



A Nuffield Farming Scholarships Trust

Report

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**Regenerative Agriculture:
Making the Change Happen**

Dan Burdett

June 2020

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ISBN: 978-1-912059-23-2

Published by The Nuffield Farming Scholarships Trust
Southill Farm, Staple Fitzpaine, Taunton, TA3 5SH
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Nuffield (UK) Farming Scholarships Trust Report



Date of report: June 2020

*"Leading positive change in agriculture.
Inspiring passion and potential in people."*

Title	Regenerative Agriculture: Making the Change Happen
Scholar	Dan Burdett
Sponsor	McDonald's UK & Ireland
Objectives of Study Tour	To meet farmers who had started or were thinking of starting down the path of Regenerative Agriculture. I wanted to find out why they wanted to do this, what were/are the challenges faced and how to overcome them
Countries Visited	USA, UK, Ireland, France, Sweden, Australia. I had planned to visit South Africa and Zimbabwe but was unable to because of Covid restrictions, so conducted phone interviews instead.
Messages	<ul style="list-style-type: none">• Regenerative agriculture appeals to a broad range of farmers• The decision to change must work with your core beliefs in order to successfully transition to regenerative agriculture• You must ensure that those around you are fully engaged with the changes being made• Always look for the appropriate support to help achieve the objectives• There should be more emphasis on farmer-led research and improved dissemination back to other farmers

EXECUTIVE SUMMARY

Regenerative Agriculture is a concept that was first coined in the early 1980's by Robert Rodale but it is only in the past ten years that it has become a more commonly used term. It is often thought to be another phrase for sustainable farming or agroecology, but is in fact much more than this, covering the economic and social as well as the environmental aspects of farming. As agriculture continues to suffer from a loss of community, soil degradation and economic hardship, the drive for farmers to make a change grows by the day.

For many farmers who wish to change their system to reflect regenerative agriculture there is no shortage of information that can be accessed on-line, in books or in person. Change in itself can be filled with challenges for a human race that feel more comfortable to follow the crowd. This report was undertaken to find out why farmers became involved with regenerative agriculture, the issues they faced and how they were overcome.

The study focuses on the journey farmers which have been on, as they change their way of farming to encompass the more holistic approach of regenerative agriculture, rather than the techniques used. Interviews were conducted across a wide range of climates and farming systems.

I found that land degradation was very often at the heart of change, with farmers unable to continue with the techniques that were causing those issues. But there is also a passion for the concept behind regenerative agriculture that is sparking interest in a new generation. For all the passion and desire for change, farmers still have to be able to stand apart from the crowd and be able to continue, despite the negative attention of those around them which can often lead to feelings of isolation. If that can be overcome, the next challenge is often being able to make a success of the new techniques that have been implemented.

Central to overcoming the majority of these issues the farmer needs to understand their purpose and to put this at the centre of their decision making. This could be a set of goals, a business plan or setting a formal holistic context through which all decisions will be made. It should be a process that is undertaken by all the key stakeholders within the business, including those who work for the farmer, in order to gain support from those around them. Support can also come from like-minded small groups of farmers or by an organisation which shares the same values.

It is also imperative that pioneering farmers are put at the heart of research and that their findings are disseminated through appropriate channels: by doing so it will be farmers that are kept at the heart of regenerative agriculture.

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DISCLAIMER

The opinions expressed in this report are my own and not necessarily those of the Nuffield Farming Scholarships Trust, or of my sponsor, or of any other sponsoring body.

Please note that the content of this report is up to date and believed to be correct as at the date shown on the front cover

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*Published by The Nuffield Farming Scholarships Trust
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Chapter 1: Personal Introduction

My name is Dan Burdett, I'm 43 years old, married to Emma and have 3 children, Lizzie (11), Molly (9) and Tom (7). We live on our organic dairy farm in Haywards Heath in Mid-Sussex, where I farm alongside my Dad, Jeremy.

My journey into farming has taken a long and circuitous route. I grew up on farms, worked through hot summers throwing bales into dusty barns and helping my Dad during milking. During my teenage years I became disillusioned with rural life, yearning to have the freedom of my urban friends. Therefore farming was never a career path and instead I studied Business Studies at University of Derby, which led to a graduate training scheme in sales and marketing at London Electricity (now EDF Energy). I thought this was following my career dream until I realised that sitting at a desk and being a small cog in a big engine wasn't the life for me.

During 2007 I came back to the farm on my days off and instantly knew that this was where my future lay. So in 2008 I moved back to the farm to begin my farming apprenticeship alongside my wife Emma. By 2013 I'd earned a distinction in my PG(dip) Organic Farming and started my own contract farming business, running the dairy on the home farm and building up my own herd of cows. In 2019, halfway through my Nuffield scholarship, I took on another organic dairy farm in Kent, also on a contract farming basis.

I have a real passion for developing those who work for me and strive to provide them with the same opportunities that I have been fortunate enough to have had.

As an owner of our dairy cooperative, Arla, I'm chairman of the West Sussex and Surrey district and also on the organic producers committee. With a huge passion for collaboration, I am working on setting up a local cluster group of farmers to make positive improvements in our farmed environment.

Outside of work I am working hard at spending more time with Emma and the kids, something I've struggled to do until recently. I also love spending time on my road bike and climbing as many hills and mountains as possible.



Figure 1: Author and family



Chapter 2: Background to my Study Subject

The broken farming system

The farming industry worldwide is beginning to face up to the serious challenges that lie ahead as a result of climate change and the way we have farmed over the past 50 years, with headlines such as:

“Our soils’ only have 60 harvests left”

“Why fertile earth is being degraded and lost”

“Are cows killing the planet?”

There may be a degree of misreporting or hype surrounding these headlines, but there can be no denying that many agricultural practices are degrading soils worldwide. The industrial farming model based on commodity production has destroyed rural communities across the world and brought with it a chilling rise in farmer suicide.

“Get big or get out” – Earl Butz

This challenging phrase used by then US Secretary of State for Agriculture in the 1970’s has recently been reinforced by current US Secretary of State, Sonny Perdue. This despite the continued increase in farm bankruptcies, an ageing farming population and environmental issues.

Many farmers are, however, looking for a way to bring back fertility to their land, recreate lost communities, earn a good living and enjoy their job. One of the pathways to this has been described as Regenerative Agriculture (RA), although it has many crossovers with other practices such as Agroecology, Sustainable Agriculture, Permaculture and Organic Agriculture.

My own experience

Our farm has been organic for 20 years and is something that my Dad and I have a great passion for. As the conversion payments stopped, many of those around us pulled out of organic farming. Milk prices were poor and the short-term outlook tough. Our belief in the long-term benefits to our farm of continuing to manage it in this way kept us on this road, where we are now reaping the benefits in terms of the product we sell and the health of the farm.

My long-term goal for the farm is that we can be as productive as a non-organic farm, but the question has been for some time whether being certified organic was going to be enough to do this? In 2013 I became aware of RA and began to read books, watch YouTube videos and attend conferences on the subject. I knew that these ideas would push the farm towards my goals, but I didn’t know where to start? I suddenly had too many ideas, flitting between one and another and often achieving little with them. As I was applying for my Nuffield scholarship, I wondered how many others were in the same position.

Rather than the techniques and the tools I wanted to hear the stories about the journey farmers have been on, the obstacles they’ve faced and how they’ve been overcome.



Chapter 3: My Study Tour

Overall aims for the trip

I was looking to hear the stories of those I visited more than the techniques they used; I was able to focus on the people rather than the place. I wanted to meet those in a similar situation to the one I find myself in at home but also those who had been able to progress much further.

I wanted to visit those in a similar climate to the UK but also countries with a vastly different climate, both weather and politically, to see if these factors have any effect on the challenges being faced.

Unfortunately due to the COVID-19 outbreak I was unable to visit New Zealand, South Africa and Zimbabwe. Because of this I conducted many of those interviews on the phone, which gave me a good picture of the circumstances there, if not a fully rounded visit.

Trip Schedule

Country Visited	When	Why
United States	March 2019	The home of RA and some of the most well-known practitioners
United Kingdom	Through 2019 and 2020	To speak to those working in a similar environment to me
Sweden	May 2019	I attended a Permaculture Design Course (PDC) to understand the challenges faced by smaller-scale farmers
France	July 2019	To visit dairy farms with RA at the centre of their aims
Ireland	October 2019	To find out more about how RA can be encouraged through Knowledge Exchange
Australia	March 2020	To visit farmers operating in more extreme climatic conditions



Chapter 4: What Does Regenerative Agriculture Mean?

The term 'Regenerative Agriculture' has gained in popularity over the last 5 years, becoming the go-to phrase when talking about a new way of farming that would benefit the land and the consumer. The term now appears in podcasts with doctors, nutritionists and celebrities: everyone wants to be a part of it. I wanted to find out for myself what it meant to those farmers that are practicing RA

The Textbook Definition

Many would assume that this term is all about soil health, but it has always been much broader than that. The term was first defined by American Robert Rodale from the Rodale Institute and, in similar terms, Allan Savory at the Savory Institute:

"A holistic approach to farming that encourages continuous innovation and improvement of environmental, social and economic measures"

One of the first questions I asked anyone I met on my travels was to define what RA meant to them. There is no doubt that the health of the farm environment was extremely important to all but many had other definitions which largely fit into all three categories defined by Rodale.

4.1 Environmental

This was, by far the most popular category, with soil health being one of the key indicators, with comments such as:

"Practices that improve soil health by applying technologies that regenerate the organic matter, leading to more and healthier living organisms and an abundance of water and fertility in the soil."

Hendrik Smith, Conservation Agriculture Facilitator for GrainSA

"Maximise photosynthetic potential for the purpose of achieving optimum yields and profits. Increasing biodiversity and reducing environmental impact". James Foley, Irish dairy farmer

"The only energy I want to use on the farm should come from the sun or from those working there. I also make decisions today based on how they would be perceived in 500 years' time".

Ben Ryan, Australian beef and sheep farmer

4.2 Social

Many of those I spoke to were concerned that the social fabric of farming and rural life is being undermined across the world and wished to make a positive change:

"To defend my farming community and retain the traditions within it."

James Rebanks, Cumbrian Hill Farmer

"Moving away from the tobacco monoculture and using RA techniques will enable us to build a farming business that provides a future for my children to be a part of"

Mark Hook, Zimbabwean Arable and Livestock Farmer.

"We believe that everyone deserves access to affordable high quality produce. We want to reduce barriers to healthy living in urban communities" Atlanta Metro Urban Farm, Atlanta (many urban



areas in the USA have become a food desert so urban farms such as this are able to show how RA can bring communities together and provide nutritious food)

4.3 Economic

Without delivering economic viability there is no way that RA could work as a concept. Farmers across the world are suffering from economic hardship, leading many to leave the industry, so RA puts this at its heart.

"I want to be able to regenerate the whole farm business, making it financially viable for many years to come"

Penny Vaughan, Mixed Farmer in Sussex

"To create a business that enables farmers to be better valued, receive a fair pay and work decent hours"

Alex Heffron, Mixed Farmer in Pembrokeshire

The three legs of the RA stool fit closely with the widely used 'Triple Bottom Line' concept, which is now being used across businesses around the world.



Figure 2: The Triple Bottom Line- potentially applicable to all businesses including regenerative agriculture.

Source: Researchgate.net

Summary of what RA means: Far from being a soil health-based movement, RA is actually a rounded way of running your business with the intention of creating positive benefits to those in and around the farm.



4.4 Who uses regenerative agriculture?

Of the farmers I met, 90% weren't organic. The majority of arable farmers still used some form of chemical input, preferring to keep all the tools at their disposal, but always looking to minimise their use over the medium to long-term. This makes RA accessible to all, and with no paperwork or inspection it is something that a farmer can start at any time and work out their own set of rules. This is in contrast to organic where the rules and regulations would certainly deter many farmers from making that transition.

The majority of those I spoke with either had livestock or were planning to integrate them into their system.

I spoke with a broad range of age groups, from college leavers to those pushing towards retirement. Age, therefore, is no barrier. In fact, many of the ideas and practices aren't new, with many simply combining the best of modern and traditional farming. Some of those I spoke to had been farming this way for years, whilst others were recent converts.

And what about personality type? Those I met during my travels ranged from the cautious to the outright risk-taker and everything in-between. But the one thing they all had in common was a set of strongly held beliefs that they came back to time and again to guide their decision making and facilitate trouble shooting.

In summary, regenerative agriculture -meaning and who does it appeal to

- RA appeals to a broad range of farmers
- It focuses not only on soil health, but also the health of the farm business and those around it
- There is no one system type for those wishing to practice RA
- A melting pot of modern technology and understanding combined with the practices from the pre 'green revolution' period

In the next chapter I will look further into why these farmers wanted to use RA and begin to understand what may be holding others back.



Chapter 5: How to get started in Regenerative Agriculture

As previously discussed, the term RA isn't just a different set of techniques, but a whole approach to looking at your operation more broadly to ensure it's truly regenerative. The work of Allan Savory and his Holistic Management Framework stands out as the true basis of RA. Within the framework sits the Holistic Context, where the farmer states what is important to them to help guide them going forward. This should include the following:

- A quality of life statement that reflects what is most meaningful to us
- A description of the land, not as it is today but as it has to be in 200 years' time, in terms of the water cycle, mineral cycle, community dynamics (the patterns of change and development within communities of living organisms) and solar energy flow, to sustain our way of life
- Our behaviour as it will have to be to positively influence those whose support our business needs

(Source Holistic Management 3rd Edition, Allan Savory)

Of those I met during my travels some had studied Holistic Management, holding it at the centre of their business, whilst others simply had strongly held personal beliefs at the core of the farming operation. Each farm has their own personal and unique reasons for moving to RA, but I will try to draw the similarities together.

5.1 Land Degradation

One way to get started with RA is to realise that the current way of operating is no longer viable. Land degradation is one of those pushing points.

In the field of RA there are a few that stand out from the crowd, the superstar farmers that have helped to influence others and I was lucky enough to meet one of them.

Will Harris farms around 3000 acres of land around the small town of Blufton in southern Georgia. White Oak Pastures has become synonymous with RA, as it has pushed the boundaries of what is possible on a much bigger scale than most other farmers. In an area of the country dominated by cotton and peanut, he is using different types of livestock to restore highly degraded land back to health again. He does this by firstly rolling out round hay bales through the winter for his herd of cows, a process he calls 'hay bombing'. This adds a large amount of organic matter onto the soil surface. He then uses the chickens, ducks and pigs to break this down further and help to incorporate within the soil, whilst adding more manure. Only then will he sow grass seed and use the sheep and cattle to manage this by mob grazing throughout the year, leaving long periods of rest in between. With his own on-farm slaughterhouse, he is able to sell a finished product completely reared and processed in one place.



Figure 3. Living the Nuffield dream as I spent the weekend with Will Harris! *Author's own photo*

It wasn't always this way though. The ranch has been in the family since before the American Civil War and had been run traditionally, with set stocking and only cattle there. Will himself wasn't able to earn enough money just from farming so chose to make a living as a chemical salesman. By 1995 Will had witnessed enough of the degraded land around him and decided that only radical change to RA would secure the future of his land but also the ever-shrinking community around him. He left his job and came back to farm full time, introducing the increased levels of livestock and began to see a great change happening to his farm

With the goals of de-centralising, de-commoditising and de-industrialising the farm, Will now has a business that employs 150 staff, is able to buy up neighbouring land no longer able to produce a crop and has inspired a whole new generation of people to move towards RA. In a part of the state which has suffered from an exodus of people leaving rural towns and villages, Will has been able to reinvest his profits to buy up rundown properties in the town and begin to rebuild the community once more. See Figure 4.



Figure 4: Through his work regenerating the land, Will has also regenerated the town of Bluffton.

Author's own photo

Elsewhere in the world, farmers in more extreme climatic regions are often those who have suffered most as a result of land degradation. In South Africa, wind erosion can be a serious issue on the sandier soils, destroying crops in a matter of minutes. David Evans' family farm is in Viljoenskroon, Kwa-Zulu Natal, an area prone to such events. In another period of drought 8 years ago, David decided that they simply couldn't carry on with the status quo. Inspired by reading Gabe Brown's book "Dirt to Soil", David found a wealth of information on YouTube that gave him the confidence to begin using less tillage and growing cover crops. Now, wind erosion is much less of an issue and costs of chemical inputs decreased. He has introduced a herd of cattle onto the farm and grazes them on the cover crops, looking to incorporate the residues back into the soil and increase soil carbon levels as a result.



Figure 5: David Evans herd of Sussex cattle grazing on a cover crop in Kwa-Zulu Natal

Courtesy of David Evans



Although I couldn't visit Zimbabwe I was lucky enough to be able to speak to many of the farmers there about RA. Mark Hook from Doonside Farm, Mutorashanga, told me how land degradation had come along with the controversial land reforms that started in the late 1990's. Before then a large variety of crops were grown in Zimbabwe, but the land reform brought instability and banks stopped lending money to farmers, with only tobacco companies willing to provide equity. Mark's farm was reduced from 940ha to 120ha, with tobacco-grown on 70ha of this. However, tobacco is incredibly bad for the soil, requiring large chemical inputs and a lot of tillage. Mark realised this couldn't continue and looked to his friend Percy Sharp for inspiration, who before emigrating to New Zealand, had set up a new mobile dairy on his farm and experimented with high density grazing and roadside sales of his products. Mark decided to take the same route into RA and has been able to reduce his tobacco area significantly, his milking herd has reached 15, with the ultimate goal to have 150 and cease tobacco production all together. As part of the RA plans, Mark, along with his son Kevin, is also working with Percy to breed a dairy cow that is well adapted to the local climate, a cow which is 75% Jersey/Kiwi cross and 25% Boran, a breed that the Masai have been milking in Kenya for many generations. The aim is to supply these genetics to other local farmers to help them to regenerate their communities in the longer term.



Figure 6: Mark Hook with his son Kevin aiming to breed the right cow to regenerate their land.

Courtesy of Mark Hook



5.2 Passion

There were many people that I met on my journey that didn't have an event or a moment that made them think about making the change to RA. These people seemed to just have a passion and a desire to change the way they wanted to farm.

In May 2019 I attended a Permaculture Design Course with the renowned farm designer Richard Perkins at his home farm in Northern Sweden. I wanted to find out what made small farms tick and how to make them profitable. What I came away with, on top of this knowledge, was the passion that younger farmers have for RA.



Figure 7: Richard Perkins (centre) draws young people from across the world to learn more about regenerative agriculture at his farm in Sweden.

Author's own photo

The course drew attendees from across the world, some had a small piece of land already but many weren't farmers, yet they had absorbed all the information out there that RA had to offer. This



blew my mind! To them the attraction was the belief that RA was the way to improve the world around them and that was all they needed to keep their desire for learning going. Although some weren't farming at the time, their intention was to use the course to help them formulate a plan to move into the industry in the near future. In an industry where the average age of the farmer is around 55-65, the injection of passion from outside due to RA must be seen as a stepping stone in the right direction.

One of the attendees, Franco from Argentina, had already used this passion to inspire a group of his friends to start up a small-scale organic vegetable production business in the shadow of the local agro-chemical company. They were still at college but had become tired of being taught conventional farming methods. The start-up went so well that they managed to persuade the college to lease them a larger parcel of land next to campus, thus also allowing other students the opportunity to take part in the farming activity there.

5.3 Family

I often found that many of those I spoke to were very much looking to the future, to who would be running the farm next and what shape it would be in.

Suzie Mac runs an organic egg business in Ditchling, East Sussex. The world of organic egg production is really tough, with slim margins and flimsy retail contracts: she realised that the business wouldn't be able to support her children when they wanted to be a part too. By sticking just to laying hens, Suzie realised that her dream of creating an opportunity for her children to become a part of the business simply wouldn't happen. Her family are building a really diverse business around the laying hens, which involves a lot of work with the local community. They have converted one of the sheds into a venue for community and private events, run food and drink festivals and have a successful campsite running through the summer. In a small village like Ditchling there are many there who didn't want to see any changes to the way they farmed, so they have had to embed themselves deeper within the community in order to get the doubters back on their side. By regenerating the farm amongst the local community, the business has expanded to bring her son and daughter-in-law on board to great success.



Figure 8: Suzie Mac in front of one of the converted chicken houses now used for community events. *Author's own photo*

At a Vic No-Till meeting in Australia I was talking to the host, Grant Sims, a man who is helping to inspire many others into RA. As people were leaving one man stopped to thank Grant for showing him a way to regenerate his farm. He said this approach had allowed him to fulfil his dream of bringing his daughter into the business. The tone of his voice and moist eyes told me how much this meant to him. There is no doubt that Vic No-Till is showing farmers how to make their farms profitable again by lowering their fixed and variable machinery costs and replacing bought-in chemicals with homemade biological solutions. This lower cost production model is attracting the attention of producers who have seen many years of low or zero return on their crops. Further, the potential to add livestock back into their farming model also allows family members to become involved in the longer-term.

5.4 The Why

It is clear to me that for any of these farming businesses to succeed they must put these core beliefs at the heart of any decision making process. The author Simon Sinek has summed up the importance to all businesses of working out the purpose (the 'why') of their organisation in order to make it stand-out from the crowd and to become more successful. For example, Apple, where they have made it very clear that their 'why' is to challenge the status quo, to show that they believe in thinking differently. Their success is because people buy why you do it, not what you do.

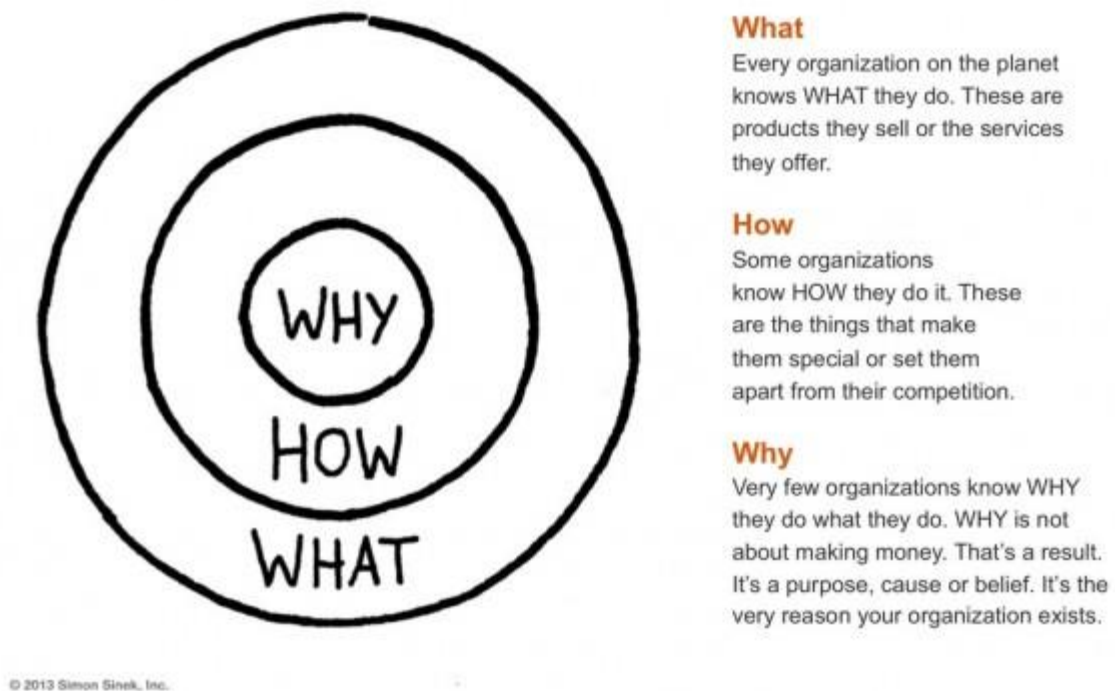


Figure 9: Core beliefs Source: Simon Sinek

When translating this to RA, I would say that it is key that the farmer focuses on what their purpose is (the 'why'). I would like to build on this in the following chapters to show that this idea is central to the success of RA working on your farm.

In summary, getting started

- There are many reasons why farmers have become interested in RA, most notably land degradation on their farms but also to build a more resilient business for their family
- There is a great deal of passion both within and from outside of agriculture for RA and this is driving many to change their views
- It's important that farmers moving to RA put this passion and focus at the heart of their plans going forward.

In the following chapter I will talk about the reasons why farmers may be struggling with a change towards RA.



Chapter 6: What's Stopping You?

One of the most challenging parts to my travels and interviews was to find those people willing to talk to me about why they have stopped short of looking closer at RA. With those I did speak with there were, once again, common themes.

6.1 Social Stigma

This is undoubtedly the main reason for thinking that RA is not for them. This isn't an issue particular to RA as social pressure from family and peer groups within farming is particularly strong, but I feel it's important to discuss within this context.

I visited Valerie Brocard, Project Manager at the Trevarez Dairy Research Station in Brittany. They are working on numerous projects designed to improve the profitability and overall quality of life of dairy farmers in the region but are continually coming across issues of actually making it happen on farm. A well led research project suggested that you didn't have to milk at 12 hour intervals in order to maximise milk yield i.e. have a shorter working day. Following a field day to promote these findings, the responses to a questionnaire showed a good uptake of the new timings, but all asked for this to remain anonymous to ensure their neighbours didn't find out!

The following day I met with Gilbert, a dairy farmer who had converted to once-a-day milking many years ago as he and his wife sought to put their family at the heart of their farming system. -His profitability has increased and he now has a great work/life balance. Despite holding numerous group visits to his farm where he goes into great detail about the benefits, virtually nobody has followed his lead. As we sat on his veranda at 3 o'clock in the afternoon, drinking cider, watching all of his neighbours tearing past with their hay making equipment, I asked myself why this was? The feeling I got from speaking to him and others over the course of my travels was unless they have worked at least 14 hours a day and not taken a holiday in a few years they weren't a real farmer! To step outside of this mould is to risk the criticism of those around you.



Figure 10: Whilst the rest of the farming world raced around, Gilbert and his cows were content to tread their own path.

Author's own photo



6.2 Sources of Information

Most information within RA comes direct from other farmers. This is in contrast to most farmers who will have at least one trusted adviser or place they go to when they have a problem, from agronomist to nutritionist, magazine to online forum and much of the information comes through traditional channels such as academic or corporate research. A problem with the traditional channels is that they deal with mainstream farming and, for whatever reason, appear not to explore or disseminate regenerative approaches.

During a trip to Ireland I saw examples of this both on farm and at an academic level when I attended the University College of Dublin Knowledge Exchange Conference. Many of the speakers acknowledged that the vast majority of farmers get their information through their Teagasc knowledge exchange managers or from their contractors. (Teagasc - the state agency providing research, advisory and education in agriculture, horticulture, food and rural development in Ireland)

Two farmers I met, Colman Deely in County Limerick and James Foley in Waterford, had first-hand experience of this happening within their dairy discussion groups. The parameters for the groups were very strict, talking about rye grass only and the management that surrounds it. Both Colman and James were interested in growing multiple species of grass, legumes and herbs but this just didn't fit the model for the discussion group, so they saw no benefit to being a part of them and left. As they already had a passion for the subject this didn't stop them but for someone just starting out this would be a barrier to entry.



Figure 11: James Foley showing me his untypical looking Irish pasture. *Author's own photo*



6.3 The Perception of Regenerative Agriculture

Being an organic farmer, I know first-hand that many farmers have pre-conceived ideas about what organic farming is and about those that practice it. RA falls into this category as well and has certainly not been helped by being seen as just the latest buzzword in the industry. In recent years we have also seen the increased use of the terms Sustainable Agriculture and Agroecology, so RA could be seen as just another passing phase. Many farmers simply don't want to be part of what could be perceived as just another fad and feel that they already steward the land well and have no need to put a label on it.

I spoke to Will Case, a mixed farmer in Cumbria, who has an interest in RA. He told me that he felt exasperated with the polarised nature of the RA discussion on twitter, where often those with a passion for the subject often miss out on the huge amount of nuance on individual farms. Advice given without fully understanding his business and what he's trying to achieve, was likely to turn him away from the conversation and from pursuing RA.

In summary, what drives or is stopping the adoption of RA

- Often farmers have to change to be able to survive
- RA is creating a great deal of passion for making change happen
- The social stigma of change is holding many farmers back
- The wider industry needs to better understand the concept of RA
- There is a danger that RA is seen as just another buzzword

In the next chapter I want to explore in more detail the challenges that farmers face when changing to RA and how they are able to overcome them.



Chapter 7: What are the issues faced on the journey and how were they solved?

There is no doubt that a change in farming system brings with it a new set of challenges, some of which will be unique to a farmer's situation and others will be common across many farms. In order to answer the question "How to make RA Happen?" I needed to understand what those challenges are along with the solutions.

7.1 Isolation

This can take many forms and can be physical or mental isolation from others. As human beings we naturally like to follow the crowd, so if we deviate from that path, it can leave you feeling vulnerable.

I visited David Finlay at his Cream o' Galloway business in Dumfries and Galloway. A few years ago David made the decision to change his dairy operation to a calf at foot, where the calf is kept with the mother until weaning, whilst the cow is still milked. Although this system is used in many micro dairies, it is rare to find it being done with a herd of over 100 cows. The first time of trying this, there was increased illness in the calves due to inappropriate housing and so he returned to a more conventional system until more and more of his customers started pushing him back towards calf at foot. With an improved housing setup many of the previous problems were minimised, although they were still on a steep learning curve.



Figure 12: The cubicle house at Cream o'Galloway. Calves only have access to their mother at certain times.

Author's own photo



Because of the success of the system, his approach was cited on a documentary programme about live export of calves from Scotland, where his system was given as a possible alternative. Once this programme aired David became a social outcast within the farming community, ignored at the local mart, dinner invitations dried up and there was a general ill feeling towards him. This has certainly taken its toll on David, bringing into question his choice to go down this route at the expense of his links in the community. As his system has progressed he is now starting to witness slightly more acceptance from those around him but it is still only a minority.

David told me that the only reason he stuck with it was due to the support of his customers and, in particular, that of his team on the farm, whose belief in the system was as strong as his. It is key when making any changes towards RA that you are fully engaged with your family and those working with you. By bringing them on the journey too they will be able to support you through the tougher times ahead as they fully understand your purpose.

I heard a similar story from Justin Knopff, a grain farmer near Salinas, Kansas. Justin had decided to move away from the traditional wheat and corn rotation towards a more diverse range of crops including triticale, considered by many of his neighbours to be a weed. He has been openly criticised for this choice on many occasions. This hasn't led to the same levels of isolation as David, but he also has members of his team who have a strong belief that what they're trying to achieve is right, particularly Garrett Kennedy, his agronomist and right hand man. There is no doubt that ensuring others around you have the same passion and focus on the purpose will help you through these periods.



Figure 13: Justin Knopff (centre) and Garrett Kennedy (Left) have shared values that have kept momentum going on the changes they wish to make. *Author's own photo*



7.2 Lost Confidence

We've all been there. Setting out to try something to improve our lives such as starting to run or a new diet but the results are slow to emerge and the urge to carry on disappears. These are the same feelings that many farmers who try RA discover and will often stop the journey in its tracks.

I met Paul Serle in Tantanoola, South Australia, farming around 800ha, primarily grazing sheep, cattle and laying hens. Paul is a 2013 Nuffield scholar, who looked at regenerative agriculture, and made a number of changes to his business as a result, including purchasing equipment to mix his own foliar sprays to use on his pastures. The use of foliar sprays can be a slow burning effect, needing time to start to see the subtle changes but after using this for a year Paul found that he couldn't justify the time and labour involved with making it and it fell by the wayside

The answer, it seemed, was close at hand. The following day we visited a good friend of Paul, David Clayfield, who rears dairy heifers on 100ha of grass and alfalfa near Mount Gambier. David is a pioneer in the use of foliar sprays and biologically based soil conditioners, which has meant the elimination of most artificial inputs on the farm now. As David spoke to us it was clear to me that when Paul had become stuck with the lack of results he should have picked up the phone to David to talk him through those issues, using him as a mentor as well as a friend. When I suggested this to David he wholeheartedly agreed, telling Paul that the door is always open. It also felt to me that Paul should go back a few steps to the initial reasons for turning to RA in order to regain his focus on the purpose of the change, and this would help drive the work he does in partnership with David.



Figure 14: David Clayfield had a vast knowledge of using biological stimulants. *Author's own photo*



You can also lose confidence as a result of never really believing in the changes you are trying to make in the first place. Tom Sewell is a pioneer no-till arable farmer in Kent and therefore has become one of the go-to people for those wishing to follow the same path. Tom sees those that make it work and those that don't. Many of those who visit him have decided to buy an expensive no-till drill using grant funding and come to him to see how it should work. However, they have also kept hold of their old equipment as a backup in case the new system fails. When the first set of crops produced doesn't meet expectations, it is all too easy to fall back to what you feel comfortable with. The added pressure of others around you commenting on the condition of the crop is enough to consign the experiment to history.

As with many of the issues described in this chapter, it is essential that before embarking on any major changes in farming system that you determine *why you are going to do it and what you are setting out to achieve*. Many of those I met had a deeply held belief about the changes they were making: some would call it their Holistic Context, others their core values. Whenever doubt started to creep in they would always fall back to these core beliefs in order to focus on the longer-term reasons for the change being made.

7.3 Unattainable Ambitions

As mentioned in section 5.2 there is a great deal of passion for RA and this emotion can lead to the heart ruling the head when starting out. With so many thoughts and ambitions it can be easy to lose sight of the basics.

Alex Heffron farms with his wife Sam at Mountain Hall Farm in Pembrokeshire, Wales. Having lived and worked in London for many years they had a long held dream of having their own small holding where they would provide nutrient dense, locally sourced food to their community, whilst farming regeneratively. They understood their purpose and this drove them very quickly into micro dairy, beef boxes, laying hens, and pigs, selling this all direct to local customers. From the outside this all looked rosy, with the outcomes matching the ambition shown. However, Alex very quickly realised that they had taken on too much. Many of the issues surrounded the health and productivity of the cows as the amount of milk produced simply wasn't enough to make a living. This had knock on effects across the rest of the farm but particularly on the wellbeing of Alex and Sam, who worked longer and longer hours to make ends meet, so something had to change. They decided to dry all the cows off in December 2018 to give them time to work out how to resolve these issues. The main cause of the issues was setting out with idealistic rather than realistic ambitions and trying to do it all at once. At the core of their belief was that the cows should be pasture fed only, something that can be achieved but which takes time to get right. They went back to basics, talked to other local dairy farms and revisited their business model, quickly realising that the lack of milk was holding them back in terms of revenue and the ability to employ someone else to release the pressure on them. For the time being they have had to temper some of their ideals by feeding the cows some purchased concentrate to bring the yield up, but now have a more resilient business from which to build upon in the coming years.



Figure 15: Alex Heffron and I at Mountain Hall Farm. *Author's own photo*

Failure to reach any target or goal can often be caused by setting unrealistic goals at the outset. The last two pillars of the SMART management philosophy are *Realistic* and *Time related* and those I met who were making a success of the change to RA had focussed on these.



Figure 16: SMART management philosophy, the five pillars

source: Entreprenoria.com



7.4 Overwhelmed with Ideas

There can be no doubt that a lack of information isn't what holds farmers back from RA. The online world is awash with podcasts, webinars and social media posts. Books written on the subject are released on a weekly basis and local and national conferences offer the chance to meet and exchange ideas with others from a diverse farming background. So, what's the issue?

"The confused mind says no"

For many people, myself included, this could be a major issue. Reading up on a subject, watching YouTube and attending conferences can become addictive, as one subject within RA leads swiftly onto another and before you know it you are in a rabbit warren and have lost your way.

Ben and Julianne Ryan, beef and sheep farmers from South Australia, took part in the Grazing for Profit course several years ago run by RCS, the leading provider of holistically-integrated education in Australia. They remain very close to those who took part, meeting annually to discuss their businesses and the progress being made. The course is designed to define your goals and set the right direction for your business, leaving at the end with an action plan to ensure that participants are able to continue the momentum gained once back on the farm. Ben told me that the most well-read couple on the subject in the group were also the ones who faced the most struggles as they had lost sight of the goals and direction set during the course.

Among those I spoke to who were well established and who knew their core purpose, over-information wasn't really an issue. Steve Slape, a beef, sheep and pig farmer in South Australia, was a great example of how to use the plethora of knowledge to the best of his advantage. He would set himself the goal of 3 hours a day of self-training, mostly internet based and was really focussed on what he wanted to learn and about the direction to travel. The key part to me was his not using social media, meaning that he didn't have a large number of voices urging him to shift focus elsewhere. Steve then backed this up by working alongside consultants who were able to maintain the direction with him. One of these was Dick Richardson, who has his own grazing consultancy called Grazing Naturally. Originally from South Africa, Dick was a holistic management trainer with the Savory Institute before moving to Australia. With Dick's help, Steve has been able to build up both soil and plant diversity by setting up a 7 year grazing plan which varies the length of rest each paddock receives during the course of a year. What really struck me whilst walking the farm with Steve and Dick was the focus on observation as Steve discovered new plant species beginning to thrive under the new management plan.

Steve also uses a local soil scientist, Matt Ballantyne, not necessarily for looking at his soils but as someone independent to bounce his ideas off and as an additional challenge to Dick Richardson. The key is that Matt is a free thinker and isn't driven by sales targets so is able to offer completely independent advice to Steve.

The results speak for themselves. The stocking rate in the last year increased from 7.25kg/ha to 10.15kg/ha at the same time that grain fed dropped from 70 tons to zero! Where Steve used to struggle to find an earthworm he now finds them in every shovel, with this apex predator a sign of the increasing levels of soil biology.



Figure 17: Steve Slape , South Australia, works closely with consultant Dick Richardson to maintain focus. *Author's own photo*

In summary, issues faced and possible solutions

- It is clear that working out your purpose is the key to overcoming so many of the hurdles
- Finding the right support within your family or business is essential to soften the impact of the change. Make sure they are engaged throughout the process of change
- Setting out with your SMART objectives is essential to maintaining your plan going forward

So far in the report I have focussed on those farmers who are already engaged with RA. In the next section I consider what it would take for others to consider RA for their farming business?



Chapter 8: What would convince others to choose regenerative agriculture?

As with any movement that you're involved with, it's easy to assume that you are amongst the majority, especially in the modern day echo chamber that social media has created around us. When looking for statistics as to the numbers calling themselves regenerative I drew a conclusive blank: the closest I came was at a Vic No Till meeting where I was told that at 16%, Victoria had the highest adoption rate in Australia. Clearly, they are well in the minority. So what might increase these numbers?

8.1 Research

Lack of RA focussed research was the major issue talked about as a barrier to adoption. So much research is funded by agri-businesses, either directly or through universities, where a product will be sold to the farmer at the end. With RA, the power is being handed back to the farmer, with less inputs required, therefore the research funding is minimal. In addition, it isn't just the research itself but the pathway it takes through journalists, knowledge exchange and farm advisors. Farmers still get much of their advice and direction through these routes. If change is to take place, this research needs to filter down these streams as well as, direct to the farmer.

There is no doubt that David Finlay of Cream o'Galloway is undertaking pioneering on-farm research at his own cost. He has made many applications to get this work funded by various government schemes but finds that it just doesn't fit the required criteria, much to his frustration.

He finds himself in the same position as many farmers undertaking their own on-farm research, often acting alone but usually willing to share those ideas freely. When done like this, the knowledge will often be disseminated within a small set of farmers, to those already keen to learn. To broaden this out, it requires a larger organisation to be able to help coordinate the work and publish the results.

One organisation doing this is GrainSA, the voluntary organisation of South African grain farmers, which provides commodity strategic support and services to support sustainability to meet the needs of its members. Dr Hendrik Smith, their Conservation Agriculture Facilitator, spoke about the work they are doing with their pioneer farmers. To Hendrik the current academic research model was too linear i.e. it doesn't deal with all of the complexities that farmers have to deal with and therefore isn't relevant to them once it's been published. The Conservation Agriculture Farmer Innovation Programme aims to identify and support farmers with on-farm trials working on no-till, cover cropping and livestock management. It puts the farmer at the head of the research by allowing them to drive the trials taking place on their own farm, while providing academic backup to fully collate and publish the results. The results have been very positive, especially when the findings are taken to smaller groups of farmers to discuss, therefore allowing them to support one another through the change to RA. The really striking part of the conversation with Hendrik was the high status he bestowed upon these pioneers. He would like to start a farming Hall of Fame and even put up a statue to them in the local town. My first thought was these ideas seemed over the top, but why not celebrate the work they're undertaking on behalf of so many others - this must surely be a great way to bring more farmers into thinking about RA.



There is desire around the world to bring more research into RA. I spoke with Terry McCosker, CEO of RCS, one of the pioneers of regenerative agriculture in Australia, (*RCS a private provider of holistically-integrated education, training and advisory services to the agricultural sector*). Using a \$1.5 billion dollar fund, the money coming mainly through wealthy benefactors who see RA as the future of the global farming industry, he was working to support not only more research, but crucially the dissemination of this knowledge to farmers and advisors across the country, something that has the potential to bring RA to a whole new group of farmers.

I feel that it's important that RA research not only looks at the ecological benefits of RA but also the financial implications of the change on a farming business. There seemed to be a general consensus that those already practicing RA are on poorer soils and facing greater climatic challenges, therefore a change had to happen in order to keep farming. A good comparison to make would be look at the uptake in Iowa, a state with generally deep top soil (although decreasing rapidly) versus Victoria, with much thinner, sandy soils. In order to break through this barrier it will be key to show that RA can be beneficial in both financial and agronomic terms no matter what your starting point.

8.2 The Marketplace

One of the major stumbling blocks when trying to convince a farmer to consider RA is that it's hard to achieve uplift in your sales price, particularly when producing a commodity crop. As an organic farmer I work within a set of parameters which determine whether I can achieve the organic premium for my milk, but this is currently not possible for a farmer practicing RA, where each farm has its own set of rules. I did meet many smaller scale farmers who are able to add value to their produce by selling locally to those you can communicate the story of your farming practices to. Tom Bradman, who runs Nomad Farms south of Adelaide, was the epitome of this model, bringing pasture raised produce to a very loyal set of customers. To Tom it is the customer demand for such produce that will bring more farmers into RA.

That message will certainly resonate with mixed farmers closer to an urban population, but what about those farming far from urban hubs and producing a higher percentage of commodity crops? In the United States there are now more examples where organisations and larger food businesses are striving to add value to food produced using RA. General Mills has been working with some high profile RA farmers with the ambition to convert 1,000,000 acres of land to RA farming practices i.e. using no-till, cover crops and livestock by 2030, whilst also pouring money into researching Kernza, the perennial wheat variety. On a smaller scale, Justin Knopff is working with a start-up venture, Grounded Growth, whose aim is to connect farmers practicing RA with smaller food manufacturers wanting to tell the story of how the food is sourced and produced, with the aim of attracting a premium for that crop.

8.3 Getting the Right Support

Wherever I have travelled during my Nuffield journey, I noticed that all of these farmers operate in a geographically isolated way. There doesn't appear to be a direct ripple effect from a farmer showing how RA has improved aspects of their business. If anything, it seems to further entrench the status quo of those around them. This certainly isn't unique to the farming community, as described by the Semmelweis Reflex:



The reflex-like tendency to reject new evidence or knowledge because it contradicts established norms, beliefs and paradigms

So how do can we break down that innate fear of breaking with tradition?

8.3.1 Create a local movement

My time in Australia fortunately coincided with a meeting run by Vic No-Till. Formed in 2002 the group aim is to help farmers achieve better harvest results whilst adopting more regenerative farming practices. As a farmer-led group they have achieved a much higher success rate in introducing RA then other states in Australia. And why is that? To me the simple reason is that it is farmer, rather than government, led. They have been able to elevate pioneering farmers to a level where others are willing to listen and learn directly from them. The big step came when they added two field days to their annual schedule, where previously it was just a conference. There is no doubt that farmers enjoy the field days as they are more hands-on and therefore interact directly with the people and equipment involved.



Figure 18: Grant Sims demonstrating the production of a vermicompost extract at the field day.

Author's own photo

During the meeting I saw farmers, both young and old, looking energised and excited to be there, many aspiring to the successes of the more experienced members. Many were first time attendees



and had been brought along by their neighbours to see how it's done for themselves, thus hopefully breaking that Semmelweis Reflex.

This movement doesn't have to be on a large scale. From seeing how well groups of 3-4 farmers work together, I would say that being able to meet those with a like-minded attitude is an important stepping stone to RA. I saw many great examples of this in action, where they also used an outside consultant occasionally to bring in an impartial observer. In Sussex, Sam Newington, David Cornforth, Fergus Henderson and Penny Vaughan had come together as a group of likeminded mob grazers in order to offer support whilst trialling new techniques. As a small group everyone is able to contribute and, most importantly, feel able to talk about the events that didn't go too well. Having the core passion and belief means they are able to push one another along. David and Fergus now have a grazing setup that allows them to move their cattle multiple times during the day and have seen their grass continue to grow through the very dry summer months whilst their neighbours' fields turn brown. As outside support they use Precision Grazing Consultancy to help benchmark their progress against others using similar techniques across the UK.

8.3.2 Institutional Support

After spending much of my time talking to farmers I felt it was important to see what support there is for entrepreneurs outside of farming i.e. those often wishing to change a business model and take a step into the unknown.

At Sussex University in Brighton I met Simon Schuster from the Sussex Innovation Centre, a wholly owned subsidiary of the University, based on the campus. The focus is entrepreneurs on campus or in the local area and can be described as a business incubator, with many of them based within the same building. They use a mixture of students and consultants to offer technical and business support to people who may have great technical knowledge but lack the ability to form a workable business plan. They look at what motivates that individual, their purpose, and use that as the driving force to get the project off the ground. As many of these entrepreneurs are in the same building they then also begin to collaborate with one another, utilising shared skills and contacts to enhance the businesses. As I walked around the building the energy levels were almost tangible as they all strived to grow their business.

A great example of support for the farming industry in the UK is the Prince's Farm Resilience Programme, which offers free business skills training to family farms across the UK. Locally to me the High Weald AONB is currently running this programme for around 15 farms, aiming to get a good cross-section of age range, those experiencing generational change and first-time farmers. Although not aimed specifically at RA, this programme has brought many farmers together that wouldn't normally have considered doing so. The group size and excellent facilitation has brought the group closer together, helping to form long-term bonds. By having no hierarchy in place everyone is able to contribute and try out new ideas without the fear of failure.

8.4 Using the right language

As part of my planned trip to Southern Africa I was added to the RegenAgZim WhatsApp group so that I could get to know the farmers before I went out. I was unable to physically travel there, but it gave me a fascinating insight into the issues within agriculture and RA in particular. What has struck me most were the subjects that gain the most responses but also those that don't. Allan Savory, one of



the foremost minds on RA and the creator of Holistic Management, is also a member of this group. He offered a great deal of advice and also that he would host more local training for other farmers in Zimbabwe, but much of it fell on deaf ears. Much of his advice sought to get across the importance of looking holistically at the way you farmed and ran your business, using a philosophical approach. The response was pretty quiet, until someone posted a practical question about an issue on their farm and the subsequent response rate went up. Speaking with some of those involved, the overwhelming feeling I had was that struggling farmers want a practical approach to problem solving and were somewhat baffled by the philosophical language often used. It would seem that Allan's message is lost when being conveyed on social media, a platform notorious for creating a short attention span in its users. Instead, he decided to organise a 3 day workshop retreat at his centre for holistic management at Victoria Falls just for Zimbabwean farmers to help bring about RA quickly within the country. The greater uptake for this shows me that it is also about using the appropriate language in the right setting in order to get the message across.

8.5 Using the power of failure

There is no doubt that in today's world social media plays a huge role in influencing others. More often than not, we prefer to post pictures of our happy memories, the successes and the aesthetically pleasing, even if it doesn't portray the whole picture of your life. This can often lead to those viewing feeling that their life doesn't match up to these supposedly perfect lives. The same is certainly true in farming terms, with twitter threads on RA dominated with pictures of fantastic looking cover crops, mob grazing and amazing roots in deep soils.

I spoke with Tim Parton, an arable Farm Manager at Brewood Park Farm in Staffordshire, about his journey into RA over the past few years, where he has gone from a conventional tillage system to no-till, cover crops and extensive use of biology over chemistry. With the changes made, he has halved the amount of artificial nitrogen used, decreased the use of sprays from £80/ha to £50/ha and now has a cost of production of £70t for wheat.



Figure 19: Tim Parton in a crop of OSR grown with much lower inputs. *Courtesy of Tim Parton*

Tim is now sought out by many other farmers wanting to go on that journey too and he is adamant that he must tell his story, warts and all, about the many challenges faced. By showing them the



whole story they are more likely to overcome the initial reluctance to change their system and will have a much more realistic approach once they start. Tim also told me that many of those he had helped had not been keen to replicate this with their neighbouring farms, instead wanting to keep the new found information to themselves. Lack of collaboration within farming has always been seen to hold the industry back and it appears that within RA this is also an issue. It is vital that within RA those farmers open up and share widely in order to bring others along with them.

8.6 The Dairy Conundrum

As an organic dairy farmer, I was keen to visit dairy farms practicing RA, hoping to be able to bring back ideas that I could directly implement at home. The overwhelming majority of those I visited were beef and sheep or arable farmers. Why is it that RA and dairy don't seem to have hit it off? The UK government's latest balance sheet analysis of farming performance shows that after pigs and poultry, dairy has the 2nd highest level of debt (£434,900) compared to arable (£316,100) and grazing livestock farms (£104,300). There is no doubt that a dairy farmer would have much more to lose financially if their journey into RA failed and so therefore are less likely to make that change.

There is also very little in the way of knowledge exchange on the subject within the industry and therefore it just isn't a phrase that dairy farmers tend to use. The tide is beginning to change and many dairy farmers are now moving away from mono-culture ryegrass and towards a greater diversity of plants. The interest on the subject on social media has increased over the past 5 years and RA is beginning to seem normal. So once again, we see the power of the farmer at the heart of RA.

In summary, to convince others that RA is a path to follow

- RA needs more research into the physical and financial benefits it can bring. This research must be farmer rather than researcher led
- Producers are starting to show that RA can help them to achieve a better sales price at a local level but this is more challenging for commodity crops
- There is a great deal of support available, either as part of a small group or through organisations, you just need to know where to look
- It is key that the right style of language and content is used when communicating RA to other farmers for them to become engaged with the subject
- We must embrace failure as part of the RA journey
- Higher levels of debt are holding farmers back from change



Chapter 9: Conclusions

- RA is viable approach to farming which is reaping long term benefits for the social, economic and environmental aspects of a farming business
- RA is a farmer led movement, with no restrictions on size or type of farm
- Before embarking on your journey you must work out your goals as this will help to drive decision making and keep you focussed
- Ensure that those around you understand and are involved in setting out your purpose
- Be realistic about what you'll be able to achieve. Use SMART objectives to make sure you are able to maintain momentum
- It is important to find the appropriate support for your business. This could be through other individual farmers, farming groups, consultants, or a combination of these that suits you

Chapter 10: Recommendations

- Researchers and those who fund them need to ensure that the farmer is put at the heart of any research programme
- This research message must be conveyed through the same channels as industry led research to ensure it reaches a broad range of farmers
- imperative that that appropriate language is used to fully engage
- To all farmers already engaged with RA it is imperative that you share your experience with as many as possible and you must talk about the failure as well as the success in order to remove the stigma attached to it



Chapter 11: After My Study Tour

My Nuffield Scholarship has given me a fascinating insight into the journey of farmers across the world into RA. During this time I have met people across the spectrum of experience, from newcomers desperate to absorb as much knowledge as possible through to those with the scars to show from the journey they've taken already. At the outset of my studies I firmly sat somewhere in the middle, plenty of ideas had been dabbled with, but few that would take me to where I believed the farm should be.

I now realise that I have most of the necessary ingredients to make this happen, but these need forming into the right order. At the base of it all are my core values. In the past I have roughly sketched out my holistic context, but that was all it was, a sketch. My mantra has always been 'diversity' into everything we grow, but that now needs to be worked into the core of the business, creating a simple decision making process that will avoid some of the blind alleys I have turned to in the past. I must do this in conjunction with my family in order to form the necessary support around me.

For years the success of my dairy business has been down to the farmers around me who have supported and pushed me forward. Now is the time to work on the RA side in a similar fashion. I will be forming a closer link with Sam, David, Fergus and Penny to help me to put my ideas into practice.

Since starting my studies our farm is now part of the AHDB Strategic Dairy Farm network and will be exchanging knowledge with dairy farmers from across the country as they come to visit us. For me this is a great opportunity to explain RA to them and showcase the longer-term benefits for our farm.

In this period I have also taken on the running of another organic dairy farm in Kent. I will be running this in partnership with the Common work Trust whose mission is to provide a place that brings sustainability to life and offers opportunities to learn, grow and be inspired. I believe that working alongside them will provide an extra impetus to not just be sustainable but regenerate the land and people around us on both farms.



Acknowledgement and Thanks

Despite the late intervention of COVID-19 the past 18 months has lived up to my hopes in so many ways and I have enjoyed every minute of it!

My first thanks must go to my amazing wife Emma, who has provided unstinting support throughout this process despite the challenges she has faced keeping the home fires burning whilst I was away.

Many thanks go to my sponsor, McDonald's UK & Ireland, not only for the financial support but also the ongoing keen interest in my travels, I hope they enjoy the report.

I have been incredibly fortunate to have a likeminded mentor in Tim May. Tim has guided me through from the early days with a subtle mixture of direction and encouragement.

I would like to thank the whole team in the Nuffield office for making me feel instantly at ease with being a scholar and for providing support whenever needed.

And last but certainly not least, I would like to give a huge thanks to the countless people I have visited and spoken to over this time. Your generosity of time, knowledge and hospitality will be something that will have a life-long affect and influence.

Dan Burdett



Published by Nuffield Farming Scholarships Trust
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