

LAKELAND FARMS

ANDREW, JENNY & FRED HAYES



'Fertiliser usage'

For the past 9 years, Andrew has used Clovertone to encourage the clover. Not only has this been a huge cost saving, but there has been no drop in production and animal health has improved. Vet bills are very low, due to no bloat drench, no causemag, just a little magnesium with molasses. Profit per ha is up because input costs are down.

Winners of the Balance Farm Environment Restoration Award.

Lake Kaituna and Lake Komakorau, Waikato.

"When we started here the ducks were in the water troughs and the cows were in the lake" says Jenny. It's a good intro to the work the Hayes have done to protect water, wildlife and soils.

The farm, and neighbouring farms, drain into a peat lake which in 1998 was dead – silting up, smelly, with dead eels and shags.



Drain leading to silt trap



Between 1999 and 2004 the Hayes removed the grey willows around the edge and fenced off a generous riparian margin –minimum 20 metres from the water. With the willows gone, the natives that had been suppressed underneath came away and there is a vigorous fringe of cabbage trees, Carryx, sedges and reeds, which have established naturally. A little planting has been done to help them along.

None of the farm's drains now discharge directly into the lake, but go through silt traps and then percolate through the wetland fringes of the lake. Now, the lake is covered with water fowl that don't stray on to the farm because there is so much food for them in the restored habitat. The ducks stay on the lake, and the cows stay out of it.

There is a problem with koi carp and gambusi, both pest fish, but efforts are underway to remove them, and native mudfish are being released to restore a more balanced ecosystem.

The cost of fencing, a little planting and weed spraying which was \$9,000 a year during the establishment phase, was met a third each by the farm, Environment Waikato through its Clean Streams funding, and the Department of Conservation. The ongoing spray programme is now costing \$1,000 p.a. In addition Honda provides 3 trees for each car they sell and 35,000 of these go to Environment Waikato for its Clean Streams programme.

Andrew and Jenny were prepared for a drop in production because of the two hectares no longer in grazing, but this has not occurred. The slower release of water into the lake means the pastures dry out more slowly in the summer. The silt captured from the traps and spread on the farm, returns a number of minerals that improve fertility.



A key milestone was entering the Balance Farm Environment Awards in 2004. While they didn't win the main farm award, they won the restoration award. Andrew says they learned a lot, and shortly after were given the 2007 Green Ribbon rural sustainability award, by the Minister for the Environment. The encouragement this provided was very important.

About the same time Andrew tackled the fertiliser regime with a nutrient budget for the farm. Urea inputs have reduced, over time, from 180 kg/ha N to just 24 kg/ha N by using a low rate of sulphate ammonia. "It's important to recognise that you can't just go cold turkey" says Andrew. "It takes the soil at least 2 years to adjust, and you have to reduce slowly". For the past 9 years, Andrew has used Clovertone® to encourage the clover. Not only has this been a huge cost saving, but there has been no drop in production and animal health is improved." He has not used potash since 1984.

The clover has flourished. This is an area that had clover weevil early and badly, and it seems now to have stabilised and the clover is less affected.

Vet bills are very low, due to no bloat drench, no causemag, just a little magnesium with molasses. Profit per ha is up because input costs are down.

Soil tests show very high levels of organic carbon. 20-40% compared with typical Waikato levels of 2-4%. Accordingly, microbial life has greatly increased too. This will be one reason for the low leaching into water ways, and the high retention of nutrients. Measurements show that the area near the lake which is regularly flooded in heavy rain is not leaching N. P. K. S. Mg. Ca. or Na.

This is a great example of how farming methods can protect water quality, wildlife habitat, stock health and profitability at the same time.

For the past 18 months, Andrew has been comparing 2 alternatives to solid fertilisers. Clovertone has continued to be used on half the farm. Outgro is used on the other half. He is monitoring this comparison very closely, with soil and pasture testing .

After 18 months, although there is no apparent difference between the two in pasture growth, the cost of Outgro is almost double that of Clovertone.



Progress map 2005 - 2012	2004-05 Actual	2008 - 2009	2009-2010	2010-2011	2011-2012	Typical Waikato 2007-08
MS / Ha	1196	1193	1256	1500	1515	1062
Total Ms	107665	105000	110600	132000	133300	106272
Cows	305	300	305	305	315	324
Milking Ha	88	88	88	88	88	100
SR	3.5	3.4	3.5	3.5	3.5	3.12
MS per cow	353	350	362	432	423	328
Bought in feeds	60 t DM Hay 50 t meal	100 t PKE 5 t Molasses 10% cows wintered off	147 t PKE 63 t Broll 20 Baleage 5 t Molasses	345 t PKE 74 t broll 30 t DM hay 10 t Molasses No Cows off	242 t PKE 80 t Cereals 25 t molasses 16 t Silage	150 t PKE some wintering off
Pasture harvested TDM/Harv/Ha	14.1	13.1	13.5	14.1	14.3	11.2
Op Profit Total Per Ha (MS \$7.40)				\$541696 \$6177	\$560673 \$6371	
Return on total assets				9.2%	9.0%	
Soluble N use (Urea) kgs/Ha	180	57	40	30	30	144
% farm as effluent area	13%	90%	90%	90%	100%	
Inductions	0%	0%	0%	0%	0%	
Empty Rate		2%	2%	5%	2%	
Fertiliser used SerpentineSuper Clovertone 20 lts	Serpentine super 900 kgs/Ha Clovertone	Serpentine super 650 kgs/Ha Clovertone	Clovertone 20 lts / Ha	Clovertone on half farm Outgro on half farm	Clovertone on half farm Outgro on half farm	
Clovertone cost /Ha (excludes application)	\$65.00	\$70.00	\$70.00	\$75	\$75	
Outgro cost/Ha (includes application)				\$170	\$170	





The Future

Chris, the 'mad scientist' and owner of Clovertone, is keen to see more farmers like Andrew take the initiative and increase productivity. After all, New Zealand relies on our industry, and the world relies on New Zealand to lead the way in development of sustainable land care.

“Animals fed on healthy pasture have less health problems, which saves on vet bills and increases your animals’ production.

Clovertone grows healthy pastures cost effectively - and it’s good for the environment!”, Chris.



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