



## Redefining what is possible

OVER the past couple of weeks, two different case studies have redefined my understanding of what is possible on commercial dairy farms. Learning from both situations, the intent here is to pass along new benchmarks and encourage your dairy to challenge the norm.

For those who know me, you'll readily acknowledge that I'm aggressively on the hunt to push the envelope. I'm constantly seeking a new definition of what is possible, learning from business-minded dairies and thought leaders. The constant improvement, stemming from ingenuity and creativity on your farms, is inspiring.

Driving this point, yesterday's average is today's loser, financially speaking. Margin over production costs are projected to be slim at best in the next four quarters. Hence, we're on the hunt to carve out previously unrecognized margins, and I expect the new normal is just around the corner.

Getting back to the two cases that will define this column, the first stems from a college friend sending me a text one night after his dairy crossed a new threshold.

### Eight pounds is now the goal

Dairy producers across the U.S. are generally paid for milk components. Butterfat, protein, lactose, and other solids make up a majority of your milk checks. As we continue to better understand milk pricing models, the key performance indicator language on farms has shifted from milk per

cow to component pounds per cow shipped per day.

Nutritionists and breeding programs have adapted to the component focus. Heck, even seed companies are taking notice. For example, at a recent invited talk with a seed company during their annual kickoff meeting, we discussed the impact that seed genetics can have on milk production and components.

The nutrition, breeding, management, and seed-related gains have been sizable, and several years ago the goal shifted from 6 pounds of components to 7 pounds shipped per cow. As of a few weeks ago, the goalpost appears to be shifting again.

My college buddy, Phil, sent me a text after his herd shipped just over 8 pounds of components per cow over several consecutive days. He was elated, and rightly so. After I got done joking with him that he must have sold all the tail end cows, I took this milestone to heart and congratulated him. This was a stunning case with a new possibility coming to light. Now this is one that I want us all to push for.

### How do we get there?

While milkfat and protein ebb and flow with consumer trends, commodity inventories, and demand, the nutritional levers we can pull to influence milkfat or protein do not. The nutrition and management factors influencing your milk components include but are not limited to:

- Consistent nutrient supply day to day
- Consistent and frequent feed

delivery or push-ups

- Controlling for moisture and nutrient changes in feed week to week
- Amino acid balancing
- Supplemental lysine and methionine, in particular
- Balanced fatty acid supplementation
- Oleic acid and other specific fatty acids supplemented to achieve desired outcomes such as greater milkfat or improved herd health
- Clean, high-quality forage beyond what the eyes can see, without spoilage yeast or mold
- Improved diet formulations
- Balancing and optimizing both digestible fiber and starch supplies
- Excellent cow comfort and cow cooling

### A new definition

Stepping aside from milk components, the second case study pushing the envelope relates to fine ground corn grain. Decades of research have driven home the fact that corn grain particle size affects dairy performance. Finer is better, but several years ago, Randy Shaver and I, along with other colleagues, surveyed commercial corn and observed a wide spread in particle size with supposed fine ground corn. Corn is not all corn, and we have margin opportunities here.

This realization hit home as I worked with a California dairy that grinds its own corn and regularly hits 400 to 500 microns as a mean particle size. Average isn't good

enough for this dairy, so the manager reached out for support.

Thanks to a solid ground corn dataset from Rock River Laboratory, we were in position to put economics to particle size and challenge the current norms. We looked at samples where both particle size and rumen in situ starch digestion were measured. We compared mean particle size to seven-hour rumen digestion, and the relationship was striking. For every 100 unit reduction in mean particle size, rumen starch digestion rose by roughly seven percentage units. Ask your nutritionist what a seven-unit gain in ground corn digestibility means for your herd!

Equally striking, the top 15 percentile was around 250 microns, meaning the goal has shifted, and we're now targeting less than 300 micron mean particle size. Ground corn particle size is affected by processing equipment, power and grinding technique, and grain hardness.

Getting to 300 microns isn't easy, but it can be done, just like we now have evidence that shipping 8 pounds of components per cow per day is possible. In both cases, we've redefined what is possible based upon experience, and now we should push for this to become the norm.

The path to continued dairy business growth depends upon constantly redefining what's possible. It's an exciting challenge. 🐄

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