



Approach nutrition like a pork producer

MY LATE father taught me the valuable lesson of pursuing outside-the-box thinking to find new ways to make things work. While on the

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phone recently with Grant Grinstead (business manager for Vir-Clar Farms), that lesson jumped to the front of my mind as we discussed opportunities to improve farm balance sheets. We recognized the need that exists in our industry today to produce a hundredweight (cwt.) of energy-corrected milk (ECM) for less than \$15. I believe this is our new normal.

Grinstead shared his early experience with a new feed center their team built that improved the dairy's feeding efficiency and bottom line.

While on the call, he shared his swine nutrition and farmer knowledge as he questioned why we feed cows in certain fashions on dairies. In swine nutrition, feed conversion efficiency is paramount. We could stand as an industry to think more in this fashion.

Feed conversion efficiency is not a new topic, yet many dairies do not have key performance indicators (KPI) set to monitor feed efficiency on their monthly dashboard. For example, consider the feed costs to produce a cwt. of ECM or a cwt. ECM per pound of dry matter intake (DMI). There is substantial variation in these two examples of efficiency KPI when we get on farms, so much so it is striking.

In a recent discussion with another colleague, Stacy Nichols,

who works as a dairy technical specialist for Vita Plus, we discussed a more than \$2 range in feed costs to produce a cwt. of milk. When evaluating ECM per DMI per cow, there are ranges of 1.5 to 1.7 out there.

Nutritionists are tasked with cutting feed costs time and time again, yet that typically only yields 5 cents to 25 cents less per cwt. What if there was \$1 per cwt. out there for your herd in efficiency opportunity?

There could be. Fold efficiency KPI into your team meetings and evaluations. We need to think and talk more in KPIs like these because your business' future depends on it.

In the past five years, there have been over 100 published articles researching dairy feed conversion efficiency. University of Illinois' Mike Hutjens has led talks and discussions since 2005 on the topic, and we need to come back to his points.

More recently, in 2017, New York nutritionist Mary Beth de Ondarza and Juan Tricarico, vice president of Sustainability Research at Dairy Management Inc., published a great review discussing feed conversion efficiency in *The Professional Animal Scientist*. Their review summarized a number of different factors to evaluate on-farm with your management team.

Don't miss opportunities

Dry matter intake. This may seem overly basic, but ensure feeders are accurately tracking intakes. Too often, when getting into feed conversion discussions on farms, we find inaccurate intake measures when drilling into records or asking questions. Any discussion of feed conversion efficiency starts with having solid intake measures along with keeping accurate pen head counts.

Starch digestibility. Some farms have adequate grain on-site or the mindset "corn is cheap" so they just feed more. Beyond controlling added feed costs, starch digestibility — or the lack of — more importantly relates to feed conversion. Achieving 98 to 99 percent total tract starch digestibility in high-producing cows allows cows to gain more energy per pound of TMR (total mixed ration). More energy captured per pound of TMR means less feed is needed to produce a cwt. of milk.

Randy Shaver, retired University of Wisconsin professor, and Shane Fredin, dairy technical manager at Adisseo, have taught that fecal starch is a great tool to assess total tract starch digestibility (TTSD) for high-producing dairy cows. The new benchmark for dairy should be less than 1 percent DM fecal starch (~98.5 percent TTSD). Notably, 15 percent of samples through Rock River Laboratory are less than this. Many dairies average 2 to 3 percent fecal starch throughout the year (~95 to 97 percent TTSD), which used to be acceptable, but average is not good enough anymore.

TMR consistency. Dairy cows can absorb inconsistencies without showing it in the tank average. In these cases, it may equate to hidden efficiency opportunities. For example, feed consumption might be erratic, even though feedbunks are similarly not empty. Feeders might adjust cow numbers up without real pen head count changes.

Check your high pens' TMR in at least three spots during unloading (i.e., start, middle, and end) for similar particle size and dry matter. If variation is greater than 5 percent, there are opportunities. Also, check load cell accuracy, and consider

cleaning out your mixer. Not many think to do this, but it can improve accuracy and potentially clean feed up, which leads to the last point.

Feed hygiene. The industry is better recognizing unseen contaminant factors that may be plaguing feed conversion and subclinically affecting cow health. Learning from Iowa State's Lance Baumgard's research into leaky gut and immune responses, an "activated" immune system can consume over 4 pounds of glucose (energy) daily. Converting this to the corn grain equivalent suggests around 7 pounds of corn grain energy is diverted from production and to the immune system during health challenges. Discuss wild yeast, mycotoxins, and also contaminant bacteria (such as *Clostridium spp.* and *Enterobacteriaceae* species) with your veterinary and nutrition consultants.

Living contaminants will not only burn through usable nutrients in the TMR but also could potentially contribute to health challenges along with mycotoxins. Check into feed contaminants when intakes and digestion are variable or performance and health seems less than ideal.

Learning from Grinstead and swine producers, ensure efficiency KPIs are part of your leadership team discussions. The most meaningful KPIs will be different depending on how your dairy is paid for its milk and your herd demographics. Then, benchmark your dairy against itself and your peers to reflect back on both success of changes made and to document progress into the future. 🐮