



by Steve Martin

# Managing feed costs during tight margin times

**I** THINK 2018 will be a year that we remember.

A dairy nutritionist always needs to achieve a good balance of biology and economics. In times of tight or negative margins, it seems like I spend more time thinking and talking about economics than biology.

The true and academic pursuit of nutritional science is unrelated to economics. Its focus has to do with nutrients, requirements, biochemistry, microbiology, etc. Bringing this knowledge to the real-world dairy nutrition business requires the infusion of economics to the list.

In recent years, my clients have challenged me more in the areas of finance and economics than topics of pure nutritional science. I suppose there has not been any reduction of interest in nutrition, but there has for sure been an increase in the attention to economic results of the diets being fed!

There is one more area of interest that must be considered in this discussion. In order to truly offer an economic evaluation of nutritional science on a dairy, there must be an understanding of how to obtain dairy production results and then how to interpret them. The nutritional plan requires an economic projection, and the animal performance requires an economic evaluation.

The question in 2018 is this: are these principles any different during times of small or even negative margins, versus easier times when milk income is higher than the cost to produce it?

The answer is yes... and no.

Calculating margins is basic math irrespective of the magnitude of cost of production and the value of milk. When margins are small or even negative, the risks of making investments and failing to earn a positive return are simply higher.

## Tight times move mind sets

My goal here is not to prove or disprove an established or assumed micro-economic principle or theory. Instead, my point is that when margins are tight dairy producers have a different mind-set to evaluating the cost side of their dairies. As a nutritionist I must correctly respond to that reality and offer advice that can help my clients weather the storm.

It is during difficult economic times that the creativity of a nutritionist is in great demand. Most of the opportunity for creative cost management comes from the experience of having working through extraordinary times, like in 2009. Goodness knows we learned a **lot** that year.

One of those creativity areas relates to truly understanding the value of various feed ingredients and the real nutrient requirements of a particular animal. Being care-



ful to not overfeed any one of them is crucial during times like these. Let's consider protein levels in heifer diets as an example.

During times of low-cost byproduct ingredients, it might be that rations balanced for minimum energy levels are actually in excess for protein needs. In such cases an over-formulation for protein may not even add cost to the diet. But what if that byproduct protein/energy ingredient is at a near record price?

In that situation, looking for creative ways to meet energy needs while not overfeeding protein could offer significant savings. This is a place where a strong linear program nutrition model can find a better way

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to manage cost than the nutritionist can simply building the ration that best fits their experience.

Staying with the heifer ration protein level example, if normal prices have allowed for a low-cost, but overly-formulated protein level, frequent lab analysis for forage protein levels may not be extremely important. But at times when protein value has a bigger impact on final ration formulation cost, being sure what your main forage protein level is becomes much more critical.

If your normal modest over-formulation is too costly to continue, it is important that you know more about all of your ingredients. Otherwise, an unexpected drop in usual forage quality could leave you with lower growth rates.

With recent increases in the cost of vitamins, we all need to look in the mirror and ask if we can truly justify the levels we have fed in the past. Vitamin A is a perfect example.

In the years since the last National Research Council (NRC) rec-

ommendations for dairy cattle were published, many nutritionists have slowly increased the level of vitamin A supplementation to animals. Some of this came from a "more is better" mentality, along with some industry recommendations based upon anecdotal animal performance responses to elevated levels.

All of those increases occurred when vitamin A was very inexpensive. But due to disruptions in production and supply this year, vitamin A cost is way up. In rations where increases were previously made, can we still justify the elevated levels in our new cost environment? In many cases the amount fed needs to be reduced to more defensible levels to help manage feed cost.

The long-standing debate about the economic wisdom of one-group TMRs always ramps up when margins are tight. The pluses and minuses of feeding one ration from freshening to dry-off, versus an approach that targets nutrient supply based on stage of lactation, can be debated forever. However, it is true that the almost ever-changing cost of feeds and value of milk can also almost constantly change the answer about which approach is most profitable.

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## Isn't no low cows the goal?

We try to stay away from the term "low ration" because the goal is to not have low production cows on the dairy. In recent years with many dairies experiencing record highs in reproductive success, along with some use of sexed semen, the need to milk lower value cows has been greatly reduced. Selective culling should negate the need to ever have a low-cow ration.

What about mid/late lactation diets that can target animals in positive energy balance that have strong intakes and are already pregnant? Maybe those cows are good candidates for a modest level of cost savings. Nutrient density and the use of some additives can be moderated

and offer some real savings without losses in production or cow health.

Adding more rations, of course, comes with potential risks that must be managed. Feeding errors, more TMR loads that must be built and delivered, and less-than-full loads are all issues that must be considered. In most cases, though, good management practices will allow for increases in margins without excessive complications and feeding errors.

I often ask if a cow at 45 days in milk eating 55 pounds of feed and making 120 pounds of milk has the same nutritional needs as a cow a 245 days in milk eating 50 pounds of feed and making only 70 pounds of milk. For sure if you energy-correct the milk of both cows and consider their different pregnancy status, you may close the gap a bit.

There is, however, a different and cheaper ration that can be fed to the later lactation animal. Taking care to build it correctly, along with being careful in the pen moves that are needed to pull it off, will almost for sure result in reduced feed cost.

During times of difficult economics a dairy nutritionist must be diligent to justify feed cost inputs. Looking for ingredient opportunities and thinking creatively is critical for success. Finding real and unique angles to save costs for my clients is a great part of this job. Mining, summarizing and interpreting dairy records to show the success or potential failure of the savings is the next step.

## More sampling can pay off

Spending a little more money on ingredient sampling could be a good investment to consider during tight margin times. More frequent analysis information can help us be sure that all possible nutrients are leveraged in every ration, and that living a little close to the edge of a nutrient requirement doesn't end up with a diet falling below supply needs. A few extra \$30 samples at the lab could result in several cents per head of feed cost savings that will easily pay for the investment.

We all have to work harder to survive a year like 2018 and the things we learn through the struggle will make us better and more profitable milk producers in the future. It is during tough times that we learn the most, and it is sticking with this new knowledge when improved margins return that helps a dairy build long-term equity.

Weathering any financial storm is the immediate goal, so taking extra care to build every ration with the best chance to be successful is a must. Paying attention to cost inputs, looking for rations whose nutrients might be over-formulated, and better targeting nutrient supply based upon stage of lactation will insure that even during times of low or even negative margins we are truly doing the best we can to feed for the bottom line. **WEST**

The author is the founder of Dairy Nutrition and Management Consulting LLC, which works with dairies and heifer growers in multiple Western states.