

# Do the math

...it's the only accurate indicator

By Lisa Boonstoppel-Pot

THE ONLY WAY WE can know if a management change works is to do the math.

"There are dairy farmers with low costs and good profits and guys with high production and high costs that also have good profits," said Chris Church, a veterinarian who is now earning his masters degree in dairy finance to help farmers troubleshoot what management changes improve profits.

Speaking at a dairy meeting hosted by Hensall Co-op on March 11 at the Exeter Legion, Church said he had two farmers. Both had 100 kilos of quota, 75 stalls and milked 60 cows producing 40 litres of milk. One farmer's mantra was "low-cost is best" and decided to fill the stalls and reduce feed costs. The other farmer's mantra was "high production is best" and decided to feed for production and leave the extra

stalls empty.

Which one made more money? And how could they tell?

Church engaged the audience and asked their opinion on how they determined profitability. One farmer said he waited for year-end statements from the accountant. Another checked the bank statement.

"A bank statement works but sometimes farmers have multiple lines of credit, and those can add up," said Church. "Accountant statements are good but not everyone goes to the accountant to check for profitability. They go because they have to pay taxes." Also, every accountant has their own method and it's near impossible to compare financial statements when they come from different accountants.

That's why Church is working on a

system to work backward from the accounting statements to actual management changes, then work forward again.

It starts with using income over feed as a starting point. There are inherent problems, right from the get-go. Some farmers believe these statements are just "smoke and mirrors" and used as a report card for nutritionists. Also, valuing home-grown feed such as haylage is a difficult process. However, Church says there is still value in this calculation, even if it is a bit of a black box.

Why? Church says he thinks in terms of levers and dials. Some management techniques and changes are like dials, slowly adding value to the farm operation. These are valuable but not as effective as levers which make dramatic improvements to profitability. Quality haylage, he says, is a lever.

Another lever is getting cows pregnant. "We are trying to get the whole herd to lower days in milk because a cow's 'engine' is less efficient as days in milk lingers," he said.

The next thing to think about is fixed and variable costs. A fixed cost is something that does not change no matter how much milk a cow produces. The costs of running the barn would be a fixed cost. Variable costs are ones that fluctuate depending on cow numbers and days in milk. These would include things like bedding and teat dip.

Feed is confusing because the total cost of feed is diluted by the fixed costs (feed required to maintain each animal). As the audience tried to follow all his data regarding fixed and variable costs, Church summarized the point by saying that the "last money is the most efficient to make." The last milk



Veterinarian and dairy farm troubleshooter, Chris Church, speaks to dairy farmer Ron Vanden Hengel about his costs at a dairy meeting hosted by Hensall Co-op



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that can be squeezed out of each cow is the most profitable because fixed costs are being paid for it, regardless. In practical terms, Church said this means “keep your bunk full. One kilogram of feed can make 2.25 litres of milk so it’s more than a 2:1 return. One kilo of feed costs around 30 cents while one litre of milk earns 80 cents. So 30 cents makes us \$1.60. That’s why we want to keep the feed to the cows, even if we have to throw some away.”

What followed was a lot of calculations that are hard to write about in this story. To summarize the math, the end result was a \$25 difference a day in income between the farmer who milked more cows with lower feed costs, and the farmer who milked fewer cows with higher feed costs.

“Quota was the same. Revenue was pretty much the same. It seems like both scenarios are profitable, right?” asked Church.

Then he asked, “does it cost you anything to milk the extra cows?”

This is where the whole scenario began to change. Including extra costs such as veterinarian bills, equipment, manure handling, activity tags, extra semen and bedding. Those extra costs can add up to about \$4 per cow per day.

That doesn’t include the costs of raising extra heifers which is usually way more expensive than farmers predict. Church asked the crowd what they estimate the costs of raising a heifer is. One farmer answered \$2,500.

Think again, said Church. When you collect the number and do the math, the costs of replacement heifers is estimated to be \$3,400 without barn payments. “With barn payments, \$4,000 isn’t unheard of,” referencing data collected from Quebec, Ontario and Manitoba. At this number, there were sounds of disbelief from the audience.

“Do your own math,” urged Church. “Feed costs are about \$1,800. You have to pay someone to take care of the heifers which can be \$700 on top of that. Then there is breeding, vaccinations, dehorning, potential scours and pregnancy checks. That’s not paying for a barn or even bedding, yet. It starts adding up.”

Back to the scenario of the farmer milking more cows with less costs, when you factor in extra costs and replacement heifer costs, that \$25 difference can change to \$78 a day between scenarios.

When measured out in a calculation including kilograms of quota and days per year, that cost alters profitability by \$28,690 per year. Which farmer made \$28,690 more? It was the farmer with fewer cows producing more milk.

“Intuitively, it feels like if we get costs down, it makes more money. And that is true ... when feed costs go down, we do make more money. However, the real way to make money is to make more milk per cow because fewer cows saves costs,” said Church.

He added a caveat saying every farm is different. Some farmers do increase profits by reducing costs. The only real way to know what works on your farm to increase profitability is to do the math. ■