Dairy Issue Briefs

DIBS

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Plummeting prices in the dairy industry are creating critical cash-flow and long-term survivability issues on Ohio's 3,328 dairy farms. Cost-cutting decisions must be made with full awareness of both short and long-term production and economic consequences. OSU Extension's Dairy Working Group, a collaboration of OSU Extension Educators and Specialists discuss:

Reducing costs to improve short term cash flow

Pounds of milk sold/ worker—Are you getting the most out of your labor?

With the financial crunch being experienced in the dairy industry, many farms are analyzing every aspect of their business to see where money can be saved. The cost of labor and its impact on the overall cost of production, means a dairy manager needs to measure, evaluate, and monitor labor efficiency. An excellent way to accomplish this is by calculating the pounds of milk sold per full-time worker. This efficiency factor combines labor efficiency and dairy herd productivity into a single indicator.

The calculation of this measure is significantly influenced by your definition of a full time equivalent worker (FTE). In Ohio, an FTE is often defined as an adult who works 50 hours per week for 50 weeks (allowing two weeks of vacation per year). This translates into 2,500 work hours for each FTE. It is vital that you include all paid and unpaid labor in this calculation. Smaller dairy farms are more likely to have some unpaid family labor from a spouse, children, or the operator who likely works more than 2,500 hours per year. *When analyzing and comparing your farm to other benchmark data, it is important to determine how the reporting entity defines a full-time worker.*

Calculation:	**Example**
Total pounds (lb) of milk sold	8,500,000 lb milk sold
÷ full-time worker equivalents (FTE)	÷ (20,000 hours/2,500 hr)
	= 1,062,500 pounds milk sold per worker

To calculate milk sold per worker:

1. Calculate total FTEs on the farm per year. Divide total hours of paid and unpaid labor for producing your dairy's feed crops and for operating the dairy herd by 2,500.

2. Divide total pounds of milk sold by total FTE per year. Total pounds of milk sold should be taken from the milk checks. Herd average figures from dairy

record systems are not an accurate reflection of milk sold because they include fresh cow milk, milk discarded from treated cows, and milk fed to calves. The pounds of salable milk fed to calves should be added to pounds of milk sold to reflect total potential milk sales.

Pounds of milk sold per worker is an important tool for evaluating the productivity of workers and cattle. It combines efficient labor utilization with good to excellent herd production. *If all feed is purchased, the general rule is to double these benchmarks.*

Because free-stall parlor systems can handle more cows, these systems allow more pounds of milk per year per worker than tie stall or stanchion systems. Tie stall or stanchion barns entail considerably higher costs per cow than large, modern free-stall facilities. The combination of lower investment per cow and more efficient labor utilization make free-stall parlor systems much more economical, because they generally result in lower costs for producing each unit of milk. However, existing tie stall or stanchion facilities may be able to compete with free-stall parlor systems if the operation carries little or no debt.

Competitive Level:

	Tie Stall or Stanchion	**Free-Stall Parlor**
Large Breed	≥ 600,000 pounds per worker	≥ 1,000,000 pounds per worker
Small Breed	≥ 450,000 pounds per worker	≥ 750,000 pounds per worker

Fewer pounds of milk per worker will likely be sold per year for small vs. large breed herds, but the value of the milk sold per year may be similar under similar management systems. This can occur because of the higher value per cwt of milk for the small breeds of dairy cattle (milk is higher in concentration of fat and protein). However, because the value of milk sold is affected by milk price fluctuations, it is not very useful for measuring labor productivity trends over time.

If the pounds of milk sold per worker is below the competitive level:

1. Evaluate herd productivity. To achieve the desired level of pounds of milk sold per worker, cows will most likely need to be above average in production for their breed. Many competitive farmers implement strategies to increase herd productivity. Some strategies include feeding balanced rations, optimizing cow comfort, using proven milk production technologies, filling facilities to above 100% of capacity, and milking more than two times per day.

2. Evaluate labor efficiency. Antiquated facilities and uncomfortable working conditions reduce labor efficiency. Careful hiring also plays an important role in labor efficiency. Employee training, motivation, and pride in doing a job well help workers to be more efficient and effective, whether they are family members or unrelated employees. Workers in tie stall or stanchion systems should be able to handle 30 to 35 cows per FTE, including raising crops. Workers in free-stall systems should be able to handle 40 to 50 cows per worker.

Bottom Line: An excellent way to examine labor efficiency is by calculating the pounds of milk sold per full-time worker employee. In free-stall and parlor facilities, a dairy should produce over 1 million pounds of milk per FTE for large breeds and over 750,000 pounds of milk per FTE for small breeds. In tie stall or stanchion facilities, a large breed dairy should produce over 600,000 pounds of milk per FTE or over 450,000 pounds per FTE for small breeds. If the pounds of milk sold per worker is below the competitive level, managers should evaluate herd productivity and labor efficiency with farm advisors.

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More DIBS are posted on-line at http://dairy.osu.edu.

Reference:

15 Measures of Dairy Farm Competitiveness (2008). Available at: ohioline.osu.edu/b864/pdf/864.pdf