

"NATURAL PROGRESSION" FARMING IN HARMONY

MIKE MOSS
ORGANIC DAIRY FARMER
RAGLAN

Most of us have a vision for our farms and businesses and our personal lives. For me, that vision or dream if you like, has always been to have a low stress sustainable farming system providing a pleasant environment in which to live and work for myself and staff. When referring to 'sustainable' I am not only meaning in an environmental sense but the business must also be financially and socially sustainable. In other words it must be profitable and provide a good level of time off for recreation, friends and family. To this end I have transformed my farming system to become a fully certified organic operation.

As well as looking at organic farming we will examine where NZ stands in the market place regarding organics. We will also look at the issues involved in the decision making process surrounding the interest in organic farming.

MARKET SITUATION

Apart from a few small boutique organic milk operations, most of the supply & processing of organic milk is driven by Fonterra. Presently there are 27 farms contracted to supply organic milk. This milk is presently processed at Hautapu, Waitoa, & Morrinsville. Most of these farms now comply with meeting all world standards. Fonterra has a seven-year plan to encourage 240 farms to go organic.

Total NZ organic exports (not just dairy) are currently \$70-90 million. Organic products represent about 2% of the global market for food and beverage. Global growth is 20-30% each year. Current world organic sales are approximately US\$28 billion.

The EU commission accepts the NZ Organic standards. NZ is one of only 7 countries out of 97 exporting organic produce into the EU that has been granted equivalence status by the EU Commission to date.

Fonterra has identified very exciting opportunities in the worlds largest organic market, the United States. NZ organic products that meet US standards can carry the USDA organic seal. This is the seal that discerning US consumers look for. Currently U.S consumers are buying over US\$1 billion worth of organic dairy foods each year.

Considerable opportunities exist in Asia and the way has now been cleared to export organic ingredients into Japan & Korea.

Premiums being paid by organic milk processors vary around the world. Fonterra have been paying a 10% premium for organic milk. This will lift to 16% for those farms meeting USDA standards. Premiums in the UK started off at around 100% and have fallen back to around 30% or less. Farmers also receive a per hectare Government payment for farming organically. It would appear that Government intervention has created a situation where supply exceeds demand.

In the US demand exceeds supply and premiums paid to farmers vary from 50-80%. The Australian organic industry is rapidly expanding and is actively organising itself to take advantage of local and export opportunities.

Locally there is increasing demand for organic products. Consumers would like to see a greater range of products available. Price premiums are considerable and many more NZ consumers would buy organic products if it were more affordable.

Many consumers buy organic products not only because they see it as a healthy choice, but they are also making a statement about how they want their food produced. They expect their food to be grown as naturally as possible without the use of drugs, GMOs and hormones, and with high standards of animal welfare and environmental management

There has been marked increase in awareness of the culinary benefits of organic food with the upsurge in cooking shows and recipes from high profile celebrity chefs such as Jamie Oliver, Rick Stein & Nigella Lawson.

Add an organic label to the positive image already associated with NZ's natural clean green environment, and the perception in many of our overseas markets is that it cannot be surpassed for quality.

MY ORGANIC FARMING

The conversion to an organic farming system was started four years ago. What brought about this change in thinking? I had started increasing the level of inputs such as urea and maize silage in order to maintain a higher stocking rate and boost profitability. After a couple of years it became apparent that this was not working well for me. The physical aspects of the farm (combination of hill country and flood plane) simply did not suit the high stocking rate and I was not generating a viable return from the extra inputs. We were working harder and it seemed to me

that man, beast and farm were constantly under pressure. Imbalances were being created and money was continually being spent to try to correct these. We were boosting grass growth with urea and then having to turn around and spend money on magnesium supplementation to keep the animals on their feet. We were spending more and more on mating problems, and yet still inducing cows in the spring. Fertiliser bills were increasing, as was the use of lime to counter the acidifying effects of this fertiliser. Metabolic problems were common as was bloat and facial eczema.

In keeping with a sustainable view on life, I started looking at how to get more balance in the system, reduce stress and increase profitability. The more I looked at biological farming the more it seemed a viable option to pursue, especially given the increasing demand from the consumer for organic products.

Some of the concerns I had on starting the conversion process were weed control, animal health, mating performance, reduced stock numbers and production levels. Developing the knowledge base required for certification was a huge concern. I was nervous about loss of profitability during this time.

The biggest thing I've learnt in the last four years is that everything starts with the soil. If the soil biology is working well, and there is optimal soil health, then we will have healthy grass, healthy stock and produce a healthy product. The philosophical aspect of organics has become very important to me - the greater my understanding of biological production, the more disturbed I have become about the way modern society produces it's food. Modern agricultural practices are often producing food that is lacking many essential minerals and vitamins, which I believe compromises our health and immune systems, and maybe contributing to a decline in overall health of our population. Instead of just treating the 'problem', we literally go back to 'grass roots' and address why the problem is there, and what imbalance may exist.

As we have improved the health of the soil, most of the issues that I was concerned about have progressively gone away or been substantially reduced. In the first years of conversion, we were largely substituting chemical remedies e.g. worm drenches for natural remedies. As we have progressed down the organic track, we have found that we have moved more from substitution to elimination.

Overall animal health has improved. Bloat, metabolic problems and facial eczema are no longer an issue. Mastitis although greatly reduced is still a challenge. For this I use homeopathy and herbal remedies with mixed success. Mating performance has improved in the years that the cows have

been well fed in spring. Grubbing and pulling successfully control ragwort and thistles, and there appears to be less each year. Gorse and blackberry however are proving very difficult to control without chemicals.

I have reduced cow numbers progressively from 180 to 150 and this has worked well. Although production is lower than under my old system the extra premium and reduced costs outweigh this.

Developing the skills required to farm biologically has not been easy and is an ongoing process. There is still an incredible amount to learn but I find this a particularly rewarding challenge. My main source of knowledge has been other farmers in the Organic Dairy Producers Group, reading and experimentation. The recently formed Organic Dairy Extension Service (ODES) is proving to be an excellent facilitator of discussion groups and field days (It is made up of Dexcel, Massey University, Fonterra and Organic Dairy Producers Group). There is much more knowledge and information for people coming on board now. There are some excellent workshops available, effective discussion groups to be attended, and most fertilizer companies offer a range of organic fertilizers and advice.

FINANCIAL COMPARISONS

In an average season (climatic) organic farmers are not too far behind conventional farms. I run about 10% behind my former production level. This is compensated for by the 10% premium paid by Fonterra. Some of the longer established farms are seeing production lift to (and in some cases surpassing) pre-conversion levels. This would vary from farm to farm depending on the extent of inputs that the farm had before starting conversion. I know of a number of farms running a very low input system that would probably find very little change in the level of production. This year, however, myself and many other organic farmers have found we are down on production owing to having limited options during an unusually difficult spring. What we have learnt from this spring is that we need to carry yet more 'insurance' for seasonal adversity. For me this will mean calving down with a higher pasture cover and making sure I keep more supplements on hand than I would previously have thought necessary. It is hard to quantify the true cost against this risk management, but it certainly has to be factored into the equation when doing financial comparisons. I did lose some financial ground in the first 2 yrs before getting a premium. This too is easier now; as I believe Fonterra, offer a contract that pays a premium from the start of the conversion period.

There are, however, other efficiencies to be gained.

I have a greatly reduced animal health bill - from approx. \$60 p/cow to around \$10 p/cow. Expenditure on fertiliser has fallen by about 40% and I expect further savings in the future. There is an extra cost in manual

weed control, but this is largely offset by a reduction in labour requirements in other areas such as drenching, dusting pastures and milking less cows.

The cost of bloat, metabolic problems, and facial eczema can be huge, so obviously reducing or eliminating the occurrence of these is of significant financial benefit.

An established organic herd will generally have a low replacement rate, due to a low level of wastage for example empties. However during the conversion years we have found it is prudent to maintain a generous level of replacements, as there tends to be a higher level of culling. This obviously impacts on costs.

There is a demand for organic beef cross calves, these carry a premium of about 10 - 20%. Most of the other per cow costs are consistent with conventional farming.

Overall, I have found that in a good season I come out financially better off than we were in a non-organic system. However, in a difficult growing period, we fall behind and can take longer to recover. As we progress to meeting USDA standards, and we gain a higher premium for our milk, this will change the equation further in our favour.

I am sure the potential exists in the future for organic farmers to organise themselves in such a way so as to be able to extract a greater share of the returns that their high value niche products are making.

The following charts show the financial comparisons between the non-organic and organic systems. Non-organic figures based on 180 cows producing 55,000 kgs MS at \$4.15. Organic figures based on 150 cows producing 49,000 kgs at \$4.56 (\$4.15 + 10%)

Figure 1: Farm working Expenses

Figure 2: Income & Profit

Figure 3: Sensitivity Analysis

Environmental, Social & Industry Implications

Environmentally, biological farming is about as sustainable as you are going to get with low stocking rates, and minimal nutrient loss through runoff and leaching. There are obviously less chemicals going into the environment and food chain, which has environmental and social benefits. It is a method of farming that lends itself to smaller herds and could help to underpin the viability of the family farm. There are definitely people in the dairy workforce and potential workforce that find this type of farming attractive. Conversely there are also those that don't. From an industry point of view, there is consistency with the public desire to have a healthy non-GM product. The demand for organic products worldwide is growing. Although organic farming produces less milk, this goes into higher value products. Organic principles sit comfortably with where the industry wants to go. Some examples of this are no tail docking, use of cdirs or inductions and strict environmental and animal welfare principles. If we are producing food in as natural, and sustainable way as possible that has to make life easier for our marketing people and be good for business, especially if we want to shift more product into the added value sector. As more farmers find that chemicals, drugs and antibiotics are not fulfilling their expectations, or simply costing too much, I think it is likely the industry will increasingly be looking to the organic sector for alternatives. To summarise the strengths and weaknesses of my organic system:

STRENGTHS

- * Creating a balanced system
- * Healthier way to live and farm
- * Get paid more for our milk with more to come as we meet USDA standards *
- Increasing demands for organic produce *
- Lower stocking rate *
- Lower stress from management perspective (when going well) *
- Low cost of production - especially good in light of forecast pay outs *
- Not reliant on antibiotics and drugs, therefore less chance of 'accidents' *
- Rewarding working with nature and not against it *
- Staff satisfaction due to nature of farm - attract and retain people whom otherwise may not be farming *
- Less weeds because of healthy soil *
- Less risk of chemical poisoning to operators (OSH)

WEAKNESSES

- * More vulnerable in unseasonable weather
- * Some animals will not suit the system and need to be sold or culled *
- Pay more for certified organic inputs *
- Possibility of certification loss through spray drift from other properties *
- Level of stockman ship needs to be very good *
- Staff issues (staff) need to believe in the system,

especially with manual weed control and use of natural remedies) * Weed control especially woody weeds such as gorse & blackberry is very difficult (hard work!) * Natural remedies do not always work * Can be very frustrating at times especially during conversion years * Auditing costs and paperwork

THE "CONVERSION FACTOR"

Examining the financial & non-financial drivers that determine whether farmers adopt the organic principles.

There appears to be a mix of psychological and monetary influences when deciding whether to head down the organic track.

I started the conversion process four years ago after contemplating organics for some time. I was mainly driven by the desire to de-stress & simplify my farming especially on a property that is unsuited to high stocking rates. A visit to an inspirational and profitable organic farm was the final catalyst to taking the plunge. The holistic approach and working towards a more balanced system rested very comfortably with my personal values.

My research suggested that a successful organic operation would be at least as profitable as my conventional system and I was mindful of the fact of the increasing demand worldwide for organic produce. I hoped that by the time I had completed the three-year certification process that the demand would create premiums and opportunities. This has in fact come to pass.

Some examples of what motivated some of my organic farming friends are: * "Burn -out" from the stresses of intensive farming * Personal health issues that impacted on their philosophy on life * Animal health disasters e.g. nitrate poisoning * Environmental & social consciousness * Desire to adopt very low cost farming system

Some of the reasons I have identified as to why people are reluctant to change are: * Established high cost / high output operation * Profitable low cost conventional system. Why change? * Knowledge base - unknown territory, new skills required * Staff issues - stockman ship, skills & adopting organic principles * Restrictive practices * Fear of the unknown * Too hard * Perceived negative (hippie, greenie) image that has at times been associated with organic farming

The NZ industry clearly needs a marked increase in organic supply. Given that those who change to organics on the strength of their personal values have probably already done so, then it is logical to assume that further conversion in significant numbers will be based more around financial

incentives.

There are cases where the belief and dedication to the organic philosophy often only comes about after the initial change was made on the strength of financial incentives. Conversely there have been cases in the UK that as premiums fall there are those that revert back to the conventional practices. (This is most likely to happen among farmers whose organic systems were not working as well as hoped).

Apart from financial incentives to change to organics the future is likely to see disincentives set against any systems that cannot prove their long-term sustainability. As the spotlight focuses on water quality issues associated with intensive dairy farming there will be increasing pressure from the public and our overseas markets to become sustainable. I believe it will shift the focus on to lower input farming at which point more people will be forced to look at other options including organics.

Another factor that will also help bring about change is having enough information to make an informed choice. Being able to see successful organic farmers operating profitably and realising it is no longer the domain of the caftan wearing, tree hugging sandal brigade.

There needs to be good extension and support services in place. The Organic Dairy Extension Service (ODES) has real potential but has failed to receive much needed Dairy Insight funding.

The change to producing organically will not be made lightly and decisions are likely to include all of the factors I have discussed.

Finally a quote from an American organic dairy farmer from Maine (where 12% of the farms are now organic) I believe sums up the combination of these factors well -

"Economics were certainly a major factor but organic farming allows me to be a good steward of the land in line with my personal values."

CONCLUSION

There is clearly a strong demand for organic produce from NZ and we need to substantially increase the level of production in order to take full advantage of the high value opportunities available.

Some farmers will farm organically on the strength of their personal ideals alone. It is more likely to be a combination of a number of factors. Although many organic farms are performing more profitably than they were under the conventional system, if the industry is to achieve its goal of 240 organic suppliers in the foreseeable future, then most will

only convert on the strength of adequate financial incentive and good support services.

We potentially face the threat of "polluter pays" policies and market access issues; the incentives to farm in a more sustainable manner will increase. I don't believe large numbers of farmers will convert on the strength of current premiums alone, but they may entice those that want to make changes to start the certification process.

Organic farming is certainly working for me and I am excited about the potential that exists to further increase profitability on both sides of the farm gate. By taking what many of my neighbours must have viewed as a great "step backwards" I have in fact gone forward in leaps and bounds. I have a great lifestyle on a beautiful farm that has regained its profitability. I have a truly sustainable and enjoyable farming operation that can take advantage of meeting the highest possible consumer and regulatory demands.

It has taken a while but I am finally 'farming in harmony'.