IMPACT OF LOW-SUGAR-CANE-YIELD ON SUGAR INDUSTRY OF PAKISTAN

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ABSTRACT

Pakistan, till today no research institution has been established for the development of potential sugar cane yield production and increase in the recovery rate of the crushed cane. As a result, sugar recovery is hardly 9.5 percent as against 12-14 percent in other world sugar producing countries. Farmers are the largest body of the farming sector they are more unproductive due to scarcity of land and capital resources. A major portion of farmer’s population directly and indirectly related to the agriculture sector. Agriculture sector is the backbone of Pakistan’s economy which contributes more than 22 percent in country’s gross domestic product. Major issues pertains to the sugar industries’ necessitate spearhead required research and development efforts, so as to meet its raw material requirements. The specifically marketing of the produce, raw material as well as end product, has emerged a key issues need serious attention. The market imperfection must be removed through market efficiency and institutionalization of market intelligence. This research effort will shape the future of farming community, through research and development, cooperation and creating awareness on the financial opportunities as well as modern farming techniques.

**JEL CLASSIFICATION:** D24, E2, J43, N5, O1, O15, O16, O18, L11, Q14

**KEY WORDS:** PRODUCTION COST, MACROECONOMICS, AGRICULTURAL LABOUR MARKETS, AGRICULTURE, ECONOMIC DEVELOPMENT, HUMAN RESOURCE CAPACITY, ECONOMIC DEVELOPMENT AGRICULTURAL FINANCE, RURAL ANALYSIS.
INTRODUCTION

The Economic development largely depends on the research and development for improvement and positive growth of agronomy portion. Pakistan is ranked sixth in world cane acreage and 15th in sugar production. Sugar cane is grown on over a million hectares and provides the raw material for Pakistan’s 84 sugar mills -- which comprises the country’s second leading agro-industry after textiles. In addition to sugar cane produces numerous valuable byproducts like, alcohol used by pharmaceutical industry, ethanol used as a fuel, Bagasse used for paper, paints, synthetics, fiber, fuel, chip board manufacturing and as a rich source of organic matter for crop production. Pakistan Agriculture population life-standard needs to flourish and achieve goals of high growth onwards overall prosperity in the country. Sugarcane is an important industrial and cash crop in Pakistan. Sugarcane production is cyclical as the interests of farmers and industry is often at odds. Cane industry procurement practices such as shelving the crushing season, buying cane at less than the support price, short weight, false deductions and delayed payments reduce returns to farmers. Sugar millers highlighted that farmers cultivates unapproved diversities varieties with low sucrose contents, thus resulting in lower recovery rates and sugar productions.

MAJOR CROPS – AREA, PRODUCTION AND YIELD

Pakistan is an agriculture country about 70 percent our economy based on the agriculture. Pakistan is best crops producer like wheat, sugarcane, cotton, and rice. Pakistan is highly reliant on the agricultural sector, which is the key source of income and employment-generating region of the economy. In 2005, the agricultural sector accounted for 22 percent of gross domestic product (GDP) and employed 45 percent of the labor force, while agro-industries accounted for about two thirds of total industrial output (Ministry of Finance 2006). In addition, to providing food to consumers and fibers to domestic industries, the agricultural sector is also a source of scarce foreign exchange earnings and it provides a market for industrial goods. However, Spartan water shortages, in amalgamation with salt affected soils, soil erosion, low-yielding varieties, and the limited use of modern agricultural technologies, have resulted in relatively low crop yields.
The detail of major crops is as under;

Major Crops – Area, Production and Yield

<table>
<thead>
<tr>
<th>Crops</th>
<th>Area Under Cultivation (000' hectares)</th>
<th>% change in FY07 over FY06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotton</td>
<td>FY05 3,229</td>
<td>FY06T 3,247</td>
</tr>
<tr>
<td>Sugarcane</td>
<td>967</td>
<td>955</td>
</tr>
<tr>
<td>Rice</td>
<td>2,520</td>
<td>2,533</td>
</tr>
<tr>
<td>Wheat</td>
<td>8,358</td>
<td>8,415</td>
</tr>
<tr>
<td>Gram</td>
<td>1,109</td>
<td>1,113</td>
</tr>
<tr>
<td>Maize</td>
<td>945</td>
<td>971</td>
</tr>
</tbody>
</table>

Production (000 tons; cotton in 000' bales of 170kg each)

<table>
<thead>
<tr>
<th>Crops</th>
<th>Production FY05</th>
<th>Production FY06T</th>
<th>Production FY06P</th>
<th>Production FY07T</th>
<th>Production FY07E</th>
<th>Production FY06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotton</td>
<td>14,600</td>
<td>15,000</td>
<td>13,000</td>
<td>13,820</td>
<td>12,500</td>
<td>-3.8</td>
</tr>
<tr>
<td>Sugarcane</td>
<td>47,224</td>
<td>50,095</td>
<td>44,651</td>
<td>50,500</td>
<td>51,444</td>
<td>15.2</td>
</tr>
<tr>
<td>Rice</td>
<td>5,025</td>
<td>5,000</td>
<td>5,547</td>
<td>5,693</td>
<td>5,400</td>
<td>-2.7</td>
</tr>
<tr>
<td>Wheat</td>
<td>21,612</td>
<td>22,000</td>
<td>21,708</td>
<td>22,000</td>
<td>22,500</td>
<td>3.6</td>
</tr>
<tr>
<td>Gram</td>
<td>766</td>
<td>853</td>
<td>536</td>
<td>610</td>
<td>707</td>
<td>31.9</td>
</tr>
<tr>
<td>Maize</td>
<td>2,520</td>
<td>2,905</td>
<td>3,560</td>
<td>3,279</td>
<td>2,918</td>
<td>-18.0</td>
</tr>
</tbody>
</table>

Yield (Kg/hectare)

<table>
<thead>
<tr>
<th>Crops</th>
<th>Yield FY05</th>
<th>Yield FY06T</th>
<th>Yield FY06P</th>
<th>Yield FY07T</th>
<th>Yield FY07E</th>
<th>Yield FY06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotton</td>
<td>769</td>
<td>785</td>
<td>713</td>
<td>723</td>
<td>720</td>
<td>1.0</td>
</tr>
<tr>
<td>Sugarcane</td>
<td>48,836</td>
<td>52,455</td>
<td>49,229</td>
<td>50,249</td>
<td>50,584</td>
<td>2.8</td>
</tr>
<tr>
<td>Rice</td>
<td>1,994</td>
<td>1,974</td>
<td>2,116</td>
<td>2,211</td>
<td>2,182</td>
<td>3.1</td>
</tr>
<tr>
<td>Wheat</td>
<td>2,586</td>
<td>2,614</td>
<td>2,598</td>
<td>2,601</td>
<td>2,672</td>
<td>2.8</td>
</tr>
<tr>
<td>Gram</td>
<td>691</td>
<td>766</td>
<td>503</td>
<td>580</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Maize</td>
<td>2,667</td>
<td>2,992</td>
<td>3,456</td>
<td>3,276</td>
<td>2,841</td>
<td>-17.8</td>
</tr>
</tbody>
</table>

P: Provisional; T: Target; E: Estimates
Note: Wheat and Gram production targets were revised to 22,500 and 707 thousand tons respectively for FY07.
Source: MINFAL

SUGAR CANE AREA AND PRODUCTION BY PROVINCE WISE

Pakistan’s Market Year (MY) 2009/10 (Oct/Sept) total centrifugal sugar production at 3.65 million metric tons (MMT), upsurge by 3 percent over Post’s 2008/09 estimate. Increased production is ascribed to grander area planted in retort to sturdy industry demand and higher cane prices. Despite efforts to achieve self-sufficiency, Pakistan remains a net importer of sugar with imports at 700,000 tons in MY 2008/09 and at 730,000 tons in MY 2009/10.
Sugar consumption is on the upsurge due to increased demand mainly propelled by population growth and enriched industrial bustle, and stood at 4.35MMT. Market year 2008/09, sugarcane production at 51.5MMT, decrease of 19 percent over the preceding year due to both a lessening in area harvested and yield. Milling policies and practices, coupled with attractive prices for alternative/competing crops (rice, cotton and sunflower) and lacking irrigation supplies are major factors limiting crop expansion in the country.

Market year 2009/10 sugarcane’s production at 53.6 MMT, an increase of 4 percent over the previous year due to an expected surge in area and sugarcane yield. A scarcity of cane hoard during the current crushing season led to an increase in cane prices.

Besides, last year’s higher production of rice and sunflower led to lower prices received by farmers, thereby encouraging the switch back to sugarcane.

### Table 1: Sugarcane Area & Production by Province

<table>
<thead>
<tr>
<th>Province</th>
<th>Area ('000' hectares)</th>
<th>Production ('000' MT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Punjab</td>
<td>827.00</td>
<td>675.00</td>
</tr>
<tr>
<td>Sindh</td>
<td>310.00</td>
<td>264.00</td>
</tr>
<tr>
<td>NWFP</td>
<td>105.00</td>
<td>105.00</td>
</tr>
<tr>
<td>Baluch</td>
<td>0.50</td>
<td>0.80</td>
</tr>
<tr>
<td>Total</td>
<td>1240.00</td>
<td>1045.00</td>
</tr>
</tbody>
</table>

Sources: Ministry of Food, Agriculture and Livestock; FAS/Islamabad
Pakistan Sugar Mills Association

Sugarcane Area, Production and Yield
Projected 1947-2010

Area (1000 hect) / Yield / Ha

Sugarcane M. Tonne


Plantation Area
Cane Production
Yield / Ha

LOW YIELD
## TABLE 6 (1)

**MILLWISE SUGAR CANE CRUSHING, RAW UTILIZATION, SUGAR PRODUCTION, RECOVERY % AND MOLASSES PRODUCTION FOR SEASON 2008-2009**

<table>
<thead>
<tr>
<th>PUNJAB</th>
<th>NO. OF DAYS</th>
<th>CANE CRUSHED</th>
<th>PROD. TONNES</th>
<th>REC. %</th>
<th>MOLASSES PROD.</th>
<th>Rec %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ABDULLAH</td>
<td>164,994</td>
<td>14,828</td>
<td>8.06</td>
<td>10,110</td>
<td>5.46</td>
<td></td>
</tr>
<tr>
<td>2 ABDULLAH(Yousef)</td>
<td>183,103</td>
<td>15,875</td>
<td>8.66</td>
<td>9,925</td>
<td>5.42</td>
<td></td>
</tr>
<tr>
<td>3 ADAM</td>
<td>103</td>
<td>256,030</td>
<td>24,835</td>
<td>9.47</td>
<td>12,060</td>
<td>4.65</td>
</tr>
<tr>
<td>4 ASHRAF</td>
<td>117</td>
<td>440,358</td>
<td>42,502</td>
<td>9.65</td>
<td>19,861</td>
<td>4.51</td>
</tr>
<tr>
<td>5 BABA FARID</td>
<td>93</td>
<td>219,035</td>
<td>17,306</td>
<td>7.91</td>
<td>10,885</td>
<td>4.98</td>
</tr>
<tr>
<td>6 BROTHERS</td>
<td>109</td>
<td>409,378</td>
<td>36,277</td>
<td>8.88</td>
<td>20,530</td>
<td>5.02</td>
</tr>
<tr>
<td>7 CHANAR</td>
<td>111</td>
<td>468,292</td>
<td>42,818</td>
<td>9.14</td>
<td>22,556</td>
<td>4.82</td>
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<tr>
<td>8 CHAUDHRY</td>
<td>112</td>
<td>413,261</td>
<td>36,162</td>
<td>8.75</td>
<td>18,352</td>
<td>4.44</td>
</tr>
<tr>
<td>9 CHISHTA</td>
<td>93</td>
<td>280,164</td>
<td>24,419</td>
<td>8.70</td>
<td>13,616</td>
<td>4.86</td>
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<tr>
<td>10 COLONY(PHALIA)</td>
<td>105</td>
<td>305,845</td>
<td>25,687</td>
<td>8.41</td>
<td>14,270</td>
<td>4.67</td>
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<tr>
<td>11 COLONY(PUNJAB)</td>
<td>130</td>
<td>382,585</td>
<td>39,049</td>
<td>10.22</td>
<td>17,090</td>
<td>4.47</td>
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<tr>
<td>12 CRESCENT</td>
<td>106</td>
<td>182,317</td>
<td>14,404</td>
<td>7.90</td>
<td>8,329</td>
<td>4.57</td>
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<tr>
<td>13 ETIHAD</td>
<td>108</td>
<td>539,555</td>
<td>57,650</td>
<td>10.69</td>
<td>18,646</td>
<td>3.46</td>
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<tr>
<td>14 FATIMA</td>
<td>114</td>
<td>732,309</td>
<td>68,014</td>
<td>9.29</td>
<td>34,335</td>
<td>4.69</td>
</tr>
<tr>
<td>15 FECTO</td>
<td>99</td>
<td>411,435</td>
<td>32,940</td>
<td>8.00</td>
<td>17,993</td>
<td>4.37</td>
</tr>
<tr>
<td>16 G.SAMMUNDRI</td>
<td>93</td>
<td>124,140</td>
<td>9,051</td>
<td>7.50</td>
<td>6,828</td>
<td>5.50</td>
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<tr>
<td>17 HAMZA</td>
<td>108</td>
<td>1,665,064</td>
<td>170,351</td>
<td>10.23</td>
<td>64,295</td>
<td>3.87</td>
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<tr>
<td>18 HAQ BAHU</td>
<td>117</td>
<td>295,145</td>
<td>28,190</td>
<td>9.55</td>
<td>13,116</td>
<td>4.44</td>
</tr>
<tr>
<td>19 H.WAQAS</td>
<td>162,502</td>
<td>12,270</td>
<td>7.60</td>
<td>8,800</td>
<td>5.47</td>
<td></td>
</tr>
<tr>
<td>20 HUDA (FAUJI)</td>
<td>95</td>
<td>194,845</td>
<td>16,525</td>
<td>8.47</td>
<td>8,972</td>
<td>4.60</td>
</tr>
<tr>
<td>21 HUNZA</td>
<td>102</td>
<td>566,664</td>
<td>49,695</td>
<td>8.75</td>
<td>27,500</td>
<td>4.84</td>
</tr>
<tr>
<td>22 HUSEIN</td>
<td>108</td>
<td>428,961</td>
<td>36,919</td>
<td>8.60</td>
<td>20,215</td>
<td>4.71</td>
</tr>
<tr>
<td>23 INDUS</td>
<td>95</td>
<td>498,386</td>
<td>52,631</td>
<td>10.56</td>
<td>19,006</td>
<td>3.81</td>
</tr>
<tr>
<td>24 ITTEFAQ</td>
<td>107</td>
<td>366,514</td>
<td>31,962</td>
<td>8.72</td>
<td>17,813</td>
<td>4.86</td>
</tr>
<tr>
<td>25 J.D. W-1</td>
<td>107</td>
<td>1,485,463</td>
<td>165,968</td>
<td>11.15</td>
<td>62,002</td>
<td>4.16</td>
</tr>
<tr>
<td>26 KAMALIA</td>
<td>104</td>
<td>975,579</td>
<td>101,356</td>
<td>10.39</td>
<td>43,584</td>
<td>4.47</td>
</tr>
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<td>27 KASHMIR</td>
<td>108</td>
<td>450,751</td>
<td>42,307</td>
<td>9.37</td>
<td>21,267</td>
<td>4.71</td>
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<td>28 KOHINOOR</td>
<td>117</td>
<td>318,959</td>
<td>29,163</td>
<td>9.14</td>
<td>15,742</td>
<td>4.93</td>
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<td>29 LAYYAH</td>
<td>111</td>
<td>803,800</td>
<td>76,273</td>
<td>9.36</td>
<td>33,591</td>
<td>4.81</td>
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<tr>
<td>30 MADINA</td>
<td>105</td>
<td>453,039</td>
<td>41,961</td>
<td>9.24</td>
<td>21,888</td>
<td>4.80</td>
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<td>31 NATIONAL</td>
<td>97</td>
<td>209,876</td>
<td>17,028</td>
<td>8.11</td>
<td>10,074</td>
<td>4.80</td>
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<tr>
<td>32 NOON</td>
<td>98</td>
<td>358,130</td>
<td>30,965</td>
<td>8.65</td>
<td>17,838</td>
<td>4.98</td>
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<tr>
<td>33 PATTOKI</td>
<td>118</td>
<td>612,972</td>
<td>55,255</td>
<td>9.00</td>
<td>26,000</td>
<td>4.24</td>
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<td>34 RAMZAN</td>
<td>106</td>
<td>376,331</td>
<td>36,743</td>
<td>9.78</td>
<td>16,935</td>
<td>4.50</td>
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<td>35 SAFINA(TIC)Ph-Walt</td>
<td>99</td>
<td>339,769</td>
<td>30,328</td>
<td>8.95</td>
<td>16,633</td>
<td>4.91</td>
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<td>36 SHAHTAJ</td>
<td>103</td>
<td>700,063</td>
<td>65,089</td>
<td>9.30</td>
<td>31,582</td>
<td>4.51</td>
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Cont..... Punjab
Pakistan Sugar Mills Association

ANNUAL REPORT 2009

Cont.... Punjab

<table>
<thead>
<tr>
<th>PUNJAB</th>
<th>NO. OF DAYS</th>
<th>CANE CRUSHED</th>
<th>PROD. TONNES</th>
<th>REC. %</th>
<th>MOLASSES PROD.</th>
<th>Rec %</th>
</tr>
</thead>
<tbody>
<tr>
<td>37</td>
<td>SHAKARGANJ (I)</td>
<td>104</td>
<td>360,758</td>
<td>33,878</td>
<td>9.37</td>
<td>14,980</td>
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<td>38</td>
<td>SHAKARGANJ (II)</td>
<td>103</td>
<td>387,372</td>
<td>34,695</td>
<td>8.96</td>
<td>16,075</td>
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<td>39</td>
<td>SHAKARGANJ (III)</td>
<td>50</td>
<td>35,926</td>
<td>3,027</td>
<td>8.54</td>
<td>2,015</td>
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<tr>
<td>40</td>
<td>SHEIKHOO</td>
<td>115</td>
<td>904,501</td>
<td>78,910</td>
<td>8.72</td>
<td>41,892</td>
</tr>
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<td>41 &amp; 42</td>
<td>TANDLIANWALA-I &amp; II</td>
<td>103</td>
<td>808,550</td>
<td>77,579</td>
<td>9.59</td>
<td>39,714</td>
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<td>JDW-II (UNITED)</td>
<td>103</td>
<td>595,765</td>
<td>67,044</td>
<td>11.25</td>
<td>23,395</td>
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<tr>
<td>44</td>
<td>MACCA</td>
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<td>87,107</td>
<td>7,030</td>
<td>8.27</td>
<td>4,225</td>
</tr>
<tr>
<td>45</td>
<td>R.Y.K</td>
<td>122</td>
<td>70,000</td>
<td>10,000</td>
<td>10.00</td>
<td>33,950</td>
</tr>
</tbody>
</table>

Av. No of Days

| TOTAL 2008-2009 | 20,677,089 | 1,963,957 | 9.50 | 928,514 | 4.49 |
| TOTAL 2007-2008 | 33,063,564 | 2,952,784 | 8.93 | 1,607,042 | 4.86 |

TABLE 6 (2)

MILLWISE SUGARCANE CRUSHING
SUGAR PRODUCTION, RECOVERY AND
MOLASSES PRODUCTION FOR SEASON 2008-2009

<table>
<thead>
<tr>
<th>S.N</th>
<th>KHYBER PAKHTUNKHWA</th>
<th>SEASON DAYS</th>
<th>CANE CRUSHED</th>
<th>PROD. TONNES</th>
<th>REC. %</th>
<th>MOL. PROD.</th>
<th>Rec %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AI- MOIZ</td>
<td>98</td>
<td>463,719</td>
<td>40,885</td>
<td>8.81</td>
<td>23,187</td>
<td>4.99</td>
</tr>
<tr>
<td>2</td>
<td>CHASHMA</td>
<td>100</td>
<td>680,677</td>
<td>56,392</td>
<td>8.28</td>
<td>32,002</td>
<td>4.70</td>
</tr>
<tr>
<td>3</td>
<td>CHASHMA (Ex.)</td>
<td>101</td>
<td>370,129</td>
<td>28,841</td>
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<td><strong>493,079</strong></td>
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<td><strong>TOTAL 2007-2008</strong></td>
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### TABLE 6 (4)

**MILL-WISE BEET SLICING, SUGAR PRODUCTION, RECOVERY AND MOLASSES PRODUCTION FOR SEASON 2008-2009**

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<tr>
<th>KHYBER PAKHHTUNKHWA</th>
<th>No. of Days</th>
<th>Beet sliced</th>
<th>Production Tonnes</th>
<th>Rec. %</th>
<th>Total Mol. Production</th>
<th>Rec. %</th>
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<td>Not- Operated this Season</td>
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<tr>
<td>3 PREMIER</td>
<td>Not- Operated this Season</td>
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<tr>
<td><strong>TOTAL 2008-2009</strong></td>
<td></td>
<td>9,301</td>
<td>947</td>
<td>10.55</td>
<td>419</td>
<td>4.50</td>
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<tr>
<td><strong>TOTAL 2007-2008</strong></td>
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<td>2,576</td>
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### TABLE 6(5)

**PROVINCE-WISE TOTAL PRODUCTION OF PAKISTAN SUMMARY 2008-2009**

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<tr>
<th></th>
<th>CANE CRUSHED</th>
<th>RAW UTILIZED</th>
<th>BEET SLICED</th>
<th>SUGAR PRODUCTION</th>
<th>TOTAL SUGAR</th>
<th>MOL. C+R+B</th>
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<td></td>
<td>(Cane)</td>
<td>(Raw)</td>
<td>(Beet)</td>
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<td>NIL</td>
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<td>1,963,957</td>
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<tr>
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<td>NIL</td>
<td>NIL</td>
<td>976,420</td>
<td>NIL</td>
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<td>193,768</td>
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<th>YEAR</th>
<th>NO. OF MILLS</th>
<th>CANE CRUSHED TONNES</th>
<th>SUGAR MADE TONNES</th>
<th>RECOVERY %</th>
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<th>SUGAR MADE TONNES</th>
<th>RECOVERY %</th>
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<td>12,415,817</td>
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<td>2003-04</td>
<td>28</td>
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<tr>
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<tr>
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<td>29</td>
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<td>31</td>
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<td>1,095,104</td>
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<tr>
<td>2010-11</td>
<td>33</td>
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<td>1,298,989</td>
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</table>

# Khyber Pakhtunkhwa

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Mills</th>
<th>Cane Crushed (Tonnes)</th>
<th>Sugar Made (Tonnes)</th>
<th>Recovery %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996-97</td>
<td>04</td>
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<td>57,669</td>
<td>7.74</td>
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<tr>
<td>1997-98</td>
<td>05</td>
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<td>1998-99</td>
<td>05</td>
<td>1,818,433</td>
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<td>1999-00</td>
<td>05</td>
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<td>102,792</td>
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<tr>
<td>2000-01</td>
<td>05</td>
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<td>61,163</td>
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<td>2001-02</td>
<td>05</td>
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<td>104,611</td>
<td>8.09</td>
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<tr>
<td>2002-03</td>
<td>05</td>
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<td>119,223</td>
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<tr>
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<td>2,255,395</td>
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<tr>
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<td>07</td>
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<tr>
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<td>07</td>
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<tr>
<td>2010-11</td>
<td>07</td>
<td>3,035,460</td>
<td>275,655</td>
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<tr>
<td>10 LARGEST SUGAR PRODUCERS (in mln metric tonnes, raw value)</td>
<td>10 LARGEST CONSUMERS (in mln metric tonnes, raw value)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------</td>
<td>------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Brazil 32.29</td>
<td>1 India 22.55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 India 25.94</td>
<td>2 EU-27 20.47</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 EU-27 16.38</td>
<td>3 China 14.73</td>
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<td></td>
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<tr>
<td>4 China 15.40</td>
<td>4 Brazil 11.86</td>
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</tr>
<tr>
<td>5 Thailand 7.77</td>
<td>5 U.S.A 9.81</td>
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<td></td>
</tr>
<tr>
<td>6 U.S.A 6.96</td>
<td>6 Russian Federation 6.18</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>7 Mexico 5.94</td>
<td>7 Mexico 5.03</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>8 Pakistan 5.00</td>
<td>8 Indonesia 4.61</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>9 Australia 4.62</td>
<td>9 Pakistan 4.54</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Russian Federation 3.79</td>
<td>10 Egypt, Arab Republic 2.7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10 LARGEST CANE SUGAR PRODUCERS (in mln metric tonnes, raw value)</th>
<th>10 LARGEST BEET SUGAR PRODUCERS (in mln metric tonnes, raw value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Brazil 32.29</td>
<td>1 EU-27 16.12</td>
</tr>
<tr>
<td>2 India 25.94</td>
<td>2 U.S.A 3.88</td>
</tr>
<tr>
<td>3 China 14.43</td>
<td>3 Russian Federation 3.79</td>
</tr>
<tr>
<td>4 Thailand 7.77</td>
<td>4 Turkey 2.15</td>
</tr>
<tr>
<td>5 Mexico 5.94</td>
<td>5 Ukraine 1.70</td>
</tr>
<tr>
<td>6 Pakistan 4.99</td>
<td>6 China 0.98</td>
</tr>
<tr>
<td>7 Australia 4.62</td>
<td>7 Japan 0.78</td>
</tr>
<tr>
<td>8 U.S.A 3.08</td>
<td>8 Belarus 0.54</td>
</tr>
<tr>
<td>9 Indonesia 2.90</td>
<td>9 Egypt, Arab Republic 0.53</td>
</tr>
<tr>
<td>10 Argentina 2.45</td>
<td>10 Iran 0.40</td>
</tr>
</tbody>
</table>

Source: ISO Sugar Year Book 2009
Classification of Cane producers by sugar yields

<table>
<thead>
<tr>
<th>Low yields (lower than 6 t/ha)</th>
<th>Middle yields (6 to 8 t/ha)</th>
<th>High Yields (8 to 10 t/ha)</th>
<th>Very high yields (higher than 10 t/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barbados</td>
<td>Mozambique</td>
<td>Argentina</td>
<td>Brazil</td>
</tr>
<tr>
<td>Belize</td>
<td>Myanmar</td>
<td>Bangladesh</td>
<td>Burkina Faso</td>
</tr>
<tr>
<td>Bolivia</td>
<td>Nepal</td>
<td>Burundi</td>
<td>Chad</td>
</tr>
<tr>
<td>Cameroon</td>
<td>Pakistan</td>
<td>China</td>
<td>Cote d'Ivoire</td>
</tr>
<tr>
<td>Congo</td>
<td>Panama</td>
<td>China (Taiwan)</td>
<td>El. Salvador</td>
</tr>
<tr>
<td>Cuba</td>
<td>Paraguay</td>
<td>Costa Rica</td>
<td>Guatemala</td>
</tr>
<tr>
<td>Dominican Rep.</td>
<td>Philippines</td>
<td>Ecuador</td>
<td>India</td>
</tr>
<tr>
<td>Fiji</td>
<td>Somalla</td>
<td>Guyana</td>
<td>Kenya</td>
</tr>
<tr>
<td>Gabon</td>
<td>Sri Lanka St.</td>
<td>Honduras</td>
<td>Mexico</td>
</tr>
<tr>
<td>Guinea</td>
<td>Christopher</td>
<td>Japan</td>
<td>Morocco</td>
</tr>
<tr>
<td>Haiti</td>
<td>Suriname</td>
<td>Mali</td>
<td>South Africa</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Trinidad &amp; T.</td>
<td>Mauritius</td>
<td>USA</td>
</tr>
<tr>
<td>Iran</td>
<td>Uruguay</td>
<td>Nicaragua</td>
<td></td>
</tr>
<tr>
<td>Jamaica</td>
<td>Venezuela</td>
<td>Papua N. G</td>
<td></td>
</tr>
<tr>
<td>Madagascar</td>
<td>Vietnam</td>
<td>Sierra Leone</td>
<td></td>
</tr>
<tr>
<td>Malaysia</td>
<td>Zaire</td>
<td>Tanzania</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Thailand</td>
<td></td>
</tr>
</tbody>
</table>
Major Cane Sugar Producing Countries
Summary Sugarcane Harvested Area, Cane and Sugar Yield T/Ha

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name</th>
<th>Cane Harvested Area</th>
<th>Cane Yield T/ Ha</th>
<th>Sugar Yield T/ Ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Argentina</td>
<td>242</td>
<td>62</td>
<td>6.8</td>
</tr>
<tr>
<td>2</td>
<td>Australia</td>
<td>416</td>
<td>81</td>
<td>11.8</td>
</tr>
<tr>
<td>3</td>
<td>Brazil</td>
<td>2,439</td>
<td>58</td>
<td>8.3</td>
</tr>
<tr>
<td>4</td>
<td>China</td>
<td>1,299</td>
<td>61</td>
<td>6.4</td>
</tr>
<tr>
<td>5</td>
<td>Colombia</td>
<td>171</td>
<td>117</td>
<td>14.5</td>
</tr>
<tr>
<td>6</td>
<td>Cuba</td>
<td>1,030</td>
<td>33</td>
<td>3.1</td>
</tr>
<tr>
<td>7</td>
<td>Egypt</td>
<td>107</td>
<td>93</td>
<td>9.9</td>
</tr>
<tr>
<td>8</td>
<td>Guatemala</td>
<td>184</td>
<td>92</td>
<td>9.8</td>
</tr>
<tr>
<td>9</td>
<td>India</td>
<td>2,581</td>
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<td>7.9</td>
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<td>10</td>
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<td>Mexico</td>
<td>606</td>
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<td>8.7</td>
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<tr>
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<td>Pakistan</td>
<td>848</td>
<td>47</td>
<td>3.9</td>
</tr>
<tr>
<td>13</td>
<td>Philippines</td>
<td>372</td>
<td>59</td>
<td>5.4</td>
</tr>
<tr>
<td>14</td>
<td>South Africa</td>
<td>323</td>
<td>70</td>
<td>8.1</td>
</tr>
<tr>
<td>15</td>
<td>Thailand</td>
<td>992</td>
<td>61</td>
<td>6.6</td>
</tr>
<tr>
<td>16</td>
<td>U.S.A</td>
<td>394</td>
<td>78</td>
<td>9.0</td>
</tr>
</tbody>
</table>

* Countries producing over 2.0 million tonnes included
** With compliments to ISO report international Survey of Sugar Crop yield.
PAST PROJECTION OF DEMAND AND SUGAR PRODUCTION CAPACITY

Pakistan's present population is 13.5 million. With an average growth rate of 2.5 percent per year the population of country will grow from year to year as shown in Table 4.
The per capita of sugar in Pakistan is about 22 Kgs. The estimated domestic consumption is provided in Table;

### PROJECTION OF DEMAND AND SUGAR PRODUCTION CAPACITY 1998/99-2004/5

<table>
<thead>
<tr>
<th>Year</th>
<th>Population In Million</th>
<th>Domestic Consumption in Tones</th>
<th>Projected Sugar Prod: Capacity In Tones</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998-1999</td>
<td>134.51</td>
<td>2959000</td>
<td>3530850</td>
</tr>
<tr>
<td>1999-2000</td>
<td>137.51</td>
<td>3025220</td>
<td>2414746</td>
</tr>
<tr>
<td>2000-01</td>
<td>140.94</td>
<td>3100680</td>
<td>3304360</td>
</tr>
<tr>
<td>2001-02</td>
<td>144.47</td>
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<td>2002-03</td>
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<td>2003-04</td>
<td>151.78</td>
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<tr>
<td>2004-05</td>
<td>155.58</td>
<td>4322760</td>
<td>3304360</td>
</tr>
</tbody>
</table>


(i) Keeping in view the equilibrium of production of agricultural sector and peculiar problems of the sugar industry faces due to its being a sort of political industry as well as its seasonal nature the minimum production of 3.3 million tones per season will be sufficient enough to meet not only the domestic demand but also make surplus sugar available during the next three years as mentioned in Table.

(ii) It is very important point that by utilizing 38.3 million tons of cane against their usual plant volume of 58 million tons of sugar cane, the mills would still have an unutilized capacity of 34 percent. The state should, therefore, focus its policy for increasing the production of sugarcane on the prevailing area under agronomy and sugar output by the existing mill. It should not encourage further increase in the number of Sugar mills.

(iii) This clearly indicates that the existing mills are sufficient enough to produce the country's requirement of sugar for the next three years.
FACTOR AFFECTING SUGARCANE AND GROWERS

The area of the sugarcane growing sector is not worst but standalone picture are creating lack of finance is a main hurdle to grow the sugarcane. Agriculture finance facility to spread upto the small growers and to provide a better quality of sugarcane and improve the production of refined sugar byproduct Molasses and Ethanol with the byproduct (Molasses) also.

Both large and small banks are aggressively offering funds to growers on active initiative of State Bank of Pakistan but because of lack of knowledge and illiteracy the agriculturist do not have access to the facilities made available by the bank. The small growers in most cases lack authenticated security or have imperfect security. This is an impediment inflow of bank credit, which is cheap and easy, for the growers. To remedy this situation the growers are compelled to approach the mill owners for providing guarantees to the banks on behalf of the growers. This puts the growers in the exploitative lap of the mill owners.

At State Bank level some attempts have been made to provide credit to growers through commercial banks on grower group guarantee for repayment but the growers are not fully aware of the arrangement. In due course of time this will convalesces the borrowing power of growers. The arrangement envisages group undertaking for individual repayment. Over the years many factors have been responsible for short fall in sugarcane supply. They include increased consumptions by the mills and failure of the growers to increase sugarcane production. Production could be increase either by increasing the area under sugarcane cultivation or more importantly by improving the yield per acre substantially.

A proportional analysis of sugarcane yield and recovery between India and Pakistan primed by the Pakistan Sugar Mills Association specifies that Pakistan is far behind India. While in Pakistani Punjab farmers are able to get a yield of only 43 tonnes per acre, in the Indian Punjab the yield is over 63 tonnes per acre. The average recovery is 9.39 percent in Indian Punjab as compared to an average recovery of 8.44 percent attained in the Pakistani Punjab.

Similarly, the average yield and recovery in Indian Gujrat is 89.6 tonnes per acre and 11.34 percent respectively as compared to 57.3 tonnes per acre and 9 percent recovery in Sindh. In both the provinces, Sindh and Punjab, the sugarcane cultivation
directly vies with cotton. If the prices of cotton are better, the farmers switch over to it, or vice versa. When the curl leave virus attacks on cotton were common, a large number of farmers, originally growing cotton, switched over to sugarcane cultivation. But with the improvement in cotton prices and availability of virus resistant varieties, the farmers have gone back to cotton cultivation. The area as well as production of sugarcane contracted by 5 and 4 percent respectively in 1995-96 as compared to preceding year, in the past, the provincial governments used to ban production of 'gur' during sugarcane crushing season but lately its production has increased manifold. The percentage of sugarcane consumed by the sugar mills in Sindh is still the highest as compared to the other two provinces. 'Gur' making has progressed without paying any taxes and has therefore been consuming more sugarcane to the detriment of the sugar industry.

The average utilization of sugarcane on countrywide basis touched the highest - 76.93 percent in 1993-94 but has gone down during the last two years. In the Punjab the maximum utilisation was 81.87 percent in the same year but came down to 63.22 percent during 1995-96. But the consumption of sugarcane by mills is NWFP was reduced to only 17 percent in 1995-96. Contrary to this, Sindh has the highest sugarcane consumption record. The maximum consumption touched 93.85 percent in 1992-93 and came down to 75.28 percent in 1995-96.

LIQUIDITY CRUNCH

The commercial banks were also focused by the State Bank of Pakistan to adjust by August 20, 1996, the balances of credit made available to the sugar industry against sugar stocks. The action was grounded on information that the mills were hoarding the stocks. Industry sources, however say that they prepare fortnightly reports pertaining to sugar production, its lifting and stocks. Besides, the mills would never like to hoard the stocks and their priority was to empty their godowns as quickly as possible as carrying a huge inventory meant huge financial cost.
SBP LENDING REGULATIONS FOR SMALL FARMERS – AGRICULTURE LOANS SCHEME – SBP CIRCULAR

QUOTE
“No. ACD/2096-2116/PD (P)-08/2003
June 30, 2003

Presidents/C.E.Os,
ABL/HBL/MCB/NBP/UBL/ZTBL/PPCB/DPBs.
(As per list of addresses attached)

Dear Sir,

AGRICULTURAL LOANS SCHEME-COMPREHENSIVE CIRCULAR

In compliance with the provisions contained in Section 8 (3) of the SBP Act 1956, State Bank of Pakistan, have to ensure availability of the adequate and timely banking credit to the Agricultural Sector, besides creating awareness and uplifting the living standard of the rural community. State Bank of Pakistan introduced Agricultural Loans Scheme in 1972 as a part of its regulatory/monitoring and supervisory responsibilities. The said scheme was introduced through different instructions/circulars/ amendments / rules issued by the State Bank of Pakistan from time to time.

In order to facilitate the availability of such circulars/instructions/rules for the benefit of participating banks, Provincial Cooperative Banks, Provincial Governments, Farmers Associations, other internal and external stakeholders, Agricultural Credit Department has consolidated all the existing instructions/ circulars etc. on Agricultural Loans Scheme in the form of one comprehensive/master circular, which is appended as Appendix

Efforts have been made to consolidate all circulars/instructions/rules etc. on the Agricultural Loans Scheme. However, there is a possibility that some of the circulars/instructions may have been missed. We shall appreciate your cooperation and suggestions, in this regard, to keep this comprehensive circular up-to-date. Help Desk is available at SBP Boulton Market Building, M.A. Jinnah Road, Karachi with Telephone Nos. 021/9217216, 021/9217214, 021/9217220 and Fax No. 021/9217215.

Please acknowledge receipt.

Yours faithfully,
(SYED ISHTIAQ ALI)
Director

Encl: 1. Appendix-1
       1. Annexure I – III
       2. Annexure IV – VII
       3. Annexure – VIII
       4. Annexure-IX”
Loan Categories

In order to protect the interest of the small farmers, the Agricultural Loans Scheme, under Section 6(A) – Grant of loans to be in specified ratio (Government of Pakistan, Finance Division No. SRO-859(1)/73 dated the 16th June, 1973 read with Section 5 of Act No. XLII of 1973) and Loans for Agricultural Purposes Rules, 1973, guarantees that agricultural loans granted by banks to farmers shall be diversified to achieve the following ratios:

i) Land owners having land not exceeding subsistence holding…………………………………70%

ii) Land owners having land, exceeding subsistence holding, but not exceeding economic holding …20%

iii) Land owners having land exceeding economic holding………………………………..10%

Eligibility

Finance can be provided to all categories of farmers (owner, owner-cum-tenant and tenant). The commercial banks will not reject any application for agricultural loan except for the following valid reasons that must be recorded in writing: ?? The applicant is not a genuine farmer.

?? The applicant’s name does not appear in the Revenue records.

?? The applicant is a defaulter of the banking system.

?? The applicant is unable to produce proper securities/sureties/passbook.

?? Credit proposal in excess of entitlement.

Small Loans for Agriculture

The Agricultural Loans Scheme was introduced with effect from December 1st, 1972. The definition of small loan for agriculture, amended from time to time is as under:

i) Bank loans and advances etc. given to farmers with holding upto 25 acres for meeting their agricultural production requirements for the purpose of Mandatory Credit Targets (23-03-1978).
ii) All loans to farmers who were exempted from payment of land revenue (farmers with land holding of up to 25 acres of irrigated land and 50 acres of un-irrigated land) were treated as small loan for agriculture (26-09-1978).

iii) Bank loans and advances given by the banks to farmers holding land up to 12.50 acres for meeting their agricultural production requirements were treated as small loans for the purpose of Mandatory Credit Targets (20-08-1979).

iv) Loans and advances including bills purchased and discounted whether clean or secured, given by the banks to the farmers holding land not exceeding the “subsistence holding” as defined for various Provinces by law for meeting their agricultural production requirements, were treated as small loans for the purpose of Mandatory Credit Targets (09-02-1980).

(The data for small loans is collected from the Banks through statement ‘S’ as per Annexure-I).

**Size of Land Holding**

Details of size of land holdings for various categories of farms in different provinces are given as under:

<table>
<thead>
<tr>
<th>Name of Province</th>
<th>Subsistence Holding</th>
<th>Economic Holding</th>
<th>Above Economic Holding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Punjab</td>
<td>Up to 12.5 Acres</td>
<td>Above 12.5 Acres</td>
<td>Above 50 Acres</td>
</tr>
<tr>
<td></td>
<td></td>
<td>to 50 Acres</td>
<td></td>
</tr>
<tr>
<td>NWFP</td>
<td>Up to 12.5 Acres</td>
<td>Above 12.5 Acres</td>
<td>Above 50 Acres</td>
</tr>
<tr>
<td></td>
<td></td>
<td>to 50 Acres</td>
<td></td>
</tr>
<tr>
<td>Sindh</td>
<td>Up to 16 Acres</td>
<td>Above 16 Acres</td>
<td>Above 64 Acres</td>
</tr>
<tr>
<td></td>
<td></td>
<td>to 64 Acres</td>
<td></td>
</tr>
<tr>
<td>Baluchistan</td>
<td>Up to 32 Acres</td>
<td>Above 32 Acres</td>
<td>Above 64 Acres</td>
</tr>
<tr>
<td></td>
<td></td>
<td>to 64 Acres</td>
<td></td>
</tr>
</tbody>
</table>

The Agricultural Loans Scheme has been designed to cover entire Pakistan with no restriction of territorial jurisdiction.

**Surety / Security Required For Agricultural Loans**

1. **Surety**

The limit of Agricultural Loans against two credit worthy sureties acceptable to the bank in lieu of mortgage of land is Rs.100,000/= per farmer per year. However, total guarantee
of one guarantor should not in any case exceed Rs.500,000/= excepting a Processing Unit.

2. Security

Agricultural credit can be availed against security of agricultural land by creating charge under the passbook system. Bank can accept agricultural land as security on the basis of the realizable value /forced sale value, instead of accepting only agricultural land as security on the basis of market value or PIU. The value of per PIU has been fixed at Rs. 400/- by the Government of Pakistan, Finance Division (Internal Finance Wing), under Notification No. F.3 (6) IF/89 dated the 17th December, 1999.

Loan Payment in Cash/ Kind at the choice of borrowers

Banks are allowed to provide agricultural loans in cash or in kind at the choice of borrowers to make them able to purchase inputs at the Bargain Price from the market.

Multiple/Revolving Limit Of Agricultural Loans

Bank can provide running finance for agricultural purposes on the basis of multiple/revolving limits for period of three years in addition to demand finance (single disbursement) under the Supervised Agricultural Credit Scheme. Banks are now allowed to renew the limits automatically not only on 100% adjustment of the previous loans but also in case of partial adjustments if these are regular advances. Banks will not ask for any fresh document at the time of each renewal.

Lending Rate

Since July 28th 1997, State Bank of Pakistan has removed cap on the minimum lending rates to be charged by the Commercial Banks on agricultural financing. The cap on maximum lending rates was removed in October 1995. Banks are now free to charge the mark-up from the borrowers, on the competitive basis determined under market forces. State Bank of Pakistan is providing credit lines only to ZTBL and PPCB on the prevailing Government T. Bill rates in the market. However, as the mark-up rates in the
market have been reduced significantly, accordingly banks have also reduced their markup rates in line with market forces and the benefit of such reduced mark up rates is being passed on to the borrowers. Commercial banks have to disburse their Mandatory Credit Targets allocated to them from their own sources / deposits.

**Normal Sowing And Harvesting Times of Important Crops in Different Provinces**

The normal times of sowing and harvesting of various crops in different provinces as conveyed by Ministry of Food, Agricultural and Livestock are given as under:

<table>
<thead>
<tr>
<th>Name of Crop</th>
<th>Normal Time of Sowing</th>
<th>Normal Time of Harvesting</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Punjab</td>
<td>Sindh</td>
</tr>
</tbody>
</table>

**Indicative Per Acre Credit Limit For Major Agricultural Crops:**

The indicative per acre credit limit for major agricultural crops is given as under:

1. Sugarcane Rs. 8,000/-
2. Paddy Rs. 4,500/-
3. Wheat Rs. 4,000/-
4. Cotton Rs. 6,000/-
5. Potato Rs. 11,000/-
6. Tobacco Rs. 9,000/-
7. Other Crops As per actual cost.

**GUARANTEE**

Bonafide losses incurred by the banks due to non-recovery of an agricultural loans made under the scheme, as proved to the satisfaction of SBP, would be guaranteed up to 50% in terms of Section 17 D (2) of the State Bank of Pakistan Act, as amended by the State
Bank of Pakistan (amendment) act, 1972. These loans would be qualified for bonafide losses subject to fulfillment of the following conditions:

I. Loans have been given strictly in accordance with the provision of the scheme.

II. All formalities required prior to the sanction and disbursement have been meticulously observed; and III. All efforts for recovery of loans including legal remedies available to the banks have been exhausted. (Presently this facility is provided only to big five commercial banks to which Agricultural Credit Targets are given on mandatory basis rather than voluntary basis.) Other provisions of the Agricultural Loans Scheme shall remain unchanged.

"UNQUOTE

RISE IN DOMESTIC SUGAR & INTERNATIONAL SUGAR PRICES

Every year a massive price hike is seen in food items and various goods just before the start of Ramadan. Quite interestingly, this is justified as a business tactic to get maximum profit at the time people are bound to store in food items. Ironic but true. However, the recent price hike in 'sugar' prices has been termed as a Sugar Crisis by Pakistani Authorities and media outlets. If inquired regarding the sudden increase in prices the local stores point fingers at the lack of supply and an increase wholesale rate, which is then directly affecting the retail market. So how does one figure out the sugar imbroglio? A significant rise in prices -up to Rs.20- just before the peak consumption time seems absurdly convenient.
## SUGAR CANE & SUGAR - I

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugarcane Area HA.</td>
<td>900,000</td>
<td>999,700</td>
<td>1,089,700</td>
<td>1,074,700</td>
<td>996,600</td>
</tr>
<tr>
<td>Sugarcane produced</td>
<td>43,620,000</td>
<td>48,041,000</td>
<td>52,049,000</td>
<td>53,800,000</td>
<td>43,533,000</td>
</tr>
<tr>
<td>Yield / Ha-Tonnes</td>
<td>45.41</td>
<td>48.08</td>
<td>47.33</td>
<td>50.00</td>
<td>45.04</td>
</tr>
<tr>
<td>Cane Utilized by Mills</td>
<td>29,408,880</td>
<td>36,708,638</td>
<td>41,766,689</td>
<td>43,661,377</td>
<td>32,101,739</td>
</tr>
<tr>
<td>% age of utilization</td>
<td>67.47</td>
<td>76.33</td>
<td>80.26</td>
<td>81.15</td>
<td>73.74</td>
</tr>
<tr>
<td>Cane support / indicative price</td>
<td>35/36</td>
<td>42/43</td>
<td>40/43</td>
<td>40/41</td>
<td>40/43</td>
</tr>
<tr>
<td>Punjab / Khyber Pakhtunkhwa / Sindh</td>
<td>8.39</td>
<td>8.71</td>
<td>8.74</td>
<td>8.75</td>
<td>9.10</td>
</tr>
<tr>
<td>Average Recovery %</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sugar Production (cane)</td>
<td>2,466,788</td>
<td>3,197,745</td>
<td>3,652,745</td>
<td>3,997,010</td>
<td>2,922,125</td>
</tr>
<tr>
<td>Sugar Production (Beet)</td>
<td>17,276</td>
<td>29,173</td>
<td>22,068</td>
<td>23,796</td>
<td>11,373</td>
</tr>
<tr>
<td>Sugar Production (Raw)</td>
<td>531,930</td>
<td>22,111</td>
<td>1,845</td>
<td>182,303</td>
<td></td>
</tr>
<tr>
<td>Total Sugar Production</td>
<td>3,015,994</td>
<td>3,249,029</td>
<td>3,676,756</td>
<td>4,020,806</td>
<td>3,115,801</td>
</tr>
<tr>
<td>Beginning Stocks 1st Oct.</td>
<td>27,274</td>
<td>620,791</td>
<td>637,149</td>
<td>759,103</td>
<td>809,357</td>
</tr>
<tr>
<td>Imports</td>
<td>832,845</td>
<td>27,484</td>
<td>9,052</td>
<td>11,697</td>
<td>622,040</td>
</tr>
<tr>
<td>Total Available</td>
<td>3,675,913</td>
<td>3,897,314</td>
<td>4,322,867</td>
<td>4,791,606</td>
<td>4,547,196</td>
</tr>
<tr>
<td>Export</td>
<td>0</td>
<td>8,069</td>
<td>80,000</td>
<td>132,008</td>
<td>28,032</td>
</tr>
<tr>
<td>End Stock 30th Sep.</td>
<td>620,791</td>
<td>637,149</td>
<td>759,103</td>
<td>809,357</td>
<td>577,653</td>
</tr>
<tr>
<td>Consumption / Marketing</td>
<td>3,355,122</td>
<td>3,252,165</td>
<td>3,483,854</td>
<td>3,850,241</td>
<td>3,941,513</td>
</tr>
<tr>
<td>Average Consump. / month</td>
<td>254,800</td>
<td>271,060</td>
<td>290,321</td>
<td>320,853</td>
<td>328,456</td>
</tr>
<tr>
<td>Season's Av. retail price / kg</td>
<td>28.73</td>
<td>22.98</td>
<td>20.12</td>
<td>19.26</td>
<td>25.31</td>
</tr>
<tr>
<td>Intl. Sugar Trade Price US $ / T</td>
<td>242.90</td>
<td>234.30</td>
<td>229.98</td>
<td>224.15</td>
<td>275.30</td>
</tr>
<tr>
<td>Molasses Prod Cane -B+R</td>
<td>1,501,501</td>
<td>1,822,959</td>
<td>2,048,117</td>
<td>2,122,099</td>
<td>1,497,395</td>
</tr>
</tbody>
</table>
Let’s also look at the economic side and try to deduce some logic. The sugar industry in Pakistan has continued to expand heavily in spite of negative fundamentals and continues advice of Pakistan Sugar Mills Association to the contrary for the last six years. The magnitude of problems of the sugar industry can be gauged from the crushing capacity utilization dropping to around 55 percent, with idle capacity at 45 percent rarely could an industry break even, let alone expect a profitable run. The main reason seems to be lack of its undivided attention on account of its preoccupation in other more important matters, political and administrative etc.

In my last research paper i.e. impact of flood on sugar industry of Pakistan, published Interdisciplinary Journal of Contemporary Research in Business, (IJCRB, march 2013 addition) as stated that no industry can flourish without promotional support of research and development. It has been initio exist. As a result, potential of the sugar industry stayed dormant. This area demands attention. Since it is not possible to increase area under sugarcane cultivation the suggested second step is to undertake efforts to develop new variety offering higher yield and recovery. This will result in higher sugarcane production and better returns to the growers without increasing support prices, improved capacity utilization by the mills, larger sugar production, reduction in cost of production per kilogram of sugar, more revenue for the government, stable prices for the consumers and better dividend to the shareholders of public limited companies. Another cause of reduction in recovery rate was the excess water due to devastating flood in the country and rain. As a result excessive water was absorbed by the sugarcane crop which reduced the sugar contents in the cane and increased in the weight of the same. A major issues pertains to sugarcane crushed more or less the same but production of sugar decreased due to reduction in recovery in percentage.

CONCLUSION

Pakistan, till today no research institution has been established for the development of potential sugar cane yield production and increase in the recovery rate of the crushed cane. As a result, sugar recovery is hardly 9.5 percent as against 12-14 percent in other world sugar producing countries. In Pakistan, more than 45 percent people generate their income for agriculture sector and 85 percent are small farmers. Small
farmers are operating less than 12.5 acres of irrigated land or less than 25 acres of un-irrigated land. Thus small farms contributes 35 percent of total agricultural output. The predominance of small farms (over 90 percent) is a critical factor in agricultural development. The sugarcane crop is beset with many problems; one abysmally low yield leading to yearly fluctuation in production, and secondly monopolistic exploitation of sugar cane growers by the powerful sugar indicate. However, in many developing countries including Pakistan wide adoption of research results remain quite limited. This situation calls research and development institution for extension supports, to make valuable interaction with the farmers and also extend their field staffs which must provide guidance to the farmers regarding to improve agricultural techniques right from the preparation of land to the harvesting of crop. Therefore, there is a need to appoint considering to probe into the causes responsible for the ills of such an important industry as sugar and suggest some effective measures to revolutionize and reactivate it. The fact is that the capital required for adopting innovative farm technologies relate on appropriate technology either comes from farmers own savings or through borrowing and agriculture credit thus, comes to the regarded as an essential input in the modern technology. All agricultural financial institutions should increased agriculture financing facilities awareness campaigns through media, radio about easy and cheap availability of credit. Bank should extend their running finance facilities for agricultural purposes on the basis of multiple/revolving limit for period of three years in addition, to demand finance (single disbursement) under the Supervise Agricultural Credit Scheme. The modifications will benefits to cane grower’s helps streamline their operating efficiency of sugarcane growers of Pakistan. High yielding varieties of cane should be introduce in the agricultural sector. This will bring improvement in cane potential highest yield per hectare and will also increase recovery rate as well as improve sucrose contents. Such varieties will raise the output of sugar. Its realization and its importance, measures will take for it development and by the research expertise emphasizes the balance growth between industrial and agricultural factor of Pakistan.
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