

Business Case Study

Keldavaigh Beef Cattle



Partners Phil Davis and Lynn Kelson

Keldavaigh is a small family farm (150 acres) located at Drummond in Central Victoria, established by Lynn and Phil in 2010. They have 46 head of Angus cross beef cattle with 40 breeders on the acreage. Keldavaigh also has a flock of 40 sheep, a few pigs and poultry to enable Lynn and Phil to be as self-sufficient as possible.

What they wanted to do

Lynn and Phil wanted to establish an ethical operation, minimise debt, maintain a healthy work/life balance, improve their land and produce high quality beef cattle with no compromise on animal health or welfare. To achieve these aims, Lynn and Phil explored regenerative farming techniques; moving away from a reliance on chemical inputs, regenerating the land by building soil health, reducing inputs and generating better outcomes.

Case Study Summary

Keldavaigh is an excellent example of the application of a holistic approach to resource efficiency, which has reduced its requirement for inputs such as fertiliser, herbicides, pesticides and fodder for their cattle. Lynn and Phil focused on soil and plant health; reducing their stocking rates, increasing their pastures' recovery time, and improving the quality and quantity of pasture. This has meant good quality pasture is now available all year round, eliminating the need to cut or purchase hay. This has substantially reduced their off-farm inputs. An emergency supply of hay in their driveway has not been touched for three years. They now have a clean, chemical-free farm environment that is beneficial to plant, animal and human health, and which regenerates the soil through minimal interference.

Case Study Detail

Lynn and Phil took a different approach to setting up their farm and assessing stock health. Lynn explained that they viewed stock management as part of a whole farming process, so the focus was not solely on producing an end product, such as a 300kg calf ready for market at a particular time, but instead they consider the whole picture of the animal's performance, its physical traits and what it has been able to do for the farm itself.

On many conventional grazing properties, stocking rates per hectare are higher, which may require the re-sowing of pasture, application of fertilisers and chemical sprays to maintain/repair pastures and soils and to control pests, and the cutting of hay and/or purchase of off-farm fodder to feed stock when the pastures have been depleted. The cost of purchasing these inputs can be substantial, so any steps to reduce the need to these inputs represent a cost saving for the business.

De-stocking

To improve the health of their soil and eliminate the need for chemical fertilizers, herbicides and pesticides, the partners needed to address the issue of overgrazing by reducing their stocking rates 80 to 40. This was a difficult decision with financial implications for the farm, but to reduce their inputs and avoid buying in feed, they needed to tailor their grazing to the carrying capacity of the land.

Over time, this has resulted in improved farm productivity, with Keldavaigh saving up to \$12,000 annually on fodder. Also, decisions about when to take cattle to market are no longer dictated by the price or availability of off-farm feed and adjusting their stocking rates has increased the resilience of their land, reducing their exposure to rainfall/seasonal variability.

Soil Regeneration

Soil regeneration was a critical part of what Lynn and Phil set out to achieve at Keldavaigh, with a mantra of healthy soil, healthy plants, healthy animals and healthy people. They undertook self-directed learning opportunities to build their knowledge and skills in the area of soil health improvement and managing their land with as little disturbance of the soil as possible.

Microbial soil inoculants were applied to stimulate the presence of beneficial biological life in the soil and microscopic assessments of the soil biology have shown increased biological counts in the soil. This has enhanced the growth, availability (year-round) and quality of their pasture without external inputs and decreased the emergence of weeds. There has been no degradation of the soil and no chemical load going into the environment.

Business Case Study - Keldavaigh Beef Cattle

An increased understanding of the soil biology has helped the partners to boost the regenerative processes that occur with their extended grazing regime. Lynn explained that once they looked at soil biology, so much more became apparent. Once they started looking at the benefits of improving soil health, it all made perfect sense!

Lynn took soil samples and watched for the balance between major microbe groups. She then applied liquid biological inoculants from particular composts to increase the preferred microbial biology into the soil. She aimed to get the latent perennial seeds to regenerate and form the base on which to build ongoing soil fertility.

It did not take long to see the benefits of the new system. In one paddock, there was only about 5 grass species whereas there are now 25 species.

Water penetration into the soil has also improved, with penetrometer measurements confirming that rainfall is soaking into the subsoil to the deep roots systems, making the pastures more resilient and better adapted.

Lynn advised their approach was about moving the stock continually and assessing the feed quality and quantity as they move them around, then allowing a long recovery time so not to diminish plant health. Re-grazing too quickly compromises the health of the plants and the soils.

Grazing Infrastructure

Keldavaigh adopted a grazing rotation system where paddocks are grazed heavily for short periods of time, then given long spells for pasture regeneration (90-180 days). This system requires flexible, yet robust farm infrastructure (fencing, water pipe and troughs), so they use electric fencing to alter and modify the grazing areas. They also use transportable watering points (including troughs, tank stands and solar pumps), which are gravity fed through poly pipe.

Work life balance

Maintaining a healthy work/life balance was really important to Lynn and Phil, who did not want to be slaves to an overdraft or a debt and so established a business structure and objectives with a place for happiness and enjoyment of the land. It was a leap of faith to follow this path, but Lynn sees that they will leave the land with a legacy of which they can be proud.

Keldavaigh is now a profitable agribusiness – Lynn and Phil are reducing debt and don't need an overdraft. Although they do have off-farm income, the farm is now sustainable, and the happiness factor is still there!

Outcomes and Measurable Impacts

Through the adoption of regenerative approaches to grazing and soil health, Lynn and Phil estimate the cost savings of spraying out, tilling, fertiliser at \$95/ha, seed \$180/ha, herbicide \$230 for total area, machinery hire, contractor costs, loss of paddock for grazing, and a loss of 40 acre paddock for a large part of the year. They save an unknown amount on a lack of depreciation and capital expenditure on machinery, labour and contractors. Other benefits include:

- No external impacts of pesticides and herbicides run-off;
- Biological functions are increased and enhanced;
- Resilience of soils and pastures is enhanced;
- \$12,000 in some seasons saved on fodder;
- Improved pasture diversity;
- Reduced weed species due to competition from beneficial pasture species;
- Reduced soil compaction;
- Increase in fungal component;
- Never any exposed earth, always pasture cover across the whole property.

Lessons learnt & critical success factors, other comments/information

Lynn reported that transitioning to this type of farming is not for the faint-hearted and committing to this approach, philosophically and practically, was difficult. Lynn and Phil were concerned about the welfare of their livestock under the new regime, and while they did have to buy in some feed during the initial transition period, their perseverance paid off - as did their self-education about soil and pasture health.

At Keldavaigh, the approach is not just about having green plants; it's about having the right plants to support the soil biology and to foster a symbiotic effect between the various soil organisms. Lynn explained that increasing diversity was a key priority at the beginning, and they became increasingly aware of how diversity increases the productivity of the overall system.

Contact:

Phil Davis and Lynn Kelson
E: thegreencocky@gmail.com.
M: 0457 182 948