Calculating the Cost of Beef Production

Knowing the income and costs of an operation are critical to the financial success of that operation. Use this article as a guide to help determine the financial success of your beef production enterprise.

**Direct Expenses**

The first broad category to consider for the beef production enterprise is direct expenses. As the name perhaps implies, items in the direct expenses’ category should include any cost that the beef farm incurs. Often the easiest thing to think about in this category is the purchase of outside feed, but do not neglect the other expenses relative to the beef enterprise that should be considered. Use the examples below to help guide your direct expense line items. Beef cattle enterprises can be one of the most unique farm enterprises. Many farms will not have all the examples listed, but there could also very well be other costs on the farm!

**Feed and Hay Purchased**

This expense item should include any feed or hay purchased to feed or supplement the cattle on the farm. Check local hay auction markets for current prices. Shop around for feed at different mills. Alternatively, you may be able to buy feed and hay from one of your neighbors and work out better deals due to proximity.

**Feed and Hay Raised**

This expense item includes the cost to produce any feed or hay raised on the home farm. It is not always easy to calculate the cost to produce feed and hay for the cattle enterprise. Nonetheless, this production cost is critical. In addition, one must consider what that feed would bring on the open market if sold because it could represent a lost opportunity cost at that point. Using hay as the example: look at your hay enterprise, realize what portion of that hay can be attributed to cattle production, and apply those costs to determine the ‘price’ of the hay to the cattle enterprise. There is certainty in raising your own feed, that is, you know exactly what you are getting because you produced it. But, if you make very good quality small square bales on your farm, for example, you may be dollars ahead to sell those small bales and purchase round bales of a more marginal quality because, in many cases, beef cattle can use poorer quality hay. Once you determine the costs, you can start playing with these scenarios more.
Supplies
Supplies would include incidentals, such as feed buckets/hay feeders, waterer’s, fly control, fence repair, tools, et cetera, that are used for beef cattle production. While each item represents a minor cost on its own, supply costs can add up and overwhelm an operation if they are not recorded and managed.

Repairs
Repairs are any repairs to equipment that is specifically associated with the beef production enterprise. Tractors may be used for the beef enterprise, for example, but if it is not fully dedicated to the beef enterprise, the cost of those tractor repairs may need to be split between other farm enterprises. Other examples of repairs for the beef enterprise may include trucks, trailers, brush hogs, et cetera.

Fertilizer, Lime, and Sprays
The fertilizer, limes, and sprays category include those consumable products that are applied to pastures, crops, or hay fields that are used to feed the beef cattle.

Machine Hire
Machine hire would include any payment made towards the rental of a piece of equipment or the hiring of someone to come to the farm and do custom work. For example, hiring someone to bale hay would be a machine hire cost.

Animals purchased for resale (not breeding stock)
Animals purchased for resale may include feeder calves, or fat steers purchased for a freezer trade, as part of the beef production enterprise. The cost of these animals should be entered as an individual line item in the budget.

Insurance
All farms should carry farm insurance to cover unexpected incidences as well as regular "maintenance" items. Farm insurance should include liability, workmen’s compensation, and may include any umbrella coverage, which includes excess liability coverage. In addition, insurance costs could include any health insurance for the owner/operator and any additional employees.

Interest on loans
The interest on loans expense item includes any interest paid on loans specific to the beef enterprise. Loans specific to the beef enterprise could include the farm mortgage or equipment, cattle, and operating loans. Operating loans are sometimes referred to as a line of credit.

Wages paid
This expense item should include any wages for employees that directly facilitate the cattle operation. In addition, wages paid to the owner/operator SHOULD be included (more on that later).

Taxes
Taxes includes fuel taxes and local, county, school, and any other property taxes associated with the operation. Keep in mind, taxes may be variable if crop or hay ground is in counties apart from where the beef herd is located, and are owned and used for feed production for the beef operation.

Veterinary and medical supplies
Any time you call the veterinarian to the farm, there will be a cost associated with that. However, there are additional costs that fall into this category including any drugs for disease prevention or vaccination of the cattle.

Breeding costs (semen purchased, registration costs, AI supplies, etc.)
Breeding costs include anything used in the operation to breed cows. Thus, breeding costs may include semen costs, synchronization drugs, artificial insemination (AI) supplies, and liquid N. In addition, remember to charge the cost of the breeder’s time in this category. If the farm is not using synchronized breeding and AI, the cost of the bull and any heat detection devices should be accounted for.

Marketing costs
Marketing costs include advertising costs or commissions paid to the auction barn. Today, this may also include website design and maintenance for the farm’s online presence.

Travel and or freight costs
Consider how your products are getting to the market. If you are hauling cattle yourself, this includes depreciation on the truck, cost of gasoline, et cetera. If you are selling direct through the freezer trade, this will include the cost of getting animals to the butcher, even if you are hiring a hauler, so be sure to include that cost. If a commercial hauler is picking animals up at your place, to take them to a large packer, you will likely see freight costs deducted directly from your check. Make sure to account for it!
Direct Income

Items in the direct income category should be anything that the beef farm does that generates revenue. Most often the easiest thing to think about in this category is the sale of cattle themselves, but do not neglect the other aspects that should be considered. Use the examples provided to help guide direct income line items. Remember, beef cattle operations are unique and there may be other things that are generating income on the farm!

Cash paid for anything sold by the cattle operation

The cash paid income is straightforward. Any time you receive payment for cattle sold or feed sold, if you have only one enterprise, it should be included in this line item.

Services provided

If you provide a service to another operation, it should be attributed as such. In a beef enterprise, services provided may include consulting, mowing pastures, breeding cattle, or hauling.

Embryos, Semen sold

This item includes any income to the farm for embryos or semen that are sold off the farm. This may not be the first source of income for the farm, but it is a growing part of many beef enterprises.

Hay or feed sold

This category includes hay or feed raised on the home farm, or brokered, that is sold and provides income to the beef enterprise. This category is also only relevant if the farm is running one enterprise and does not separate out the cropping and beef enterprises.

Hidden Costs

Finally, in every operation there are hidden costs. These costs are sometimes also referred to as opportunity costs because they represent losses or inefficiencies in the system. These hidden costs can come in the form of inefficient equipment that breaks down, or even just takes too long to get around the field; inadequate management, which can lead to a plethora of inefficiencies such as poor gain; and inadequate feed efficiency and reproductive issues, which can increase calving intervals and/or decrease the percent of calves born and weaned. One of the most overlooked hidden costs is the value of your time. Could you be doing something else with your time that would increase the income of the operation? Sometimes increased income can be best realized by taking a job off the farm.

Determining Costs

If the farm is new, or you are attempting to develop a business case, or if you just want to know how your farm “stacks up”, it can be challenging to identify what the costs and income should be. In those instances, the Iowa Ag Decision Maker is a great tool to use because it allows you to do projections for a business plan or to determine future costs and income based on the projections. However, it is important to keep in mind that the Iowa Ag Decision Maker is based on midwestern prices, and production and farming costs can be regionally specific. For example, farm labor in one area may be just minimum wage and yet in another area it may be impossible to hire anyone for less than $15 per hour. In many cases, when determining costs and making projections, it is best to put in the extra legwork. Ask neighboring farmers about their costs for feed or production. Consult feed and fertilizer dealers in your areas to determine supply costs. Ask about custom hire rates and availability in the area – custom rates may be cheaper than owning the equipment. Alternatively, you may be trying to hire someone to mow pastures for you only to find out there is not anyone other than the local landscaper. If that is the case, you will likely be paying landscape prices to do the job.

Other considerations: Accounting methods

It is always a good idea to hire a professional familiar with farm accounting to assist you with setting up and developing accounting methods. Cash basis accounts easily for the income and expenses during the year, but cash basis does not consider accounts receivable and accounts payable that may be outstanding, or unpaid, nor does it include balances on loans. The true financial health of a business is only determined by utilizing the accrual method which allows for the inclusion of those items, expenses or income, that are anticipated but may not yet be in hand. Most agricultural accounts will use the cash basis for income tax reporting; but they may also use the accrual method to determine the true health of the business.
Enterprise accounting

Throughout the discussion we have emphasized the beef enterprise and accounts relative to the beef enterprise. If all your farming operations are utilized by the beef operation, then you have a one-enterprise situation and all expenses can be assigned to that operation. However, if you have a beef operation and make hay that will be sold then you may have two different enterprises and thus the need for enterprise accounting. Enterprise accounting allows you to assign costs and income of certain items based on their influence for a particular enterprise. A good example of this is a tractor. What percentage of time is that tractor used for hay making versus feeding cows? Is the hay being made by that tractor being sold or used to feed the cows? All of this is necessary so that costs associated with that tractor are divided evenly among the two enterprises. If the tractor is only being used in the hay operation and the beef enterprise is buying hay from the hay enterprise the entire cost of the tractor can be applied to the hay enterprise. This may seem confusing at first but once you decide on how your operation is going to be accounted for it becomes much easier. Many cow/calf producers operate two or more enterprises. If that is the case, make sure each enterprise is bearing the brunt of the costs of production.

A professional who understands farms and is willing to assist you with determining how to set up your accounting system and how to accurately track income and expenses is an invaluable tool. They can help you determine the health of your business and assist you with making decisions on whether to expand or dissolve an enterprise. Starting the operation with the accounting system in mind and understanding what items need to be tracked from the beginning will make life much easier as your business grows. Good financial management will enable you to make sound decisions on purchases and expansion as time moves along.

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