

## ECONOMIC IMPACT OF COMPLYING WITH THE DAIRY RULE ON OKEECHOBEE DAIRIES



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The economic impact of dairies complying with the rule was estimated in a two step process. First, the impact on county economic activity was estimated.

### COUNTY IMPACTS

County level multipliers were used to estimate the total impact of the dairy industry on the economy of Okeechobee County and to evaluate the impact of reduced dairy production under recent state programs. Major findings were:

1. Agriculture in Okeechobee County in 1988 generated direct earnings of \$26 million (16.6 percent of total earnings in the county), and in 1987 the dairy industry represented 67.6 percent of total agricultural sales in the county.
2. Multipliers for the dairy industry relate total county impacts to sales of milk outside of Okeechobee County by dairy producers. Each dollar in milk sales generates total sales in the county of \$1.58 and earnings of \$0.29, and 15 full-time equivalent jobs are generated for each one million dollars in sales.

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3. In 1989, the base year for the impact study, the Okeechobee County dairies produced 624 million pounds of milk and had gross sales of more than \$100 million. Total, county-wide economic impacts were \$158.6 million in sales, 1,549 full-time equivalent jobs, and \$29.8 million in local earnings.
4. Relative to 1989, environmental rules and relocation incentives caused 19 dairies to discontinue operations which reduced milk production by more than 200 million pounds resulting in reduced milk sales in the range of \$30 - \$34 million. Resulting total impacts on the local economy are annual losses between \$47.6 and \$54.3 million in county-wide sales, between 465 and 531 full-time equivalent jobs, and between \$9.0 and \$10.2 million in earnings.
5. Annual impacts expressed on the basis of a 1000 cow dairy are 14.5 million pounds of milk and direct sales of \$2.3 million. Resulting county-wide impacts are losses of \$3.7 million in sales, 36 full-time equivalent jobs, and 692.8 thousand in earnings.
6. Cost sharing funds and expenditures by the state to purchase dairy cows (approximately \$17.4 million) provided a one time infusion of an estimated \$10.6 million into the local economy. Other economic activity on land formerly used for dairy production appears to be insignificant.

### **DAIRY IMPACTS**

This part of the study identified and measured the most important cost components of dairymen's compliance with the dairy rule in the Lake Okeechobee drainage basin.

A survey of the remaining dairymen in the basin identified the out-of-pocket investments they had made in facilities; documented the costs incurred during and after construction due to changes in cow numbers and in milk production per cow, as well as increases in culling rates, employees, and variable costs. Average values for all the responses follow:

--Total expenditures on construction averaged \$923 per cow, \$691 for DER mandated components and \$232 for optional components. Cost share averaged \$355 per cow, leaving out-of-pocket expenditures of \$568 per cow, almost \$600,000 per dairy.

--During construction, which took an average of 11 months:

- \*Cow numbers dropped 9 percent

- \*Cow culling rates were 10 percent higher than before

- \*Milk production per cow declined 3.68 pounds per day

- \*About .65 extra employee was necessary

- \*Variable costs of operation increased about 8 percent.

--The net effect of revenue losses during construction averaged about \$352 per cow, or about \$369,000 per dairy.

The major financial effects of complying with the "dairy rule" were measured with a financial simulator which projected profitability and net worth accumulation over the next five years. Simulations were done for five representative dairies which provided detailed data about their dairies' financial performance. Major results of that analysis are:

--The present value of net income losses due to compliance with the 'rule' averaged about \$272,000, or \$259 per cow over the next five years.

--Even 100 percent cost share for DER approved components was not enough to offset the cost of rule compliance.

--High tech designs (i.e. designs with optional roofed structures that were not eligible for cost sharing) averaged \$124 per cow per year more milk revenue than did the low tech designs, which more than offset the cost differences.

--The dairy rule is projected to end up costing small dairies (i.e. less than 1000 cows) about 50 percent more per cow than large dairies.

Taking the full cost of rule compliance into account and giving credit where due for improved production, rule compliance will on average cost dairies an estimated \$1179 per cow or \$1.2 million per dairy, net of cost share received. Spread over the economic life of the system this amounts to an increase of approximately \$1.10 per hundredweight of milk produced.