



Howard de Klerk of Dairy Nutrition & Management Solutions.

Alternative view on pasture focus

Words and photos by: **Karen Trebilcock**

Dairy consultant Howard de Klerk is disputing research presented at the Pasture Summit in Hamilton and Ashburton late last year.

"Some of the papers presented at the Pasture Summit had fundamental flaws," he says.

De Klerk, of Dairy Nutrition & Management Solutions, is based in Otago and is an independent specialist nutritionist and dairy consultant with 30 years' experience internationally and in New Zealand.

He criticises the focus of the Pasture Summit on lowering farm working expenses (FWE) per kg of milksolids (MS).

"Don't assume profit is maximised at the lowest FWE because it's not. This is only true for a static level of production.

"By striving to reduce FWE, production is often compromised which can increase the amount of interest per kg MS faster than the savings in FWE per kg MS.

"Debt levels have increased from \$8 per kg MS in 2001 to \$21 per kg MS in 2018. Interest is now the biggest single cost item for the average New Zealand dairy farmer and needs to be diluted.

"Farmers simply cannot afford poor financial decisions as interest per kg MS will rapidly increase with less production.

"Cutting back on production in an attempt to lower FWE is the biggest problem I see with farmers who are currently struggling to make ends meet and needing help.

"Advice like going to once-a-day milking in order to save feed may be counter-productive.

"The question should be, is the saving bigger or less than the loss of income. By producing less milk the fixed costs increase on a per kg MS basis.

"If you are getting paid more for a milk solid than it costs to produce, you should produce that extra milk solid, even if it raises the average FWE per MS.

"Marginal analysis teaches to maximise overall profit by continuing to produce until the cost to produce the extra kg MS

(marginal cost) is the same as the selling price," he says.

"This is the sweet spot where profit is maximised."

He is also concerned that the latest messages following the summit are suggesting lower input systems are more profitable when the data shows differently.

A summary of the DairyNZ Annual Economic Surveys for the past 10 years shows higher input system (system 4 and 5 farms) had a 12% better return on assets, a 31% better return on equity, a 37% better growth in equity and had 3% lower liabilities (debt) per milk solid than low input system 1 & 2 farmers, he says.

"In the past decade, there has only been one year where the higher input farmers had a negative margin. I don't think farmers should reduce their profit for nine years for fear of one bad year.

"How are farmers with a 37% better growth in equity and lower debt at more risk? The data simply does not support this thinking. It just makes no sense."

ROA	1&2	4&5	ROE	1&2	4&5	GIE	1&2	4&5	Debt/kg MS	1&2	4&5
7/8	14.8	18.7	7/8	18.75	25.7	7/8	17.7	25.2	7/8	19.69	18.33
8/9	-4.9	-7.8	8/9	-12.2	-16.9	8/9	-12.9	-15	8/9	21	19.82
9/10	4.6	7	9/10	3.25	7.2	9/10	5.4	9.6	9/10	20.65	21.3
10/11	7.4	9	10/11	3.3	7.2	10/11	8	8.9	10/11	17.69	17.75
11/12	9.3	9	11/12	8.9	12.1	11/12	10.1	12	11/12	17.47	20.6
12/13	8.3	10.7	12/13	10.1	15.4	12/13	10.6	16	12/13	20.77	20.33
13/14	9	11.1	13/14	12.1	15.7	13/14	8.9	13.6	13/14	21.9	18.69
14/15	0.1	0.8	14/15	-3.5	-3.9	14/15	-4.6	-3.5	14/15	21.12	20.94
15/16	-3.8	-4.8	15/16	-11.2	-14	15/16	-7.3	-7.6	15/16	22.89	20.49
16/17	11.5	9.3	16/17	18.6	14.5	16/17	18.6	15.2	16/17	24.8	23.43
Average	5.6	6.3	Average	4.8	6.3	Average	5.5	7.4	Average	20.8	20.2
		112			131			137			97
12% better ROA			31% better ROE			37% better growth on equity			lower liabilities/MS		

Table 1. Return of Assets (ROA), Return on Equity (ROE), Growth in Equity (GIE) and Debt/kg MS at System 1&2 and System 3&4

He is concerned that a fear of substitution is being used to dissuade farmers from feeding supplements and he disagrees that commercial farmers can only achieve half the milk response rate to supplements scientists can achieve in trials.

NZ research showed a cow could graze 3.4% of its bodyweight at peak intake which is about 18kg DM of grass but over the entire lactation period the average amount grazed is closer to 16kg DM a day.

However, on average, a cow could eat 4% of her liveweight which is 20kg DM for a 500kg cow.

It could not eat this amount from pasture only due to constraints such as the time it takes to graze, the reduction in bite size as the pasture is grazed down and the need to process the pasture by rumination.

“If a cow grazes 16kg DM of pasture and is supplemented with an extra 4kg of energy-dense feed there will be very little substitution and an excellent response rate.

“If the farmer needs to continually feed

6kg supplement to achieve the 20kg DM intake, it simply means the farm is over-stocked as there is only 14kg DM of pasture eaten per cow instead of 16kg DM/cow per day. This is not pasture first and is rarely profitable.

“Supplements should be used to increase DM intake, not to carry more cows. With the correct stocking rate and grazing pressure to achieve the desired 1600kg DM/ha residual there is not much to fear.”

By fully feeding the cows the drymatter intake increases and the proportion of the diet used for milk production also increases.

“And that is what drives efficiency gains. Supplement must never be used to increase stocking rate, but rather be used to increase production per cow.”

De Klerk says substitution has been used as “a scare tactic” to dissuade farmers from feeding supplements for years.

“Often data from overseas trials are used to show how bad substitution can

be but this is not supported by local trials where supplements are used to increase production per cow rather than carrying more cows.

“In a New Zealand trial, cows supplemented with 6000kg of maize grain per ha only left 600kg DM pasture behind over the lactation period compared with non-supplemented cows.

“Despite this, the extra DM and energy intakes resulted in an additional 600kg MS per ha which is a response rate of 100g MS per kg of grain despite the substitution.

“In scientific trials the response to the supplement is often a lactation response (limited to supplements fed during the lactation period) and is typically 100g per kg of grain as seen in the trial with the maize grain.

“However, messages from the Pasture Summit suggested farmers only achieve half that response rate.

“By using DairyBase annual data, which includes supplements fed during the dry

Quick and Easy to Install

Howard de Klerk says some of the papers presented at the recent Pasture Summit had fundamental flaws.



period, you could come to this conclusion.

“If a cow is fed a tonne of feed during her dry period with zero milk response and a tonne of grain during the lactation period with a 100g response rate (1:10) the average annual response rate will be 50g per kg of supplement.”

Using industry figures, a cow weighing 500kg producing a mere 250kg MS will eat 4100kg DM per year. This cow therefore produces 1kg MS for every 16.4kg DM eaten (including dry period) or has a 60g annual response rate to every 1kg of feed (11 MJME) eaten during the entire year.

“It is difficult to see how farmers who use grain (with 20% more energy) to increase the amount of energy available to the cow after her maintenance requirements have already been met, will supposedly only achieve a 50g lactation response rate which is less than a very poor performing cow’s annual response rate to all feed.

De Klerk says when supplements are used correctly, to increase production per cow as opposed to increase the stocking rate per hectare, the farmers he works with typically achieve 90-100g MS per kg of concentrate fed as cows respond to the extra energy.

“This has been standard over thousands and thousands of lactations I have been involved with over the past 30 years.

“Supplements used correctly, can and do, improve profitability on real commercial farms in New Zealand.”

He also says the papers at the Pasture Summit showed how feeding supplements

supposedly increased the so-called “hidden costs” per kg MS and per ton of grain.

“This supposedly increases the cost of grain by 50% of its purchase price – \$400 per tonne supposedly costs \$600/tonne because of the so-called “hidden costs” associated with the supplements.

“While the overall cost per ha did increase at 1.5 times the cost of the supplement on a per-ha basis, the extra milk production per ha increased at a faster rate which diluted the operating cost on a per-litre basis.

“It is therefore incorrect to say that because the operating costs increased by 1.5 times the cost of the supplement on a per-ha basis, it will increase 1.5 times on a per-litre or MS basis and that the grain therefore costs 1.5 times the per ton purchase price.

“While the “hidden costs” increased by 1.5 times on a per-ha basis, the “hidden costs” had a 0.9 relationship on a per-litre basis which means that the hidden costs were diluted as more supplements were fed and production per ha increased.

“The “hidden operating costs” actually reduced from just over 16c to just below 16c on a per L basis, they certainly did not increase 1.5 times.

“Combining the messages of the summit,

farmers can only expect a 50g milk response rate, or put another way, use 20kg of grain to produce a kg MS.

“Furthermore, the grain supposedly costs \$600 per ton, including “hidden costs” and not \$400 that the farmer actually pays for the grain.

“This means it costs 20kg x \$0.6 = \$12 per MS produced from grain so therefore no farmer in New Zealand has ever made a cent from feeding grain?”

He says the dairy industry needs to improve efficiency by using fewer cows to produce the same amount of milk.

“This not only improves efficiency but will be more profitable and be better for the environment. It will reduce both leaching and greenhouse gasses.

“Cost control is obviously important to any business, but chasing lowest FWE/kg MS and lowering production can be counter-productive for profitability.

“Things have changed over the past 20 years with large fixed costs that need to be diluted. Be careful not to save yourself broke when dilution could be the solution.

“Farmers should use a consultant who understand supplements and can financially model their farm to find the economic sweet spot, where profit is maximised.”



