

# Regenerative farmers: Alistair Crawford

The Crawford farm, at Omana, lies to the south of the Tangihua ranges in the centre of the Northland Peninsula. Alistair and his brother Culloden run the farm purchased by their parents in 1981. Their mother still has an active role on the farm. About 30% of the pasture grows on fertile alluvial flats with the remainder rolling hill country. Of the 296 hectares, there are approximately 250 hectares effective grazing. Alistair has some wagyu cattle and grows corn in the summer, but the main production is from the 300 Ayrshire dairy cows. The Crawfords split calve and milk year-round. Three years ago they moved to once a day milking with a drop in production, but a gain in lifestyle.



*Figure one: Looking north toward the Tangihuas.*

When the family bought the farm there had been large applications of potassic-superphosphate but also significant problems with milk fever and bloat. Alistair's father applied very little fertiliser. Health problems with the children prompted the family to research causes leading them to attribute the cause to toxicities associated with chemical use and diet. So they started the conversion to organic production in 2009, achieving AsureQuality certification in 2012. Significant improvements in family and herd health have justified the change.

The AsureQuality standard is very rigorous and conforms with USDA dairy organic standards. For example, when replacing fences, tanalised posts are not permitted. Alistair buys concrete posts or Waratah posts.

## Soil and pasture

Regenerative farmers focus on soil health, and for the Crawfords the balance of minerals in the soil is an important foundation. They don't apply fertilisers but do add some trace minerals to achieve balance. With careful research and monitoring they have now achieved good levels of calcium and magnesium. The recently introduced dung beetles are multiplying rapidly and Alistair believes they will have sufficient numbers across the farm in a year or two to recycle cow pats in a day. There was little evidence of the clumps of green over cow pats common on most dairy farms. The active soil biome, including dung beetles integrates the manure into the soil rapidly. The cow pat in the image below was from a paddock grazed four days ago. Note the little mound evidencing dung beetle activity.



*Figure two: Signs of dung beetle activity*

Increased drought tolerance in the summer and better drainage in the winter is a major gain from healthier soil. In the last major drought, Alistair was up the Tangihua ranges. Looking down, his farm clearly contrasted with the neighbouring farms as it was still relatively green.

Infiltration rate is important. In recent tests water disappeared as quickly as 10 seconds compared to other farms where even small quantities of water can sit on the surface for hours or days. Alistair has noticed that when rain comes after dry periods, water quickly drains off neighbour's farms while drains from his paddocks are still dry, confirming that the best place to store water is where it lands.

The pasture has growing diversity with 18 species now present. When soil health began improving, older pasture species such as Yorkshire fog and plantain reappeared. The Crawfords have added chicory and yarrow to seed mixes. The cows seem to most enjoy the clover species on offer. Kikuyu is grazed hard to enable greater pasture diversity.



Some years ago, the Crawfords had Ecogent measure carbon and organic matter. Alistair sees benefits in getting them back to re-test.

## Animal health

The Crawfords focus a lot on animal health but spend very little on it. Vet visits are mostly for compliance testing, such as the annual animal health inspection to maintain certification. Recent condition tests scored six or seven and the vet commented that the calves were perhaps a little overweight. The cows look healthy and content.



*Figure three: Healthy looking Ayrshires*

There is no bloat, milk fever or facial eczema on the farm. There is occasional mastitis and lame feet. While there is no lung worm, there are low levels of some worms, but this is desirable to build immunity.

A cupboard in the cowshed that contains a big range of homeopathic remedies. According to Culloden, that is because cows need individualised treatment for optimum health. This [meta study](#) of 52 trials in 48 peer-reviewed publications found that “the use of homeopathy currently cannot claim to have sufficient prognostic validity where efficacy is concerned”. However, the Crawfords have found it efficacious for both their cattle and their family. There is a combination of factors supporting animal health, including healthy soil, lower stocking rates, pasture diversity and homeopathics. It would be very



difficult to separate out these factors in controlled trials. It is time to place more importance on the research, observations, cycles of learning and trials that farmers such as the Crawfords do. Anything that can reduce our dependence on antibiotics will have benefits and lower risks for producers and consumers. A worthwhile study would be to track the vet bills of those who use homeopathic remedies.

## The market

Whangarei cheese maker Grinning Gecko purchases about five percent of the Crawfords milk. They have won national and international cheese awards attesting to the quality of their milk. Most of the remainder goes to Fonterra's organic processing plant south of Auckland. Fonterra's strategy around organics has been fickle and remains a risk for Northland farmers, but at a probable \$8.50 per kilogram of milk solids, organic milk is achieving a \$2.00 plus premium over conventional milk. Barriers to more farmers taking advantage of the premium include the transition time for organic certification and the lack of processing facilities in Northland. Over time the value proposition for organic milk will strengthen when accumulating soil carbon gets recognised here and rewarded and more consumers want healthier food. The other significant part of the value equation is the role of organic farmers as catchment kaitiaki (guardians) illustrated here in Alistair's comments about infiltration rates and runoff, manure recycling and their non-use of nitrogen and phosphate fertilisers.



*Figure four: Alistair and his cows*

I admire farmers like Alistair who deal with the challenges the environment poses and the complexity of keeping soil, pasture, animals and family healthy. Regenerative farmers are usually isolated by their peers. They go through intense cycles of learning with observation, research, trialling and reflecting and generate huge amounts of knowledge localised to their property. Imagine if they had the benefit of looking over the fence to the activities of other regenerative farmers and growing a community of learning.