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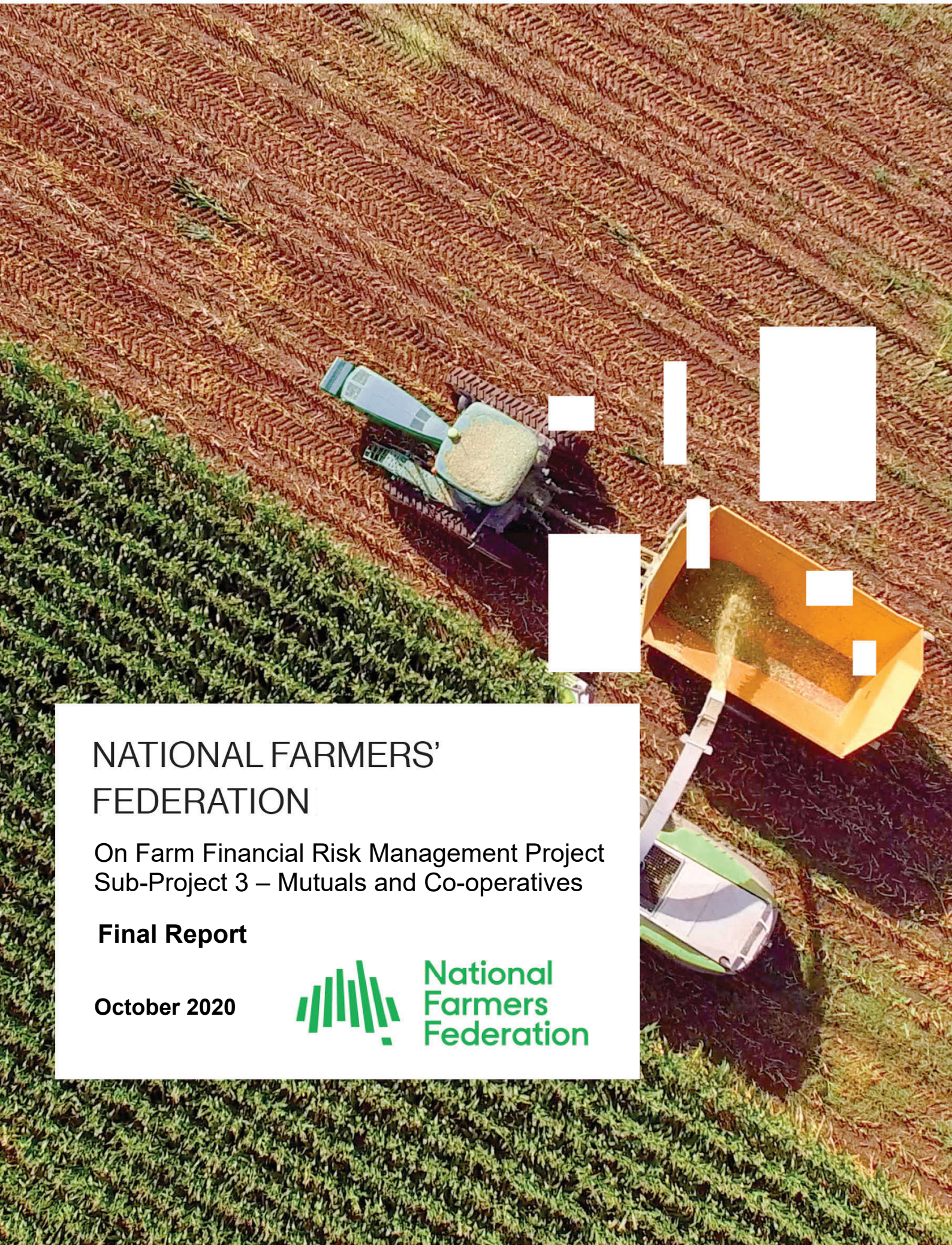

NATIONAL FARMERS' FEDERATION

On Farm Financial Risk Management Project
Sub-Project 3 – Mutuals and Co-operatives

Final Report

October 2020

National Farmers Federation

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Section 1: Executive Summary

This project evaluates the opportunity for mutuals and co-operatives to help the Australian agricultural sector better manage financial risks through insurance or insurance-like products. Our report recognises that mutuals and co-operatives are used in situations beyond insurance, but for the purposes of this on-farm financial risk management report, we have focussed on insurance-based mutuals. These are typically used to pool risk by aggregating (usually) low value, high frequency losses and funding these from a dedicated pool of shared capital, meaning that external insurer capital is only used – and paid for – to protect against an accumulation of smaller losses or one-off large losses in excess of the group's risk appetite and capital. This mechanism has proved successful in many geographies and industry sectors, yet not currently for the farming sector in Australia. A key inhibitor that must be noted is that the key risks faced by Australian farmers are generally systemic in nature and may not lend themselves to mutualisation without significant external support.

As provided in the project Terms of Reference, our report aims to address the following key questions related to mutuals and co-operatives:

- What is the prevalence of farmer mutuals and co-operatives in Australia and in other major developed countries?
- What are their key benefits, including value and impact, and limitations in assisting farmers to manage financial risk, including their size and the services they offer?
- What are the barriers to improving or expanding their service offering?
- What are the conditions needed to reduce or remove those barriers?

To evaluate the benefits to farmers of a co-operative or mutual, we first conducted a comprehensive review of academic and industry/government literature on financial risk management insurance products, including derivatives and other similar products in the agriculture sector implemented/proposed nationally and globally. Financial risk management insurance products were classified and discussed, and their potential to transfer the risk of natural disasters, delivering considerable benefit, affordability, and sustainability, across a range of economic and social scales (e.g. enterprise to industry; individual to community to region; farm enterprises). Such products were considered in the light of their ability to assist local and central governments to deliver disaster risk management policy and provide possible broader social benefits.

We reviewed the early development and recent history of agricultural co-operatives to identify key contextual issues, identified and examined recent cases of mutuals offering or considering offering insurance, largely relying on interviews with the principals involved and in one case, drawing on researchers involved in developing a proposal. Such examples were scarce, with little published analysis of these cases. Finally, we looked at cases from selected countries with much stronger co-operative and mutual enterprise (CME) sectors, in order to set out appropriate comparisons.

There was input from people from existing research, policy and commercial networks and from a sub-project Farmers' Reference Group (FRG) and key industry informants, to test the appetite for implementing co-operatives and mutuals. The FRG and industry experts provided feedback on perceptions of available financial risk management insurance products (both 'traditional' and indexed-based); worked examples to demonstrate how the mutual works; willingness and affordability of the available/new products; potential business impact and policy impacts, and potential barriers to adaptation/adoption of these innovations and strategies to enhance uptake.

Comparative policy studies were used to analyse: overarching policy settings; institutional settings and capacity; government-business relations; and interactions with other farm sector policies. These were used to: identify prospects for policy transfer to, or adaptation for the Australian context; and highlight factors in Australia that would need to be addressed if ICMEs (insurance-providing co-operatives and mutual enterprises) are is to be developed.

The implementation of co-operatives and mutuals as financial risk management insurance products, were analysed in terms of their application, strengths/weaknesses, barriers to adoption and key strategies to address these. Based on our findings, an integrated action plan was developed to inform government and industry interventions (policy and investment) with co-operatives and mutual options for improving the effectiveness of existing products and expanding the range of those and enhance the uptake of financial risk management insurance products in the agriculture sectors.

Findings and Recommendations

The key **findings** of this sub-project are:

Risks to the Farming Sector

- Natural hazard risks impacting Australian farmers are some of the most volatile as compared, to other G20 agricultural producers.
- The effects of climate change are already increasing the severity, and possibly also the frequency, of extreme weather events causing extensive damage to Australia's agricultural output. The sustainability of many of Australia's agricultural systems are already under threat from climate change related shifts. If the sector is to transition to more sustainable systems, then risk management will be a key enabler of this necessary change.

Insurance for Agricultural Enterprises

- The comparatively high level of climatic variability in Australia, exacerbated by climate change, and the geographical extent of extreme events, inhibits the development of agricultural insurance markets in Australia.
- Dominating perils such as drought on the eastern seaboard of Australia are broadly systemic and natural diversification is challenging to achieve, even in a mature insurance portfolio.
- Production insurance products currently on offer are limited and are perceived to be expensive and/or ineffective; the uptake by farmers is low.
- Recent and current public policies that provide financial support to the farming sector following extreme events may also contribute to reducing the demand for insurance products.
- Frictional costs including claims handling, policy administration, stamp duty and GST, can significantly increase the costs of production insurances.
- We observe that countries in which their governments have taken active and material steps to support agricultural insurances report very high levels of adoption of such products by growers. In turn this supports our contention that it is price rather than the functionality of products that is the key barrier to widescale adoption.

Insurance Co-operative and Mutual Enterprises (ICMEs)

- There is a very small number (no more than three or so) of ICMEs in Australia focussing on on-farm financial risk management and those that do exist have so far achieved limited reach. As a result, there is little awareness of such options and possibilities amongst the potential membership base of farmers.
- Recent efforts to start ICMEs have largely been short-lived or have not developed to full implementation.
- Farmer indifference to ICMEs offering on-farm financial risk management is not a result of the nature of the institution itself (i.e. Mutual vs Insurance company), rather it is a lack of appetite for production insurance products.
- The commercial and policy environments in Australia have not been, comparatively, conducive to the starting and flourishing of ICMEs. They are nominally supported but not treated as part of an important economic sector.
- We note from our review of other countries, that there are more aggressive approaches to enabling ICME growth, including government sponsored (or managed) specific-purpose finance agencies, special competition policy provisions, education and training programs to build management capacity and national funds for ICME development.
- ICMEs need engaged, confident members and skilled management. It is important that the interests of management are aligned with those of the membership such that the members have confidence in the skills and integrity of the management.
- A key advantage of an ICME is that member contributions to the fund component do not attract Stamp Duty.
- ICMEs have the advantage that the shareholder is the risk taker - therefore allowing greater synergy than customer/share holder insurance model. Additionally the discretionary mutual licensing in Australia allows for discretionary payments in large payout years. This licensing feature confers advantageous flexibility that may hold the key to navigating the extreme nature farming perils such as drought.

Capital and Reinsurance

- ICMEs that offer protection that includes the impact of extreme events such as drought or tropical cyclone, require capitalisation and/or reinsurance to ensure that the ICME is adequately funded to manage the aggregation impact of a single extreme event affecting multiple policyholders.
- The cost of reinsurance is likely to be high if there is insufficient capitalisation, particularly if the ICME is underwriting catastrophe risks.
- Reinsurance costs need to be absorbed by the premiums charged to members for coverage, reducing the perceived value for money.
- There are a number of sources of capital available to ICMEs; members own funds, lenders, benefactors or mutual capital instruments (MCIs).

- In other countries, such as the USA, co-operative banks have been specifically established to provide finance for agriculture co-operatives.

Role of Government

- Based on current market conditions and attitudes of farmers to both ICMEs and production insurances, ICMEs are unlikely to develop or be sustained, without government action, except in highly particular circumstances.
- We understand that there is little prospect of government support to producers that involve on-going financial commitments, in particular in the form of insurance premium subsidies that are a prevalent underpinning of national agricultural insurance programmes elsewhere[1].
- However, it is government that is effectively the insurer of last resort when disaster strikes. This policy of *ex-post* funding is considered to be fiscally less efficient than providing for future losses by means of an orderly *ex-ante* funding process.

Recommendations

The **recommendations** of this sub-project are:

Remove Regulatory and Frictional Cost Barriers

- A consistent concern has been flagged that additional cost in the form of, for example, Stamp Duty and Government Sales Tax (GST) can inflate the up-front cost of on-farm risk management protection by 20% or more. Such additional costs further detract from the perceived cost-benefit of such protection so as to deter uptake. Whilst such additional expenses are not necessarily borne by ICMEs, it is seen as a logical and consistent approach to exempt all forms of on-farm financial risk management products from such frictional costs that serve as strong deterrents to their uptake.

  We recommend the Federal Government removes both Stamp Duty and GST from all forms of production insurances across all Australian states.

Enable an Environment that actively promotes ICME Development

- As ICMEs have historically and internationally been established to manage risk where other market mechanisms have failed, it is timely for an environment to be further developed to encourage and facilitate the establishment of new ICMEs to take on this role in Australia. Government has the potential to set an environment that is favourable to the establishment and sustainability of ICMEs.

  We recommend the Australian Government further develops a favourable regulatory framework for ICMEs that protects their mutual status and ensures equal recognition and treatment with other businesses.

Provide financial support for start-up ICMEs

- One of the key barriers to the establishment of ICMEs in Australia is the sourcing of sufficient capital to ensure that the ICME could meet its full obligations to policyholders in all claims scenarios.

  We recommend funds are allocated from existing extreme event or drought fund commitments to support ICMEs in the form of either up-front capitalisation or on-call limited liability liquidity fund. Such allocations of capital should be only made on a fully repayable basis.

Focus financial support on groups where there already exists a strong sense of collaboration

- Evidence suggests that ICMEs are most likely to be successful and sustainable where there already exists a collaborative track record and strong leadership from an industry body which has a loyal membership. A larger membership may also be advantageous but very small, tightly connected mutuals might work in some cases. Members are more likely to be willing to share risk if they perceive the risks to be covered to be homogenous for all members.
- Financial support in the form of tax-related incentives also have the potential to influence farmer behaviours towards risk management.

We recommend initial funding is focussed on industry specific ICMEs that seek to offer protection to farmers against a limited range of catastrophic perils specific to that industry.

Focus on Innovation

- The key risks to the farming sector are natural perils such as drought and tropical cyclones. Collaboration is more likely to flourish where there are limited alternative mechanisms for managing catastrophic risks. Frictional costs, including on farm loss adjustment, need to be kept to a minimum to ensure affordability. Quick settlement of claims is an absolute necessity to ensure that members' interests are best served.
- Innovation of more comprehensive covers should be included as these can be utilised by financial institutions for loan guarantee and collateral purposes. Lenders need to be assured that protection against a wide spectrum of perils are also provided to ensure the farmer can repay loans.

We recommend the initial focus of ICMEs should be to offer parametric covers for catastrophe perils such as drought and tropical cyclone, although it should be noted that expert consultation to this report also indicates that ICMEs with more comprehensive risk management products can also be successful if earlier recommendations are adopted.

Data and Modelling

- In common with all insurances, parametric policies require robust, reliable, consistent, independent, granular data for structuring, pricing and settlement. The BOM already captures extensive data on many natural perils, but an increase in the spatial distribution of observations will enhance the development of parametric policies that more accurately reflect the localised exposures of the ICME membership.

We recommend the Government supports investment in the orderly capturing of robust and granular yield and weather data.

Research and Training

- ICMEs need strong leadership, expert management and a strong sense awareness and understanding amongst the potential membership.

We recommend the Government invests in developing formal industry-led training and educational programmes to raise awareness of ICMEs amongst industry bodies and potential members. Ultimately, these training programs should be extended and embedded in recognised training or educational entities. Such training should provide:

- **Support for education and training for advisors who deal with ICMEs.**
- **Advice and assistance for ICMEs experiencing threats to the capital base.**
- **Support ICMEs in learning about and using MCIs and Co-operative Capital Units (CCUs)[1] [2].**

In addition to these education and training enhancements, we also draw attention to the Business Council of Co-operatives and Mutuals (BCCM), 'blueprint' for supporting agricultural co-operatives,[3] which recommends such government policy and program adaptations, supported by findings from this study, that capital constraints are the major issue for CMEs and therefore to:

- Enhance the demutualisation provisions in relation to mutual capital instruments (MCIs).

[1] Enabled in NSW since 1993.
[2] Enabled in NSW since 1993.
[3] Business Council of Co-operatives and Mutuals, "Co-Operative Farming: Blueprint for Future-Proofing Aussie Farmers," (Sydney: Business Council of Co-operatives and Mutuals, 2020).

Section 2: Introduction, Background and Aim of the Project

Scope of the Report

While mutuals and co-operatives offer a number of benefits, including achieving economies of scale with purchasing and or marketing, peer support services related to financial risk etc., the key focus of this project is to explore the benefits of mutuals and co-operatives as useful structures in helping their members to manage financial risks through insurance and other risk transfer options.

The project will compare Australian co-operative and mutual enterprises (CMEs) with international examples, focussing on the key drivers and barriers, and making recommendations on how mutual and co-operatives could improve their suite of services to achieve better financial risk management outcomes for their members. This required consideration of three things:

1. The context of the operation of CMEs in Australia;
2. The offering and provision of risk mitigation agricultural insurances in Australia, especially considering experience and barriers; and
3. At the intersection of 1. and 2., an overview of insurance-providing CMEs (ICMEs).

There are however, very few examples of ICMEs and so we also had to rely to some extent on unsuccessful efforts to establish them for additional data.

Aims and Deliverables

As provided in the project Terms of Reference, this report aims to address the following key questions related to mutuals and co-operatives:

Deliverable 1	
a)	*Describes how mutuals and co-operatives in the agriculture sector currently work in Australia and in other major developed countries in terms of assisting farmers manage financial risk.*
b)	*Collects and details data on the number of Australian farmers joining mutuals and co-operatives for the purpose of managing financial risk by commodity, size of business, and location*
c)	*Collects and details data on the number of farmers in major developed countries who are members of comparable mutuals and co-operatives and compare this with the Australian data.*
d)	*Collects and details input on the value and impact of mutuals and co-operatives as assessed by farmers who are currently members of mutuals and co-operatives in Australia.*
e)	*Identifies and assesses potential existing and new developments related to mutuals and co-operatives for assisting farmers manage financial risk.*
f)	*Identifies and assesses barriers to farmers in Australia and in major overseas countries to joining and or remaining in mutuals and co-operatives.*
g)	*Identifies, assesses and makes recommendations on the conditions needed to address these barriers and the viability of putting those conditions in place.*
h)	*Identifies and assesses the commercial impact on the Australian agriculture sector generally and by major commodity of increasing membership of mutuals and co-operatives.*
i)	*Identifies and assesses the public policy impact of increasing membership of mutuals and co-operatives.*
Deliverable 2	
a)	*To convene and engage with a farmer reference group for the duration of the project to seek input to inform, validate and test the information and ideas contained in the report.*
Deliverable 3	
a)	*To work with the overarching Project coordinators and other sub-project groups to deliver a holistic and consistent report and set of recommendations.*

Framing the Research

In order to focus the work, we started with some key assumptions, based on literature and previous work by, and experience of, the team. These included:

1. Agricultural insurance markets are unlikely to spontaneously develop at this stage of available technology, data and attitudinal orientation.
2. Most multi-peril or extensive agricultural insurance programs throughout the world have involved government support and therefore if governments and industry bodies deem this form of risk management to be desirable, then some direct or indirect contribution is likely unavoidable.
3. Australian agricultural policy settings are however unlikely to accommodate on-going support programs for farmers, especially where these involve transfers. Specifically, we do not expect there will be premium subsidies or similar available in the foreseeable future. There is however ongoing and occasionally strong interest in agricultural support programs, so some types of risk-mitigation intervention are likely to continue or be trialled.

In summary, government interventions in agricultural risk management are possible but likely to be limited in extent of support and choice of policy instruments.

We then reflected on possible justifications for: developing insurance-providing co-operative and mutual enterprises (ICMEs) as structures that could be used to reduce farm business risk; and for government support for such entities. For this, we largely draw from literature on agriculture co-operatives in general[1] and comparisons with other countries.

Some advocates for co-operatives have claimed that co-operatives are desirable because of **spillover social benefits from having a 'third' sector**.[2] From his comprehensive history of agricultural co-operatives in Australia, Lewis concluded that such 'idealism' was evident in the 19th century origins of co-operatives but this thinking was largely overwhelmed by more pragmatic justifications as set out below.[3]

One of the main pragmatic justifications of CMEs is the potential to **reduce costs** for a group of producers, which in the case of insurances would be either or both, a reduction in premium costs and offsetting returns to members. In addition, per farm **transaction costs** could be reduced through collective management and purchasing, for example for reinsurance. These factors could boost overall farm profit, or at the very least, reduce income variability, which could further contribute to the stability of associated rural business incomes – broader rural economic development benefit.

CMEs can also provide **'complementarity benefits'**,[4] through developing social capital for a group. As a speculative example, the development of a successful ICME could lead to other collaborative activities, such as purchasing of inputs or selling commodities, that could cut other costs and increase prices. Furthermore, there might be **personal benefits** from the social aspects of working with others.[5]

Turning to the justification for government support of an ICME we briefly review some more general arguments for government intervention.

First, there is a possible **market failure**. At face value though, the failure to develop a market for agricultural insurance might instead be just due to very low demand at the price considered profitable by suppliers. There could however be a market failure in relation to information about the benefits of insurance, though from our study, farmer participants do believe they have enough information to make risk management choices in general and believe they are familiar with insurance choices. We note though, work from behavioural economics that casts considerable doubt on the human ability to accurately assess risk and to self-assess one's own skills and knowledge.[6] Therefore, information provision about risk management instruments might still contribute to market creation, even where *ex ante* stated demand is not evident.

A second argument is that agricultural production in general has particularly important social and national roles (food supply, historical significance, regional population), and faces particular difficulties (climatic and price volatility, lack of market power) and therefore should be allowed a degree of **policy exceptionalism** that might include forms and extent of support not available to other sectors. Related to this, some of the expansion of government scope and spending is

[1] William van Caenegem et al., "Collective Bargaining in the Agricultural Sector," (Canberra: Rural Industries Research and Development Corporation, 2015).
[2] Greg Lewis, *The Democracy Principle: Farmer Co-operatives in Twentieth Century Australia* (Wamboin NSW: Greg Lewis, 2006).
[3] Ibid.
[4] van Caenegem et al., "Collective Bargaining in the Agricultural Sector."
[5] Ibid.
[6] Daniel Kahneman, *Thinking, Fast and Slow* (New York: Farrar, Straus and Giroux., 2011).

about recognising and helping to manage personal and sectoral risks,[1] so governments could also support risk management by Australian farmers.

A third perspective, and one especially relevant to this study, is the idea of **marginal policy change**.[2] This is a defined change from a current policy setting, say parts of drought support programs, to a clear alternative such as government support of selected ICMEs, which is a realistic reflection of how much policy is implemented. The effects of the marginal change can then be analysed. In this case, the contention is that current funding and programs for extreme events could, respectively, be reallocated and redesigned to increase net social benefits.

[1] David Moss, *When All Else Fails: Government as the Ultimate Risk Manager* (Cambridge Mass.: Harvard University Press, 2004).
[2] Pedro Carneiro, James J. Heckman, and Edward Vytlacil, "Evaluating Marginal Policy Changes and the Average Effect of Treatment for Individuals at the Margin," *Econometrica* 78, no. 1 (2010).

Section 3A:

Describes how mutuals and co-operatives in the agriculture sector currently work in Australia and in other major developed countries in terms of assisting farmers manage financial risk.

Comparative Studies: Approach and Function

In this section we review the development of co-operatives in several other countries in order to highlight: contextual and structural differences that suggest possibilities for, and barriers to, CMEs in Australia; risk mitigation insurances programs to suggest options for, and barriers to, such developments in Australia; and possible approaches to developing ICMEs in particular.

Such comparative studies need to be treated carefully as there are many factors, some of which operate in conjunction, that contribute to the development and persistence of CMEs ICMEs. Thus, conclusions about policy transfers need to be heavily qualified.

Mutuals and Co-operatives: Origin and Overview

Co-operation and mutuality have a long history, given the general evolution of humans in group settings. CMEs, appear in many forms, as buying and selling groups, retail and wholesale trade organisations and most relevant to our explorations: mutual insurance companies offering tailored and affordable protection to a pool of, relatively, homogeneous policyholders.

Whilst there is evidence of mutuality and 'friendly societies' dating back to the 18th century, which we would now term 'insurance' provision, we look to the United Kingdom in the 19th century to the birth of co-operative societies amongst flannel weavers, printers and mill workers. Initially this was characterised by members' subscriptions facilitating sick pay. The flannel weavers of Rochdale (UK) explored iterations of co-operative societies, eventually drawing up a 'recipe for mutual action' - the Rochdale Equitable Pioneers Society: "open membership, democratic control…, distribution of surplus in proportion to trade, payment of limited interest on capital, political and religious neutrality…and the promotion of education"[1]. Two hundred years later these Rochdale principles remain central to CMEs around the world across industries as various as healthcare and agriculture. Soon after this early innovation the credit needs of rural farmers in Germany were being met by co-operatives. Comparable enterprises soon existed in Brazil, Japan and Australia. The innovation in the first half of the 19th century was followed by legislation in the second half and the turn of the 20th century, encoding the legal structure and commercial operation of such institutions. The Mutual Reform Act of 2019 in Australia for example updated the broader 'Corporations Act', legislating for the definition of co-operative entities.

CMEs have a global membership of around one billion - it is often the case, especially in agriculture, that people are members of several organisations. Countries where membership is most ubiquitous are India, China and the USA. Globally there are estimated to be 2.6 million co-ops[2]: the key sectors constitute insurance (mutuals) and the agri-food industry (comprising about one third each) and wholesale/ retail trade (with a 20% share).[3] While the core cultural principle of collectivising to achieve scale and an economic benefit remains, the majority of modern day CMEs are first and foremost defined by their constitution: their ownership structure and the nature of their profit distribution. The abidance to the broad founding cultural principles of the Rochdale Equitable Pioneers Society varies greatly from nation to nation and entity to entity and invariably the culture and purpose of these organisation differ hugely.

In trying to define a co-operative we must refer to our brief exploration of their evolution and the two, intertwined, facets: firstly, the underpinning social philosophy of the entity and, secondly, the nature of their incorporation and ownership structure (which varies according to the nuanced legislation of different territories). A co-operative, therefore, is where a body of people come together-collectivising- as joint owners and members of an enterprise. The members are united by a profession or purpose and their scale facilitates mutual economic benefit as well as auxiliary benefits such as education and access to innovation. Co-operatives generally have open and democratic membership where increased

[1] Mayo, Ed., "A Short History of Co-operation and Mutuality", https://www.uk.coop/sites/default/files/uploads/attachments/a-short-history-of-cooperation-and-mutuality_ed-mayo-web_english_0.pdf
[2] Dave Grace and Associates, Measuring the Size and Scope of the Co-operative Economy: results of the 2014 global census
[3] ICA & EURICSE, World Co-operative Monitor: exploring the co-operative

patronage can lead to increased benefit. Members may have varying shareholdings, but all are entitled to vote on company matters. Profits are not returned to external investors but to members, as a dividend, bonus or rebate. Alternatively, profits are returned to the business to further improve the core value of the business to members - perhaps reducing premiums of a mutual insurance company or rolling out improved software for a farming co-operative.

Mutuals and Co-operatives in Agriculture

Agriculture co-operatives originate in the joint buying and selling of goods (offering economic efficiency) and in the provision of credit insurance to farmers (enabling economic security).

Australian farmer co-operatives probably started with dairying in south coast NSW in the late 19th century. The Co-operatives tended to be more prolific in some industries, such as dairying, and in small farm areas where physical proximity and shared values, such as religious values. may have also contributed to the supporting social capital.[1] There was some degree of idealism about co-operatives in economy and society but this was largely displaced by the focus on commercial benefits during the 20th century.[2] These benefits were seen to be the elimination of 'middle men', better supply chain management, greater capacity for quality control, increasing scope for adding value, acceleration of production innovations and providing stronger competition for other suppliers and buyers.[3] Co-operatives were predominantly focussed on selling commodities but many also developed retail functions, including the provision of insurances to farmers.[4]

Lewis concludes that the early development of Australian co-operatives left a relatively 'weak legacy'[5] because of:

- No real co-operative 'movement'. The emerging sector was not considered particularly important for either or both philosophical or pragmatic reasons and so CMEs remained a very minor part of Australia's socio-economy and policy considerations.
- Internal disagreements about direction and purpose.
- Competition from 'bogus' co-operatives and adverse political lobbying by commercial competitors.
- Legislative complexities that added burdens to co-operatives.
- State-based legislation and registration that limited expansion and collaboration.
- Constraints on capital raising and particular difficulties during economic crises (e.g. price slumps and the Great Depression).

There were two related developments that strongly affected the contemporary environment for Australian agricultural co-operatives. First, was the development of statutory marketing authorities (SMAs), a form of compulsory collaboration, developed and applied from World War 1 through the 1960s, with regulated commodities including coarse grains, especially wheat, many fruits, eggs and dairy products. Therefore, many industries' producers had little or no exposure to voluntary co-operatives while those and others were also inured to government as providing risk management through supply, pooling and pricing management. There were strong co-operatives in the dairy industry, but these worked within a highly regulated environment. The second development was the deregulation of such arrangements from the 1970s. With the economic deregulation of agriculture from the 1970s, most SMAs moved, at various speeds, through stages of corporatisation, in which the power of compulsory acquisition of commodities was pared away. Some became actual or quasi co-operatives, but most moved on to become listed companies and many major former SMAs are now foreign-owned. One of Australia's largest businesses, Wesfarmers, started life as a co-operative in Western Australian. Parallel to that, long standing co-operatives, such as those in the dairy industry moved through amalgamations (in some cases) and demutualisation.

From a review of the history of agricultural co-operatives, Greg Patmore (Pers. Comm.) estimates that there have been approximately 930 agricultural co-operatives in Australia. By 2000 Lewis estimated there were about 300 operating, with 10 of those in the top 1,000 Australian businesses, of which six were dealing with dairy products.[6] As at 2020, of those 10, only two remain as co-operatives.[7] Overall, there are 229 'agribusiness co-operatives', 189 for farming fishing or forestry and 40 for irrigation schemes.[8] They have a membership of 24,000 individuals.

[1] Lewis, *The Democracy Principle: Farmer Co-operatives in Twentieth Century Australia*.
[2] Ibid.
[3] Ibid.
[4] Records on services provided are incomplete but notable examples of insurance provision include the Co-operative Insurance Company, formed in 1918 by 2 farmer co-operatives and the Farmers and Graziers Co-operative Grain Insurance & Agency Company.
[5] Lewis, *The Democracy Principle: Farmer Co-operatives in Twentieth Century Australia*.
[6] Ibid.
[7] Norco (dairy) and CBH (grain)
[8] Business Council of Co-operatives and Mutuals, "Co-Operative Farming: Blueprint for Future-Proofing Aussie Farmers."

Farmer co-operatives were providers of insurance from early in the 20th century, though as far as can be ascertained this would not have included production-related insurance. Some of these early insurance enterprises became parts of major insurance companies through privatisation and mergers. There is very little in the way of farmer co-operatives currently offering insurance. We identified the following current or recent cases:

- CBH offered multi-peril crop insurance in 2010/11 to grain grower members but did not continue.
- Latevo Farmers Mutual is offering a farm income protection model.
- Farmers Mutual Limited (FML), developed a full proposal and structure but has recently been delisted.
- The Sweeter Banana Co-operative of Carnarvon Western Australia run a self-funded production protection model.
- Sugar cane growers in Queensland and some of the researchers for this project are developing a cyclone protection proposal.

These will be discussed more fully later in the report.

Mutuals and Agricultural Insurance

Internationally, agricultural mutuals have tended to offer cover against single perils (e.g. fire and hail) rather than multi-peril crop insurance (MPCI). Some territories have more comprehensive MPCI offerings that are underpinned by government subsidy. Generally, 'spot perils' like hail and fire are easier to loss-adjust and have less aggregate impact on a mutual's risk portfolio. Systemic risks such as drought are challenging to adjust and are intimidating from a 'probable maximum loss' scenario. These systematic risks are however, the key, harvest-ruining, concerns that farmers- notably in Australia- most fear. Although 'local' perils such as hail and fire are non-trivial concerns, the key hazards that impact agriculture tend to be those systemic in nature, affecting vast areas and having knock-on impacts well beyond the typical annual insurance policy cycle: drought, tropical cyclones and flood. A single cyclone event may affect a very large area and have a dramatic impact on a mutual insurer with a large market share in that location. To mutualise risks with such high loss potential requires effective reinsurance and capitalisation. If these are not in place, the mutual may be unable to pay claims to its members or offer the cover in the first instance.

Premiums offered by mutuals to a homogenous pool of members tend to be cheaper than those offered by a typical commercial insurance company, to one-off farming risks. The nature of mutuals' geographic risk spread, and their deep understanding of their membership facilitates efficient pricing. Additionally, their mutual make-up enables competitive reinsurance support, structured in such a way as to promote the growth of their market share whilst not having to underwrite this ambition entirely on their own balance sheet. Mutual insurers may typically operate with reduced cost pressure from their grower members- they operate not to create a capital return for external investors but to satisfy their members with affordable insurance and excellent service. Farmer members do not pay membership and/or premiums in a speculative manner in order to grow their capital but in order to underwrite the ongoing prosperity of their business: farming. This gives mutuals a distinct advantage and underwriting flexibility not available to typical commercial insurers.

Insurance mutuals seek to cultivate strong brand awareness amongst their target members. The agriculture focus encourages and cultivates expertise amongst those designing and pricing the insurance products. This leads to targeted and appropriate coverage options; simply put, the insurance mutual understands the class of business - the cover they offer is appropriate and empathetic to the farmer-member's needs. Members recognise this expertise and value the presence of the mutual. This fosters trust and collaboration between members - this collaboration may arise as feedback on coverage options and the mutuals tweaking and advancing new cover designed for the specific needs of members. Trust that stems from the core purpose of membership - affordable and reliable insurance - is a great cornerstone on which to build auxiliary member benefits: initiatives for rural communities' education and technological innovation. This encourages long term relationships and embeds insurance mutuals as a key tool and partner for farmers. Generally, the barriers to entry for membership to CMEs are low, with affordable share buy-in and membership generally open and encouraged (although not across the board).

Co-operatives and Mutuals as Legal Entities in Australia

We defer to the Business Council of Co-operatives and Mutuals (BCCM)[1], the 'peak' body for CMEs in Australia, to assist our understanding of the legal and operational characteristics of these companies within Australia's corporate

[1] We acknowledge Anthony Taylor and Melina Morrison from the Business Council of Co-operatives and Mutuals for providing reports and valuable advice related to mutuals and co-operatives.

landscape. The BCCM determine that the purpose of a CME is to 'provide goods and services to its members, on an equitable basis'[1]. 'Equitable' means that all members derive equal benefit, from the mutual. This may mean 'universal', or proportional to the extent of their patronage - the more members transact with the CME the greater their benefit (in savings and rebates etc.). This feature is not just encouraged but it is written into the constitutions of the entities. This equality can be considered as 'fairness'; fairness achieved through members sharing power, receiving rebates not in excess of their proportional contribution to the mutual[2].

With agriculture in mind and the 'systematic' perils mentioned previously, we note BCCM's assertion that "CMEs emerge where there is a 'market failure'. Hence, traditional forms of business are seen as not meeting peoples' needs. Mutuality consists of people making a commitment to each other through the mutual organisation they have set up."[3]

Internationally, there is often specific legislation passed to guide CMEs of different forms. In Australia, prior to 2001, friendly societies, credit unions or building societies were similarly governed by separate legislation, the 2001 Corporations Act however dictated that all federally registered CME's adhere to the Companies Act as companies - they are limited by share or guarantee, or both, as laid out in their articles of incorporation. There are exceptions for state registered CMEs.

Federally registered mutuals can seek to be registered as a 'Mutual Entity' under the Corporations Act. This catch-all approach infers more freedom and pragmatism for companies. These companies do not have matching constitutions: they arise in a range of guises, but they exhibit the same style and features, such as the equitable membership described above[4]. They are united not by their legal form (of which there are many) but by their common goal of mutuality and they design their constitutions accordingly, within the confines of the Companies Act. As with shareholder owned companies, CME's are legally distinct from their member owners.

Considering mutual entities in Australia the BCCM points to the 'Treasury Laws Amendment (Mutual Reforms) Act 2019', which allows a federally registered company to be considered a 'Mutual Entity' if it is registered under the 2001 Corporations Act and if it only permits a single vote per member (for each function they hold as a member) at company meetings. The 2019 revision does not go very far in catering to the unique characteristics of mutuals as they retain the same tax and corporate status as a CME.

The 2019 Act determines how mutuals are permitted to raise capital and which mutuals can issue a Mutual Capital Instrument (MCI). Previously, mutuals had to raise capital as debt (through bank lending), which contributed to pressures for demutualisation in some cases. An MCI provides greater flexibility in fundraising and investing, while encouraging growth and avoiding compromising their mutual status. If an eligible mutual issues an MCI it becomes a 'MCI Mutual Entity' and the provisions of MCIs must be accounted for in their constitution. MCI's are securities unique to the mutuals sector, with specific rights attaching to the security relating to dividends, repayment in the event of winding-up and participation in excess profits and assets. Some mutuals have strict constitutional regulation which may inhibit use of the MCI allowance, but the Act has provisions to enable constitutional changes to allow the mutual to take advantage of this new capital raising option.[5]

CMEs are also subject to National Competition Policy regulations, including oversight by the Australian Consumer and Competition Commission (ACCC). Australia has a generally 'neutral' approach to CMEs, in that they are subject to similar rules to other businesses. This means that monopoly and near monopoly situations and mergers and takeovers will be scrutinised as to their effect on market competition. Those intending to engage in collective market activity (buying, selling or services) may have obligations to notify the ACCC of their intentions.[6]

Regarding the governance of these CME's, the level of interaction by members will vary but generally they conform to the principle of one vote for one member, or at least a close derivation of this principle. Voting shares may increase proportionally with the size of shareholding, however an upper limit on a vote's weighting is used to ensure no single member has too much power. Governance by members can be conducted directly or indirectly through representatives or proxies who exist to aggregate and represent members' interests.

[1] "BCCM: Defining Mutuality", Business Council of Co-operatives and Mutuals, https://bccm.coop/.
[2] *As per footnote 1*
[3] *As per footnote 1*
[4] *As per footnote 1*
[5] BCCM, "What the Mutual Reform Act 2019 means for Mutuals".
[6] van Caenegem et al., "Collective Bargaining in the Agricultural Sector."

Section 3B:

Collects and details data on the number of Australian farmers joining mutuals and co-operatives for the purpose of managing financial risk by commodity, size of business, and location.

Australia

As noted previously, there are now few, large agricultural CMEs in Australia and a very small number of ICMEs, with only one having a track record beyond one or two years of product offerings. In addition, there is no known research on ICMEs and little requirement for them to publish or provide data. Data on participation in ICMEs are therefore very limited. We are able to provide some survey data from a sample of farmers. First though, we contrast the state of Australian ICMEs with some in other countries, also noting other cases that can contribute to understanding the context of Australian CMEs more generally.

A. Collects and details data on the number of farmers in major developed countries who are members of comparable mutuals and co-operatives and compare this with the Australian data.

Mutuals and Co-operatives: International Perspective

This project has chosen four countries to compare CME activity. These were all chosen for having a comparatively active agricultural CME sub-sector, including some offering risk management products.

Country 1: New Zealand

New Zealand is in some ways the most similar to Australia, in terms of histories of European settlement, economic structures and deregulation of the agricultural sector from the 1970s. They are both countries that are 'neutral' about economic structures in markets, that is CMEs receive little in the way of incentives or 'exceptional' (especially favourable) policies.

CMEs in New Zealand are member owned and controlled businesses, dedicated to benefit distribution not profit creation for investors. Compared to Australia, CMEs have a strong role in New Zealand specifically in agriculture. With the withdrawal of government subsidies for farmers in the 1980s, and no government sponsored insurance scheme, farmers found security and kinship in CMEs, and where possible, specifically in mutuals. New Zealand's deregulation of agriculture was even more extensive and rapid than that of Australia and so adaptation by and through co-operatives was important.

Many CMEs are underpinned by the 1996 Co-operatives Companies Act which was intent on re-affirming the values of a co-operative economy. Although ownership structures vary, NZ CMEs rely on open and democratic member control: "at least 60% of the voting shares must be held by transacting members if the business is to retain the term 'co-operative'…".[1]

There does not appear to be a competitive landscape for agriculture insurance mutuals in NZ. Farmers Mutual Group is dominant with more than half the market share. It largely competes for business with commercial brokers, insurers and reinsurers (on and offshore). Through FMG, farmers find value in agriculture insurance and in the mutual insurance model.

Co-operatives and Mutuals in New Zealand

Agri-food co-operatives are the most prevalent form of CME in New Zealand, by revenue. They provide wide-ranging set of benefits to their growers, with a focus on cost-saving and 'quality' for differentiation.

There are several types of co-operatives in New Zealand.

[1] Woodford (2008)

- **Producer Co-operatives:** Co-operatives owned by businesses of a common nature. These co-operatives also offer the opportunity for increased efficiency and improved branding.
- **Purchasing or 'shared services' Co-operatives:** Independent business owners (such as farmers) come together, using their scale to form a buying group. They occur across industries but agri-food is particularly prevalent sector.
- **Banking Co-operatives:** Financial entities whose customers are also owners. They often appear as credit unions or building societies.
- **Insurance Mutuals Co-operatives:** Policyholders are also the owners of the business. Profit is either returned as dividends to members (policyholders) are utilised to reduce future premiums.
- **Consumer Co-operatives:** These businesses may sell food or provide housing, or even a service. They are owned by consumers.
- **Worker Co-operatives**: Owned and managed by their employees across all sectors, providing employment and ownership.

New Zealand's leading 30 mutuals and co-operatives (selected by the 2017 report 'The New Zealand Co-operative Economy) are responsible for >NZD 42 billion annual revenue, or USD 30 billion, roughly 18% of New Zealand's GDP, with 1.4 million memberships, which is significant given the total population of 4.8 million people.[1]

Table 1: Top 20 Co-operatives in New Zealand by membership (2015)

Name of Co-operative	Revenue (NZ$)	Active Area
Fonterra Co-operative Group	18,845	Agrifood
Foodstuffs - North Island	6,239	Agrifood
Foodstuffs - South Island	2,721	Agrifood
Silver Fern Farms	2,434	Agrifood
Farmlands Trading Society	2,210	Agrifood
Alliance Group	1,502	Agrifood
Zespri	1,459	Agrifood
Balance Agri-Nutrients	893	Agrifood
Southern Cross Medical Care Society	818	Finance
Ravensdown Fertiliser Co-operative	711	Agrifood
Mitre 10 (New Zealand)	709	Retail
Westland Co-operative Dairy Co	639	Agrifood
Independent Timber Merchants Co-operative	398	Construction
Market Gardeners	329	Agrifood
CDC Pharmaceuticals	293	Pharmaceuticals
Tatua Co-operative Dairy Co	286	Agrifood
Capricorn Society	261	Automotive
Livestock Improvement Corporation	228	Agrifood
FMG	209	Finance
Southland Building Society (SBS Bank)	183	Finance

Co-operatives and Mutuals in Agriculture

In NZ Agrifood is responsible for 65% of the revenue (as collated within 'The World Co-operative Monitor's' report on the 'Top 300 Co-operatives')[2]. Only 3.4% of CME revenue is attributable to insurance, banking or finance (as at 2015). The agri-food sector is smaller by memberships but has a great revenue significance, driven by the quantity of supply/purchase co-ops and the prominence agri-food has in the New Zealand economy. It is estimated that when the value of farm inputs is added to farm-gate goods, as well as basic processing activities, the agri-food 'system' contributes ~NZD 33 billion to the total GDP (12.4%) - this is against the NZD 15 billion from financial services.[3]

The horticulture industry has a range of marketing co-operatives, as well as primary agriculture supply entities, such as Zespri, the marketing body for kiwifruit growers and Eastpack and Satara for storing and packing kiwifruit. Fertiliser production and processing are dominated by two farmer owned co-operatives, and most farmers belong to at least one general farm merchandise supply co-operative.[4]

Whilst co-operatives and mutuals are generally distinct, membership of one often confers membership and economic benefits of another. For example, membership of Farmlands Co-operative, the largest buying group of its kind, gives

[1] Garnevska, E., Callagher, L., Apparao, MD., Shadbolt, N. and Siedlok, F. (2017) The New Zealand Co-operative Economy Massey University, Palmerston North, New Zealand
[2] https://www.ica.coop/sites/default/files/publication-files/wcm2018-web-1542524747.pdf
[3] Woodord, Keith., (2019) https://www.interest.co.nz/rural-news/102105/agricultural-gdp-catches-well-under-one-quarter-agribusiness-system-such-it-fails#:~:text=But%20here%20is%20a%20start,production%20was%20therefore%2025%20billion.
[4] Woodford (2008)

affinity benefits through its 'Farmlands Card': including savings on insurance purchased through Farmers Mutual Group (FMG).

Whilst NZ co-operatives look to build a broad menu of benefits for members, they do not stray into offering financial services beyond high level farm management advice or referrals to commercial brokers, or perhaps discounted premiums with mutual insurers. The kiwifruit co-operative and exporter, Zespri, is an anomaly: facilitating Zespri branded insurance to members as an auxiliary benefit to membership- *but*- this is underwritten by a commercial insurer. So, whilst there are many holistic benefits to membership of agriculture co-operatives, including implicit financial management and support, the only explicit financial risk management is found in insurance, through mutuals. Before moving to the ICME examples, we use the case of Fonterra to make a comparative point about CMEs more broadly.

Case Study: Fonterra Co-operative

Dairy is "New Zealand's most important export industry…[with] one mega co-operative (Fonterra) processing and marketing about 95% of national dairy production"[1] Fonterra is a dairy co-operative, employing more than 20,000 people, including internationally, and more than 10,000 supplier shareholders. It also has a significant presence in the Australian dairy industry. Fonterra are responsible for 25% of New Zealand's exports, returning NZD 10 billion back into rural New Zealand. The cost of a share is subject to change and is driven by trade on an 'exchange'. Shareholders must consider a share standard that requires that, "as a minimum, one share is held for every kilogram of milk solids supplied". "Fonterra shareholders, and new entrants whose applications to supply have been accepted by Fonterra, can purchase shares at any time of the year. Shares can be purchased from other farmer shareholders at the current market price using the Fonterra Shareholders' Market or privately through an off-market transaction (e.g. as part of a farm sale). At least 1,000 shares must be registered in your name before milk will be collected. Farmer shareholders may hold up to 200% of the Shares they must hold under the Share Standard."[2]

The key comparison is that the scale and dominance of Fonterra are in contrast to CMEs in Australia. With the rapid deregulation of the NZ economy and agriculture, producers, supported to some extent by government, opted to keep a large industry co-operative. Some reasons for this difference will be further explored in the discussion on Australia.

Case Study: Zespri

Zespri is effectively a statutory marketing authority (SMA), with a co-operative structure and sells more than 167.2 million trays of kiwifruit; this is generally increasing.[3] Zespri recently underwent corporate restructuring to formalise as a co-operative and ensure ownership and control lay with its grower members. Growers took the opportunity to increase their shareholdings or become shareholders in a targeted share issue and buy-back programme; "More than half of the applications were from previously unshared growers and the percentage of total shares in Zespri held by growers has increased to 85%."[4] Members have a varying number of shares depending on the volume of fruit they feed into Zespri. There are more than 2,700 producers. Members receive a dividend each year; the dividend increased in 2018/19: $0.92 versus the $0.50 the previous year[5].

Zespri receive a loyalty payment from licensed growers which is split between Zespri and Plant & Food research in NZ- highlighting a focus on developing crop quality and yield for the betterment of growers. "Zespri's share of those royalties was $28.4 million in 2018/19, an increase of 37% from the previous year reflecting both higher volume and value earned on sales…."[6] In their 2018/19 annual report Zespri stress their investment on innovation, which is another benefit of agricultural CMEs: "Total investment on kiwifruit innovation, including from our research partners, was $44 million, of which Zespri contributed $31 million."[7] Thus, in Australian terms, Zespri is both a CME and something of a research and development corporation (RDC).

Zespri distributes insurance to its farmer-members for their crop risk. Hail insurance is provided to members as part of their 'grower supply agreement': the 'Zespri Group Limited Pool Hail Insurance Policy' pays for the loss of individual Class 1 kiwifruit which are damaged having been directly 'struck by hail, on the vine', and which are then unable to meet export standards. The risk is underwritten by a commercial insurance entity - Primacy, with international support.

[1] Woodford, Keith., (2008), The Diversity of Co-operative Structures in New Zealand Agribusiness Journal of Co-operative Studies, 41.1, April 2008
[2] Fonterra Share Standard, Key Facts, https://www.fonterra.com/content/dam/fonterra-public-website/fonterra-new-zealand/documents/pdf/Information_Sheet_General.pdf#
[3] *As per footnote 1*
[4] Zespri Annual Report, 2018-19
[5] *As per footnote 3*
[6] Zespri Annual Report, 2018-19……
[7] *As per footnote 3*

Thus, government and producers have effectively transitioned a state-backed monopoly into a CME monopoly. This has two effects: maximising both membership (of kiwifruit producers) and possible scale of operation within the industry. Zespri provides insurance but it is for a single commodity and for limited perils. In terms of membership scale and industry place within a designated region, Zespri is somewhat like CBH, but its main commodity and insurance product are more akin to Sweeter Bananas.

The three points to note from this case are:

- The transition from an SMA to a co-operative, which was rarely done in Australia;
- The research function that gives Zespri a broader remit and additional revenue flows; and
- The specificity of the industry cover and risk focus.

Mutual Agri-Insurers

Mutual insurers exist in New Zealand beyond agriculture in the areas of health, shipping and construction, but FMG is a major enterprise in the New Zealand context.

Case Study: Farmers Mutual Group

FMG has >50% of the agri-insurance market share, with the remainder held by a collection of investor-owned national and international insurers.

As in Australia, agriculture-based insurance mutuals started in the early 20th century, and FMG is the product of the 1978 merger of three regional entities.

Farmers Mutual Group is owned by more than 65,000 NZ shareholders, with profits returned to policyholders as dividends (although there is no obligation to pay dividends). Profits are also invested back into rural communities through FMG initiatives around farmer wellbeing, rural lobbying, 'young farmer' competitions, leadership initiatives and community programmes. FMG offers insurance for livestock, arable and horticulture crops as well as forestry assets, farm buildings, vehicles and equipment. Liability and business interruption risks associated with farm businesses are also covered.

The geographic spread of risk FMG presents a different risk profile to that of an urban or metro heavy insurer. This is beneficial for FMG's risk management and for reinsurers who support FMG - more affordable reinsurance feeds into better pricing for NZ farmers. Mutual insurers can exercise greater discretion on keeping premiums at an affordable level as the level of exposure oversight is greater given the focus on a speciality - a broad pool of homogeneous risks.[1]

FMG had a net increase of clients of 8.3% from 2018 to 2019, also increasing net profit after tax by NZD 7 million (up to NZD 19.1m) - this is largely driven by the relatively benign loss period in contrast to previous years driving losses, through the Kaikoura earthquake and several large storms. Year-end reserves, and member equity, for FMG was NZD 257.4m - this is a substantial sum with which the co-operative can support current members and extend to new customers with innovative services; their online 'service channel', FMG Connect is part of this drive.[2]

The three points from this case are:

- Continuity of operation of FMG, enabling growth, but with some evolution in scope;
- The formation from mergers (as with Fonterra); and
- Significant market position.

Conclusions

New Zealand has a number of successful agricultural CMEs, perhaps due to the scale of the country, its small economy, dependence on agricultural exports and the rapid rolling back of government subsidies to farmers in the 1980s. As in Australia, the deregulation drove some co-operative and mutual mergers, but in New Zealand some dominant CMEs developed. FMG largely stands apart as *the* mutual offering agriculture insurance in NZ. The only other extension of insurance to farmers in the CME space comes from Zespri, where membership of the company confers insurance benefits (although the ultimate carrier of the risk is not a mutual). We also see co-operatives running affinity programmes where members receive discounted insurance, and for other 'retail' purchases.

The FMG case shows the potential for a rural-based insurance company, though the discontinuity of such entities in Australia, through mergers and demutualisations, may make it difficult for start-ups for this market. The Zespri case

[1] Wu, Hong., (2005), "*A theoretical note on the mutual insurance co-operatives", NFT I.*
[2] ICMIF https://www.icmif.org/news/more-half-new-zealand-farmers-and-growers-now-insure-icmif-member-fmg

illustrates the benefits of a monopoly or near monopoly in a small production environment, in building a co-operative and the potential for single commodity entities to develop limited peril insurance to a relatively small market.

Country 2: France

Europe has the ten largest mutual insurance markets by market share, with France, which is the World's sixth largest overall insurance market, as its major player. The prevalence of mutuals and co-operatives in France has increased in the years following the global financial crisis in 2008, perhaps reflecting a high level of trust in the mutual/co-operative structure.

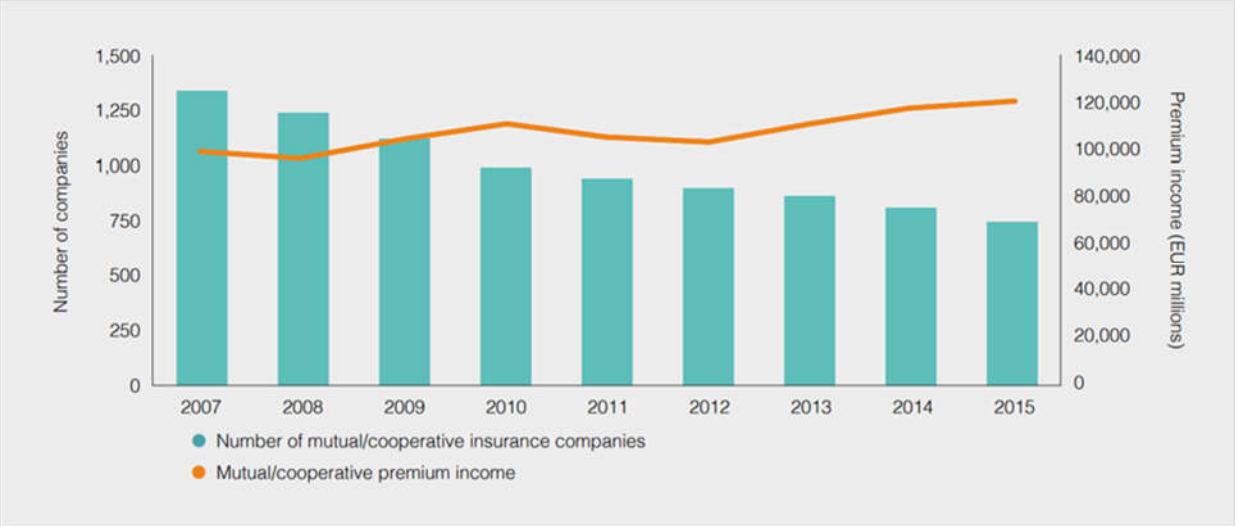
As the world's largest co-operative financial institution and founded in France, Credit Agricole enjoyed considerable government support in its early years and now provides a range of financial services to farmers.[1] In 1964 the French government began funding agriculture insurance schemes, namely National Guarantee Fund for farming calamities (FNGCA), following a series of droughts (accounting for 75% of indemnities).

Co-operatives and Mutuals in France

There are three codes governing the insurance markets in France which depend on the structure of the company; mutuals, insurance companies and provident institutions. The Insurance Code defines mutual insurance companies as not for profit organisations that are owned by the members (policyholders) and have no share capital. Insurers with a co-operative legal form are not foreseen in France, thus there are no co-operative insurance companies in France. There are, however, subsidiaries of co-operative banks or co-operative controlled groups active in the French market.[2]

The number of mutuals is decreasing but income is increasing (Figure 1). There has been year-on-year market share growth from 2007 to 2015, and the sector accounted for over a half of the total French insurance market by premiums in 2015. While mutual business increased by 4.4%, in recent years premium growth in their total markets (life and non-life mutuals) was 1%.

Figure 1: The number of mutual/co-operative insurers in France (ICMIF Facts and Figures 2018) [1]



There are more than 23,000 French co-operatives, with over 28 million members. 1 in 3 people living in France are members of a co-operative.[3] To provide France's relative position in the co-operative economy, 10 of the top 30 European co-operatives are in France and co-operatives comprise 18% of France's GDP.

There are four main types of co-operatives in France[4]:

- **Users' co-operatives**: the members of the company use the goods and services produced. This includes consumer, school co-operatives and others alike.
- **Co-operative banks** or "credit co-operatives": the partners are the clients, savers and borrowers.

[1] https://www.credit-agricole.com/en/
[2] 2018, Facts and figures: Mutual and co-operative insurance in Europe
[3] https://www.entreprises.coop/pourquoi-une-co-operative
[4] https://www.lacooperationagricole.coop

- **Co-operative companies** or "enterprise co-operatives": the members are the business owners. In this case, agricultural co-operatives fall in this category, alongside maritime, trades, haulage and shopkeepers' co-operatives.
- **Production co-operatives** or "worker co-operatives": the members are the employees.

There is no general definition of a mutual in French Law, however, there are two types of mutuals in France defined in special legislations:

- Mutual insurance companies – "sociétés d'assurance mutuelle" (SAM), which fall under the Insurance Code.
- Mutuals – "mutuelles" that fall under the Mutuals Code (Code de la mutualité). These tend to be more involved in health insurance. One of the three large health insurance regimes in France is AMEXA, farmers' health insurance system.

Mutual insurers in France also form groups called Mutual Insurance Group Societies (SGAM) allowing the sharing of administrative and operational facilities. In addition, members of this group can also "provide back-stop financial support to other partners in the grouping in the event of financial difficulties."[1]

Agriculture is the second most represented sector in Europe with more than 51,392 co-operatives; 30% of co-operative activity in Europe is agricultural and 12% is related to providing insurance. Agriculture has the highest annual turnover of the sectors, with 347 billion Euros.[2] Within Europe, France has the largest number of CME members and employees and the largest co-operative turnover[3];14.7% of these co-operative jobs in France are in agriculture, behind merchant co-operatives (43.3%) and co-operative banks (26.1%).[4] France has more than 730,000 farms and almost 7% of their workforce are employed in agriculture, which is relatively high for a developed country.

The next section will present a deeper dive into agricultural mutual/co-operative organisations.

Co-operatives and Mutuals in Agriculture

The French 'model' of agricultural co-operatives has La Coopération Agricole (CA) as the representative of agricultural, agri-food, agro-industry and forestry co-operatives in France. CA then has roles in supporting the development of co-operatives and in major agricultural policy networks.

The foundations of agricultural co-operatives were built following the economic recession of 1929 and the low prices of agricultural goods during 1880 – 1900. Producers joined to bulk-buy fertilisers and soon state intervention allowed funding for storage capacities. Since and throughout the financial crisis in 2008, co-operatives have been resilient and their model in France has proved to be a "bearer of new solutions." The model is favoured in Europe due to the benefits that co-operatives provide such as "employment, social integration, and rural development[5]". Despite some common principles regarding the co-operative model, there is no European legal framework.

The co-operative landscape has changed over recent years due to mergers, particularly co-operatives merging with non-co-operative organisations and expansion into other countries as the agri-co-operatives such as Limagrain, Tereos and Champagne Céréales have done. Co-operatives are also outsourcing various activities to non-co-operative organisations through subsidiarisation which has led to the "increased presence of French co-operatives in downstream activities".[6]

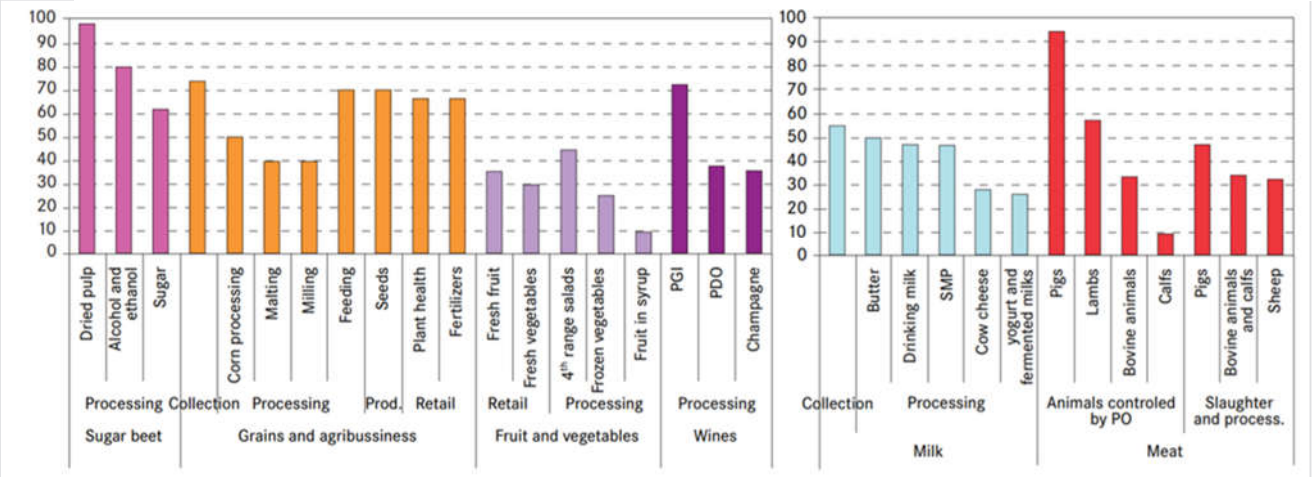
In 1972, laws were put in place which allowed co-operative organisations to do "business with outside parties but limited to 20% of turnover and subject to corporation tax, weighted voting and non-co-operative associates admitted." This also led to an increase in the formation of co-operative subsidiaries. More recent changes to law include the 1999 Loi d'Orientation Agricole (French Agricultural Framework Law) which allows any EU co-operative to join a union of co-operatives and the law of 2006, which allows the use of financial tools and increased transparency between members and the co-operative organisation.

As of 2018, France had 2,400 agricultural co-operatives, unions and SICA (Agricultural collective interest company) and 740 CUMAs (Coopérative d'Utilisation de Matériel Agricole, an agricultural co-operative society). This sector employed 190,000 and generated 84.4 billion euros of turnover.[7] Three-quarters of French farmers are members of at least one co-operative. The special co-operatives – CUMAs - allow farmers to centrally purchase farm equipment and share its use. Half of the farmers are part of a CUMA. This allows them to own and operate agricultural machinery (and share

[1] Mutual insurance in the 21st century: back to the future? – Swiss Re Sigma Report 2016
[2] Co-operatives Europe. 2020. Co-operatives Europe
[3] Lacooperationagricole.coop. 2020. Page D'accueil | La Coopération Agricole
[4] Panorama 2020 Edition, COOP FR
[5] Division of statistics and strategic foresight - strategic foresight and evaluation analysis no. 36 - November 2011
[6] *As per footnote 5*
[7] Entreprises.coop. 2020. Panorama Des Entreprises Coopératives 2020 | Campagnes | Qui Sommes-Nous ? | Coop FR

risks), especially for harvesting, and to also share agricultural employees. Approximately 74% of the agricultural co-operatives in the top 100 of co-operatives have headquarters in rural areas.

Figure 2: Co-operative market shares in various food chains (COOP de France 2010)



The EU's Common Agricultural Policy (CAP) has a very small role in assisting governments' efforts to subsidise crop insurance.[1] Other than CAP, there are no specific state-funded agricultural insurance schemes supporting French farmers.

Co-operatives also have a major presence in the credit market such as Credit Agricole, Caisse d'Épargne, and Crédit Mutuel. These banks not only provide banking services to farmers but also insurance services to protect crops against climate-related risks. See **Table 2** for the top 10 agricultural co-operatives in France.

Figure 3: Agricultural co-operatives in France, 2018 (Statista 2020)

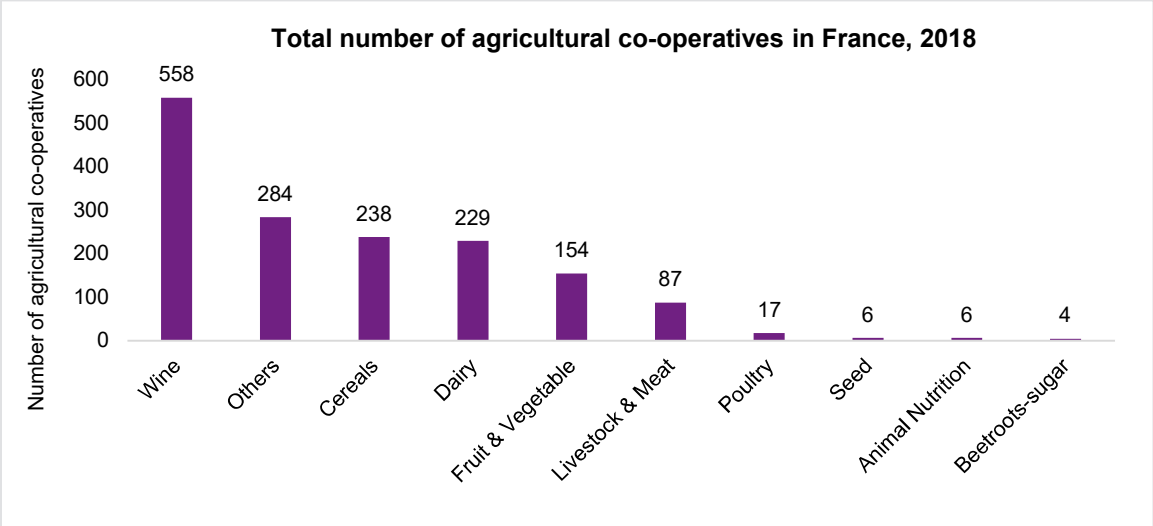


Table 2: Top 10 Agricultural Co-operatives in France (by 2016 turnover), COOP FR Panorama 2018

Name of Co-operative	Active Area	Founded	Turnover (€ millions) *including subsidiaries (2016)*	Number of Members *(2016)*	Number of Employees *(2016)*
InVivo	Cereals supply, animal nutrition, trade food, wine	2001	6,401	220	9,200
Terrena	Versatile	2000	5,196	29,000	15,890
Agrial	Versatile	2000	5,160	14,000	21,000
Sodiaal Union	Milk	1990	4,771	12,500	9,100
Tereos	Sugar	2004	4,201	12,000	23,000

[1] Agricultural and Rural Convention. 2020. Agriculture Atlas | The Biggest Beneficiary | ARC2020.

Name of Co-operative	Active Area	Founded	Turnover (€ millions) *including subsidiaries (2016)*	Number of Members *(2016)*	Number of Employees *(2016)*
Vivescia	Cereals supply, milling, malting	1927	3,607	11,000	8,000
Axereal	Cereals supply, milling, malting	2013	2,783	13,000	3,200
Cristal Uniun	Sugar	2000	2,479	10,000	2,000
Even	Milk	1930	2,100	1,400	6,000
Cooperl Arc Atlantique	Meat	1966	2,000	2,700	7,000

Case Study: Credit Agricole[1]

As France's leading financier and the ranked first in terms of turnover by the World Co-operative Monitor[2], Crédit Agricole Group has been stated as "the bank for choice for eight out of ten farmers. It is well-known for its co-operative and mutual insurance foundations serving farmers but has now expanded its portfolio into a wide range of financial services. Crédit Agricole Group has over 10 million members and 21 million customers amongst 39 regional banks. Their key services and offerings include:

Financing Solutions

- Support farmers setting up organic farms or converting existing farms.
- Full or partial deferral of repayment related to financing their operations and stabilising impacts from the transition period.
- Full or partial deferral of repayment related to agricultural equipment, materials and operation method.

Facilitating sales with mobile payment collection solutions

- Payment acceptance via smartphones and tablets using 'Smart TPE'.
- Technology available to use in markets, remote-selling, year-round or on a one-off basis.

Provide marketing opportunities

- A loan offering for marketing and advertisement such as press coverage, events, open days, creation of flyers and brochures.
- Facilitate online presence of farmers (commercial websites) through providing E-commerce packs.

Insurance Offerings

- Protect against loss of revenue due to adverse weather.
- Coverage for crop, meadow and hail insurance.
- Ensures the continuity of operation of farm.

There are three points from this case are:

- The strong and continuous role of CMEs in the economy, which is very different to Australia;
- The benefits of scale, including integration within the EU; and
- As with the NZ cases, the growth of key CMEs.

Case Study: Groupama[3]

Groupama is a leading agricultural mutual insurance group in France that also covers a wide range of other services including home and motor insurance. Its services are delivered by 2,800 local mutuals in France. It has been titled the number 1 insurer in France for agriculture, individual health and public authorities. Groupama employs 31,500 people in France and internationally (through subsidiaries in 9 other countries) and serves more than 12 million members and customers.

According to their 2019 annual report, Groupama generated a combined premium income of 14.4 billion euros, an increase of 1.7% from 2018. Last year, Groupama invested in new technological developments such as mobile solutions which aligns with their aim to offer digital and connected solutions as well as considering cyber security. For the

[1] Pressroom.credit-agricole.com. 2020. Crédit Agricole Group Supports The Development Of Organic Farming.
[2] World Co-operative Monitor: Exploring the Co-operative Economy 2019
[3] Groupama.fr. 2020. L'Assurance Multirisque Agricole - Groupama

agriculture sector, "the development of short supply chains, the energy transition, cyber risks…" seem to be the sector's new expectations and risks, which Groupama are addressing through risk management. Farmer members received pay outs totalling 250 million Euros following a "turbulent year [2019] in terms of [the] climate" (Annual Report, 2019).

The lines of business covered by Groupama include property and casualty insurance, life and health insurance and financial business activities. The agriculture-related covers are listed below:

- Multi-risk agricultural insurance (agricultural liability insurance, legal protection, business interruption insurance and livestock insurance)
- Insurance for tractors and agricultural machinery
- Animal mortality insurance
- Agricultural liability insurance
- Multi-risk climate insurance

The key points for Groupama are:

- The network structure with local CMEs as 'agents';
- The diversity of the insurance portfolio; and
- Once again, the scale of operation.

Case Study: InVivo[1]

InVivo is a French agricultural cooperation comprising 201 member co-operatives, turning over 5.2 billion Euros and employing over 5,345 people in 19 countries. The organisation is structured into three areas: Bioline by InVivo (agriculture), InVivo Retail (garden centre and food distribution), and InVivo Wine. Bioline, with a network of 48 co-operatives, produces straw cereal seeds in collaboration with Semences de France, the number-one player in the French seed market.[2] Other services include[3]:

Plant protection: Pool input purchases (crop protection, fertilization, agro-equipment) in France and in Europe

Agricultural consulting: Agrosolutions operates with farmers, co-operatives and the food industry to support them in implementing collective initiatives and responding to issues regarding quality of production, climate, water, soil, biodiversity and energy.[4]

Agrosolutions also leads Bioline Insurance, a crop insurance solution dedicated to co-operatives. It offers the following[5]:

- Protection of crop yield and quality
- Insurable crops representing 90% of cultivated surfaces (excluding grassland and forage crops)
- A low 10% deductible that increases compensation
- Covers 100% of the risks and guarantees insurance availability in the long-term.
- Product's integration into co-operative agreements strengthens their attractiveness and simplicity.
- CAP (Common Agricultural Policy) subsidy that reduces costs. CAP provides subsidies (£40bn each year) for farmers and growers in the EU.[6]

Conclusion

In France, co-operatives have a strong position in economy and society and there is a long history and culture of co-operatives amongst farmers. Risk-sharing, enhanced economic power, independence and the sharing of costs are amongst the top benefits for mutual/co-operative membership. The major players in the co-operative/mutual insurance provide credit services such as Credit Agricole and Covea, and thus hold more of the market share across all sectors. However, refining down to agricultural mutuals such as InVivo, Agrial and Sodiaal, the market is not dominated by a single entity, therefore fostering good competition.

Co-operatives are similar to other major businesses as they continue to grow and advance their financial, legal and decision-making structures. Complications such as bankruptcies and takeovers by non-co-operative organisations can

[1] Invivo-group.com. 2020. Publication | Invivo
[2] *As per footnote 1*
[3] Invivo-group.com. 2020. [online] Available at: <https://www.invivo-group.com/sites/default/files/atoms/files/cp_-_bioline_group_-_bioline_insurance_en.pdf>
[4] https://www.invivo-group.com/fr/expertise-conseil-agricole
[5] *As per footnote 3*
[6] European Commission - European Commission. 2020. The Common Agricultural Policy At A Glance.

force this structure to fail. The "lack of speed and agility to respond to the changing market" may prove to be a challenge for the sector.[1]

According to AMICE and ICMIF Facts and Figures (2018)[2], the implementation of Solvency II was the defining feature for mutuals and co-operatives in France from a regulatory perspective. It is being applied in an unsystematic way which is "creating an unbalanced environment for the regulation of mutual/co-operative insurers." This creates barriers to entry for cross-border activity. Smaller entities are (disproportionately) facing the greatest challenge from the Solvency II requirements and increased compliance demands alongside different legal systems across Europe which result in barriers to cross-border activities.

Key points from France are:

- The continuity and strength of the CME sector in French economy and society and the consequent benefits from scale of operation;
- The growth of relatively young co-operatives (<25yrs);
- The role of CA in connecting co-operatives.

Country 3: United States of America

Co-operatives and mutual insurance companies (referred to hereafter as mutual insurers) play a large role in the general US economy. Importantly, both co-operatives and mutual insurers have a large role in helping farmers manage financial risk through financial and insurance solutions in the US.

The US has a diverse range of co-operatives and mutual insurers, from the global to the very local. The US has some of the largest mutual insurers globally (e.g. State Farm, Nationwide) that are highly competitive with insurers of more traditional structures, with gross premiums exceeding $US 1bn. However, many US co-operatives remain local and specialised, operating within one county, and maybe only focussing on purchasing or supplying one type of commodity.

US co-operatives developed from European models, with the first one in 1752 being a mutual for fire insurance. Dairy co-operatives were operating in the eastern states by 1810. Factors in the development of particular US co-operatives can be quite localised. There are a number of things that may have favoured co-operative formation, some of which can be usefully contrasted with the Australian context, especially if focussing on co-operatives based in the central US. These include:

- Settlement patterns, with three factors at play:
  - Particular ethnic or religious groups (strong social capital) settling in groups
  - The formation of rural communities through collaborative arrangements, rather than as part of state planning or allocation of resources
  - The relatively close settlement of farming areas (less dense than much of western Europe but more dense than Australia)
- The rejection, by farm lobbies, of most proposals for direct state control of, so there was much less crowding out from SMAs, although some coops became virtual monopolies.
- Influential farm lobby organisations that promoted co-operatives.

In summary, the US has a large agricultural sector with many rural centres with a strong sense of independence. However, governments have generally supported the development of the sector, with little crowding out from direct state management or parts of the supply chain. Government has had a significant role in Multiple Peril Crop Insurance (MPCI) policies. MPCI policies are heavily subsidised by public sector funds and participation is actively encouraged. These policies cover a wide range of crop and livestock risk.

Co-operatives and Mutual Insurers in the US

Co-operatives

Though it is difficult to define a 'co-operative' in the United States through just one definition[3], co-operatives are firmly established and are found in all sectors of the US economy[4]. These sectors include art, education, healthcare, housing,

[1] Icmif.org. 2020. Facts And Figures: Mutual And Co-operative Insurance In Europe | ICMIF
[2] *As per footnote 1*
[3] e.g. self-identification, incorporation status, tax status, or guiding co-operative principles (Deller et al. 2009).
[4] Powell L.S. (2017) What it means to be Mutual. *National Association of Mutual Insurance Companies*

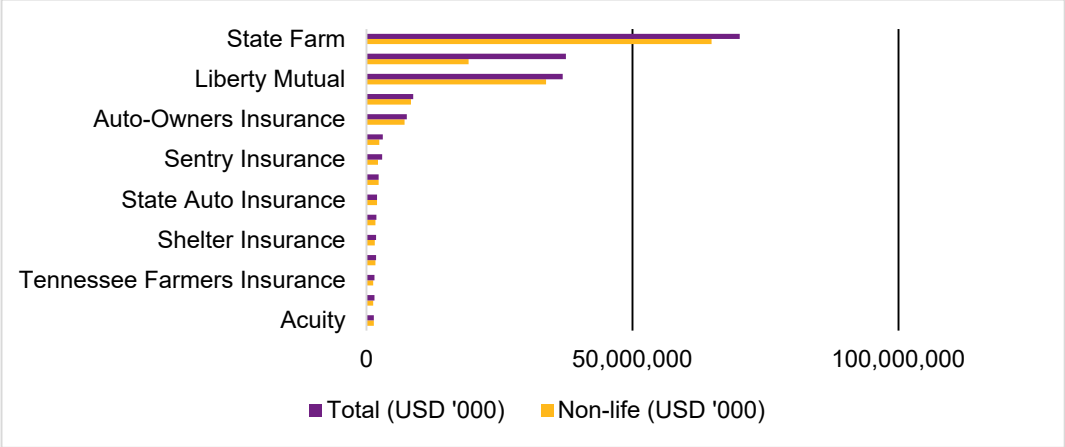
transportation, utilities, and agriculture. In 2018, revenues exceeded $US 222bn (National Co-operative Bank 2019), constituting ~1% of the overall US economy.

Mutual Insurance Companies (Mutual Insurers)

Co-operatives are also present as mutual insurance companies (mutual insurers). Mutual insurers, a subset of the co-operative structure, are also well-integrated into financial markets. In financial terms, the US has a well-established, large mutual market that continues to grow strongly. Of the top Global 500 mutual insurers, 196 originate from the US[1]. Between 2007–2017, the US mutual insurance market share grew by 10.1% — which is a higher growth rate than that of the overall insurance market in North America. As such, the total mutual insurance market has a large percentage share and high growth rate in the North American market.

Despite financial success, policyholder satisfaction may be a better indicator of mutual insurer performance. Policyholder satisfaction may be better suited to mutual insurers, as a core purpose of mutual insurers (and co-operatives) is to serve its policy holders[2]. Indeed, mutual insurers tend to provide more satisfaction than stock insurers. This tendency holds across household, automobile, small business and property policyholders[3]. Exemplifying this tendency, in 2019 Amica Mutual ranks most highly in automobile policyholder satisfaction, followed closely by COUNTRY Financial[4]. Thus, whilst being financially successful (see Amica and COUNTRY gross premiums in Figure 4) these companies provide a more satisfying service than their stock-based competitors.

Figure 4: The 10 largest mutual insurers in the US that provide non-life insurance, ordered according to gross premiums (2017). The non-life premiums are in yellow, the total premiums are in purple (such that Life premiums = Total premiums – Non-Life premiums)



Co-operatives and Mutual Insurers in US Agriculture

Agricultural co-operatives serve many different roles in the US. These roles include service, marketing and supply co-operatives (aggregating goods and services for increased competitiveness), mutual insurers (where policyholders are member-owners), and financial co-operatives serving agricultural communities (where credit is given to member-owners). This section outlines the trends and culture of each type of co-operative, with a focus on the agricultural sector.

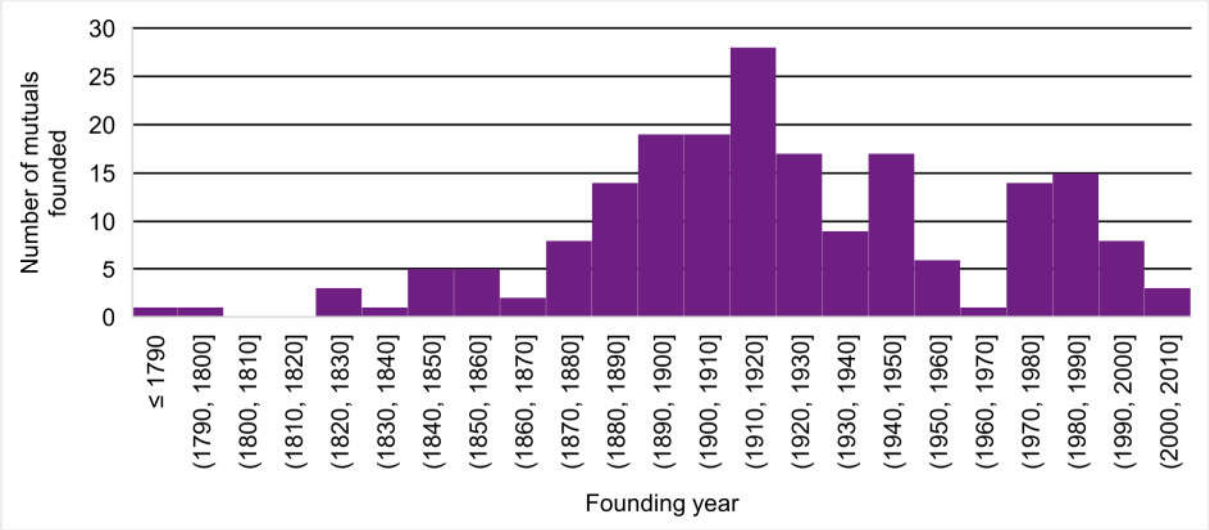
The oldest insurance companies in the US are mutual insurers. Many US mutual insurers were founded in a socially progressive era of American history, between 1870–1950 (Figure 2). These mutual insurers typically covered both life and non-life insurance, though were originally founded by farmers for fire cover. Many (agricultural) co-operatives were also founded in the 19th and early 20th century, with numbers peaking in the 1930s (Figure 5).

During this time, the US experienced the Great Depression, with many business (including farms) defaulting on loans. As such, in 1916, the Farm Credit System was founded as a federated financial co-operative that could provide competitive loans to the agricultural sector. Again, the Farm Credit System has strong ties to the public sector, as it was

[1] ICMIF Global 500 Report
[2] Powell L.S. (2017) What it means to be Mutual. *National Association of Mutual Insurance Companies*
[3] *As per footnote 2*
[4] J.D. Power (2019) https://www.jdpower.com/awards#insurance

originally founded by Congress. Furthermore, new policies for rural communities directly from the federal US government, known as Farm Bills, were first enacted in 1933. Farm Bills outline important policy, loan structures, and insurance solutions. These Farm Bills are still updated to reflect agricultural needs, with the most recent Farm Bill signed in 2018[1].

Figure 5: The number of insurance mutual co-operatives founded per decade that are in the ICMIF Global 500. The notation (1880, 1890] refers to 1881–1890 inclusive (excluding 1880)



Despite early growth, both the number of agricultural co-operatives and membership within agricultural co-operatives have been declining since 1930–1960 (Figure 6). The total number of agricultural co-operatives (marketing, supply and service) reduced by 85% between 1913 and 2018. This decrease in the number of agricultural cooperates has occurred through three primary factors: economic restructuring in agriculture, consolidation of co-operatives, and a declining number of farmers in the population[2].

Covering the first two points (restructuring and consolidation of co-operatives), the number of agricultural co-operatives has been declining at an average rate of 4% per year. About half of these co-operatives have exited from business (2% per year), whilst the other half have merged or been acquired (2% per year). Meanwhile, the number of members per agricultural co-operative has generally increased over time, peaking in 2011 at 1,003 members per co-operative. Thus, it could be viewed that mergers and acquisitions have increased the number of members per co-operative, and their subsequent ability to pool resources[3].

Covering the third point (declining number of famers), as the US has progressively urbanised, the number of farmers in rural communities has decreased. Most notably, the number of farms halved between 1950–1970[4], contributing to the reduction in the number of agricultural co-operative members.

In the 1990s, there was further demutualisation as mutual insurers expanded their portfolio beyond insurance and required more access to capital. Thus, these companies became either stock-based or created "mutual holding companies", where policyholders own the company that "holds" stock-based companies. Whilst we do not discuss mutual holding companies any further, they could be argued as a type of co-operative that operates in the US.

[1] Ahearn M., (2019) Rural Policies and Employment: Transatlantic Experiences. Chapter 10 US Farm Bill Policies: Impacts on Rural Economic Development.
[2] Demko I., (2018) Trends of U.S. Agricultural Co-operatives (1913-2016). Urban Publications 0 1 2 3 1577. https://engagedscholarship.csuohio.edu/urban_facpub/1577.
[3] Demko I., (2018) Trends of U.S. Agricultural Co-operatives (1913-2016). Urban Publications 0 1 2 3 1577. https://engagedscholarship.csuohio.edu/urban_facpub/1577.
[4] *As per footnote 1*

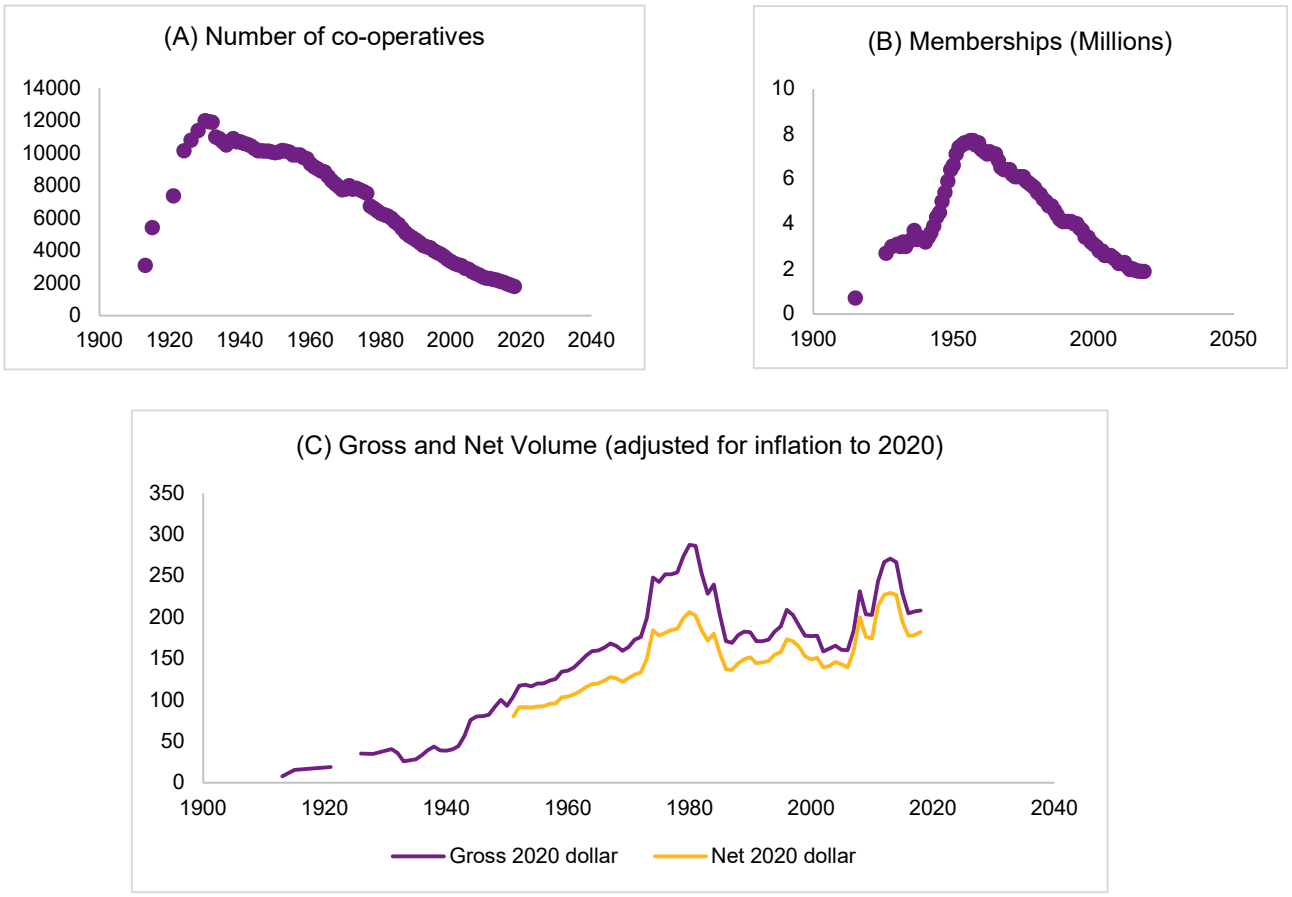


Figure 6: Statistics according the United States Department of Agricultural Report 1913–2018. A) the total number of co-operatives in the US (marketing, supply and service), B) the number of members and C) the gross volume (Blue) and net volume (Orange) adjusted.

Agricultural Co-operatives (Service, Marketing, Supply)

Whilst the number of co-operatives has been steadily declining, they have remained competitive in the agricultural sector. Co-operatives continue to employ about 190,000 employees, they have continued to increase their assets held by about $US 2.8bn/year between 2009–2018, and they have maintained a steady total revenue of between $US 113–177bn over the same period[1]. That is, the co-operative sector, like other types of business have a tendency to concentration over time.

Agricultural co-operatives cover three main functions (marketing, supply and service) and three main types of membership structure (centralised, federated and mixed). Over half of agricultural co-operatives (53%) function as 'marketing' co-operatives that help farmers sell commodities such as dairy or wheat. Just under half of agricultural co-operatives (42%) function as 'supply' co-operatives that help farmers pool together resources to buy commodities at a lower cost. Finally, the remaining agricultural co-operatives (5%) function as 'service' co-operatives that aid farmers through information or processing services (Deller et al. 2009). These agricultural co-operatives operate across a range of scales. Most agricultural co-operatives are centralized (~94%), where farmers, or individuals, comprise the membership. As such, most of these centralized co-operatives operate in just one state or county (USDA 2018). Far fewer co-operatives are federated (~2%, a co-operative that is constituted of other cooperates) or mixed (~4%, with both centralised and federated types within the co-operative) (USDA 2018). As expected, these federated and mixed structure co-operatives tend to produce most revenue and hold most assets out of agricultural co-operatives.[2]

Whilst there are three main types of co-operatives, there is also a separate type of co-operative that focusses on providing financial services in the form of credit. The largest financial co-operatives in the US are CoBank, AgriBank FCB, FCS of America, FCS of Mid-America and Ag First Farm Credit Bank.

These financial co-operatives are each members of the *Farm Credit System*, a nationwide network of customer-owned co-operatives. Whilst founded by Congress and originally funded by the government, the Farm Credit system now raises

[1] USDA 2018 Annual Report
[2] *As per footnote 1*

funds by selling debt securities on the market. The "FCS and commercial banks have dominated the agricultural credit market" [1]. The Farm Credit System comprises four wholesale banks, which serve more localised, retail banks. The four wholesale banks are AgriBank, AgFirst, CoBank and Farm Credit Bank of Texas. The FCS of America (serving Iowa, South Dakota, Wyoming, Nebraska) and FCS of Mid-America (serving Indiana, Ohio, Kentucky and Tennessee) cover the heart of the US farming communities in the Mid-West and fall under AgriBank wholesale. The full structure of Farm Credit can be found at https://farmcredit.com/our-structure.

Through financial credit systems, the co-operative banks provide financial management by supplying credit to the agricultural sector. The main other method of financial management (and risk management) from co-operatives in the US are provided by mutual insurers.

Mutual Insurance Companies

Some insurers classify general agricultural business and equipment insurance under a "Farm and Ranch" insurance package, which itself may be within "Property" insurance. For example, State Farm provides "Farm and Ranch" insurance under its "Home and Property" division. These policies cover farm machinery, grain, livestock, and farm tools. Typically, policies can be adjusted to included farm buildings and structures. However, there are also crop and livestock insurance policies within the agricultural division. Within the US, agricultural insurance is generally divided between property and equipment insurance (Farm and Ranch), crop insurance, and livestock insurance. Mutual insurers write an 80% share of premiums from farm-owners, possibly because of their historical links to the agricultural economy[2].

Of note, mutual insurers may struggle to gain capital and underwrite catastrophic risk compared to stock insurers. They struggle with catastrophic risk, because they cannot access capital as easily as stock insurers – mutual insurers cannot simply sell stock. Therefore, mutual insurers may need to hold more capital, or cede a larger percentage of risk (and premium) to reinsurers. This ceding of risk is particularly important to mutual insurers for highly correlated risks, such as natural hazards (e.g. tropical cyclones, droughts) that affect many farmers at the same time[3]. As the US is such a large country, these catastrophic risks may affect large portions of the nation at once. As such, the Federal US government recommends and subsidises agricultural insurance under the Federal Crop Insurance Program.

The Federal Crop Insurance Program

The federal crop insurance programme, through which the largest mutual insurers in the US provide crop and livestock insurance. Whilst fully private agricultural insurance products are available, the US Department of Agriculture (USDA) Risk Management Agency (RMA) also oversees federal crop and livestock insurance programmes. The Federal Crop Insurance Program is a public-private partnership, allowing 14 private companies that are approved by the USDA RMA to write federally-approved crop insurance policies. The 14 USDA-approved crop insurance companies are a mix of mutual insurers (5 out of 14) and shareholder-owned insurance companies (9 out of 14). Of these 14 insurers, 11 are also approved for the federal livestock program (as indicated). These privately written policies are heavily regulated by the federal government (e.g. rates, crop types, geography). These policies are attractive to farmers because they are heavily subsidised, and attractive to private insurers because they are reimbursed their operating and administrative costs.

The Federal Crop and Livestock programs have been successful at penetrating the market. Under the Federal Crop Insurance Program, approximately 1.1m policies are written, covering 150m hectares of cropland. More than 90% of insurable farmland in the US is protected through the federal crop insurance program[4]. Furthermore, the range of cover is expanding. Novel policies are continuing to be phased in, such as apiculture, annual forage and APH Hemp.

Conclusion

Co-operatives play a key role within the US agricultural sector. Co-operatives, financial co-operatives and mutual insurers help farmers manage both supply and marketing of commodities, as well as manage their financial risk alongside the Federal government. There are at least two types of co-operative structures that help farmers manage their financial risk – the Farm Credit System and the mutual insurers through the Federal, multiperil crop insurance policies. Whilst the federal crop insurance policy is subsidised, there remains strong competition between mutual insurers' and stock insurers' policies.

Mutual insurers are competitive with stock insurers, despite possible issues with the policyholder-member structure of mutual insurers. Whilst mutual insurers may struggle to provide cover for highly correlated risks (e.g. tropical cyclones or

[1] Brewer et al. (2019) Farmers' Choice of Credit among the Farm Credit System, Commercial Banks, and Non-traditional Lenders. Journal of Agricultural and Resource Economics 44(2):362–379.
[2] Powell L.S. (2017) What it means to be Mutual. National Association of Mutual Insurance Companies
[3] Powell L.S. (2017) What it means to be Mutual. National Association of Mutual Insurance Companies
[4] https://cropinsuranceinamerica.org

droughts) because they lack capacity, there are strategies (e.g. retaining more capital, ceding risk to reinsurers) that help mutual insurers maintain competition. A key difference between co-operative structures and more traditional company structures, is the perceived value in being a member, and the benefit to the community of becoming a co-operative member. This value is measurable, as mutual insurance policyholders consistently have consistently satisfaction rates than stock insurance policyholders.

The key points from the US comparison are:

- SMAs did not have a large role in US agriculture, likely leaving room for CMEs to develop.
- While hard to prove conclusively, there is good circumstantial evidence that US settlement patterns and local cultures contributed to co-operative development, certainly much more so than in Australia.
- The development of a very strong co-operatives peak body, along with a political system that is favourable to regional and sectoral lobbying, has helped to develop an environment favourable to co-operative development.
- The US is not a 'neutral' regulatory environment, with important support including:
  - The development of an extension service to support the development of agricultural co-operatives (from the Smith-Lever Act 1914 and Co-operative Marketing Act 1926). This started a partnership between the US Department of Agriculture (USDA) and the Land Grant Universities. These universities still provide research and training services to co-operatives.
  - Having a long-term and dedicated section within USDA providing research, training and policy advisory services.
  - Partial exemptions from anti-trust (monopoly) legislation (through the Capper-Volstead Act 1922).
  - The creation of 'banks' for co-operatives (Farm Credit Act 1933 and the Rural Electrification Act 1937).

Country 4: India

There are more than 600,000 co-operatives across India and mutuals have been used as a risk transfer mechanism for more than 70 years. The absence of a regulatory framework has impeded the development of a sophisticated mutual landscape and the ability of existing mutuals to scale. On the other hand, this informal legal and regulatory landscape has enabled mutuals to innovate, however, by developing a microinsurance mutual model to address the needs of low-income farmers. Furthermore, India's co-operative sector receives financial support from the Indian state. Most co-operatives do not provide ancillary services to their members. If they do, they tend to be the largest national co-operatives and do not focus on the provision of financial services.

This section explores the developments of mutuals and co-operatives in India, evaluates their strengths and weaknesses, considers their operational challenges and presents relevant case studies. It also explores how India's state agricultural insurance programmes could be the reason CMEs do not focus on insurance.

Co-operatives and Mutuals in India

India may be home to the world's largest co-operative movement. The International Co-operative and Mutual Insurance Federation (ICMIF) estimate it has over 600,000 co-operatives with a total membership of more than 250 million people – roughly 25% of its population[1].

India's co-operative movement developed in the late 19th Century, with co-operatives established by the colonial British government to provide rural farming populations with access to credit to improve their economic condition and reduce their exposure to drought-related impoverishment[2].

Over time the scope of co-operatives widened to encapsulate new geographies, sectors and activities at various scales. Other parts of the agriculture value chain, such as production, marketing and processing now benefit from co-operatives[3]. Whilst agriculture remains a focus, particularly dairy, sugar, fruit and vegetable production, co-operatives have shifted to banking and housing services as well as representation for relatively niche groups, such as handloom weavers.

There are several types of co-operatives that operate in India:

- **Consumer co-operatives:** purchase goods in bulk and sell them to members (and non-members) at lower than retail prices using capital raised via members purchasing shares in the co-operative.

[1] International Co-operative and Mutual Insurance Federation (2017) The missing chapter of microinsurance in India: a diagnostic of mutuals
[2] Vaidyanathan, A. (2013). Future of co-operatives in India. Economic and Political Weekly, pp.30-34.
[3] *As per footnote 2*

- **Producer co-operatives:** such as for farmers or fishers, to supply inputs, such as raw materials and tools, to members and sell their output to non-members, reducing costs and improving the producer's profitability.
- **Credit co-operatives:** provide low interest loans to members, in sectors from agriculture to housing, and some have developed to meet the credit requirements of specific groups, such as state employees.
- **Marketing co-operatives:** leverage their size to secure competitive pricing for producers on a collective basis. They also educate their members on the markets they operate in, credit access and distribution methods.
- **Farming co-operatives:** Members pool their resources, such as inputs and equipment, to generate more output and earn a share of its final value. Some pool the land of individual farmers for collective use whilst others purchase their own land and lease it to members.

The uptake of mutual insurance in India has been limited. The earliest known insurance mutuals in India focussed on healthcare insurance. In 1948, the Calcutta Hospitals and Nursing Home Benefits Association was founded to provide medical insurance to executives in India's private sector. Today's mutuals maintain a significant focus on health and life (micro)insurance[1]. Products for non-health related risks, such as agriculture and livestock, have been limited. Most current mutuals have a small membership (less than 1,000) and premium income (less than USD 10 per year).

Mutuals slowly fell out of scope of India's insurance legislation. They were referenced in early acts (Insurance Act 1938, the General Insurance Business (Nationalisation) Act 1972 and the Insurance Amendment Act 2002) but not in the most recent Insurance Laws Amendment Act 2015[2].

The lack of regulation has impeded the development of mutuals and their ability to scale geographically and in terms of membership. This has produced a patchwork of different sized and focused mutuals across India. Without prudential regulation, mutuals are also unable to access the international (re)insurance market - thereby increasing their exposure to catastrophic weather phenomena.

Limited regulation also results in a dearth of public information on mutuals in India. As there is no central regulation or body responsible there is no central database that tracks the number or operations of mutuals. Limited regulation has, however, enabled mutuals to hybridise their business models with other structures according to their members' needs. Such hybridisation further complicates any study of insurance mutuals in India.

Co-operatives and Mutuals in Agriculture

Despite regulatory challenges, insurance mutuals are increasingly utilised as a means of building the financial resilience of India's economically and socially disenfranchised groups – particularly low-income populations in the rural agricultural/livestock sector[3]. Here, mutuals fill protection gaps left behind by the commercial insurance sector and government agricultural/livestock programmes through mutualised microinsurance.

India also has a strong history of state agricultural insurance programmes but the mutual microinsurance model addresses the inadequacies of the state schemes and the local insurance sector by bridging the protection gap experienced by low-income groups in the rural agricultural and livestock sectors.

The mutual microinsurance model has significant potential given recent growth in India's microinsurance sector (which covers more than 420 million people) and the current low penetration of mutualised insurance. For instance, ICMIF report there are 15 mutuals and co-operatives across 13 states in India that provide microinsurance to one million low-income people [4]. However, as discussed, the mutual microinsurance model is largely unregulated – meaning they operate without the financial and social support mechanisms that may otherwise enhance their operations.

Identified Mutuals

There is an acute scarcity of publicly available information on mutuals operating in India. It can be argued, however, that mutuals in India are identifiable by certain characteristics, such as:

- Focus on health and life classes of business, with some attention paid to agricultural and livestock risks;
- Small membership that focusses on low-income groups in rural spaces;
- Low annual premium (less than USD 10); and
- Provision of insurance education and awareness[5].

[1] Bhat, R., Lysander M. and Avila, C (2017). *Review of Community/Mutual-Based Health Insurance Schemes and Their Role in Strengthening the Financial Protection System in India.* Bethesda, MD: Health Finance and Governance Project, Abt Associates Inc.
[2] International Co-operative and Mutual Insurance Federation (2017) The missing chapter of microinsurance in India: a diagnostic of mutuals
[3] *As per footnote 2*
[4] International Co-operative and Mutual Insurance Federation (2017) The missing chapter of microinsurance in India: a diagnostic of mutuals
[5] *As per footnote 1*

This research has identified the following mutuals relevant to the aims of this report:

People Mutuals (DHAN Foundation)[1]

Line(s) of business	▪ Mostly provides life and health cover with some crop and livestock policies.
Insurance model	▪ Mixed model: mostly agent-based with a small mutual business
Geographical scope	▪ Limited state coverage: – **Crop coverage**: Tamil Nadu – **Livestock coverage**: Tamil Nadu and Andhra Pradesh
Perils covered	▪ **Crop coverage**: low rainfall ▪ **Livestock coverage**: livestock mortality
Beneficiaries	▪ Only 3% of People Mutuals' total beneficiaries (216,445) have crop or livestock coverage – most beneficiaries have health and life coverages only. – **Crop coverage**: 500 beneficiaries – **Livestock coverage**: 6,400 beneficiaries
Financials	▪ Majority of People Mutual's income is from health and life policies: – **Crop**: USD 15,400 sum insured, USD 3,850 premium income – **Livestock**: USD 197,000 sum insured, USD 7,850 premium income

The Goat Trust [2]

Line(s) of business	▪ Livestock insurance – focussing on goats
Insurance model	▪ Pure mutual insurance model
Geographical scope	▪ Uttar Pradesh state only
Perils covered	▪ Livestock mortality, infertility and paralysis
Beneficiaries	▪ 7,000 insured livestock
Financials	▪ N/A – limited financial information publicly available. ▪ Premium costs: 10% of insurable valuable of livestock

Society for Elimination of Rural Poverty (SERP)[3]

Line(s) of business	▪ Livestock insurance (and credit insurance offered by partner organisation)
Insurance model	▪ Mixed insurance model: mutual and government-supported partner-agent model ▪ Significant support from state government is unique for mutuals
Geographical scope	▪ Andhra Pradesh and Telangana states
Beneficiaries	▪ Livestock: 110,000 beneficiaries (SERP as a whole has 6.8 million members)
Financials	▪ Livestock: USD 0.1 per USD 15 of livestock

Co-operatives in India

Despite the scale and strength of India's co-operative sector, only a minority provide financial services to their members. When they do it tends to be part of a government or Corporate Social Responsibility programme.

Unlike the mutual insurance sector, the co-operative sector in India operates with substantial state support. It is argued the growth in scope and number of co-operatives is mostly due to state sponsorship, not grass-roots momentum, as co-operatives have long been utilised as policy tools for economic development[4]. Also, in contrast to the experience of the mutual insurance sector, state governments across India have developed regulation for co-operatives and maintain responsibility for ensuring compliance – not without criticism, however.

[1] *As per footnote 1*
[2] *As per footnote 1*
[3] International Co-operative and Mutual Insurance Federation (2017) The missing chapter of microinsurance in India: a diagnostic of mutuals
[4] Vaidyanathan, A. (2013). Future of co-operatives in India. Economic and Political Weekly, pp.30-34.

Instead of achieving their altruistic goals of combatting rural impoverishment, critics argue that limited enforcement of co-operative regulation has led to their dependence on state funding, ineffective internal financial management and appropriation by political groups who use co-operatives to further their own interests at the expense of the co-operative and its members [1].

Despite there being over 600,000 co-operatives in India[2], there is limited evidence to suggest they actively provide insurance, credit or other financial services to their members.

All but the largest co-operatives tend to focus on their core, rather than ancillary, operations. When co-operatives engage in the provision of ancillary services, they focus on the transfer of knowledge, technology and veterinary/soil services to improve the agricultural processes of members and/or the health of their livestock – a different type of risk management.

In the very limited cases where insurance services are offered by a co-operative, they are part of a government programme and not the co-operative's own services. When they form part of a co-operative's Corporate Social Responsibility programme, they tend to focus on specific groups in their membership, such as women.

Co-operatives that provide some form of insurance services to their members include the below:

Aavin / Tamilnadu Co-operative Milk Producers' Federation Limited[3]

Objective	One of the largest milk co-operatives in India, Aavin focus on the procurement, processing and marketing of milk and associated products.
Beneficiaries	An apex co-operative in Tamil Nadu that is comprised by 19 district dairy co-operative unions and 13,585 dairy societies.
Financials	Revenue in 2018-19: $840 million.
Financial services provided	▪ Milk-producing livestock of famers insured with 50% of premiums subsidised by the National Programme for Bovine Breeding (NPBB). ▪ 170,000 animals covered in 2019-20. Aavin is considering covering all uninsured animals under the co-operative. ▪ Other services: cattle health services, artificial insemination facilities, subsidised cattle inputs and training.

Indian Farmers Fertiliser Co-operative Limited (IFFCO)[4]

Objective	▪ IFFCO's core business is the production and selling of fertilisers to farmers across India. ▪ They operate in a range of other markets in and outside of India, including: logistics, telecommunications and insurance.
Beneficiaries	One of the largest co-operatives in the world, consisting of over 35,000 co-operatives and 55 million farmers.
Financials	Revenue in 2018-19: $2.7 billion
Financial services provided	**Tokio General Insurance Company Limited** ▪ IFFCO is a majority owner of IFFCO Tokio General Insurance Company Limited, one of the largest insurance companies in India. ▪ Although its insurance services are not exclusively targeted at its members, it is worthwhile to note that IFFCO Tokio General Insurance Company provides crop insurance in Rajasthan and Maharashtra. ▪ Through its Sankat Haran Bima Yojna scheme, it provides accident cover to farmers through their purchase of IFFCO fertiliser bags. It has covered over 19 million farmers and paid $14 million in claims since 2001. **IFFCO Kisansewa Trust** ▪ IFFCO operates a charitable trust that provides financial assistance to farmers that have been impacted by natural disasters and adverse weather. It also offers medical treatment to farmers and educational scholarships to impacted farmers' children. ▪ Although this is a charitable cause and not IFFCO's core objective, it is still worthy to note how the largest co-operatives utilise post-event risk financing – albeit not insurance.

[1] *As per footnote 2*
[2] *As per footnote 1*
[3] Tamilnadu Co-operative Milk Producers' Federation Limited. (n.d.). Services Offered To Milk Producers By Co-Operatives. Available: https://aavinmilk.com/web/guest/producers.
[4] Indian Farmers Fertiliser Co-operative Limited . (n.d.). Initiatives. Available: http://www.iffco.in/index.php/initiatives.

Karnataka Milk Federation (KMF)[1]

Objective	KMF's core business is the production and selling of milk on behalf of its co-operative members under its 'Nandini' brand.
Beneficiaries	KMF is the second largest milk co-operative in India and has a membership of over 160,000 diary co-operatives and 1.8 million farmers across Karnataka state.
Financials	Revenue: $2.05 billion
Financial services provided	Support to Training and Employment Programme (STEP) for Women ▪ KMF operates a 'Margin Money' scheme, under the STEP Programme launched by India's Ministry of Women & Child Development. It provides interest free loans of 5,000 INR / USD 65 (a sum often demanded as security by banks) to eligible women. ▪ Although a CSR/charitable cause, this example indicates how large co-operatives are involved in government financial inclusion schemes.

National Schemes

A possible explanation for the lack of mutual and co-operative engagement with agricultural risk management is the prevalence of India's well established and widely scoped state insurance programmes.

India's experience with state agricultural insurance started in 1971. It originally experimented with small local schemes and government pilots that evolved into three major national agricultural programmes:

- National Agricultural Insurance Scheme (1999 – 2015);
- Modified National Agricultural Insurance Scheme (2010 – 2015); and
- Pradhan Mantri Fasal Bima Yojana (2016 – present)

National Agricultural Insurance Scheme: 1999 – 2015

The National Agricultural Insurance Scheme was born of out the Comprehensive Crop Insurance Scheme that started in 1985. It covered around 30 crops (depending on the season) and farmers who had taken out government loans[2].

Structure	Area-yield index covering Rabi (winter) and Kharif (autumn)
Geographical Scope	National
Coverage	▪ Sub-district level: yield reduction ▪ Farm level: hailstorm, landslide, cyclone and flood ▪ Coverage levels: 60%, 80% or 90% of yield
Beneficiaries	Compulsory for farmers who were provided agricultural loans from the government
Financials	Between 1999-2014 ▪ Loss ratio: 314%; ▪ Average premium rate: 3.5%

Modified National Agricultural Insurance Scheme: 2010 - 2015

The Modified National Agricultural Insurance Scheme operated alongside the National Agricultural Insurance Scheme between 2010 and 2015 as a result of the financial burden experienced by its predecessor scheme. It was expanded to include coverage provided by private (re)insurers[3].

Structure	Area-yield index covering Rabi (winter) and Kharif (autumn)
Geographical Scope	National
Coverage	Coverage levels: 70%, 80% or 90% of yield at district level
Beneficiaries	▪ Compulsory for farmers who were provided agricultural loans by the government ▪ Ad-hoc take up for farmers without loans
Financials	Between 2010-2014: ▪ Loss ratio: 92% ▪ Average premium rate: 11%

[1] Jyothi, BV. and Krupalini, H.S. (2019) International Journal of Applied Research 2019; 5(7): pp.161-163
[2] Hohl, R.M. (2019). *Agricultural Risk Transfer: From Insurance to Reinsurance to Capital Markets*. John Wiley & Sons.
[3] *As per footnote 1*

Pradhan Mantri Fasal Bima Yojana: 2016 – Present

The Pradhan Mantri Fasal Bima Yojana scheme was implemented to overcome the shortcomings of the Modified National Agricultural Insurance Scheme – particularly the 12-month waiting period for claim pay-outs [1].

Structure	Area-yield index covering Rabi (winter) and Kharif (autumn)
Geographical Scope	National
Coverage	Drought, flood, fire, cyclones, landslides, hail, pests and diseases
Beneficiaries	Loanee farmers and non-loanee farmers
Financials	▪ Experienced significant growth: $3 billion Gross Written Premium in 2016/17 ▪ Flat premium rate: 2% of sum insured for Kharif crops and 1.5% of sum insured of Rabi crops

Conclusion

Mutuals and co-operatives play a limited role in agricultural risk management in India.

An absence of an appropriate regulatory framework has impeded the development of new mutuals and the ability of existing mutuals to scale. Well established government schemes also already dominate the agricultural and livestock risk management space. Some mutuals have used this as an opportunity to incorporate microinsurance principles into their business models, meeting members' needs where state schemes do not.

India has a significant co-operative sector but only the largest organisations provide financial services to their members. When they do, typically as part of a Corporate Social Responsibility or government programme, they focus on the transfer of knowledge, technology and veterinary/soil services rather than insurance or credit.

However, both mutuals and co-operatives have significant potential to improve risk management in the agricultural value chain in the country. The low penetration rate of mutual insurance and rapid uptake of microinsurance provide fertile ground for mutuals to develop across the country. The well-established infrastructure of the co-operative landscape, government support and substantial membership size provide similar opportunity for rapid deployment of insurance services to members at scale.

Of relevance in this report and to the Australian context, is that observation that ICME activity in India has stepped in to assist farmers, often very smallholders, with access to input purchase and marketing efficiencies – as well as risk management – under circumstances in which no equivalent corporate services were available.

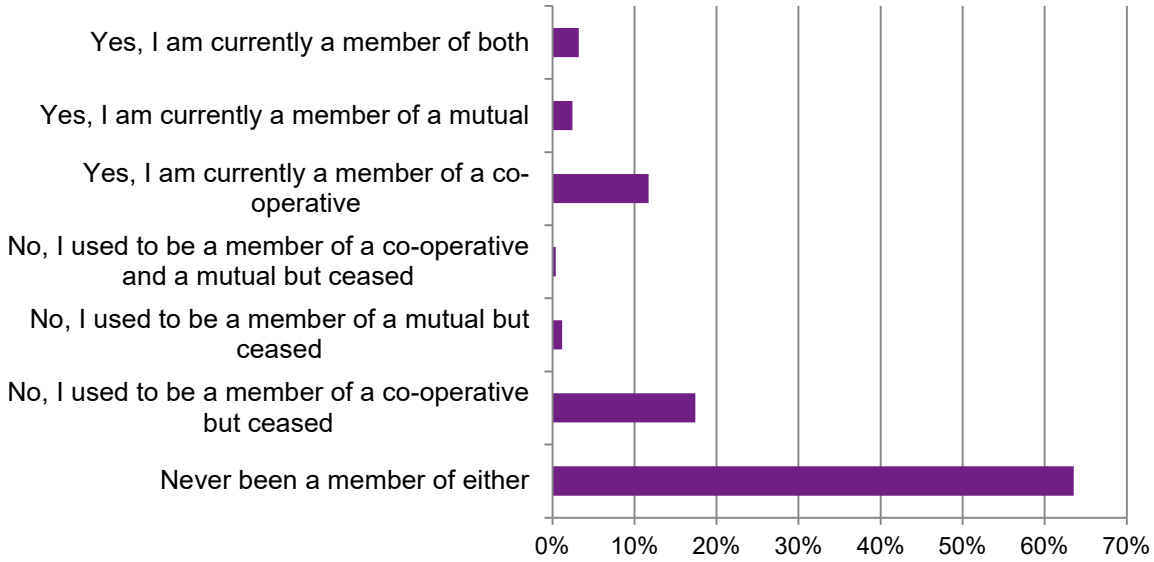
[1] Hohl, R.M. (2019). *Agricultural Risk Transfer: From Insurance to Reinsurance to Capital Markets*. John Wiley & Sons.

Section 3C:

Collects and details input on the value and impact of mutuals and co-operatives as assessed by farmers who are currently members of mutuals and co-operatives in Australia.

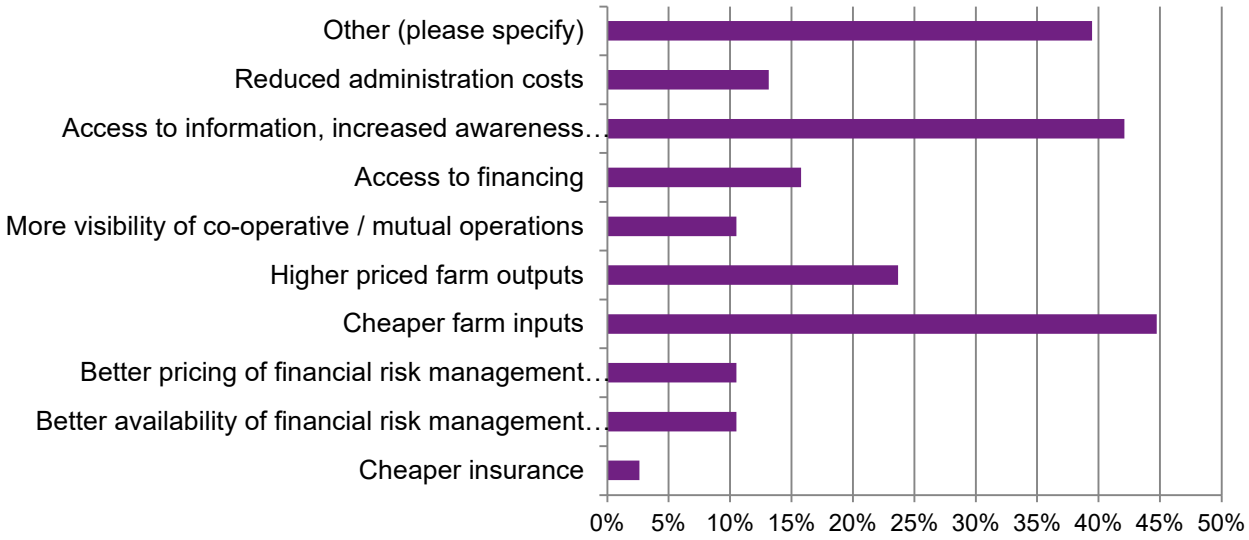
To assess the value and impact of the mutual and co-operatives, a national survey or 302 stakeholders was conducted. Questions related to participation in CMEs and reasons for, and barriers to, participation.

Figure 7: Are you a member of a co-operative or a mutual organisation?



Less than 15% of respondents are currently a member of a co-operative or a mutual. More than 60% have never been a member of either. Hence, the number of respondents for the questions below is around 45-60.

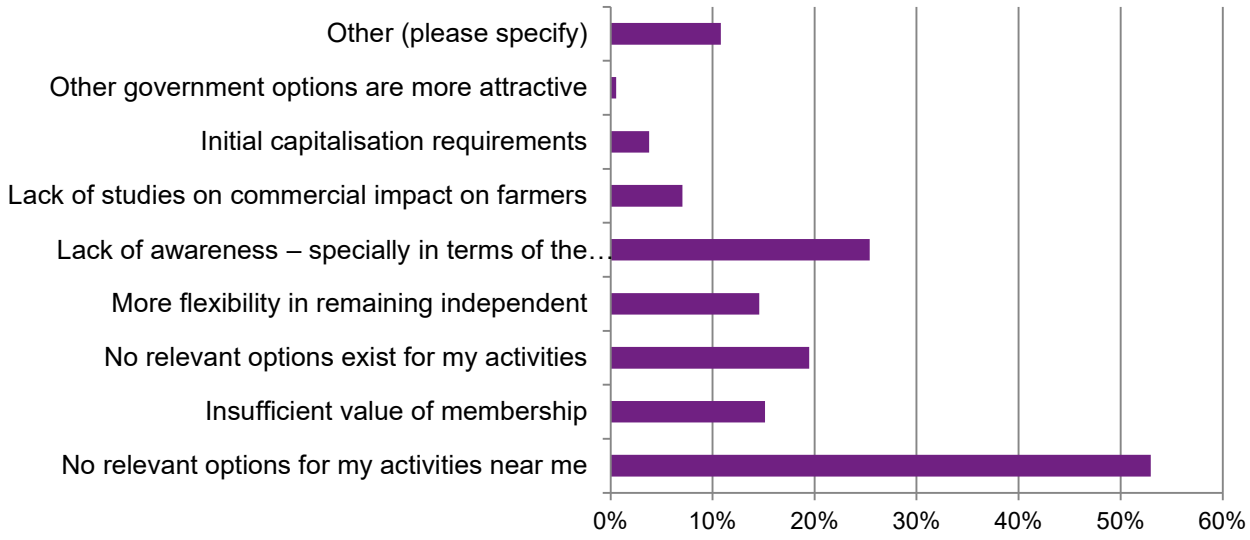
Figure 8: What benefits do you receive from your co-operative / mutual membership?



Respondents participating in CMEs nominated cheaper farmer inputs (49%) as the main benefit they receive from being a CME member. 43% regarded access to information and increased awareness as a key benefit, while 39% gave a

variety of other reasons. Interestingly, cheaper insurance was seen as only a minor benefit (3%), suggesting that most Australian CMEs are not providing an insurance facility.

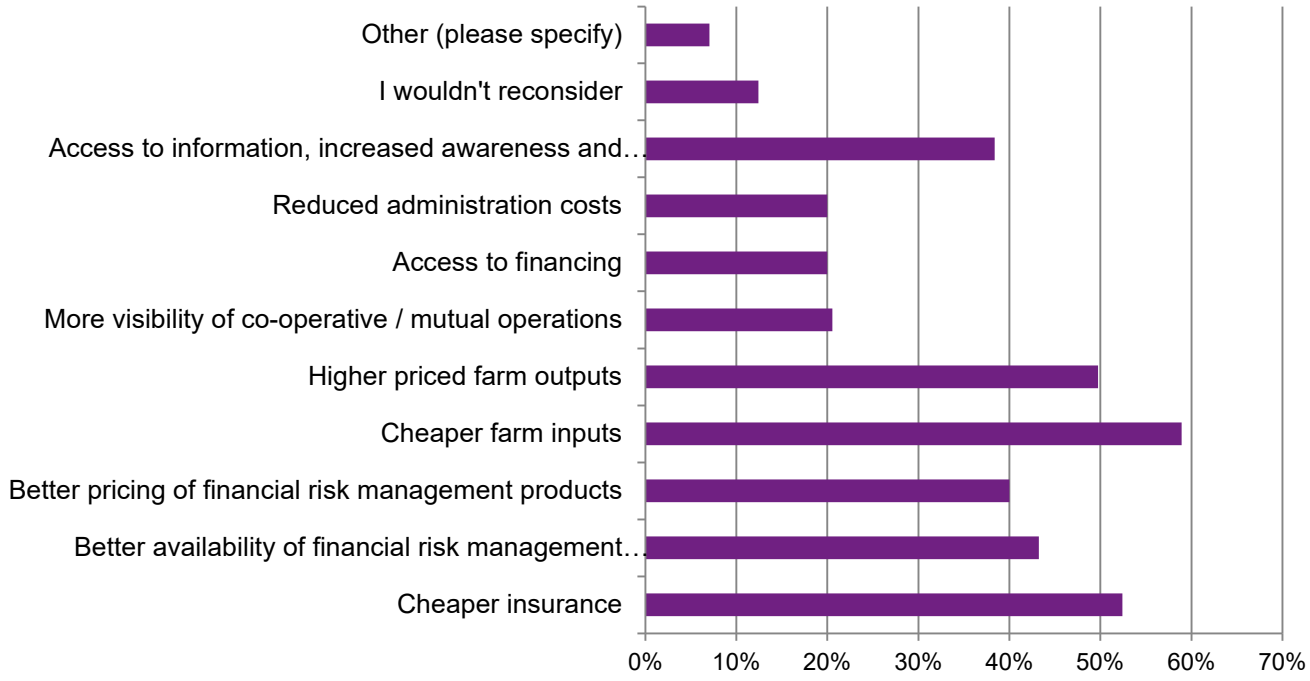
Figure 9: Why aren't you a member of a co-operative / mutual?



In view of the low percentage of farmers participating in CMEs in Australia, the survey asked farmers for the main reasons why they didn't belong to a CME. 53% or respondents were not aware of a CME existing in their region that related to their activities. The other main reason for not joining a CME (27%) was lack of awareness of the value they could provide.

The following Figure shows the key enablers that will allow farmers to think about participating in the CME.

Figure 10: Which of the below factors would make you reconsider joining a mutual/co-op?



The survey uncovered a variety of reasons for why farmers would reconsider joining a CME (subject to one being available to them). Better priced farm outputs (59%) was given as the main reason for joining a CME, closely followed by cheaper insurance (52% and clearly a concern) and higher prices for farm outputs.

Impact of Mutual

The primary commercial benefit to the Australian agricultural sector of a successful mutual is improved ability to recover following major events, with significantly less or even no reliance on government handouts.

The smoothing of financial volatility in farming will also allow better long-term investment and planning decisions. Funding of farming activities such as through bank lending will also be less onerous and ultimately more successful through farms having a more consistent income basis.

As opposed to using for-profit, shareholder-owned insurance, mutual protection also benefits the sector in that experience profits are retained in the mutual, rather than leaking to shareholders. That insurance shareholder leakage is also usually to shareholders outside the regional areas, meaning that profits leave the region. In a mutual these profits are retained for the benefit of members; this can occur through stronger reserves (to give greater resilience in future downturns), better protection or reduce contributions – or a combination thereof.

This is particularly beneficial in a situation where there is generally a one-sided view of the impact of climate change on premiums (i.e. that they should be higher). In a shareholder-owned insurer, if this is wrong, and experience is better than expected, the profits leak out. In a mutual, this is retained as described in the previous paragraph. The current narrative around climate change, rightly or wrongly, means that this bias in pricing insurance is very prevalent and consequently this benefit of a mutual should not be underestimated.

Section 3D:

Identifies and assesses potential existing and new developments related to mutuals and co-operatives for assisting farmers to manage financial risk.

CBH Mutual Offering

As noted earlier, CBH is the largest agricultural co-operative by turnover and the by far the largest collective arrangement in the grain industry, with the winding of SMAs. If scale matters in the ability to provide production-related insurances, then CBH might be relatively well placed.

In 2011, Willis Towers Watson and CBH designed an insurance mutual to protect CBH's grower members. The mutual did not attract sufficient participation to enable its continuation beyond its first year of operation. This was a result of the perceived high premium levels that were imposed by the programme's international reinsurance support.

The following is an outline of the programme that the mutual offered to CBH's member growers:

How did it work?[1]

- Growers nominated the intended total plantings (ha) of wheat/barley by 30 April 2011 and historical average yields for wheat and for barley (t/ha).
  - The Average Yield is the average of last 10 years yield for the contracted grower for wheat and for barley.
- A wheat and barley cover price of $250/t was used for what growers would expect to receive for their grain.
- Growers calculated at what level they wished their cost of production to begin to be covered, ideally where they saw their cost of production as a percentage of expected revenue.
  - Cover could begin at 60%, 50%, 40% or 30% of the growers expected revenue.
- The Underwritten Yield for the contract was set in the application assessment stage and determined through grower supplied data.
- An Offer of Cover contained an agreed underwritten value, being the maximum claim value for the contract.
  - Underwritten Value = (Area x Price x Underwritten Yield for Wheat) + (Area x Price x Underwritten Yield for Barley)
- Grower advised by 30 June 2011 actual planting hectares each of wheat and barley.
- Any natural events (e.g. fire, hail, frost) must be notified to CBH Mutual within 14 days.
- Growers needed to lodge a claim by 31 January 2012, with payments made by 31 March 2012.
- Payout based on the observed Value of Production of wheat and barley in the 2011-12 season compared to the underwritten value.
  - The observed value of production would have been calculated using total production of the farm and the cover price (wheat tonnes x cover price) + (barley tonnes x cover price).
- CBH would have used an auditing process to assess the validity of claims. This process will validate all information on the application form, therefore it is important that this information is accurate and can be verified.
- Cover could start with the Underwritten Value specified as 60%, 50% 40% and 30% of the expected value of production.

The quote for each grower depended on their individual circumstances. However, to provide an indicative pricing, an indicative pricing model for each Shire per commodity is provided on the CBH Mutual website.

[1] Based upon original marketing material for CBH Mutual.

Working Example

The following example illustrates how the Cost of Production Cover operated.

A grower applies for Cost of Production Cover product by 30 April 2011 stating that they intend to plant 10,000ha (of which 4000ha is wheat and 6000ha is barley) in the shire of 'XYZ' for the 2011-12 season.

An Offer of Cover is provided to the grower which states that based on their historical yields provided, the Cover will use historical yield averages of 1.5 t/ha for wheat and 1.7 t/ha for barley. The grower accepts the Offer of Cover and submits payment of the Contribution by 20 May 2011.

- The grower nominates selected Cover to commence at 50% of average yield (the Strike %).
- The Cover Price of $250 is used for the calculation of expected value of production.
- The Underwritten Value is $2,025,000.
  - 4,000ha x 1.5t x $250 = $1,500,000 for wheat; 6,000ha x 1.7t x $250 = $2,550,000 barley;
  - $4,050,000 expected revenue
  - $4,050,000 (total production) x 50% (Strike %) = $2,025,000

The Cost of Production Cover may pay-out when the value of production of wheat and barley falls below $2,025,000.

Carnarvon Banana Industry Fund

Formed in the early 1960s after a cyclone, the Carnarvon Banana Industry Fund is one of Australia's few agricultural risk-transfer based mutuals still in operation. It covers about 25-30 growers.

The following are some of this mutual fund's key attributes[1]:

- Every 50 cents contributed by member growers were matched initially.
- Optional to be a member but all growers supported **their** industry fund
- Government co-contribution reduced as the funds gained more assets,
- In 1999, appointment of a trust fund managed by a grower committee. APC (Agricultural Produce Commission) to legally collect levies.
- Fund also employs a local executive office (5 FTE) to manage the data and measure the farm production, record keeping and general administration.
- In the event of a natural disaster a committee of growers acts as assessors to determine % of loss.
- Growers are paid a monetary amount on forecast lost production based on previous productivity and current plantings.

Key points:

- Cyclone risk can be mitigated with government underwriting support and reasonable contributions across industry, this could be mitigated - specifically across diverse geographical areas.
- Production and therefore risk is highly concentrated
- If multiple products/risks/and geographical spread could be included, then the fund could be derisked somewhat, however there are many more potential "events" that could be covered, such as pest/disease for horticulture, floods, etc.
- Due to the compensation fund there has been no call on government for disaster relief funding for cyclones. Establishing a more self-sufficient industry is less likely to claim on disaster recovery funds.

Latevo Farmers Mutual (LFM)

LFM is one of two cases of specific insurance start-ups, as opposed to the more common development of insurance providers out of CMEs that initially provide other services.

The management of LFM[2] have been participants in the on-farm risk management arena in Australia since 2014 in a period that has included multi-year or sequential droughts, depending on location. This led to the exodus of international reinsurance support in parallel to other market providers.

[1] Source: Fund/Co-operative's Business Manager (FRG workshop)

[2] Information by Andrew Trotter, CEO and Founder of Latevo Farmers Mutual

LFM was established as a direct response to the lack of availability of reinsurance support provided by potential international providers. Its establishment has enabled the management of Latevo to continue to offer its Farm Income Protection product. The mutual model confers certain valuable economic benefits (e.g. exemption from the requirement to charge Stamp Duty and Government Service Tax) however it does not *per se* solve the requirement for the need for adequate capitalisation or availability of 'stop loss' funds in the event of extreme claims incidence.

In order to address this fundamental requirement for financial resilience – other than resorting to the ultimate contract compromise available to Discretionary Mutuals of pro-rata claims settlement – LFM has been highly active in its lobbying of national and state government to provide 'stop loss' funds. Critically, LFM's proposition to government has been structured as reimbursable contingent funds rather than either upfront cash funding or the mobilisation of any funding provision that is not already in place.

The authors of this report are grateful for the following written testimonial from Mr Andrew Trotter, CEO of LFM:

> "In Australia the Federal Government's policy towards drought and support for the farm sector has historically been in the form of ad hoc after-the-event payments. However, to obtain such support typically requires vocal lobbying from farmers and high-profile media attention before such assistance packages are rolled out.
>
> An almost inevitable consequence of this approach is that there is little time to carry out the ideal levels of planning and due diligence such that these approaches are often poorly targeted, commonly taken advantage of and extremely expensive. Additionally, such payments come as a shock to the Federal budget in normal times, but this is no longer an option as the economy struggles to return normality due the cost of Covid.
>
> In addition following at least two years of drought-related hardship, farmers are now obliged to resort to the banks to seek hundreds of thousands or even millions of dollars to pay bills and plant next year's crop. High and growing levels of farm indebtedness will inevitably lead to a cutting of corners on crop inputs for the next 2-3 years. In turn this leads to what is commonly referred to as the "poverty cycle" in which less of the key inputs are put in, resulting in lower crops yields than are optimally achievable.
>
> Latevo Farmers Mutual calls for a new structured approach both to increase farm financial resilience but also to provide additional asset security to allow essential new capital to enter the industry. Much as lending to other sectors and assets requires adequate insurances to be in place, the same can be applied to farmers of all types.
>
> However, 2019 saw the withdrawal of the last comprehensive multi-peril crop insurance program available to Australian farmers, so a new approach is now required. In circumstances such as these, when the traditional insurance market withdraws from a line of business then the impetus arises for alternative structures to arise. Discretionary Mutual Funds (DMFs) are perfectly suited to move into the market space that has been vacated by a failed insurance market.
>
> Mutuals have a proud history of being the foundation of innovative risk transfer structures and even Lloyd's of London came into being by mutualising the interests of shipowners, and started as a collective mutuals between its founding shipping merchants in 1686.
>
> However, the key limiting factor to the establishment of Mutuals is their ability to access capital and this especially challenging given the underlying riskiness of the insured production and the potential scale of the coverage that is required, amounting to hundreds of millions of dollars even in its early years of operation. There is a key role for the Federal Government to act in a limited liability manner to guarantee the development of grower-owned discretionary mutuals.
>
> Finally, there is a pressing need to help farmers to understand the need for and benefits of taking up crop insurance as a rational part of their overall farm risk management. Previously a review was undertaken by IPART in NSW that set out a package of recommendations; at a state level this review set out a 5-year stimulus program of support which LFM strongly believes should be refreshed and implemented."

Farmers Mutual Limited (FML)

In 2017, a group of leading farmers across Australia looked at managing farm risk. It started out as a discussion on Multi-Peril Crop Insurance between a group of fellow Nuffield Scholars, but then moved into a much bigger discussion around how to create a culture within their farm businesses to minimise claimable events, but still ensuring the members' assets and balance sheet are protected.

As a result, FML was formed after extensive collaboration and consultation between farmers across Australia, industry groups and agricultural insurance experts. It was to be a not-for-profit Discretionary Mutual Fund with a foundation membership of farmers geographical spread across Australia.

It focussed on:

- Putting ownership and control back into farmers hands
- Driving savings through operational efficiencies, removing intermediary and administrative costs
- Profits retained by the mutual and owned by farmer members
- Building a culture of risk management through an awareness of 'what is claimed today is paid for tomorrow'
- Remove the concept of community rating where good businesses are subsidising poor risk managers
- Initially marketing comparable protection products such as fire / hail and farm pack, with the scope and capability to invest into tailored coverage.
- A dedicated product advisory committee which will be allocated its own R&D funding to investigate and establish alternative risk management solutions
- Transparency, education, communication and collaboration.

In 2020 FML was delisted, and key reasons given for the mutual's failure, were:

- Lack of government capitalization
- Difficult and inconsistent approach shown by mutual's potential reinsurer
- Broadness of coverage and spread of risk was perhaps too difficult for insurance market to grasp
- Regulation costs and lack of capital became unsustainable
- Negativity from those opposed to the mutual concept to protect their own interest.

Sugarcane Growers Mutual for Tropical Cyclones

This case study explores the potential for the Queensland Cane Growers' Organisation (CANEGROWERS) to develop a unique members' Discretionary Mutual Fund (DMF) for tropical cyclones in Queensland. This would initially be a specific-threat cover, for a single commodity, similar to the Banana Fund and Zespri in NZ.

Impacts of Cyclones on Queensland Agriculture

Cyclone events in Queensland are frequent and the impacts can be severe and widespread. It is estimated, for example. that Severe Tropical Cyclone Debbie caused ~ AUD 450 million of damage (Nicholas and Miller 2017). Sugarcane and horticulture crops including beans, capsicums, melons, tomatoes and mango orchards were all affected (Nicholas and Miller 2017). Cyclones can also impact bananas and many other types of crop (Leigh et al. 2014; Lindsay 2016) and also nurseries and fisheries. It is not just the high winds that cause damage to crops, the associated low-pressure systems and heavy rainfall can cause flooding that can result in substantial agricultural damage.

The cyclone season officially runs from November to April, and on average 4.7 tropical cyclones affect Queensland per year (BoM 2018). Cyclone risk varies across the state with the northern coastal areas being most frequently impacted by cyclones. The area with the highest cyclone risk is around Ayr and to its south. Most of coastal Queensland is at medium risk of cyclone. The likelihood of cyclones occurring is also influenced by the southern oscillation, with cyclones more likely to occur in La Niña compared to El Niño conditions (Hastings 1990).

Sugarcane Growers Discretionary Mutual Fund structure

DMF Coverage

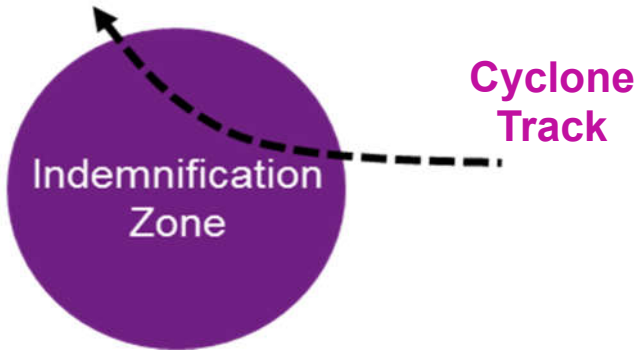
The purpose of the DMF would be to provide cyclone cover to sugarcane growers in Queensland. The coverage provided would be in parametric form, with claims being triggered based upon the track and intensity of cyclones occurring during the policy period.

Coverage details;

- Each member will be allocated to a region based on their location which will be identified by latitude/longitude co-ordinates.
- The policy term will run for twelve months with commencement date to be agreed, likely to be 1 June.
- The indemnification zone will comprise a circle centred on an agreed latitude/longitude, which represents the farm location (Figure 11).
- The policy trigger will be a cyclone meeting or exceeding an agreed category whilst in the indemnification zone

- The policy sum insured per covered member will be pre-agreed.
- The policy will pay the policy sum insured if the eye of a cyclone meeting the agreed category passes within the agreed indemnification zone.

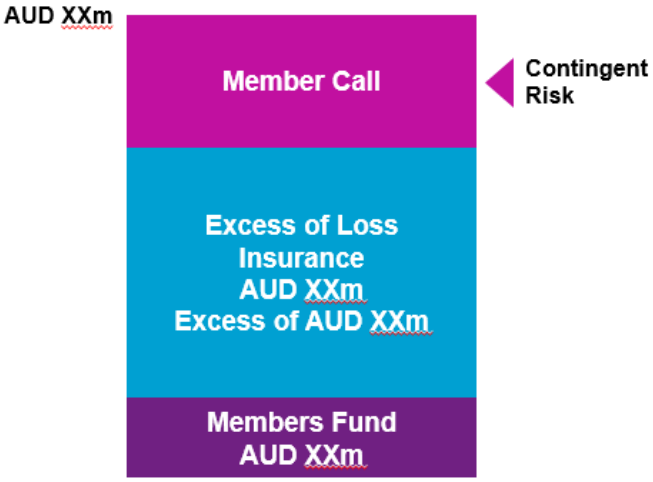
Figure 11: "Cat in a Circle" Cyclone Coverage



Reinsurance

It is recommended that the DMF purchases (re)insurance to protect the DMF in the case of a severe cyclone year in which claims exceeds the member contributions. This will ensure that the DMF has sufficient funds to pay the claims of all members in full. The limit and attachment of the reinsurance will reflect the number of policies issued, the selected policy limits and the geographical spread of the policyholders along with the premium contributions and the level of capitalization.

Figure 12: Example capitalisation structure for a DMF

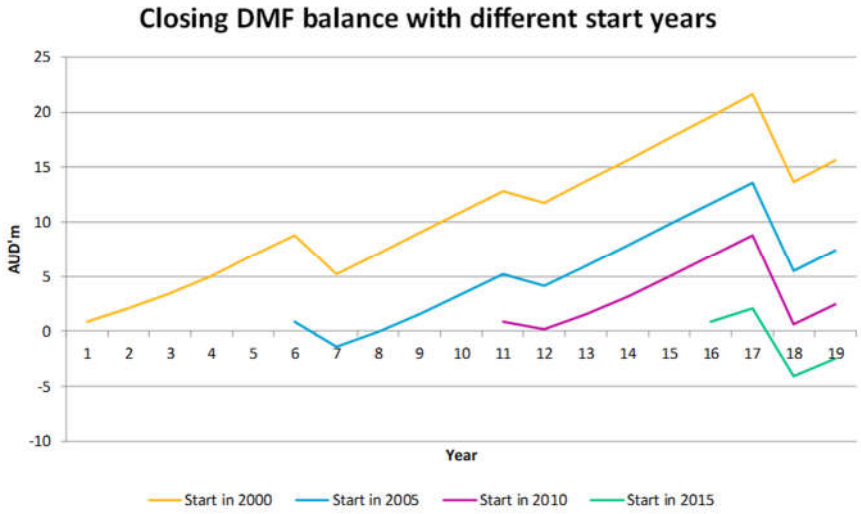


Capitalisation

Even with the benefit of reinsurance, there remains a reasonable possibility that the DMF will have insufficient assets to pay claims, particularly in the early years. Hence the need for capital.

Capital is required to cater for the unexpected scenarios; notably when cyclones occur in the early years of the DMF's existence before retained earnings have been accumulated. Based on the historical cyclone data, the following graphic illustrates how an uncapitalised DMF would have performed had it started writing business in 2000, 2005, 2010 and 2015. In two of the four scenarios, the DMF would have been insolvent at some point between inception and today as a result of a cyclone occurring during year 1, 2 or 3.

Figure 13: Scenario based capital modelling



Clearly history is not always an accurate predictor of the future, particularly with regards to low frequency, high severity events such as cyclones. It is possible that future cyclone activity could be considerably lower or considerably higher than the past 20 years. In low claims scenarios, the DMF could survive with no capital, but we recommend that that DMF is supported by sufficient initial capital to cater for at least a 1 in 10-year downside scenario.

Capitalisation Options

Capitalisation through direct Queensland Government treasury support

Through the Queensland government's individual/institutional investment loans, depending on how the DMF is legally established, the Queensland government can lend money for the required capitalisation. The Queensland Treasury Corporation (QTC), which is the Queensland Government's central financing authority, can play a pivotal role in securing the required finances for the DMF at a suitable interest rate.

QTC provides a range of financial services to the State and its public sector entities, including local governments. These services include debt funding and management, cash management facilities, and financial risk management advisory services.

Capitalisation through Queensland Rural and Industry Development Authority concessional loans.

The Queensland Rural and Industry Development Authority (QRIDA) is a specialist provider of Queensland government financial assistance and advisory support to rural and regional Queensland. For 25 years, QRIDA has been helping primary producers make a start in agriculture, improve long term sustainability and profitability, and overcome difficult conditions including recovering from natural disasters.

Key role and responsibilities of QRIDA include

- Overseeing Queensland's Farm Business Debt Mediation program
- Administering Queensland's Farm Debt Restructure Office
- Designing and delivering a broad range of State and Commonwealth approved schemes of support for rural and regional Queensland; and
- Undertaking research and providing advice to government

As the Queensland Government's experts in rural finance, we also administer the State Government's Farm Business Debt Mediation program, Farm Debt Restructure Office, conduct a biennial Rural Debt Survey, undertake research and provide advice to the Minister for Agricultural Industry Development and Fisheries.

Concessional Sustainability Loans

Sustainability Loans provide the beneficiary with finance up to $1,300,000 to assist in achieving a more productive and sustainable primary production enterprise.

What can this loan be used for?

- *Improving enterprise efficiencies*: Make land work better by building fences, dams, storage facilities, improving irrigation, or establishing additional water points. Implement on-farm value adding or supply chain initiatives to ensure the enterprise continues to be successful for years to come.
- *Upgrading or diversifying operations*: Upgrade operations to improve productivity - buy or replace plant or machinery as part of farm business planning, or diversification of operations. If the purchase livestock or machinery is contemplated, QRIDA can lend for these purchases and also for enterprise expansion in stages to best meet farm cash flow.
- *Achieve long-term sustainability*: Purchase equipment to meet environmental requirements, or drought/flood 'proof' farm property. Implement sustainable resource management practices, including alternative energy systems to achieve long-term sustainability.
- *Joint lending with existing bank lenders*: QRIDA will consider joint lending options with an existing bank or other commercial lenders. If more than $1.3 million is required or partial funding from QRIDA for a specific project or activity these can be considered also.

Terms and Conditions

Parameter	Limits and Conditions	Application for the Sugarcane DMF
Total funding	100 million but additional 30 million is likely to be available.	Extending funding limit to the QRIDA, which is the independent specialist provider of government financial assistance and advisory support, may allow capitalisation of the sugarcane DMF
Loan amount	Up to $1.3 million	The amount is low to meet DMF capitalisation requirement.
Loan term	Up to 20 years	
Interest rate	Low interest rates fixed for 1, 3 or 5 years	1 year fixed: 1.61% 3 years fixed: 1.74% 5 years fixed: 1.93%
Fees and charges	Nil	
Eligibility	If the following requirements are met, farm may be eligible for a Sustainability Loan: ■ be a full-time primary producer operating for at least 2 years ■ sound prospects for commercial viability ■ demonstrate financial need (Note: This does not require a decline by your commercial lender) ■ Provide an adequate management plan	
Security	Security must be provided commensurate with the amount of the loan	It will be hard for CANEGROWERS to provide security on behalf of growers.
Administration cost	Only administration cost applies	QRIDA is non-for-profit government agency, which means the costs are only limited to the actual implementation of the program.

Other Concessional Loans

QRIDA is currently administering 'Disaster Assistance' loans in response to the 2019 North and far North Queensland monsoonal trough ($250,000), 'Bushfire Concessional' 2019 loan ($), and 'Primary Producer First Start' loans ($1,300,000). However, these loans are not suitable for the proposed DMF.

Capitalisation through Mutual Capital Instruments supported through the Business Council of Co-operatives and Mutuals

The Business Council of Co-operatives and Mutuals (BCCM) is Australia's only peak body for co-operatives and mutuals across all industries (including 167 agricultural co-operatives and mutual). The BCCM unites co-operatives, mutuals and member-owned businesses with the common objective of increasing awareness of the co-operative and mutual business model and the important contribution of member-owned businesses to the national economy and community development of Australia. It has 84 members.

Australia's taxation system: Australian taxation legislation provides that certain 'mutual/co- operative companies', as defined for taxation purposes, can obtain government loans for purchasing assets and deduct repayments from

assessable income. Some States provide specialised loan schemes for mutuals/co-operatives, designed to fall within this legislation.

It is important to be aware that while the definition of a 'mutual/co-operative company' for taxation purposes captures some key characteristics (e.g. mutuality) of mutual organisations, it is distinct from the Australian legal definition of both a mutual and a company.

Each state approaches the possibility of providing specialised mutual/co-operative government loans differently. There is no specific mutual/co-operative loan scheme in Queensland, but Queensland Treasury Corporation offers a limited amount of loans specifically for Queensland co-operative housing societies.

The Mutual Reforms Act 2019 enabled mutuals to raise capital through the issuance of Mutual Capital Instruments (MCIs). Beyond this, the amendment to mutual entity definition does not create or alter any other rights for mutuals, including in relation to tax obligations or rights in relation to mutual receipts. MCIs can be issued by eligible mutual entities that are companies limited by shares, companies limited by guarantee and companies limited by shares and guarantee. The amendments in the Bill provide for eligible mutual entities to issue MCIs, a bespoke share that has been created for the mutual sector.

The ability to issue MCIs provides mutual entities with access to a broader range of capital raising and investment options without risking their mutual structure or status. Australia's financial regulator, the Australian Securities and Investments Commission (ASIC) can provide relief to mutual constitutions for a period of 36 months (dated from April 2019) to enable mutuals to take advantage of these reforms.

Who can issue MCIs: Mutual entities that are registered as companies limited by shares or companies limited by shares and guarantee already have the power to issue shares under the existing law. These mutual entities may issue MCIs under this existing power. Under the existing law, companies limited by guarantee do not have power to issue shares. The new law ensures that a mutual entity that is a company limited by guarantee has power to issue an MCI.

Requirements to be able to issue MCIs: A mutual entity may issue an MCI provided it meets certain requirements. Some requirements relate to the mutual entity itself, while other requirements attach to the MCI. The key requirements include:

- must be a public company;
- must not have voting shares (other than any MCIs) on a prescribed financial market;
- must not be a registered entity within the meaning of the of the Australian Charities and Not-for-profits Commission Act 2012 (ACNC Act); and
- must have a constitution that states the entity is intended to be an MCI entity for the purposes of the Corporations Act.

An entity is an MCI mutual entity if it meets the above requirements and has issued one or more MCIs.

Features of an MCI: As a type of share, an MCI is a 'security' for the purposes of the Corporations Act. Accordingly, MCIs are subject to the Corporations Act regulatory regimes that would ordinarily apply to the issuance of a share issuing including fundraising and disclosure requirements. MCIs are a new type of bespoke share for the mutual sector. While on their face there may be similarities between MCIs and preference shares (such as having non-cumulative dividends and the participation in surplus assets and profits), MCIs are distinctly different to preference shares. The constitution must also set out the rights attached to the share with respect to participation in surplus assets and profits (which includes any rights of an MCI holder to repayment of the face value ahead of other claims to surplus assets in a winding up).

Potential for MCI to capitalise sugarcane DMF: As the use of MCIs as a means of capitalizing mutual and co-operatives in Australia are in development phase, there are no local examples available at this stage. However, MCIs are utilised in overseas countries, and mutual managers are currently reviewing the protocols and methodology for amending mutual constitutions for adoption in Australia. Each mutual constitution will need to be set up or amended to allow for raising capital through MCIs. Agreement will be need to be reached by members and the funder on terms of issue.

An insurance mutual is one form of a community focused entity that can work with Government to provide effective and efficient services while increasing consumer choice and control. Cane grower ownership can generate better social outcomes, greater value for money, and enable greater social and economic resilience in the community. A Discretionary Mutual Fund with insurance protection can take a longer-term view, allowing it to work closely with the community to address risk mitigation as well as providing protection to its members, so developing a genuine self-help model. The trust and sense of belonging that a mutual engenders when wedded with a common goal that benefits all the

members and the transparency of a mutual can bring about the change that is necessary for the community to effectively manage its natural disaster risks.

In the end, the potential for alignment rests on there being a business case for the taxpayer: will risk mitigation through a mutual and government support for it, ultimately save taxpayer funds in the future?

Although in its infancy in Australia, the intense lobbying of Government by BCCM over the past three years to allow mutuals to raise their own capital through MCIs, is a potential game-breaker for mutuals and co-operatives. This will give new insurance mutuals such as the CANEGROWERS' Cyclone DMF, the opportunity to raise sufficient capital to meet the obligations of their fund retention and purchase reinsurance to protect the fund, for a premium that farmers will find more attractive.

Capitalisation through Farm Management Deposits

There is an opportunity to investigate the use of Farm Management Deposits (FMDs) to act as security against parametric products that are written against weather events such as tropical cyclones. The FMD funds are only drawn down if the members' retention (fund) is exhausted. The payment to the DMF would be in the form of a loan at pre-agreed interest rates and repayment period.

With the enactment of the Mutual Reforms Act 2019, mutual have the ability to issue Mutual Capital Instruments (MCIs) and this provides mutual entities with access to a broader range of capital raising and investment options without risking their mutual structure or status.

Issuing MCIs to utilise FMD funds may be a way of capitalizing DMFs, whilst retaining capital within the agricultural sector and providing farmers with protection against risks not readily available from the insurance market.

At this hypothetical stage, we recognise that there may be merit in exploring the potential for using FMD funds as collateral for MCIs. However, from the outset we recognise that there is a fundamental disconnect: namely, it is difficult to perceive a rational basis for any farm business to 'invest' in a mutual that it is not connected with (or be a member of). Yet, equally, to redirect FMD funds that are currently wholly reserved to protect the farm itself to a mutualised (but not necessarily diversified) risk pool of which it is a member is even less logical. This contradiction of economic rationale would need to be resolved, if indeed it can be, for any such recommendation to make sense.

Section 3E:

Identifies and assesses barriers to farmers in Australia and in major overseas countries to participation in mutuals and co-operatives.

In this section we consider barriers to participation in CMEs in general and then barriers to participation in insurance mutuals, based on project surveys and reviews of international case studies and the history of Australian CMEs and ICMEs.

In relation to CMEs in general and agricultural CMEs in particular, Australia does not have, relatively speaking, a favourable CME environment. From the international case studies, it seems that the development of a CME sector needs at least one or more of:

- Market dominance (e.g. Fonterra, Zespri, AC);
- Favourable regulatory environment (US); and
- Structures for CME capital (US and France).

We note that the two largest agricultural co-operatives, CBH and Norco, do have some regional market dominance (WA wheatbelt and northern NSW dairy). Otherwise though, contextual factors for Australia's contextual situation include:

- No strong CME idealism;
- Limited role of CMEs in the economy and especially agricultural economy;
- Government regulatory choices especially in relation SMAs in agriculture;
- A significant period of demutualisation, possibly driven by capital constraints and, in the case of agricultural SMAs, the push to privatisation;
- A generally neutral approach to business regulation; and
- Limited sectoral, networking architecture. There is the BCCM, but no overarching co-operative or powerful lobby group.

More specifically, we found that farmers don't join or remain members of a CME because of:

- Lack of relevant choice of co-operative;
- Not seeing any or sufficient benefits;
- Preference for greater flexibility in other business choices;
- Lack of knowledge of, and research about, CMEs and their benefits; and
- Initial capitalisation.

We note that Australia did have a developing CME sector from the early 20th century but for reasons described, this sector experienced some relative decline. It is easy to speculate that short-term financial reward may have been the key driver to this movement away from the co-operative format and, whilst this is probably largely true, it also reflects the underlying challenge of capital sufficiency.

Any entity that has, as a core part of its establishment and constitution, the management of risk on behalf of its members requires adequate capitalisation. A co-operative (as opposed to a mutual) that focuses on providing buying and/or selling efficiencies on behalf its members requires relatively little capital beyond a sufficient level to meet cashflow requirements. If credit terms are provided to members, for example those commonly referred to as 'harvest terms', then sufficient liquidity will be required to purchase the inputs or assets and withstand the delay in their repayment until the season's harvest proceeds have been realised. There is also some credit risk to be taken into account.

A well-managed co-operative, once established and stable, will tend to retain earnings to a prudent level according to its activities and obligations. In essence these levels are no different to those of other institutions that might be capitalised by shareholders and supported, where necessary, by medium/long-term borrowings and short-term banking arrangements.

The question therefore arises: do mutual and co-operatives have the same access to capital as other institutions? It would seem not. Our interviews have strongly implicated the lack of capital as being the principle constraint to the establishment of a new co-operative or mutual; also, in some instances, to subsequent poor management resulting in inadequate capital maintenance.

Is the problem with mutualisation/cooperation per se?

Whilst access to adequate capital is a key constraint to the establishment and management of co-operatives and mutuals, their ongoing viability is determined by the success or otherwise of its business model and the management of sometimes diverse interests and views within the membership.

In addition to the problems of capital constraints in the early phase, co-operatives face existential issues as a matter of course. Michael Cook, an eminent co-operatives researcher in the US, examines these through the idea of a co-operative life cycle, consisting of five stages:[1]

1. Economic justification for establishment.
2. Organizational design.
3. Growth, glory and heterogeneity, whereby members must consider growth or non-growth, outcomes and the management of disagreements (the heterogeneity).
4. Introspective analysis to look at 'cost frictions' and internal factions.
5. Moving towards a new future, which includes considerations of claim and control rights, purpose/s and culture or mindsets. This phase can lead to winding up the business, demutualisation or initiating a 'new' cycle.

There are three key points that follow from this conception. CMEs can benefit from support in management skill and self-analysis on an on-going basis, not just in the start-up phase. Secondly, regeneration is inevitable, as we might be seeing in the early days of efforts to develop Australian ICMEs. Regeneration, as opposed to 'degeneration' of the co-operative are supported by having a strong economic justification for collective action, perhaps not yet the case for Australian ICMEs, and/or adapting or 'tinkering' with the arrangements to overcome problems.[2] That is, there needs to be some room for adaptation. Thirdly, enduring co-operatives, at least in the US, seem to be good at identifying and managing the 'frictions and factions'.

Other research has identified the importance of member commitment to, and identification with, the co-operative, so that reinforcement of these things amongst members is important.[3] We can see that these things might be easier to develop where members are geographically concentrated, having similar community attachment, and common enterprise types, such as the case of Sweeter Bananas, but harder to develop for multi-industry ICMEs with a wide geographical dispersion.

Co-operatives that provide their members with the benefits associated with economies of scale such as the bulk buying of farm inputs such as seed, fertilisers and agro-chemicals, offer a relatively straightforward business model. Adequate membership levels and cashflow management being the key components of a sustainable enterprise.

In contrast, mutuals confront a far more challenging business model and economic performance environment. By their very nature, the financial performance of a mutual is uncertain as it is largely dependent on the occurrence of the risk(s) against which protection is offered. In turn the nature of these risks may be more or less volatile according to their characteristics.

Certain risks lend themselves more easily to mutualisation than others. The origin of farmer mutuals in Europe lies in the coverage of fire and hail. Both of these perils tend to be broadly random and non-systemic in nature; both can cause devastation at the individual farm level but – given a reasonable spread of risks in the group – are unlikely to impact all farmers at the same time. So the basic principle of a risk sharing model is upheld: the premiums of the many support the losses of the few.

In Australia the standout peril is **drought**: the survey carried out in the preparation of this report showed greater that 80% of respondents indicating drought (and low rainfall) as their key concern.

However, as is well known, the occurrence of drought (or prolonged periods of low/no rainfall) is typically highly systemic; impacting extensive areas of farmland within a single season. And, worse, also for seasons back-to back. Where on and off farm water sources permit, a degree of risk management is possible especially for high value crops and livestock. Otherwise drought is seasonal and widespread in its impact; there is little to no value in diversification even across the thousands of miles encompassed by Australia's broadacre farming areas.

It is therefore exceedingly difficult for a mutual to hold enough capital to meet the cost of claims impacting all or most of its membership at the same time. The conventional solution to this, as is widely practised internationally, is for the mutual to buy insurance to protect its own aggregate position, in the form of reinsurance. This enables the mutual to

[1] Michael Cook, "A Life Cycle Explanation of Co-operative Longevity," *Sustainability* 10 (2018).
[2] Ibid.
[3] Elena Mamouni Limnios et al., "The Member Wears Four Hats: A Member Identification Framework for Co-Operative Enterprises," *Journal of Co-operative Organization and Management* 6, no. 1 (2018).

protect its members fully, or typically up an event whose magnitude is deemed to be of severity with occurrence once every two hundred years (probability equals 0.5%). The cost of holding capital to cover such an event would be prohibitive even if it were available. Furthermore, it is unlikely that members of a mutual would necessarily wish to see excessive amount of 'their' money encumbered in a reserve account to provide against the losses arising from a high severity event.

So, we are led to the observation that it is not an attribute of mutualisation or cooperation per se that tend to militate against their establishment for the management of agricultural (especially crop and livestock) production risks. Rather it is the nature of the perils that beset the farming sector in Australia, especially water scarcity, that make capital support and probably also reinsurance an intractable challenge.

At least one provider in Australia has settled on the formation of a Discretionary Mutual Fund (DMF) as the preferred model for offering an Income Protection product to farmers. In this case there is, as yet, no capitalisation in place or reinsurance to backstop the fund's ultimate liability to its members in the event of loss. We are advised that the managers of the fund are in advanced discussions to remedy this position in order to provide members with the security they need, as well as to attract new membership from farmers who might otherwise have been deterred by this position.

Unlike the position of an insurance company, a financial institution regulated by APRA to ensure certain minimum standards of financial security to the company's policyholders, a DMF has the benefit of being able to take (as the name suggests) a 'discretionary' view of the payments it makes to its members. If there were to be a shortfall in the funds available to make payments to legitimate claimants, the DMF has the right – at its own discretion – to reduce the levels of payment to match its resources.

Clearly any shortfall from the amount that would otherwise be payable under the terms of the agreement in place with a farmer member represents a default with possibly disastrous consequences. However, the DMF can preserve itself from ultimate bankruptcy which would be the case if an insurer to find itself in such a position.

It is certainly not a recommendation that a DMF should operate without adequate capital backing and access to further financial protection in the event of severe losses, but we note that it is an option.

Mutual Capital Instrument

Developments relating to mutuals – the major one in the last 5 years is the changes to the Corporations Act (2001) in relation to the Mutual Capital Instrument (MCI). An MCI is essentially a share in the mutual. MCI Holders may receive a non-cumulative dividend subject to the class rights for the MCI. The class rights may also allow for the instrument to be redeemed by the Company and for the instrument to be transferred between investors. The extent of all of these things will depend on the specific class rights and will vary from issuer to issuer. Like a share, the MCI Holder's investment is at risk in the event of liquidation of the mutual. Class rights are designed to ensure that the Board of directors of the Company is always acting in the interest of members, rather than MCI holders.

Mutuals need to have appropriate accommodating rules in their constitutions to be an 'MCI Mutual' and be able to issue MCIs. An MCI Holder is not a member of the company through holding the MCI. They may be a member through ordinary member qualification however do not need to be. Likewise, members do not need to be MCI holders in order to qualify as members.

MCIs are significant because they create a pathway for the creation of new mutuals with adequate capitalisation and an avenue for supplementing members' funds in existing mutuals. MCI investment is not a 'donation' to the mutual and remains an asset in the hands of the MCI holder. MCI investors may typically be entities or people who have an interest in supporting the mutual. Where the class rights permit and sufficient member surplus exists, redemption of the instrument by the Company may allow MCI Holders to regain their investment funds.

The MCI regulations therefore have opened up an exciting new chapter to allow the creation of viable mutuals for the purposes of risk protection. These may be insurance mutual companies or discretionary mutual funds (DMF). A new insurance mutual must still go through the licence application process with APRA. DMFs can be established relatively quickly.

Picnic Labs Limited (Picnic) has developed a model to instantiate new mutuals in less than 3 months. This includes a replicable process of feasibility analysis, design and establishment and go-live. In addition to a highly skilled team to support the management of the mutual, Picnic's framework brings key partners to support important aspects such as external (re)insurance placement and capital needs and major loss modelling.

Institutional and Insurance Market Barriers

- Lack for insurer choices / competition.
- Competitiveness.
- Lack of historical data.
- Thin markets.
- Lack of underwriting capacity.
- Mutualising catastrophe risk difficult because of aggregation.

Policy Barriers or Limitations

- Government reluctance to be involved in capitalisation.
- Regulatory barriers and awareness.
- Government legislation is not supportive but new developments are helpful.
- Restrictions on raising capital in Australia.

Section 3F:

Identifies, assesses and makes recommendations on the conditions needed to address these barriers and the viability of putting those conditions in place.

In the previous Section 3E we observed that it is less that mutual and co-operatives suffer from barriers to their establishment and management but, rather, that it is fundamentally challenging to create a sustainable business model that adequately addresses the key risks confronting the Australian agricultural sector.

Indeed, in recent times both Farmers Mutual Limited (FML) and Latevo Farmers Mutual (LFM) have taken steps to establish new businesses in this space. Both FML and LFM have encountered challenges in finding support for their underlying capitalisation as well as support from reinsurers. Whilst it could be regarded as an entirely commercial matter that two DMFs have been unable to obtain funding by means of standard market capital raising approaches, it should perhaps be viewed a strong signal that government intervention would be beneficial to stimulate the establishment of market-base risk management mechanisms. An absence of such institutions leaves the farming sector without valuable risk management options.

The key barrier in Australia for farmers to join or remain in a risk protection mutual has been the lack of appropriate established mutuals with a focus on their needs and considerable hurdles to establishing new mutuals.

Prior to the introduction of the MCI, the main barrier to establishing a new mutual was the challenge of capitalising a new mutual in a way which was fair for those supporters, members at establishment and members in the future. In absence of MCIs, moneys invested were essentially benevolent donations and would be 'trapped' in the mutual, meaning those supporters would not receive any return.

Where those initial funding supporters were also members of the mutual, the burden of capitalising the mutual would disproportionally fall on those early members - members joining later would gain the benefit of the mutual without the capital commitment. As a result of this issue, a new mutual established would usually not have sufficient capital to be a truly efficient risk pooling platform and consequently the benefit for members in joining or remaining in the mutual (in the form of lower contributions) would not be significant. Thus, new mutuals didn't appear and the overall lack of such mutuals was evident.

An additional potential barrier is ensuring that any mutual achieves the scale required to satisfactorily spread overhead costs around members. The scale is related to the underlying business model of the mutual and the level of overheads that consequently arise. A low-overhead efficient mutual can provide well priced products at a lower overall scale. In order for a mutual to be appealing to members, the price (contribution) required for the cover is a critical consideration. 'Legacy' mutuals, especially those not operating at sufficient scale, will struggle to offer attractive terms for members.

Section 3G:

Identifies and assesses the commercial impact on the Australian agriculture sector generally and by major commodity of increasing membership of mutuals and co-operatives.

As described in Section 3E, the introduction of the MCI has provided an opportunity to potentially address the largest barrier in creating new mutuals (and adequately capitalising existing mutuals). That opportunity however needs to be seized upon – constitutional amendments are required, rights of MCI holders formalised and suitable investors identified. The conditions exist for this to proceed and the emergence of Picnic Labs Limited as a provider of mutual instantiation and management services with a capability to develop new MCI mutuals means that it is expected that a new generation of mutuals will emerge to meet the needs of Australian farmers and other groups in Australia and New Zealand.

In establishing a new 'start-up' mutual, a pathway needs to exist for that mutual to grow to a scale to support the overheads incurred in running it. Critical to that pathway is a suitable 'foundation member'. This member will be seen as a cornerstone of the mutual, that other potential members will look to follow and consequently join the mutual. Beyond that, a suitable member growth model needs to exist.

Start-up mutuals have the best chance of success when the addressable market is the largest. Therefore any new mutual must be designed in such a way that broad groups will find the products offered appealing. In the case of farmers, that means offering products that are relevant to as many types of farming as possible – cattle, sheep meet, wool, cotton, dairy, growers, etc. That doesn't mean necessarily a one-size-fits all product, rather the suite of products available must be broad so that each group's needs are catered for adequately by the mutual.

Balance must be sought between single industry specialty and scale. Focusing too narrowly on one group (e.g. cane growers) can lead to a situation where the mutual struggles to place the necessary external (re)insurance covers and/or is too exposed to volatility from a common cause (e.g. drought, cyclone, etc). As well as the addressable market being broader, the best results from a stability point of view will be achieved when a broader range of industries is supported.

Picnic Labs' expert team has the experience to build and support a mutual focused on needs of members from across the spectrum of agrarian activity. A suitable foundation member is sought who brings a reasonable size portfolio of exposure at launch but also can champion the mutual and encourage others to join. That foundation member does not need to be the provider of MCI capital. Where they are not, a suitable MCI investor(s) is also sought to provide sufficient MCI capital that will support the mutual through to the scale where that MCI capital can be redeemed (returned to the investor).

Section 3H:

Identifies and assesses the public policy impact of increasing membership of mutuals and co-operatives.

The Policy Context

The inclination to support agricultural production is long-standing and widespread amongst nations. While the rhetoric of the last 30 years in developed nations has been about the need for farmers to be self-reliant and competitive, this is the historical exception amongst developed and developing nations. Australia and New Zealand are however notable within OECD countries in the extent to which self-reliance is expected. The major change at the international level has been from movement from instruments of production support to indirect forms of support[1], such as, in the US, subsidising crop insurance premiums[2] and supporting the operation of farmer co-operatives, rather than topping up commodity prices.

Nonetheless, even in Australia, there remains pressure for policy action that will help producers, especially in relation to managing climatic and market risks and structural disadvantages in national and international markets. The key point from this review of the context of agricultural policy is that the Antipodean[3] policy difference[4] means that direct policy transfers from other countries are unlikely and that if there is a will for some form of support or market development or creation, then there will need to be a design for the Australian context. For this review, we applied some comparative policy analysis but only with the intention of using comparisons to highlight particular characteristics of the Australian context, paving the way for later policy design discussions.

Trends in Agricultural Policy

Agricultural policy frameworks in post-industrial economies can be broadly considered as systems of policy layering, whereby there are identifiable shifts in emphasis, but previous policy paradigms are not necessarily entirely displaced[5]. These policy paradigms are usually associated with a dominant value or set of values and assumptions. Perhaps the most fundamental of these is agricultural policy is *food security*, which was initially mostly about food supply, redefined in the era of apparent abundance to include consistency of supply and food quality[6]. Secondly, was *agricultural mercantilism*, whereby nations (and earlier on empires) wanted and sometimes still want, to confer advantage on their producers over those from other nations. Examples of mercantilist measures include subsidising finance, land, infrastructure and biotechnology in order to develop particular industries[7], such as for Australian wheat, and export subsidies to gain advantage in all or markets, which reached a high point in the trade wars of the 1980s[8].

Thirdly, support for agricultural production has also been used to support *rural development* and sometimes *decentralisation* in first encouraging settlement, with policies such as land distribution and redistribution and start-up support, and then using a suite of support policies and subsidised services and infrastructure to try and retain farmers and sustain associated rural towns. Fourthly, the case for supporting agriculture has also been bolstered by some cultural narratives around the *social and cultural roles of agriculture*[9]. These can vary in orientation by country, from ideas of the idyllic countryside more common in western Europe to the frontier and nation-building stories of North America and Australia. The commonality is a notion of social contribution through some combination of (positive) characteristics of rural landscapes, people and communities. Fifthly, there is an argument for there being *asymmetrical market power* in agricultural commodity markets with farmers subject to downward pressure on prices while unable to

[1] Many countries, including the US still use production-linked support, such as export subsidies and offsets for producers supposedly affected by trade disputes.
[2] Some analysts argue that insurance premium subsidies are production-linked and therefore could be in breach of WTO rules, however this is unlikely to be tested in the near future given US domestic and international trade politics and the general weakening of the WTO as economic nationalism resurges in many countries.
[3] The Antipodes was sometimes used to mean Australia and New Zealand.
[4] Cockfield, G., & Botterill, L. C. (2012).
[5] Daugbjerg, C., & Swinbank, A. (2015)
[6] Daugbjerg, C., Farsund, A. A., & Langhelle, O. (2017)
[7] The Australian wheat industry is a good example of this. Originally the development of the industry was also part of an 'empire economy' strategy.
[8] Josling, T., & Petit, M. (2018)
[9] Montmarquet, J. A. (1989)

control costs.[1] Finally, and further to the previous factor, agriculture is seen to be particularly exposed to *climatic, quarantine and international relations risks*.

All of these factors have been cited in arguments to develop and sustain national and even multi-state[2] systems of agricultural support. Such systems developed from the early 20th century but became more entrenched and widespread from the 1950s, in what was seen as the age of *agricultural policy exceptionalism*, whereby farm industries were supported in ways and to an extent rarely found with other industries[3] The forms and combinations of support varied across countries and those earlier choices are important in understanding the contemporary policy context. A key point is that Australia relatively heavily on indirect (to production) support measures, compared to the EU and US, where there were more direct transfers to farm incomes through production-linked support[4]. Australian farmers rarely got a 'cheque in the mail'. Instead, there were some input subsidies (fuel, fertiliser, machinery) and, for some industries (coarse grains, dairy, sugar) developed comprehensive marketing boards, as did New Zealand and Canada in something of a Commonwealth policy model, though Canada also shared some policy instruments with the US.

An additional but very important point is that in some countries the combination of settlement patterns and electoral system had made the rural vote crucial. In Australia the Country Party was an influential part of governments in the post-war era, while in the US the 'farm state' senators can still be very influential.

By the early 1970s the reasonably widespread support for agricultural policy exceptionalism started to be increasingly challenged in policy debates, with significant policy retrenchment starting in the 1980s. The drivers of this challenge included:

- The cost to governments of industry support generally and agricultural support in particular;
- The increasing influence of market liberal Ideology, which promoted the values of competition, efficiency and self-reliance;
- The influence of other exporting industry lobbies, wanting to free up world trade in order to get greater access to markets; and
- The consequent development of international trade regulatory institutions.

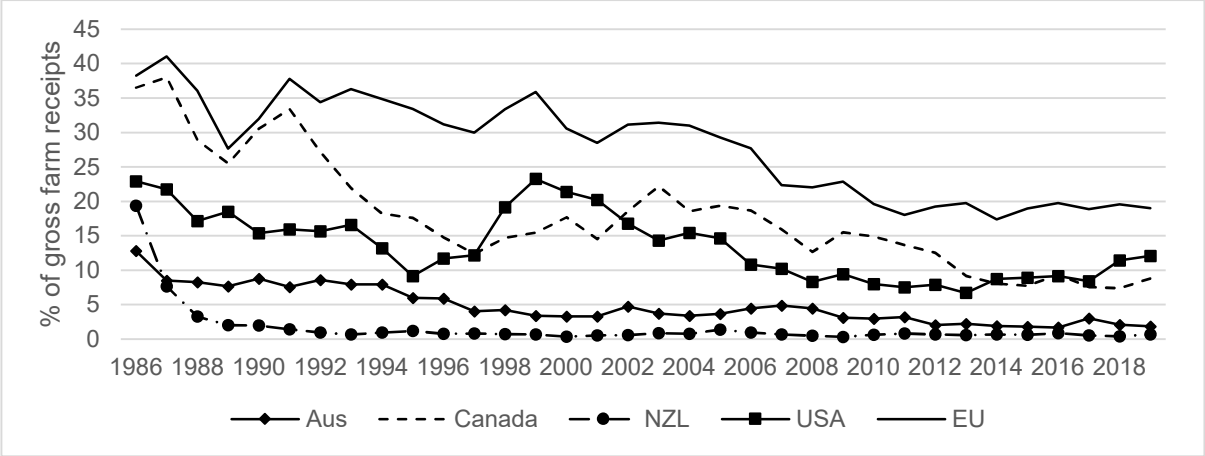
Importantly for this context setting, Australia was a relatively enthusiastic supporter of freeing up world trade, through participation in the Cairns group, based on the assumptions that Australia would never be able to compete in any subsidy wars, a system of trade rules would somewhat constrain the EU and US and Australian farmers would be competitive in a deregulated environment.

Some policy analysts see that we have moved into a period of *post-exceptionalism*, with significant policy change but with some carryover from the exceptionalist period[5]. The key characteristics of this stage are:

- Initial movement to comply with WTO rules around the types of allowable support measures (indirect rather than direct support);
- A decrease in total direct support as it affects farm receipts (see Figure 12);
- A decrease in the proportion of support based on market prices [6]; and
- Different degrees of policy retrenchment, especially with the Antipodean countries especially winding back the amount and variety of forms of assistance.

[1] The Treadmill Effect is where farmers increase scale and/or innovate to reduce per unit costs, but as more innovation occurs amongst many competitive farmers, prices tend to stay lower.
[2] The Common Agricultural Policy
[3] Coleman, W. (1998); Skogstad, G. (1998); Noting though that secondary industry protectionism was also widespread in many countries.
[4] Cockfield, G., & Botterill, L. C. (2012); Cockfield, G., & Botterill, L. C. (2018)
[5] Daugbjerg & Feindt, 2017; Greer, 2017
[6] There are some exceptions, such as New Zealand, that maintained or increased this form of assistance but within a very small amount of expenditure.

Figure 12: Proportion of gross farm receipts by jurisdiction[1]



For Australia in this period, the key outcomes were: the reduction and then virtual elimination of input subsidies; the winding down of tariffs to a level that is the equal lowest in the world; and the incremental unwinding of commodity marketing and handling entities, through corporatisation and then (mostly) privatisation)[2]. This has essentially left Australia with no long-term, direct support programs, relying on either concessions or short-term eligibility. Examples include support during and after extreme events (drought or floods), product and market development grants, various research and extension programs, specific agricultural concessional finance and Farm Management Deposits (enabling some tax concessions).

The reasons for the divergence in levels of support for farmers are likely complex and beyond the scope of this study but there are some factors that may be contextually relevant. These factors can be drawn out by comparing New Zealand, Australia, US and the EU on a series of factors (Table 3). From this grouping of countries, farm income support and the historic use of direct income support measures are higher where the economies are bigger, the share of agriculture in the economy and overall exports is lower and political decentralisation[3] and legislative aggregation[4] are higher. The latter two factors are about the ease of making policy change. New Zealand, for example had relatively few constraints on the central government whereas in Australia, policy change in many areas needed the state governments to agree to certain things over time, while EU policy requires multi-country negotiations.

Table 3: Direction of differences in economies, institutions and policy instruments by jurisdiction

	NZ	Australia	Canada	US	EU
Proportion of farm receipts from policy interventions	→	→	→	→	→
Use of direct price/income measures	→	→	→	→	→
Size of economy (GDP)	→	→	→	→	→
Share of agriculture in GDP	←	←	←	←	←
Share of agriculture in exports	←	←	←	←	←
Political decentralisation	→	→	→	→	→
Legislative aggregation	→	→	→	→	→

In addition to all that, Australia tied itself to the free trade movement, which may relate to the combination of size of economy and relative dependence on agriculture in exports.

There follows from this brief historical review a number of implications for consideration of policy options for Australia. First, we should proceed on the assumption that there will be no major change to Australian policy settings and in particular, governments will be very reluctant to commit to programs that involve on-going expenditure. Budget control is almost an article of faith in Australian politics and both major parties remain largely tied to the idea of free markets and business self-reliance. In addition, as discussed above, there have been few on-going direct transfers of funds to

[1] *Source:* OECD 2020
[2] Cockfield & Botterill, 2012, 2018
[3] Meaning the levels of government and parliaments/congress. New Zealand is a unitary system with one parliamentary house, whereas the EU is a confederation with multiple and in some cases multi-level national political system.
[4] The degree to which agricultural issues are considered in omnibus arrangements. New Zealand and Australia tend to have issue by issue legislation, whereas the US has aggregated cyclical farm bills (every 4-5 years) and the EU has the CAP.

producers and governments will be very wary of any such commitment as being a 'thin end of the wedge'. Secondly, the institutional and academic capacity to support innovative risk management and development of co-operatives is limited as compared to the western European and North American countries. This is especially so for insurance programs where there is little history of Australian government involvement. In the US, for example, there are specialist agencies to support program development for risk management and co-operatives and also significant expertise and extension capacity in Land Grant universities to provide additional support.

Thirdly, the forms and trajectories of Australian agricultural policy did not necessarily, at the very least, contribute to the development of an environment conducive to the formation and development of agricultural co-operatives. The development of statutory commodity marketing and handling boards in some industries[1] effectively created hybrid government-co-operative models, with grower 'members' or participants but a degree of government control and oversight. Thus, the deregulation of these could be driven by governments, leading many to be first corporatized and then privatized, with some even ending up with foreign ownership.[2] On top of that, Australia runs a competition policy framework that constrains co-operatives, relative to, for example the US, where there are specific competition exemptions for agricultural collectives. Australian governments have belatedly recognised the potential benefits of producer co-operatives and sought to support their development, however there has been a generational gap in experience of such co-operatives.

The primary commercial benefit to the Australian agricultural sector of a successful mutual is improved ability to recover following major events, with significantly less reliance on government handouts.

The smoothing of financial volatility in farming will also allow better long-term investment and planning decisions. Funding of farming activities such as through bank lending will also be less onerous and ultimately more successful through farms having a more consistent income basis.

As opposed to using for-profit, shareholder-owned insurance, mutual protection also benefits the sector in that experience profits are retained in the mutual, rather than leaking to shareholders. That insurance shareholder leakage is also usually to shareholders outside the regional areas, meaning that profits leave the region. In a mutual these profits are retained for the benefit of members; this can occur through stronger reserves (to give greater resilience in future downturns), better protection or reduce contributions – or a combination thereof.

This is particularly beneficial in a situation where there is generally a one-sided view of the impact of climate change on premiums (i.e. that they should be higher). In a shareholder-owned insurer, if this is wrong, and experience is better than expected, the profits leak out. In a mutual, this is retained as described in the previous paragraph. The current narrative around climate change, rightly or wrongly, means that this bias in pricing insurance is very prevalent and consequently this benefit of a mutual should not be underestimated.

[1] Examples include the Australian Wheat Board and state grain handling authorities.
[2] For example, the successor company to the Australian Wheat Board is now owned by Cargill whereas CBH is a notable exception in the grain industry, remaining as a grower co-operative.

Section 3I:

Identifies and assesses the public policy impact of increasing membership of mutuals and co-operatives.

The obvious public policy benefit from increasing mutual membership (and insurance generally) comes through reduced reliance on government funding during downturns or after major events. The secondary impacts on public policy in relation to improved mental health and other outcomes that arise when stresses associated with unfunded losses are removed or reduced should also not be ignored.

The specific additional benefit in the mutual membership that may arise is through a focus on risk reduction and risk management practices as well as education that is common with mutuals. This can assist public policy makers in engaging with this key sector of the economy and fostering a spirit of partnership rather than antagonism.

Section 4: Deliverable 2

To convene and engage with a farmer reference group for the duration of the project to seek input, validate and test the information and ideas contained in the report.

Farmers' Reference Group

The following cross-section of agricultural representatives / experts has been brought together to work with our project team over the full period of the project. Their passion for the industry and in many cases experience with either mutuals or co-operatives, will prove invaluable in ensuring meaningful outcomes for our project.

State	Industry / Crop Type	Farmer / Entity	Contact
QLD	Sugarcane	John Casey	John Casey
NSW	Cotton	Daniel Kahl	Daniel Kahl
QLD	Horticulture	QLD Farmers' Federation	Kerry Battersby
QLD	Grain	Carnamah Farming	John Alexander
NSW	Livestock / Meat Processor	Northern Co-operative Meat Company Ltd	Simon Stahl
ACT	Pork	Australian Pork Ltd	Alister Oulton
ACT	Pork	Australian Pork Ltd	William Davies
VIC	Grains	Birchip Cropping Group	Fiona Best
WA	Fruit	Sweeter Banana Co-op	Doriana Mangili
WA	Fruit	Carnarvon Banana Industry Fund	Bruce Munro
WA	Grain	CBH	Rob Dickie
WA	Livestock / Meat Processor	WAMMCO	Coll MacRury
WA	Livestock / Meat Processor	WAMMCO	Kelly Pearce
NSW	Dairy	Norco	Greg McNamara
NSW	Various	Oz Group	Adam Bianchi

Pre-22nd June Webinar feedback back from the Farmer Reference Group (FRG)

FRG members have a mix of understanding / involvement with mutuals and co-operatives.

- Goals consistent – maximum benefits, maximum savings and greater collaboration.
- Strength in numbers will reduce financial risk and bring better products without higher prices.
- Main driver for change is high cost of insurance (particularly in northern Australia).
- To be successful, mutual contribution needs to be cost effective, sustainable (for farmers and insurers), with critical mass essential.

Barriers

- Access to capital, set-up and capitalization costs, lengthy application / development process.
- Impact insurers see to their bottom line – how do we minimise this and reduce premiums?
- Lack of awareness. Existing mutual and co-operative members enjoy significant benefits – how do we improve awareness?
- Driver / Enabler – members incentivized to act in best interests of all for lowest-cost and best service.

Key points from 22nd June Farmer Reference Group Webinar:

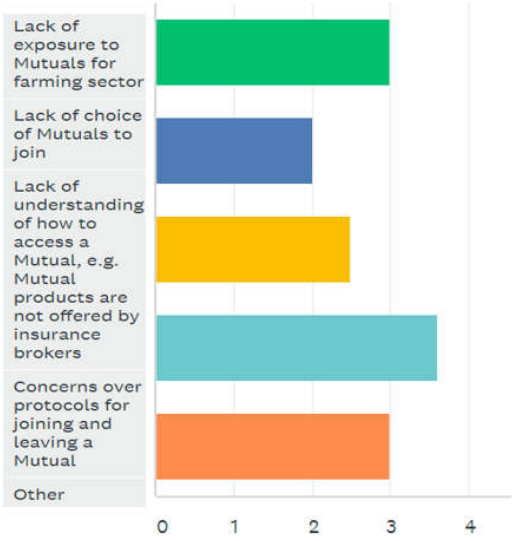
- Raising the essential capitalisation (to ensure the mutual is adequately funded in the event of a major loss and lower its dependence on reinsurance) is a key constraint.
- Access to well-priced reinsurance is needed especially if the mutual is writing risks of a systemic nature.
- To establish a new mutual or co-operative and to drive participation requires impetus. This usually comes from a committed promoter often representing a specific sector or region.

- Member education / awareness of the financial benefits and potential disadvantages are needed to create the critical mass needed for success.
- Management skills are crucial for growth and good governance.
- Sustainability requires a critical mass of like-minded members with a common interest.
- Awareness that there is the ongoing potential for an inherent tension between the interests of 'members' and 'owners' (where this is relevant) e.g. mutual pays a member's loss which adversely affects the mutuals financial results.
- A long-term strategy needs to be considered, particularly as the mutual or co-operative grows.

Key points from 18th August Farmer Reference Group Webinar:

Leading up to our second workshop, we conducted a short form survey of our Farmer Reference Group participants, asking farmers to consider the following CME-related issues. This webinar concentrated on reviewing and discussing these points, and also the CME questions raised in the NFF survey:

Aware and Access

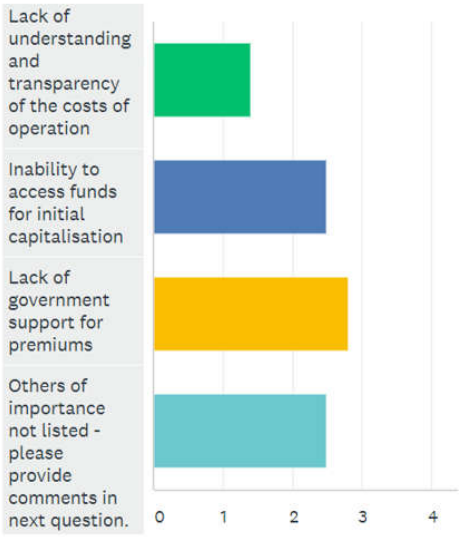


Comment on rankings: *"Mutuals are virtually unknown in the cane farming sector. Keen to know more".*

Product Ranges

Comment on rankings: *"We do not know a lot about what is offered by mutuals, but I am sure it will be of great benefit to growers. Any opportunity to drive costs down would be great".*

Cost



Comment on rankings: *"Unsure on how to access funds to start a mutual. Govt support is needed which will hard to come by in today's environment".*

Key points from 16th September Farmer Reference Group Webinar:

- The use of co-operative and Mutual Enterprises (CMEs) to provide insurance and insurance-like products to reduce the production risks to Australian farm businesses has been relatively limited.
- Based on current market conditions and attitudes to both CMEs and production insurances, agricultural insurance mutuals are unlikely to develop or be sustained, without some form of government support.
- There is little prospect of government support to producers that involves on-going financial commitments, such as insurance premium subsidies.
- Extreme and sometimes systemic events, such as cyclone and drought, challenge the operating model and therefore the viability of a mutual unless there is sufficient capitalisation and/or adequate reinsurance.
- Without insurance or other forms of support, climate change imposes a requirement for operational and financial tolerances not previously borne by the farming sector.
- As with all CMEs, there is likely to be tension between the interests of 'members' and 'owners' (where this is relevant) e.g. mutual pays a member's loss which adversely affects the mutual's financial results. Proper management of the mutual is therefore essential.

Section 5: Deliverable 3

To work with the overarching Project coordinators and other sub-project groups to deliver a holistic and consistent report and set of recommendations.

4th August

Willis Towers Watson (WTW) London-based Agriculture and Weather Risks' team provided Aither (Subproject 1 – Insurance) with an overview of the international agricultural insurance market and the challenges faced in underwriting Australian crop insurance.

6th August

WTW participated as an observer in Aither's Insurance Council of Australia – Rural Affairs Working Group Workshop. Insurers and rural underwriting agencies provided valuable insight into the barriers and possible interventions to improve uptake of agricultural insurance. The majority of the issues raised by Australian insurers reflect the position relating to the underwriting of insurance mutuals and also the international insurance market.

12th August

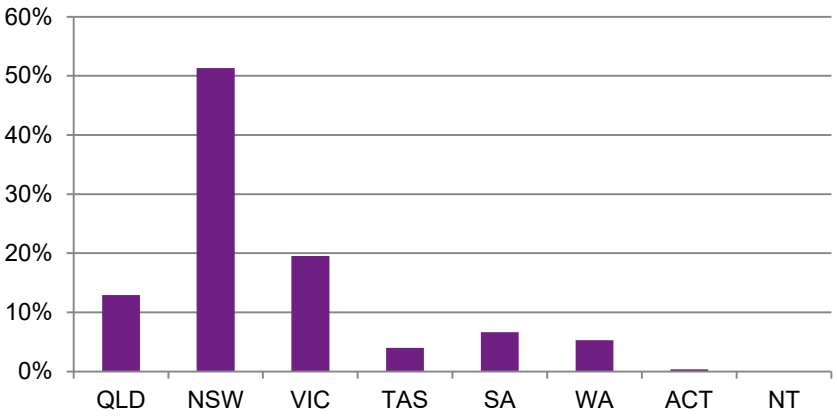
An overview by Aither with WTW's Reinsurance Asia Pacific Agriculture leader on the pricing and volatility of underwriting Australian crop insurance, and the mechanics and structuring of reinsurance to potentially bring down farmer premiums, together with the role of Government as potential reinsurer.

20th August

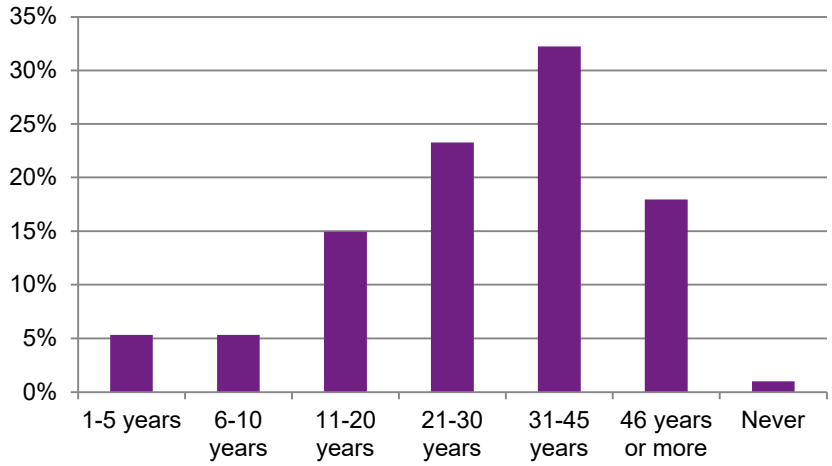
Participation by WTW and USQ in Aither's interview with QLD Farmers' Federation to identify conclusions and recommendations from Drought and Climate Adaptation Program, case studies and potential intervention mechanisms that could assist in provision of insurance products.

Section 6: Survey Results

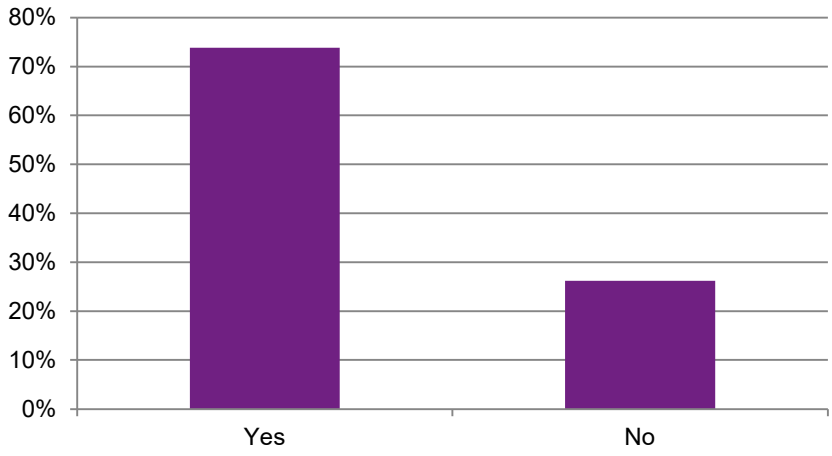
Location of Participants



How many years have you been involved in the Australian agricultural industry?

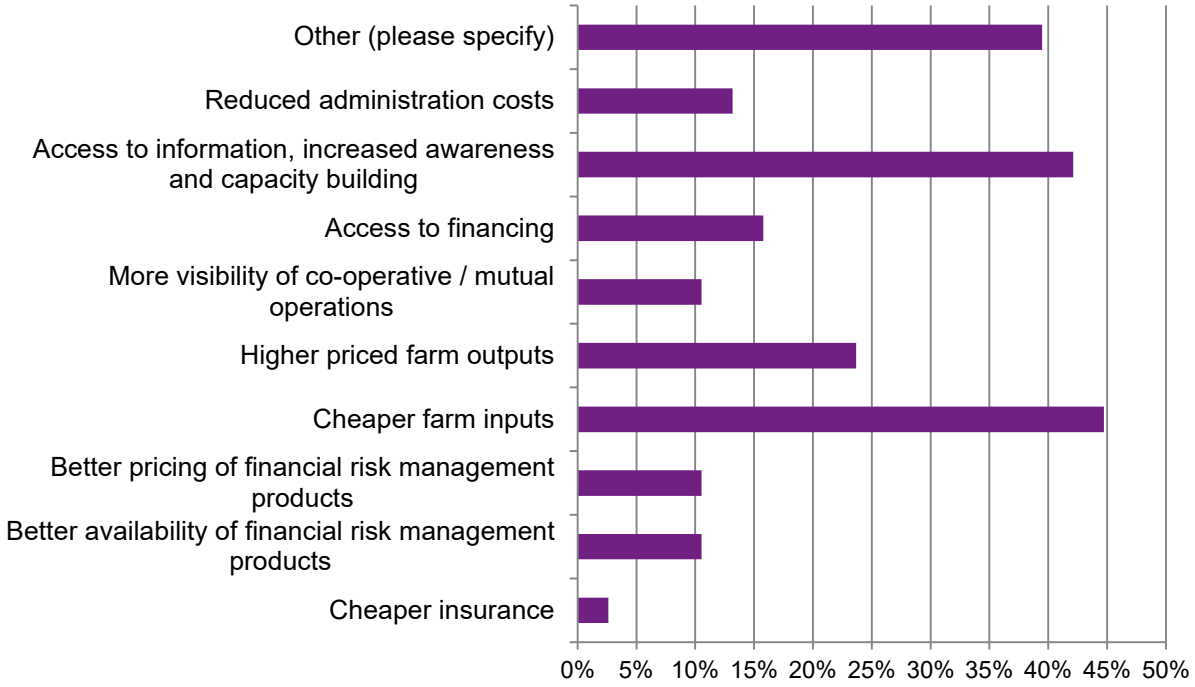


Are you a member of an Industry Association?



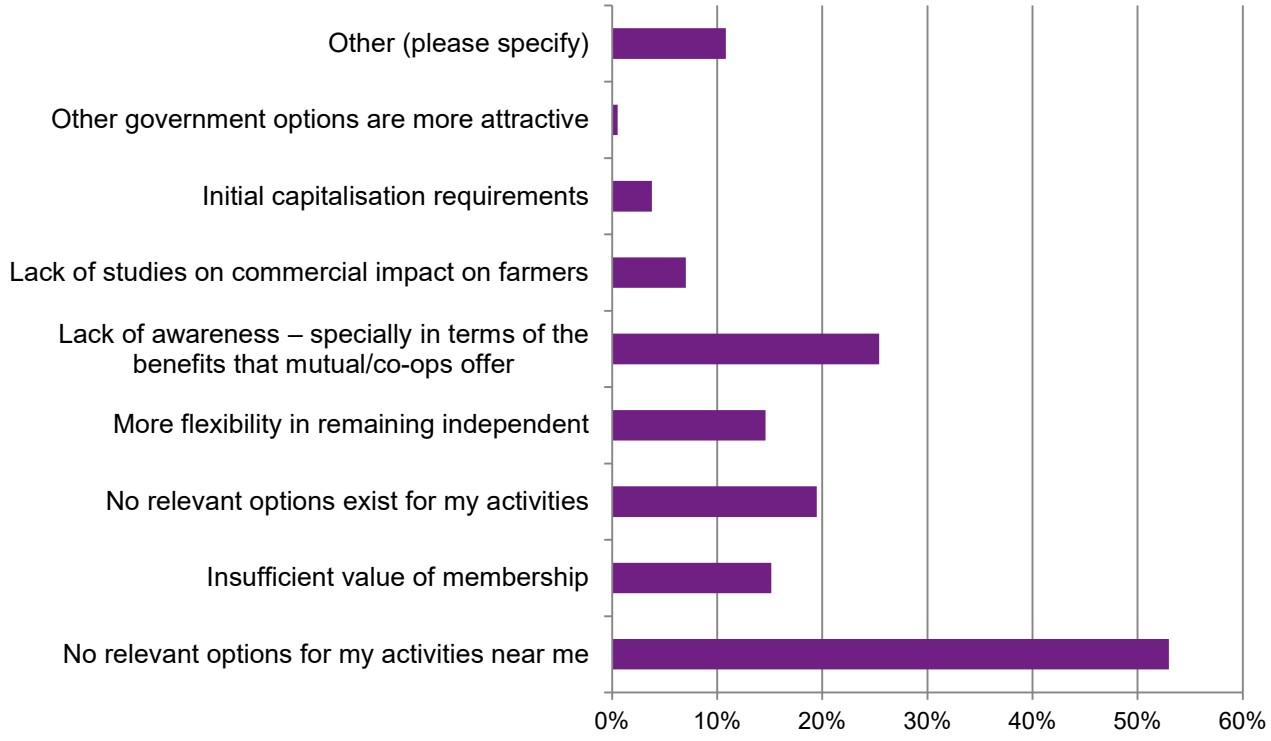
What benefits do you receive from your co-operative / mutual membership? Select all that apply.

Cheaper inputs and access to information are perceived to be the prime benefits of membership



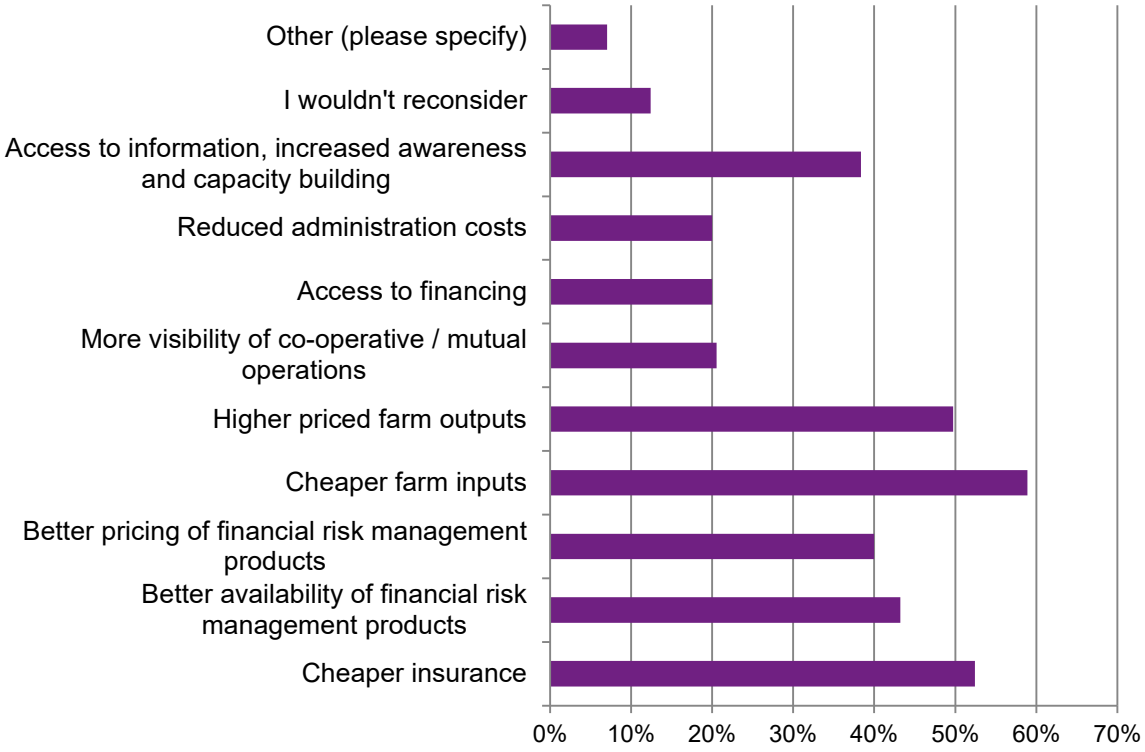
Why aren't you a member of a co-operative / mutual? Tick all that apply

Lack of availability and/or awareness of key barriers to membership

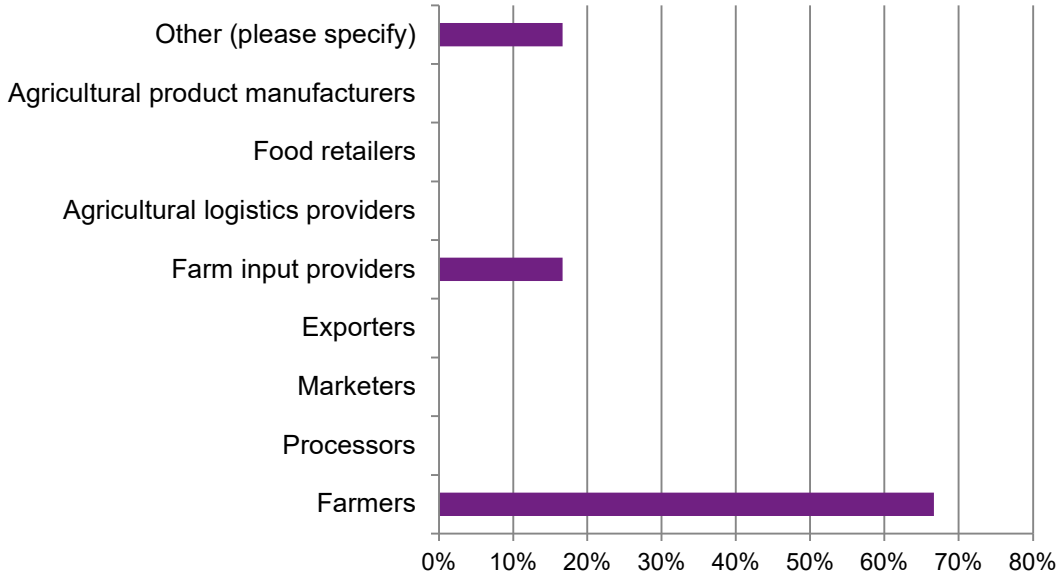


Which of the below factors would make you reconsider joining a mutual/co-op?

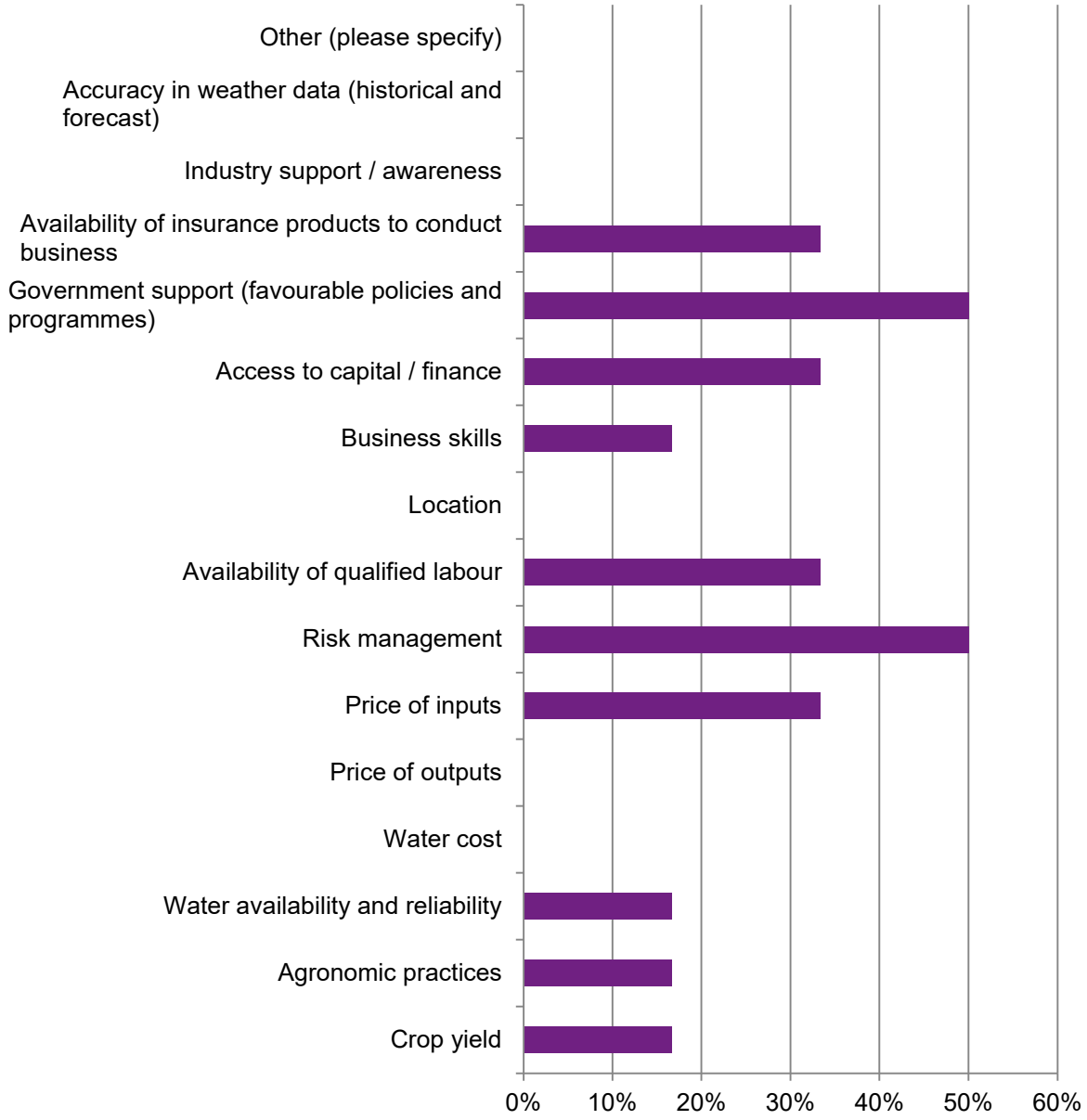
Financial benefits are the key motivations for joining.



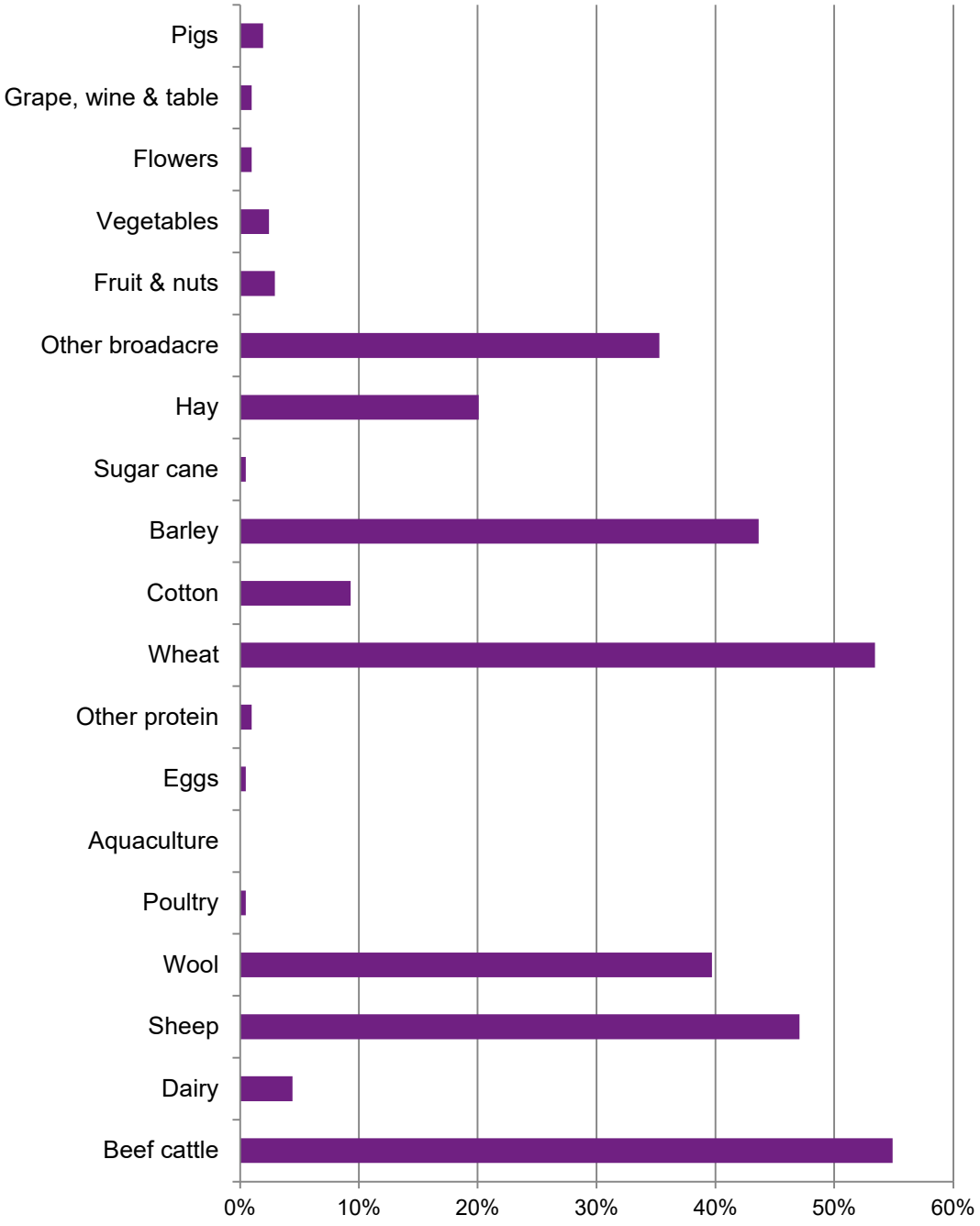
Which of the following best describes your membership base?



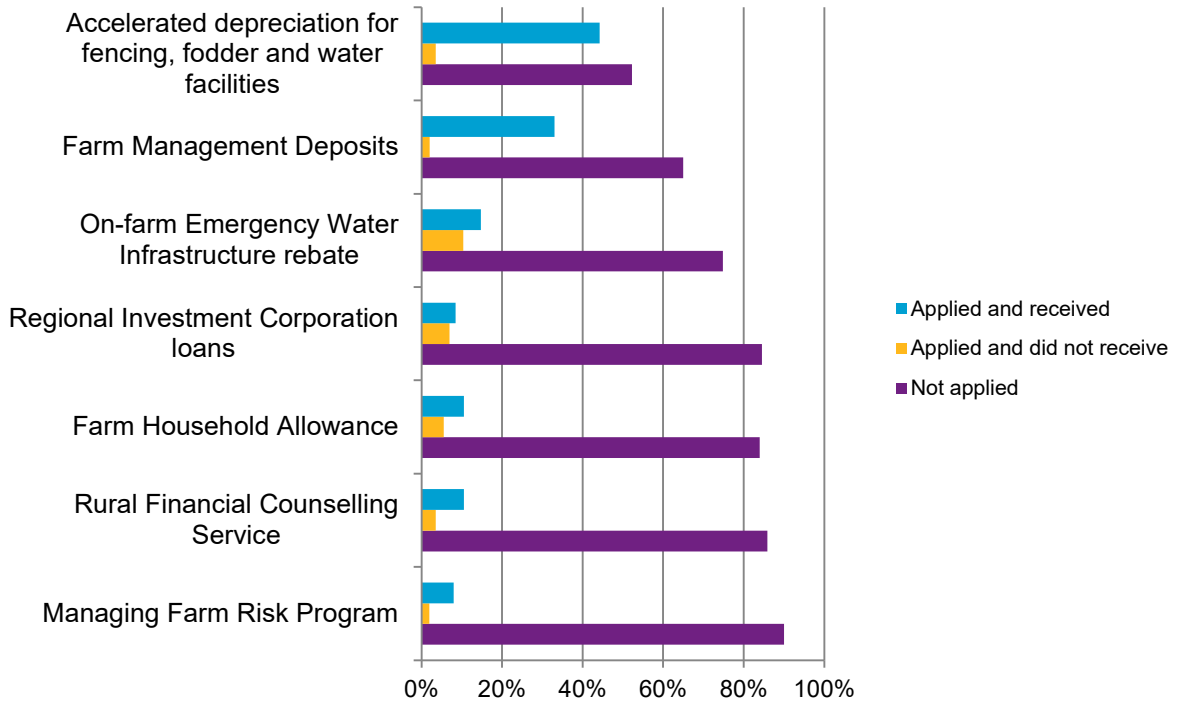
What do you consider to be the most important factors for your members to operate a sustainable business? Select the top three



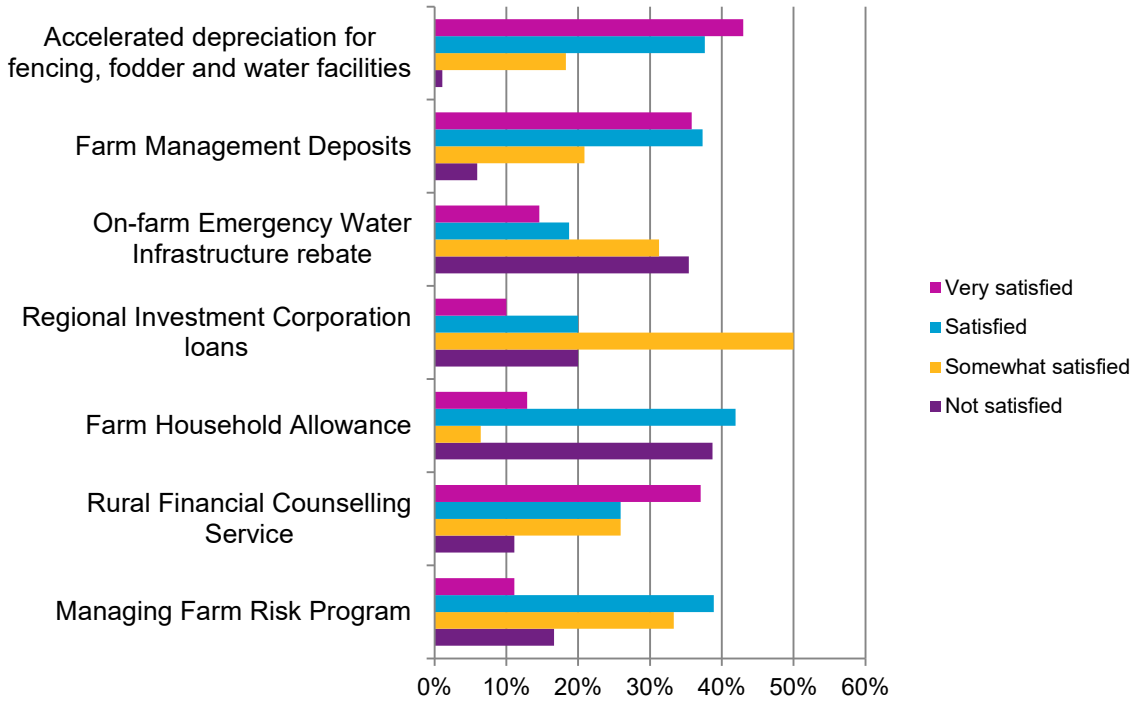
What agricultural commodities do you produce, export, process or market?



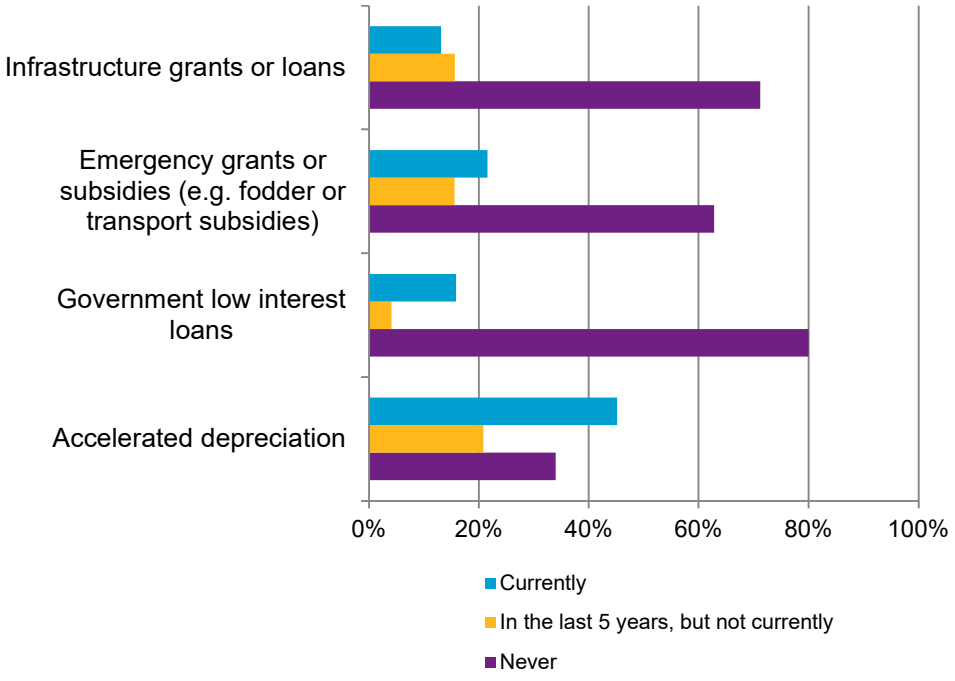
Thinking about the last five years, please indicate whether you applied and/or received any of the following government assistance measures



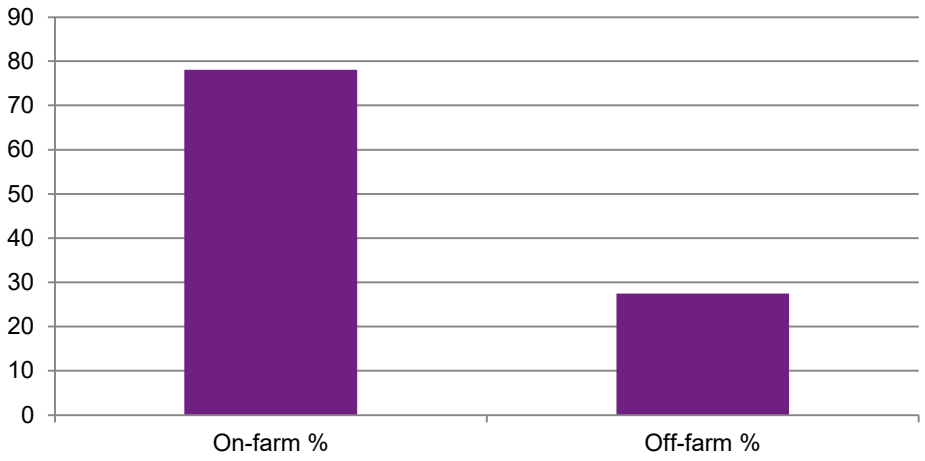
Please indicate your level of satisfaction with the programme



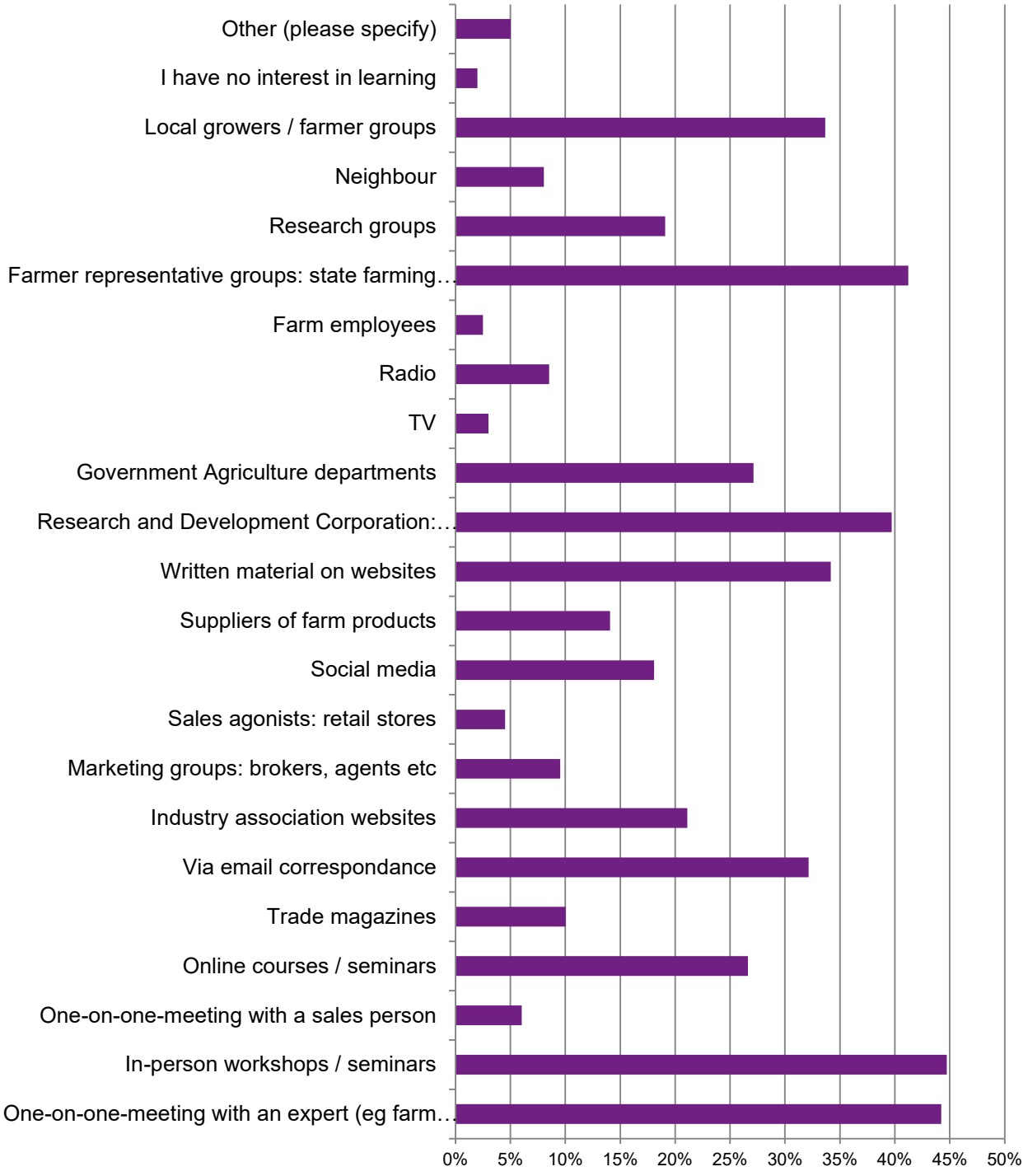
Have you used any of the following government financial risk mitigation measures?



What percent your total household income (i.e. from all sources) would be?

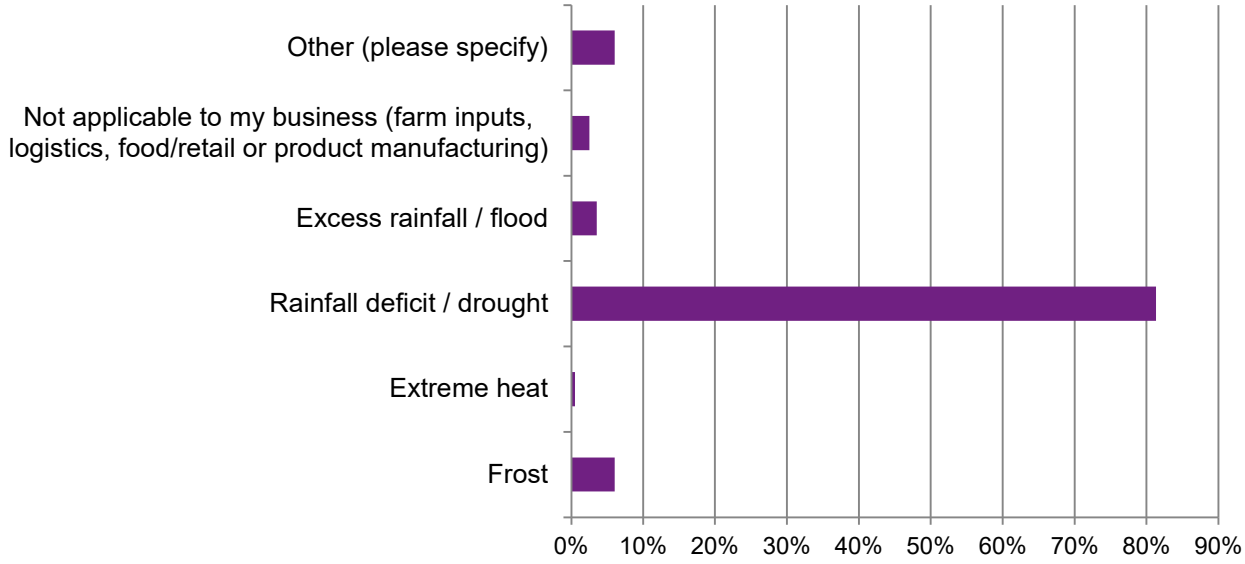


How do you like to learn about the financial risk management products and measures available to you? Select all that apply.

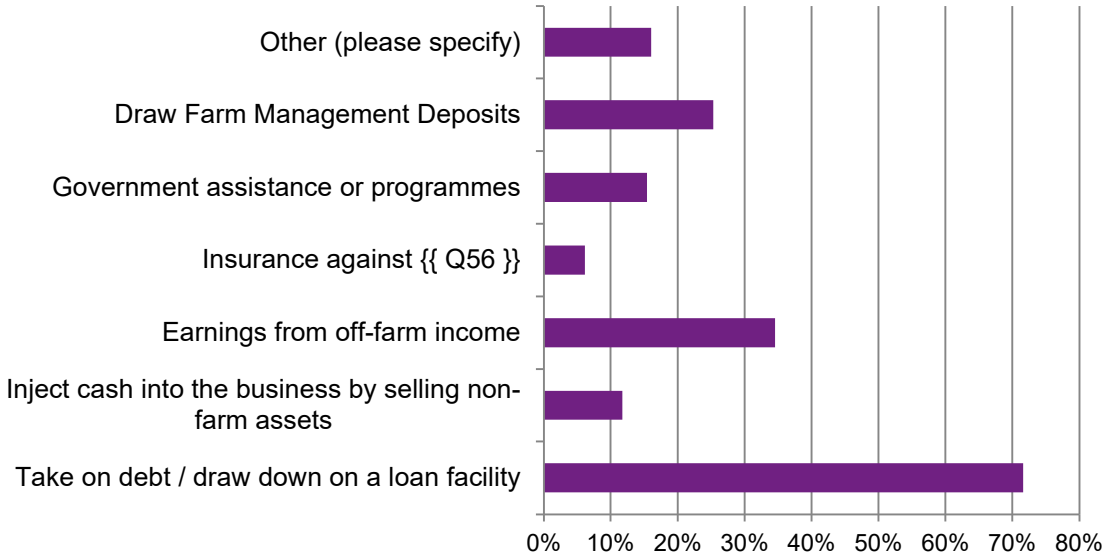


Understanding that most businesses face multiple perils, the following questions relate to a single peril and its impacts on your business. What is the main weather peril your business faces?

This is mainly related to project 1.



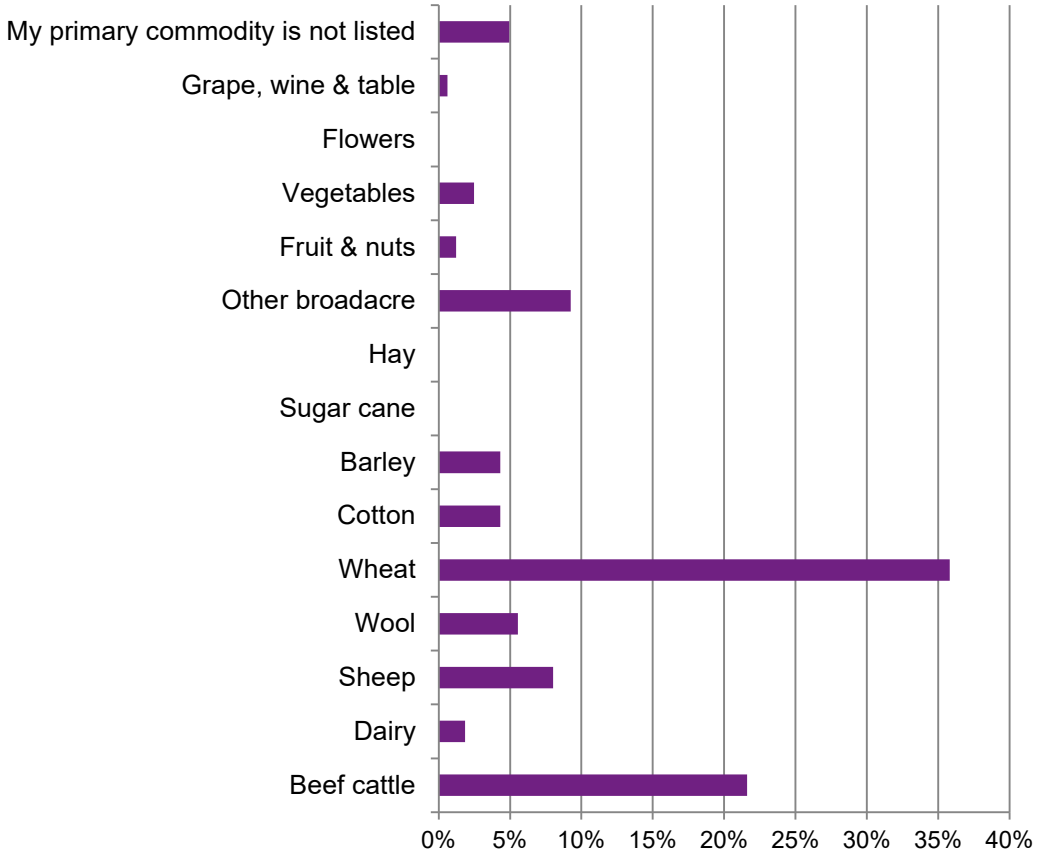
What are the primary financial mechanisms you use to manage losses in the worst 10% of years for rainfall deficit/drought?



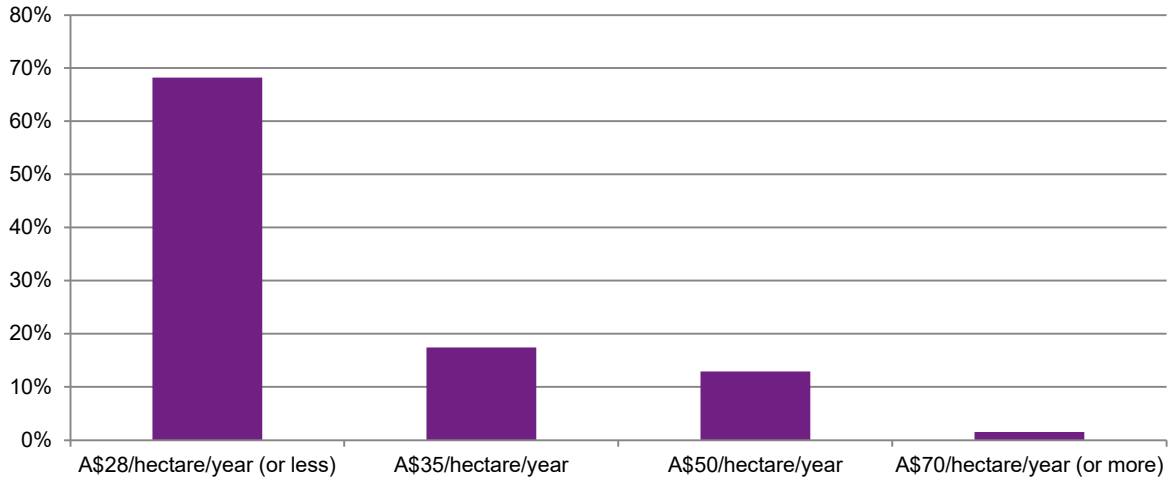
* Q56 = drought

For insurance purposes, what is the main commodity affected by rainfall deficit/drought?

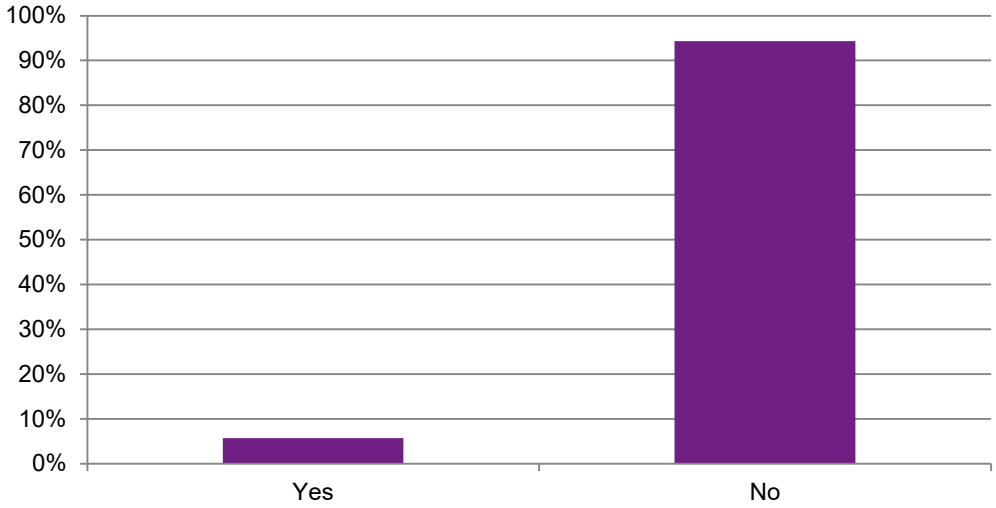
Wheat and beef cattle are the most affected by drought



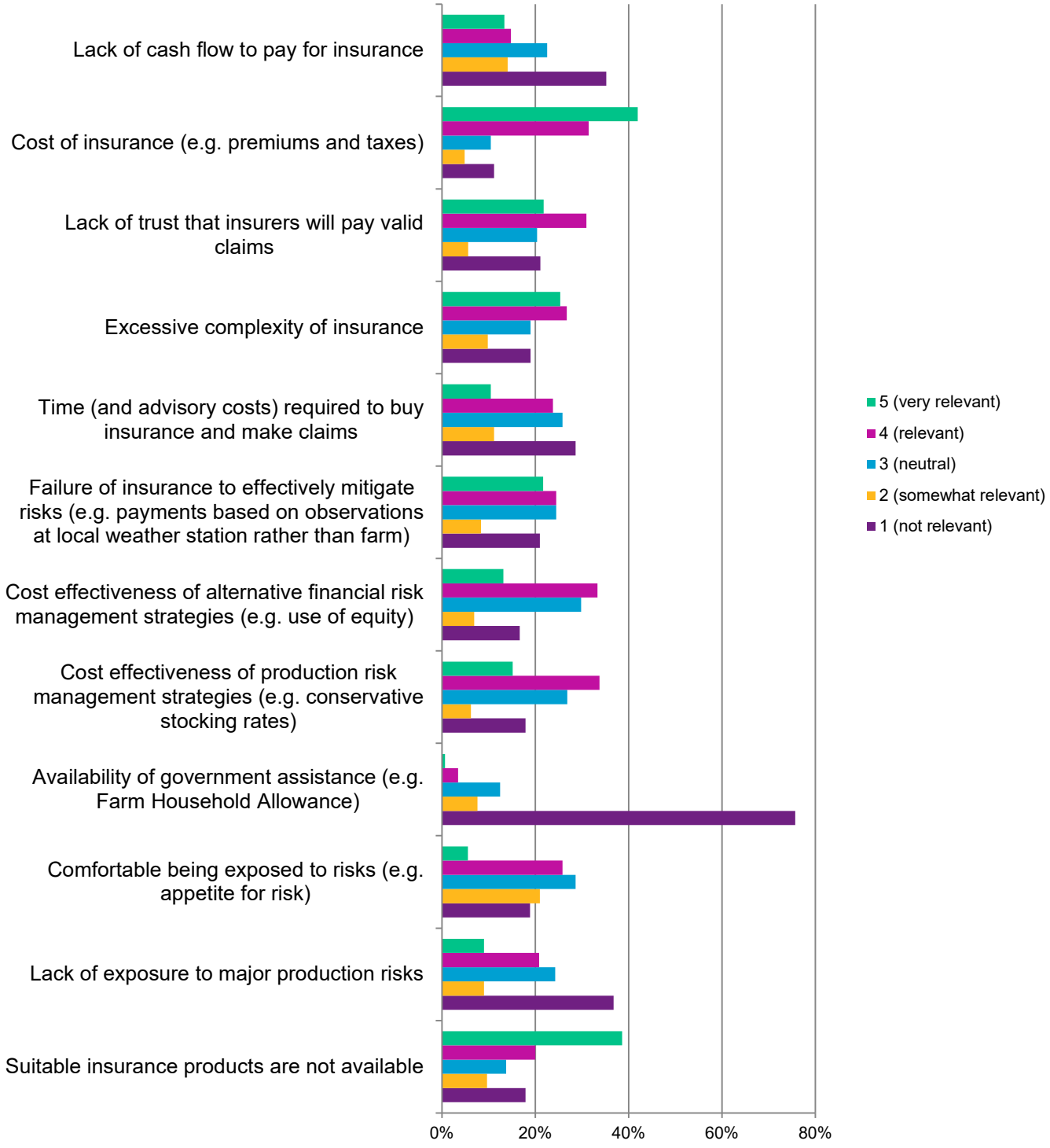
The following question is designed to help us understand your preferences for income smoothing over years with and without perils. What is the most farm income you would be prepared to give up in years without rainfall deficit/drought to get an additional A$250/hectare of farm income in the 10% of worst years for rainfall deficit/drought?



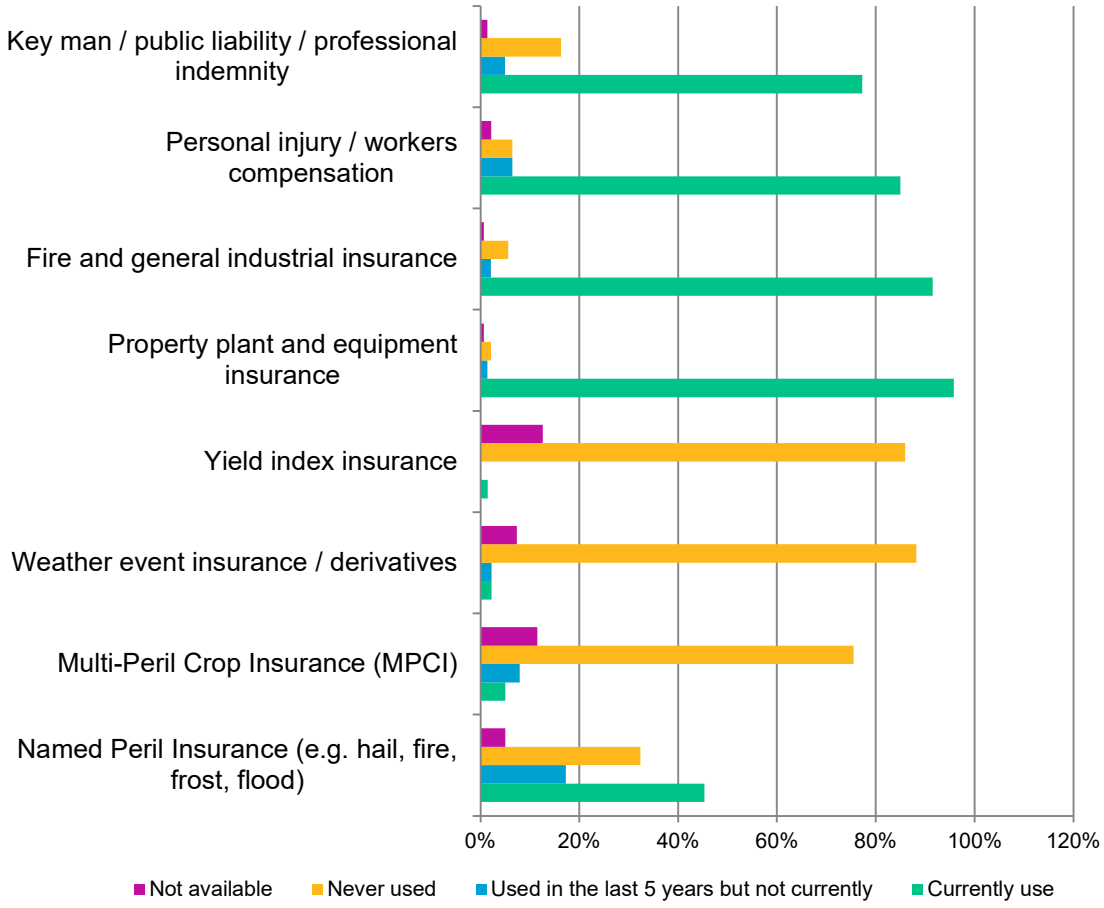
Do you have insurance against rainfall deficit/drought?



How relevant are the following in influencing your decision to not buy insurance against rainfall/drought?

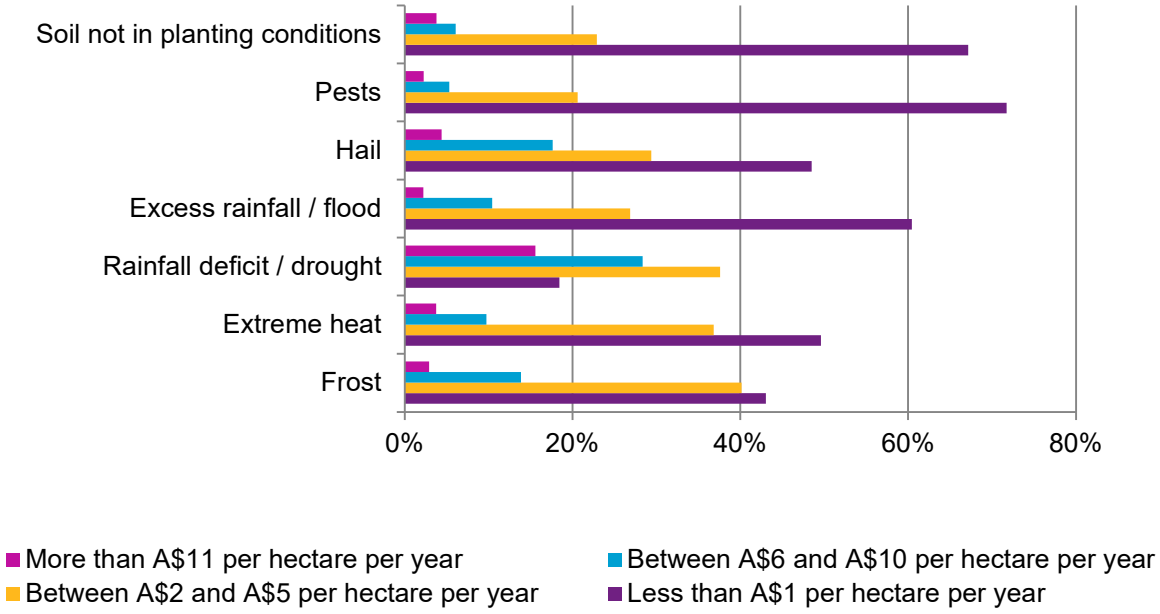


Of the products mentioned below; please select all boxes that apply.

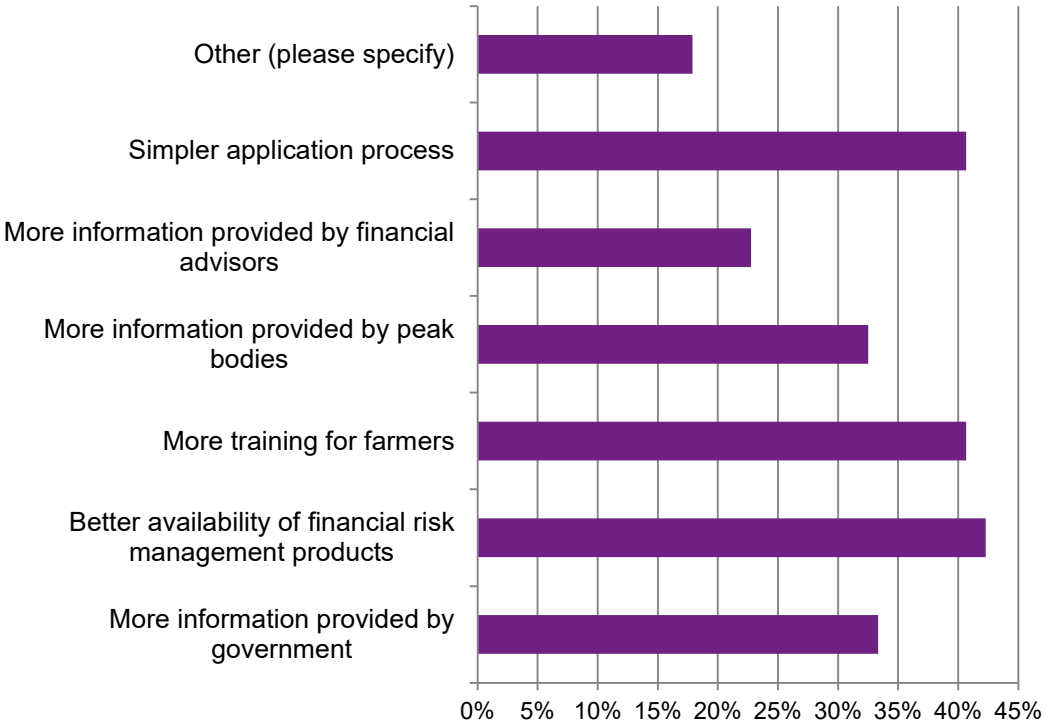


If insurance is available for the following perils, how much would you be willing to pay per hectare for a A$100/ha worth of cover?

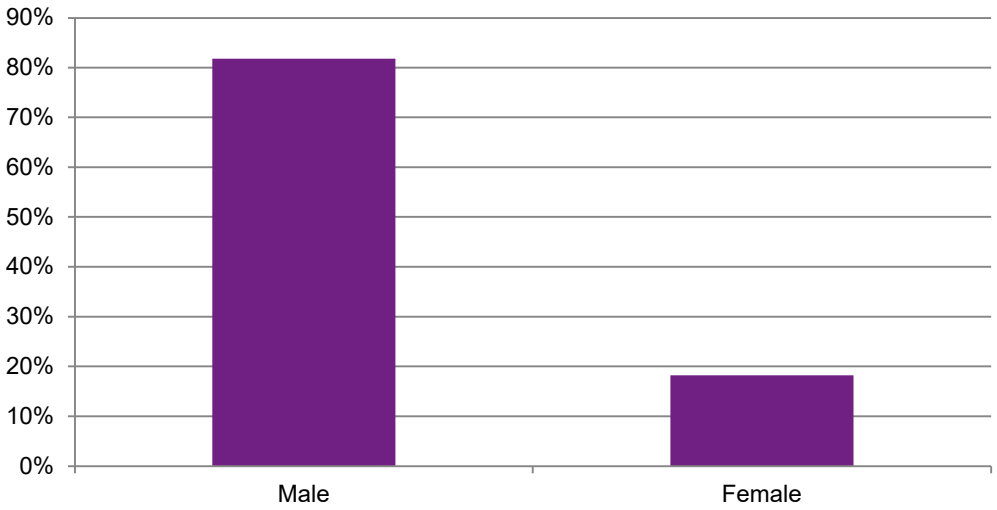
Farmers are willing to pay more for drought cover that any other peril



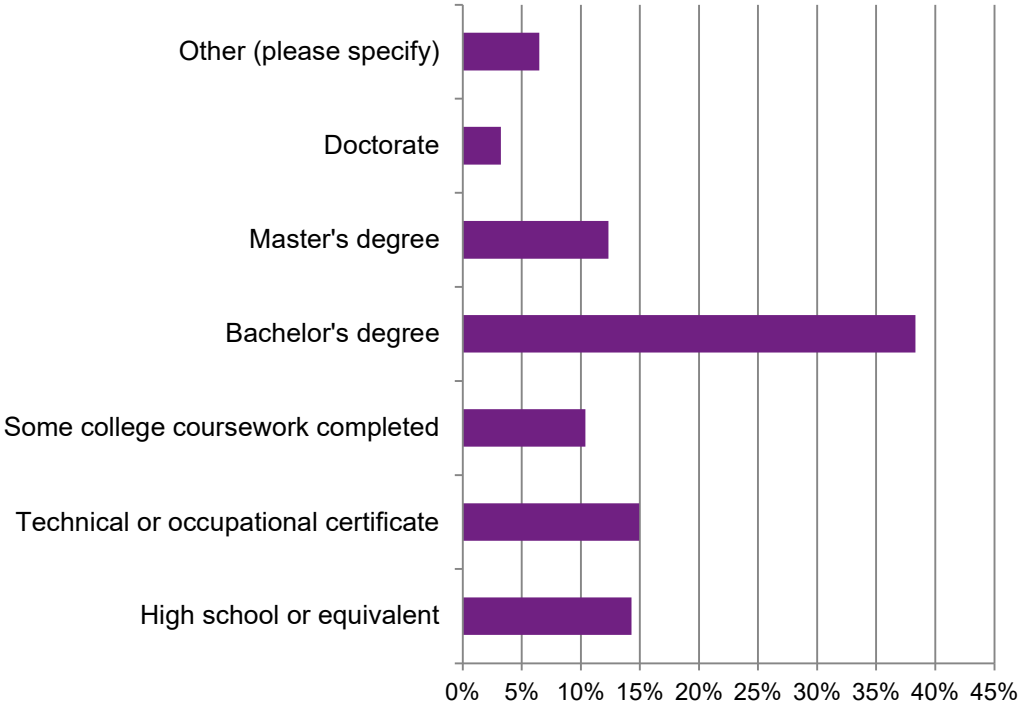
How could the awareness and delivery of financial risk management products be improved?



Please select your gender



Please select your highest level of education



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