

The Cost of Harvesting Forage
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Using information to make management decisions is critical to operating a profitable dairy business. Using the *right information* is even more critical. Getting the right information will require producers to reexamine how their information systems are organized. In some dairy businesses, producers have collected adequate information to conduct an enterprise analysis of the entire business. They are able to determine if growing corn silage, alfalfa or small grain silage is profitable. However, this information is inadequate to provide sufficient detail on the various functions involved in raising the forages. They cannot determine if changing a management practice will improve the profitability of the enterprise in question. Managerial accounting is set up to provide the information needed to examine the efficiency of different functions within a business. One example would be the cost of harvesting a ton of forage. As producers approach the end of spring harvest, now will be a good time to do some calculations to determine what it cost to harvest a ton of haylage or small grain. In knowing these costs, producers can benchmark this function of their business to other dairy businesses, regardless of the harvest strategy being employed.

To insure producers are comparing similar numbers, the process must be standardized and well defined. The process of harvesting corn silage is fairly simple. It involves chopping, hauling and packing. The process for harvesting haylage & small grains is somewhat more complex, as it also includes mowing and raking. The harvesting process should not include any costs associated with storage of the crop, such as ag-bags and/or inoculants. The costs of ownership and operation of all the equipment used in each of these processes must be included. The ownership, or fixed, expenses would include the DIRT-5 (depreciation, interest, repairs, taxes and insurance). The operating, or variable, expenses include fuel, oil and lubricants, and labor. Many of the more advanced accounting systems can provide this data if they are set up correctly and in sufficient detail. On most dairy businesses, additional processing of data is needed to calculate these numbers. Once calculated, the total expenses of each function can be divided by the number of tons harvested to achieve a cost per ton for the individual harvest functions. The results can then be summed to provide the total cost per ton of harvesting the forage.

A critical piece of information that is often misrepresented in this calculation is the actual tons of forage harvested. Although many modern dairy businesses are equipped with scales, enabling the producer to weigh the harvested product, most dairies are not equipped with such equipment. This data can be obtained in a number of ways. The key is to develop a system for collecting this information and periodically checking the method to validate its accuracy. Counting wagons or truckloads of forage is not good enough without weighing a sample set of those loads to determine their capacity. It may be best to set up a system that involves several methods for calculating yields.

As more producers utilize custom operators for harvesting forage it is easier to calculate this number. However, producers must still look at the individual functions in the harvesting process to insure the method they are using is the most profitable. For example, suppose a producer has determined he can have his forage chopped by custom operator for less cost than he could own and operate the machinery, but to keep the custom operator running at maximum efficiency, he must purchase a larger haybine and a double rake. Any cost advantage the producer may have gained in having his crop chopped by the custom operator could be lost in the mowing and raking functions. It may be more profitable for that producer to find a person who is willing, and equipped, to mow and rake his crop. A partial budget is an excellent tool for evaluating these alternatives.

Once this information has been calculated, producers can use it to compare their operation to others. This information can be used to determine if and when equipment should be replaced or if a custom operator should be employed. It can also be used to determine if custom operators are providing their services at competitive rates. In some instances, however, the data may still be misleading. If a producer focuses only on the cost of harvesting the forage, disregarding quality, the impact on the profitability of his operation can be devastating. The producer who operates old worn out machinery, which has little value, can harvest the crop fairly cheaply. However, if the equipment does not enable the producer to harvest the crop within an acceptable window of time, forage quality will be compromised, and milk production will suffer. Thus, it is important to evaluate this number, but also keep an eye on the big picture.

Packing is extremely important in harvesting high quality forage. If a producer has employed a custom operator without the necessary equipment to adequately move and pack forage at a pace that will keep up with the harvester, quality can suffer. In this case, it would be a sound business decision to rent a tractor and blade, which would increase the cost of harvesting a ton of forage. However, the benefits of a more efficient and better fermentation can outweigh the added costs.

When comparing data from other dairies it is important to remember there are a number of items that affect the cost of harvesting a ton of forage. They can include average yield, field size and terrain. Also, in multiple cutting crops, the cost on the initial cutting will be less than subsequent cuttings, so it is important to compile the data for all cuttings to get a composite cost per ton for the total crop.

As Pennsylvania dairies strive to become more competitive, it is imperative that the owners make sound business decisions. Sound decisions are a result of having and using the right information. For more information on calculating the cost of harvesting a ton of forage, contact Brad Hilty at 717-503-8114 or send an email to bhilty@psu.edu.