

ODPG Field Day Report: Clearwater's Dairy Farm, Peel Forest, 27 March, 2009

The Organic Dairy and Pastoral Group held a field day at Jackie and Bryan Clearwater's dairy farm at Peel Forest in March. The Clearwater's farm, "Peelview", is 110 ha and has full organic certification.

Introduction Jackie & Bryan Clearwater have been dairying for 15 years. They were sharemilkers, then leased a farm before buying "Peelview" in 1999. They always had a concern for the environment and were interested in organic farming since WOOFing days in Europe. Bryan has always felt that sustainability and organics should be something New Zealand farmers should embrace rather than feel threatened by, so they began their path to organic certification with AsureQuality and are now fully certified. Jackie and Bryan feel that farmers have a responsibility for the land and for producing healthy food, and like to be able to produce healthy food for those who seek it.

Pastures and soil Pastures are mixed species pastures with ryegrass, tall fescue, timothy, red and white clovers, chicory and plantain. 15 ha of barley is grown for silage and a brassica grown for winter feed. Bryan finds it hard to get the tall fescue established, so has relied more on ryegrass. With irrigation restrictions looming, they will try tall fescue again, which is deeper rooting and hence more drought resistant. Pasture is grazed on a 20 day rotation. Rainfall is 750 mm per year, with uneven distribution – last winter was very wet, then spring and summer dry until February when they had 11 inches (275 mm). Two soil types prevail: Mayfield silt loam which has good waterholding capacity, and Ruapuna silt loam which tends to be drier. Both have good nutrient status, and they regularly use soil tests and fertilise with solid fertilisers (RPR, quick lime, elemental sulphur, trace elements, potassium, humates, seaweed and organic sugar). The Clearwater's are also interested in the ideas of Elaine Ingham and the soil foodweb, and incorporate compost teas into the fertiliser programme.

Irrigation The Clearwater's have a 40 m well from which they can irrigate, however Environment Canterbury has found that their well is linked to Cooper's Creek, a local spring-fed creek that is the water supply for Peel Forest village. They may have irrigation restrictions in summer if the levels in the creek drop below a certain threshold. It seems that there is leakage from the shallow aquifer that feeds Cooper's Creek into the deeper aquifer that their well taps. There was considerable discussion of the options the Clearwater's could use if restrictions were imposed:

- Building of gravity-fed ponds to create water storage – an expensive option, also uses good soils, and there will be considerable evaporation, so not ideal
- Digging deeper wells – expensive and not necessarily a solution
- Planting of alternative pasture types that would do well in non-irrigated summers and could “tap into” deeper soil moisture. Lucerne is deep rooting, can do well in a mixed pasture and produces well in summer. Kelvin Hicks at Hororata said he has had good success cross-drilling lucerne with fescue pasture mix, and by drilling alternative rows with lucerne and grass. The lucerne variety Torlesse did well and should be allowed to flower once each season (although some years it doesn't flower). “Revolution” was a fescue/ryegrass cross with good summer production.
- Stop water leaking down – by re-drilling with a cable rather than a rotary drill which may allow water to run down outside the pipe.
- Can the measuring point be changed?
- Indoor fodder sheds – growing supplementary feed with very high nutritive value which could cover gaps in pasture production.

Stock The Clearwater's milk all year round, with a maximum of 220 cows in spring until the end of January, and 50 in winter. The herd is a mix of Jerseys and Friesians, although they are moving towards more Jerseys because the milking shed is a bit small for many of the large-framed Friesians. Animal health is generally good, with a very low incidence of mastitis. Some of the younger cows develop Johne's disease symptoms, the cause of which they do not know at present. They have tried homeopathic remedies for mastitis without success, but a drenching programme of garlic and cider vinegar is 60 - 70% effective.

Adding value to their produce An important addition to the dairying operation is a yoghurt-making business. They milk all year round so they can maintain milk supply to the yoghurt business. Development of this business has increased the workload markedly but the Clearwaters were always keen to add value to their product, and a premium yoghurt, made in the pot with non-homogenised, whole organic milk gives them a “point of difference” in the marketplace. They wanted to create a product that could tell a story of a sustainable organic farm, which a brand could be built around. Yoghurt is also an easy product to manage because of its low pH (low risk of disease contamination compared with cheese which is higher pH).

The milk is sold at a premium to the yoghurt business, which is owned half by the Clearwaters and half by Ad Sintenie, the chief yoghurt maker, and his wife Catherine. Ad has brought food industry experience to the business, as well as specialist yoghurt making skills. He experimented with different cultures before they settled on the current blends. To ensure consistency in the market place, absolute control of cultures is required, and it is this, as well as temperature, which gives the Clearwater yoghurt its unique flavor.

Production has gone from 40 litres per week to over 2000 litres per week over the last 3 years. They are confident that they have a top quality product made from sustainably produced milk, which the market values. It is available in supermarkets and specialty shops all over the South Island, and now even in Auckland.

The yoghurt factory has been built in a series of shipping containers at the side of the milking shed (no food miles here!). As they had a steady income from selling the bulk of their milk to Fonterra, there was little risk by starting on a small scale, testing the product on families and friends, then selling to small shops after a favourable response. They have created a brand and an image which helps sell the yoghurt, but are conscious that it still has to be a top product for it to sell.

Most people say it's the best yoghurt they've ever tasted, so it seems they've definitely got a top product!

The yoghurt still only uses less than 10% of the farm's milk, and is made only 2-3 days per week, so there is plenty of capacity that can still be filled. Yoghurt making requires milk that is consistent, and high in milk solids, which is one reason why barley silage is given to the cows to increase their dry matter intake.

Mary Ralston