


**TESTIMONY OF DR. WAYNE A. KNOBLAUCH  
ON BEHALF OF  
AMERICAN INDEPENDENT DAIRY ALLIANCE  
(AIDA)**

***Introduction and Qualifications***

I am here today to present testimony at this hearing on behalf of the American Independent Dairy Alliance (AIDA). I am a Professor in the Department of Applied Economics and Management in the College of Agriculture and Life Sciences at Cornell University. I earned a PhD in agricultural economics from Michigan State University in 1976. I have been on the faculty at Cornell University since that time. At Cornell University, I teach and conduct research and extension programs in dairy farm management. I have won numerous awards for my research, teaching and extension programs. ~~My curriculum vita is attached to this testimony.~~ 

My testimony for AIDA in this hearing addresses three principal areas. First, drawing upon Cornell University research and USDA-ERS statistics, it discusses the costs of producing milk by both large and small dairy farms. Second, I discuss the prices for milk actually received by dairy farmers basing by discussion on the continuing research done at Cornell concerning mailbox milk prices. Third, my testimony addresses the research done at Cornell University to study the costs actually incurred by value added processors, including some producer-handlers and the costs actually incurred by regulated fluid milk bottlers. Finally, I briefly discuss the costs of balancing incurred by producer-handlers.

***Costs of Milk Production***

For more than 50 years, Cornell has conducted surveys of New York dairy farmers on a wide range of topics, including the cost of producing milk.<sup>1</sup>

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<sup>1</sup> See the References & Citations section at the end of my testimony for a listing of Cornell University Dairy Farm Business Summary publications that I relied upon in preparing my testimony.

Data from the Dairy Farm Business Summary and Analysis program for 2006, 2007 and 2008 was analyzed by herd size. The Dairy Farm Business Summary represents the average of above average producers. For example, the producers in the study are above average in terms of milk production per cow and financial performance.

Not surprisingly, the results show that in each of the most recent three years, as herd size increases, total cost of producing milk decreases. Small herds, those with less than 100 cows, averaged a total cost of \$23.16 per hundredweight in 2008. For herds with greater than 800 cows the total cost of producing milk decreased to \$18.15 per hundredweight. The difference between small and large herd sizes in 2008 of \$5.01 can be mostly attributed to improved rates of production per cow, and capital and labor efficiencies. Yet, despite these efficiencies, and of particular relevance to this hearing, it is important to note that the cost of production exceeds the uniform milk price for small herds in all years but not for large farms in good milk price years, notably 2007 and 2008. While 2009 data is not available, it can be expected that for all herd sizes, the costs of production will by far exceed the uniform price.

The USDA, Economic Research Service cost of milk production data represents the costs for the average producer. Thus, their data shows costs that are higher per hundredweight of milk produced than the Dairy Farm Business Summary. The ERS average data demonstrates that even when measured against the Class I price, the cost of production exceeds the Class I price by \$5 to 8 per hundredweight. See the attached graph for actual Dairy Farm Business Summary and ERS cost of production data in comparison to milk prices.

The Cornell data and other data from other studies, most notably the United States Department of Agriculture, Economic Research Service studies, show that scale economies virtually disappear after 1,250 cow herd size is attained. This is true regardless of geographic region of the United States. See especially USDA, ERS Publication Number 47, September, 2007. But nevertheless, even for those producers with these larger, more efficient herds, their cost of production regularly exceeds the uniform prices and even the Class I prices of the orders. Given this fact, dairy farmers regardless of the size of their herd cannot rely on simply marketing their raw milk to ensure long-terms economic viability of their farm operations.

## *Milk Price Differences*

The case that federal milk marketing orders provides uniform milk prices for all producers is just plain wrong. Cornell University compiles period reports and surveys of producer paychecks, which are sorted and analyzed to provide a clearer picture of producer returns. These reports demonstrate that even within the structure of federal orders, farms will be paid differently based on component levels shipped in Multiple Component Pricing orders, somatic cell counts in those orders where that is accounted for, and the Producer Price Differential. And, as you can see from the attached milk check data, over order premiums and deductions from milk checks differ significantly across farms. See "Comparing Your Milk Checks", Stephenson.

In any year, there is about a \$2.00 difference from high to low within New York State alone based on components, and this is taking colored breeds with higher milk components out of the equation. There is also a \$2.00 spread in what we call the "Net Marketing Margin" which takes the Producer Price Differential + all premiums - all expenses (including hauling). The net marketing margin is a good measure of actual differences among similarly situated farms because a farm could always get a higher Producer Price Differential by shipping their milk to Boston in Order 1 or to Miami in Order 6, for that matter. However, the hauling costs could more than offset the higher Producer Price Differential. Taking these marketing decisions into account, along with components of producer milk, this research data makes the point that producers do not receive equal payments under the current federal order system.

What would producers gain by having Producer Handlers pooled? In 2008, about 39 percent of producer receipts in federal orders were used in Class I sales. The Producer Handler volume in 2008 was about 1.5 percent of Class I sales. If we assume that the average Class I differential that would have been paid by Producer Handlers was between \$2-3 per cwt. then the average statistical uniform price would have increased from \$18.24 per cwt. to \$18.25-18.26 - a mere 1-2 cents per cwt. These increases in the uniform prices due to the full regulation of producer-handlers would neither offset the differences already existing among producer mailbox prices nor would it change the existing spread among producers. Producers are not losing significant revenues because Producer Handlers are not contributing to the pool. Just to put this in perspective, this is well below than the 4-5¢ of

administrative costs required in most federal orders that producer-handlers would have to pay.

Let's talk about the pay price to the producer. The cooperatives set the prices to the extent that they are above the minimum price, and also have add on charges and deductions which they charge back to the producers. Thus, the 1- 2 cents might never even go into the producers' pockets in any event.

### *Value Added Processors*

My Cornell University colleagues, Chuck Nicholson and Mark Stephenson, conducted a study of producers who operated plants to determine the viability and profitability of their operations. In this study (RB 206-07) Nicholson and Stephenson refer to the businesses as "Value Added" processors rather than "Producer-Handlers" because there are several farms which are bottling and selling fluid milk but also many farms making manufactured products. We decided to conduct a study of these operations in New York, Vermont and Wisconsin in 2006. There were 27 operations in total that were studied. Some of them were goat or sheep farms but most were traditional dairy farms. Some bottled and sold fluid milk but most made cheese or other manufactured products. Still, there were 6 operations bottling cow's milk which had Producer-Handler status involved in the study.

Enterprise accounting was used to separate the income and expenses of producing milk from processing and marketing of finished products. When processing net income (which includes the cost of the milk produced) was plotted against total processing receipts, a distinct pattern was observed. The report shows a regression line through those data points which indicates that regardless of product produced or type of milk (cow, sheep or goat) a value-added processor needed to receive about \$100 per hundredweight in total returns in order to break even.

Fluid milk processors in this study were found to average \$2.38 in processing costs (not including milk price) per gallon. There was only one farm in the study that made a modest return on both milk production and processing. Most made a bit of profit in one side of their operation or the other. If part of the rationale for a Producer-Handler exemption is to allow

them some room to compete with large specialized fluid milk plants, it is obvious from this study that the need still exists.

The additional burden of contributing equalization payments to the pool and the associated paperwork would certainly put some folks out of business. And, this really comes without the usual Class I benefit of performance (balancing) for most Producer Handlers.

### ***Cost of Processing***

Admittedly, Producer Handlers in the Value Added study were smaller sized operations. However, another Cornell University study clearly shows that larger plant size and higher plant capacity utilization increase plant labor productivity. Furthermore, both factors also directly impact plant cost per gallon. The total effect of operating a larger plant, considering both the direct effect on cost per gallon and the indirect effect on costs through increased labor productivity, was substantial if plant size changed significantly. See RB 97-03, Erba, Aplin and Stephenson.

For example, increasing from 2 million gallons (17.24 million pounds) per month to 3 million gallons (25.86 million pounds) per month decreased plant cost per gallon by 4.1%. Increasing from 3 million gallons per month to 4 million gallons (34.48 million pounds) per month further decreased plant cost per gallon by 2.7%. Given their analysis was based on costs exclusive of depreciation, the cost advantage of larger plants when including depreciation is undoubtedly even larger because the investment per gallon is lower in larger plants. This provides evidence that plants in the 15 to 30 million pounds of milk per month are still finding substantial returns to scale and have not yet reached the “flat portion” of the cost curve which occurs after the 30 million pounds of milk per month. The assertion that fluid bottling plants reach a level of efficiency at three million pounds of Class I volumes each month sufficient to compete on a level playing field with larger regulated bottlers is simply untrue. When we further consider that this study was completed over 12 years ago and it is likely that the scale economies have moved to even larger volumes since then. Producer Handlers, even those processing volumes of milk at the upper end of the levels estimated by NMPF in its economic testimony are simply not in the range of the scale to compete with equal milk costs with large, fully regulated plants.

## ***Balancing Costs***

Producer Handlers must balance their own milk supplies with demand for their fluid products. If a Producer Handler produces more milk than it is able to sell as finished product, the disposal of surplus milk is either through outlets that the producer-handler might possess or through sales to another outlet at a negotiated price - usually the lowest class price - not the statistical uniform price. We tend to think of the uniform price as the opportunity cost that a Producer Handler foregoes for the privilege of selling at a higher class I level, but that is not the case for sales of milk to balance their production. The significant cost of balancing is placed on the Producer Handlers themselves. For example, the U.S. average statistical uniform price in 2008 was \$18.24 per hundredweight but the Class IV price only averaged \$14.65 that year. The penalty to a Producer Handler for selling surplus milk at the Class IV price was therefore \$3.59 per hundredweight.

For example, if 20 percent of a Producer Handler's milk was sold to balance demand, it is receiving a penalty of at least \$0.72 per hundredweight of milk produced ( $\$3.59 * 0.20$ ) versus operating as a plant with 100% Class I sales.

## ***Conclusions***

(1) The results of Cornell University research show that in each of the most recent three years, as herd size increases, total cost of producing milk decreases and decreases significantly, but plateaus at approximately 1,250 cows. This is consistent with studies performed by others, most notably, the USDA, Economic Research Service. Taken in tandem, the data from the DFBS and the ERS demonstrate that the total costs of production across all herd sizes exceeds the FMMO blend and Class I prices.

(2) Milk check research data clearly makes the point that producers do not receive equal payments under the current federal order system. This is true even if one ignores the differences in farm-to-farm component payments. Over-order premiums and other marketing decisions result in milk checks that vary substantially between producers in the same federal order. If producer equity is a goal of federal milk marketing orders, then lack of attaining that goal has little to do with Producer Handlers.

(3) Value added research clearly implies that Producer Handler status is a small step in the direction of leveling the playing field with large specialized fluid plants.

(4) As both farms and plants get larger, Producer Handler operations still function at a comparative disadvantage to larger fully regulated plants. Even the largest farms do not generate consistent returns from simply marketing raw milk to ensure profitability, and assuming that those large farms elect to operate producer-handler bottling plants, economies of scale from plant size are not fully realized at the level of volumes that even the largest producer-handlers operate.

(5) Producer Handlers can incur large costs in balancing milk supplied to meet their customer demands. These costs are incurred by the Producer Handler and not by the pooled producers in the order.

### *References & Citations*

Knoblauch, Wayne A., Curriculum Vita

Knoblauch, Wayne A., Linda D. Putnam, Jason Karszes, Daniel Murray and Rella Moag, "Dairy Farm Business Summary New York State, 2007", RB 2008-03, October 2008, Department of Applied Economics and Management, Cornell University.

Knoblauch, Wayne A., Linda D. Putnam and Jason Karszes, "Dairy Farm Business Summary New York State, 2006", RB 2007-01, October 2007, Department of Applied Economics and Management, Cornell University.

"Profits, Costs and the Changing Structure of Dairy Farming", MacDonald, O'Donoghue, McBride, Nehring, Sandretto and Mosheim, USDA, ERS, Report Number 47, September 2007.

"Characteristics and Production Costs of U.S. Dairy Operations", Sara D. Short, USDA, ERS, Report Number 974-6, February 2004.

“Comparing Your Milk Checks”, 2008, Stephenson, Department of Applied Economics and Management, Cornell University.

Nicholson, Charles, and Mark Stephenson, “Financial Performance and Other Characteristics of On-Farm Dairy Processing Enterprises in New York, Vermont and Wisconsin”, RB 2006-07, November 2006, Department of Applied Economics and Management, Cornell University.

Erba, Eric M, Richard D. Aplin and Mark W. Stephenson, “An Analysis of Processing and Distribution Costs in 35 Fluid Milk Plants, RB 97-03, February 1997, Department of Agricultural, Resource and Managerial Economics, Cornell University.



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Year	Less Than 100 Cows			100 to 300 Cows			300 to 800 Cows			More Than 800 Cows			ERS Average Cost of Production	USDA Data FMMO 1 Uniform Pr	
	Cash	Purch Inputs	Total Cost	Cash	Purch Inputs	Total Cost	Cash	Purch Inputs	Total Cost	Cash	Purch Inputs	Total Cost			
2006		11.2	12.57	18.39	11.51	12.86	16.16	12.16	13.46	15.24	12.31	13.5	14.79	23.27	13.51
2007		13.72	15.19	21.26	13.94	15.27	18.8	13.77	15.09	17.03	14.13	15.44	16.89	26.39	19.92
2008		15.73	17.14	23.16	15.23	16.57	19.89	15.47	16.74	18.67	14.89	16.4	18.15	27.88	18.63

<http://www.ers.usda.gov/Data/CostsAndReturns/TestPick.htm#milkproduction>

Year	Cornell Total Cost (<100 Cows)	Cornell Total Cost (100-300 Cows)	Cornell Total Cost (300-800 Cows)	Cornell Total Cost (>800 Cows)	ERS Cost of Production (NY)	FMMO 1 Uniform Price	FMMO 1 Class I price
2006	18.39	16.16	15.24	14.79	23.27	13.51	15.13
2007	21.26	18.8	17.03	16.89	26.39	19.92	21.39
2008	23.16	19.89	18.67	18.15	27.88	18.63	21.25

