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Farmer to Farmer Collaborations

Mark Brock

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SCHOLAR PROFILE



I live and work on a family farm near Hensall, Ontario, where my wife Sandi and I run a grain and oilseed operation and produce lambs for the Ontario red meat market. I am a life-long farmer who studied Agronomy at the University of Guelph before coming home to sell seed for ten years and manage our family's grain and oilseed operation D&D Brock Farms Ltd. for 13 years. In 2012, Sandi and I branched off to own and operate Shepherd Creek Farms Ltd., a dream for us both.

In 2010, I became involved with the Grain Farmers of Ontario, a provincial commodity organization that represents the interests of 28,000 farmers who grow barley, corn, oats, soybeans, and wheat. I represented District 9 (Perth county) for nine years as a provincial director, where I spent seven years on the board's executive committee, three of which as Chair of the board of directors. Through the various roles that I have held, this experience broadened my understanding of not only Ontario agriculture but of Canadian agriculture as well.

Through my industry involvement, exposure to new people and experiences sparked an unchanneled curiosity that lacked direction and focus. I have always valued further education and lifelong learning, and I'm always looking for opportunities. After meeting several Canadian Nuffield scholars and hearing about their experiences, I decided to apply for a Nuffield Scholarship as a way to channel this curiosity and as a means to further education.

Being at the mid-point of my career, my goal is to give back to an industry that has given so freely to me. With my Nuffield Scholarship, I want to provide information, tools, global knowledge, and resources to help Canadian farmers remain viable and resilient to the challenges that we face every day now and in the future.

ACKNOWLEDGEMENTS

To think of all the people and organizations that helped me along the way is genuinely humbling, but those that I need to thank first are Sandi, Jack, and Jessica. Family is like a compass; it gives you the confidence to travel and explore, letting you learn more about yourself and the world, but you know it will always get you back home. Thank you so much for all the support and tolerance during my scholarship, and lastly, for believing in me.

To my family and friends, your support and help while I was travelling were deeply appreciated. To know if Sandi had problems, there was a list of willing people to help out, sure put my mind at ease.

To all the 2019 Nuffield Scholars, thank you. I would never have imagined my life being influenced by so many people from around the world. A big thanks to the other 2019 Canadian Scholars who made representing Canada at the CSC a fantastic experience. A special thanks to those Australian and New Zealand scholars that opened your doors and shared your farm and family during my visit.

Thanks to Nuffield Canada and past Canadian scholars for all the support, and special thank you to Nicole McKellar, Tony Balkwill, Blake Vince, Crosby Devitt, and Leona Watson. Sharing your insights and Nuffield experience helped me decide that a Scholarship was right for me.

Lastly, I would like to thank the Grain Farmers of Ontario for providing me with a Nuffield Scholarship. The organization's belief in personal development and creating thought-provoking leadership shows a steadfast commitment to the Ontario and Canadian agricultural industry.



EXECUTIVE SUMMARY

The constantly changing climate of agriculture has added pressure on Canadian farmers. These pressures over the years have forced a decline in overall farm numbers and resulted in more consolidation. Data from Statistics Canada shows this trend and highlights the loss of mid-sized farm operations. A study conducted by the Institute for the Advanced Study of Food and Agriculture Policy at the University of Guelph highlights that about 31% of Canadian farms had farm sales between \$100,000 to \$250,000 in 1981 and this fell to 8.5% in 2016 (Chen et al., 2019). This operating environment raises the question, how do we strengthen overall farm viability no matter the size? This report looks at the role collaborations could play in helping farmers overcome these challenges.

In researching collaboration, it seemed many in Canada resisted the idea. This led to stepping back to determine why there was such resistance. Research in behavioural economics helped explain why this may be happening. Fearing loss over a potential of gain may cause farmers to view collaborations negatively. Furthermore, it emphasizes the impact that decision biases have on collaborations in general.

This report examines five collaborations in Australia and New Zealand. Among these case studies, positive trends are observed, and key elements were identified in successful collaborations. In conducting numerous interviews, it further highlighted these trends.

Through this process, one main point became obvious. All collaborations begin with a 'why', a shared problem or goal. Broken down further, eighteen elements surfaced as being necessary building blocks for collaborations. They are further broken down into human and structural elements.

Human elements include:

- Trust
- Innovative
- Open-minded
- Openness
- Like-minded
- Curious
- Humility
- Positive mindset

Structural elements include:

- Group size
- Safe environment
- Diversity
- Leadership
- Exit plan
- Accountability
- Facilitator
- Relevance

What became apparent is human elements need to be addressed before advancing further in a discussion of potential collaboration. If you get the 'people' aspect right, the rest seems to fall in place. Structural elements can then be developed that best reflects the needs and goals of the collaboration. Only then, a collaboration can create Key Performance Indicators that can measure against set goals. Because the human element is so crucial to the success of every collaboration, it is essential to have a set time to evaluate the entire collaboration mandate and its current relevance.

Collaborations should not be feared. It all comes down to a shared 'why'. A curiosity that led one to it, but the right people and proper structure that will keep one there.

DISCLAIMER

This report has been prepared in good faith but is not intended to be a scientific study or an academic paper. It is a collection of my current thoughts and findings on discussions, research and visits undertaken during my Nuffield Farming Scholarship.

It illustrates my thought process and my quest for improvements to my knowledge base. It is not a manual with step-by-step instructions to implement procedures.

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1.0 INTRODUCTION

1.1 Current Canadian Agricultural Environment

In 2017 the Advisory Council on Economic Growth chaired by Dominic Barton presented its report to the Federal government, highlighting agriculture as a significant growth area for the Canadian economy (Johnson, 2017). This unleashed an unexpected focus on agriculture and food processing resulting in some bold statements in the 2017 federal budget setting an ambitious growth target in agri-food exports from \$55 billion in 2015 to \$75 billion by 2025 (RealAgriculture, 2017). Fast-forward to 2020, and Canada is now dealing with an unforeseen economic downturn brought about by a global pandemic and the coronavirus. Canadian farmers are also feeling the effects of the USA and China trade war and uncertain trade relationships with major trading partners such as China and the USA. It seems in a very short amount of time; Canadian agriculture has become even more challenging to navigate.

Challenges in agriculture are nothing new; weather, fluctuating prices, or new disease threats are always top of mind for producers, but these challenges are having an impact. Some of our greatest challenges as primary producers are access to capital and skilled labour. Statistics Canada indicates that within agriculture, for every dollar in sales, there is an average of \$0.83 in operating expenses (Statistics Canada, 2017). As new technologies and production practices come to the market, they usually always bring a higher price tag, and most operations hope that increases in productivity will offset these costs. However, for farm operations that do not have the economies of scale, it is hard to keep pace, and over time they begin to fall behind. It becomes the law of diminishing returns, and farm operations may decide to exit the industry, usually selling to a more extensive farm operation.

1.2 Canadian Farm Consolidation

Consolidation can be defined as the process of uniting but, more specifically, *“the unification of two or more corporations by the dissolution of existing ones and the creation of a single new corporation”* (Merriam-Webster,n.d.). The use of this word is nothing new for Canadian agriculture, whether it is used to describe the merger of multinational life science companies or the absorption of small farm entities by larger ones.

The Canadian agricultural landscape has significantly changed in recent years and consolidation has played a pivotal role. In just the last couple of years, we have seen the merger of Dow Chemical Co. and DuPont into Corteva, and the acquisition of Monsanto by Bayer. Changes in farm numbers have also resulted from consolidation. The 2016 census numbers indicate a 5.9% decrease in farms from the previous census in 2011 (Statistics Canada, 2017). This declining trend has been happening in Canadian agriculture since the 1950s (Figure 1) with no indication of stopping, and with the average farm size doubling over the last 50 years.

number of operations (thousands)

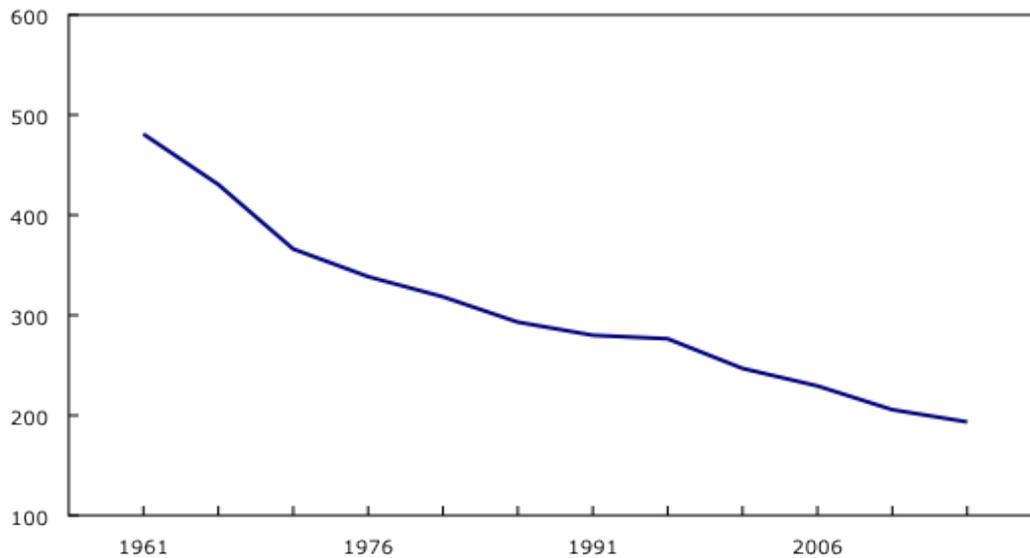
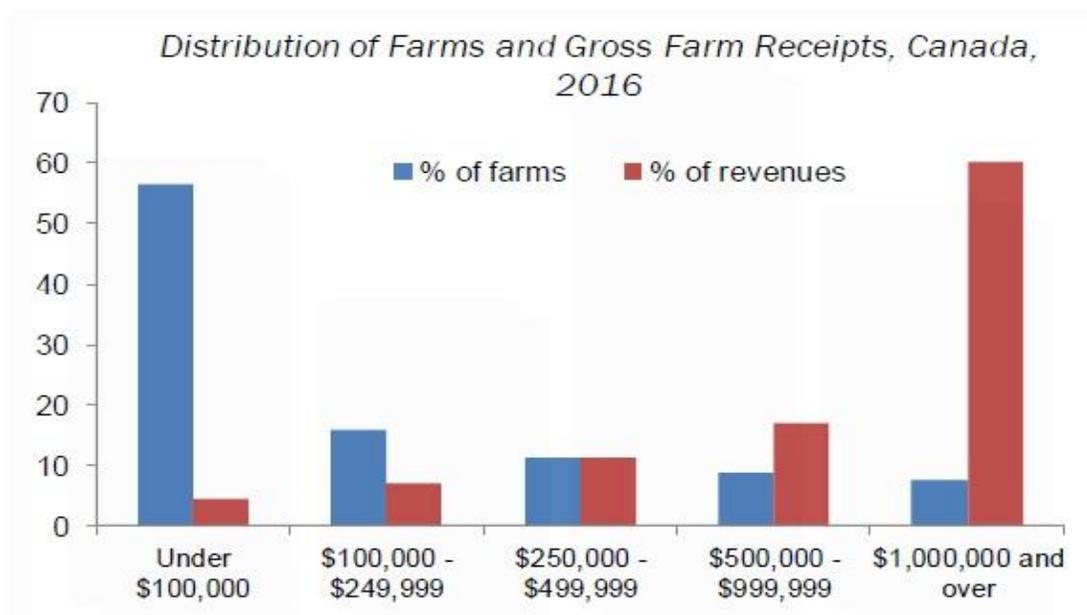


Figure 1: Total Number of agricultural operations, Canada, 1961 to 2016

Source: Statistics Canada, Census of Agriculture

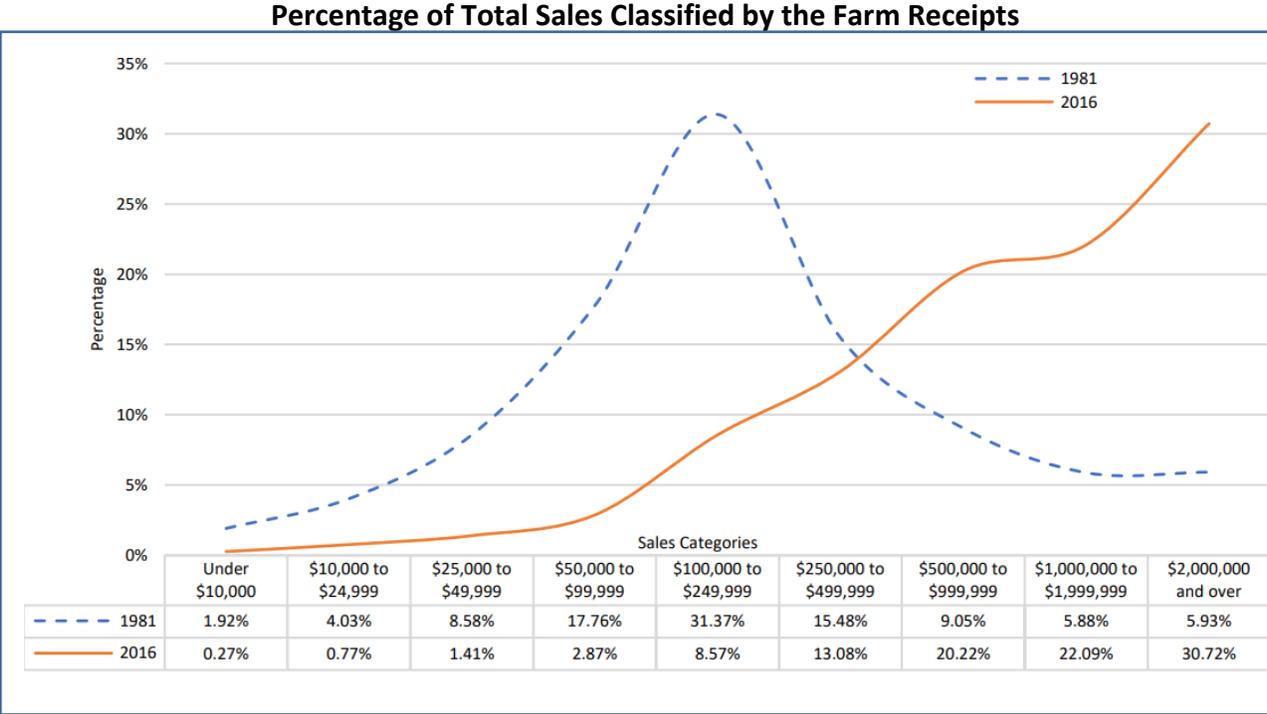
In interviews conducted with key government personnel, data indicates farm consolidation has led to a small number of very large farms earning a majority of agricultural receipts (Figure 2).



Source: Statistics Canada, Census of Agriculture, 2016 AAFC custom tables

Figure 2: Distribution of Farms and Gross Farms Receipts, Canada, 2016

We are now seeing that farms with gross farm receipts under \$100,000 make up more than 55% of the total farm operations in Canada (Figure 2). Furthermore, about 60% of the total gross farm receipts in Canada come from just under 10% of the total farm operations. A study conducted in 2019 researched the change in farm size in Canada between 1981 and 2016. The study concluded that about 31% of farms had farm sales between \$100,000 to \$250,000 in 1981 and this fell to 8.5% in 2016 (Chen et al., 2019).



Source: Chen et al., 2019
 Figure 3: Percentage of Total Sale Classified by the Farm Receipts

This graph (Figure 3) visually represents this statement, showing the loss of “mid-size” farm operations defined by gross farm receipts. Canada is witnessing a shift to larger farm operations with higher gross farm receipts.

It is this farm consolidation and concern about mid-size farm viability that lead me to do my Nuffield topic on farmer to farmer collaborations.

1.3 Collaborations

So, the million-dollar question is: how do farms remain viable in an environment that is historically prone to consolidation. As I look to expand our farm operation, it has become more and more challenging to access capital or make significant investments without economies of scale. It has also been challenging to find and retain skilled labour, which has a considerable impact on overall operational efficiencies and timeliness. In discussions with farmers all over Canada, this situation is pervasive on many farms, especially mid-size operations. There seems

to be an awkward farm size where farms are almost large enough to make significant capital investments but do not have the size to warrant a good return on investment.

An example on our own farm would be a combine purchase. This is an investment that would take \$350,000 with a cost of ownership around \$75,000 a year with a 7-year equipment loan. We harvest 1600 acres a year, so over those seven years, our cost per acre to own and operate a combine would be about \$47 per acre. Current custom rates in our area are about \$48/acre. When calculating this scenario, it becomes difficult to warrant the purchase of a combine for our operation. It is the intrinsic value of having a combine that has been the deciding factor in our decision to own. This is just one of many different scenarios that frequently occur on farms all over Canada.

My Nuffield journey began by looking at various business structures that could provide farmers with an opportunity to work together. By pooling resources, farmers could increase their collective economies of scale and achieve a greater return on investment. These structures could be joint ventures, corporations, partnerships, or unique sharing agreements. However, this idea around equipment sharing or pooling of assets met significant resistance in discussions with Canadian farmers. I decided to step back and re-evaluate how I wanted to proceed with my topic and decided to focus on farmer to farmer collaborations. I decided to investigate examples where farmers are working together in a mutually beneficial way. These collaborations can take on many forms, and I have listed some examples below.

- Peer groups
- Partnerships
- Buying groups
- Joint Ventures
- Co-operatives
- Corporations

This study researched different types of farmer collaborations and how they have brought value back to the participants. It also investigated the human element and why farmers may be resistant to collaborations. The purpose of this report is to provide farmers with some tools, insights, or ideas to help determine if a collaboration is right for their operation.



Sheep farm in Tasmania, Australia – photo by Mark Brock

2.0 OBSERVATIONS

2.1 Behavioural Economics

When deciding on a Nuffield topic that focused on farmer to farmer collaboration, I was surprised by the amount of resistance there was to the idea. I struggled to understand why the most popular comment I received was “...that will never work” and so began my journey into behavioural economics.

Behavioural economics incorporates the study of psychology into the analysis of the decision-making behind an economic outcome (Partington, 2017). In short, it steps outside the bounds of ‘rational choice’ economic theory and considers that people don’t behave rationally. Daniel Kahneman wrote a book *Thinking, Fast and Slow* (Kahneman, 2011), that takes a deep dive into behavioural economics and discusses ‘irrational choice’ which I believe explains some of the resistance I received around my topic.

2.1.1 Rational Choice

Rational Choice theory, described in a book by Gary S. Becker entitled, *The Economic Approach to Human Behavior*, surmises that humans will act rationally when it comes to economic decisions (Becker, 1976). For example, if a grain farmer were looking to upgrade a piece of equipment and Dealer A is asking \$8,000 while Dealer B is asking \$7,500, rational choice theory would have the farmer purchase the equipment from Dealer B. This choice would have the farmer save \$500, thereby maximizing their opportunity. Rational choice theory has a more simplistic approach to decision making and tends to be individualistic, whereby the person or organization puts greater value on maximizing their outcome.

Going a step further, when looking at farmer-to-farmer collaborations, one would think that farmers, based on the rational choice theory, would be interested in any opportunity to maximize their outcome. Let’s look at a collaboration example where two farmers have an opportunity to share a bull for breeding their cows.

Option A

Both farms contribute \$5,000 each to the purchase of a \$10,000 bull with excellent genetics that will likely return \$4,000 more annually to each farmer's bottom line.

Option B

Each farmer purchases their own bull for \$5,000 with average genetics that will only add \$1,500 more annually to each farmer's bottom line.

Using rational choice theory, option A would be the likely choice as each farmer would make \$2,500 more annually by collaborating on the purchase of the bull. Under the premise of

rational choice theory, one would assume that if there is an economic or other perceived benefit, a farmer will choose to participate in a collaboration every single time.

In agriculture, farmers use many different tools to help make rational decisions. Whether it's a spreadsheet used to determine a crop's cost of production or a livestock electronic data collection system, this information is used to make logical business decisions. However, as many of us know, not all decisions are made logically or rationally. There are times when the data indicates a farmer should do one thing, yet they do the complete opposite. This brings us to some theories around irrational choice.

2.1.2 Prospect Theory

In behavioural economics, irrational choice helps us understand why people make unlikely choices that do not maximize their return or benefit. This irrational choice is supported by many different theories and decision biases. One theory that resonates with agriculture is Prospect Theory, introduced by Daniel Kahneman and Amos Tversky in the late 1970s. It "describes how people choose between different options (or prospects) and how they estimate (many times in a biased or incorrect way) the *perceived* likelihood of each of these options" (Aurora Harley, 2016).

The theory helps explain how, as farmers, our personal biases influence our decision-making process and, at times, ignore relevant information when making our decisions. Within this theory, Kahneman and Tversky mention risk aversion in which people will most likely make the less risky choice if they feel the loss would be greater than the possible gain (Kahneman and Tversky, 1979). However, the opposite is true when it comes to loss-aversion; a person is likely to pick the riskier option if there's a chance of losing less (Kahneman and Tversky, 1979). Using a few examples below will help put some context around risk and loss aversion.

Example 1

A farmer is provided with an opportunity to receive a new product to try and has to choose one of the following options after purchasing \$1,000 of product.

- A. Enter a draw to win an additional \$1,000 of product with a 90% chance of winning, or
- B. Get another \$900 of product for sure.

In the above example, most farmers would pick option B because it's more risk-averse; they are guaranteed to have \$1,900 worth of product versus the 10% risk of having only \$1,000 even though there is a 90% chance to have \$2,000 worth. Our bias towards certainty puts greater value on particular outcomes that result in risk-averse gains.

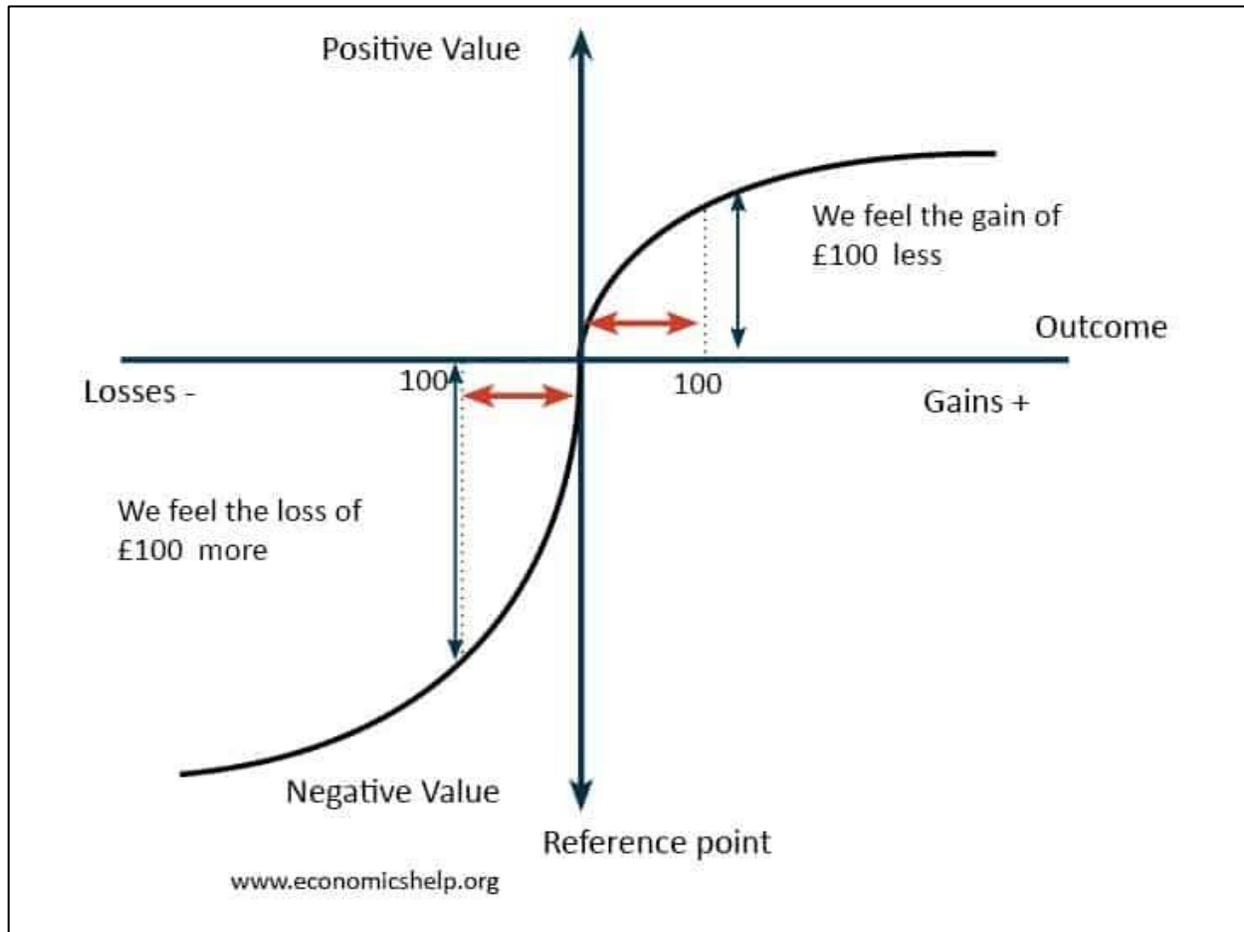
Example 2

A farmer has \$2,000 of grain to sell and is given two price options to choose from.

- 1. Sell to buyer 1 and lose \$900, or
- 2. Sell to buyer 2 and have a 90% chance of losing \$1,000.

In this example, most farmers would pick option B because it's loss-averse, there is a chance that the farmer will lose no money and gamble versus the sure loss of \$900. Our bias toward loss aversion in the situation puts greater value on minimizing our losses even if it is the riskier choice.

Figure 4 provides an excellent perspective on how Prospect Theory takes into consideration the value people put on perceived gains and losses.



Source: www.economicshelp.org

Figure 4: Prospect Theory

In Rational Choice Theory, this graph would be a linear relationship where a \$100 gain would have the same positive value as a \$100 loss would have negative value.

Fundamentally, Prospect Theory is the idea that people are more worried about losing something they already have and less worried about any potential gain of something they do not have. This leads us to decision biases and how they influence our decision-making process at times resulting in irrational decision making.

2.1.3 Decision Biases

I believe all farmers are aware they have certain biases that affect their decision making. Some farmers will only have John Deere equipment, while others believe that if you don't have black Angus cattle, you're not a real beef farmer. Our biases creep into our decision-making process every day, whether we are aware of them or not, shaping outcomes on our farm. These may be positive or negative and are further influenced by our aversion to loss or risk. It is these biases that help explain why some of our decisions may be viewed by others as irrational. Dr. Gerry Wunsch wrote an interesting article in *The Australian Cottongrower* magazine that discussed farmer decision making and identified some biases that influence farmer's decisions. She identified five biases that I believe are relevant: confirmation, availability heuristic, social proof, status quo, and overconfidence (Wunsch, 2019). I will further explain these biases and give some examples of how they can impact our decision making.

Confirmation bias is a tendency to seek out information that conforms to our existing values and beliefs. Agriculture is full of confirmation biases, and it is difficult to break the cycle as social media and internet algorithms push a constant flow of information towards us that supports these biases. As these biases become entrenched, it becomes difficult to have meaningful conversation on topics with people that may have a differing view. When making decisions, confirmation bias can result in some irrational results.

Example

Farmer A is a 3rd generation grain farmer that has been raised on a farm that uses only John Deere (JD) equipment. Farmer A is about to purchase a new tractor for the farm, so they research what they need by looking at JD information, talking to fellow JD tractor owners, and check their twitter feed (full of JD equipment fans). They determine that the right JD tractor for them costs \$275,000. The local CIH salesperson hears that Farmer A is looking for a new tractor and stops in to find out more. Following their conversation, the CIH salesperson offers to sell Farmer A, a CIH tractor with the same specs for \$250,000. Straight economics would dictate that Farmer A should buy the CIH tractor, but due to Farmer A's confirmation bias, they purchase the JD tractor instead. This decision is further influenced by the value they put on the loss of not getting the JD tractor versus the perceived financial gain if they were to purchase the CIH tractor.

Availability heuristic is the tendency to use information that is readily available to make easy decisions, a mental shortcut to speed up decision making. Availability heuristics are those "rule of thumb" or "gut" feel decisions that we make every day. A lot of times, these are based on past experiences and memories that have emotional triggers.

Example

Farmer B lately has been purchasing seed from Company A and has been happy with its performance. However, Farmer B receives a phone call from Company B, and they offer to sell

them seed at a reduced cost to Company A that performs equally. Farmer B immediately thinks back to the last time they grew seed from Company B and remembers it fell over and was horrible to harvest. Farmer B declines the offer and continues to purchase seed from Company A. Rational decision making would have Farmer B analyze the data and performance and make a decision based on economics. However, availability heuristics kicked in, and Farmer B made a decision based on the memory of a negative past experience.

Social proof (Influence) explains why people feel the need to do what others are doing and why some decisions are significantly influenced by others. There are times when a farmer is in a situation, and they are unsure about what decision to make, or if they are doing things properly, so they look to others to help influence their decision. They feel other farmers are more informed of the situation and are making the right choices. Social influence can be seen in the tendency of large groups to accept choices or practices that can be either right or wrong.

Example

Farmer C has been debating the use of cover crops in their cropping operation. They are unsure about the benefits and worried about the costs to grow them. Farmer C really would like to try some, but worried if it's the right thing to do. They have been watching several of their neighbours use cover crops over the last couple of years, and it appears that it's been improving their farms. In conversations with them, Farmer C has found out their yields have improved, and their crops are more resilient to extreme weather. Farmer C decides to grow some cover crops the following year. In this example, Farmer C was unsure what to do and leaned on the action of neighbouring farmers to help make a decision. There are many examples in agriculture (good and bad) of social influence, and one has to be careful not to get caught up in negative herd behaviour.

Status quo bias is the need and desire to have things stay as they are. We all have status quo biases where it's easier to do nothing than make a change. Work done by Kahneman and Tversky identified that people feel greater loss from bad outcomes from a new action than poor outcomes from inaction (Kahneman & Tversky, 1982). Ultimately, the perceived benefit to change is outweighed by the risk of loss as a result of the change.

Example

Farmer D has been purchasing insurance from Company A for ten years and is comfortable with the current plan. At the time of renewal, Company A offers Farmer D the option to enroll in a new plan that has better premiums and deductibles. Even though the new plan comes with financial benefits, Farmer D stays with the existing plan. In this example, Farmer D is just too comfortable with their existing plan to "risk" changing to a new plan. Farmers need to make decisions every day, and there are times when it is just easier to stick with the status quo. However, farmers need to be aware that status quo biases can make them blind to opportunities.

Overconfidence bias puts too much confidence in one's abilities or knowledge, an underlying belief that you're better than you are. People that are particularly good at something tend to be susceptible to overconfidence bias.

Example

Farmer E feels they are particularly good at marketing the farm's crops. In discussions with their banker, Farmer E states that based on market research, corn will hit \$5.00/bu before the end of the year, and they will get over \$5.00/bu for every bushel produced. However, due to Farmer E's overconfidence bias and the fact that corn never reached \$5.00/bu, the farm lost out on several good pricing opportunities. Farmers all have overconfidence biases, whether it is projected timelines or production targets, and we need to be aware of the consequences of overestimating our abilities.

2.1.4 Perceived barriers to Farmer-to-Farmer Collaborations

When looking at farmer-to-farmer collaboration through a purely economic lens, if the collaboration provides each participant with a positive outcome, there should be no resistance to the idea. That was my own thought process as I developed ideas around my Nuffield topic; rational choice theory rules the day. So why is there resistance among some farmers to collaborating and working together? Why is the most popular comment "...that will never work"? Taking some time to develop a limited understanding of behavioural economics has helped me understand some of the resistance to collaborations and how Prospect Theory and decision biases play a role. Let us go back to our example in section 2.1.1 The Rational Choice Theory. Taking the example of the bull, let us apply some ideas we have learned from Prospect Theory and decision biases.

Option A – Collaboration

Farmer A and Farmer B contribute \$5,000 each to the purchase of a \$10,000 bull with excellent genetics that will likely return \$4,000 more annually to each farmer's bottom line.

Option B – Individual

Farmer A and Farmer B purchase their own bull for \$5,000 with average genetics that will only add \$1,500 more annually to each farmer's bottom line.

There are many reasons why neither farmer would choose to participate in a collaboration.

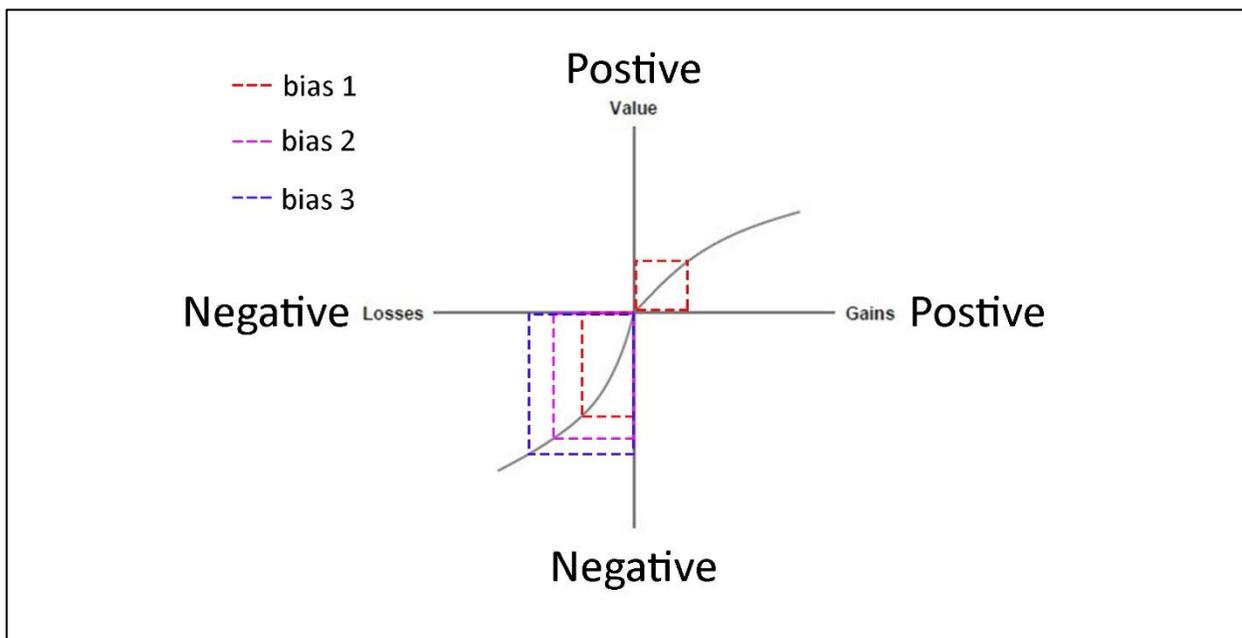
- Farmer A may want to breed the same time as Farmer B
- Farmer B is worried about herd health and disease transfer from Farmer A
- Farmer A thinks they are a better farmer and worried about the bull's health when at Farmer B's place
- Farmer A and Farmer B cannot even agree on a bull
- Farmer B is more comfortable with purchasing his own bull as they have always done

- Farmer A thinks the risk associated with change is too great for the \$2,500 annual benefit
- Farmer B had a neighbour they shared a bull with, and it did not work out

It's quite easy to come up with reasons why a collaboration wouldn't work. Looking at the different examples, it is not hard to associate some type of decision bias to them. Even though there is an economic benefit to collaborating, both farmers are reluctant to work together.

When discussing collaboration with farmers that are resistant to the idea, many of them default to some type of decision bias that impacts how they perceive the benefit of the collaboration.

Figure 5 illustrates how the combinations of decision biases can influence Prospect theory.



Source: Mark Brock

Figure 5: Impact of biases in relation to Prospect Theory

As each additional decision bias is added to the chart, the perceived losses increase, and negative value grows. This easily offsets any perceived gain and positive value from the potential collaboration. In my opinion, this is the reason I get the “...that will never work” comment when I talk about farmer to farmer collaborations. The farmer’s decision biases almost always offset any potential gain through collaborations with fear of loss.

Farmer to farmer collaborations are possible and understanding a little bit about behavioural economics helps farmers become more aware of their own decision biases toward them. Over the next few sections, I will be presenting five case studies describing various farmer to farmer collaborations. These are examples in which farmers were able to overcome their own decision biases and see the positive benefit through collaboration. It would almost seem that these farmers flip the graph around, and the gain is valued greater than any potential loss.

2.2 Case Study 1

Macquarie Settlement Pipeline Partnership (Tasmania, Australia)

This case study looks at the design and development of a privately funded irrigation scheme servicing 12,918 hectares (ha), supplying 13,000 megalitres annually (Tasmanian Irrigation Development Board, 2008). This scheme was initiated by 13 area farmers working as a formal partnership to help improve the reliability of their water supply. The Macquarie Settlement area started as dryland farming back in the 1920s and, over time, further improved productivity through the development of irrigation. At first, irrigation water was fairly reliable, but as further irrigation systems developed, it became difficult to rely on consistent water allotments resulting in inconsistent production.

In 2007/2008, these 13 farmers (19 farms) began the formal Macquarie Settlement Pipeline Partnership (MSPP) and took on the ambitious irrigation project in cooperation with other private and public businesses. The project resulted in the development of 17 kilometres of new pipeline with water purchased from Hydro Tasmania after it has been used for power generation out of Great Lake through the Lake River system (Vern Costelow, 2009). The MSPP as a private entity was able to design and develop the irrigation scheme at a significant costs saving in comparison to having it created by state-owned groups like Tasmanian Irrigation Pty Ltd. Rough numbers cited during an interview with one of the partnership members indicated they were able to complete the project for a third of the typical cost with a total project cost of \$7.5 million, of which \$5 million was directly provided from farmers.

The formal structure of the MSPP consists of 13 entities, all having one vote no matter the size of operations. For example, a 1,000 ha operation has the same influence on formal decisions as a 2,500 ha operation. In the creation of the partnership, it was important that no single farm entity had a significant influence on the scheme's operations. The MSPP has two formal committees populated by members of the partnership. A Management Committee has six members consisting of 2-year terms with 3 of the six members turning over every year at the partnership's annual general meeting. The committee is tasked with developing annual water allotments and adjusting throughout the year as required, in essence, setting the annual rules for the scheme. The Operations Committee is tasked to deliver on the plan created by the Management Committee, making sure that as farm entities request water, it is within the farm's allotment, and water is available within the system. The MSPP is governed by a constitution created during its formation and is the foundation on which the partnership was built upon.

In discussions with one of the MSPP founding members, the constitution is their "rule book," but there are some other human factors that play a role in the success and, at the time of our interview, issues within the partnership. For the MSPP to function, there is a need for trust,

integrity, respect, and loyalty among the members. Even with a formal structure in place, the interviewee felt that the MSPP's success could be put at risk in the absence of any of these personality traits. During the interview, it was mentioned that water was being removed from the system by one of its members outside the rules of the partnership. It has been difficult to prove the improper water removal as it is happening before the water meter, and no formal proof has been discovered. This has significantly impacted the amount of available water to all members of the irrigation scheme. The impact has put in question the trust and integrity among the 13 members and has highlighted that even with a formal business structure, human personality traits can have a considerable impact on the success of a collaboration.

2.3 Case Study 2

Camden Group (Dunsandel, New Zealand)

Camden Group is a collection of dairy and dairy support operations in New Zealand's South Island. It is made up of 5 dairy farms, 2 grazing farms, a management company, and a contracting business providing field crop production services. In total, the Camden Group manages 6,500 cows supported by 2,800 hectares of land and with the help of 40 full-time staff. Camden Group started in 1994 with the formation of Camden Dairy Farms Ltd. and its purchase and development of a 500 cow dairy operation. In my interview with Lee Donkers (Co-founder), he described the process involved in developing a New Zealand dairy operation in the early '90s. Lee explained that they would purchase existing sheep farms and go about a "greenfield" conversion, which consists of removing everything within the existing land base.



Irrigation pivot in Tasmania – photo by Mark Brock

This would include livestock buildings and fencing along with any hedges or trees. This gave them a blank slate to build and develop the new dairy operation. Development included adding irrigation to the farm that brought feed production levels from 5MT per hectare to 20MT.

Growth continued through the years with the addition of further dryland farms, some of which were converted to dairy operations.

The growth experienced by the Camden Group over the last 15 years can be attributed to excellent business sense, but Lee Donkers would insist it's because of good people. He described "The Camden Way" and how people are so important to success.

We don't take our commitments lightly

We're dedicated to doing the right thing, and we take great strides to foster trusting relationships between our employees, our suppliers and our planet.

People/Community

Support, collaborate, grow, pay it forward and repeat.

- We provide our employees with a safe and supportive working environment.
- We're respectful, honest and open with them and will recognize and encourage their personal development and goals.
- We want to be recognized as a preferred employer by the farming industry.
- We're positive and supportive of the communities in which we live.



Source: Camden Group website <https://camdengroup.co.nz/about/camden-way/>
A pasture-based dairy operation in New Zealand – photo by Mark Brock

It is these values that create a willingness to collaborate with people, businesses and communities. Lee feels that all staff members believe and uphold these values. He further explains that the ownership team is committed to finding the right spot for employees within their various operations.

Within the Camden Group, there have been a few dairy joint ventures, where Camden Group helped provide equity for current employees to form a 50/50 sharemilking arrangement. A 50/50 sharemilker arrangement in New Zealand usually consists of a farmer owner providing

land and milking facilitates in exchange for 50% of the milk income produced. The sharemilker, in turn, supplies the cowherd, labour, and feed (grown on the provided land) for the remaining 50%.

Terimicow Holdings Ltd.

The first joint venture for the Camden Group started in 2008 with two existing employees that sharemilked 650 cows on a farm at Bankside. In 2011, Terimicow Holdings relocated to Te Pirita and had increased the herd size to 1040 milking cows.

Alto Holdings Ltd.

In 2009 this joint venture was created between Camden Group and employees Tony and Anna Wakelin to start a 50/50 sharemilking arrangement with a local farm owner. Three years later, as their herd size grew, they moved to a new dairy conversion milking 1330 cows. In 2019, Camden Group and the Wakelin's took their relationship to the next level and co-purchased Kohika Downs, a 501 hectare dryland farm milking 1100 cows.

Camden Group also owns a portion of Te Pirita Enterprises, a contracting company that provides various fieldwork services, including cultivation and seeding. This joint venture is a way farmers can reduce their capital cost on equipment and still know the work will be completed by the contracting company. The success of this collaboration has resulted in the expansion of fieldwork beyond the members of the joint venture.

In discussions with Lee, it is easy to see the value Camden Group puts on good people and the value that good people can bring to an organization. There is a commitment within the organization to help those employees that help themselves. If an employee shows drive and desire to grow within the business, Camden Group will invest in them and look for opportunities for those individuals within the organization or beyond. In the above dairy examples, these opportunities have been in the form of joint ventures or co-ownership. Camden Group's path to growth has taken both traditional and non-traditional paths. Most farm operations would be disappointed with the potential of losing a valued employee looking to leave to start their own farm operations. However, Camden Group sees these as opportunities to grow their own farm business and help a valued employee fulfill their dreams of farm ownership. In our interview, Lee likes this model of co-ownership/joint venture because everyone involved has "skin in the game" and recognizes that collaborations have been effective tools to grow Camden Group.

2.4 Case Study 3

Bulla Burra (Alawoona/Loxton, South Australia)

Bulla Burra is a well-known farming collaboration in South Australia that is a collection of two farm families. What is interesting is that the two principals in the operation, John Gladigua and Robin Schaefer, are both Nuffield Scholars. This farm collaboration was fueled by John's own Nuffield topic back in 2007, "Collaborate to survive and thrive". Each operation individually was farming 2000 hectares with older equipment and struggled to justify the capital cost of newer, more technologically advanced equipment. Add in the risk of weather and access to human capital, and it was difficult for either farm to expand without significant financial threat. In 2009, deciding it would be better together, John and Robin formed Bulla Burra by combining each of their 2000 hectares and adding 4000 leased hectares.



A field in Alawoona suffering from the extended drought in South Australia – photo by Mark Brock

More recently, Bulla Burra is cropping 11,000 hectares of arable land divided into two units, 5,500 hectares at Alawoona where John is located and 5,500 hectares at Robin's near Loxton. The crop mix typically consists of cereals, legumes, and canola. From an operations perspective, Robin is responsible for the production decisions, while John is responsible for business decisions. At the time of my interview with John, Bulla Burra had been experiencing three years of drought conditions with little to no rainfall. To put things in perspective, their annual precipitation in 2019 was 137.2mm of rain when typically, it is 286.3mm (Australian government, 2020).

In building their collaboration, John and Robin took sufficient time to work through the thought process and structure required for effective collaboration. Much like the Macquarie Settlement Pipeline Partnership, Bulla Burra has a formal structure that includes a board of directors and a governance agreement known as the “Rule” book. What is interesting is that the board of directors is chaired by an independent person not invested in the farm operation. John and Robin believe an independent chair has less biases and challenges them to make better business decisions.

In discussing the farming collaboration, John provided some insight into the many benefits it brought to both farm families, with the largest being economies of scale. The ability to spread capital costs across a much larger number of acres had the following results:

- Enable the farm to purchase modern technologically advanced equipment
- Modern equipment enables them to tailor applications to individual crops (e.g. variable seed and fertilizer rates) based on productivity
- The ability to better align crop cost of production based on crop potential
- Better purchasing power on farm inputs and equipment

However, beyond the pure economics of the collaboration, there has been significant personal and professional development. John states that the need for proper business structures and systems has forced them to become more professional in their approach to business. It has also improved their communication skills within the business but also in their personal lives.

John has been a proponent of farm collaboration since completing the Bulla Burra amalgamation and is involved in Collaborative Farming Australia (CFA). This company helps farmers interested in collaborative farming ventures develop the structure and tools needed for success. Here is the company's vision concerning farm collaborations.

“CFA believes it can bring collaborative business solutions to farming enterprises which will increase profitability and sustainability. This can be achieved while maintaining the integrity and heritage of the family farm.

At its core are the development of efficiency cells, and the implementation of a professional business structure with an emphasis on accountability and transparency.” (Collaborative Farming Australia, n.d.)

In my interview, John highlighted several characteristics that make up a successful collaboration, but the most important is the people. John expressed directly to me, “If you get the people right, the economics look after themselves”. He stated that too many farmers look at collaborations strictly through an economic lens and forget the impact people's emotions can have on relationships. John states that people’s emotions and values are the biggest barriers to farm collaboration.

2.5 Case Study 4

Cotton Growers (Emerald, Queensland, Australia)

I had the pleasure of spending a couple of days in Emerald, where I had many discussions with area cotton growers. These conversations resonated with me as they highlighted examples of collaborations through knowledge sharing. This area, known as the Central Highlands, is the most northern valley where cotton is grown in Australia. In the 2019-2020 growing season, the area grew 6,020 hectares and produced an estimated 65,000 bales of cotton (Cotton Australia, 2020). A bale of cotton by Australian standards weighs 227 kilograms made up of 50% cottonseed, 40% cotton fibre, and the remaining 10% as trash from the cotton plant. To put things in perspective, this area in 2019-2020 represented only 2% of the cotton hectares grown in Australia.



Harvested cotton field near Emerald, QLD – photo by Mark Brock

This isolated and small growing area has created an environment among cotton growers that's very collaborative and has led to the development of small grower groups focused on cotton production challenges. I have highlighted three interviews that reflect the need to collaborate and how these are best-structured to drive success.

Interview 1: Cam Geddes

In my interview with Cam, right off the start, he made the statement “collaboration is necessary”. With the challenges of growing cotton in the area, Cam believes that farmers need to work together to overcome these obstacles. We spent a lot of time discussing the key elements for collaborative learning and knowledge sharing environments. Much like John Gladigua, Cam feels it is as much about the people as it is the knowledge exchange. In general,

Cam feels that if a knowledge sharing peer-group is created with some awareness around these traits, great things can happen. He also believes it will help “weed out” those participants with self-serving interests in mind. To put some context around these statements, I have listed some personality traits that Cam identified.

- Positive mindset and attitude
- Open to failures
- Thought leaders
- Open-minded
- Willingness to share
- Good communication skills
- Innovative
- Understanding

Interview 2: Graham Volck

In my discussion with Graham, he also highlighted the need for farms to collaborate. He felt that through collaborations, area cotton farms were able to accelerate and improve their growing practice, helping offset some of the societal pressures around water use. He also believes that broader thoughts and ideas in peer-group settings can help counteract individual confirmation biases. The bulk of our conversation focused on peer-group structure. From past experience, he highlighted some of the important structural elements along with the need to conduct proper meetings. Here are some of Graham’s thoughts around peer-groups and how they should function.

- Limit participant numbers (10 maximum)
- Determine a goal or desired outcome
- Need facilitator or meeting Chair
- Meeting agenda
- Have a predetermined meeting time limit
- Give it a time limit (3 years) and reassess its value

Interview 3: Neek Morawitz

My conversation with Neek highlighted the value of farmer to farmer collaboration, especially in the Australian cotton industry. We spent a great deal of time discussing how cotton farms have improved and the role best management practices and peer to peer learning have played. Cotton production has faced significant consumer pressures around pesticide use and, most recently, around water usage. As a collective, farmers realized that they need to improve their practices to remain a viable and sustainable industry. Australian cotton growers, in partnership with scientists, industry, and government, developed a science-based guideline of best management practices (BMPs). These BMPs are the effort to self-regulate the industry and increase the adoption of improved and sustainable production practices. Neek sees that through peer to peer learning, these practices have had significant acceptance and area farmers are “lifting their game” meeting or surpassing the minimum BMP requirements. He feels producers look at BMPs more as a marketing opportunity than that of compliance. Furthermore, Neek thinks this learning experience in cotton has created a “sharing environment” for other crops within the region.

2.5 Case Study 5

Stirling to Coast Farmers Inc. (Albany, Western Australia)

Stirling to Coast Farmers (SCF) is a not-for-profit grower group with over 200 members representing 83 farming businesses and 350,000 hectares of farmland. It covers a 100-kilometre radius around the Albany Port located on the south coast of Western Australia. It was formed in 2008, focusing on sustainably improving farm productivity, concentrating in 5 main areas.

- Soil Constraints
- Weed, Pest and Disease Management
- Rotations/systems
- Plant Breeding
- Extension

Source: Stirling to Coast Farmers' website <https://www.scfarmers.org.au/about-1>

The impetus for SCF's formation was driven by the desire for more localized research and extension that reflected the area's higher rainfall and geography. Areas farmers felt that research data and production practices from the larger (and drier) wheat belt did not align well with their experiences. A Stirling to Coast Farmers membership today costs 350 Australian dollars and gives members access to SCF research, agronomic, and livestock information. SCF, over time, has been able to build greater capacity and today has eight staff members. Its strong collaborative approach has attracted industry partners to contribute funding towards relevant research projects. In 2019, Stirling to Coast Farmers took a significant step forward and established the WA Producers' Co-operative (WAPC). This co-operative is a logistics and distribution enterprise focused on beef, sheep, and grain. WAPC creates value by combining individuals' commodities and developing a local brand and selling into new, high-value markets.

In my interview with Nathan Dovey, Stirling to Coast Farmers CEO, we discussed some of SCF's reasons for success and some of the challenges it still faces. Their formal structure includes a board of directors, a constitution, and working committees. Furthermore, they have a strategic 3-year plan that was just recently reviewed in 2019. Nathan believes all this helps bring credibility to the organization and attracts high calibre employees. This structure also allows them to access project funding through the Grain Research and Development Corporation (GRDC) Western panel as well as Meat and Livestock Australia (MLA).

As mentioned before, Nathan feels that the professionalism of SCF allows them to attract funding from corporations, especially for projects difficult to fund through GRDC or MLA. One of the biggest advantages to the growers is "de-risking" new systems. SCF can do research on a large scale across many farms to determine the validity of a new production practice or system. Historically much of this research would be done in a few localized regions in small area plots.

Now, SCF using its member network, can conduct research trials in several areas at field scale. Nathan commented that farmers appreciate the larger-scale trials and demo projects as they put more value in those outcomes than that of small research trials. As for challenges, the biggest is funding research projects. Like most organizations, SCF gets caught up in funding cycles and money availability. Whether it is a function of government money issued through GRDC and MLA or corporate budgetary constraints, Nathan mentions that funding challenges will always exist but as an organization, its important to focus on projects relevant to its members and not do projects just for the sake of money.

Overall, Stirling to Coast Farmers is a great example of a large farmer to farmer collaboration focusing on the betterment of all farms in the Great Southern region of Western Australia.



Sheep grazing crop stubble in Western Australia – photo by Mark Brock

2.6 General Observations

Throughout my Nuffield travels, I have had many formal and informal conversations. These ranged from farmer collaborations to the importance of continuing one's education. It is difficult to summarize these conversations, but it's important to highlight some key takeaways.

2.6.1 Australia

Australia, as a country, has many similarities to Canada, specifically the country's diverse range of agriculture commodities and the necessity to export products to global trade partners. One stark difference, though, is Australia's isolation from the rest of the world. I had the pleasure of visiting several Australian states helping me understand a little more about Australian agriculture and their farmers. This may be a broad statement, but the general feeling I got from conversations with farmers is that they view the world as their competitor and not so much their neighbour. This attitude lends itself nicely to collaborations as they are more likely to work together to benefit all farm operations.

A great example is the Esperance area in Western Australia. I spent two days in this farming area made up of some very large farm operations. In talking with area farmers, it was quite obvious it's a very collaborative community. Area farmers attribute it to the isolation (713km from Perth) and the need to rely on each other. Furthermore, the area is newer to agricultural production, with significant land clearing and farm expansion starting in the 1940s. The soil in this region is quite difficult to manage, and a lot of work to date has been focused on soil remediation. Farmers are learning from each other on what methods work best to improve the productivity of the soils. Using Nathan's Dovey phase, these farmers are de-risking the learning process by sharing their experience with other farmers to improve the Esperance area's productivity.

Unlike Canadian farmers, Australian farmers have no direct government financial support programs. Australia's approach to farm support has been in the areas of research and export markets. I believe that Australia's lack of "individual" support programs like crop insurance helps promote an environment more open to collaborations. Without the financial "backstop" of support programs, Australian farmers are managing risk through knowledge sharing and collaboration. The Stirling to Coast Farmers case study mentioned previously is just one example of farmers working together to access government research funding on topics specific to the area's production challenges. An individual farm operation will never have the critical mass to access government research dollars and that therefore lends to the "better together" approach.

Lastly, Australian agriculture does an excellent job benchmarking both production and financial data. Australian farmers have access to a broad network of business consultancies that help them focus on improving farm business management skills. I was impressed by how many farms utilize farm business consultants and participate in benchmarking. Benchmarking results

can be aggregated among geographies and/or enterprises. This sharing of data helps farmers measure their performance and highlight areas that may need improvement or areas of success. I met several farmers that go a step further and form peer groups and share individual financial data, all in the effort to improve their businesses.

Australian agriculture is not without its challenges, but overall, the collaborative spirit is alive and well and is among one of its great strengths.

2.6.2 New Zealand

Sadly, due to the coronavirus, my time in New Zealand was cut short by a couple of weeks. The time I did spend meeting with farmers and industry representatives helped provide some insights on collaborations within New Zealand agriculture. Much like Australia and Canada, New Zealand is an agricultural export nation with dairy products being the lead agricultural export. Similar to Australia, New Zealand's lack of government subsidies pushed farmers to work together collaboratively to manage risk.

With the significant reliance on dairy product exports, farmers looked for ways to manage this dependence on trade. Most New Zealand dairy farmers use a co-operative business model for on-farm milk sales and exporting dairy products. Agricultural co-operatives are private business organizations that are owned and controlled by farmers that buy products from or sell products to the co-operative. For New Zealand dairy farmers, the ability to aggregate dairy products within a co-operative structure allows them a critical mass for better export price discovery and profit along all steps of the value chain. These co-operatives have played a significant role in the growth of New Zealand's dairy industry and include companies like Tatua Cooperative Dairy Company Ltd. and the well-known Fonterra Cooperative Group.

Generally, much like Australia, isolation from trade partners and lack of direct government farm subsidies create an environment of cooperation among New Zealand farmers.

2.6.3 Canada

Canada's farm business environment is quite different than that of Australia and New Zealand. As stated before, there are similarities in geography, products produced, and the need to export. However, I would generalize Canadian agriculture as more individualistic, especially at the producer level. During my involvement in farm organizations and industry groups, I witnessed all too often one group throwing another one "under the bus" in an attempt to get ahead. There are farmer to farmer collaborations happening in Canada, but more often than not, Canadian farmers prefer the individual approach. I would describe agriculture in the United States of America (USA) similarly and note that Canada's close relationship with the USA has a significant influence on Canadian agriculture. I believe this individualism plays a role in why I got the "...that will never work" response to my question about collaborations. I have asked myself why and have come up with a few thoughts.

Government Support Programs

I question if our government support programs potentially influence our need to collaborate as farmers. The current suite of support programs (AgriInsurance, AgriStability, and AgriInvest) are designed with the individual producer or farm in mind. For example, a farm uses AgriInsurance (better known as crop insurance) to protect their crop due to weather-related crop failure. The cost of the program is funded 60% by Governments (Federal, Provincial, and Territories) and 40% by producers through their annual insurance premiums. In Ontario, this program uses the farm's 10-year historical yield for each crop insured and determines a premium based on coverage level. It is a program designed so any farm can participate but is very individual focused on cost and outcomes.

AgriStability and AgriInvest have the same individualist approach. AgriStability is Canada's income support program that is designed to help farmers when income falls below 70%. The program uses a participating farm's financial data to calculate (using program parameters) the potential for a support payment. This is an overly simplistic explanation to the program, but much like AgriInsurance, it is very individual-based.

Unlike Australian and New Zealand farmers, Canadian farmers have access to government support programs that help manage some of the risks experienced on farms. I ask the question, does this lower exposure to risk offset the need for Canadian farmers to collaborate and therefore re-enforcing individualism? Furthermore, I wonder if Australian and New Zealand farmers collaborate more to manage risk because they do not have access to similar programs. It is not my intent to criticize our Canadian support programs but merely highlight the potential unattended consequence they may have on farmer collaborations.

Business Skills Development

After travelling through Australia and New Zealand, it became evident that Canada lacks capacity in agricultural business consultancies. There is significant financial and production benchmarking in these countries done by private companies that drive improvement. In conversations with various Canadian farmers and industry people, there seems to be a lack of these same services in Canada. Our focus on financial reporting on Canadian farms seems more focussed on tax filing and banking requirements than that of farm financial management.

This current Canadian model does not prioritize financial ratios, making it challenging to measure improvements in individual farm businesses. However, BDO Canada has started doing work benchmarking farm financial data using their client's information. This was done in collaboration with Agrifood Management Excellence (AME) in an effort to standardized farm financial statements (BDO Canada, n.d.). As Canadian farmers, if we had this information and understand its relevance, would it create the curiosity for change? Could this change lead to peer groups or other forms of collaboration? Is there an opportunity for business consulting,

coaching, or training? If there was a greater emphasis on the business side of farming, how reliant would we be on additional government support programs?

3.0 CONCLUSIONS

3.1 The “why”

Before any farmer to farmer collaboration, there needs to be a “why”. This “why” may be a common problem or goal shared among a group of farmers. In all my discussions, every person identified the need for purpose. A collaboration without intent struggles to bring value to the participants and ultimately fails. Based on my studies, it is my opinion, the stronger the “why,” the greater willingness to collaborate. Reflecting to case studies presented earlier in this paper, it is easy to identify each collaboration’s “why”. These “whys” brought farmers together, looking for a better way than the existing “status quo” :

- Macquarie Settlement Pipeline Partnership – the need to access more irrigation water
- Camden Group – to better manage growth and retain valued people
- Bulla Burra – to increase economies of scale and remain viable
- Cotton Industry – overcome production challenges specific to the area
- Stirling to Coast Farmers – conduct meaningful research relevant to area farms

Beyond a “why”, collaborations need formal structure and consideration for the “human” element. In the many interviews I conducted, I began to see key elements in the design of successful farmer to farmer collaborations. These design elements are split into two categories, Human and Structure. The human elements are defined as those personality traits and characteristics that make a person more willing to collaborate. Structure, on the other hand, focuses on the key features of good collaboration design. The next portion of the report will focus on each category and its key components.

3.2 The Human Element

I have highlighted eight human characteristics that help identify if a person would be a good fit for a collaboration. These elements came up consistently in my interviews, and all have significant importance.

3.2.1 Trust

Collaborations have to be built on trust; without it, it’s doomed to fail. Individuals within a collaboration need to feel trust and that members will act in good faith. Some collaborations can be more complex than others, and, in my research, there appears a direct correlation to the level of trust required. The Macquarie Settlement Pipeline Partnership highlights the impact lack of trust can have on collaboration. Furthermore, peer groups that share financial data need to feel that information share will not be disclosed outside the membership.

3.2.2 Like-Minded

In interviews, like-minded people were described as individuals who share a common vision or approach. I think it is important that people within collaborations have similar values and shared vision. In conversation with people, it was surprising to discover how easy collaborations can be derailed by different attitudes to tasks or challenges. John Galdigau used a great example as we discussed different approaches to collaborations. He described two farmers that were thinking of selling both their combines and purchasing one together. John recommended they use one farmer's combine and do a trial run at harvest. In the end, both farmers agreed the collaboration would not work because their attitudes toward equipment maintenance were completely opposite.

3.2.3 Innovative

An innovative person can be described as someone who looks to experiment or discover new ways of doing things. In essence, these people are not happy with the "status quo". In my interviews, people commented that collaborations are just an innovative way to address current issues or challenges. People within collaborations need to be constantly looking for different paths or solutions to achieve positive outcomes. Camden Group exemplified this by addressing two issues at the same time, by forging a path forward while creating opportunities through joint ventures.

3.2.4 Positive Mindset

"[P]ositive thinking actually means approaching life's challenges with a positive outlook. It does not necessarily mean avoiding or ignoring the bad things; instead, it involves making the most of the potentially bad situations, trying to see the best in other people, and viewing yourself and your abilities in a positive light." (Ackerman, 2020). This characteristic was witnessed in many of the collaborations.

3.2.5 Curious

Curiosity is the spark that asks the question "why". In my interview with Dr. Larry Martin, he identified it as the trait that pushes people to the next step. Curiosity is the backbone of why people would even consider a change or feel the need for one. All collaborations begin with a common curiosity.

3.2.6 Open-Minded

A person entering a collaboration with a solution already in mind will leave frustrated. One must be open-minded and be willing to consider other member's ideas and opinions. Looking at the small cotton grower groups in Emerald Australia, their success could have been negatively impacted if members were not open to new ideas or figured they already had the solution.

3.2.7 Openness

In any type of collaboration, one must be willing to share. A person cannot enter a collaboration expecting to reap all the benefits from working together without contributing. Looking at many different types of peer groups, it is this sharing environment that brings significant value to back its members.

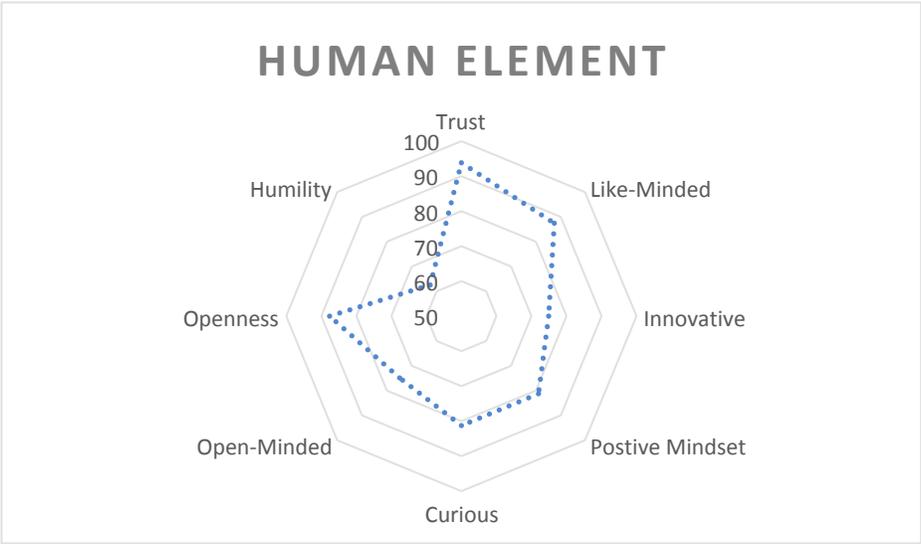
3.2.8 Humility

When entering into a collaboration, it was observed that one must enter humbly, which means a modest view of their importance. If you hold yourself in high regard within a collaboration, this can lead to resentment and, ultimately, failure. It may leave the person feeling that they add more value than what they perceive they get back in return.

3.2.9 Conclusions

The above eight human elements represent the majority of those identified during my interviews, and it by no means represents a complete list. Individuals or groups will place different values on these traits or others as they look at different forms of collaboration.

Upon the conclusion of my interviews, I went back through my notes and “informally” logged when an interviewee identified one of these human elements. The results are not scientific, but help represent which ones are more popular. The graph below (Figure 6) visually depicts the outcome of this exercise. The higher the number, the more popular the human trait.



Source: Mark Brock
Figure 6: Human Element

3.3 Structural Elements

In my interviews, it became obvious that collaborations need formality. In the case of some collaborations, this may be a formal business structure or simply a meeting agenda. It is important not to overcomplicate a collaboration, but it's critical to understand the need for some type of structure to its design. Below are some elements that surfaced during my studies.

3.3.1 Group Size

The ideal size of a group depends on the type of collaboration. For example, many I interviewed said that peer groups should not go over ten people. Their reasoning is to create an intimate environment that addresses the complexities of different personality types. Introverted people are more likely to share in these smaller groups. On the other hand, sometimes a larger group is needed for critical mass. The Sterling to Coast Farmers group is a great example where size is needed for attracting research dollars but can be limiting for group participation. In deciding on collaboration, one needs to be cognizant of group size and its impact on peer to peer interaction.

3.3.2 Safe Environment

To create a safe environment for collaboration it may help to include a charter or a partnership agreement. There must be a level of comfort for all involved. Providing a safe environment will lead to greater trust. For example, a peer group may use a non-disclosure agreement to create a safe place to share (i.e. Financial data). Other collaborations may require legal documents to protect participants.

3.3.3 Diversity

As Dr. Larry Martin states, "you can't have six carbon copies of yourself for darn sakes". Diversity brings value to any group as each person brings their own unique skill or experience to the table. It can also fill gaps where individual weaknesses are recognized but joined with others who may excel in that certain area. It leads to improved personal development, as there is the added benefit of mentorship within the group.

3.3.4 Leadership

Like any organization or group, there needs to be some level of leadership. Sometimes it goes unspoken in a small group but should be recognized. Even in a partnership, lead roles should be decided. In the Bulla Burra example, they had to decide who would lead in specific areas of the collaboration. In a larger setting, there needs to be a board of governance with an elected or appointed chair. Without formal leadership, a group can become vulnerable to complacency or lack of accountability.

3.3.5 Exit Plan

Ensure there is an exit plan to deal with any unforeseen complications. This needs to be a formality, no matter the collaboration or size of the group. A good exit plan also adds to a safe environment when deciding to join, knowing the rules on exiting if it ends up not being a good fit.

3.3.6 Accountability

Accountability is having something in place to ensure members of the group do as they say. Good leadership or a facilitator helps add accountability to any group collaborating. By having formal measures in place, it helps identify weaknesses that can be addressed.

3.3.7 Facilitator

A facilitator may be needed depending on the type of collaboration. This is more relative to a peer group style where there is not a board of governance to run the actual meeting. A facilitator will keep a group on task and help develop an agenda. Facilitators could potentially be used in larger groups as an unbiased resource to draw information out of the group. It could be especially beneficial to groups struggling with direction.

3.3.8 Relevance

Relevance is the “gut check” you have to feel to know you are going in the right direction. It is having a formal process scheduled to ensure people within the collaboration are happy with the status currently and comfortable with the future direction. This is the time where, as a group, they need to adapt to future changes or conclude the collaboration. In one of the Cotton Growing peer groups, there was a set date to evaluate the collaboration (three years), and if it proved not relevant or accomplished the intended goal, the group would disband.

3.3.9 Conclusions

It is important to reiterate that structure is essential to every collaboration, and the need for it was identified in every single interview. The above eight components help build a level of professionalism and formality to a collaboration, giving it a solid foundation for success. This is not a comprehensive list, but much like the human elements, they were easily identifiable from my interview notes. Depending on the type of collaborations, some may be more relatable than others. I graphed these design features (Figure 7) in the same pretext as the human elements (the higher number being more popular).



Source: Mark Brock
Figure 7: Structure

3.4 Final Thoughts

While highlighting these critical design elements of collaborations, it became apparent that everyone must begin with a “why”. There has to be an ignition to create curiosity outside the status quo that one feels there is an opportunity. Before collaborations even start, each individual must first be aware of their own decision biases. These biases can significantly impact how you perceive a potential collaboration. Our biases cause us to make quick, emotional decisions that may influence us to view collaboration negatively. However, by taking the time and understanding these biases allows us to better see the potential of a collaboration. I will always remember John Gladigau’s comment, “If you get the people part right, the economics looks after itself”.

4.0 RECOMMENDATIONS

The recommendations within this report offer suggestions to help a person or group understand if a collaboration is right for them (assuming there is a common “why”). Additionally, these recommendations will identify the minimal structural requirements for a strong foundation and positive outcome. The report will recognize the role consultancies and government can take regarding farm business management.

4.1 Fear

Don’t be afraid to try something new. There have been many farmer to farmer collaborations; some have failed while others have succeeded. If something has sparked an interest in creating a collaboration, do some investigating and look for like-minded people that have a common “why”. Most collaborations fail because people get excited and rush in without regard to personalities or proper structure. This can ultimately lead to resentment and negativity toward

any future collaborations. By taking the time and doing some due diligence in collaboration design, mistakes can be avoided and put you on a path to success. Start small, experiment, adapt, change, fail, it's all part of learning.

4.2 People

As highlighted throughout this report, human decision making, biases, and emotions can have a significant influence on attitudes towards and within collaborations. Listed below are four recommendations.

1. Be aware of your biases' impact on decision making and attitude
2. Take time to understand each individual's personality types.
 - a. This is more important for smaller groups or more formal business structures (i.e. Joint Venture)
 - b. It may be helpful to conduct a personality test (i.e. Myers Briggs)
 - c. These processes may benefit from the use of a facilitator
3. Refer to the eight Human Elements named in the conclusions ([#the human element](#)) and identify which trait(s) are important to the collaboration.
 - a. A peer group sharing financial data may highly value "Trust" and "Openness"
 - b. Two farmers sharing equipment may value "Like-Minded" and "Trust"
 - c. There may be many traits beyond the eight listed, but the intent is to be cognizant of the "human factor"
4. Conduct a trial run and determine compatibility
 - a. This is true for a collaboration of two people or two hundred
 - b. It's better to determine this early in the process

4.3 Structure and Design

I can not reiterate enough how important structure is for a collaboration. It can be simple or complex, but I believe it holds members accountable and raises the level of professionalism within the group. Listed below are various recommendations.

1. Determine what type of collaboration will help accomplish the goals of the group.
 - a. Develop goals or objectives
 - b. All collaborations need to develop Key Performance Indicators to measure success against determined group goals.
2. Formalize the structure through documentation.
 - a. Peer group: this would be a charter
 - b. Business: legal documentation
 - c. Organization: terms of reference
3. Identify leadership.
 - a. Peer group: facilitator and group leader
 - b. Business: governance board, leadership titles (i.e. CEO, CFO)

- c. Organization: leadership title (i.e. chair, co-chair)
- 4. Schedule annual evaluations.
 - a. Relevance
 - b. A change of people in the group (impact on group dynamics)
 - c. Evaluate the effectiveness of the group using identified KPIs
- 5. Formalize an exit plan.
- 6. Develop habits for effective meetings.
 - a. Meeting agenda
 - b. Scheduled
 - c. Leadership (i.e. Meeting chair)

4.4 Farm Business Management

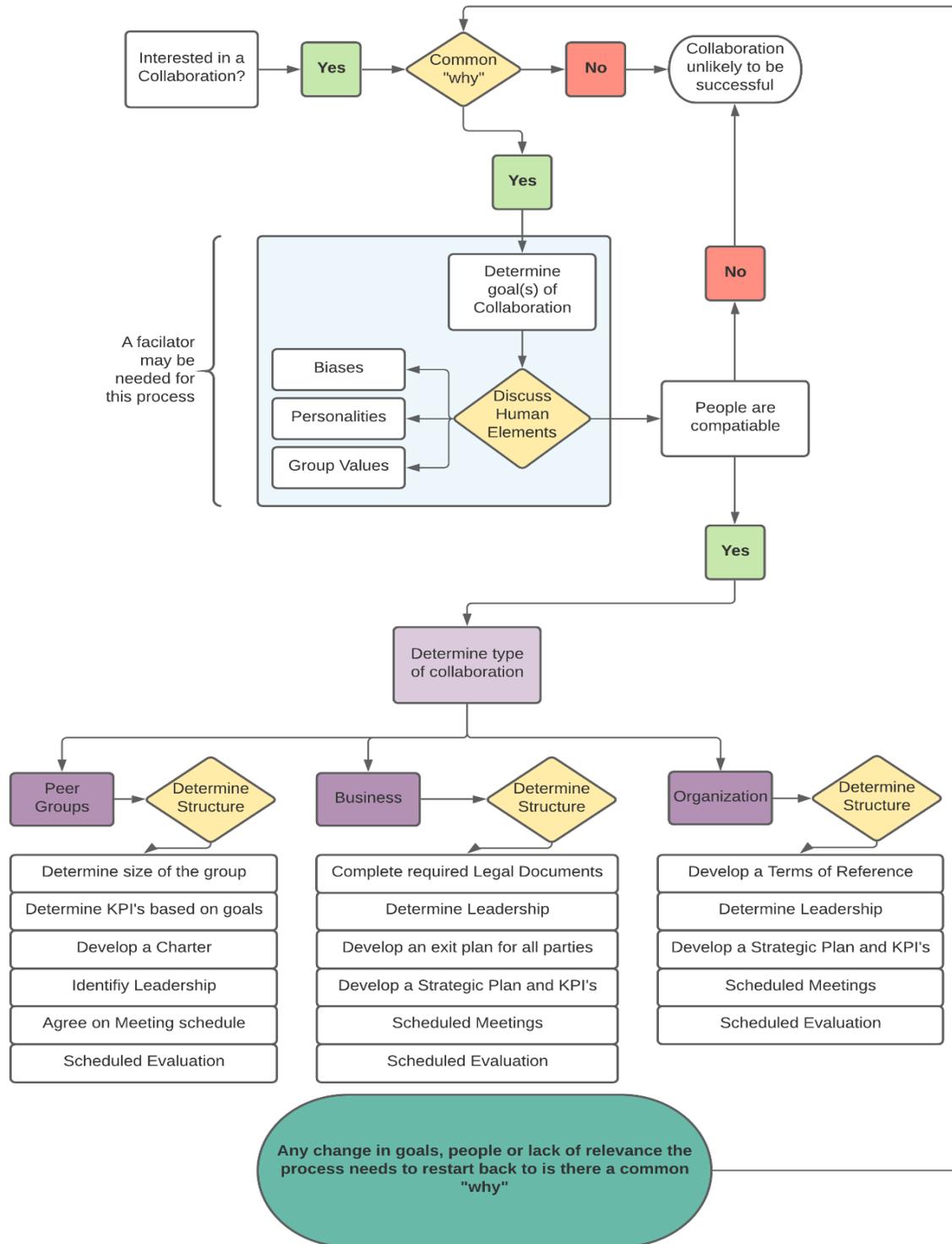
In farming, we do an excellent job learning new and exciting things, but arguably these are always production-related. It seems most grower meetings or conferences are dominated by agronomic or livestock information with little focus on business or business management. If we can encourage farmers to improve their business skills, it may create a spark that leads to collaboration. The list below is a few recommendations.

1. Create greater opportunities for farmers to improve their business skills.
 - a. This could be done regional, provincially, or nationally through producer organizations or accounting firms
2. Create greater recognition of available resources and professionals for business coaching.
 - a. Farm Management Canada's website has some excellent resources
<https://www.fmc-gac.com/>
 - b. CTEAM (Canadian Total Excellence in Agricultural Management) is a business course offered by Agri-Food Management Excellence
<https://www.agrifoodtraining.com/for-producers-cteam>
3. Greater adoption of standardized financial benchmarking and ratios.

4.5 Government's Role

Most farmers would prefer to limit the government's involvement within their business; however, I do think there is an opportunity. Through the Canadian Agricultural Partnership (CAP), there seems to be less access to cost-sharing funding for business management development for farmers. It's my recommendation that this type of support should be reinstated and further supported. If government funding helped to equip farmers with business management skills through cost-sharing programs, there might be less pressure on-farm support programming.

5.0 APPENDIX



Source: Mark Brock

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