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Agribusiness

CASE STUDY:

Mclvor Farm

As part of the Regenerative Agriculture project undertaken in conjunction with Deakin University, five best practice case studies were developed based on interviews with regenerative agriculture practitioners.





Background

Mclvor Farm is primarily a free range piggery which also backgrounds/agists beef cattle. Twelve years ago, Jason and Belinda Hagan were employed in the agricultural industry – Jason as a piggery manager with Western Plains Pork (outdoor bred piggery) and Belinda in animal (monogastric) nutrition. They loved the industry they worked in, but both felt that their work did not uphold their own personal ethics in terms of environmental responsibility, animal welfare and community engagement in the food system.

Pig and poultry production in the industrial farming system, even the free-range systems Jason was involved with, posed many challenges for them both in terms of housing, nutrient loads and environmental impact as well as the quality of the final product to the consumer.

They decided to establish their own operation on the Hagan family property in Tooborac. Primarily a sheep grazing operation for the previous two generations, the farm had been run down over many years, with little investment into fences, soils or infrastructure. Initially the property was leased by the couple, then as the business grew and blossomed, the property was purchased. A few years later, the adjoining property was purchased to make the farm the 220Ha it is today.

Fast Facts

Owner / Business:

Jason and Belinda Hagan
Mclvor Farm

Key Farm Outputs:

Free range pork and beef

Age:

48 years and 44 years

Generation:

3rd generation

Location:

Tooborac, Goulburn Region, Victoria

Size of farm:

220ha freehold

Established:

2008

Employment:

4 people permanent, 4 people casual (total 7 FTE)

Rainfall:

577.7mm (100-year average)

Soil Type:

Granitic Sands

Land Tenure:

Freehold

Key Markets:

Direct sales to butcher shops (75%), Direct sales – other (25%) includes cafes, restaurants, retailers, farmers markets and farm gate shop



Need for change

"I felt particularly torn when offering advice for the use of feed additives to farmers for the company I worked for, they were a band aid solution for a broken farming system. This began to cause conflict between myself and my employer, so I knew it was time to move on and test our own farming theories."

They felt that there must be a better way, and with their combined years of experience, they launched McIvor Farm as an example of how a different approach can produce better results for the animals, the environment and the community.

"The fact the family farm had been run down was actually of benefit to us, as it essentially gave us a clean slate to work with and implement our completely new approach to managing the farm with pigs. We took over the farm in 2008. Our first step was to stop using chemicals on the property, including any herbicides or synthetic fertilisers. The pigs were introduced in 2010 and then in 2012, we started working with Darren Doherty of Regrarians. Darren's input into the farm design was invaluable and a turning point for us."



Innovative approach

Darren's approach was to implement a comprehensive redesign of the farm based on Keyline. Keyline is a methodology described by P.A. Yeomans in his series of books on the subject, including the pivotal "Water for every farm" which was published in 1965.

"The design involves a road network around the farm along the keylines – just off the contour – and small dams at key points to slow water down in the system and retain soil moisture. This offers the backbone of the property which we then manage also according to these principles, with animal's cell grazed, moving around the farm through the paddocks created by the road network and any ploughing or soil disturbance also respecting the keyline. We aim to give the paddocks 9 months rest at least depending on rainfall."

With this fundamental design in place, the Hagans have continued to grow and develop their knowledge and techniques.

"We are aiming to improve our systems all the time. We are constantly learning and testing our knowledge on the farm. McIvor farm is a regenerative, agroecological farming operation, but it is a combination of a range of integrated systems that make it work – including holistic grazing management using a fencing product by Kiwitech, biodiversity conservation, pasture cropping plus soil and water conservation. And of course, the pigs are fantastic in their own right, cultivating and fertilizing as they move around the farm."

The farm runs 110-140 Berkshire Black sows, with numbers dependent on the season and market. All stock are bred and grown on farm with between 1700 -2000 pigs processed and sold each year. The farm also currently runs cattle, either via the purchase of stock for backgrounding or on agistment where they attract a premium weight gain incentive due to their cell grazing management and proven results. They have also previously integrated lamb and wool production into the system.



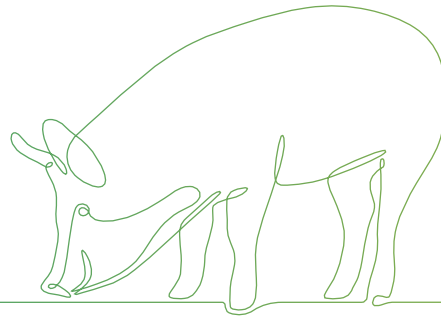
Certification

They do not have any certification as they have not found one that encompasses the ethics and morals the business stands for, or one that offers commercial advantage for market access. Direct marketing in an honest and transparent way is more productive for marketing to community.

Quality Assurance programs are also not suited to the size of the operation and the administrative burden does not help day to day business. The programs could, however, have helped with rare excess pig production seasonally or when market avenues opened their doors to additional markets.



Operational Information



Local Government Authority:

Mitchell Shire

Planning Controls:

Farming Zone (FZ); Erosion Management Overlay (EMO) (partial); Environmental Significance Overlay (ESO2); Areas of Aboriginal Cultural Heritage Sensitivity (Waterways).

Percentage of land utilized:

82 percent

Percentage of land for biodiversity:

18 percent utilised and/or proposed for revegetation.

Proportion of income:

100 percent

Pasture base:

Improved species. Integration of pasture cropping techniques for diverse fodder source, including brassicas, rye, corn & oats.

Marketing approach:

Social media, website, blog, newsletter, direct customer contact, Gold medal at Delicious Awards 2018.

Volunteer use:

None – all paid employment.

Open to public:

By appointment and occasional events.

Farming framework:

Regenerative agriculture practitioner; Integrated cell grazing and holistic grazing management; Key line / Yeomans design principles; Permaculture; Agroecology; Biodiversity conservation; Pasture Cropping; No chemicals; No synthetic fertilisers; Pigs on pasture from birth to processing; Synergistic enterprises – beef.

Certification (eg. Organic):

N/A

Transitioned (year):

2008 – ceased use of chemicals; 2010 – pigs introduced; 2012 – keyline design and cell grazing operation established.

Other products (household):

Fruit and vegetables, eggs.

Question and Answer

Q. What benefits have you found in a regenerative approach to farming?

A. *Since transitioning the Tooborac property to regenerative agriculture, we have observed many benefits including increased productivity and water holding capacity of healthy soils. A diversification of pasture species with an expression of the latent seed bank has been evident. This has been further enhanced through the addition of pasture cropping.*

The increase in biodiversity has been really apparent – insects, birdlife, dung beetles, reptiles, plants and grasses. And it's not just in the areas of the farm set aside for conservation, but across the entire system. We have a really healthy business here. Just cattle and a conventional approach would never have been profitable enough to sustain a family on this property and certainly never employ people.

Business and economic health enables us to be a part of our local community. Our children attend the local school. We don't have to commute long distances to work each day, so we can be a part of local community groups. Jason is a part of the CFA and I'm involved in groups like Landcare and the school council. Regenerative agriculture is not just about the farm, but the community. We employ people that are local or become local. Our mail comes through the general store. We go to the local pub. We purchase through other local businesses and sponsor school events. Thriving businesses enrich the community.

Q. What have been your biggest farming challenges?

A. *Putting together a good team has taken time and makes life on the farm much easier. Advertising in the general farming community that doesn't understand regenerative farming can be difficult.*

We pay above award rates, but some expectations of pay rates when working on a small family farm have been interesting.

Cash flow management. Justifying to customers why costs of production are higher at a smaller scale and with regenerative commitment. We make decisions based on environment and animal welfare, not only economics. This is particularly difficult in a market with cheap industrially produced, imported product.

As farmers, we thought we were meeting requirements but as understanding of details of regulations increased, stepping up to meet the food regulations has resulted in significant additional cost and process improvements.

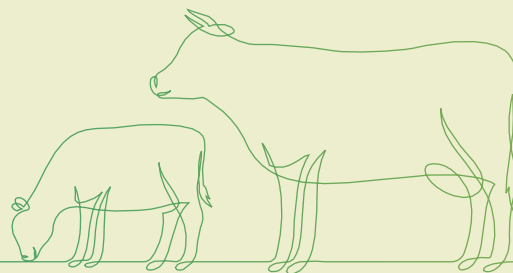
It has always been a challenge and something we are conscious of, but we have further improved our systems and infrastructure due to African Swine Flu.

Q. What is your biggest farming achievement?

A. *We can see the change in the farm for the better – growing more feed, healthier soils, more biodiversity and having a great product to sell is exciting, motivating and very satisfying.*

Developing a profitable business, employing people, not having to seek off farm income – establishing our own brand. As farmers, we have always tended to shy away from the lime light, but as the business has grown, we have learned to accept and seek the publicity as it increases the profile of the business and the farming methods – it is for the business, not about us.

The constant development and innovation on the farm – it's exciting to see the effects of new ideas and systems put in place.



Q. What are the biggest industry challenges faced by yourself and other producers?

A. *Youth coming through that are passionate about agriculture need to be supported. They need to have better training opportunities and frameworks for getting them out working on farms either as staff or on their own enterprises. More needs to be done to promote agriculture as a career. It's difficult to start your own farming business as the main asset – land – is very expensive. We need to support other ways to get young farmers onto land.*

The vegan and animal activist movement is also very challenging. There is a clear lack of education and understanding about an animal's role in environmental damage and climate change. The current disconnect between the urban population and the part of their community that produce their food is creating this misunderstanding. There needs to be better linkages between city and country. We need to develop school programs educating people about sustainable food production and systems, that there is a future in agriculture and the role animals can have in environmental restoration and carbon sequestration in healthy soils.

We need to acknowledge the true cost of food production. The motivation to stick pigs and chickens in sheds in the first place was about the production of cheap food. Economics and efficiency came at the cost of animal welfare and ecology. There is no such thing as cheap food – the price will be paid somewhere in the system.

There needs to be change – and quickly. Government needs to step up. It is currently an encumbrance not a support. Mclvor is not waiting for the government to step up but using the power of their farming approach and conscious community / consumers to drive change.

Q. Who have been your mentors?

A. *Darren and Lisa Doherty – Regrarians (<http://www.regrarians.org/>)*

Colin Seis – Pasture Cropping (<https://www.wool.com/land/regenerative-agriculture/case-studies/weather-the-drought-with-regenerative-agriculture/>)

Graeme Hand – Holistic Grazing Management local practitioner (<https://www.handfortheland.com/>)

Allan Savory – Holistic Grazing Management founder and developer, Savory Institute (<https://www.savory.global/>)

Joel Salatin – Polyface Farm (<http://www.polyfacefarms.com/>)

Gabe Brown – Brown's Ranch Holistic Management (<https://brownsranch.us/>)

Peter Andrews – Natural Sequence Farming (<https://www.peterandrewsoam.com/>)

Charles Massy – Regenerative Farm – “Call of the Reed Warbler” (<https://fennerschool.anu.edu.au/people/visiting/dr-charles-massy>)

Stuart Andrew – Peter Andrews son – Tarwin Park Training – Natural Sequence Farming

Q. What have been your most influential texts?

A. *Back from the Brink, Peter Andrews.*

Question and Answer

Q. What action could local government take to support regenerative agriculture?

A. *Not give small farming businesses a hard time! Anything that can be done to reduce the complexity and layers of regulation involved would be welcome. It would also be nice to have a supportive attitude and helping hand from local government. Complexity and bureaucracy cause some businesses to fly under the radar which puts them at risk and may prevent them from achieving what they could and fully contributing to the community if people had more trust in local government.*

Local Government doesn't seem to have the influence we need to have on real regulatory change, but they can advocate to State and Federal levels of government on our behalf.

Q. What action could state government take to support regenerative agriculture?

A. *It takes a long time to do anything with government. Small businesses need to be more agile and flexible – dynamic – if we are going to survive. Expectations of government and small business in terms of timing don't align.*

Inconsistency in food regulations between states in food regulations. For example, it is cheaper to set up butcher shop and smoke house in NSW with less regulatory burden and the product can be sold into Victoria as is apparently still food safe. Wherever possible, regulations should be streamlined to ensure both a safe, great product for the consumer, but minimal cost to business.

Q. What actions have you taken to increase your climate resilience?

A. *Our whole farming approach is about increasing soil organic matter and water holding capacity in granitic sands as an act of climate resilience and carbon sequestration.*

The property is not an ideal location for pigs in terms of heat and soils, but family connection motivated our site choice. The site choice means that we are more conscious about decisions made around adapting and resilience building of the farm. Basic water holding and permeability of difficult soils inspired learning, and we built from there.

We have made a difference – maybe only to our piece of land, and perhaps we educate and inspire future farmers and consumers, but ultimately we created a farming system that was environmental and ethical, and we can rest easy with that. There is more to the world than money. I worry about the state of the world for the next generation. I worry about my children.

Q. Why do you do what you do?

A. *We love farming. We did discuss exiting agriculture in the Millennium drought, but we realised that it wasn't agriculture that we needed to leave, it was the modern industrial system that didn't align with our morals and ethics, and didn't offer long term resilience and security in a changing climate, so developing your own business is the best solution. We worry about the world we are leaving for the next generation, for our children.*

We want to offer better food choices to our community. People are becoming increasingly conscious of how their food is produced and the impact of the farming systems – of water quality

and the impacts of nutrient loads, of animal welfare, of soil loss and climate impact. And about how the food we put in our body impacts us. We offer a better option to these people as their awareness grows.

Q. What are your plans for the future?

A. *We hope to be putting ourselves out there more as industry leaders now we have 10 years' experience in the business itself, and to encourage others to follow our lead and start their own enterprises. We can share our experiences and hopefully streamline the process for new farmers entering the industry.*

We plan to build a butcher and smoke house on farm for value adding and taking control of our own supply chain. Slaughtering on farm would be the ultimate, but regulatory barriers currently make that very difficult. We are aiming for a fully vertically integrated business including a closed loop for animal welfare. Slaughter is currently an element of the process that is completely out of our control – and it can make or break the product. There is movement on the regulation interstate, so we just have to be patient and keep working towards the ideal.

We hope to get to a point where the team runs the day to day operation of the farm, and we can work more on the business rather than in the business. Possibly have time to develop other income streams to support more ecological investment or increase income to reinvest in the ecological development of the property.





What is Pasture Cropping?

Pasture cropping was developed by Colin Seis and Daryl Cluffe. The concept was trialled on Colin's property, Winona – a wool and cropping operation in the NSW Central Highlands.

The catalyst for the innovation was the ongoing decline of the property through several generations of conventional farming approaches, including cultivation, set stocking, superphosphate and chemical use. The result has been low soil fertility and health, including significant salinity and acidity issues. A bushfire in 1979 compelled Colin to opt for low input approaches to farm management due to lack of resources.

The concept of pasture cropping is essentially the sowing of crops into winter dormant perennial pastures, including many native pasture species. It takes advantage of the different active growth times of the pastures and the crops, avoiding the need for a planned chemical fallow. It offers the opportunity to obtain three “yields” from each paddock – grazing of crop, harvesting of grain and the established perennial pasture once harvesting is complete. This is done with greatly reduced inputs, with little chemical or fertilisers required to manage the system. Similar yields have been achieved to conventional systems, with significantly less expenses, resulting in greater profitability.

Pasture cropping allows groundcover to be maintained all year round, conserving soil health and structure, and reducing erosion. The maintenance of perennial root systems improves water infiltration and water use efficiency. It has also been shown to improve nutrient cycling and dramatically increase soil carbon sequestration. The approach has also resulted in the restoration of native grasslands due to the no kill technique. Increases in wool quality have also been observed.

Adaptations of pasture cropping, including those used at Mclvor Farm, have focused more significantly on fodder crops and establishing diversity of fodder on offer to animals. This has included the integration of brassicas, ryecorn, millet, sunflower, turnip and radishes. Deeper tap roots and larger root systems of these diverse planting have obvious benefits for soil compaction, soil biology and nutrient cycling, with added benefits for biodiversity, attraction of beneficial insects and animal health outcomes.

Useful Links

<https://soilsforlife.org.au/winona-pasture-cropping-the-way-to-health/>

https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0003/276807/Pasture-cropping.pdf

<https://www.farmingsecrets.com/wp-content/uploads/2013/01/Article-Pasture-Cropping.pdf>

<https://www.youtube.com/watch?v=AyC4f24rWfU>

We would like to acknowledge that the information contained within this case study is the intellectual property of Mclvor Farm.

Contact details

P 9217 2081

E agribusiness@whittlesea.vic.gov.au

W whittlesea.vic.gov.au/agriculture

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