

Fertility basics at North Canterbury workshop

by Phil Stewart, *Deer Industry News* Editor

When about 35 people gathered at the property of Mark and Gill Forrester for a P2P Regional Workshop on 22 March, there were signs the three years of drought might be coming to an end. The excellent rains in the months since then have borne that out, but the 10 members of the North Canterbury Advance Party will be dealing with the consequences of the prolonged dry spell for some time yet.

THE FORRESTERS RUN 8,000 stock units comprising sheep, beef and deer on three neighbouring blocks at Waipara Gorge near Amberley in North Canterbury. They bought the home block (Forrest Downs) in 2001 and have since leased two other blocks along the same road. About 200 hectares of the 400 hectare Forrest Downs is now deer fenced, with a further 240 hectares of the Claremont block's 600 hectares also deer fenced.

The deer that came with Claremont farm when they leased it were the first that the couple had encountered and they embarked on a steep learning curve after 100 of their 400 hinds went into winter dry. "Things have improved drastically since then," Mark Forrester said.

Over time, the Forresters have been reducing ewe numbers and building up the deer and cattle. "The sheep are good high-producing ewes but the returns outside the lamb crop are pretty miserable for the amount of work we had to put in," Mark said.



Mixed aged hinds in with the stag on Browntop pasture at Forrest Downs.

Gill Forrester said the previous spring had been good and in November they sold all their lambs except replacements as well as 1,000 ewes. "It's been a really good move," she said. They have now increased deer numbers to 270 yearling hinds and 850 mixed age hinds. Angus cow numbers are up to 300 (kept on the hillier Forrest Downs block) with 290 weaned calves being run on Claremont. Of the sheep, 1,000 ewes and 350 mated hoggets remain.

The R2 and R3 hinds fawn at Claremont, which is also a finishing block. The mixed age hinds fawn at Forrest Downs.

They pre-rut weaned for the first time last year and it went well. This year an endophyte problem on Nui-type pastures at Forrest Downs forced them to put one mob on rape until the problem subsided, but not before losing two fawns and a hind. The weaners were on a radish/kale hybrid crop when we visited in March for the Regional Workshop and were due to move to Claremont for more rape and fodder beet through the winter.



Used tyres make useful supplement depots at Forrest Downs.

The rest of the mixed age hinds at Forrest Downs were going to be post-rut weaned this year as they were in very good condition – quite an achievement given the tough conditions in North Canterbury since Christmas. All the R2 and R3 mobs at Claremont had been pre-rut weaned, and the strategy for the farm is for all hinds to be pre-rut weaned.

Last year they finished 800 weaners, with the first draft away on 18 September and most gone by late October. The last were gone by 12 December and overall they killed a month earlier than usual, with average carcass weights of 55kg, the best they had ever achieved.

Gill said the members of the North Canterbury Advance Party had encouraged them and given them confidence to keep expanding the deer fenced area.

The Forresters are also wanting to improve pastures to support more deer while reducing supplement use, at the same time increasing weaning weights and routinely pre-rut weaning the entire herd.

Mark said the weaner weights achieved by nearby Advance



Weaners with aunty hinds on kale at the Claremont block.

Party colleagues, Lyndon and Millie Matthews had been fully 9kg heavier than theirs, which inspired the Forresters to make far better use of strategic feeding in autumn. He said better use of weighing and monitoring liveweight gains per day meant they could respond better to changing conditions.

At Claremont there is a large self-feed barley silage pit in a sheltered paddock well away from water courses. It gets used during the worst of the winter, for about 100 days. It is supplemented with hay and sometimes baleage if the weather gets bad.

Fodder beet is another important winter feed and the Forresters were among the first in North Canterbury to use it.



From left: Hamish, Gill and Mark Forrester and Agknowledge Director, Dr Doug Edmeades. The hill in the distance at left is being redeveloped with a "drought mix" of a two-year ryegrass, red and white clover, chicory and plantain.

Mark commented that it is only expensive if it fails to perform.

Palm kernel is also used at Claremont, delivered to the deer in half-tonne lots inside used tractor tyres.

Straight talk from soil expert

Guest speaker at the Regional Workshop was Doug Edmeades, a soil and fertiliser expert with a reputation for directness. Edmeades is Managing Director of Agknowledge, an independent

soil fertility and pasture nutrition advisory service.

He made a strong case for getting back to the basics and making better use of pasture legumes on dry land. "Clover fixes nitrogen for free. You can grow 1kg of clover/ryegrass pasture for 4–5 cents, versus 15–20 cents for crops. Look after your legumes because they are the engines driving our systems. If you can grow more pasture, why bother with crops? We've made a simple system unnecessarily complex."

It was too easy to make excuses such as weeds, weevils or drought for not looking after clovers, he said. "Clover fixes N well, but it has a poor root structure so needs more nutrients than grass. If there is 30 percent legume in a pasture it will fix enough N. Ideally it should be 40 percent clover plus ryegrass and plantain. Clover needs 16 nutrients as all plants do, and will only grow as fast as the most significant one allows."

He said many of the 16 nutrients were easily available in soils (iron, carbon etc.) but the ones to worry about were phosphorus, potassium, sulphur, magnesium, molybdenum as well as a high pH. The health of clover in a pasture was the "canary in the mine" he said. Raising the pH to clover-friendly levels didn't have to be expensive. "Finely ground expensive lime at \$200 a tonne is no more effective than coarser lime. The old stuff still works."

The nutrient needs of lucerne and all clovers were the same, but red clover and lucerne had the advantage of deep tap roots so could do well in dry conditions, he added.

Edmeades took a swipe at both fertiliser and seed companies. He said fertiliser companies were distracted by the fight for market share as well as environmental issues, while seed companies were focused on selling their cultivars. The free advice given by fertiliser companies was not that good, he warned, adding that the companies are moving towards more expensive branded products rather than generics. "We start from the point of your farm goals, then doing tests and seeing what you need to do to reach the goals. What fertilisers are needed to get there and what's the best deal available for getting that blend?"

Seed companies tended to scaremonger about pasture persistence so they could sell more seed, Edmeades said. "Some well-fed pastures are 50 years old!"

Pasture persistence was linked to soil fertility. If clovers were underfed, they wouldn't be recycling N effectively, he said.

Edmeades urged farmers to use soil tests but to be careful to take samples away from dung and urine patches or stock camps. "Don't just go on the results of your soil tests, though.

Take a good look at the pastures too. Sometimes the test will look okay, but the pastures will be rubbish."

While he acknowledges that ploughing can damage soil structure and burn off N from the soil, he has no time for those who advocate concentrating on organic matter and soil biology to "unlock nutrients". That approach, he said, is "bullshit".

The starting point should be feeding soil the 16 basic nutrients that legumes need, he advised, and all else will follow. "Don't

worry about feeding bugs. No farmer ever went broke putting on the right amount of fertiliser.”

Potassium, molybdenum and sulphur were often deficient in the South Island. “It’s cheap to fix, but do a soil test first.”

He said where moisture was a constraint, as it had been in North Canterbury, it was important to make the most of the short windows that were available for pasture growth. In general terms he advised dividing the farm into land classes and working out the optimal P levels for each. He said phosphorus at about \$2.80/kg is the most expensive and sulphur (\$0.70/kg) the cheapest with potassium in the middle. “We need to work out the economic ranges for each block and be sure that nutritional levels aren’t limiting potential. Once the optimal levels are reached, it’s a question of maintenance – working out what is going off the property and then replacing it.”

As a general rule, about 30kg/ha of P, K and S was needed for maintenance. Across all pastoral farming, people usually spend about \$10 per stock unit, he said. ■

Climate of doubt

His advice on fertilisers and plant nutrition was warmly received by the visitors to the Regional Workshop, but Doug Edmeades’ “postscript” comments on global warming had a more neutral reception. Unlike most in the scientific community, he is a climate change sceptic. He said carbon is one of the essential 16 nutrients captured by plants and saw increasing CO₂ levels in the atmosphere as a positive.

“The planet is greening because of increased CO₂. Plant growth will increase by 20–30 percent because of higher levels.”

Edmeades disputed that the planet is continuing its warming trend. “There’s been no warming for 18 years. The earth always warms and cools – temperatures peaked in the 1990s and now they have plateaued. You are being fed BS [about climate change].”

“Then why are the icecaps melting?” was the only response from the group. ■