When Do Feed and Milk Economics Change the Way We Feed Cows?

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All indications are pointing to lower milk prices for 2015. We all expected that the lower prices were coming sooner or later. At least it is nice to not be caught off-guard. So, what do we do about it? Obviously, voluntary capital expenditures will decrease, stockpiling of feed might slow down, and the potential to add more cows and or heifers is no longer a slam dunk decision. Is it also time to alter the way we feed the cows? The nature of this monthly column is oriented around feeding dairy cows, so addressing feed investments in a new milk price dynamic seems fitting.

When we look at shrinking margins, should it spur us to reevaluate some decisions we've made about ingredients that are included in the ration? Keep in mind that this evaluation is strictly driven by economics. The cow's *requirements* for vitamins, minerals, protein and energy have not changed. When we make a decision to reduce the quality of protein, forage, vitamin/mineral supplementation to save money, it does not mean that the cow's requirements were reduced for those same nutrients. What it does mean is that you will build the diet with lower quality ingredients and with less nutrient fortification.

With that being said, all ingredients have an expected return on investment (ROI). So what does it mean if an ingredient has an ROI of 3:1? Let's consider a proven technology-ingredient (aka feed additive) as an example. Assume an expected 3 pounds milk response based on sound research and proven field data. A couple of months ago milk was worth $25/cwt. If you got the 3 pound milk response suggested, the result was a 3:1 ROI. This ROI comes from dividing 75 cents of milk income by 25 cents invested. Great deal right? Now when looking forward to the CME Class III milk for FEB, you would expect $17 milk. Using this lower milk price, the extra income is only 51 cents for the same 3 pounds of milk response. Now, the ROI is down to 2:1. The technology in the additive didn't stop working, the research behind the expected milk didn't all the sudden become bad data and the cows didn't stop responding. The only difference is the value of the extra milk decreased. Therefore, careful evaluation of every ingredient becomes paramount to maximize the probability for profitability.

Honestly, this process should only affect a pretty short list of ingredients. The vast majority of the ingredients in the ration are meeting minimum requirements of the cows being fed and carry a very high ROI. At times when feed costs actually increase during a down milk market, factors affecting dry matter intake (DMI) become just as important as milk production. When a pound of dry matter cost 14 cents and a pound of milk returns 25 cents it is always the right decision to invest in a pound of intake for a pound or more of milk. When those values come closer together the decision becomes more difficult. But, experience has taught us that at times, increasing DMI can result in simply poorer feed conversions. In such a case, the closer the cost of a pound of feed gets to the value of a pound of milk, the less incentive to push intakes for more milk. Both feed cost and milk value move in cycles. How these cycles match up or mirror each other has a big impact on the resulting ROI for feed cost.

The facts of the biology don't change simply because the economics are different. Nutrients and ingredients don't affect cows differently when the price of milk drops, or when the price of feed increases. In fact, the decision making process is the same. The difference is in what parameters we use when evaluating the economic return of potential nutrients and ingredients. Keeping these biological and economic principles in mind can't change the price of milk or the price of soybean meal, but considering them could make a significant impact on your operation and go Straight to Your Bottom Line.