



Research combination



Autumn calving cows on Kavanagh farm were dried off at BCS 4.8.

Words by: **Jackie Harrigan**

Being a stronghold of the New Zealand dairy industry since 1880 and once home to 118 small dairy factories, there is no denying Taranaki's dairy farming heritage. Consolidation and rationalisation of assets has reduced the number of dairy factories and increased the size of farms, but the region's farmers are still spoilt for research farms.

Four farms have been brought together under the umbrella of Dairy Trust Taranaki, established in 2016 with the mandate 'to advance knowledge and discover solutions to ensure the ongoing viability of dairy farming in Taranaki and New Zealand, through the harnessing the shared resources and collaboration with others.'

The four farms, totalling 400 hectares

and running 1200 cows with 12 staff, are varied in altitude, rainfall and size. The varied conditions make them ideal to run separate research programmes at the different properties, DTT Operations manager and South Taranaki dairy farm consultant Debbie McCallum says.

When the trust was formed the trustees brainstormed with Taranaki farm consultants and farmers to identify Taranaki issues farmers would benefit from research around.

"The issues we came up with were summer dry conditions on the coastal strip, winter wet on the high altitude farms on the flanks of Mt Taranaki, how the FEI system would work and how to get farmers effectively using palm kernel and challenges with recruiting, retaining and training staff for Taranaki dairy farms."

The trust was effectively set up to provide the platform for research into the issues – providing the land, cows and staff.

The milk and stock income pays the staff and debt on cows and Fonterra shares for the Kavanagh farm, and for a small parcel of land adjoining the Gibson farm purchased by the trust.

Gibson and Kavanagh are owned by Fonterra, as part of the green belt around the Whareroa factory, and leased to the trust. The other two DTT properties have been operating as independent demonstration farms for more than 100 years.

ONGOING RESEARCH

The need to secure contestable funding for research projects makes the continuity of programmes difficult, Debbie says,

but in a few years' time the trust will have paid down their debt and be able to support more research themselves. In the meantime they potentially secure funding from NZ sources, including Sustainable Food and Fibre Futures Fund (MPI) and Dairy NZ, who co-fund research, provide scientific input and are able to advise on research happening in other parts of the country to avoid overlap.

The trust also has many national and local sponsors who contribute in product and time and expertise.

Good and engaged farm staff are essential to any research programme, Debbie says.

Running the split herd on Kavanagh farm's current research project can be tough on staff as it's more complicated, but she says their staff are engaged and interested in the results.

"It took a while for them to get their heads around it, but it's imperative they are engaged in the research and are good at monitoring and measuring and data collection.

"They really need to be rigorous about sticking to the rules, understanding which herd needs what treatments.

"But making sure they have a balanced life is important, because the shed never stops so it's tough on the team but manager Matt Butler gives each team member a couple of weeks of sleep-ins in the dry period."

The staff really like the dry period being in summer, so they can get away with their families and enjoy the summer, she says.

A full-time research technician has been employed in Linda Cruikshank,

who collects and collates data across all the farms and all research programmes.

“Ideally in future we hope to get another technician onboard to help Linda and allow her more time to contribute to writing up research papers alongside the input of a part-time scientist.”

Part of Linda’s brief is to turn her collected data into a weekly email Farm Walk Notes newsletter detailing pasture growth rates for each DTT site, rainfall, soil temperatures, cow performance and a summary of what is happening on each farmlet. Subscribers number 440 and a summary of the notes is also posted on the Dairy Trust Taranaki Facebook page.

Signup to Farm Walk Notes: www.dairytrusttaranaki.co.nz

DTT KAVANAGH

The latest research programme to start has been a transition to autumn calving and winter milking for half the 600-cow herd at Kavanagh Farm, and a full comparison with the other half of the herd – a spring-calving herd. The herd and farm were split in half in October 2017 into randomised groups with half the herd mated in spring and the other half milked through, mated in winter and calved down in mid-March.

A full suite of physical and financial data is being collected over the next three seasons. The transition to autumn calving will be analysed by DairyNZ scholar and masters student Jake Jarman for the project which has Dairy NZ co-funding.

An autumn calving discussion group is run on both DTT Kavanagh and Waimate West and Debbie says the early indications are good. There are already about 40 autumn-calving herds on the Taranaki coastal strip and a waitlist with Fonterra for more farmers to supply in the winter.

Anecdotally, calving in March is much easier due to the better weather and the calves grow very quickly and are outside almost from day one,” she says.

The cows have milked really well and held on to condition – meeting their calving BCS target before they were dried off, she added, saying they produced 480kg milksolids (MS)/cow across a 300-day lactation.

The only downside was managing mating results from winter mating, but she was very happy with the 12% empty rate they achieved at Kavanagh.

A full update on the transition to autumn calving will be given at the Farmers Forum held at DTT Gibson on March 11, 2020.

DTT STRATFORD

- Formerly Stratford Demonstration Farm
- 51 effective ha
- East of Stratford
- Annual rainfall 2000mm
- 300 metres above sea level
- 160-180 cows
- Target 100,000kg MS
- 2017/18 and 2018/19 farm scale research into wintering/ spring strategies with half the herd accessing covered woodchip standoff area.
- Results are on the DTT website at www.dairytrusttaranaki.co.nz/dtt-stratford/

DTT WAIMATE WEST

- 34 effective ha.
- 40 x 0.86 ha paddocks
- North of Manaia
- Annual rainfall 1140mm
- 90m asl
- Current research into eliminating reliance on imported feed and growing all supplements onfarm.
- The farm is running two autumn-calving herds – one with cropping and self-contained and one with supplementary feed purchased off-farm.
- Extensive cropping programmes have run over the past six seasons with spring-calving Jersey cows.
- More detail on the DTT website at www.dairytrusttaranaki.co.nz/dtt-waimate-west/

DTT KAVANAGH

- 213 effective ha
- Adjacent to Gibson property
- 600 cows, 204ha milking platform
- Target: 250,000kg MS
- Hawera
- Current research into autumn calving.

DTT GIBSON

- Coastal South Taranaki
- 110 effective ha
- 72 x 1 ha paddocks
- Annual rainfall 1100mm
- 100m asl
- Hawera, alongside the Whareroa Fonterra site
- Perfectly suited for farmlet comparisons with 72 x 1 ha paddocks and infrastructure to support multiple herds.
- The past two seasons (2017-2019) the farm has been investigating the biophysical and economic effects of supplementing grazing dairy cows with palm kernel compared with a palm kernel blend or grain.
- Results are on the DTT website at www.dairytrusttaranaki.co.nz/dtt-gibson/
- Next planned trial: Future farming 2030 and beyond – a farmlet trial investigating the profitability of low stocking rate, low N fert, no palm kernel – reducing the footprint of dairy farming.