The Role of Farmer Collaboration in Creating Supply Solutions

A report for



By Ben Ranford

2008 Nuffield Scholar

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Foreword



Farmers find themselves in an exciting age of opportunities. Demand for agricultural output has never been greater and must continue to rise. In addition to currently feeding nearly 7 billion people agriculture is also a source of fibre, pharmaceuticals and increasingly bio- energy. Agriculture may have a leading role to play in sequestering carbon and providing environmental solutions for air, water and land. However, farmers will not automatically benefit from increased global demand for all its products and services.

Consolidation of agriculturally based supply chain players makes individual farm businesses very small by comparison. Farmers are often deficient in skills and scale to negotiate reasonable trading terms. When dealing with commodities, the market will always be the market and it is difficult to affect price. As farmers we focus on issues including risk, costs and profit margins for our production systems because efficiency and productivity will be the basis for success in supplying commodities. The supply chain adds value to our produce but it also adds costs. It is in farmer's interests to understand their current arrangements and identify the extra value which can be extracted from developing their supplier capabilities beyond the farm gate.

Farmer collaboration is a proven strategy to build supply capacity and capability. A detailed understanding of the status quo is the basis on which farmers can make judgements about existing supply chain arrangements and identify opportunities to add value. The scale and supply profile created by aggregating production is a sound basis for building relationships with current and potential supply chain partners.

Personal reflection

From the time I applied for a Nuffield scholarship I was told that it would be a life changing experience. I never doubted that but I couldn't anticipate how the people I would meet and the places I visited in a year could reshape my world. From the halls of power in Washington DC to minefields in Cambodia, observing the "nouveau riche" in glitzy Kiev and sharing meals with farmers in rural India, it was a journey filled with contrast and inequity.

The glorious hospitality shown by Nuffield scholars across the UK and France provided a cultural insight and real perspective on how short our white Australian history is as I took in picturesque countryside, medieval castles, Gothic cathedrals and Roman ruins. Savouring fine local food and wine, including snails and frogs legs, I appreciated the French connection with the finer things in life. Competing in a French triathlon gave real perspective on how unfit Nuffield travels had made me!



A few of the 260 tractors currently operating at Stamoules farms. San Joaquin Valley, California USA

I saw magnificent crops and farming excellence, I was overwhelmed by the scale of production in Californian horticulture and the Bountiful productivity that is far from realising its full potential in Brazil.

I was also horrified at the destruction of lives and resources caused by politics, poverty and ignorance. I witnessed sad examples of environmental damage caused by a lack of regulations and farmer education. A region of irrigated rice in Cambodia brought food security to drought prone fields but not without consequences. Water diverted from a river is used for drinking and washing in villages each side of flood irrigation and then flows back into the river. I found empty "Red Dog" pesticide containers in drains which had contained atrazine. I mentioned that these chemicals harm aquatic wildlife. My translator confirmed that there are no longer any frogs, and no more snakes in this area where "it was once so loud from the frogs".



The legacy of war: physical and economic pain for Cambodians

Visiting countries scarred by wars, I became aware of Australia's privileged status of not sharing land borders with other countries and having avoided the horrors of war within our nation. The ANZAC tradition stops short of comprehending the nightmare of genocide and destruction experienced by Germany, Poland, Ukraine and Cambodia.

Access to resources varies dramatically across nations and has profound implications on how people can work together and what is possible. As an Australian, it is hard to accept that many countries appear to have absolutely corrupt and self serving political leadership and there is no agenda for developing the common good of the people.

My Nuffield travels have provided a most powerful perspective on "quality of life", and the circumstances people find themselves in the lottery of life. I comment on the way forward for Australian farmers and their communities grateful for Australia's place in world agriculture and our stable and cohesive society.

Acknowledgments

I sincerely thank the following people and organisations who made my Nuffield experience possible.

- My wife Kathy: For her love, and understanding that I was struggling to accept our farming circumstances. It was Kathy who insisted that I apply for a Nuffield scholarship as part of a solution. Kathy gave unwavering support as I globe trotted and relayed my adventures while she became a single parent of 4 young children at home! Thank you to my children Phoebe, Jade, Skye and Oscar for adapting to life without Dad for a while and being real troopers when they travelled in hot, humid Asia.
- My father John: For taking on extra responsibilities in my absence and managing the farm through another difficult season at a time in his life when he would rather be the one travelling!
- Nuffield Australia: For providing me with the privilege of becoming a Nuffield scholar.
 To Mark Branson and Peter Treloar for their encouragement to apply, to the selection committees who believed I have something to contribute, and to Jim Geltch and his team who put together a life changing "Global Focus Tour".
- Australian Wool Innovation Ltd: For their sponsorship and support of Nuffield Australia
 in empowering farmers to gain a global perspective and increase their capacity to make
 positive contributions to Australian agriculture.
- To the 2008 vintage Australian Nuffield scholars and International scholars who travelled to Melbourne in February 2008. Many contributed to my understanding of a "Bigger picture", welcomed me into their homes and enriched my journey.
- To the Global focus tour group I travelled with for 7 weeks, (10 roosters with no hens!) What an amazing experience, and one I think about every day.
- The Nuffield "family" of Australian and overseas scholars and their partners: Who welcomed me into an inspiring network of "can do" people. Their encouragement and mentoring has given me confidence to tackle challenges and welcome change. I have the utmost respect for those who lead by example, the Nuffield network is brimming with them.

- To all those people across many countries who gave their time to speak to me and provide insight to their world. Their generosity only started with information and often extended to meals, accommodation and always cultural experiences! This interaction was the essence of my Nuffield experience. I look forward to returning their hospitality throughout my lifetime.
- To my Mum Diana for her prayers and support. I give thanks for travelling safely over 17 weeks across 15 countries without ever feeling I was in danger or trouble or having anything stolen. I did, however, leave a Nuffield rugby top on a plane in Texas and a Nuffield hat in a cave in Vietnam. If anyone finds them you know where I live!

I am a family man and a farmer. The two roles are well aligned; both concerned with nurturing and managing the cycle of life. I realise now, more than ever that I am already rich in my experience of love, freedom, security, health and well being. With the completion of this report I look back on an extraordinary year.

Abbreviations & Acronyms

ABARE Australian Bureau of Agricultural and Resource Economics

AFI Australian Farm Institute

ANZAC Australian and New Zealand Army Corps

Bu bushel

Co-op Co-operative

FAWL Farm Assured Welsh Lamb

HCC Meat Promotion Wales (Hybu Cig Cymru)

Kg kilogram

Ltd Limited

NFU Cymru the National Farmers Union of Wales

PGI Protected Geographical Indication

SSQ standard quality quotation

T tonne(s)

UK United Kingdom

USDA United States Department of Agriculture

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Executive Summary

Suppliers of commodities need to be the most productive and cost-efficient to absorb the inherent volatility in supply and demand which determines price. For commodity producing family farms to survive and prosper into the future they need to be highly valued by the consumers of their produce and the supply chains involved. Achieving this may require farmers to extend their focus from the internal functions of their business to the external processes of the supply chains they are part of.

Aims

My research aimed to identify how adopting a collaborative approach can meet farmer's economic, social and cultural needs. In particular, how farmer collaboration can capture value for farmers as well as create benefits for supply chains.

I have targeted overseas examples of farmer co-operation, investigating business models and quantifying the outcomes generated. I sought to identify the motives which initiate collaborative participation, and the principles that sustain farmer's commitment. Conversely, I examined why farmers choose to operate individually and reasons why collaborative approaches have not been successful.

Key findings

A high capacity to supply and a professional business approach provides the foundation for building relationships with key customers and building competitive, sustainable supply chains.

Farmer owned co-operative structures have succeeded in securing markets for their members. This report contains overseas examples of farmer owned co-operatives which have lowered costs, achieved higher margins and provided equity into value chains for their members. These benefits have been made possible through building capacity to supply and are underpinned by aggregating production and creating efficiencies. Economies of scale create the opportunity to engage highly skilled management and apply technology to innovating competitive, sustainable supply chains.

By understanding existing value chains and stakeholders farmers can gain an appreciation of their role as suppliers. If a different outcome is desired they need to understand the costs and benefits associated with change and their capacity to achieve it.

The sustainability of a supply chain relies on adding value to the customer and generating a profit for every business in the chain.

Method

The research was undertaken throughout 2008 during 17 weeks of travel as a Nuffield scholar. The scholarship involved 2 overseas study tours; the Global Focus Tour organised by Nuffield Australia for a group of 10 scholars to visit California and Washington DC in the United States of America (USA), Canada, Mexico, Brazil and the United Kingdom (UK). This provided access to and insight into production, environmental, economic and trade issues affecting agriculture in these countries. This was followed by an individual study tour where I visited farmers, supply chain businesses and agricultural organisations in India, UK, France, Germany, Ukraine, Cambodia and Vietnam.

Recommendations

My recommendation is that farmers look critically at their supply chain arrangements to gain an understanding of how it works and who is involved. This becomes the starting point to identify opportunities to capture extra value.

- 1. Farmers should develop relationships with supply chain partners to improve efficiencies and understand how to be the ideal supplier.
- 2. Farmers should scope opportunities with a willingness to embrace collaboration to achieve scale and attract resources out of the reach of individual small business.
- 3. Farmer collaboration needs to translate scale into efficiencies and increased capabilities, to become the foundation for value adding.
- 4. Farmers need to understand the commitment and investment required to achieve supply chain rewards.

Introduction

The planet's population continues to swell: from 1 billion in 1820, to 2 billion in 1930, 3 billion in 1960, 4 billion in 1974, 5 billion in 1988, and 6 billion in 2000.

By mid 2009 there will be 6.8 billion humans. The US Census Bureau calculates the current natural increase to be 2.5 people/second i.e. 4.3 births and 1.8 deaths. The fact I find most amazing is that the human population growth from 2 billion to 7 billion will fit into some people's own life time!

Demand for agricultural output has never been greater and must continue to rise. In addition to feeding this mass, agriculture is a source of fibre, pharmaceuticals and increasingly, bio- energy. However, farmers will not automatically benefit from increased global demand. In 2008, the world's farmers responded to low global grain stocks and unprecedented high prices. Within 6 months a record world grain crop was produced and down came the prices. **Too often in commodity markets the cure for high prices, is high prices.**

Suppliers of commodities need to be the most productive and cost efficient to survive the inherent volatility in supply and demand which determines price. Suppliers who are willing to be innovative in developing solutions and provide value to targeted customers make the most eligible supply partners.

Margins in value chains

"There is plenty of money to be made from agriculture, but not for the farmer" declared Professor Biswas in Gujarat State, India. He outlined how wheat milled into flour more than doubled its value through a quick and simple process after the farmer invested 8 months of cost and risk to produce it.

A boutique brewer in France outlined the costs and returns on his tasty lagers - the price paid for malting barley represented 1% of the cost of his bottled beer.

I left for my overseas tour wearing a 100% fine wool T-shirt, a little sheepish that I, the wool grower, would receive about 1% of its value for the 150 grams of wool.

In each example a raw commodity has undergone post farm gate processing which has boosted product value by between 100% and 10,000%. As a result of a value chain, barley and Merino wool commodities are transformed into differentiated products; they become branded experiences which consumers can rave about!

In value chains the greatest margins are reserved for the retail end. Thousands of farmers grow the malting barley, yet one skilled brewer crafted each teaspoon of malted barley into the consumer experience; a bottle of beer with his story attached.

The highly sophisticated retail sector is driven by fashions and perceptions. Its roles include promotion and presentation which target products at identified market segments. There is constant pressure to innovate, create customer value and grow market share. If the retailer gets it right, our produce is purchased by consumers. The retailer may take an enviable margin but they are the interface to the most important link in the chain, the consumer. The consumer is the only one who puts money into the chain, everyone else involved is dividing up that revenue.

Linking the farm and the consumer's shopping trolley is the supply chain. It is in farmer's interests to analyse the stakeholders in an existing value chain to understand their role, cost and value they create.

A detailed understanding of the status quo is the basis on which farmers can make judgements about existing arrangements and identify opportunities to add value.

If commodity producing family farms and their communities are to survive and prosper into the future they need to be

- generating an acceptable return on investment
- highly valued by consumers of their produce
- creating solutions for value chains they supply.

In principle, collaboration is an appropriate strategy for supplying agricultural commodities because the production sector is represented by many small producers. Individually they have limited supplier ability but the combined supply profile is significant. If managed well aggregation can facilitate supply efficiencies and value adding opportunities. If this is achieved by a business owned and controlled by farmers, they are positioned to receive benefits from the value they create compared to being customers of commercial third parties.

By adopting a collaborative strategy farmers have been able to employ skills and harness technology to increase efficiency and effectiveness and create supply arrangements which would have been out of their reach as individuals.

Supply chain consolidation

The family farm is at the low value end of the supply chain. In accepting this, farmers have an incentive to increase their understanding of value chains and to explore value adding.

A weakness of individual farmers in Australia and across the world is their small scale and low level of business skills and resources relative to other participants along commodity supply chains. Mick Keogh, CEO of the Australian Farm Institute (AFI) describes farms as operating the opposite to most successful businesses. The contrasts include

- costs not being linked to income
- a high risk profile
- earning a low return on capital
- usually profits are invested back into the farm

In contrast, traders, processors and retailers are becoming larger, more diversified and vertically integrated. They are consolidating at a global scale. These companies apply specialised skills and resources to every element of their business interests.

In Australia, stock firms and grain trading companies have merged to consolidate their positions as "One stop shops" for farmers. These firms offer a suite of products including grain marketing and broking for sheep, wool and real estate. They provide professional advice which underpins their finance, insurance and merchandise products and positions them to generate a margin from most farmer transactions.

I observed this type of "Rural business hub" gaining popularity in India and met with a representative of Hariyali Kisaan Bazaar, a company in the process of establishing 1,000 outlets across Northern India. These resemble our Australian rural supply shop fronts and provide an even more extensive suite of products, including fuel, automotive and machinery products and household supermarket lines.

There is a long history of Indian farmers having a heavy dependence on credit linked with procurement systems for farmer's produce. The Hariyali Kisaan Bazaar model has consolidated this across "all the agricultural and household needs of the rural community".

I was impressed by the emphasis put on "bridging the last mile" between agri-inputs and farmers with a team of agronomists providing free consultation, "24/7 technical support and hand holding". The reality is that 1 agronomist is provided for each 5,000 farmer customers spread across a 30- 40 km radius. I was quite cynical regarding the level of service and the terms of trade provided to farmers by this model but it must have been an improvement for farmers who previously had no agronomic support or quality assurance for fertilizers and pesticides purchased. I was also informed that the terms given to farmers were transparent and equal for all customers, which has not been available from other providers.

Australian Farmers and their counterparts across the world have stuck to production - taking on its risks and inherent price volatility! While this is the case farmers should expect to buy at retail prices, sell at wholesale prices and pay the freight (and commissions) both ways!

Co-operation and Collaboration: Working together

Across many references both co-operation and collaboration are described as working together. In the Roget's Thesaurus the words are interchangeable, along with "join forces", "team up" and "work together". Co-operative describes a business which is designed around these concepts.

There are many variants to collaborative business models, but a common theme involves serving members by meeting their common economic, social and cultural needs through jointly owned and democratically controlled enterprises. It is the members who are the beneficiaries of the business (Co-operatives UK). While the individual companies that make up a co-operative (co-op) may make profits, as a condition of its charter in most countries, the profits of the co-op itself are turned back into its promotion, or invested in its growth and functioning and not taken as dividends of any kind (The Co-operative future).

Co-operatives are woven into the culture of many countries, particularly in Europe. In addition to agriculture, there are a huge variety which exist to provide benefits to the members they were created for. For example, "The Co-operative Group" in the UK is a consumer co-op and one of the world's largest consumer owned businesses, having over 3 millions members. The family of businesses comprises: food, travel, banking, insurance, pharmacy, funerals, legal services, investments, online shopping, electrical and bedding. Membership is open to everyone as long as they share the Group's values and principles. Every year members receive a share of the profits that they helped to create, based on the amount made in profits that year and the how much they have spent with any of its businesses. The Co-operative Group is the largest farmer in the UK, managing over 70,000 acres which provides an increasing amount of produce to its retail business. (www.co-operative.coop)

Banking co-ops include Rabobank which began as a rural credit co-operative in the Netherlands in 1898. Farmers united to overcome rural poverty by providing finance to help build and support each others' business. Rabobank is now the world's leading specialist in food and agribusiness banking. There are also Housing, Utility, Fishery and Worker co-ops in which there are no consumer owners, only worker owners.

Cambodian farmers do not have a collaborative history but I met with a group of them who were willing to pool their physical resources and very modest finances as a strategy for building productivity and releasing them from the cycle of poverty they have endured. Their co-operative was still in the planning phase but their objectives include collectively marketing their produce to attract greater competition from traders and collectively buying inputs to provide economies of scale and more favourable terms. This farmer group also forms a focal point for aid organisations such as CARE Australia to work with to extend programmes to improve farming systems and community projects. If these Cambodian farmers succeed in their co-operative venture it serves their social and economic needs as per the description in this section.

Australian agri-"culture"

This section provides background information describing the cycle of industry structures, weather and farmer attitudes in Australian agriculture. I focus on the grain industry due to its economic importance to my region of Eyre Peninsula, and also to many others.

The on-going consolidation of Australian grain industry supply chains presents opportunities and threats to grower equity in its functions. If alignment with grower's interests is lost there is a potential erosion of value to farmers provided by storage, handling and marketing companies.

Most individual farmers don't possess the grain marketing skills to consistently maximise the value of their production and have limited ability to leverage the best "deal" when small tonnages are offered. There are opportunities for farmers to aggregate production and employ skilled professionals to act on their behalf to overcome these limitations.

"What about Me?"

Moving Picture's 1982 Australian hit made it to #1 again over 20 years later when Shannon Noll covered "What about me?" to the rural backdrop of his home town of Condobolin, NSW. The anthem's video clip depicts farmers and residents of Outback Australia struggling with the forces of nature and a changing economic landscape.

There have been many rural Australian communities asking this question in recent years. Changing weather patterns, water issues and the roller coaster of markets has left many bewildered and questioning if their enterprises are relevant or valued by consumers and society.

Cohesive, supportive communities are a tremendous asset in strengthening the resolve of individual farming families operating within the inherent "boom and bust" cycles of Australian agriculture. Achieving vibrant, profitable farm businesses is the key to sustaining communities and services in rural Australia.

Australian broad acre crop and livestock producers have experienced declining terms of trade throughout the past 50 years. This trend accelerated from 2005 to 2008 as prices for oil and mineral related inputs rose to record levels. While absorbing these dramatic increases in input costs, production failures have denied many Australian farmers from capitalising on the massive grain prices offered in the 2007 and 2008 seasons. Generally dry, and in many regions persistent drought has limited productivity and removed human, physical and financial resources from farm businesses and the communities which have existed to support them.

Eyre Peninsula

The Eyre Peninsula, a large coastal region in the south, central part of South Australia is the region I am focussed on exploring agri-business solutions. Like many regions, Eyre Peninsula has endured tough conditions in recent years.

It is a defined region, bounded by Spencer Gulf in the East, the Great Australian Bight in the West and the Gawler Ranges in the North. It covers an area of 55,000 square kilometres (ABARE 2006). Eyre Peninsula farms are spread across 250 mm to 600 mm annual rainfall zones.

Broad acre farms account for 95% of the farms on Eyre Peninsula. This equated to 2,242 farms in 2004, of which more than 86% were dependent on grain growing or a combination of grain and livestock production (ABARE 2006).

Currently, the region's agricultural production fits into the "Commodities" category.

FREE Eyre Limited

My involvement with the Eyre Peninsula farmer initiative "FREE Eyre Ltd.", an unlisted public company formed in 2007 by the collaboration of 350 regional farming businesses has given personal insight into the motivations for a cohesive approach to supply chain issues. Observing collaborative farmer initiatives on my Nuffield studies revealed recurring issues shared with this local example. These were:

- 1. Adversity. Expressed as poor seasons, low commodity prices, changing industry structures and marketing/ trading environments is relevant to both FREE Eyre and many other examples studied. "Bubbling" concern is a catalyst for change. Humans act when the pain of change is less than the pain of staying the same. There is much less incentive to change when businesses are enjoying success and healthy profits.
- 2. Aggregated production. The volume and consistency offered by effectively aggregating production is significant to supply chains. Most individual farming enterprises have insufficient resources to execute "supply chain" scale solutions.

The first business resulting from FREE Eyre Ltd. is a grain marketing joint venture. The company, "EP Grain" was well supported by the region's grain growers in 2008; receiving 15% of the region's total production its first year of operation. The year 1 profit has been invested into starting FREE Eyre's second business, "EP Storage" a newly built grain storage facility in the region which will receive grain from the 2009/10 harvest.

The function of accumulating product in an efficient, effective way underpinned many other value adding opportunities for collaborative ventures studied during my tour.

Australian agricultural leadership

Australian agriculture is experiencing a decline in collaboration. The structures of Australian agri-business have changed in response to political policy and the leadership of company directors and executives. The general trend has been to deregulate marketing and to convert grower's equity in supply businesses to shareholdings in publicly listed companies. Change has not been driven primarily by farmers, but many have been apathetic in deciding the direction of their industries.

Australian National and State based agri-political organisations are struggling to maintain memberships due to increasing divergence in opinions over both grain and sheep industry issues as well as very difficult water resources issues. Key industry organisations have damaged their credibility and grower's confidence with in-fighting and reacting negatively to threats.

Australian agriculture has not been good at supporting those who dare to represent them. Memberships and budgets of farmer organisations are shrinking. Delegates on many agricultural related boards and committees are given little reward or encouragement for their efforts. This is a stark contrast to the United State's (US) and European Union (EU) where peak farm bodies are very well resourced and funded indirectly through a raft of subsidies paid to farmers. Not surprisingly, a core objective of these bodies is to uphold income support to farmers.

Commodities

A commodity is an article of trade or commerce, especially an agricultural or mining product that can be processed and resold (Farlex dictionary). The Wikipedia definition of a commodity is "something for which there is demand, but which is supplied without qualitative differentiation across a given market". The logical progression is that producers of commodities will always be price takers and their supply can be substituted by competitors.

It is not ideal to be a "commodity" producer when competing in markets where other suppliers have advantages such as price subsidies, lower costs or greater access to customers. Ultimately, in these markets only producers with the lowest costs per unit of production will survive.

Agricultural commodity markets are historically volatile due largely to variations in supply. Too often in commodity markets, "The best cure for high prices, is high prices" (Jasper Wormald, USDA). This accurately describes the situation of extremely high grain prices in 2008 which led to massive increases in global grain production in 2009 and a rapid retraction of grain prices as global supplies outstripped demand.

Value Adding

Commodity producers are price takers, but (without changing the physical product) a supplier may be able to differentiate their supplying characteristics to create value for customers and secure market access.

There is a misperception by many farmers that adding value to farm produce requires processing into a retail product, or creating a retail brand. But value adding can be as fundamental as aggregating production and capturing benefits which result from meeting customer specifications and delivering in the most efficient manner.

Value means different things to different people.

- 1. Customers value reliable and consistent supply of product which meets their specifications.
- 2. Customers value suppliers who have a clear understanding of, and ability to supply their needs.
- 3. Customers value suppliers who build relationships with them to innovate supply chain solutions. These suppliers are eligible to share the rewards for the benefits created.

Conversely, failure of a supplier is not tolerated, particularly in commodity markets. If a supplier fails to deliver, customers discount or terminate the relationship.

To understand and adopt the characteristics of being a faultless, model supplier "requires farmers to shift their focus from the internal processes of their business to external relationships with the customer" (Fearne, 2008).

Adding Value to Grain

Investigating grain storage and marketing strategies in both mature and developing countries gave perspective on what marketers and customers are demanding and the environment farmers operate in. Historical supply chain arrangements and current trends help to understand why business models are appropriate.

There are characteristics of Australia's grain industry which contrast to every other country I visited. The primary difference is that Australia exports a much higher percentage of its production. Historically, Australian grain has been marketed by an organised selling system and stored by co-operatively owned companies. North America, Europe and South East Asia have relatively well developed and diverse domestic markets supporting large human populations, intensive animal production and bio-fuel industries. Experience in storing and marketing grain in fragmented, deregulated markets is normal for most overseas farmers.

Across all countries there were some common attributes which maximised the value of grain. The hardest one to manage but made the biggest impact was time of sale.

Trading grain in Ukraine

I was fortunate to meet with David Sweere, an expatriate North American who farms with his wife and son in Ukraine. David is also a grain trader. He has many agricultural interests including bartering diesel for field peas on a large scale. It became apparent from David's experience that organised crime takes a keen interest in most profitable business in Ukraine and their demands can erode profit margins at the very least. David has an excellent knowledge of the culture of trading and the language of money.

David made it clear that "unless farmers can hold back their grain from the market at harvest and keep it clean and dry, they will get crucified on the price. Believe me, I do it". These three elements are the essence of adding value to grain.

Using high capacity grain dryers is often the solution to timely harvesting and safe storage in the UK and Europe. This certainly maintains grain quality and manages risk for growers while representing a significant cost. Camgrain co-op in the UK used over 2.6 million litres of fuel to dry 160,000 tonnes of grain during a soggy 2008 harvest.

Most North American and European grain farmers I met had a strategy which spread their sales out over 12 months with a minimum sold over the harvest period. This requires on-farm storage equivalent to annual production or access to centralised storage. In many situations, farmers chose co-operative storage because of financial benefits and the transfer of storage management responsibility to a dedicated business. For the same reasons, farmers were employing professional grain brokers to act as agents in pricing grain, or participated in grain marketing pools managed by co-ops.

Camgrain

Camprain is the UK's largest farmer owned central storage business, located in Cambridgeshire, East Anglia. It is an excellent example of having ownership and control of value- adding functions. The wholly farmer owned, arable crop marketing and storage society provides a seamless supply solution from the field to the retail customer.

Camgrain was founded in 1983 to increase farmer's returns from grain cropping. It started with 60 farmer members and storage for 10,000 tonnes of grain. It has grown to over 300 members and has a total grain storage capacity of 250,000 tonnes at 2 sites. Camgrain continues to grow its membership due to strong demand from local growers and has plans to further expand operations.

"The combination of sophisticated central storage and specialist marketing services is extremely effective in gaining price premiums whilst minimising risk". John Latham, Chairman of Camgrain.

The services provided include:

- On farm pick up of grain to storage and all post storage logistics
- Efficient, centrally located storage providing drying, cleaning and segregation
- Partnerships with farmer owned grain marketers to provide comprehensive grain marketing choices with cash and pooling

• High profile contract to supply the wheat for all flour requirements of retail supermarket "Sainsbury's" 360 in-store bakeries.

This direct relationship with a specific retailer has led to the formation of "Sainsbury's British Flour Development Group" (SBFDG) to share information and best practice between the retailer, the miller and the 300 Camgrain farmers. This process encourages open and transparent communication from the farmer to consumer.

The group will drive efficiencies in terms of cost, processes and the environment and discuss farming codes of practice (Sainsbury press release 2008).

For the Camgrain farmer member there are multiple benefits. They centre on sharing highly sophisticated storage which provides first stage processing of grain to meet market demands. John Latham, Camgrain's chairman, stressed the importance of securing commitment from members and that processes be designed which oblige members to use the system and services. The Camgrain member's commitment is through being allocated storage under the following terms:

(2008 Camgrain membership details and charges structure)

- Initial purchase of a \$25 share in the society
- Farmer commits to store a tonnage up to the amount of their annual storage requirements
- Qualification loan of \$100/tonne, which is refunded in full after 10 years of membership
- Storage charge of \$175/tonne over 10 years i.e.: \$17.50/year plus interest on outstanding balance. No storage charge after year 10.
- Handling charge (\$23.75 in 2008) includes all transport costs from farm up to 50 km from store, drying from 16% moisture on cereals, all cleaning, damping, gravity separation, lab analysis, administration and store maintenance.
- These costs are paid following harvest. When a member decides to exit from Camgrain, their storage will be reassigned and the retiring member receives a payment in line with the current storage valuation (\$225/tonne in 2008).

In essence, the farmer directs a substantial investment into centralised, professionally managed storage which performs as an appreciating asset and can be liquidated if farming policy changes. This strategy becomes the alternative to building on farm storage which is a fixed and depreciating asset with the additional responsibility of management and cost of maintenance.



Logistics and sophisticated storage solutions (Camgrain, UK)

Access to cost-efficient logistics, sophisticated storage and processing and a comprehensive grain marketing service allows Camgrain farmers to concentrate on producing and harvesting crops while their society provides "ideal supplier" functions along an innovative, competitive supply chain through to a retail or end-user customer.

Camprain is not unique in addressing grain supply chain functions on behalf of farmers in the UK. There is a growing trend towards farmer ownership of central storage and marketing.

NetworkGrain UK

NetworkGrain UK is the umbrella organisation for 10 leading farmer-owned central storage cooperatives in the UK. Their philosophy is to improve the grain received into their stores and give members the best possible ownership experience from buying and using grain storage space and utilising marketing options. Their members have confidence that from the time the grain leaves the farm, the highest standards of storage and marketing will deliver the maximum value to them (NetworkGrain UK website 2008).



12 tonne/hectare wheat. Worcestershire, UK

Heartland Co-op, USA

Heartland co-operative is one of the largest grain and farm supply companies in Iowa, USA. It provides products and services to approximately 3,700 arable farmer members across 30 communities. It is also the largest employer in most of these communities with over 340 full time employees. The co-op has evolved through the aggregation of approximately 20 grain farmer owned co-operatives, some of which were operating 100 years ago. Its core functions are to secure inputs and provide grain storage and marketing services. Heartland co-op has also acquired a number of private companies and facilities associated with grain storage, supplying fertilizer, fuel and cropping inputs.

Their motto "Helping farmers produce and market, profitably" is aligned with a mission statement to have quality customer service, products and programmes at competitive prices while maintaining profitability for both Heartland Co-op and its members. Profitability of the co-op is the prime mover in Heartland's success and underpins its corporate culture of being aggressively growth-orientated.

A recent innovation in storage available to Heartland members is the "Grain Condominium" programme, which provides grain storage space for share holders. Grain storage in the region has been insufficient for a number of years, so in 2005 the grain condo project was started in cooperation with 6 other Iowa co-operatives. This concept is also being used successfully in North Dakota and Minnesota.

Under the programme, Heartland sets up a limited liability company (LLC) as the ownership entity for 2 storage bins each with a capacity of 500,000 bu. (13,000 tonnes) of grain. These are built on co-op land near a grain receival site. Shares for 5000 bushels (130 tonnes) of storage are available to members for US \$5,750 each, equal to about US \$45/tonne. The shares are valid for the life of the facility (35 to 40 years) and are freely transferable. The grower retains ownership of the grain until their decision to sell so they can participate in USDA non-recourse loan programmes which are one of three forms of grain related subsidies available. Taxation is similar to owning an on-farm bin regarding cost depreciation. The grain stored can be any combination of corn or soybeans and even though each share holder owns part of a specific storage, their grain can be taken to any of the 33 participating storage sites.

After the initial investment there is no storage charge but shareholders are billed for electricity, maintenance, insurance and handling at the rate of US \$230 per year for each 5,000 bu. share, set for the next 3 years. This is less than US \$2/tonne.

The benefits of the "Condo" storage option include a much lower cost to the farmer compared to building on-farm storage and transferring the management of storage to the LLC. Many farmers are renting land or have doubts about their long-term futures because of urban sprawl or retirement. These operators are not confident to invest in private storage. It suits them to have the transferable share as an easy exit strategy. (Jay Nelson, Director of Origination Heartland co-op) So, the co-operative spirit is alive and well across the grain belts of the USA.

French Grain Co-Operatives

Co-operatives have played an important role in French agricultural development, especially in storage and processing, marketing and procuring inputs. The co-operative culture still dominates French agriculture. Since the end of the 1970s they have contributed more than 50% of farming output in cereals and also other sectors including milk, meat and wine (Mauget and Koulychizky, 2003).

The support for a collaborative approach appears to be associated with a culture of farmer interdependence. The French have a policy of small land holdings which are becoming more fragmented with each generation. This ensures a large "farmer" population concerned with agricultural policy but also creates huge issues with farm succession or expansion.

The active farmer of each generation is required to compensate their siblings, usually with rent for their respective shares of the farm. Land prices are so high most farmers cannot afford to buy these other shares. This is causing some families to sell the farm and distribute the value of the estate. This succession uncertainty and small scale operations are incentives for a collaborative approach to machinery ownership, cropping operations and infrastructure such as grain storage.

Many French co-ops were formed over 50 years ago and are increasingly challenged with replacing obsolete grain handling technology. A large percentage of older receival sites are now situated in towns or cities due to urban sprawl which has surrounded them. This creates traffic congestion, air quality issues and social conflict between farmers and urban populations.

Many co-ops are consolidating their memberships to fund new infrastructure, rationalising the location and increasing capacity of grain sites. While some co-ops are getting bigger to capture efficiencies and economies of scale, some members are withdrawing from the large organisations in favour of forming small groups of like-minded, compatible farmers. These farmers feel that greater benefits flow from building storage to service surrounding neighbours and avoiding the logistical bottle necks at large co-operative receival sites.

Generally, French farmers retain a portion of their grain on farm to market themselves, but most grain produced is stored by a co-op. Generally, the grain is captive to the co-op once delivered and marketed by it. Farmers have the option of taking cash prices based on a forward month or having grain pooled and sold over 12 months. Growers receive the price achieved by the co-operative less the cost of storage and logistics.

France is home to the largest farming co-operative in Europe, "Champagne-Cereales" which receives approximately 2.5 million tonnes of grain from over 9,000 members.

This co-op has many fully owned subsidiaries and partnerships within the food sector and conducts agricultural research and development across Europe. It connects its members to vertical integration from milling through to retail cereal products, and from malting barley through to brewing.

Farmer collaboration to supply sheep meat

I was interested in exploring red meat supply chains with a collaborative dimension to observe the associated benefits and issues for producers. I was encouraged to visit Wales by Nicola Raymond, 2006 scholar. Nicola provided me with some great contacts and I tracked down most of the Welsh population at the largest agricultural/livestock event in Europe, The Royal Welsh Show.

The value chains I observed in Wales were not co-operatives. Each one had a producer membership or alliance which created the supply profile required to support a branded product.

I also studied the red meat industry framework in Wales to understand how its organisations assist producers and provide consumer confidence to grow markets for Welsh red meat products.

Welsh lamb industry background

The Welsh lamb and beef industries have developed a large range of differentiated retail products which have resulted in demand growth for Welsh red meat. A range of branded red meat products are offered and most of these are consumed by the domestic UK market. The major retail supermarkets (Tesco, ASDA, Sainsbury's, CO-OP, and Waiterose) are the largest markets.

Each branded product range is underpinned by production systems and processes that ensure quality, consistency and specifications are met. These value chain models require an appropriate number of committed producers to dedicate their production systems and livestock to specific markets. I observed the challenge of producers extending their product responsibilities to add value to customers through quality assurance programmes and traceability systems.

Welsh red meat organisations

The creation of differentiated "Welsh" red meat products, product improvement, traceability, access to markets and boosting consumer confidence is assisted by a red meat industry framework and includes the following organisations which are all substantially funded by Welsh Red Meat producers.

Meat Promotion Wales (HCC)

Meat Promotion Wales (HCC) is the industry led organisation responsible for the development, promotion and marketing of Welsh red meat. It has commonalities to the role of Meat and Livestock Australia (MLA). It is partly funded by producer and processor levies collected on animals for slaughter or live export. HCC aims to improve eating quality, increase cost effectiveness and add value to red meat products across the whole supply chain.



"Nice rack". Welsh lamb (Wales)

HCC has programmes for uptake of technology and innovation on farms and provides training and information for producers to calculate costs of production, target markets and meet specifications. HCC also works with processors, butchers and the food service sector to ensure consistent quality and inform them of new product developments along the supply chain.

Farm Assured Welsh Lamb (FAWL)

Farm Assured Welsh Lamb (FAWL) is a voluntary welfare and husbandry compliance scheme which producers pay an annual subscription to. It is an opportunity for producers to provide proof of their expertise and integrity. Farms are inspected annually.

Lambs born and raised in Wales which comply with environment and FAWL standards are eligible for branding with a signature "Welsh Lamb" logo. This depiction of blue sky and green pasture is easily identifiable and guarantees provenance.

Protected Geographical Indication (PGI)

PGI status has been awarded to Welsh lamb which is fully traceable (individually numbered tag and husbandry record) in addition to the "Welsh Lamb" standards. This protected food name scheme was developed by the European Union and is awarded to quality products from a defined region. When the "Welsh Lamb" and PGI logos are displayed on packaging it assures consumers of first class quality, food safety and traceability.

Branded Welsh Lamb examples

The following supply chains are examples of differentiated Welsh lamb (and mutton) brands and their unique quality parameters.

ASDA Lamb Link

ASDA is part of the Walmart group and the second largest retail supermarket chain in the UK. Welsh Country Foods is the processing company that supplies ASDA with Welsh lamb through the "Lamb Link" chain. It has 2,600 producer members who supply about 1 million lambs a years to ASDA.

The benefit for producers who supply this market is the constant, large volume demand for product and no contract required to supply. The processor provides on-farm pick up, with payment made 2 working days post slaughter. The bid price is based on the SQQ (live auction indicator) average. A carcase specification grid provides premiums for well conformed, lean lambs dressing 15 to 21 kg. Lambs outside the preferred specifications are heavily discounted.

ASDA Lamb Link subsidises the purchase of "ideal" sires for producers who commit their lamb progeny to the supply chain.

Waiterose Organic Lamb:

Waiterose retail supermarket chain is UK's 7th largest and considered a premium outlet by consumers. It offers a range of premium organic fruit, vegetable and meat products including Welsh and New Zealand Organically produced lamb.

Waiterose contract producers to supply lambs reared to the legal standards of the UK register of Organic Food Standards. This involves grazing "organically" managed pastures and restrictions on veterinarian products used.

Due to suitability of traditional production systems to achieve "organic" standards with little (or no) extra cost or loss in productivity, there is often an over-supply offered to this market. This removes the price premiums for a large part of the season. Producers have also been frustrated by the small numbers of stock that Waiterose is willing to contract.

Salt Marsh Lamb (SML):

SML is sold through retail butchers. Lambs are born and bred on member producer's holdings and individually tagged to provide full traceability. The point of difference for this product is that lambs graze for at least the last 6 weeks on saline marshes which gives the meat a distinctive flavour. Preferred carcase weight range is between 16- 22 kg. The volume of Salt Marsh lamb is relatively small due to scarcity of ideal pastures, it is promoted as rare and pristine.

Cambrian Mountain Lamb:

Cambrian Mountain Lamb is sold through the Co-operative Group, a UK consumer co-operative and one of the world's largest consumer-owned businesses. (Wikipedia 2008) This group has purchased the Somerfield chain of stores which gives it over 3,000 outlets across the UK and makes the Co-op the 5th largest UK food retailer.

Lambs supplied are native breeds produced in Mid-Wales mountain production systems. There is promotion of the virtues of traditions which still exist in this region. The fact that there are no fences between neighbours and a culture of farmers helping each other is a point of difference promoted to consumers. The target consumers have also chosen to be members of and shop at the Co-operative group stores so the production systems resonate with both the consumer and the culture of the retailer.

Renaissance Mutton:

Renaissance Mutton is supplied through retail butchers and supermarkets. The product is meat from a traceable, farm assured sheep over 2 years of age which has been finished on a forage based diet and has been matured (hung in a chiller) for at least 2 weeks post slaughter. Educating consumers regarding appropriate dishes and cooking methods is a priority of the Brand's promotion and relies heavily on butchers to assist customers. HRH, Prince of Wales is a patron of Renaissance Mutton and the product is marketed as rediscovering a lost treasure.

No profit growth for Welsh lamb producers

Progress is being made in growing markets for Welsh lamb. November 2008 statistics showed a 2% increase in domestic lamb purchases over 2007 levels (Assembly Govt 2008). Consumers can choose the story and brand which most appeals to them in most retail butchers or supermarkets. However, this has not translated into more profitable returns for lamb producers. Farmers I surveyed who were supplying lamb into every marketing option were disappointed with the market based prices being offered. Detailed analysis of farmer's production costs by the supermarkets appears to set the wholesale buy price. Producer's have a firm view that retail supermarkets set the price and are only prepared to pay farmers an amount equal to their cost of production. This left the farmer to rely on the single farm payment subsidy as their profit per acre.

The supermarkets generally contracted the majority of their lamb requirements through supply chains of their own design. As a result, the sale yard prices represented uncontracted animals and some of these were not within ideal specifications. On this basis farmers felt that the live auction indicator price (SSQ) was a poor choice of market indicator.

The Assembly Government statistics show the sheep and lamb flock in Wales has dropped 5% in the November '07 to November '08 period. "Farmers continue to have a lack of confidence in securing a profitable future in Red meat production. Livestock producers must see the market place deliver returns to allow them to invest with confidence in their business" (Dai Davies, NFU Cymru President 2008).

Farmers have been innovating cost reductions, improving the growth and conformation of lambs and providing traceability. They pay levies to market and promote their product. The farmer's opinion is that they have not been rewarded for their increased investment. Lamb producers have "raised the bar" for retailers and consumers to have more confidence and satisfaction from their product while they remain at the edge of viability.

The extra investment in branding and differentiating Welsh Lamb has contributed to growth in demand; however the supply of lamb for most of the year is still greater than demand. Whenever demand has driven improvements in price, supply has increased to exceed it. The supermarkets also use optionality of supply by importing lower cost New Zealand lamb product and presenting it next to Welsh lamb. This provides choice to consumers and assists the retailers to leverage the price of domestic lamb down.

I thought this industry was a great example of retail supermarket power. Also that price is a function of supply and demand. The Welsh have developed wonderful lamb products with great brands and stories. The products follow through with a satisfying eating experience. The dilemma is; that described every tray in the meat section! They are all competing in the same category again.

A Dairy Co-Operative in India

Gujarat Co-Operative Milk Marketing Federation

India is the largest dairy producing and consuming nation in the world. India's largest food marketing company is the Gujarat Co-operative Milk Marketing Federation. It has over 200 retail dairy products sold domestically and exported under the "AMUL" brand. The co-operative sales turnover for 07/08 was over US\$1.3 billion. (Amul.com)

The company is owned by 2.7 million Indian milk producers who deliver less than 3 litres per day on average! This represents their surplus milk after family consumption and private sales. Prior to 1970, dairy consumption in India was restricted by low production and a lack of refrigeration and processing. European dairy surpluses, which resulted in "Butter Mountains" in the late 1960's, prompted food aid initiatives to developing countries. India accepted the aid but a Dr. Kurian, who became father of India's "White Revolution", argued giving dairy aid free to the population would destroy India's dairy industry and make the nation forever reliant on imports. He lobbied for a National dairy development board to manage aid product, reconstitute milk and distribute it for sale.

Revenue was invested into developing dairy in India to meet domestic demand. A three tier model of producers, processors and marketers resulted. This has been replicated by other Indian Dairy co-ops and is referred to as "The Amul model".

Members are active dairy producers who will adhere to set standards. They receive cash on delivery to their village collection point twice a day. A bonus is distributed each year determined by profits of the co-operative and relative to each member's total deliveries.



Delivering milk to India's largest food company (Gurjarat Milk Co-operative Marketing Federation, India)

Currently about half of the milk produced in India comes from buffaloes which produce only 10% of the yield of milk that an average US dairy cow produces. (International farm comparison network 2003). The population love this rich, distinctive milk but the co-op provides free artificial insemination (AI) with superior dairy genetics. This is an important strategy in an already crowded nation full of urban cows, to get more milk from fewer cows. Free vet treatment is also provided. These services would not be affordable for small producers.

Members can buy high nutrition pelleted feed for their cows through the co-op. The daily cash flow allows producers to reinvest in their cows and gain higher productivity. The normal cow diet is only the scraps and rubbish found in the city where they wander, supplemented by any fodder owners can find for them. Prior to this supply chain being created there were no cold storage options and dairy product would spoil very quickly. Traders with refrigeration would offer a very low price for milk knowing producers had to take their price or get nothing.

This co-op has made a huge difference to the lives of the very poor people it was created to benefit. They have a daily cash flow which gives them consumer status and they are owners of Amul, "The Pride of India". The entire Indian dairy supply chain has benefited from adopting this model. The largest dairy consuming nation now boasts an increasing production base, a vibrant processing sector and consumers with access to quality, affordable, value-added local dairy products.

Indians believe that the success of this reinvestment scheme has led to a reduction in international food aid for India. Prof. Biswas pointed out "When offered wheat or tractors, India chose tractors. Wealthy nations would rather give away their over-production than improve other's capacity to compete."

Why do collaborative initiatives often fail?

There is a long list of reasons why some farmer groups or collaborative ventures have not been sustainable. Not understanding enough about the supply chain and the costs and risks associated with change is a common stumbling block. Managing expectations of all stakeholders in a supply chain and the reactions from existing players is another key issue.

The following points are gathered from experienced overseas and Australian food supply chain participants regarding producer supply chain initiatives and reasons why they have not succeeded. I have grouped them in common themes.

1. Lack a commitment to change:

- It is a global trend that farmers are older on average than people in most other industries.

 This older demographic is less likely to embrace change.
- Many feel they have seen it all before. "That was tried 20 years ago". They are not willing to engage in or be part of another potential failure.
- Producers want "more" without changing.
- Farmers who say "yes" and mean "no" when they are asked if they will commit to change.

2. Immediate self interest above long term gains:

- Getting farmers to work cohesively is "like herding cats", due to a culture of autonomy.
- "A lot of time can be spent creating a long term solution, and farmer's loyalty is surpassed by a few dollars of short term gain". Farmers are conditioned to opportunistic behaviour.
- Farmers try to solve their own problems without solving others.
- Producers think their product is special, and its not.

3. Farmers fail to understand their capacity and capability to supply:

- Producers are unaware of their cost of production and therefore the costs/benefits of change.
- Variations in productivity (costs) across a group of farmers which have socialised/ standardised returns.
- Lack a point of difference such as a differentiated product or service solution.

- Unrealistic expectations of development time and costs.
- Suppliers who do not appreciate the impact of human/systems/quality or quantity failure on partners in the supply chain. Often, "one strike and you're out."
- Inexperience and lack of expertise leads to mistakes. Mistakes kill new businesses.
- The start up phase of a business requires excellent management, often this is not affordable.

4. Farmers lack awareness of strategic issues:

- Have no idea about the real meaning of "Control" and "Power" in business.
- Don't know the rules, and who makes them.
- Cannot manage the negative reactions from existing supply chain participants.
- Select the wrong business partners.
- Use contracts poorly, basing prices on the wrong market indicators.
- Have little empathy or understanding for others in the supply chain, including their needs, investment or intellectual property.
- Have a dilemma of scale: They are often too big (difficult to manage and finance in start up phase), or too small to be a consistent/reliable supplier or gain economies of scale and profitability.
- Have not been able to modify strategy as business environment changes.
- Have not integrated an exit strategy to minimise losses and provide alternatives to stakeholders.

The mechanics of delivering a collaborative (or other) business model will be a unique recipe of processes, systems and relationships to suit a particular industry or social situation. The principles involved however, are common to most cases.

Conclusion

In accepting that the farm is at the low value end of the supply chain, farmers have the greatest incentive to extend their involvement in value chains and to have equity in value adding.

Choice is fundamental to leveraging value and service. There is no power to negotiate when alternative options are unavailable. If producers or others in a supply chain believe a situation is unacceptable then it is their responsibility to co-innovate a solution. No one else has any incentive to change.

Consolidation

If producers cannot affect the price received for commodities they need to focus on efficiency, costs, price and profit margins for the inputs and output of our business and determine how to "take some margin". Collaborative business models can positively impact on these issues and create a form of consolidation for farmers.

Collaboration

Farmer collaboration is a proven strategy to build supply capacity and capability. The level of support for this principle and the models adopted do not remain constant due to many factors (economic, political and physical) impacting industry over time.

A clear understanding of the status quo is the basis on which farmers can make judgements about existing arrangements and identify opportunities to leverage benefits from a collaborative approach.

The scale and supply profile created by aggregating production is a sound basis for building relationships with current and potential supply chain partners. The Camgrain model in the UK and the "Amul" model in India are stellar examples and illustrate the progress possible.

In the USA, UK and France many agri-businesses are co-operatively owned by farmers. There has been a significant tradition of co-operatives in the majority of European countries and the current trend is for increased support of these co-operatives. There is also considerable consolidation of co-operatives such as the evolution of Heartland Co-op in Iowa and Champagne Cereale in France, creating more vertical integration and giving critical mass to implement value-adding strategies.

Northern hemisphere farmers have generally enjoyed record returns from grain prices in 2007 and 2008. With high grain incomes and supported by subsidies, many European and US farmers are investing into collaborative supply chain solutions. Their goals include cost reductions, transfer of management and strength in marketing. This is occurring as farmers conclude that a collaborative approach achieves these outcomes more effectively than private on-farm investment.

I believe there is currently a collaboration "hangover" in Australian agriculture. This has resulted from deregulation in a number of industries where a co-operative approach had served farmers well but restructures have exposed farmers to painful new responsibilities which they have not been prepared for. Australian farmers do not have the political support or financial assistance provided to farmers in many Northern hemisphere countries which has been utilised in creating overseas collaborative models.

Collaboration initiatives by farmers are often unsuccessful due to limited understanding of the supply chain and the customer. The unique skills possessed by farmers do not often extend to the business skills and experience required to innovate supply chain solutions. Knowledge gaps should be identified and addressed by engaging expertise and experience. A lack of skills and resources and underestimating the time and cost to commercialise a project is a common downfall.

Value Adding

Value adding can be achieved through supply management, creating efficiencies and solutions for partners, as well as processing and marketing.

Rewarding value-adding opportunities do exist for farmers, but these needs to be tempered with the fact that adding value usually involves adding cost and complexity.

Consistency is generally the most important supply requirement. It is critical not to fail in meeting agreed volumes and specifications. Producers need to fully commit to a higher level of responsibility when they take on the role of "supplier".

If a different outcome in supply dynamics is desired by farmers then they need to understand the costs and benefits associated with change and their capacity to achieve it.

Change: High level of motivation required

Generally, people are resistant to change. It is only when concern becomes widespread, or when circumstances bring an acute awareness of fundamental issues, that people get sufficiently motivated to change. This fits with the old adage that "things happen when the pain of change is less than the pain of staying the same".

Farmers generally have extraordinary pain thresholds relating to supply arrangements, choosing to whinge rather than take decisive action. This is in contrast to the way they approach their production systems, utilising their experience and expertise and investing a great deal of capital in the process. Production results are predictable given a set of circumstances even though many of these circumstances are beyond their control.

Most farmers have limited knowledge or experience of functions beyond producing and selling a commodity. Addressing supply chain issues takes them outside of their comfort zone. Loyalties to supply chain institutions and a fear of "burning bridges" with existing players prevent them from stepping over the "farm gate" line. These are rational considerations.

Many producers resign themselves to being better farmers; striving to increase productivity and efficiency to compensate for their diminishing terms of trade. Unfortunately, this is unlikely to be a sustainable approach for many Australian farmers. I observed agriculture in many countries which realise higher productivity and lower costs while achieving this more reliably than many Australian producers can.

Shared Vision

When there is an appetite for change amongst a group of producers there needs to be a shared vision to harness collaboration. This vision has to develop into a strategy which clearly identifies the current situation as a starting point, and maps the desired outcomes.

Usually the process is driven by a small group of passionate, dedicated, key drivers. These people take responsibility for developing the ideas and vision of a group into a clear set of objectives within a structure.

It seems universal that progress is made by harnessing the capacity of a minority of people often referred to as leaders, innovators, champions and visionaries. These people are programmed to question the status quo and are willing to explore the possibilities. They are also the personalities targeted by government, community and industry organisations when change is proposed. Through their leadership other people can be made aware, observe and gain confidence in a process.

Commitment

I was advised by experienced collaborative managers that it is better to start with a small group of reliable and committed people, rather than involve a large number of people who are not. This reduces the risk of spending large amounts of energy and resources working around the demands of those who may not sustain their interest or ultimately support the business.

Individuals choosing to be part of a collaborative business need to accept that a degree of autonomy is sacrificed and that short term personal gain needs to be over-ruled by loyalty to the collaborative process to realise sustained benefits. This sounds fair enough to most producers in theory, but is sorely tested when they are faced with receiving returns below an alternative pathway at any point in time.

Managing the expectations of those who commit to a collaborative process is most important. Most farmers underestimate the costs and development time involved with start-up businesses. Benefits and premiums are often preceded by years of work and investment. The start up phase is also a particularly vulnerable stage for a business when competitors may employ strategies to undermine supply or processes.

All producers, whether they have chosen to be part of a new collaborative venture or not, should analyse the effect it has on the service and prices offered by existing players in the market place.

Converting in-principle support into commitment requires mechanisms which compel producers to participate in the business. This can be achieved in a number of ways:

- A binding contract between producers and the collaborative business.
- The process or service provided by the new business is incontestable
- The business provides access to value adding through vertical integration.
- The producer invests in the collaborative business to provide management solutions which transfers those functions away from their own business.
- The producer invests in collaboratively owned infrastructure, skills and technology in place of individual capacity.
- The producer has equity in the business and receives a dividend from the profits in proportion to their supply.

Benefits need to be apparent to sustain a collaborative approach. These may be expressed as a price premium, but more often with commodities it involves lowering costs to producers through efficiencies and adding value through service and processing.

Management and Leadership

Successful businessmen across Europe reinforced the message of how important management is to success. These are some examples of their advice:

- "You need the best management."
- "The manager has a heavy weight of responsibility, and they need to be prepared to be hit hard"
- "It is not what they (management) cost, rather it is the return on investment in them for the business that matters".
- "Avoid mistakes, they can kill a business"
- "It is most important to identify and manage risks"

These points are not confined to managing a collaborative farming venture, they can be applied to all those who find themselves in a management role. The sporting coach is a good parallel.

The art of management is making the right decisions in a timely way. It also requires implementing a strategy and communicating effectively with all the stakeholders involved.

A business plan may be the result of a flawless desk top analysis but the execution of the plan and success will rely on the human resources applied to it, which include:

- Skills and experience
- Motives
- Health

The best farming businesses across the world have embraced a high standard of corporate governance to increase strategic and operational capacity. A collaborative venture requires an appropriate structure, systems and processes. Usually this is developed through a skills-based board of directors selected for their individual expertise in specific areas, and who as a group have an appreciation of, and commitment to, the overall objectives.

Due to the numbers of participants involved and the democratic nature of collaboration, an extraordinary level of communication can be required to represent the organisation and create an understanding across its membership.

Leaders need to be supported by key people and resources. "Burn out" of drivers in both community and business is common. Succession planning for management and leadership roles provides an exit strategy for those in control and a career path for others.

Recommendations to farmers

Critically examine farm product supply chain arrangements:

As part of understanding the status quo and scoping opportunities farmers should:

- Understand how supply chains work and who is involved. Identify the players, the roles and responsibilities of supply chain participants
- Understand the costs and value each link in the chain adds to their produce
- Understand the rules of the supply chain, and who makes them
- Ask: "what do I offer as a supplier in the current chain?" and "Could I innovate new products or processes to customers which they will value?"

Explore opportunities to capture extra value:

- Invest in the best human resources possible in scoping and planning. Outsource skills and experience.
- Always have a plan B, including an exit strategy.
- Determine the financial investment, skills and technology and development time required.
- Consider the impacts (both positive and negative) on existing supply chains.
- Ensure that sustained benefits result producers as well as supply chain partners and the consumer.
- Scope opportunities with a willingness to embrace collaboration if achieving scale and accessing resources is an objective.

Understand the prerequisites of adding value:

- Efficiency and effectiveness will be central to success at any link in the supply chain.
- Understand the additional roles and responsibilities of a "supplier" over being a "producer".
- Determine the capability and capacity of a group of producers to supply consistently.
- Understand cost of production. Adding value can involve adding substantial costs.

Move forward using an appropriate framework managed by the best people

- Employ the best management skills combined with sustained passion for the objectives of the business.
- A collaborative business requires a high level of corporate governance.
- Consider partnerships and alliances to achieve goals compared to replicating resources.
- The business model needs to secure commitment from producer/suppliers.
- Communicate effectively across all stakeholders to build and sustain support.

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Gujarat Cooperative Milk Marketing Federation (GCMMF) is India's largest food products marketing organisation. It is a state level apex body of milk cooperatives in Gujarat which aims to provide remunerative returns to the farmers and also serve the interest of consumers by providing quality products which are good value for money.

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Hybu Cig Cymru - Meat Promotion Wales (HCC) is the industry-led organisation responsible for the development, promotion and marketing of Welsh red meat.

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Heartland Co-op has 50 locations providing products and services to its farmer members/patrons.

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NetworkGrain UK is a collaboration between ten leading farmer-owned central storage cooperatives from across the UK who operate right across the length and breadth of the UKs prime cereal growing regions from Aberdeen in the North, Kent in the South East to Truro in Cornwall. Through joint co-operation, NetworkGrain UK sets clear standards for supply of its vendor assured grain.

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NFU Cymru is the voice of Welsh farmers and is responsible for lobbying the National Assembly for Wales

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The Co-operative currently farms over 70,000 acres in England and Scotland, making them the

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Champagne-Cereals www.champagne-cereales.com/

Meat Promotion Wales (HCC) www.hccmpw.org.uk/index.aspx

Farm Assured Welsh Lamb (FAWL)

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Plain English Compendium Summary

Project Title:	The role of farmer collaboration in creating supply solutions
Nuffield Australia Project No.:0814	
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Objectives	Define how a collaborative approach can enable farmers to participate in supply functions to capture more value from their production.
Background	Supply chain players are large and consolidating their positions. Individual family farms are small and insignificant as commodity producers. Farm production is at the low value end of the supply chain giving farmers incentive to extend their interest in value chains and to have equity in value adding.
Research	17 weeks international travel in 2008 as a Nuffield scholar
Outcomes	Collaborative businesses are creating value for farmers and partners in supply chains through achieving scale. Expertise is required to develop an appropriate business model and employ excellent management to translate scale into efficiencies.
Implications	Adding value involves adding cost. Do not under estimate the time and investment required to develop supply chain solutions. Collaborative models need to manage member's expectations and require clear communication.
Publications	n/a