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A Feasibility Analysis for a Milk Processing Plant in Tangipahoa Parish

Updated July 2005

Introduction

The association of Louisiana Milk Producers (ALaMP) is exploring the possibility of establishing a milk processing plant in the Tangipahoa Parish. This report will analyze the economic feasibility of the proposed plant.

Background

The tri-parish area of Tangipahoa, St. Helena and Washington produced 402 million pounds of milk in 2003, which was approximately 80% of the total production in the state. The total consumption in the state is about 900 million pounds a year. The retail price of processed milk is approximately \$3.25 per gallon, while dairy farmers received \$1.25 for each gallon of raw milk delivered to a processing plant. The wholesale price of processed milk is \$2.50, so an additional \$1.25 of value is added to a gallon of milk between what the farmers receive and the wholesale price of processed milk. Since many dairy farmers are struggling to cover costs with the price they are receiving for their product, they are keenly interested in establishing a milk processing plant that will help capture some of the value added to raw milk before it reaches the retailers. Their goal is to process and sell approximately 180 million pounds of milk per year. Our analysis of the cost and returns from processing raw milk will be based on a study by researchers at the Cornell University.

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Analysis

A Cornell study by Erba, Aplin and Stephenson(1997) analyzed the cost and distribution of processing and distribution in 35 fluid milk plants throughout the United States.

The study considered the (a) labor cost, (b) utility cost, (c) plant cost including depreciation, (d) cost of milk containers, (e) delivery cost and (f) selling, general and administrative expenses. The cost in each category was reported on a per gallon basis.

The data represents costs during January 1993 to March 1995 period.

In our analysis, we will use the average estimated in some of the categories and adjust it to reflect 2005 prices and also account for the price differences between Louisiana and the U.S. In the other categories we will use our own estimates based on information obtained locally. The estimates of the cost components are shown in Table 1.

Labor : The average labor cost of processing milk in the U. S. was 12.3 cents per gallon at 1994 prices. This was based on a labor cost of \$20.19 (including benefits) per hour.

Adjusting the data for the cost of living differences between the U.S. average and Louisiana, and for inflation since 1994, the labor cost was estimated to be 15.1 cents per gallon at 2005 prices

Utility: The utility cost in Louisiana was found to lower than in New York in 1994, so a cost of 1.2 cent per gallon was used.

Plant: The plant cost reported in the Cornell study included labor and utility cost. In our estimate these two items were excluded from the plant cost since they are considered

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separately. Our estimate of the plant cost was based on a facility costing \$30 million and capable of processing 1 million pounds a day. We considered the opportunity cost of capital tied up in the plant, maintenance cost as well as taxes and insurance. Also assuming that the plant would process an average of 180 million pounds of milk annually, our estimate for the plant cost is 22.7 cents per gallon in 2005.

Plastic Containers Since utility prices are lower in Louisiana, the cost for plastic jars was estimated to be 9.1 cents.

Delivery: The average delivery cost of 9.2 cents per gallon in the Cornell study was based on a labor cost of \$21.3 per hour, in 1994. The low wages of transportation workers in Louisiana should keep the delivery cost in check. Consequently, we have used a smaller adjustment factor than that for plant labor.

Selling, General and Administrative: The average selling and general and administrative expenses in the U.S. would be 14 cents a gallon at 2005 prices. We estimate the cost in Louisiana to be 13 cents per gallon.

Our analysis shows that the cost of processing a gallon of fluid milk in the Tangipahoa Parish would be 71 cents. Since the price of raw milk is \$1.25 per gallon and the wholesale price of processed milk is estimated to be \$2.50 per gallon, there is an opportunity for the ownership of the milk plant to gain $\$2.5 - \$1.96 = \$0.54$ or 54 cents per gallon. Assuming 180 million lbs (20.93 mill gals) of milk is processed per year, the

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annual profit would be \$11.3 million. If the local dairy farmers owned the plant, it has the potential for significantly increasing their income. This would provide a substantial relief to the farmers who are under pressure from the rising cost of milk production

Most state sponsored projects are required to assume a 10 percent cost overrun for capital outlay and operation. Such an adjustment would reduce the gain to 47 cents per gallon or \$9.84 million for the enterprise.

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Table 1
Cost of Processing of Processing and Distribution of Fluid Milk

<u>Cost Component</u>	<u>U.S Average</u> (¢ per gallon)		<u>Local Plant</u> (¢ per gal, 2005 prices)
	1994 prices	2005 prices	
Labor	12.3	16.3	15.1
Utility	2.6	3.4	1.2
Plant	21.1	27.9	22.7
Plastic Container	8.8	11.6	9.1
Delivery	9.2	12.1	10
Selling, G&A	10.6	14	13
Total	64.6	85.3	71.1

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Table 1			
Cost of Processing and Distributing Fluid Milk			
Cost Component	U.S. Average (¢ per gallon)		Local Plant (¢ per gallon)
	1994 Prices	2005 Prices	2005 Prices
Labor	12.3	16.3	15.1
Utility	2.6	3.4	1.2
Plant	21.1	27.9	22.7
Plastic Container	8.8	11.6	9.1
Delivery	9.2	12.1	10.0
Selling G&A	10.6	14.0	13.0
Total	64.6	85.3	71.1