



KELLOGG

RURAL LEADERSHIP
PROGRAMME



**PARTIAL LAND USE
DIVERSIFICATION TO
STRENGTHEN INCOME AND
BUSINESS RESILIENCE**

Kellogg Rural Leadership
Programme

Course 43 2021

JENNA SMITH

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Executive Summary

Pressures on what is deemed the appropriate use of land to create food and fibre in New Zealand are countless and seemingly coming from multiple directions. Such pressures can have the ability to inspire change, be it willing or not.

Reactive land use diversification is not new. Land holders have changed their agricultural systems to increase financial gains or access stronger markets as the result of many external influences.

Often, the notion of land use change has been referenced as a complete transition of the entire land holding. However partial diversification is already prevalent amongst New Zealand agricultural enterprises, and many rely upon multiple income sources for financial viability.

When thinking of investment, an investment reliant upon a sole markets return is described as high risk, hence the often-sage advice to diversify a share portfolio. The investment of agriculture is surely deemed high risk when the return is commonly solely reliant on the sale of a single commodity.

The purpose of this report is to explore the reasons behind land use decision makers reasons for exploring land use diversification and to determine if there is a place to partially diversify agricultural enterprises in a way that both brings income and business resilience as well as reduced environmental impacts and greater compliance of regulatory frameworks.

Can agricultural businesses be the same as a diverse share portfolio, with varying risk, seasonality, liquidity and return all on one land holding?

Financial, Environmental, Social, Knowledge and Regulatory opportunities or barriers appear to drive land use change, but none more so than financial.

However, with the exploration of the other factors, it could be said that financial performance is heavily pursued in the land use that is desired by the land holder and that has created a narrow view of the business or lands capabilities.

There appears to be an opportunity within New Zealand's Food and Fibre sectors to create multiple enterprise farming operations that bring increased financial resilience, lower environmental impacts whilst maintaining the "social licence to farm" and creating job satisfaction for those that own the land.

Therefore, the recommendations from the research undertaken are:

Collaboration from a variety of sectors to allow knowledge share. This could include discussion groups that are possibly hosted by the likes of Dairy NZ, Beef & Lamb, Horticulture NZ and other non-government organisations.

Research and publications in to successful and failed enterprises that have undertaken partial land use changes to establish the complications, complexities, drivers and barriers that exist in partially diversified operations.

Greater accessibility to ministry funding to enable partial diversifications where outcomes are likely to improve environmental impacts. Funding or resource to enable the collaboration of farming businesses to achieve greater market access when sole scale is not sufficient should also be explored.

1. Acknowledgements

I would like to thank Rural Leaders and the Kellogg Rural Leader programme team – Scott Champion, Patrick Aldwell, Chris Parsons, Lisa Rogers and Desley Tucker you all add so much value to the food and fibre sector not only through your own significant accomplishments, but also by empowering and moulding current and future leaders with the guidance, insights, and absolute gems of knowledge that you impart throughout the programme.

To cohort 43, an amazing and diverse group of people that I am very fortunate to now include in my network.

Such growth can come from a group of people not being afraid to share their opinions, experiences, and feelings in a place that they feel safe to do so, and I certainly think that was the environment we fostered over the past six months.

I would also like to thank my employer Pouarua Farms for allowing me to take the time for this personal and professional development. In terms of my project topic, I have certainly been fortunate to have hands on experience in diversifying land uses and income streams with good success which has no doubt come from the strong decision makers amongst this business.

And lastly and not at all least, I would like to thank my beautiful family for always being my anchor. I cannot be who I am without you.

I recommend Kellogg Rural Leaders to any individual aligned with the primary sectors that has a passion and determination to better themselves to engender change in a meaningful way to the food and fibre sectors.

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2. Introduction

When investing in the share market the advice is usually uniform and comes back to the old saying “don’t put all your eggs in one basket.” When we look at agricultural business – our biggest investment is essentially a single investment, the land and what it can produce. The heightened risk that comes with having a single source of income reliant upon the sale of one commodity (often one in which we in agriculture are simply price takers) is surely deemed high risk.

In terms of investment, reducing the risk of a cracked nest egg is appealing to many.

Does a diverse portfolio of varying risk, seasonality, liquidity, and return equate to stronger cashflow and more resilient business?

But then many are successful with a single investment because they have carved a resilient business whilst being reliant on one income source. Is this sustainable in the future with such volatility in markets globally as well as an agriculture industry that is continually changing with compliance and regulations forcing changes that relate directly to income.

“DIVERSIFICATION IS A PROTECTION AGAINST IGNORANCE. IT MAKES VERY LITTLE SENSE FOR THOSE WHO KNOW WHAT THEY’RE DOING.”

- WARREN BUFFETT

Diverse income can be as complex as creating different income streams via varying land use and as simple as an off-farm income. The latter has become prevalent as supplementation to everyday living costs as farm drawings are often not enough to cover all the financial needs of a modern family. A 2015 survey of NZ Farm managers/owners (Lincoln University Greig B, Nuthall P, Old, K) showed “off farm income” was surprisingly high with an average across all farms of nearly 25% of net income.

The late 1980s and early 1990s brought pressures to income resilience in farming businesses that meant farmers needed to change their systems to survive economically. The same need for change could be needed now with the volatility of global markets, compliance and regulatory changes all potentially impacting income.

Through this project I looked closely at diversification of income as a result of diversifying land uses and producing more than one product.

Land use change is not at all a new concept in New Zealand agriculture, many farmers have adapted and “changed codes”, the change has however usually been driven by market forces. The challenge facing producers in the current climate is far greater than chasing an extra few percent on their return on asset. Environmental, social, market, regulatory and cultural influences all

come into the frame along side financial, and trying to ensure profitability while “changing codes” can sound easier said than done when you have to tick all the other boxes as well.

The opportunity became more apparent to me as I progressed through the project, that stronger cash flow positions could come alongside gains in environmental stewardship, meeting regulatory frameworks and strengthening food security for the growing population. Though it may not always be advantageous to profit, surely as long as it is not a disadvantage from current position and it meets some or all of the other benefits such as environment, social/wellbeing, regulatory then this is a shift that we as food producers can come to be comfortable with.

3. Aims and objectives

The question posed was “if having a single source of income, reliant on the sale of one commodity is high risk, does a diverse portfolio of varying risk, seasonality, liquidity and return equate to a stronger cash flow and more resilient business?”

Exploring if diverse operations with multiple enterprises do become more cash flow positive than successful single enterprise opportunities, was the initial trajectory. Though, through the many rabbit holes that can come from such a large question, I narrowed down to reviewing the reasons why we are typically single enterprise operations in New Zealand, and what the barriers are to becoming multi-sector farmers and producers.

“BUSINESS OPPORTUNITIES ARE LIKE BUSES, THERE'S ALWAYS ANOTHER ONE COMING” – RICHARD BRANSON

4. Methodology

The method I have used for this project was information gathering and analysis as well as literature review.

In the literature review I looked for research and information that was relative only to New Zealand food and fibre production to keep the scope focused on the barriers that relate to the perspectives of the New Zealand producers and land use decision makers.

Information gathering was a mixture of the study of existing documents and reports available through both central government departments and non-government organisations.

Themes and opinions were gathered from many informal conversations and through participation in relevant discussions pertaining to this topic.

I also relied upon results from my own experiences within a business undertaking diversified means of food production.

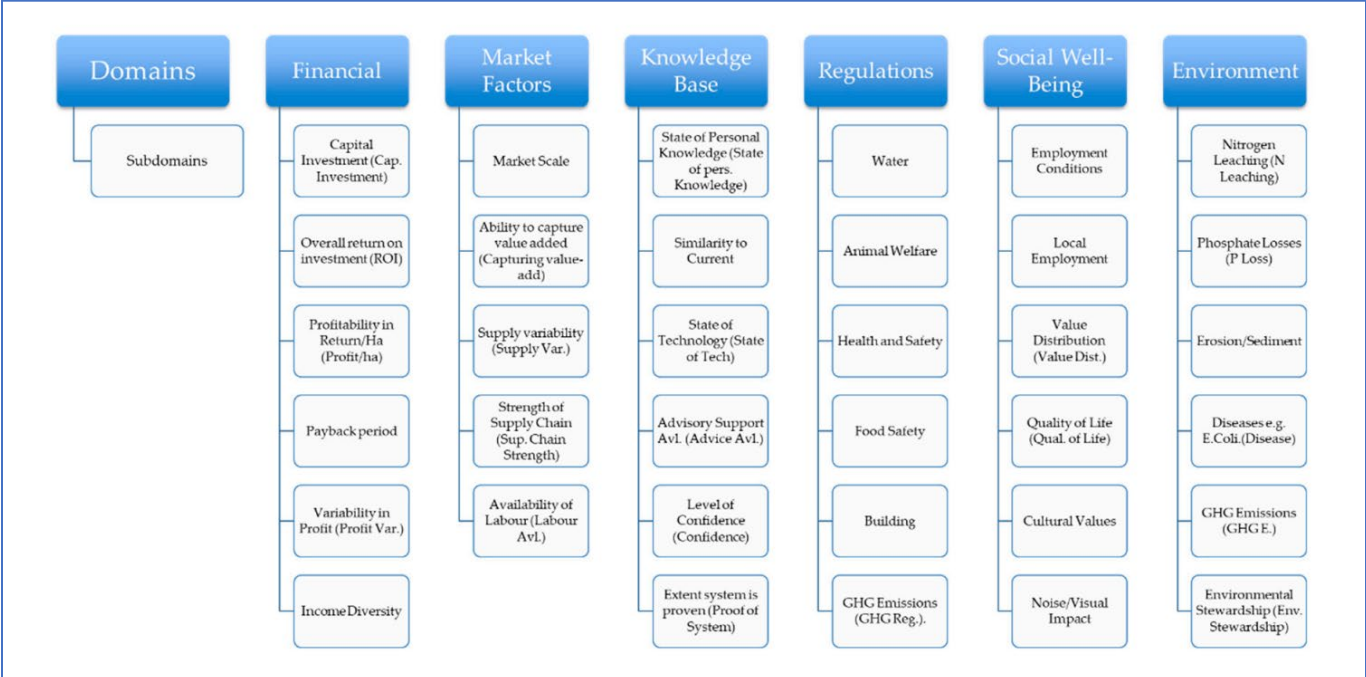
5. The potential barriers to land use / income diversification

While undertaking the literature review and reading the multiple reports that have been produced by and for central government, non-government industry organisations, and processors, it became apparent to me that the reasons both for the change and the barriers to the change were almost exactly the same, and often contradicted themselves.

The article ‘challenges and opportunities for land use transformation: Insights from the CPW scheme in NZ’ (Renwick, A et al 2019) highlighted six domains with multiple sub-domains that influenced land managers when thinking about land use changes.

These domains were:

- Financial
- Market Factors
- Knowledge Base
- Regulations
- Social Well-Being
- Environment



Source – Challenges and opportunities for land use transformation. Renwick, A et al. 2019 Figure 1.

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5.1 Financial

It is commonly referenced that many are in business to make money. It is of little surprise that financial factors influenced the land use decision makers interviewed in the CPW study (Renwick, A et al 2019)

But do landowners and producers try to bleed a stone to stay in their chosen production field and is it this resistance to change land use that often sees primary producers with a very strong capital asset but less than ideal cash flow capabilities.

“We haven’t thought about the payback period, we’ve thought about a secure capital asset in the long run. We’re farmers and that’s what we know how to do. Don’t want to get involved in the sharemarket so we have ploughed all the money in to a single asset we think will be secure in the long run”.

INT001 CPW Study (Renwick,A et al 2019)

A comparison from the AgFirst report (Journeaux, P et al. 2017) showed financial data from various sectors and their associated EBIT per hectare. The range was vast, from \$155 on a sheep and beef property through to \$30,372 on a Kiwifruit property.

The report notes that the obvious uplift in return would be an enticing proposition for most to consider land use change, but the constraints could be numerous when we take into consideration all the other noted barriers.

The constraint that would be most obvious in my opinion is the access to capital to develop a land use change. A recent conversion of low productivity dairy land to fruit required a capital investment of \$256,000/ha with a 3-year gap on any return. (Case study) Having a supplementary income by undertaking a partial diversification has made the wait on return easier to stomach, the outlay in capital however is difficult to assume accessible to all farm businesses.

Creating financial sustainability through multiple enterprises was highlighted in a sample study of 18,561 business owners (commissioned by the Federation of Small Businesses) in the UK (Carter, S et al. 2004). The results showed that many business owners were not solely looking for profit maximisation when establishing multiple enterprises.

Some used the additional income for wealth accumulation and others as a survival tactic to keep their initial venture afloat. Other drivers included using new enterprises to facilitate business entry or exit.

Whether farm diversification should be considered a distinct objective rather than an associated outcome of good economic policy depends primarily on the economic structure of the economy in question.

5.2 Market Factors

When researching land use diversification, a prevalent theme of opinion-based articles suggested that diversification is an aim towards a niche or developing market that has high value. The safety of a well-established product with processors who have access to well established markets is comfortable.

Having to develop and market a new enterprise in what can be a competitive environment is time consuming and would understandably be off-putting.

A report by Hammervol and Toften (2012) focused on niche marketing and showed that a number of people that had developed alternative enterprises had to rely upon scale to take their enterprises to a more successful business model, and that this scale was possibly only achievable by collaboration of farmers.

Marketing can act as both a reason to incite change as well as a barrier to the change.

The more accessible the market – the greater uptake in land use change is likely to be, however if the market accessibility needs developing – this can lead to lower inclination to take on such a transition.

5.3 Knowledge Base

In my experience, farmers have an ability to find solutions and access resources that will assist them. This theme also appeared in some of the literature and research.

As in the CPW scheme study (Renwick, A et al 2019), it seemed that the farmers that were interviewed were not concerned about taking on a land use change that was outside their knowledge set. The farmers interviewed felt they could access advisory support to supplement their own knowledge gathering, and that they would partake in their own small trials on their properties to assist in building the knowledge they needed.

We are what we repeatedly do. Excellence, then, is not an act, but a habit.

ARISTOTLE

Within the land use changes that I have undertaken in the past, accessing knowledge and information, or partnering with businesses that already specialise in the new enterprises area has been a relatively straight forward process.

This however cannot be said for all sectors, I have generally found that knowledge competition increases the more niche or less resourced the market is. Dairy farming seems to be an overly collaborative industry, likely because the competitive nature of

marketing is removed. But as you get into the smaller sectors, knowledge share is significantly reduced by the fear of increase in competition or worse – the lowering of the overall price.

5.4 Regulations

Regulation is not often talked about as an enticing reason to enter a new enterprise when farming is concerned. Dairy farming has certainly faced a sustained period of regulations being named as a prevalent theme as to why some farmers are wither exiting the industry, or why others would not consider Dairy as an industry to look to convert to.

Alternatively, the use of regulations in many sectors results in a competitive edge when marketing products for export. Something that perhaps producers of Dairy for example should pay more attention to.

The removed marketing component of dairying shelters producers to the requirements and often demands of the customer or consumer

Regulations can feel like the trajectory of your business is being driven by government organisations, but the reality is it is being brought about by market forces as well as environmental and associated social pressures.

Interestingly, the results from the CPW study had social, environmental and market factors weighted similarly when considering land use change, but regulation was weighted lower than those three factors that generally drive regulation.

The AgFirst report Drivers and Barriers to land use change (Journeaux, P et al. 2017) had identified Societal and Regulatory factors under the same driver or barrier. Often referred to as the “licence to farm” it was noted in this report that concerns around animal welfare and environmental impacts of land use often drive regulatory change.

When speaking with market gardeners in the South Auckland region, it was felt that regulations focused on discharges of smells, nutrients and chemicals could and do restrict certain land uses. They also noted that urbanisation of once rural communities drives social pressures that impact one's decisions around land use change and this is likely to become more prevalent as New Zealand's population growth and shortage of housing continues.

5.5 Social Well-being

The addition of enterprises outside the mainstay adds complexity that in the CPW study (Renwick, A. et al 2019) had been highlighted as a reason why interviewees were not pursuing smaller enterprise adds to their current operations. The additional enterprises were often seen as something that could only be achieved on a small area of their farms and that became an additional complexity to their established farm systems (such as their place in rotations). Complexity is a pressure that often falls on one sole point of responsibility and that does not enable a simplified system offering a better work/life balance.

In the CPW study (Renwick, A et al. 2019) the domain with the most agreement from the interviewees was the social domain. Three factors (conditions of employment, quality of life and cultural values) were consistently highlighted as important.

Social Wellbeing – that is quite important (when compared to the financial domain). If it was all financial, I'd be dairy farming, and I do not want to be a Dairy Farmer!

INT003 CPW Study, Renwick A, et al 2019

The Agfirst report Drivers and Barriers to land use change (Journeaux, P et al. 2017) highlighted the social pressures and "license to farm" as well as personal factors relating to an individual, age, education and experience combined with family circumstances, attitude to risk, access to capital, access to information and attitude to change lead to the social interpretation of the drivers and barriers to land use change or diversification.

This report found that the fundamental barrier to land use change getting off the ground was driven by the individual land use decision maker. With examples being referenced to the economic response that has driven changes in land use like the Bay of Plenty's kiwifruit movement or Marlborough's vineyard expansion. It was noted that these changes were not forced upon by a consensus that this was where Agriculture needed to move to – rather it happened because individuals realised an opportunity existed and enacted the change.

5.6 Environment

Land use change has been held up as one of the key areas in reducing the implications of environmental pressures in relation to agriculture.

There is no denying that without the protection of the land's integrity today, we cannot secure our place as food producers in the future. The CPW study (Renwick, A et al. 2019) showed that there was no uniform consensus from the interviewees as to which land use had the greatest impact on environmental degradation. Of note, some interviewees that had converted from cropping/arable systems had reduced their environmental impacts by changing to dairy farming.

All interviewees had the same notion, in that all their considered land use changes were being made with the intention to improve environmental outcomes.

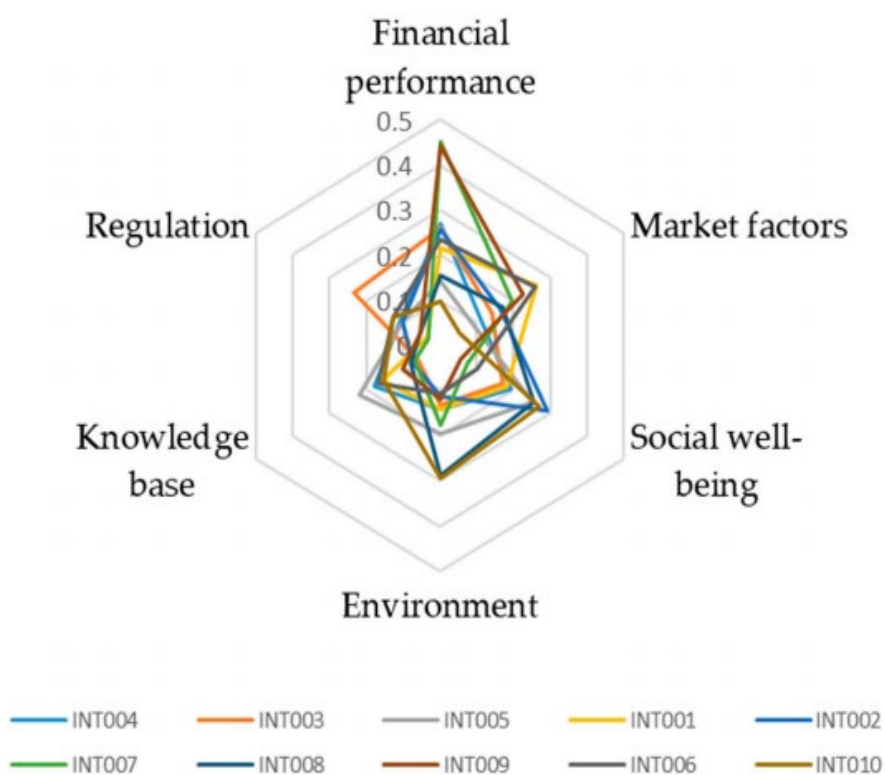
What we do with our land is increasingly becoming a topic of discussion in both urban and rural communities. This was recently demonstrated in a survey conducted by Our Land and Water National Science Challenge following the 2021 Open Farms initiative.

When I have discussed land use changes that do not disadvantage the return or profitability of the land and business, it is often assumed that intensification is required and therefore environmental impacts will be greater.

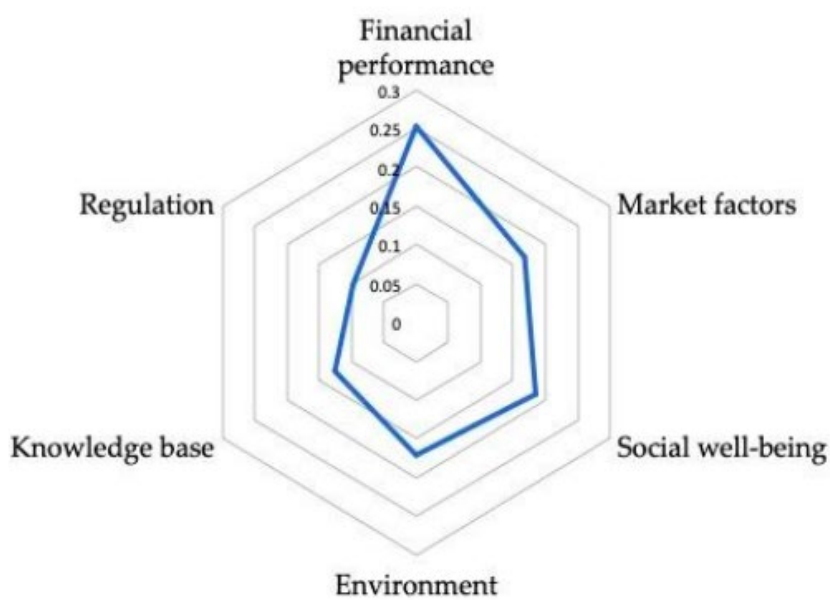
There are many examples where land use changes can bring out lower environmental impacts.

An example derived from the AgFirst report Drivers and Barriers to land use change (Journeaux, P et al. 2017) showed reducing dairying or intensive vegetable cropping land use to sheep and beef or viticulture could see N leaching reductions of up to 145kgN/ha/yr. (based on the assumption of a dairy farm leaching 150kgN/ha/yr vs a vineyard leaching 5kgN/ha/yr.)

The tighter controls being placed around regulations relating to water quality, water takes, greenhouse gas emissions etc will ultimately have a great impact on whether land use diversification is possible or indeed necessary depending on the regional council the business operates under.



(a)



Source – Challenges and opportunities for land use transformation. Renwick, A et al. 2019 Figure 2. Page 7
 Spider graph of all participants' results (a) individually at the domain level, and (b) the average of participants' results at the domain level

6. Discussion

Agriculture is the most healthful, most useful, and most noble employment of man.

George Washington

Primary producers seem relatively unified in wanting business resilience. However complete land use change almost goes against the social component that farmers are instinctively farmers of a specific product and therefore do not have the desire to become a producer of an entirely different product.

However regulatory changes that are driven with environmental, social and market forces behind them point towards the need for land uses in our agricultural sector.

Shifts in land use change no matter the driver – the producer chasing greater returns, or pressures created from central government have been historically slow.

Is the middle ground to achieving both change that creates wealth opportunity and stronger more resilient cash flow as well as meeting the environmental, social, and regulatory changes one of a partial transition to land use changes. Essentially do farms need to become multiple enterprise operations, producing more than one food or fibre source.

If each producer and or land holder set aside a small under performing (in their current system) piece of land to transition to an alternative enterprise, then both income diversity and environmental gains could be achieved.

The barriers to this though could come from inclination to undertake the additional complexity that a multi-enterprise operation adds. The values proposition of undertaking the production of an alternative product could also have an impact on social wellbeing.

There seems to be opportunity for either public or private sector facilitation of change here.

There has been success in investing in a shareholding of an agricultural enterprise in the past, the opportunity apparent here is a business management one, to take the complexity of the alternate business enterprise transition away from the landowner as well as driving the market formation.

As noted by Renwick, A (et al 2019), there needs to be a support framework from financial institutions to assist the transition in land use changes. Similarly local and central government could have a role to play in strengthening supply chains for niche products.

Through my own experience and conversations, the barrier to land use change has usually comes down to two factors – financial constraints and the social component.

Financial constraints can be varied, from the proposed venture change not producing a higher return to make it more attractive than the current operation. Or a lack of capital to launch a new venture and take it through the low return phase during the maturity process.

A partial land use change to add income diversification is a nice medium here, as identifying under performing land in your operation will be easier to part with if the returns do not quite match the current yield. Often the change is thought to have to return a double-digit figure to justify the change, however if it is a partial diversification as long as it is not disadvantageous then accepting change that brings other benefits such as diversified income (timing), environmental benefits and overall food production shouldn't be discarded.

As an example, a crop that has an annual harvest and return can supplement more regular income such as grazing or dairying with a one-off bulk payment then available to fund innovation, capital projects or to pay down principal on debt.

The social component I have often encountered is the desire to be a farmer of a specific product. Sheep farmers want to be sheep farmers, arable farmers want to be arable farmers, and the thought of changing for added business security seems to be foreign and almost socially unacceptable.

Again, this is where the partial diversification of land use offers the ability to stay true to the land use one set out to devote their time and resources to while strengthening the resilience of the business.

There is an opportunity for partial land use change to supplement business and income resilience in New Zealand. If this can be achieved at scale, then there is also increased ability for greater reductions in environmental impact.

This would be achievable with assistance from central or local funding to enable land holders to pivot their businesses into multiple enterprise farming operations.

Opportunity for private sector organisations to facilitate the change in communities offers a collaborative approach to some marketing hurdles, as well as removing the complexity burden that would fall on the land holder.

7. Recommendation

Further analysis, research and publication is needed to assess the current state of New Zealand's critical asset to enabling land use change. Greater soil mapping needs to be undertaken to understand our resources capability.

Collaboration from a variety of sectors to facilitate knowledge share. This could include discussion groups that are possibly hosted by the likes of Dairy NZ, Beef & Lamb, Horticulture NZ and other non-government organisations.

Continued support from financial institutions to fund partial diversification to slowly occur to ensure a stronger balance sheet.

I encourage further research and development in to successful and failed enterprises that have undertaken partial land use changes to establish the complications, complexities, drivers, and barriers that exist in partially diversified operations.

Greater accessibility to ministry funding to enable partial diversifications where outcomes are likely to improve environmental impacts.

Funding or resource to enable the collaboration of farming businesses to achieve greater market access when sole scale is not sufficient should also be explored

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