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The Cost of Producing Milk as a Management Tool

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CORNELL
AGRICULTURAL ECONOMICS
STAFF PAPER

**The Cost of Producing Milk as a
Management Tool**

Eddy L. LaDue

Staff Paper No. 92-17

November 1992

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The Cost of Producing Milk as a Management Tool

Eddy L. LaDue¹

My assignment for today is to discuss four questions:

1. Why is the cost of producing milk important to the dairy producer?
2. How is the cost of producing milk calculated?
3. What factors have an affect on the cost of producing milk?
4. What should farmers expect in the future for the dairy industry and the price of milk?

I will discuss them in that order.

Why is the Cost of Producing Milk Important to the Dairy Producer?

The answer to this question is very simple and very basic. The basic profitability equation for dairy producers is:

Price of Milk		_____
Minus: Cost of Producing Milk	(-)	_____
Equals: Net Income or Profit	(=)	_____

The cost of producing milk is half of this equation. To improve profitability, we need to either improve the price received for milk or reduce the cost of producing milk. In fact, if we think about this equation for a minute we have to conclude that the cost of producing milk is the "*big half*" of this equation.

Opportunities for Improving Milk Prices are Limited

When we think about the methods we can use to improve the price of milk, we realize that our opportunities are limited. Some price improvement can often be achieved by going after quality premiums. There are a limited number of these. Premiums are often available for reducing somatic cell counts, lowering bacteria counts or, less frequently, increasing protein.

Quantity premiums are available for large producers. However, you usually do not increase herd size just to get quantity premiums. Thus, for most people, you either get the quantity premium or you do not.

You can support advertising programs to increase the consumption of milk and milk products. However, this usually has a modest long-run effect. It will not solve an individual farm's immediate profitability shortcomings.

Increasing the butterfat content of milk has historically been one way of increasing price. But, consumers do not want or need large amounts of butterfat. The premium for higher fat content has been reduced considerably, and will likely be reduced even further. Thus, improving butterfat is likely an unprofitable strategy. Increasing solids-nonfat or protein makes more sense, but few people are currently being paid for these.

Moving to a fall freshening herd may help a few farms where the gains from such a shift are not more than offset by the increased costs of seasonal use of facilities, seasonal feed requirements and seasonal labor requirements. Similarly, a few farms may gain by changing milk plants.

¹ Professor of Agricultural Finance, Cornell University. This paper was presented at the Cornell Cooperative Extension of Jefferson County program on The Cost of Producing Milk on Northern New York Farms held on September 1, 1992.

In net, there just are not many opportunities for increasing the price received for milk. Farmers are frequently called "*price takers*". This is particularly true for dairy farmers.

Opportunities for Reducing the Cost of Production are Unlimited

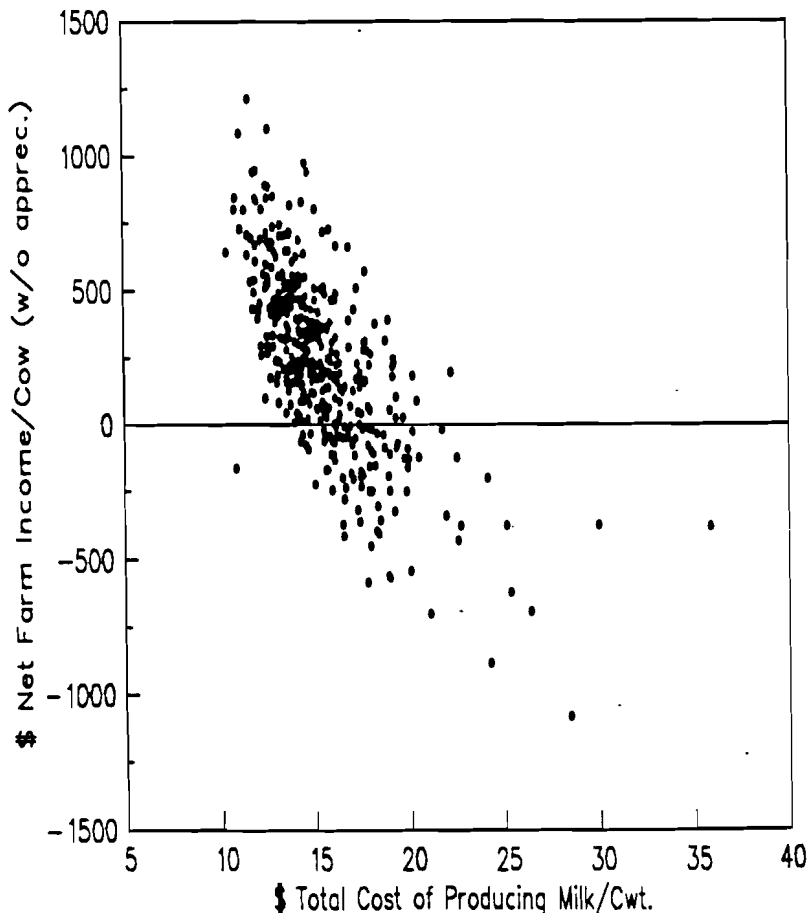
There are many more opportunities on the cost side. I am sure that some of you are thinking "if you think the opportunities are unlimited, come out to my farm and show me where". I am not suggesting that you can reduce the cost to zero. I am suggesting that there are unlimited *number* of things on which you can work.

Most of the decisions and activities of the dairy farm business influence costs. Buying inputs, selecting rations, growing crops, buying machinery and other such activities all have their primary influence on costs. These are the activities that the farmer decides, or controls. So, the cost of producing milk is the basic indicator of your success in controlling those things over which you have the most control.

Cost of Producing Milk is Directly Related to Net Income

Because the milk price can be influenced so little by the farmer, it is very similar on all farms, particularly all farms in the same region. For that reason differences in net income or profit are directly related to the cost of production. For example, data on the 407 New York dairy farms that participated in the Cornell Dairy Farm Business Summary (DFBS) program indicate a very direct relationship between costs and net income (Figure 1).

**Figure 1. TOTAL COST PER HUNDREDWEIGHT & NET FARM INCOME PER COW
407 NEW YORK DAIRY FARM, 1991**



No Such Thing as *the* Cost of Producing Milk

One thing I want to make perfectly clear! There is no such thing as *the* cost of producing milk. You often hear people say such things as "the milk price is below the cost of producing milk". My question for that statement is "*whose cost of producing milk are you talking about?*" Every farm has their own cost of producing milk. It is unlikely to be exactly the same as any other farm, and certainly is unlikely to be the same as their neighbor's, or the same as that of anyone else they know.

To illustrate this, let's look at the cost of producing milk on the 407 farms that participated in DFBS in 1991. To reduce the effect of farm size, we will look at the cost of producing milk (COPM) for three different herd size groups. The 70 to 99 cow herds had COPM that ranged from about \$12 to about \$24 (Figure 2). Costs for most of the herds were spread out between \$13 and \$20. Costs for larger herd sizes were similarly dispersed (Figures 3 and 4), although at slightly lower levels. Clearly, you do not know your cost of producing milk unless you calculate it for your farm.

Figure 2. **70-99 COW HERDS**

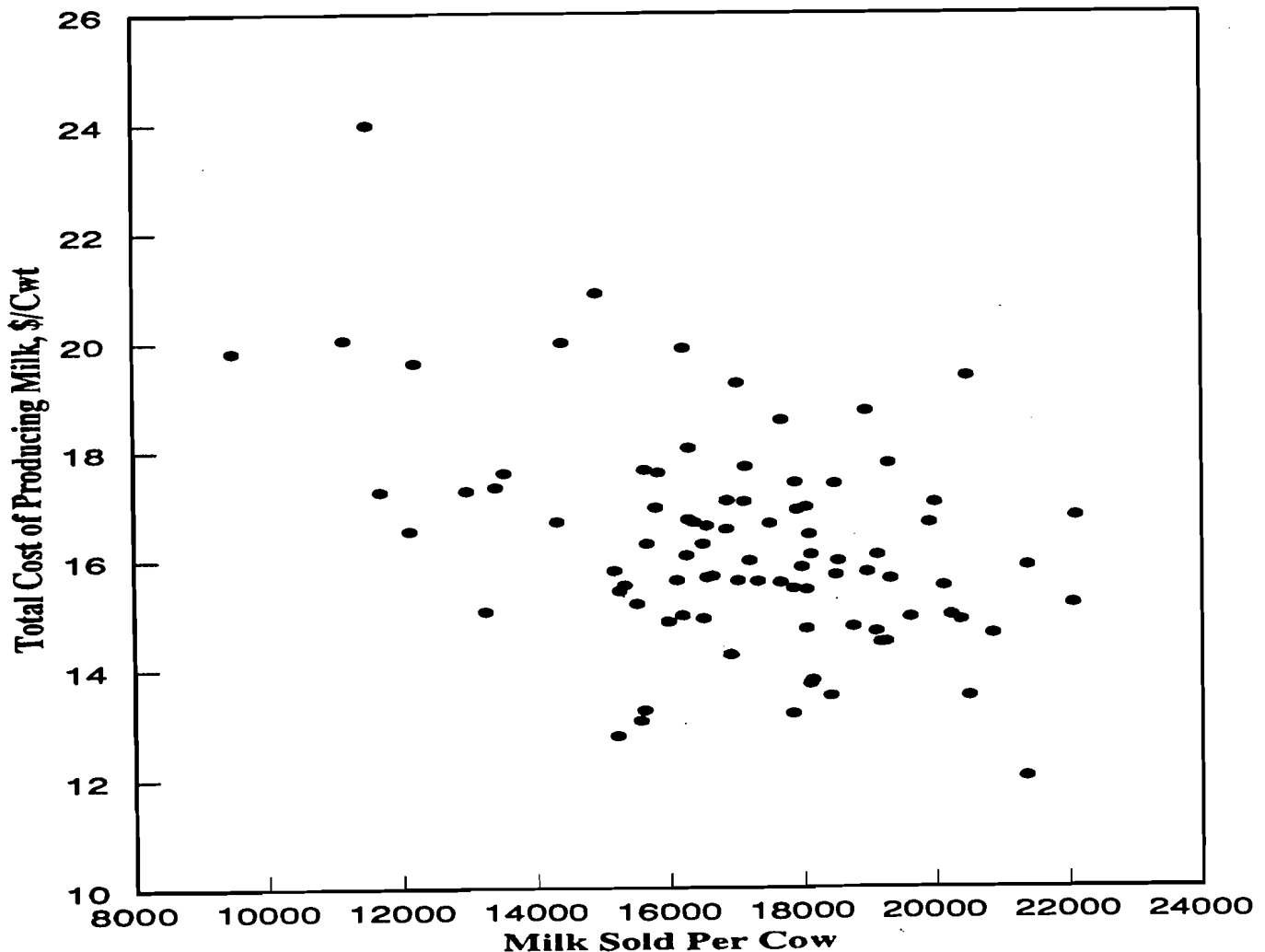


Figure 3. **100-149 COW HERDS**

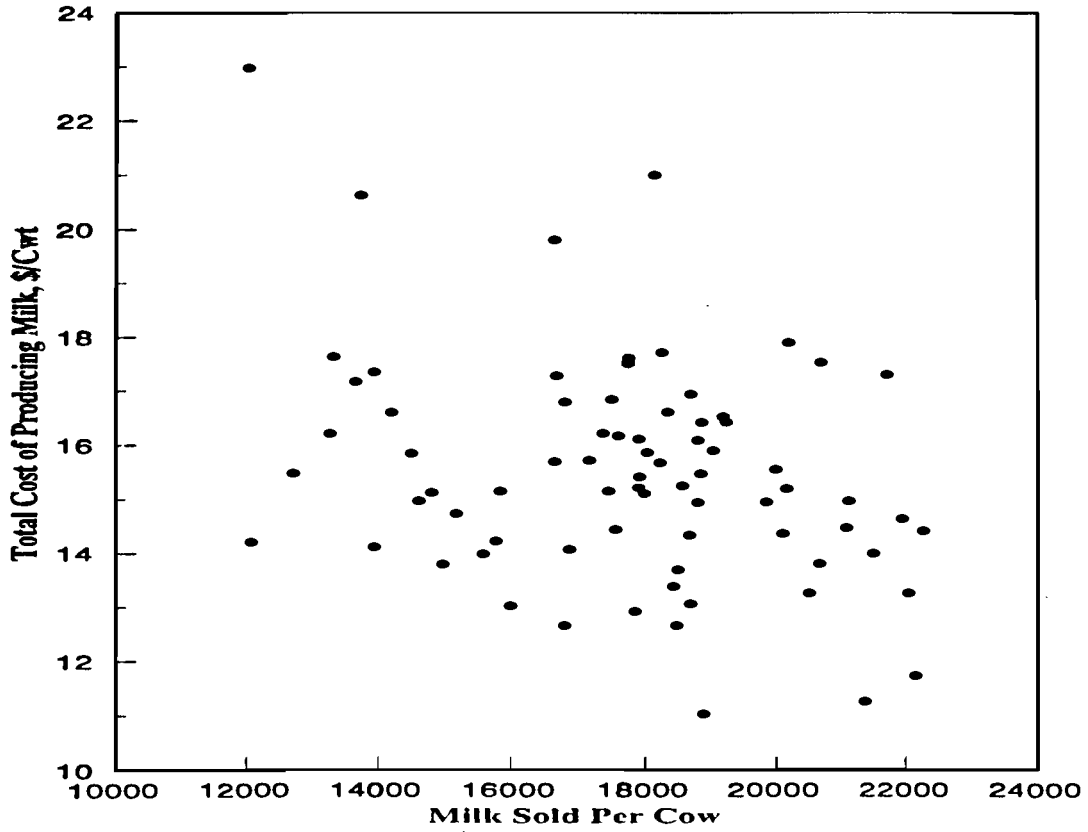
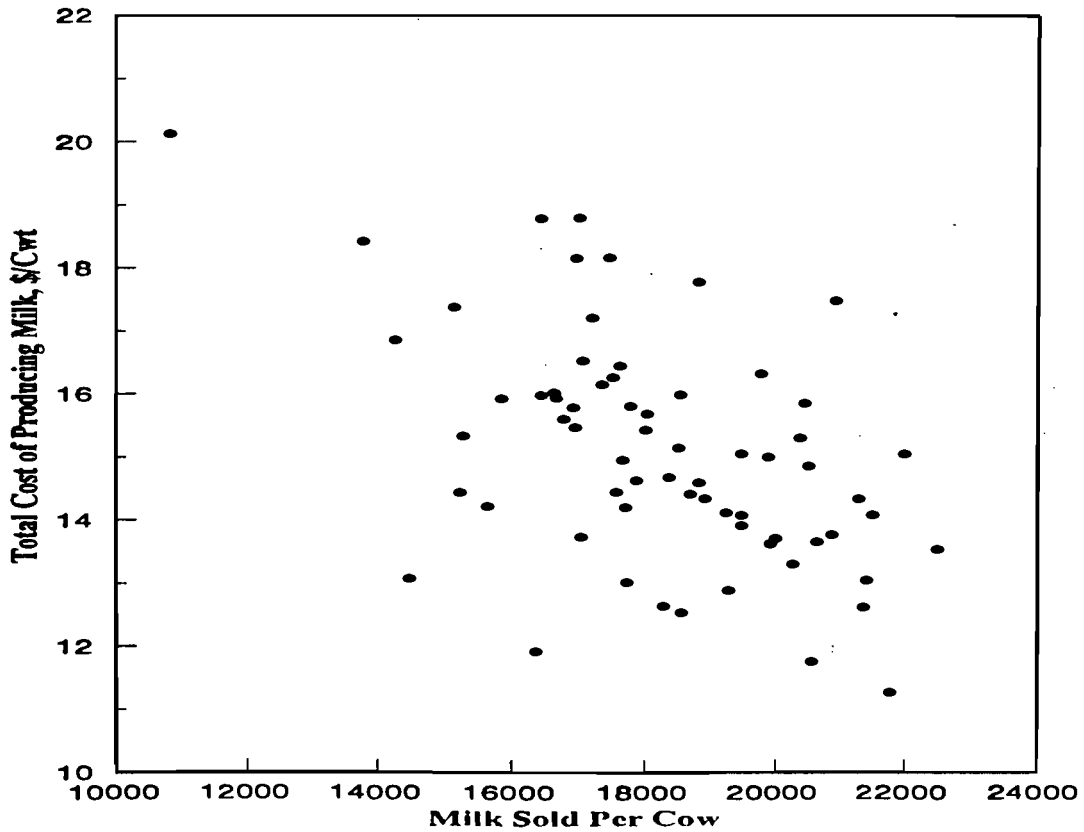


Figure 4. **150+ COW HERDS**



How is the Cost of Producing Milk Calculated?

That brings us to our second question, how do you calculate the cost of producing milk? Obviously, there is more than one method for making these calculations. Economists could bore you to tears with their discussions of the merits and disadvantages of the various methods. We are going to discuss the whole farm business method used in DFBS.

Conceptually

First, let's think about this conceptually. Then we will go through the calculations for an example. The whole farm method uses the costs and returns for the whole business to calculate COPM. Three different COPM's are calculated depending on which costs are included (Table 1).

Table 1. Whole Farm Method "Conceptually"

Total Operating Costs		_____	
Nonmilk Income	(-)	_____	
Operating COPM		_____ / _____	cwt. milk = _____
Depreciation	(+)	_____	
Family Unpaid Labor	(+)	_____	
Purchased Inputs COPM		_____ / _____	cwt. milk = _____
Operator Labor & Management	(+)	_____	
Real Interest on Equity Capital	(+)	_____	
Total COPM		_____ / _____	cwt. milk = _____

The operating COPM is calculated by taking all of the operating costs and subtracting nonmilk income. Operating costs are the costs of items that are purchased each year for use during the year. This includes feed, vet expense, fertilizer, and other similar expenses. Nonmilk income is all farm income received by the business except that received for the milk itself. The total operating COPM is then divided by the hundredweight of milk produced to get the operating COPM per hundredweight. The operating COPM is the cost that George has been focusing on for this program. The three farms we visited have had operating COPM of under \$10 per hundredweight for the last seven years.

When we subtract nonmilk income in the calculation of COPM we assume that the revenue from these nonmilk income items is generated at a cost equal to the revenue received, or that the cost of production that should be charged to this income equals the income generated. The largest item on most farms is the sale of cull dairy cows. The assumption is that the cost of generating that beef is equal to the revenue received, or that any profit or loss involved in generating that income should be allocated to milk production.

On most specialized dairy farms, nonmilk income is a small proportion of income and if a profit or loss were made on the income, it would have very little effect on the COPM. This procedure only works well on specialized dairy farms. Fortunately, most New York dairy farms are specialized.

The biggest problem occurs on New York farms when there is farm income that is unusual and is generated with very little cost. Two examples are lumber and natural gas wells. If a farm sells the lumber in the woods in one year, and that income is included in farm income, the operating

COPM can be unusually low. A similar result occurs when the farm has gas well income that is counted as farm income.

What I have titled the Purchased Inputs COPM is referred to in DFBS as "Total Costs Excluding Operator, Management and Equity Capital". I find my title more descriptive of what the costs represent. This measure of the cost of producing milk starts with operating COPM and adds the depreciation on machinery and buildings, and unpaid family labor. You can argue that unpaid family labor is not a purchased input. However, most families pay for that labor one way or another. If this labor were not available, it would have to be hired.

From a farmer's perspective, the purchased inputs COPM represents the cost of all of the resources that he or she does not provide. It is useful to subtract the purchased inputs COPM from the milk price to determine the return per hundredweight that goes to the operator for his or her inputs into the business.

Alternately, we can add the cost of the operator supplied resources to the purchased inputs COPM to get the total COPM. This is accomplished by adding the operator's estimate of the value of his or her labor and management, and by adding the real cost of equity capital. We use a real cost of equity capital of five percent. If a farmer receives a price for his/her milk that is equal to the total COPM, the farmer is being paid what he/she believes he/she is worth, and five percent on equity capital.

An Example

To illustrate how to calculate the COPM, we will use data from the 407 farms who participated in DFBS in 1991. We start (Table 2) by adding expansion livestock to total accrual operating expenses to get total operating expenses. Since all cattle sales are included in nonmilk receipts, all purchases must be included in expenses. We determine nonmilk income by subtracting milk income from total income. For this group of farms the total operating COPM was \$207,687. Dividing that by the 20,059.9 hundredweight of milk sold gives us an operating cost per hundredweight of \$10.35. That means that in 1991 the average operating COPM for this group of farms was \$10.35. The three farms that we visited all had cost under \$10, and thus, were considerably better than average.

**Table 2. Operating Cost of Producing Milk
407 New York Dairy Farms, 1991**

Total Accrual Operating Expenses	\$246,753	
Expansion Livestock Expense	<u>(+) 3,997</u>	
Total Operating Costs		\$250,750
Total Accrual Receipts	\$302,751	
Milk Sales	<u>(-)259,688</u>	
Nonmilk Income		<u>(-) 43,063</u>
Operating COPM		\$207,687
Cwt. of Milk		<u>(-)20,059.9</u>
Operating COPM (per cwt.)		\$ 10.35

To calculate the total cost of purchased inputs, we add the machinery and building depreciation and unpaid family labor to the operating COPM (Table 3). For these farms this results in total costs of \$236,989. When we divide that by the 20,059.9 hundredweight of milk, we see that the purchased inputs COPM was \$11.81.

**Table 3. Total Cost of Producing Milk
407 New York Dairy Farms, 1991**

Operating COPM		\$207,687
Machinery Depreciation	\$ 15,739	
Building Depreciation	9,871	
Unpaid Family Labor	<u>3,692</u>	<u>29,302</u>
Purchased Inputs COPM (total cost excluding operator labor, management & equity capital)		\$236,989
Operator Labor & Management	\$ 30,794	
Real Interest on Equity Capital	<u>24,007</u>	<u>\$ 54,801</u>
Total COPM		\$291,790

Per Cwt.:		
Purchased Inputs COPM (per cwt.) (236,989/20,059.9)		\$ 11.81
Total COPM (per cwt.) (291,790/20,059.9)		\$ 14.55

The total COPM is determined by adding the value of the operator's labor and management of \$30,794 and \$24,007 for return to equity capital to the total costs of purchased inputs. This results in total costs of \$291,790, which when divided by the hundredweight of milk produced gives us a total COPM of \$14.55.

It is interesting to note that the average price received for milk by these farms in 1991, a year that everyone in this room would agree was a bad milk price year, was \$12.95. These farms more than covered all of their purchased inputs, but did not receive the return for their labor, management and equity capital that they believed they should. They only received \$1.14 per hundredweight for their own resources which they believed were worth \$2.74.

What Factors Have an Affect on the Cost of Producing Milk?

Earlier we said that there were an unlimited number of factors that influence the cost of producing milk. When we asked each of the three farmers that we visited today what they thought were the keys to keeping costs of productions low, they gave responses of "keep track of everything, make repairs or adjustments whenever anything is out of line", "having everyone alert to catch small

problems before they become big ones", and *"the whole picture in general, everything has to mesh"*. Basically they were saying that everything was important. The manager has to keep his or her finger on the pulse of every part or aspect of the business. Interestingly, when you take the COPM of low cost producers and compare them to high cost producers, you reach the same conclusion. Practically every category of expense is higher for high cost producers.

Differences in the Cost of Producing Milk

The question that most people are interested in is which factors are most important. To take a look at that question, I summarized the cost of producing milk data for those DFBS cooperators with operating COPM of under \$9.00 and those with costs over \$12.00 per hundredweight, and compared them (Table 4). The average difference in operating COPM was \$5.23. All items were higher except crop expenses and government receipts, which were slightly lower.

**Table 4. Operating Cost of Producing Milk
New York Dairy Farms, 1991**

Cost Item	Operating Cost of Producing Milk		Difference	
	Under \$9.00	Over \$12.00	Dollars	Percent
Labor	1.34	1.84	.50	10
Feed	3.25	4.55	1.30	25
Machinery Expense	1.27	1.69	.42	8
Replacements	.07	.20	.13	2
Marketing	.48	.81	.33	6
Livestock Expense	1.03	1.32	.29	5
Crop Expense	.87	.86	-.01	0
Real Estate Expense	.86	.89	.03	0
Insurance, Utilities, Misc.	.76	1.02	.26	5
Interest	.70	1.42	.72	14
Expansion Livestock	.03	.06	.03	0
Total Operating	10.66	14.66	4.00	75
Dairy Cattle Sales	1.46	1.16	.30	6
Calf Sales	.33	.28	.05	1
Crop Sales	.45	-.37	.82	15
Government Receipts	.14	.18	-.04	1
Other Receipts	.29	.19	.10	2
Total Nonmilk Income	2.67	1.44	1.23	25
Operating COPM	7.99	13.22	5.23	100

Since nonmilk income items are subtracted from operating expenses to get the operating COPM, these items are also listed as part of the costs. If an income item is lower for the high cost producer, that lower income adds to the COPM. For example, high cost producers did not sell as many dairy cattle. On most farms this means that they did not sell as many cull animals. In a few cases the difference may be caused by the sale of a few animals for dairy purposes, but this does not happen on most farms.

To determine which of these cost items appear most important, the individual cost item differences were expressed as a percent of the total difference. By this criteria, feed cost is most important, representing 25 percent of the difference. In fact, feed cost is more important than the 25 percent indicates because crop sales are closely related to feed costs, and crop sales make up an additional 15 percent of the difference in operating COPM. The change in inventory of all forages is included in crop sales. Thus, changes in the inventory of feed items appear under crop sales. For 1991, low cost producers had increases in crop inventories and high cost producers had decreases. Combining the feed cost and crop sales indicates that feed items account for 40 percent of the difference in operating COPM. Other items of importance were interest, labor, machine expense, dairy cattle sales and marketing.

The high cost farms had similar depreciation expenses to low cost farms (Table 5). High cost farms did use more family labor than low cost farms. This increased the purchased input costs for the high cost farms and increased the difference between high and low cost farms to \$5.38 for 1991.

**Table 5. Total Cost of Producing Milk
New York Dairy Farms, 1991**

Cost Item	Operating Cost of Producing Milk		Difference	
	Under \$9.00	Over \$12.00	Dollars	Percent
Operating COPM	7.99	13.22	5.23	105
Machinery Depreciation	.92	.88	-.04	-1
Building Depreciation	.48	.54	+.06	+1
Unpaid Family Labor	<u>.17</u>	.30	+.13	+3
Purchased Inputs COPM	9.56	14.94	5.38	108
Operating Labor & Mgt.	1.98	1.66	-.32	-6
Equity Capital	<u>1.48</u>	1.39	-.09	-2
Total COPM	13.02	17.99	4.97	100

High cost farms valued their labor and management at less than did the low cost farms (Table 5). Apparently these high cost managers realized that they were not doing as good a job, or valued themselves lower because there was less money with which to pay themselves.

The high cost producers also had less equity capital and thus a lower equity capital cost. The effect of the lower value of operator supplied resources resulted in the total cost of production being less different between the two groups than was the case for operating costs.

Tables 6 and 7 include similar data for the farms participating in DFBS in 1990. The 1990 year was more profitable because the price of milk was higher than 1991. The general conclusions relative to the operating COPM are the same for 1990 as for 1991. High cost producers had significantly lower machinery depreciation costs than low cost producers. High cost producers apparently did not increase machinery purchases in a good year like low cost producers did. Although both groups tended to value their labor and management higher in a good year, the low cost

group showed more year to year variability than the high cost group. This significantly reduced the difference between the two groups in their total COPM.

**Table 6. Operating Cost of Producing Milk
New York Dairy Farms, 1990**

Cost Item	Operating Cost of Producing Milk		Difference	
	Under \$9.00	Over \$12.00	Dollars	Percent
-----cost per cwt.-----				
Labor	1.04	1.87	.83	15
Feed	3.23	4.90	1.67	29
Machinery Expense	1.31	1.74	.43	8
Replacements	.19	.28	.09	2
Milk Marketing	.47	.70	.23	4
Livestock Expense	1.06	1.25	.19	3
Crop Expense	1.06	.96	-.10	-2
Real Estate Expense	.97	1.04	.07	1
Insurance, Util., Misc.	.83	.94	.11	2
Interest	.68	1.33	.65	11
Expansion Livestock	.18	.21	.03	1
Total Operating	11.02	15.22	4.20	74
Dairy Cattle Sales	1.63	1.19	.44	8
Calves & Other	.36	.25	.11	2
Crop Sales	.82	.12	.70	12
Government Receipts	.25	.15	.10	2
Other Receipts	.31	.19	.12	2
Total Nonmilk Income	3.37	1.90	1.47	26
Operating COPM	7.65	13.32	5.67	100

What Factors Cause the Difference?

Feed Costs. The most important cause of differences in feed costs is the quality and quantity of forage harvested. One factor that influences this is the weather. Of course, you have no control over this, and in years like this year, weather has a significant affect. However, some people always get their hay crop harvested earlier than others. Todd Mason indicated that harvest of their first cutting ran a little into June this year. There are some people whose first cutting ran a little into August this year! The difference between early June and early August (or July) goes a long way towards explaining differences in the cost of producing milk, and thus, net income.

There is also considerable difference in the prices that different farmers pay for purchased feed. You need to shop around to get the best price. Make the feed dealers bid to get your business.

Feeding efficiency is also important. Forage testing is necessary to determine what was actually harvested or purchased. You need to know what is in the forages in order to balance the ration. Balanced rations should be developed whenever the feed changes. In my opinion these

rations should be least cost balanced rations. However, many nutritionists only balance rations with cost as a side, or external, consideration. It is sometimes hard to get the feed you are selling into the ration if you try to develop a least cost ration and consider a wide variety of options. In all cases, you should be feeding for production. You are paid for production, you should feed for it.

**Table 7. Operating Cost of Producing Milk
New York Dairy Farms, 1990**

Cost Item	Operating Cost of Producing Milk		Difference	
	Under \$9.00	Over \$12.00	Dollars	Percent
	-----cost per cwt.-----			
Operating COPM	7.65	13.32	5.67	159
Machinery Depreciation	1.16	.76	-.40	-11
Building Depreciation	.50	.44	-.06	-2
Unpaid Family Labor	<u>.32</u>	<u>.19</u>	<u>-.13</u>	<u>-3</u>
Purchased Inputs COPM	9.63	14.71	5.08	143
Operating Labor & Mgt.	2.54	1.45	-1.09	-31
Equity Capital	<u>1.60</u>	<u>1.17</u>	<u>-.43</u>	<u>-12</u>
Total COPM	13.77	17.33	3.56	100

The importance of feed cost in determining production cost are illustrated in Figure 5. Feed costs are so important that they are strongly related to the total costs. Clearly, feed cost is an area where most farmers should put a high proportion of their effort. It is the biggest cost item and is influenced by a number of factors.

Interest Costs. The second most important cost item is interest cost. This is, of course, closely related to the amount of debt on the farm. The level of debt is frequently determined by how long the farm has been in business and the time period since the last major expansion. Not a lot can be done about this in any immediate sense. It does reiterate that people with debt have higher costs than those without debt.

Those with high costs also have more trouble paying off debt. With less margin, there is less money after operating costs and family living to pay debt down. Because of this, high cost of production tends to feed on itself, resulting in high cost of production through high interest costs.

Except for reducing debt whenever the opportunity arises, about the only way to control interest costs is to be sure that you are getting the lowest rate that is available for your farm situation. Review your rates with your lender. Talk to other lenders about the rates that they might be able to offer you.

One caveat about interest costs is that debt interest cost, which is included in the operating COPM, is partially offset in the total COPM by interest on equity capital. Higher debt farms usually have lower equity, and thus, lower equity capital costs. Therefore, total COPM is not influenced as much by the level of debt as is the operating COPM (Figure 6).

Figure 5.
Operating Cost of Producing Milk
by Feed Costs, 1991

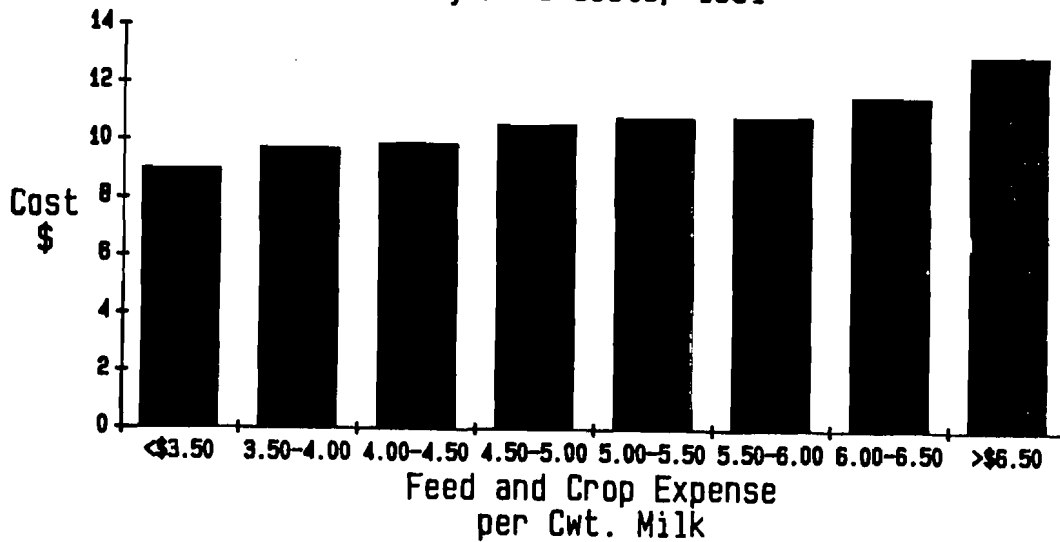
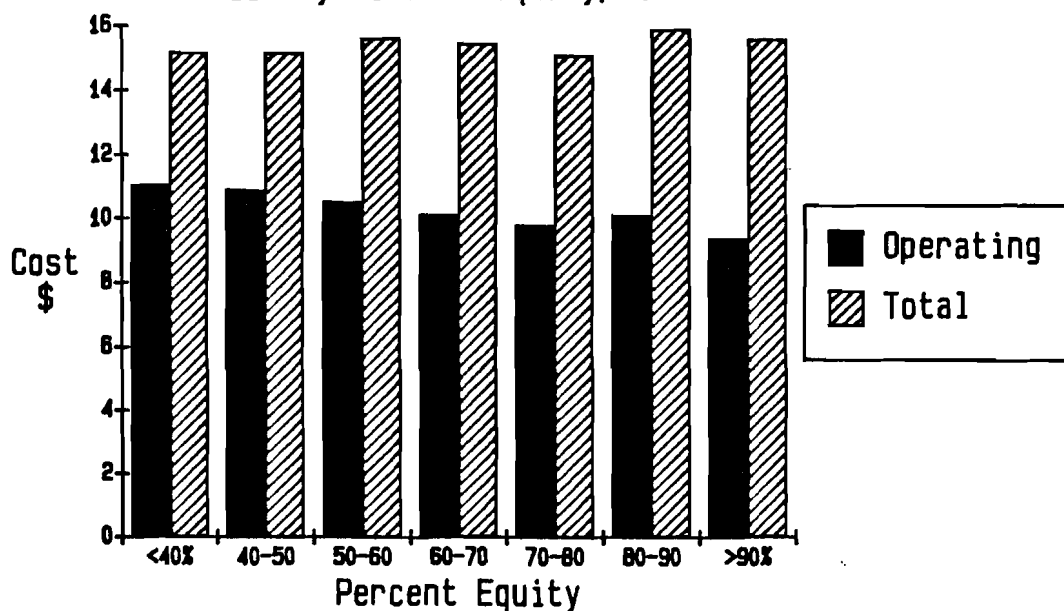


Figure 6.
Operating and Total Cost of Producing
Milk by Percent Equity, 1991



Labor Costs. The third most important factor is labor costs. It has a significant affect on total operating costs (Figure 7) Reducing labor costs is not accomplished by lowering wages! It is accomplished through a good labor management program. This involves training and retaining good workers so that they are very productive, resulting in low costs per pound of milk.

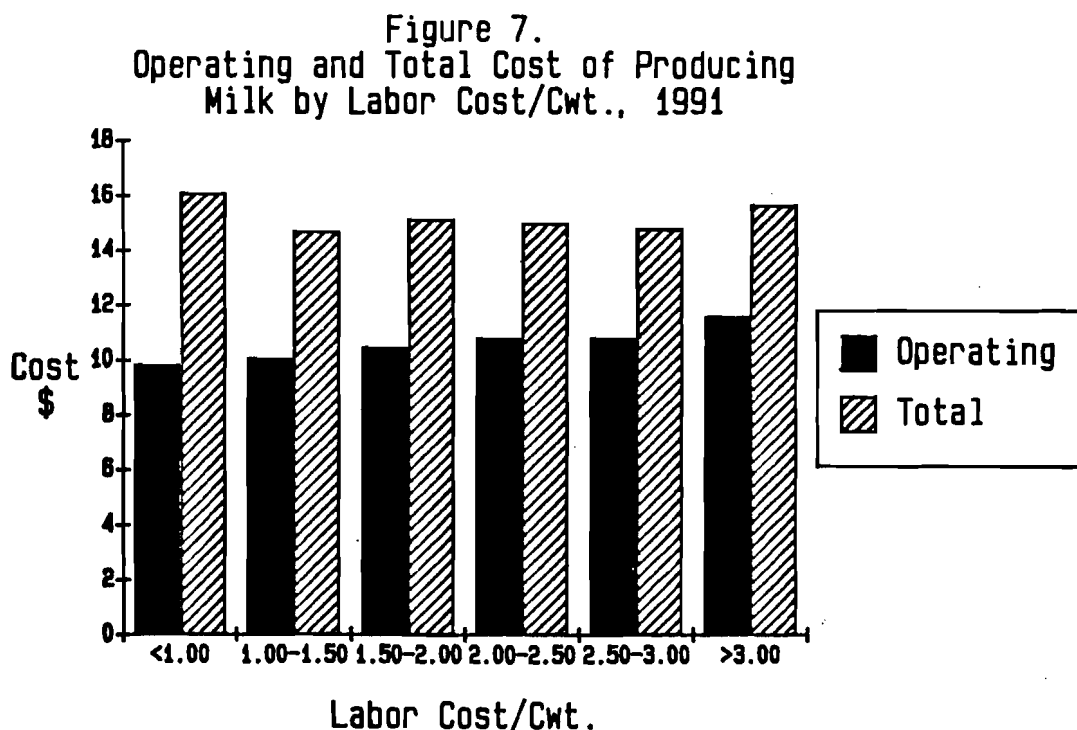
Labor costs are also controlled by developing labor efficient organizations. This involves setting up the business so that it makes efficient use of time. Labor saving devices like milking parlors and freestall systems make possible more efficient use of labor. However, some people with these systems do not achieve the efficiency that is achieved by people with more conventional systems. Effort must be made to get the efficiency out of the system being used.

Work routines should be assessed to be sure that they are efficient. Look at all jobs to be sure that they really need to be done, or need to be done as often as they are currently. As a manager you may have to force some efficiency. When I was growing up we had a hired man about whom my father said "You have to watch him. He can work hard all day and never get his feet out of a bushel basket". You cannot allow labor (you, family labor or hired labor) to be inefficient.

Machinery Costs. Fourth in importance is machinery costs. These costs include repairs, fuel, machine hire and auto expense. It does not include depreciation on purchased machinery. Low cost farms are better able to control these costs. Control includes such things as doing your own repairs, preventative maintenance and organizing operations so that the jobs can be done with a minimum of fuel.

Income Items. Low cost producers have higher dairy cattle sales. This is strongly related to the heifer raising program. Farms that raise more and better replacements are able to cull more heavily and may be able to sell an animal for dairy purposes once in a while.

High income nondairy activities can significantly reduce the COPM. As indicated earlier, selling lumber or having a gas or oil well that are counted as farm income would be examples. Such activities occur rarely on dairy farms, but we need to be alert to such activities when looking at an individual farm.



Marketing costs. Marketing costs are important (Figure 8). There is some tendency for marketing costs to be related to the region (i.e., how far the milk has to be trucked and the charging practices of the handler). The only real possibilities for reducing these costs are to change milk markets. In that case, marketing costs have to be considered against the price paid by the handler.

Time and effort spent on management. All cost items are lower for lower cost producers. That means that management must have its finger on all cost categories. You need to set aside time to (1) maintain and examine records that will indicate where problems and opportunities exist, (2) analyze alternatives, as solutions to problems and as better methods of operating, (3) make decisions, and (4) monitor the results of those decisions (was the desired/expected result obtained?).

Size. Larger farms, on average, do have lower total costs of producing milk. There are economies of scale that can be achieved. Larger businesses allow you to make money faster. However, they also allow you to lose it faster! Achieving the economies of larger size require better management.

Operating costs, however, may not decline with increasing size. For the 407 DFBS farms, 1991 operating costs actually increased slightly with increasing size (Figure 9). The increase results largely from a shift of labor expenses from operator labor to hired labor. For a small farm, most of the labor is provided by the operator resulting in little or no hired labor cost in operating expenses. Larger farms hire a larger portion of the labor required. The hired labor is an operating expense, and thus, operating costs increase. Interest costs also have some of the same effect. Larger farms tend to have more borrowed capital requiring more debt interest payments which are part of operating costs.

Figure 8.
Operating Cost of Producing Milk
by Marketing Cost, 1991

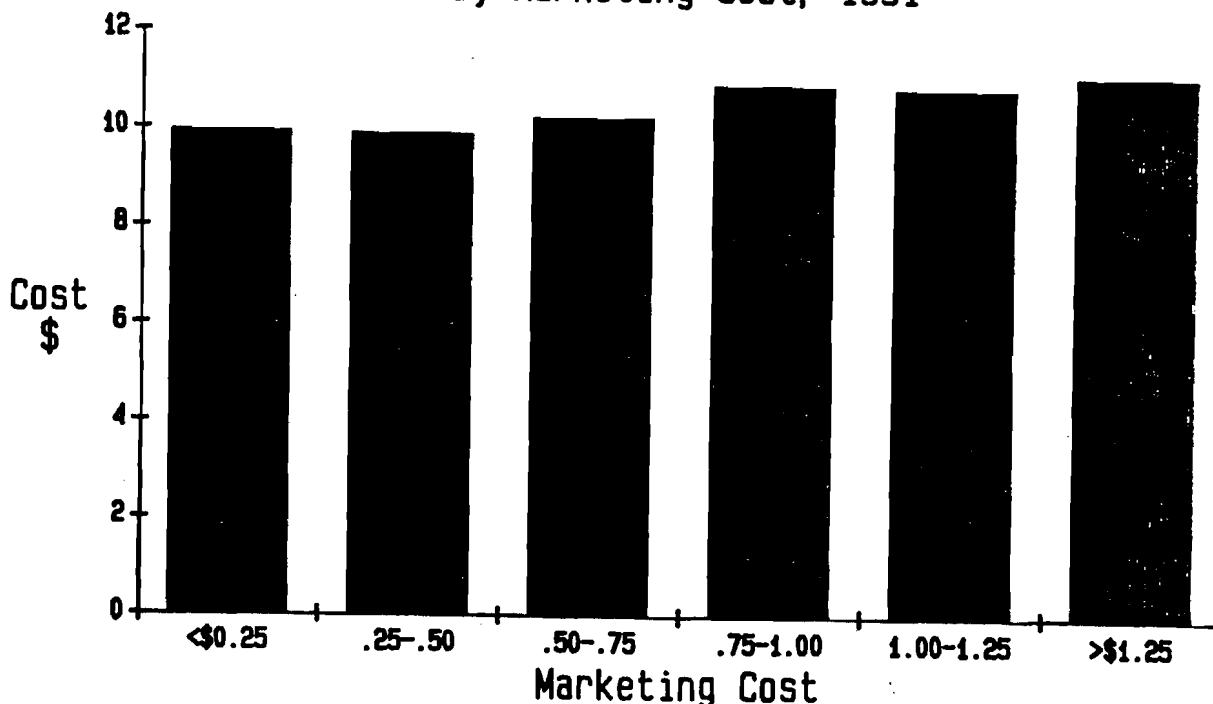
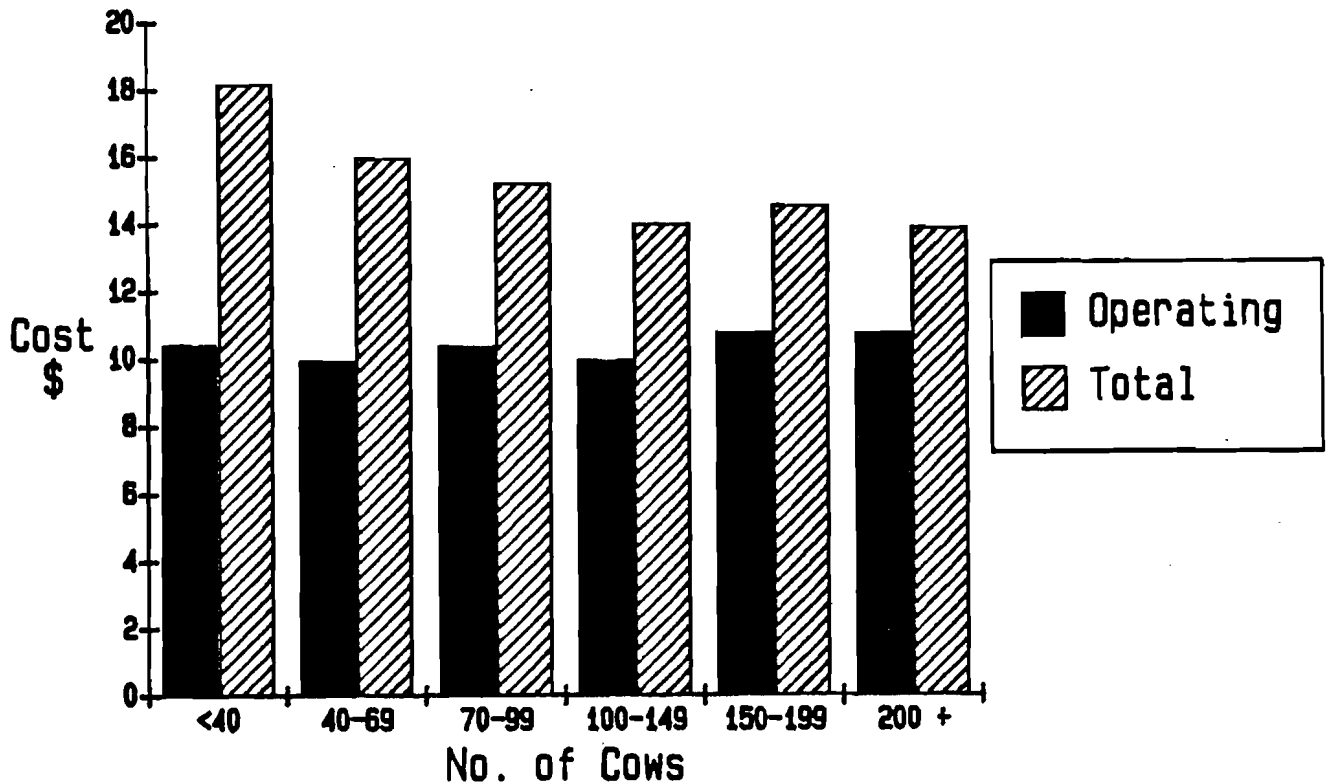


Figure 9.
Cost of Producing Milk by Herd Size



What Should Farmers Expect for the Future?

Milk Price Variability

The price variability that we have experienced over the last few years is here to stay. The 1991 level of prices will be back. Similarly, the 1990 prices will be back. Milk prices are now more influenced by supply and demand than they were in the past. With supply being close to demand, at least part of the time, and with the demand for milk being inelastic, we should expect prices to fluctuate widely.

This variability presents a cash flow challenge. You need to prepare for the bad years whenever you have a good year. This preparation may involve such things as paying off debt ahead of time, setting aside cash, getting machinery and supplies inventories in shape. Some of these actions have tax consequences that have to be taken into consideration.

Milk price variability also presents an opportunity for good managers. Appropriate handling of variability will take good management. Some farm operators will not be able to meet that challenge. Some others will not be able to meet it well. Thus, a good manager who is able to operate efficiently in this environment should be able to make good money.

Declining Margins

Farmers margins have been declining for years, at least since the early 1920's. This is likely to continue. It is not caused by some evil force that is against farmers having good incomes. Changes in technology and improved managerial capacity make it possible for managers to make acceptable incomes with smaller margins. In 1991, which we all agree was a bad year, the top 10 percent of the farmers in the DFBS program had incomes over \$50,000. The top 10 percent had returns to equity of over 15 percent. These people are the pace setters and the price setters. If they can make reasonably good incomes at 1991 prices, they want to expand to be ready to make real money in a good year. If prices went above 1990 levels, these people would each want to produce 10 times as much milk as they are now. This type of activity will keep margins low. But, remember, if they can do it, you can too.

Other regions of the country are also interested in producing milk. Their competition also tends to keep margins low. Data for 1989 indicate that the margins, or net returns, are lower in the Pacific and Upper Midwest regions than they are in the Northeast (Table 8). Production in these regions, at least in the Pacific region, has been increasing. While the farmers in these regions would like higher prices, they are willing to expand production at margins considerably below those of the Northeast. This competition will continue to put downward pressure on margins in this part of the country.

**Table 8. Regional Comparisons of Costs and Returns
for Milk Production
USDA Estimates, United States, 1989**

Region	Receipts	Cash Operating Expenses	All Cash Expenses Plus Replacement	Net Return
-----per cwt.-----				
Northeast	\$15.20	\$ 8.55	\$12.82	\$ 2.38
Upper Midwest	14.81	8.44	13.43	1.38
Pacific	13.68	10.13	12.40	1.28
Appalachia	\$14.90	\$ 8.95	\$12.42	\$ 2.48
Corn Belt	14.75	8.81	13.48	1.27
Southeast	16.96	11.98	14.66	2.30
Southern Plains	15.71	10.70	13.71	2.00
USA	\$14.82	\$ 9.06	\$13.10	\$ 1.72

Source: USDA, ECIFS9-1, Cost of Production, 1989.
Prepared by B.F. Stanton.

Increased Focus on "Business Management"

Farming is a business. You will not be farming long unless you treat it as a business. You are the manager of a small business. If you like to milk cows, feed cows and grow crops, but you do not like the book-work and decision-making, you have two alternatives; (1) learn to like it, or (2) go to

work for someone who does. The businesses that we visited today are successful because they do the book-work and keep their finger on the pulse of all aspects of the business.

The good news is that it will be possible to make good money at farming as long as you view your job as that of manager. It is not an easy, get rich quick business, but people are and will be making money at it. In order to be a good manager you need to know where you are at all times with respect to all aspects of the business, and you need to have the hard data on your business in order to assess your alternatives. Each of these farmers used DFBS, DHIA, crop records and many other sources of information. This is the type of information that farm managers of the future need in order to compete. To control your cost of producing milk, you need to measure your cost of producing milk.

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