

TECHNICAL TOPICS

VOLUME 11

AUDIT FEED ADDITIVES TO CONTROL FEED COSTS

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KEY TAKEAWAYS

- Feed additives can increase your feed cost/cow/day significantly. Therefore, it is necessary for the producer and nutritionist to conduct a periodic review of feed additives in the diet to help control feed costs.
- Feed additives are included in the diet for specific reasons. It is up to the producer and the nutritionist to determine if those reasons are still valid today.
- Not all additives are created equal. Assess the research, experience on farms like yours, and proven returns on each unique product.
- Milk price should NOT determine if a feed additive is appropriate. Either it's helpful, or it's not. Milk price will affect the ROI, but not the need.
- Use all your resources to get complete information and make an informed decision.

FEED ADDITIVES

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Feed costs are the single highest input expense on the dairy today. Feed costs are estimated to range from 40 to 60% of total costs on most dairies. The majority of dairies focus on maximizing feed dollars by harvesting high-quality forages, storing properly, reducing shrink, and practicing good feed bunk management. They also take careful consideration when locking in a feed price on purchased feeds via contracts. As we all know right now, forage and commodity costs will vary year-to-year based on weather, exports, and demand for different crop uses (human vs. livestock vs. biofuel production). On the flip side, the nutrients necessary to feed a high-producing dairy cow do not change. This article will deal with one more factor that can affect overall feed costs: feed additives.

We will define a feed additive as any ingredient added to the diet beyond the cow's protein, fiber, carbohydrate, vitamin and mineral needs. It seems there is no end to this list with products that offer to lower digestive upsets, improve feed efficiency, enhance components, improve hoof health, improve transition cow health or reproduction, among other things. Therefore, it is up to the nutritionist and producer to decide which additives meet their dairy's unique needs. Additionally, additives are sometimes used to address a short-term situation, for example, higher toxin levels in a forage or recovery from a heat stress period. It is easy to see that feed additives are typically added to the diet for good reasons. Still, I'd purpose a periodic review of additives in the diet is necessary to assure the nutrition program stays on track, we prevent "additive creep," and thus more effectively control ration costs over time.

It is not unusual to see additive costs in a diet add up to \$0.50 to 1.00/cow/day, or even more. It's easy to see how this happens, as the nutritionist believes every diet should include monensin (\$0.05) for feed efficiency and a yeast product (\$0.05) to help stabilize rumen function. Then a binder (\$0.15) got added to deal with higher

than desired toxin levels. We wanted to be proactive with summer coming and added a K+ source (\$0.20), and by fall, we hit more hoof lesions than typical, so we added some Biotin and upped organic trace mineral sources (\$0.08). By early winter, we have \$.50/cow/day in additives in the diet. This then raises the question: Are all of these still necessary? Of course, the answer is "it depends" on your unique situation, which will vary year to year, which is why a periodic review of additives is a great idea and should be done quarterly or annually at a minimum.

Take each ingredient and look at it through a magnifying glass. Be careful not to forget that many feed additives have become key to maintaining profitability on the dairy, so these audits are not just about lowering costs. Auditing a ration is more about ensuring a balance between price and performance.

THE AUDIT PROCESS

1. Why was the additive added to the diet? Does that need still exist? This question is best answered via good records around the nutrition program. Hopefully, you remember exactly why and when the additive was added to the diet. If it appears the feed additive is no longer necessary, then the additive could likely be removed without any negative consequences.
2. Have we done whatever is possible to remove the underlying problem? Let's say an additive was brought into the diet to reduce high yeast counts in forages. Since that time, particular management attention was put on managing the bunker or pile face, and yeast counts are well within the expected range. Again, if the underlying problem was solved in another way, the additive could be removed without negative consequences.
3. Has the additive performed as intended? Was the desired result achieved? If the underlying problem was not resolved and still exists, did the additive help improve the situation? If no, then we should remove the additive and/or look at alternative solutions. If yes, it should be continued.

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PLAN NOW FOR SUMMER HEAT STRESS Wayne Weiland, DVM

As I sit down to write this Tech Tidbit, it's 42°F for a high today in Wisconsin. But the summer heat will be on us before you know it, and NOW is the time to think about and prepare for summer heat abatement practices. Below is a list you might want to consider now to make your cow cooling efforts as effective as possible.

1. Clean all fans, lubricate as needed, and check belts for wear and tension. The cleaning should also involve fan hoods and louvers to assure maximum airflow. Dirty fans can increase electric use by up to 40% AND decrease airflow by up to 40%. That's a double-whammy you want to avoid! While you are at it, make sure the fan angle is correct to put maximum air at the level desired (e.g. 2 feet above the lying surface in the beds or at back level at the feed alley). Don't forget the fans in the holding area.
2. Clean thermostats and make sure fans come on by 68°F. If you bring on additional fans at higher temps, make sure they kick on at the desired setting.
3. If you utilize water soaker lines, clean the nozzles and assure they are delivering a large droplet size. Be sure to replace the in-line water filter and check the line pressure. A pressure reducer should take line pressure to 15 to 20 psi in a free-stall barn. If line pressure is too high, water droplet size will be too small to wet cows effectively. Line pressure can run slightly higher in the holding area, from 15 to 25 psi.
4. Check the settings on your soaker system controller. If your controller allows for multiple settings, consider starting with 15 minute cycles of 1-2 minute duration at 72°F, then graduate to a 10 minute cycle of 1-2 min duration at 80°F and a 5 minute cycle of 1-2 minute duration above 88°F. This highest setting can make it a challenge to finish all cycles around the barn before it starts again. You will need to assure adequate water flow and timing to hit these highest settings. Rate of water provided may also be checked by "catching" water from a single nozzle in a container of a known volume – aim for about 0.50 gal/minute.
5. Cows' water intake can hit 50 to 60 gallons per day in the summer heat. Look for areas where you can add waterers into the system, such as the exit lane or return alley from the parlor. These should ideally allow cows to spread out and take a drink before returning to their pen. Assure all waterers are clean and functioning properly. There should be at least 2 water sources per pen, so the boss cow can't control the only water source.
6. Consider adjusting your feeding times to allow cows to maximize their intake and then dissipate the heat of digestion before the maximum heat of the day. If cows are fed at 5 to 6 a.m. they will have a peak heat of digestion around 8 to 9 a.m. This gives them some time to dissipate heat before the noon to 2 p.m. peak heat of the day. This may require some feeding routine adjustments, but would be well worth the effort. Feeding more frequently (i.e. 2 times per day or more) can help keep feed fresh and intakes high – consider adding an evening feeding. Assure feed bunks are kept clean so that spoiled feed is not limiting intake.
7. Finally, visit with your nutritionist about dietary changes that might be necessary. Since intakes will likely fall, he/she may want to increase the nutrient density of the diet to provide the necessary nutrients to maintain production and body condition. Consider adjusting inclusion of highly fermentable starches. Also consider feedout rate of any wet commodities, which will heat faster due to fermentation by wild yeast. Increasing the level of buffer (positive DCAD balance) and feed additives which have proven helpful during heat stress periods should also be discussed and considered.

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4. Is this the best or most cost-effective solution? Are there new or different options that need to be considered? New products are constantly being researched and brought forward to the market. Therefore, it is necessary to consider whether the additive we are using is still the best and most cost-effective option in the market? An example here might be replacing a product with a new generic product equivalent in performance but at a cheaper cost.
5. What is the strength of research and/or relevant farm-level results? Not all additives are created equal. Some have a known mechanism of action, large amounts of research, and a solid technical team to back it up. Some don't. Are you working with a proven product with a highly repeatable outcome?
6. Can we afford it? Does it add a positive return OR mitigate a negative outcome? I often hear: "milk price is down, so pull these additives out of the diet." If the product is working, it is either bringing a positive benefit (better components) OR minimizing a negative (less foot problems). In either case, it is bringing value. In reality, milk price should NEVER be the criteria for whether or not to feed an additive. The only reason to pull the product is if you don't have the cash flow to pay for it. Just remember that if you pull it for cash flow reasons, it is likely cash flow will get worse, not better.

When doing your additive audit, you might want to consider all your available resources for information. Include your nutritionist, and possibly your veterinarian, and the product sales and technical support team. Challenge the product sales team with direct and simple questions about this particular additive's abilities and what might be expected with your diet's inclusion. From their experiences, in what situations has this additive worked best? Feed additive representatives will be honest when asked straightforward questions to learn and make good decisions for your dairy.

At the end of the day, the decision to use additives in the diet lies with the producer. The producer should surround themselves with advisors that do not have a personal financial gain in a decision to use an additive. Sales representatives from the company should be relied on to provide information to make a good decision, but should not be making the decision itself. Using unbiased advisors will help separate the chaff and help make the best health and production choices for the cows and the best economic choice for the dairy.

References are available upon request.

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