



Changes in Sugarcane Production Costs and Returns in Louisiana, 2004-2008

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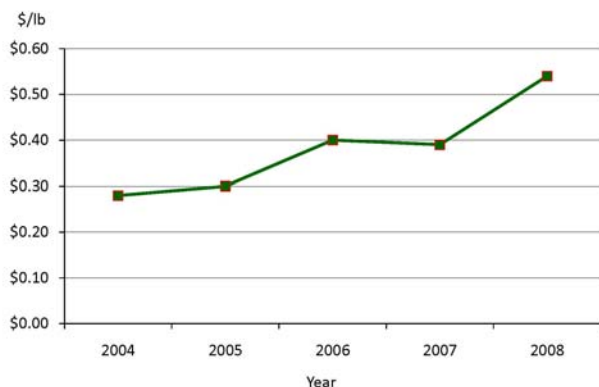
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Sugarcane production and processing is a major agricultural industry in Louisiana. It is consistently the leading agricultural row crop produced in the state in terms of market value of product produced. In 2008, the total market value of raw sugar and molasses produced in Louisiana was \$601.7 million, ahead of rice, soybeans, corn and cotton.

Production costs for sugarcane in Louisiana have risen substantially over the past few years, while raw sugar prices received have remained flat. This report presents a brief summary highlighting the changes in sugarcane production costs in Louisiana over the 2004-2008 period. Comparisons are made between variable and total production costs per pound of raw sugar produced and the net average raw sugar price received in those years.

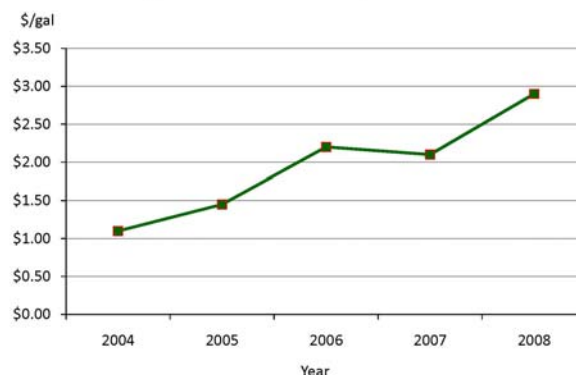
Nitrogen fertilizer is one of the major farm production expense items associated with sugarcane production. Current fertilizer recommendations for sugarcane produced in Louisiana suggest the use of 60-100 pounds of nitrogen per acre on plant cane and 80-120 pounds of nitrogen per acre on stubble cane. Since 2004, the input cost of nitrogen fertilizer has almost doubled (Figure 1). In 2004, the average nitrogen cost was \$0.28 per pound. By 2008, that cost had risen to \$0.54 per pound, increasing nitrogen fertilization costs by \$21 to \$26 dollars per acre of sugarcane produced.

Figure 1 – Nitrogen Fertilizer Cost, 2004-2008



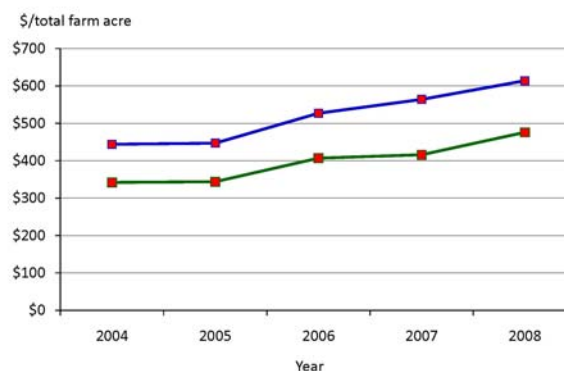
Diesel fuel is another major production cost item. Planting, cultivating and harvesting sugarcane all involve the use of tractors or harvesters consuming fuel. In 2004, the average farm diesel cost in Louisiana was \$1.10 per gallon (Figure 2). By 2008, the cost of farm diesel had risen to \$2.90 per gallon. As a result, fuel cost per acre of sugarcane produced increased by approximately \$24 per acre over the five year period.

Figure 2 – Diesel Fuel Cost, 2004-2008



Variable and total sugarcane production costs per total farm acre are shown in Figure 3. Variable costs include expenses for seedcane purchase, fertilizer, fuel, herbicides, insecticides, labor and repairs. Total production costs also include fixed equipment expenses and general farm overhead.

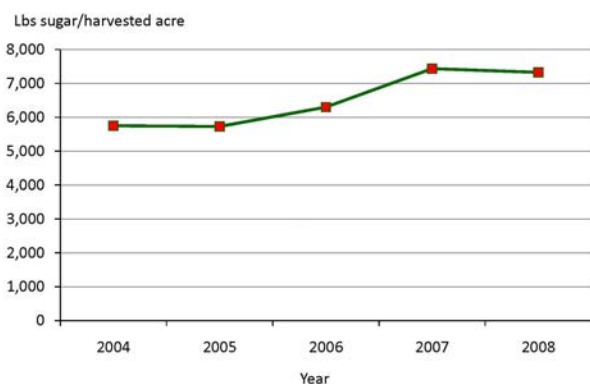
Figure 3 – Sugarcane Variable and Total Cost per Acre, 2004-2008



In 2004, variable sugarcane production costs were estimated to be \$342 per total farm acre. Increased fertilizer and fuel prices, as well as other cost changes, pushed variable costs up to \$476 per total farm acre by 2008. Including fixed equipment costs and general farm overhead, total sugarcane production costs increased from \$444 per acre in 2004 to \$614 per acre in 2008.

Actual production costs per pound of raw sugar produced are influenced by sugar yield as well as production costs per acre. Figure 4 presents the actual raw sugar yield per harvested acre for sugarcane production in Louisiana from 2004 through 2008. Harvested yields were below 6,000 pounds per acre in 2004 and 2005 (5,751 lbs/acre and 5,729 lbs/acre, respectively). In 2006, the state average yield was 6,300 lbs per harvested acre. Harvested acre yields were above 7,000 lbs/acre the past two years, with state average yields of 7,434 lbs/acre in 2007 and 7,325 lbs/acre in 2008.

Figure 4 – Sugarcane Yield per Harvested Acre, 2004-2008



Using actual raw sugar yields (converted to yield per total farm acre) and estimated production costs per acre, production costs per pound of raw sugar produced were calculated and are shown in Figure 5 along with the net average raw sugar price received by growers in Louisiana over that time period. Variable production costs per pound of raw sugar ranged from 15.4 cents/lb in 2004 to 16.8 cents/lb in 2008. Total production costs were

estimated to be 21.3 cents/lb in 2004 and had risen to 22.7 cents/lb in 2008.

Figure 5 – Estimated Total Production Cost and Net Raw Sugar Price Received, 2004-2008

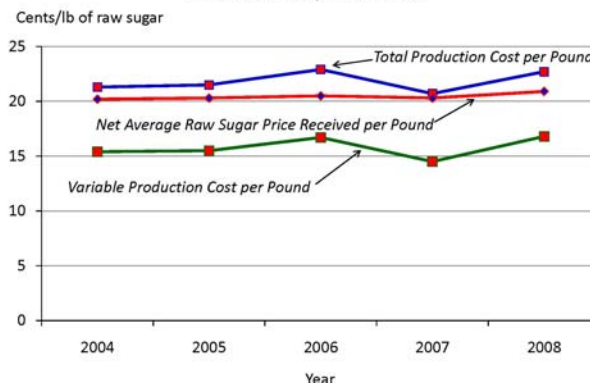


Figure 5 also shows the net average raw sugar price received by sugarcane growers in the state over the 2004-2008 period. Over this time period, net prices received by growers exceeded 20.5 cents/lb in only one year, 2008. Over the 2004-2007 period, net average raw sugar prices received were 20.2, 20.3, 20.5 and 20.3 cents/lb, respectively. In 2008, average net price received increased to 20.9 cents/lb.

As illustrated in Figure 5, raw sugar prices received by growers in Louisiana are covering variable production costs, but are not high enough to cover total production costs. Farm revenues from sugarcane production are sufficient to purchase inputs and pay for the variable costs of field and harvest operations. However, these prices have not been high enough to cover total production costs. As a result, replacing equipment in a timely and cost efficient manner as well as securing financing for the next year's crop are becoming much more difficult, especially for farms with less than average sugar yields. This cost/price relationship poses a serious challenge for the long term economic viability of many of these sugarcane farms in the state, as well as the raw sugar mills which process their sugarcane.

References

2008 Louisiana Ag Summary, Louisiana State University Agricultural Center.
Projected Costs and Returns – Sugarcane, Louisiana, 2004-2008, LSU Agricultural Center, Dept. of Agricultural Economics and Agribusiness, A.E.A. Information Series No. 220, 229, 237, 245, 253.



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