

# Labor Efficiency and Determining Labor Needs for a Dairy Operation



College of Agriculture,  
Food and Environment  
Cooperative Extension Service

By: **Abbey Chandler and Donna Amaral-Phillips, Ph.D.**

In times of low milk prices and even in times of high milk prices if input costs are high dairy farmers look for ways to cut costs and get by. One place many farmers try to manage costs is labor because for many operations labor is the most inefficiently used resource. While decreasing the labor force is not always the best option, making sure that you have the correct number of people and that you use the labor you have efficiently is important, however it is also hard to do. In the long run decreasing the labor force may decrease productivity and profitability if it results in not enough labor to manage the herd correctly. Determining your labor needs and managing that labor efficiently will help you avoid loss in productivity while still managing costs.

- **Pounds of milk sold per worker can be used as a benchmark** to determine if you are managing labor efficiently or in other words getting the most bang for your buck with paid and unpaid or family labor and milk produced. To calculate:
  1. Determine the number of full time equivalent workers on the operation. Full time is considered 2,500 hours per year. Make sure to include both paid and unpaid as well as family labor.
  2. Divide total hours of paid and unpaid labor, required for producing the operation's crops and managing the herd, by 2,500.
  3. Then divide the total number of pounds of milk sold per year by the standardized number of workers from the previous calculation. This gives you the pounds of milk sold per worker. Make sure you use the total pounds of milk sold from your milk check and not production estimated on herd record management systems, such as DHI.
  4. Then you can compare your number to the benchmarks that are considered to be set at a competitive level.

Benchmarks: For large breed (example: Holstein) herds the benchmark for pounds of milk sold per worker is 600,000 pounds for tie stall barns and 1 million pounds for free-stall barns. Where facilities and use of labor is very efficient, some herds have achieved 1.5 to 2 million pounds of milk per worker. For small breed herds (Jerseys) the benchmark is 450,000 pounds for tie stall barns and 750,000 pounds for free-stall barns.

If you calculate pounds of milk sold per worker and your number is lower than the benchmarks, then there could be a problem with labor efficiency depending on how your operation stacks up with cow comfort and any of the other factors that affect productivity. If labor is the problem, you may not have enough labor or the labor you do have is not being used to the fullest potential. Knowing where you stack up against the benchmark can help point in the right direction when determining where you should look to manage costs and still get the production you desire.

## Labor Efficiency and Determining Labor Needs for a Dairy Operation

- **How do you determine labor needs for a dairy operation?** Aside from the pounds of milk per worker benchmark, the other benchmark that you can use to compare your operation to is number of cows per worker. Studies have shown that for most dairies with 250 cows or less in size, around 80 cows per worker is efficient, but for larger dairies with over 700 head, that number grows to 150 or more cows per worker. This benchmark is an easier and faster way for you to assess and determine your labor needs without having to look up production data and do calculations.
- **How do you know if your labor is efficient?** One way is by comparing your pounds of milk sold to the benchmarks as mentioned above. If your operation meets the benchmarks discussed above, and your herd is where you want to be in terms of production and quality then odds are you are probably doing a good job managing your labor.