

Dairying by numbers paying off

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MUTUAL GAINS: Jane and James Smallwood, with Wilfred and Rachel van Beek and baby Fritz, study data collected by soil probes, fed to this weather station and then sent to a website where they can determine how much water their farm needs.

Successful dairy farming comes down to numbers. The most important number is three, according to Wilfred van Beek.

"That's the ideal number of leaves each grass stalk should have," he says. "Less than that, it's not enough to feed a cow properly; more, the grass takes too much energy to digest."

This is meat and drink to Greytown dairy farmer James Smallwood.

He and wife Jane took over the family farm 10 years ago after he had travelled the world as a big-business change manager.

He had always been a numbers man and was delighted to meet a fellow enthusiast in Wilfred a few years ago. He was judging the sharemilker of the year competition and came home and told Jane: "If we ever need sharemilkers, I've just seen the right ones."

Wilfred and wife Rachel didn't win but James kept their number. Two years later, he rang it.

Catalyst for the call was a whole-farm assessment by DairyNZ.

This reviews a farm business for possible improvements and it triggered the realisation by James and Jane that they were too immersed in day-to-day farm tasks.

If they stepped back they could take a broader view and open up other opportunities.

The assessment followed a DairyNZ Tight Times course, which helped them concentrate on the basics, particularly measuring all costs against their effect on milk income.

"When those costs were measured in kilograms of milksolids it was a game-changer for me," James says.

"Those with the lowest costs make the most money - it's obvious. And we went after that like a robber's dog."

They took on Wilfred and Rachel as variable order sharemilkers and immediately production from the 490 cows lifted. Last season was a record and this year that will lift again, despite the drought.

Wilfred says it comes down to the numbers, and he has the most important number at his fingertips: three - that's leaves of grass.

And he has others: A cow needs to drink 80 litres of water a day and eat 120kg of grass.

James leaps in to put those in simple terms: "To supply the herd each day that's enough water to fill two backyard swimming pools and the grass needed would fill 500 wool bales each day."

Such precise measurements are required to keep cost increases under control and the cows at peak production.

Wilfred and his staff measure grass levels each week, walking the 155 hectares of paddocks with a rising plate meter.

The measurements are converted to kilograms- of-dry-matter-a-hectare and a feed budget done to determine how long the herd can be kept in each paddock.

Crucial to this is water. They tap into bores near the Waiohine River and take care to use it as efficiently as possible on 90 per cent of the farm.

Soil probes in their paddocks measure temperature, moisture, humidity and evapotranspiration (moisture lost to the atmosphere) and the data is sent to a website run by Harvest Electronics.

Graphs tell them how much water each paddock needs and, with GPS placement technology, where to move sprinklers and k-line pods so not a drop is wasted.

Totara trees left after the bush was cut in the late 1800s are dotted round the farm and their preservation is the reason James decided not to put in a large centre pivot irrigator

Grass silage has been added to the feed mix in autumn and is the only feed brought onto the farm. Urea is also used to even out pasture growth.

Effluent is sprayed on to 30 per cent of the farm. The irrigator has a GPS unit connected to the Harvest Electronics website so they can see where the effluent has been spread to ensure they are meeting their resource consent.

If, during spraying, it doesn't move for two minutes it is automatically shut down and Wilfred is notified by text.

In a system dependent on grass the more information they have the better.

"It won't be the most profitable in a high payout year but it will come into its own when there's a low payout," James says.

Wilfred makes the most of the system, James says.

"I can't speak highly enough of him. Our costs have remained the same but our production has increased."

Wilfred says he is still fine-tuning it. "We can get better."

He and Rachel have received recent Fonterra awards for excellence in milk production and for low somatic cell counts, which they say is also a credit to their team.

They work hard to ensure the cows perform well. They pay particular attention at milking, ensuring the cows are fully milked out and teat-sprayed to protect them from mastitis.

The reproduction system is kept simple, with an emphasis on good nutrition confirmed with condition scoring. As a result the empty rate has been reduced to 13 per cent.

The submission rate has also improved as mating has been reduced from 12 to 10 weeks.

However, this has created a problem at calving with more cows calving earlier than usual and needing more feed. A plan to shift the calving date a week later is being worked on with Massey University.

Wilfred's love of numbers reappears as he explains the need for the change.

"It's only a few days but multiply that seven days over 500 cows. That's 3500 milking days to find extra feed for - the same as feeding one cow for 9 years."

James talks about a "symbiotic" relationship between the two couples. "We understand each other and work well together. We share similar ethics and morals."

Each couple has a five-year plan setting out future goals. "It's like a conscience," Jane says. "It hangs on the wall; it's there to make sure we will do what we said we would."

She worked as a project manager in the financial sector before their two children, now 8 and 6, arrived and handles the farm's finances.

She is a convenor for the Dairy Women's Network and is doing the Agri-Women's Development Trust's "Escalator" 10-month leadership and governance programme.

Wilfred and Rachel have two five-year plans, for family and for business. The family goals are most important. They have four children, spanning in age from 1 to 8.

"The business plan is based on the family plan," Rachel says. "We want to make sure we're around when the little darlings need us."

Spending more time with his children was another reason why James wanted to step back from on-farm work two years ago.

"They were getting to school age. I could see that I would be around home during the day when the kids weren't there and working in the milking shed at the weekends when they were."

Now he is free to do other work. He is the business manager and minority equity partner of a 2000-cow Wairarapa dairy farm and is a change management consultant.

At the same time he keeps in touch with his farm's progress through the Harvest Electronics site.

His last job before full-time farming was as general manager meat and wool services for Meat and Wool NZ just after it was formed from a variety of smaller organisations.

Weekend milking was his way of relaxing.

"All of a sudden my relaxation became my job," he says. "I was a change manager for someone else who had to become a change manager for myself. It's taken a while but it's worked out all right."

Wilfred has one more number to add.

"Two million. That's the sets of cups the average worker puts on in his career in the milking shed. After that they tend to give up farming if they can't get out of the shed.

"That's only 10 years if you've got 400 cows, so it can go by quickly. That's why it's important to share the load."

James smiles at this. "Do you hear that? This industry only works because people like Wilfred and his team are willing to get up at 4.30 every morning and go to work," he says, pride in his voice.

"Actually," Wilfred says. "It's more like 3am some days, but I won't argue numbers with you."

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