



by John Goeser

Unpacking feed conversion efficiency

WHILE traveling to the airport early en route to a dairy industry meeting, I tuned into a *Hoard's Dairyman* "Herd It Here" podcast episode covering feed conversion efficiency with Mary Beth de Ondarza. I recommend listening to the content-packed episode. De Ondarza is a thoughtful leader in dairy nutrition, having contributed work that helps us zero in on the factors we can manage to improve feed conversion efficiency and income over feed costs. We'll delve into this more again in a bit.

The podcast topic is timely as we need to continue expanding on feed conversion efficiency. Several months ago, I previewed the latest round of the dairy herd performance and economic benchmarking project from Stacy Nichols and his Vita Plus team. In this latest summary, we focused on 20 Midwestern dairy herds shipping nearly 7 pounds of combined fat and protein. This equates to over 100 pounds per cow in energy-corrected milk. The milk income for these 20 herds averaged around \$18 per hundredweight, with little range to the milk income as we focused only on benchmarking among high output herds.

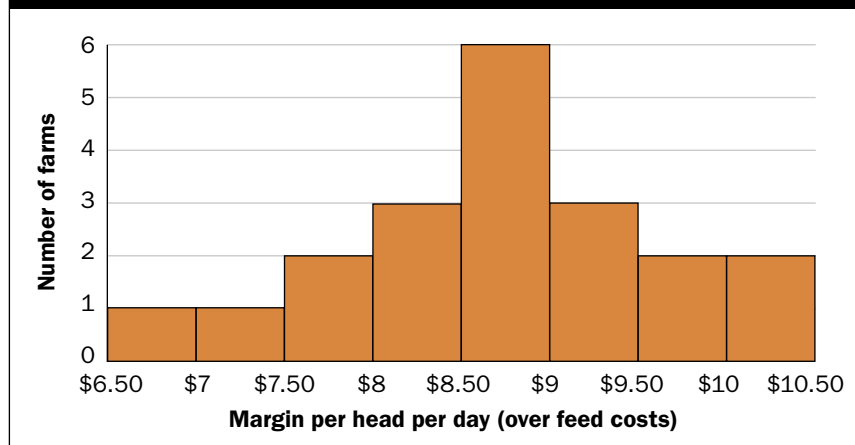
Where the rubber hits the road, financially speaking, is with income over feed costs (IOFC), ranging around \$3.50 per head across these 20 high-output herds. This is a staggering difference in profitability and margin and warrants visualizing to grasp the financial magnitude. In Figure 1, we can visualize the real and sizable range in economic performance among these high output herds, with IOFC ranging from less than \$7 to greater than \$10 per head per day.

Income above costs

Taking a boomerang path back to one of de Ondarza's comments, income over feed cost can also be a feed conversion efficiency indicator. IOFC details how herds are turning feed expenses into valuable margins. At times during meetings, I can sense that feed conversion efficiency benchmarks such as 1.60 or 1.85 require experience and can be tough to grasp. However, \$8 versus \$10 IOFC per head or per hundredweight speaks directly to the dairy producer's checkbook.

As I write this month's article, I'm still astounded at the range in economic performance among these herds. Yet, it speaks to wonderful opportunities ahead for our industry. Just like a plant breeder, if we identify high-performing genetics, we can seek to move the whole population in that direction. That's the goal — to continue moving our industry closer and closer to the top in economic performance.

Figure 1. Income over feed cost distribution for 20 dairy herds



A look at intake

In that vein, we can explore the other benchmarks Nichols' team reported relative to IOFC such as dry matter intake, feed conversion efficiency, and feed cost per pound of dry matter in the lactating diet. The range in dry matter intake (DMI) among these 20 herds was over 11 pounds, which is also astounding. However, it should be no surprise that DMI was negatively related to IOFC. This negative relationship is due to DMI driving feed conversion efficiency, with each of these herds shipping around 100 to 105 pounds in energy-corrected milk.

The ECM based feed conversion efficiency was better and positively related to IOFC. Again, this shouldn't be surprising, as the top economically performing dairies were 1.75 or greater.

The last benchmark I looked at was feed cost per pound of dry matter. This was a new benchmark to show up with this latest report from Nichols' team.

Interestingly, feed cost per pound of dry matter for the lactating diet was by far the strongest indicator of IOFC. In fact, the feed cost density explained nearly 70% of the variance in IOFC as indicated by an r-square value of 0.67. This isn't a benchmark we've covered extensively in the past, as it will range over time with total feed costs. However, within this high-output herd benchmarking report, the range in feed cost per pound was roughly \$0.06 and tightly correlated with economic performance.

Realizing this, we need this benchmark in our monthly and quarterly reports and discussions. Feed costs are always a hot topic; benchmarking total feed costs against dry matter intake is another valuable metric to evaluate in our decision making.

Let's continue pushing forward in seeking IOFC gains but with newfound insights as discussed here. Reference de Ondarza's recent contribution on the "Herd it Here" podcast and the 2017 paper she co-authored

with Dairy Management Inc.'s Juan Tricarico for valuable ideas (available at on.hoards.com/dairyefficiency). The future is bright for our industry, with sizable margin opportunities out there! 🐄

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