



## Field Day Notes

### Organic

Thursday 10<sup>th</sup> March 2011

Speakers: George Moss, Mike Moss, Greg Walters.

#### Questions to be answered at the field day

Some of the key questions farmers who attended the field day had about the system were:

- *How do you handle extreme cases of disease and animal health issues in general e.g. mastitis?*
- *Soil fertility – there are a myriad of options, how do you choose what you are going to apply? Do you use nitrogen, particularly in spring?*
- *Transitioning to organics.*
- *Does the interest level in organics correlate to the MS price?*
- *How do you replace what is leaving the farm organically i.e. minerals, so that the system is sustainable?*
- *What would you do differently if you were starting again?*
- *Where do you see yourself in the medium to long term?*
- *How do you control weeds?*
- *What do you do in a feed shortage?*
- *What is the definition of certified organic farming?*
- *Which system does organics fit best with? Can you do system 5?*
- *What is the profitability of the system?*
- *What support is there for organic farmers?*

#### Main points from George and Mike Moss

*Note: While the main focus of the field day was on George's organic farm near Tokoroa, Mike, who is an experienced organic dairy farmer milking 140 cows and based at Waitetuna, near Raglan, had many valuable observations to add.*

#### History of the Tokoroa Moss farm businesses

George and Sharon have been running a conventional dairy farm near Tokoroa for some time. When the neighbouring property came on the market they purchased it, in partnership with Earl and Jo Rattray, and they have been operating it now for four years while converting it to organics (the conversion process started in June 2007). Sharon oversees the conventional property while George looks after the organic one.

When the farm was purchased the infrastructure was not particularly good, the intention is to gradually improve it, as funds allow. Although debt levels are high, they have been reducing over the four years of ownership and the property has also delivered a return to the shareholders.

There was the option to do a gradual transition to organics or immediate. For a variety of reasons they chose to jump in boots and all and immediately convert the farm.

There have been many challenges in the last four years, primarily climate, milk price variations and increasingly tough standards, George sees the process of farming the property as being a journey, with much to learn. To help in this process he intensively monitors and also benchmarks the farm with the neighbouring conventional one. DairyBase is critical to both businesses' performance. If animals or the business are not performing he wants to know why, and issues are analysed in depth.

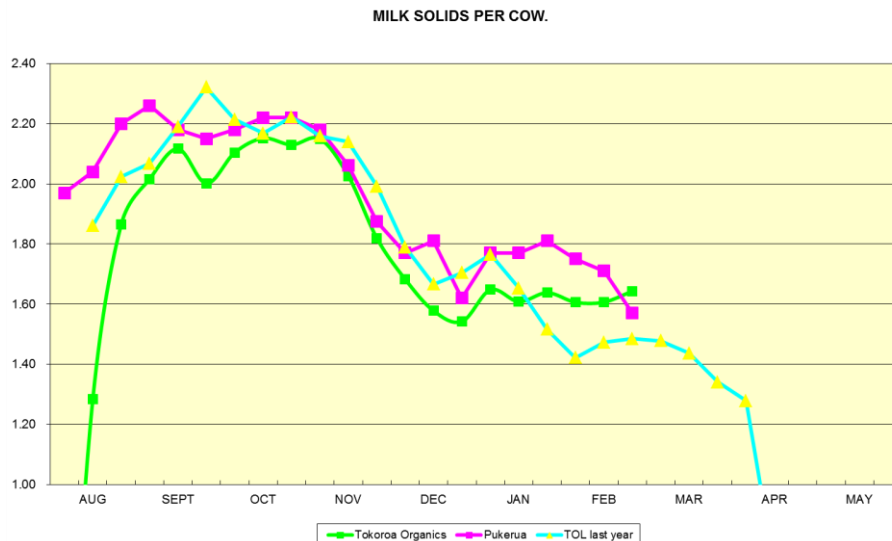
### Why choose this system?

George looked at a number of factors when choosing to run the farm as an organic, system 1 business:

- The global picture. Current high MS prices will not be maintained; he wanted a low cost system.
- Transport costs, and thus the costs of bought in feed, will only increase, therefore a lower input system was desirable. He believed NZ had no competitive advantage in farming using purchased feeds. At the time they looked at some DairyNZ research which showed that system 1 and 2 farms gave better returns at low MS prices.
- Organic milk offers a premium, the margins looked good if the system was low cost. Also, George believes the organic brand is very strong globally and has a lot of future potential.
- He could see from observing Mike's success with organics that it could work well and be profitable.
- The owners were keen to see just what returns could be delivered under an organic system.



***The organic operation produces 20,000 less kg of MS than the conventional farm next door, however, the resulting profit from each has been very similar.***



One of the primary challenges George has had with organics is in meeting the compliance requirements, a lot of paperwork is involved, and this has only increased over the time he has been organic farming.

*Audience question: Did they consider combining the 2 farms and running them as one unit?*

They did consider it, however they believed the capital costs of the infrastructure changes required would be prohibitive. There was, and still is, no compelling economic reason for amalgamation. Also, this second farm is an investment property, if things become too tight financially they will be able to sell it without affecting the other farm business.

## Transition to organics

Some advice when considering transitioning to organics:

George:

- We looked at the standards we needed to achieve at the time and then jumped straight in.
- We also looked at the grass that was being grown on farm and adjusted the stocking rate accordingly.

Mike:

- Before transitioning make sure your soil fertility is good to set you on the right path. Adding compost and compost teas will help start the process.
- Select for healthy animals.
- Get on top of any woody weeds before starting transition.

## The environmental impact of organics

George's farm is part of a Waikato catchment study which is assessing the environmental impact of farms. The results seem to indicate that the impact is farmer specific rather than farm system specific i.e. the individual management has more impact.

## Bought in feed

Building up an on farm feed buffer, to cope with any climatic issues is the goal. In the mean time George has been able to source feed (silage) off another organic block. He sees this as a short term solution though as he wants bought in feed to be a discretionary item, not a necessity. He believes moving away from system 1 may not be as profitable.

Mike: I am ideologically opposed to bought in feed. We did get caught out this spring, so have moved the calving date back.

PKE: can't be used currently because of the fumigation methods used. Organic demand would have to rise for this process to change.

## Breeding and genetics

Mike: a Kiwi cross seems best suited to this system, although we are trialling some Swedish Red genetics (don't believe they are any better than the kiwi cross though).

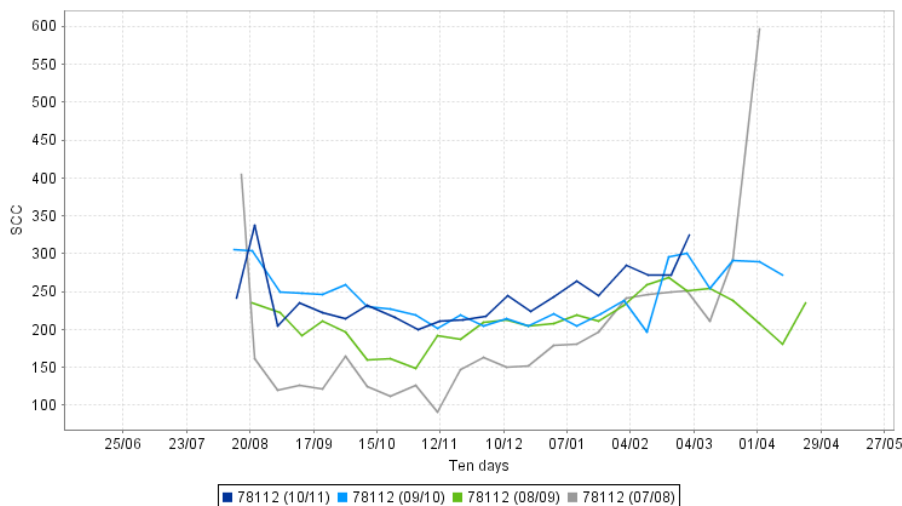
George: we just look at PWs and select and cull accordingly.

## Animal health

Empties have been a problem this year (16%, 9 week mating period).

### Mastitis and SCC

George believes it is hard to get the herd average below 100,000 BSCC without using antibiotics. They have issues with SCC, which is high, although there are not a lot of clinical cases. He thinks salt (and SE) have a positive effect on it, he has observed cows with mastitis seem to desire salt. Salt is offered in troughs at the dairy.



## Minerals

You can use all the key minerals, but you do need to meet the certifier's paperwork requirements. This needs to be backed by blood tests and a letter from the vet. The animals receive: selenium, cobalt, copper, lime flour and magnesium oxide. Lime has been applied as a source of calcium.

Mike: Facial eczema seems to have disappeared from his property. He thinks this may be due to the change in pasture composition (less ryegrass) and the healthy soil biology resulting in less thatch.

George: Only treated four metabolic cases in four years.

### **Management of sick animals**

Sick animals are not shifted to the conventional farm for treatment. They would rather manage them organically so that the organic farm is self-contained, additionally they are likely to be a problem on the conventional farm also. Long term problem animals are culled. The hardest part is to determine when to reach for antibiotics.

Mike: Animal welfare is our main concern. Antibiotics are used if necessary, treated animals are quarantined and then culled once healthy. However we only need to resort to this for 1 animal in every 2 years.

### **Management during a significant outbreak of disease**

The potential of a significant outbreak of disease does concern both George and Mike e.g. the salmonella outbreak in the Waikato this season. In this circumstance it is highly likely they would use antibiotics to control it as animal welfare is paramount.

A vet attendee suggested they could vaccinate for salmonella.

### **Vaccinations**

Are permitted if there is no GE component in the vaccine. George vaccinates for lepto and use 5 in 1.

### **Soil fertility and fertiliser**

George: Both the conventional and organic farms have good fertility. They are not going to mine the farms as this will affect their long term sustainability. They use: RPR, potash sulphate, elemental sulphur, composted chicken manure and [Osflo](#), and will probably also add magnesium. They want to move away from using nitrogen (in Osflo) as they want to encourage clover growth. The RPR (and elemental sulphur) was applied in spring and they are hoping it will not need reapplying again for 3-4 years. As the soils on the farm are less acidic than many (pH ~6.1) the breakdown of RPR may be an issue, but George hopes that the bacterial activity in his soil offsets this.

Mike: Levels of minerals are monitored closely and we add them to the soil rather than the animals. We add calcium and magnesium (lime, lime mag, and dolomite), compost products, effluent and Biophos (for P) and only need small amounts of other minerals. The P levels on farm have dropped from 30-21. Any trace elements (including salt) are applied with the lime. We haven't applied potash in 12 years, the healthy soil biology compensates for this.

The pasture roots do go deeper which results in drought tolerance and plants being able to access more minerals and nutrients. Worm numbers have increased from 14-40 per spade width.

Mike believes the future scarcity of imported minerals is an important factor to consider and farmers need to be prepared for it.

## Pasture management and composition

When regrassing George introduces clovers, plantain and annual ryegrass, by either oversowing or drilling. He has ploughed as part of a maize trial but he would prefer not to plough or turn over the ground at all due to the soil disturbance it causes.

He has noticed an increase in clover content in comparison to the conventional farm.

## Weeds and Pests

George: Grass grub can be an issue.

Mike: We have black beetle, grass grub and cover root weevil, but the system seems to cope with them all.

George:

- Blackberry can be an issue. You need to keep on top of it when it is young.
- Ragwort/thistles are grubbed.
- Californian thistles can be a challenge.

Mike:

- Thistles and ragwort have reduced so can be controlled by chipping.
- Areas with gorse problems have been converted to forestry.
- Blackberry is a problem, particularly on riparian strips, although it does not like shading so planting thickly helps.

## Financials

Operating profit is the key driver. If you look at the farm financials and take into account the fact it was on a partial premium for the first three years, the figures seem to stack up well. The ROI was higher than the conventional farm because there is a higher investment in cows and machinery on the conventional farm.

You need to understand your system and George finds using DairyBase very useful. He thinks that in theory the organic farm should beat the conventional one in the long term.



***Close monitoring of all the factors involved in the farm is key to success.***

## Where to from here?

George: converting to organics has had a substantial positive impact on the land. He would like to consider how he is going to utilise this, for example, in growing organic crops. But whatever he does the system needs to be profitable.

Mike: want to be a show piece for sustainability. Would like to achieve 400kgMS/cow. And want to be able to employ a manager.

## Key points from Greg Walters (Business Development Manager - Specialty Milks – Fonterra)

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*Note: Also refer to his slides.*

Fonterra is looking to grow its organic supply long term.

- Organics is a system and a process under which the product is produced. Consumers see it as: good, clean and healthy.
- 71 countries have an organic standard, although the EU and US standards have a big influence on the standards.
- As a category it is growing fast. Currently it makes up 3% of world-wide dairy consumption.
- The liquid milk sector is small in NZ, so the majority of products are exported. It is used in a variety of products which include: cheese, infant formula and yoghurt.
- Supply is uncapped, although collection is not currently available in the South Island.
- The interest in organics does fluctuate depending on the payout (reduces when the payout is up). However, like any business decision you need to do your homework and look at the long term prognosis.

Fonterra 's sales pitch for their organic product:

- Animals are grass fed.
- Product meets all 71 organic standards.
- Low and reducing carbon footprint.
- Farmer owned cooperative.
- BST (growth promotant) free.

### Payment for organic milk

The conversion to organics is a 3 year process. Fonterra offers 6 year contracts (3 years conversion + 3 years fully organic), currently they pay a 45c premium/kg MS during the 3 year conversion period and \$1.05 premium/kg MS thereafter. George chose a fixed rather than % premium as he wanted to protect his business from fluctuations in MS price.

*Audience question: Do you think you are getting enough farmers to convert? Should you be paying more to encourage them?*

Would like to have more organic supply however it is a balancing act as we don't want to be to the detriment of other farmers.

### Support for organic farmers

The best source of information for farmers is other organic farmers. Fonterra can help people to get in contact with them. They also run field days in the North Island.

## Summary

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There are many aspects to consider when thinking about converting to organics.

George:

- Think about your business and the global trends in the market. The resources you believe are going to be scarce in the future will influence where you pitch your business.
- The paperwork is time consuming but in some ways it makes things simpler as once you understand the rules you know what is, or isn't allowed, unlike conventional farming where you need to consider every option.
- There is no one right system for everyone. Look at the big picture, be clear about what your goals are (both financial and personal) and tailor your system to suit.
- You need to have a good handle on what your current farming situation is before you decide on what is best for you business.

Mike:

- Get your soil conditions right and things will go well.
- A lot of the organic principles involve going back to what our forebears did.
- You will be surprised how profitable organics will be.

Greg:

- Organics is not fringe, it is becoming main stream.
- We are seeing a swing where conventional farmers are learning from organics.
- Links to a support network of other organic farmers can be accessed by contacting Fonterra.