

## SUGARCANE ECONOMIC RESEARCH IN 2008

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Projected costs and returns for the various stages of sugarcane production in Louisiana were estimated for the 2008 crop year. Production and tillage practices, as well as application rates for fertilizer, herbicides and insecticides were updated. Input suppliers and equipment dealers were surveyed in 2007 for current input prices. Specific operations for which production costs were estimated included field operations on fallow land, seedbed preparation, cutting and planting heat treated seedcane, planting cultured seedcane, field operations on plantcane, first stubble, second stubble, and third stubble, succession planting, as well as the costs of harvesting with wholestalk and combine harvesters. Costs and returns were estimated for tenant-operators, reflecting the predominant land tenure situation, and reflect a mill payment of 39 percent of production and a land rent payment of one-fifth and one-sixth shares of the "after milling crop" proceeds. Total costs of production plus overhead for crop cycles through harvest of second, third and fourth stubble were estimated and breakeven prices to cover direct and total specified production costs were estimated for one-fifth and one-sixth share rental arrangements. Summary breakeven prices to cover production costs through harvest of 3rd stubble for alternative yield levels are shown in Table 1. These values also represent production costs per pound of sugar produced at assumed yield levels. Breakeven raw sugar yield per acre of sugarcane harvested are presented in Table 2 for a selected range of raw sugar prices.

Allocated (unrecovered) sugarcane planting cost estimates were estimated for sugarcane planted in 2008. Published estimates for allocation of total planting costs as of January 1, 2009, for sugarcane planted the previous year, were as follows: cultured seed-cane - \$1,149 per acre, propagated seed-cane - \$791 per acre, machine planted whole stalk plant cane - \$799 per acre and machine planted billet plant cane - \$999 per acre. These estimates serve as a basis for the determination of sugarcane crop value associated with changes in land ownership or tenant arrangements.

Production cost estimates were developed for the use of high-fiber energy cane as a biofuel feedstock. Cost estimates included values for planting, cultivation and harvest of energy cane for a range of average yields. Cost comparisons were made between cellulosic ethanol production costs using high fiber energy cane as the feedstock with corn ethanol to evaluate cost competitiveness.

Table 1. Projected breakeven selling prices for raw sugar for selected yield levels, Arrangements, harvest through third stubble, tenant-operators, Louisiana, 2008.

|  | Selected Yield Levels              |       |       |       |       |
|--|------------------------------------|-------|-------|-------|-------|
|  | -20%                               | -10%  | Base  | +10%  | +20%  |
| Cane yield per harvested acre <sup>1</sup> (tons)                | 27.9                               | 31.4  | 34.9  | 38.4  | 41.9  |
| Sugar yield per harvested acre <sup>2</sup> (lbs)                | 5,863                              | 6,596 | 7,329 | 8,062 | 8,795 |
| Sugar yield per rotational (farm) <sup>3</sup> acre <sup>3</sup> | 4,470                              | 5,029 | 5,587 | 6,146 | 6,705 |
| One-Fifth Land Share Rent:                                       |                                    |       |       |       |       |
|  | -----cents per pound of sugar----- |       |       |       |       |
| Breakeven price to recover <sup>4</sup> :                        |                                    |       |       |       |       |
| Direct costs   | 19.5                               | 17.8  | 16.4  | 15.3  | 14.4  |
| Total specified costs  | 25.8                               | 23.4  | 21.5  | 20.0  | 18.6  |
| Total costs plus overhead  | 27.2                               | 24.7  | 22.6  | 21.0  | 19.6  |
| One-Sixth Land Share Rent:                                       |                                    |       |       |       |       |
|  | -----cents per pound of sugar----- |       |       |       |       |
| Breakeven price to recover <sup>4</sup> :                        |                                    |       |       |       |       |
| Direct costs   | 18.7                               | 17.1  | 15.8  | 14.7  | 13.8  |
| Total specified costs  | 24.8                               | 22.5  | 20.7  | 19.2  | 17.9  |
| Total costs plus overhead  | 26.1                               | 23.7  | 21.7  | 20.1  | 18.8  |

<sup>1</sup> Average farm yield across harvested acreage of plantcane, 1st stubble, 2nd stubble, and 3rd stubble (base yield of 36 tons plantcane, 37 tons 1st stubble, 34 tons 2nd stubble, 33 tons 3rd stubble).

<sup>2</sup> Average yield in tons per acre multiplied by a 200 CRS.

<sup>3</sup> Assumes standard land rotation of 20% each of fallow, plantcane, 1st stubble, 2nd stubble and 3rd stubble.

<sup>4</sup> Breakeven prices are calculated by dividing grower's share of production into direct costs, total specified costs, and total specified costs plus overhead.

Table 2. Projected breakeven raw sugar yields for selected raw sugar price levels, harvest through third stubble, tenant-operators, Louisiana, 2008.

| Raw sugar price (cents per pound) | Selected Raw Sugar Price Levels          |       |       |       |       |
|-----------------------------------|--|-------|-------|-------|-------|
|                                   | -1.0                                     | -0.5  | Base  | +0.5  | +1.0  |
|                                   | 19.5                                     | 20.0  | 20.5  | 21.0  | 21.5  |
| One-Fifth Land Share Rent:        |  |       |       |       |       |
|                                   | -----pounds of sugar per harv. acre----- |       |       |       |       |
| Breakeven yield to recover:       |  |       |       |       |       |
| Direct costs                      | 6,184                                    | 6,030 | 5,883 | 5,742 | 5,609 |
| Total specified costs             | 8,104                                    | 7,901 | 7,708 | 7,525 | 7,350 |
| Total costs plus overhead         | 8,518                                    | 8,305 | 8,102 | 7,909 | 7,725 |
| One-Sixth Land Share Rent:        |  |       |       |       |       |
|                                   | -----pounds of sugar per harv. acre----- |       |       |       |       |
| Breakeven yield to recover:       |  |       |       |       |       |
| Direct costs                      | 5,941                                    | 5,792 | 5,651 | 5,516 | 5,388 |
| Total specified costs             | 7,784                                    | 7,590 | 7,405 | 7,228 | 7,060 |
| Total costs plus overhead         | 8,182                                    | 7,978 | 7,783 | 7,598 | 7,421 |