

How to determine your dairy's 'true' ration cost

Mark Linzmeier for *Progressive Dairyman*

With all the moving parts on a dairy farm, many would think that determining ration costs would be a relatively easy endeavor. The industry also has many experienced and knowledgeable nutritionists to assist in this effort. But as with many items, the more you really analyze this, the more items there are to consider. In addition, how a dairy uses the total feed cost information can also have some implications, so let's start there.

Total feed or ration costs are utilized for various reasons. In some cases, individuals want to simply zero in on the feed cost for lactating rations. In that way, they may try to estimate the feed cost per cow per day or per hundredweight for the lactating herd or a specific pen or group. In

other instances, they may combine this with expected milk production to create an estimated income over feed cost for that specific pen or group.

A slightly more evolved view of this includes incorporating the cost of feeding dry cows into the equation to develop a more complete overall feed cost or margin calculation. An even more in-depth view incorporates all youngstock feed costs into the equation. It is very important to note that each dairy may operate differently, so each dairy may have a different goal of what it wants to measure.

Once a dairy identifies what it wants to measure, the next step is to determine the process to determine the overall feed costs. While most

industry participants are generally aware of the differences in various rations, it is crucial they also understand the impact of them. So let's first revisit the general types of rations on the dairy:

- 1 The ration that is formulated
- 2 The ration that is expected to be mixed or fed
- 3 The ration actually mixed and delivered to the cattle
- 4 The ration that is actually consumed

Now let's zero in on various considerations and which of the above results in the true overall feed costs. A lot of dairy producers simply rely on the first one to calculate and determine their feed costs. The ration sheet may even report a feed cost as part of the calculation. All parties need to consider the dynamics of the specific dairy to determine how accurate this may be. Here are a few considerations:

◆ *Is this ration also the same as Nos. 2, 3 and 4 above – meaning is this exactly what is mixed, fed to the group and actually consumed? If not, it will not result in an accurate ration or feed cost.*

◆ *Does the ration take shrink into account? There are various definitions of shrink, so I will hit some of the high points here. Shrink is the result of lost feed to wind, damage, spoilage, birds, rodents and other reasons. Other people also define shrink to include loss due to inaccurate*

weighing, mixing or other operational activities.

◆ *Shrink is a very real cost item for all dairy producers and varies for many reasons, including facilities, operational management, the type of ingredients fed, equipment and many other reasons. Shrink also varies by ingredient. Very, very few rations that fit the definition of No. 1 above include a cost for shrink.*

◆ *How are the individual ingredient costs which ultimately result in the calculation of the overall feed costs determined? Are they updated continually or seldom? For example, corn and soybean meal prices are constantly changing, so are they also updated regularly? If a dairy grows its own feed, is the cost truly accurate for their cost to produce or just a guess?*

So while most dairy producers default to ration type No. 1 above as being their feed cost, it is virtually impossible for that to truly capture all the items identified above. So let's move on to other considerations related to ration types 2, 3 and 4 above for some additional perspective.

◆ *Most dairies adjust the formulated ration and attempt to mix something different. They generally have a valid reason for doing this (to increase feed intake and ultimately milk production). Some may do this via entering adjustments into their feed management system to help them identify what the true feeding rates should be. In other cases, they may simply have a chart developed to show the feeding levels for each ingredient for various levels of cattle and then they feed for more cattle than are*



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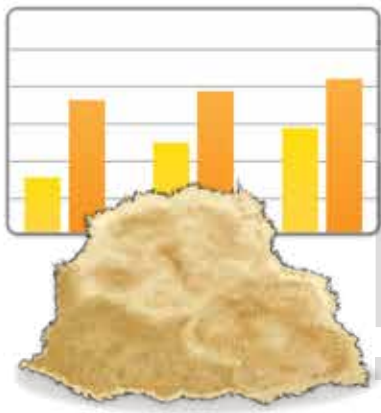
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actually in the pen or group. It is very common for this to be 3 to 10 percent above the formulated ration for lactating cattle, and in certain pens or cases it may be in excess of 10 percent.

◆ The next consideration is the ability of the personnel and equipment to truly mix what is expected. There are a great number of potential complexities here which can come into play. A few examples are:

- Is the feeder technically trained on the use of the feed management system and the equipment?
- Does the dairy use a payloader to load small-quantity ingredients into the mixer?
- Where is the mixing done and how does wind, travel distance (ingredients falling from a payloader bucket on to the ground during travel) and time affect the process?
- Does the feeder have to “rush” to keep up with the cattle pen to parlor movements to have fresh feed in front of cows returning from the parlor?
- Do weather conditions impact employee efficiency (cold of winter, heat of summer, etc.)?

- Does the ration fit within the capacity of the mixer or does feed get pushed over the top during mixing?

- Are feed management monitoring protocols properly managed on the dairy or do personnel learn how to “get around the system” and create even greater hidden issues?

- ◆ How are bunks read and who determines what should be fed on a given day?

- ◆ There are many more considerations, but I will group all of this into the broad definition of “overfeeding,” which simply means the difference between what is actually loaded into the mixer to be fed (generally ration type No. 3 above) compared to what was formulated (ration type No. 1 above). This is a very important definition because it will ultimately determine what hits the checkbook and ultimately will impact the dairy’s true costs.

- ◆ So that leaves some explanation for ration type 4 above, the ration actually consumed. The dairy should consider the impact of what it does with any feed which isn’t consumed (whether they call it refusal, pushout, weighback or something else). If this is

fed back to another group on the dairy, it will reduce the cost of those rations. Alternatively, if it is sold outside the dairy, it will generate some revenue that should also offset or reduce feed costs. I do caution dairies to consider this, as I have seen instances where dairies have focused on overfeeding too much trying to increase intakes (with the thought that they can sell the refusal if it is not consumed), and they have ended up with much higher feed costs because the refusal only sold for a fraction of the original cost.

So what is the “true cost” of a dairy’s overall feed cost? The truth lies in a combination of the items above. I will start by focusing in on the four general ration types above. “True cost” begins mostly in No. 3. The ingredients actually put in the mixer and in front of your cattle will always directly hit the bottom line. So that includes not only what is formulated (type No. 1) and what is expected to be fed (type No. 2), but also how effective your personnel is at mixing and delivering the expected ration.

Consideration also must be given to ration type No. 4 for the impact of internal use or sale of refusals. On top of this, the dairy needs to consider the actual costs for each of the ingredients they are feeding. If the dairy has some

ingredients contracted at a committed price, those should be used in conjunction with market prices for any uncommitted ingredients. Internally grown ingredients should be included either at cost or be market-based on the dairy’s preference. Having a mechanism to continually project and update headcounts, rations and costs is crucial to knowing the dairy’s overall feed costs. Finally, never forget about the impact of shrink. Shrink is a real cost and should always be considered when determining the dairy’s true feed costs.

Take a look at the graphic which shows the four general ration types identified earlier and the impact of cost (simply shown on a per-head per-day basis). The graphic shows the impact of shrink as well. With a 10 percent overfeed, and shrink included, the actual cost of the ration put in front of the group is 18.6 percent higher than the formulated ration in this case. As mentioned earlier, each dairy will have its own set of circumstances. However, staying focused on these various items will ultimately help a dairy do a better job understanding and managing their true overall feed costs. **PD**

Mark Linzmeier is a certified public accountant specializing in all financial areas of dairy for more than 25 years.



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