



**On-farm financial risk management project**  
Education and awareness (Sub-project 4) | 25<sup>th</sup> September 2020

Pottinger

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# 1. Executive summary

## 1.1 Introduction and purpose of this report

This report is concerned with the awareness and education of Australian farmers on matters relating to financial risk management products. It is one of seven sub-projects which together constitute the National Farmers' Federation Financial Risk Management Project, undertaken in collaboration with the NSW Government.

The purpose of this report is to analyse existing barriers to farmers' understanding of financial risk management products, consider the options available to improve awareness and education levels in respect of such products, and to provide a set of recommendations for consideration by Government and other stakeholders. In each case, these objectives are anchored around the risks faced by farms and farmers and their respective needs.

## 1.2 Risk and risk management in Australian agriculture

Farm businesses face many different types of risk and these vary considerably by type of production and geographic location. Farmers thus have many different needs when it comes to managing individual risks. Nevertheless, if you step back from the operational minutiae of individual businesses, there are common themes that apply across the industry nationally. One such commonality is the prevalence of production risk to all growers and producers of agricultural commodities.

Our analysis considers risks which are under the control of farmers but also those risks which are not (or less so). Our approach is deliberately agnostic in the initial assessment of these risks and the relevant financial risk management products and measures which are intended to address them. Meanwhile, in the development of our recommendations, we have more focussed regard for matters of relevance and impact.

In theory, most underlying financial risks can be mitigated or managed through financial risk management products and/or other measures. In practice, however, many such products are not readily available to Australian farmers. Where products do exist, often they can only be purchased as over-the-counter instruments, rather than on more transparent public markets.

Figure 1: Summary risk classification



The value of agricultural production from Australia is amongst the most volatile of all major agricultural exporting nations. This has implications both for farmers and more broadly for the Australian economy. Nevertheless, despite the challenges that many parts of the Australian agricultural sector have faced over the last twenty years, some farmers have been protected from the worst of the downside by ongoing increases in the value of agricultural land. This has enabled farmers to meet cash shortfalls by drawing down on debt facilities.

Overall, there remains scope to improve farmers' awareness and understanding of relevant financial risk management tools in order to provide farmers with greater choice about how to build and sustain resilient farm businesses.

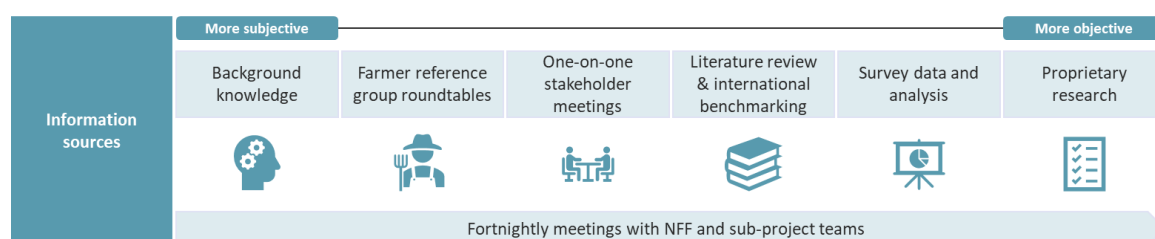
### 1.3 Overview of our approach and work undertaken

Our report includes both qualitative and quantitative elements and draws on a diverse evidence base. This includes both research-based and consultative processes and leverages the subject matter expertise of our sub-project team. Our approach is top-down in its methodology, whereby analysis is anchored around – and informed by – the overall risks faced by farmers, rather than tackling the topic of awareness and education from a bottom-up, product-centric perspective. Pottinger's view is that the latter approach significantly overlooks matters of relevance and impact when discussing agricultural financial risk management.

The evidence base for this project includes:

- **Quantitative and qualitative survey results** derived from a national, multi-stakeholder survey comprising 124 questions and covering six approaches to risk management, which was made available and widely promoted throughout the country among farmers, mutuals, co-operatives, industry associations, government bodies and other industry participants. We received 311 survey responses;
- **Three roundtables convened with a farmer reference group** comprising 11 Australian farmers located in diverse geographic regions and representing nine commodity types;
- **33 consultations held with stakeholders** along the agricultural value chain from both the private and public sectors as well as the education sector;
- **Fortnightly workshops with the other sub-project teams** held throughout the seven-month project timeline;
- A high-level **international benchmarking and comparative research** exercise; and
- A **literature review**.

Figure 2: Information sources





## 1.4 Overview of this report

With this as context, we outline below the structure of this report and summarise the pertinent content of each chapter.

Figure 3: Report chapter descriptions

Chapter/topic	Summary
<b>Chapter 2: Factors affecting on-farm financial risk management</b>	This chapter sets out the context in which Australian farmers operate. It outlines the framework we utilised to analyse causes and sources of farm risk and presents methods for management and mitigation. The chapter also considers the impact of debt finance and industry collaboration on farm business sustainability and summarises the stakeholder engagement process that has informed our analysis and advice.
<b>Chapter 3: Farmers' awareness and use of financial risk management tools</b>	This chapter summarises farmers' views on the risks affecting their operations, the suite of financial risk management tools available to mitigate risks and their awareness and use of different financial risk management products and measures. We also set out farmers' preferred sources of financial risk management information and the counterparties they rely on when choosing which products to purchase.
<b>Chapter 4: Financial advisors' familiarity with financial risk tools</b>	This chapter focuses on the organisations that advise farmers on financial risk management tools. We consider different categories of advisor and analyse their level of financial knowledge as well as the sources of information on which they rely. We also explore the potential conflicts of interest that must be navigated by different types of organisations.
<b>Chapter 5: Assessment of existing farmer financial literacy programmes</b>	This chapter describes the financial literacy programmes available to farmers in Australia and compares this with international benchmarks. We then analyse farmers' awareness and use of financial literacy education opportunities and comment on Government's role and participation in the financial education of farmers.
<b>Chapter 6: Barriers impeding farmer awareness of financial products</b>	This chapter summarises our findings related to farmers' awareness gaps in relation to financial risk management products. We then present our assessment of the barriers impeding farmers' awareness and understanding of financial risk management products.
<b>Chapter 7: Addressing barriers to farmers' awareness of financial risk tools</b>	This chapter identifies alternatives to address barriers to awareness, knowledge and understanding of both, existing, and new financial risk management products and measures. We then evaluate the proposed solutions using our assessment criteria and make recommendations on the relative attractiveness of each category of alternatives. Finally, we discuss the current and potential role of technology to support education and access to financial risk management products and measures.

## 1.5 Summary of barriers and key findings

Our analysis found a series of barriers to farmers' awareness of financial risk management tools, which can be grouped into the following four categories:

- Factors related to awareness of and/or accessibility of data;
- Factors related to farmers' interests and behaviour;
- Factors related to farmers' advisors; and
- Industry-wide and systemic factors.

From an education perspective, farmers have access to a wide variety of financial literacy programmes through formal and informal channels. Based on our research, Australia's education system caters reasonably well for the agricultural sector and government support helps to keep the cost of this education low. There is, however, some evidence that the breadth and depth of some courses is declining, and financial education and risk management is at best an optional element for many of these.

We note also that there is no national body that farmers trust as an independent source of expertise on financial and risk matters, or which provides comprehensive national data or benchmarking on relevant metrics. Indeed, the network of information and education providers on matters of financial risk management products in Australia is highly fragmented.

Meanwhile, financial risk management products form part of the broader topic of business skills and financial literacy. While our survey results confirm that farmers are mainly preoccupied with production risk, they do appreciate the need for good business skills and rate the latter as the most important factor for overall business sustainability. However, whilst farmers surveyed indicate strong levels of awareness of financial risk management products, their actual degree of familiarity of available and relevant products is less clear, and likely varies considerably amongst the farming community. Furthermore, the consensus from the industry stakeholders we consulted points to a lower level of awareness by farmers, implying that there is a perception gap between farmers and the broader industry.

Farmers most like to learn through group workshops and one-on-one sessions. Relationships with neighbours and those in the community are important, as are advisors, who play an important part in educating farmers about what financial risk management tools are available.

Farm advisors play an important bridging role between agricultural business management and the use of financial products to mitigate or manage associated risks. There are several different types of farm advisor, and not all are equipped or indeed legally allowed to provide advice on financial risk management products. The latter is an active area for ASIC in its role as watchdog for compliance with the Australian financial services legislative regime. Meanwhile, trust is an important aspect of the farmer-advisor relationship and is also helpful in the education context. It is thus important that farm advisors are and remain trusted, and this includes avoiding conflicts of interest. Finally, our research suggests that farmers' use of third-party advice varies significantly by state.

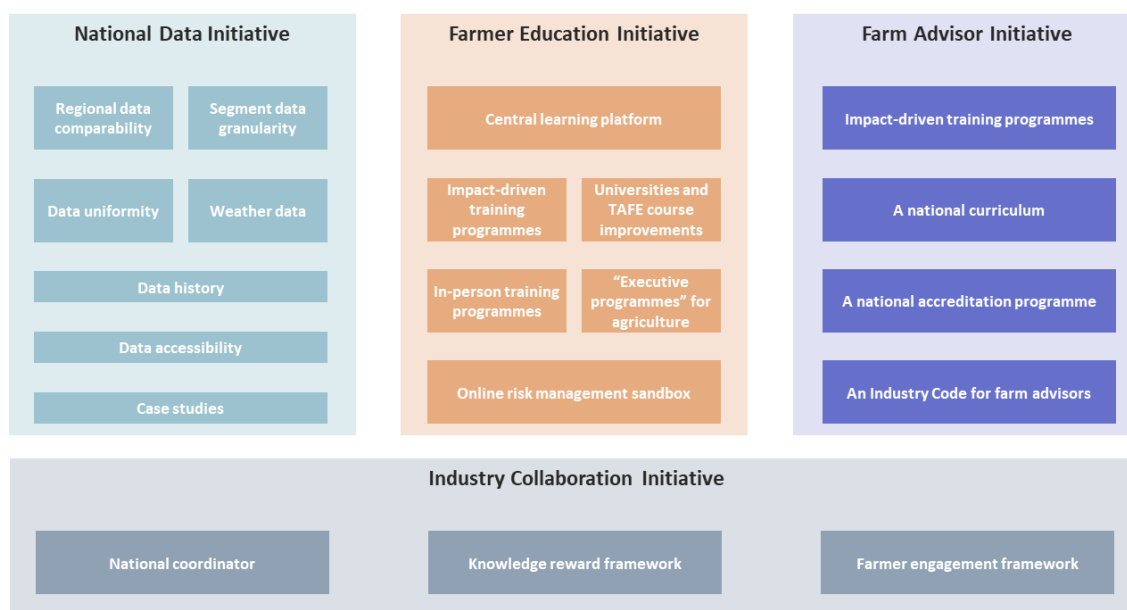
## 1.6 Summary of our recommendations

Having regard for the above key findings, our four categories of recommended initiatives include:

- **National Data Initiative:** To develop more, higher quality, more granular and more comparable datasets for use across the agricultural sector, and make both these and existing data sets more readily accessible to farmers in a more user-friendly, task-oriented manner;
- **Farmer Education Initiative:** To raise the base level of awareness and understanding of financial literacy and financial risk management tools across the industry;
- **Farm Advisors Initiative:** To improve the agricultural and financial risk management product-specific knowledge and awareness of those advising farmers, so that their advice adds greater value; and
- **Industry Collaboration Initiative:** To design a model for information sharing and cooperation on a national basis, managed through a single, nationally-focussed organisation or secretariat, which draws together resources from the private and public

sectors, including amongst education providers, relevant government departments and agencies, industry associations and commercial enterprises.

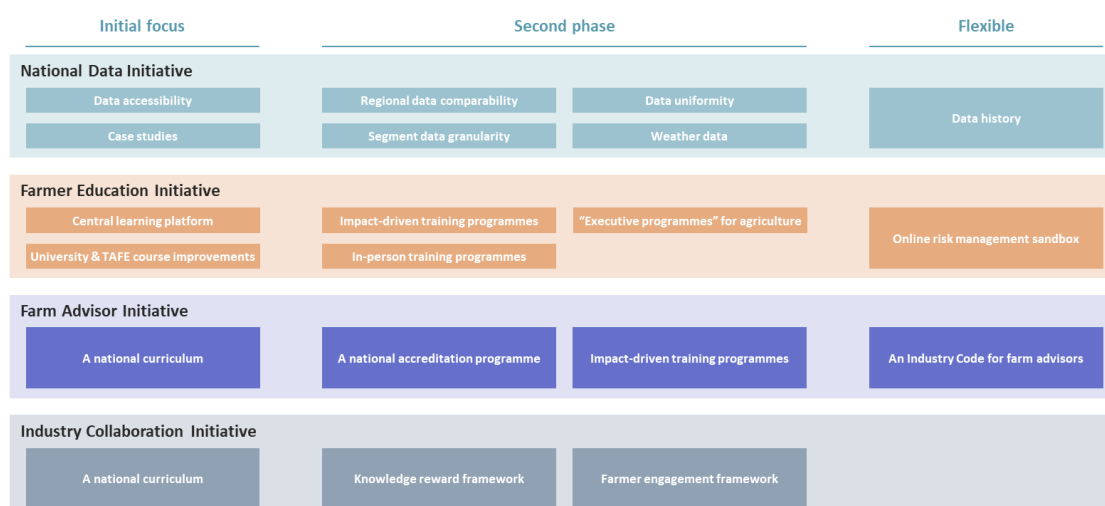
Figure 4: Overview of individual steps identified to implement the recommended initiatives



## 1.7 Implementation and next steps

Our recommendations are accompanied by illustrative implementation pathways which have been developed in order to assess the viability and effectiveness of our recommendations. A number of these implementation pathways could form the basis of future research and analysis, including the development of detailed feasibility or scoping studies.

Figure 5: Implementation sequence



Improving farmers awareness and understanding of risk management products will be a major task requiring collaboration from a range of industry stakeholders including Government, farmers, industry associations, research organisations and commercial service providers. Due to the size and complexity of the task it is proposed it be implemented in stages over a number of years.

We invite and encourage engagement with interested stakeholders around the topics addressed in this report.



## 2. Factors affecting on-farm financial risk management

This chapter sets out the context in which Australian farmers operate. It outlines the framework we utilised to analyse causes and sources of farm risk and presents methods for management and mitigation. The chapter also considers the impact of debt finance and industry collaboration on farm business sustainability and summarises the stakeholder engagement process that has informed our analysis and advice.

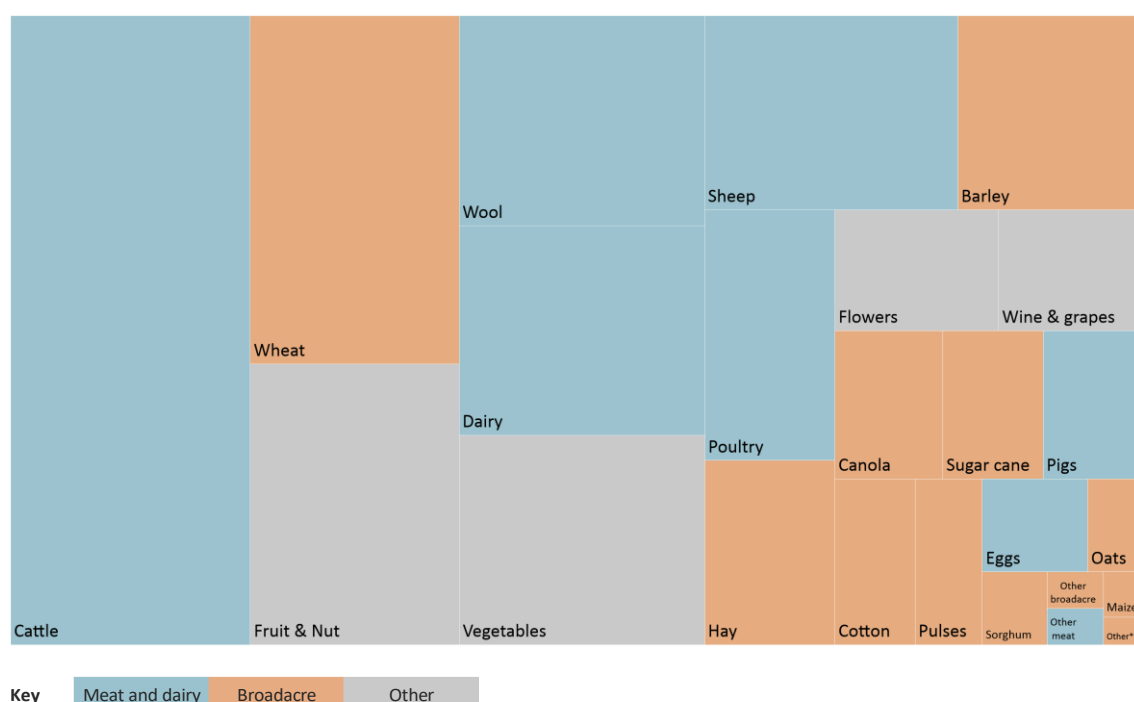
### 2.1 Introduction and context

This sub-project addresses farmers' awareness and education of how risk can be managed across the agricultural sector, with a particular focus on the action that can be taken at an individual farm level. Our methodology considers the underlying sources of risk and their impact, identifies the financial products and other measures that are available to manage and mitigate risk at a farm level, and assesses awareness of these approaches by both farmers and other market participants including financial advisors and education providers.

In this chapter, we provide a brief overview of the range of financial risk management measures and products that are in use in Australia, set against the context of farmers' broader relationships with financial services institutions.

We have considered financial risk management products and measures in use across the entire agricultural value chain in Australia. In doing so, it is helpful to keep in mind the relative size of different agricultural segments, as illustrated below.

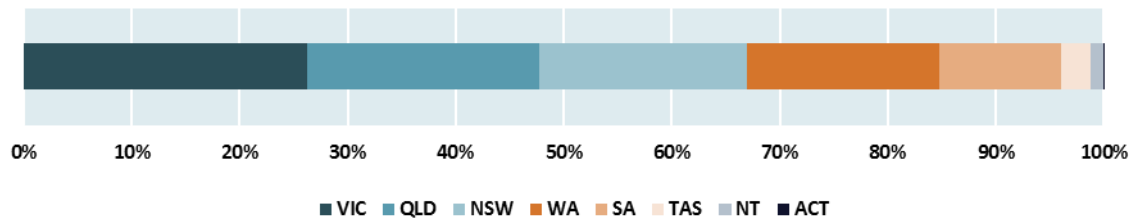
Figure 6: Australian agricultural industry by value of production



Source: ABS - Australian agricultural output 2018/19 and Pottinger analysis

Our report has a national, multi-commodity scope. Our analysis and stakeholder engagement process involves farmers operating across all six Australian states, as well as the Australian Capital Territory (ACT) and Northern Territory. As shown below, three states contribute just under 70% of the total value of agricultural production in Australia.

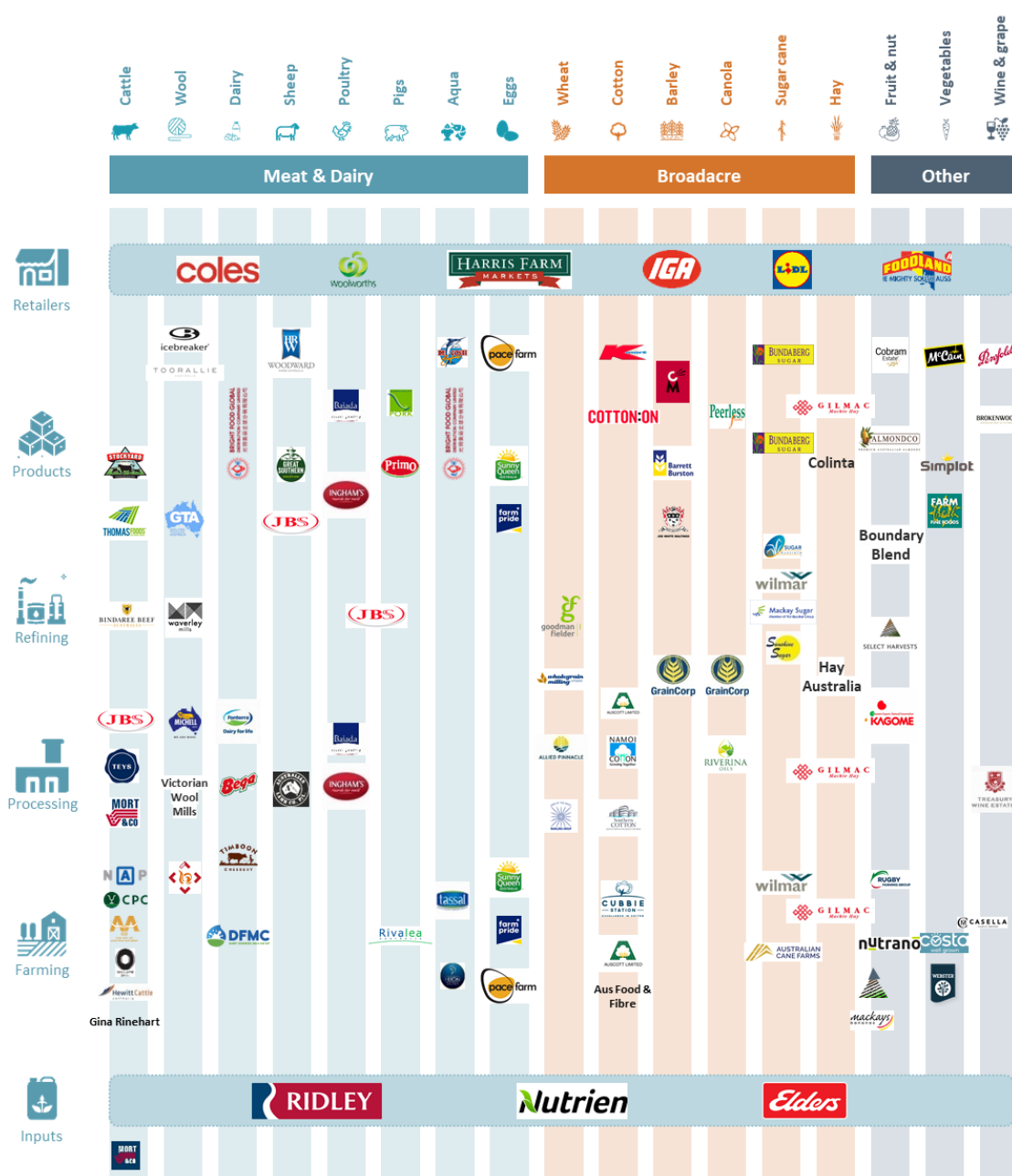
Figure 7: Australian agricultural output by state and territory



Source: ABS - Australian agricultural output 2018/19 and Pottinger analysis

Our project has farmers at its core. To develop an understanding of matters impacting farm operations, we also analysed farmer relationships with other relevant stakeholders along the Australian agricultural value chain.

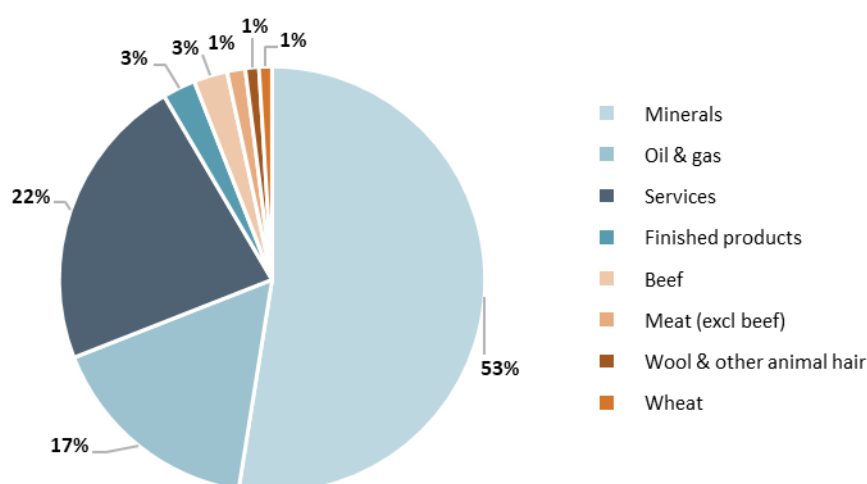
Figure 8: Overview of the Australian agricultural value chain and examples of major businesses



Source: Pottinger analysis

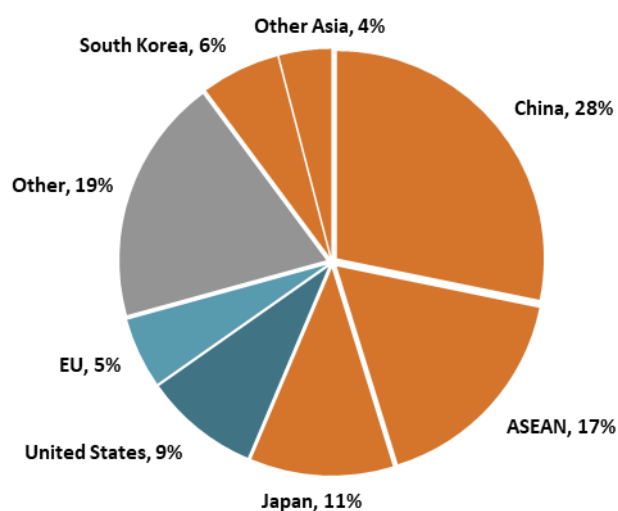
The agricultural sector is central to Australia's economic and social prosperity. Over 90%<sup>1</sup> of fresh fruit and vegetables, meat, milk and eggs sold in Australian supermarkets are domestically produced. Meanwhile, the country exports more than 50% of its agricultural produce, which accounts for over 6%<sup>2</sup> of Australia's total exports.

Figure 9: Composition of Australian exports 2018-2019



Source: DFAT and Pottinger analysis

Figure 10: Australia's agricultural exports in 2018-19 by agriculture principal markets



Source: ABS and Pottinger analysis

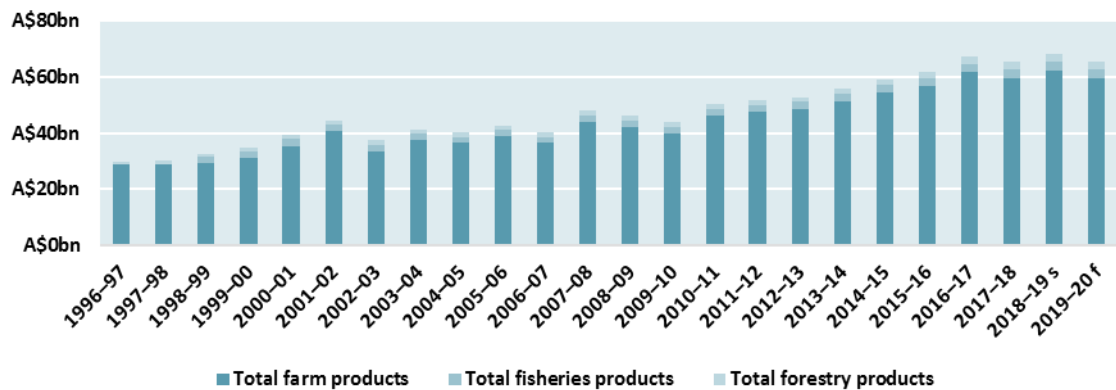
Agricultural production in Australia has grown at a compound rate of around 3% per year for the last 30 years. To achieve the NFF's target of reaching A\$100bn of farmgate output by 2030, the industry would need to grow at more than 5% per year.

<sup>1</sup> Department of Agriculture, Water and the Environment

<sup>2</sup> Department of Agriculture, Water and the Environment - ABARES

As shown below, the value of production reached record levels in 2018-2019 despite drought conditions, as a surge in commodity prices more than offset the reduction in output.

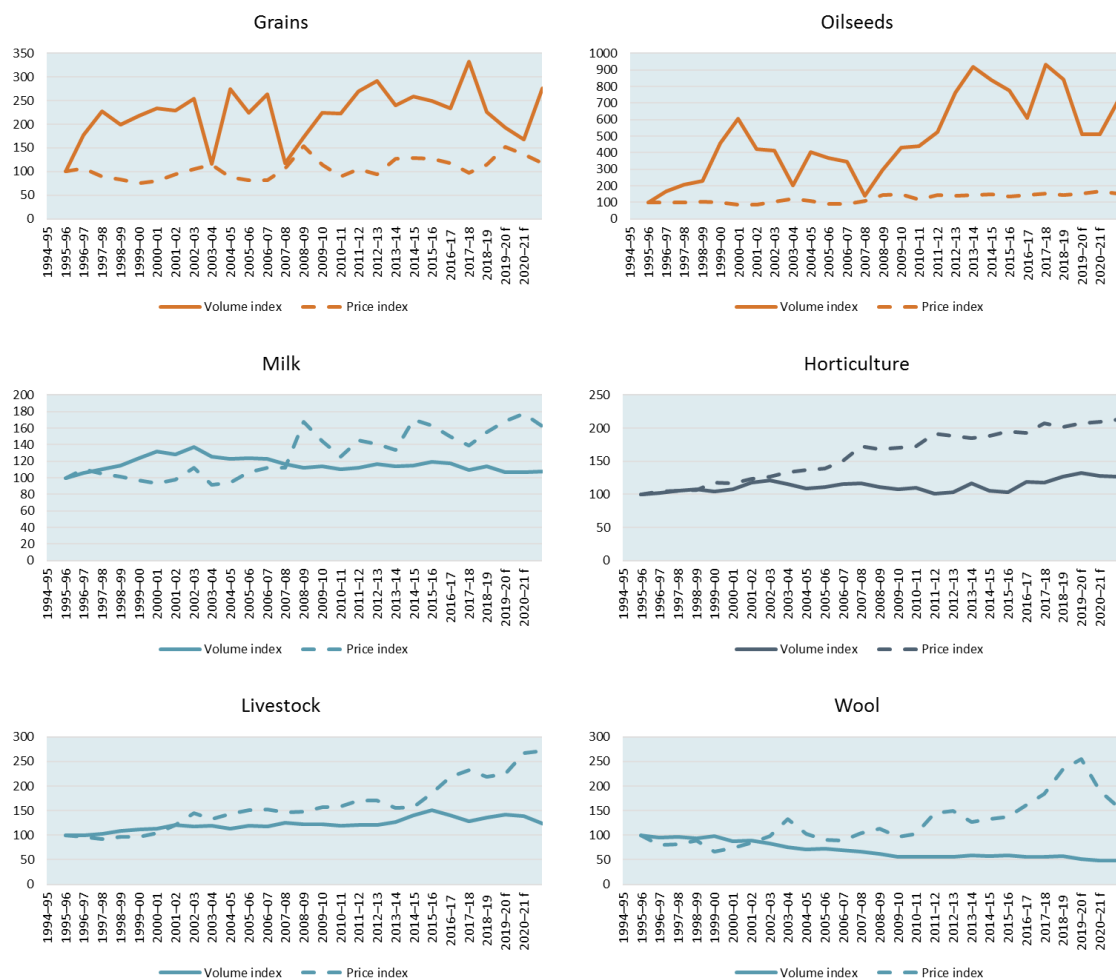
Figure 11: Agricultural gross production value in Australia over time



Source: ABS and Pottinger analysis

The charts below show how the drop in production volumes for a number of commodities were offset by increases in prices for the same period.

Figure 12: Index of commodity prices and production volumes

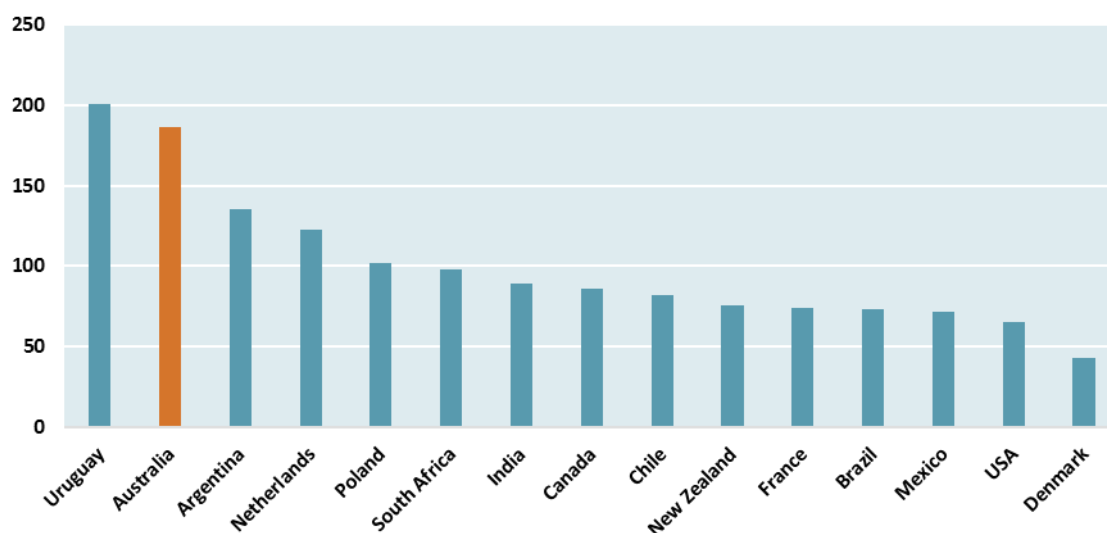


Source: ABARES, ABS and Pottinger analysis



The value of Australian agricultural production is amongst the most volatile of all large agricultural markets. Factors including significant variations in weather conditions over time, as well as a relatively high exposure to global (export) commodity prices, have resulted in the second largest volatility of national annual agricultural output, as shown below. This highlights the potential relevance of financial risk management products and measures, so long as these are cost-effective and thus improve the overall risk-return profile of the industry.

Figure 13: Index of volatility of national annual agricultural output by value, 1961–2009



Source: Food and Agriculture Organization of the United Nations, 2011 and Pottinger analysis

## 2.2 Causes and sources of farm risk

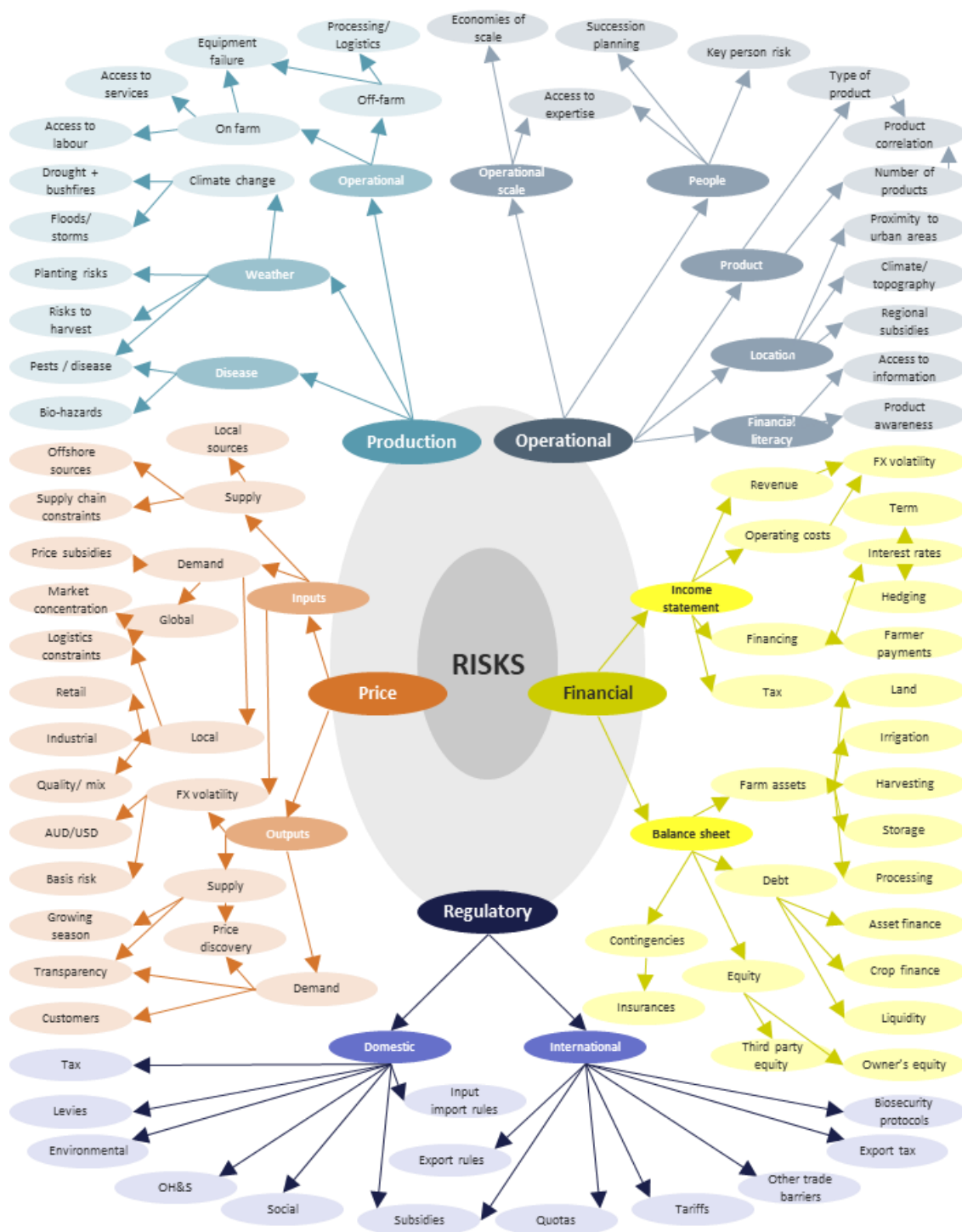
Farms face many risks. For simplicity, we have considered these in five broad categories:

- **Production risk** encompasses uncertainties arising from the agricultural cycle, including risks related to planting, crop development and harvest, and equivalents for livestock. Factors include weather, disease and a variety of operational matters which ultimately affect both the quantity and quality of production;
- **Price risk** refers to the uncertainty about prices that producers will receive for their commodities as well as the prices they might pay for production inputs. These prices are affected by supply and demand factors as well as fluctuations in exchange rates;
- **Financial risk** reflects a farm's ability to generate sufficient profits and cash flow to remain sustainable over the medium to long term, including meeting its ongoing financial obligations. This also includes the ability of farms to access any equity and debt financing required to support ongoing investment in and development of the business, and hence will reflect both internal financial performance factors as well as external factors such as interest rates, currency fluctuations and investor appetite;
- **Regulatory risk** arises from both domestic and international laws and regulations that impact farm operations, import/export flows and associated supply chains. This includes local and international taxes and tariffs, as well as other restrictions related to the international trade in agricultural products; and
- **Operational risk** is a synthesis of various operational factors that impact profitability and inherent riskiness of the business, including farm location, product mix and diversification, position in the supply chain, people and other matters related to running of the farm day-to-day.

Whilst the precise nature of these risks varies considerably by farm type, scale and location, at a conceptual level the risks are broadly similar across the entire sector.

Our analysis considers risks which are under the control of farmers but also those risks which are not (or less so). Our approach is deliberately agnostic in the initial assessment of these risks. We set out below a schematic map of the primary risks that we have identified. This has been developed by considering the agricultural value chain for different types of farms, the capital investment required and how these translate into profitability and return on investment.

Figure 14: Schematic map of risks impacting farms



Source: Pottinger analysis

## 2.3 Methods for managing and mitigating risk

There are five broad approaches through which farms can either manage or mitigate risk, all of which are in turn amplified by the level of awareness of these approaches within the agricultural community. The six sub-projects are designed to address all the related issues:

- **Contractual arrangements** include listed and unlisted derivatives such as forward contracts, futures, options and swaps. These can be used, among other things, to manage the volatility of commodity or currency prices which impact both input costs and the value of outputs, allowing farmers to reduce financial risk;
- **Insurance products** span both commercial insurance solutions and government-subsidised insurance options. Typical products include crop/livestock insurance, as well as weather insurance. These products enable farmers to protect their operations against one-off events such as floods, storms and droughts that can have a substantial impact on production in any given growing season;
- **Industry collaboration** means mechanisms that enable farmers to work together to share resources, consolidate buying power, manage risks and create value. These are typically implemented via mutuals and co-operatives designed to enable individual farmers to unlock the benefits provided by scale eg cheaper inputs, better prices for outputs, lower cost primary processing and better value insurances and other financial products;
- **Off-farm income** refers to the productive activities undertaken by farmers outside of their core farming work that provide an additional revenue stream. Examples include contract harvesting which utilises existing harvesting assets to achieve additional services revenue. The ideal off-farm income revenue streams not only provide additional revenue but counter-cyclical income that provides financial stability irrespective of the performance of the primary farming business;
- **Government policy** and other government risk management measures promote the financial stability and resilience of farmers and the agricultural industry and may seek to address areas of market failure in the availability of relevant products or services. Examples include tax arrangements for managing the volatility of agricultural production, support for the development of export markets, and investment in infrastructure that is critical to unlocking value across the agricultural sector as a whole; and
- **Education and awareness** of financial risk management products and measures ensures that farmers have access to information about relevant instruments that they can use to mitigate farm risk, thus helping to ensure that the available products, services and resources are fully utilised.

We set out below **examples** of the products and strategies available to manage different types of risks by type of approach.

Figure 15: Risk management mitigation measures and mechanisms per type of approach

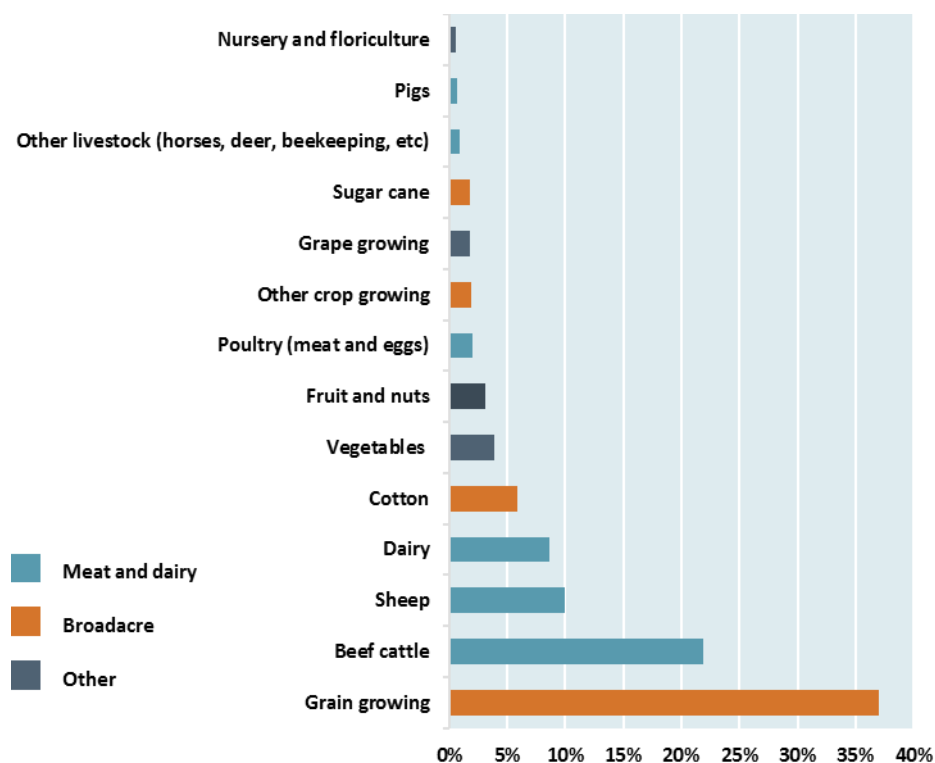
Approach	Type of risk				
	Production	Price	Financial	Regulatory	Business
<b>Contractual arrangements</b> (financial risk management products)	Listed/OTC commodity derivatives	Listed/OTC commodity derivatives	Interest rate & FX derivatives		
	Supply agreements	Supply agreements			
<b>Insurance products</b>	Multi-peril crop insurance / yield index insurance		Property, key man, public liability, professional indemnity	Geo-political risk insurance Biosecurity insurance	Property / PP&E insurance

Approach	Type of risk				
	Production	Price	Financial	Regulatory	Business
<b>Industry collaboration</b> (mutual and co-operatives)	Crop / livestock insurance				
	Weather insurance				
	PP&E insurance				
	Large scale equipment Infrastructure Primary processing	Group buying Collective marketing	Access to finance Cheaper financing	Industry representation	Shared risks
<b>Off-farm income</b>		Revenue mix / negative correlation	Revenue diversification	Definition of primary producer Tax statutes	Alternative revenue streams
<b>Government policy</b>	Production / crop subsidies Infrastructure, eg dams	Price subsidies / offtakes	Farm Management Deposits Grants and assistance programmes	Import / export trade agreements Land use constraints Water supply regulation	
<b>Education and awareness</b>	Product diversification Land utilisation Farming methods Use of credit / savings	Product diversification (negative correlations)	Optimal capital structure Scale Financial literacy		Product diversification Vertical integration

## 2.4 Overview of debt finance provided to agricultural businesses

Many farmers' primary financial relationship is with their bank in the form of current accounts for day-to-day banking as well as equipment financing and borrowing facilities. As at 2018, agricultural producers had borrowings of approximately A\$73.5bn, with grain growers and beef producers accounting for approximately 60% of this amount, as illustrated below.

Figure 16: Agricultural lending in Australia by type of agricultural production



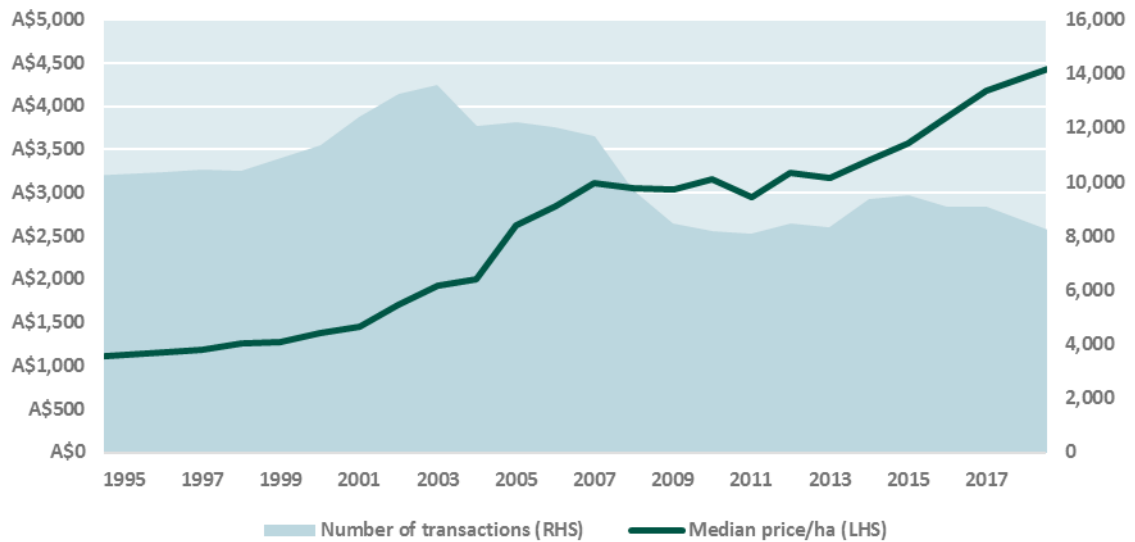
Source: Agricultural Lending Data reported by the Department of Agriculture, Water and the Environment and Pottinger analysis

Farm value reports from Rabobank indicate that the value of Australian farms has increased three-fold between fiscal years 2000-2020. In contrast, ABS data reports the value of agricultural production has grown 19% over the same timeframe. This is consistent with land values being supported by low interest rates.



According to conversations held with various stakeholders, increases in land value and the ability to borrow against their real estate assets has partially shielded farmers from needing tools to manage production and price risk. For this and other reasons, many farmers do not see a need for education on financial risk management products. If there was a correction in land values, many farmers could be exposed and a knowledge of financial risk management products for farmers could become critical.

Figure 17: Value of Australian farm assets and number of transactions in Australia

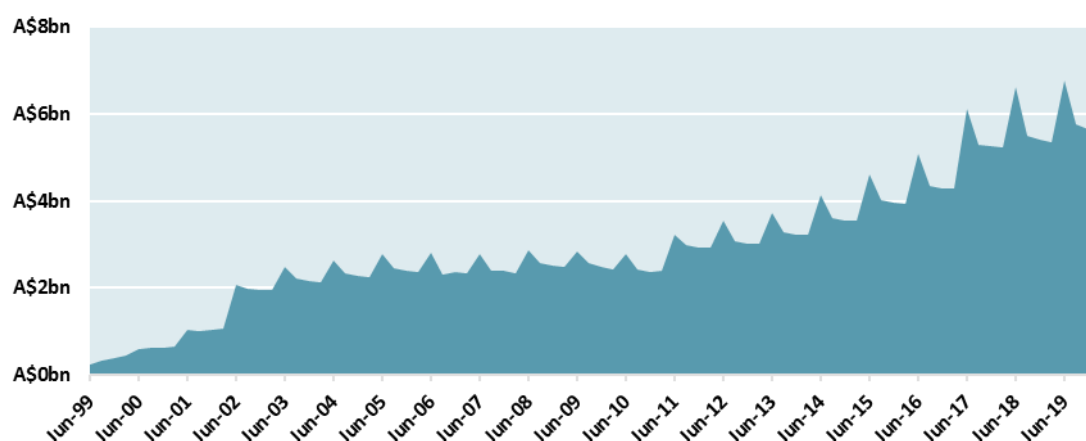


Source: Australian Farmland Values 2019 | Rural Bank

In part, according to several industry participants we consulted with, this amount of borrowing in the industry has been enabled by the growth in farmers' asset values. While capital appreciation can unlock much needed finance for farmers, it has also made some operators complacent. In other words, farms might be running operating losses while still being able to borrow money against their farms.

Many farmers also hold Farm Management Deposit (FMD) accounts. As at 31st May 2020, a total of 46,941 FMD accounts were in use<sup>3</sup> and total on deposit were approximately A\$5.6bn<sup>4</sup>.

Figure 18: Total holdings in the Farm Management Deposits scheme



Source: Department of Agriculture and Pottinger analysis

According to the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES), in FY18 the average equity ratio (being the total value of a farm as calculated by ABARES divided by total farm debt) was 88% for broadacre farms and 80% for dairy farms. In total in FY18 there was A\$73.5bn<sup>5</sup> of agricultural debt spread across 143,849 entities with an average debt per farm of A\$511,050 out of average available credit of A\$616,226. This shows that the Farm Management Deposit scheme is small relative to farm borrowings, with total deposits equivalent to less than 10% of total borrowings.

## 2.5 Overview of stakeholder engagement process

To build the evidence base for this sub-project, we undertook a broad data gathering and stakeholder consultation exercise designed to cover a range of stakeholders across Australia. This comprised three primary elements:

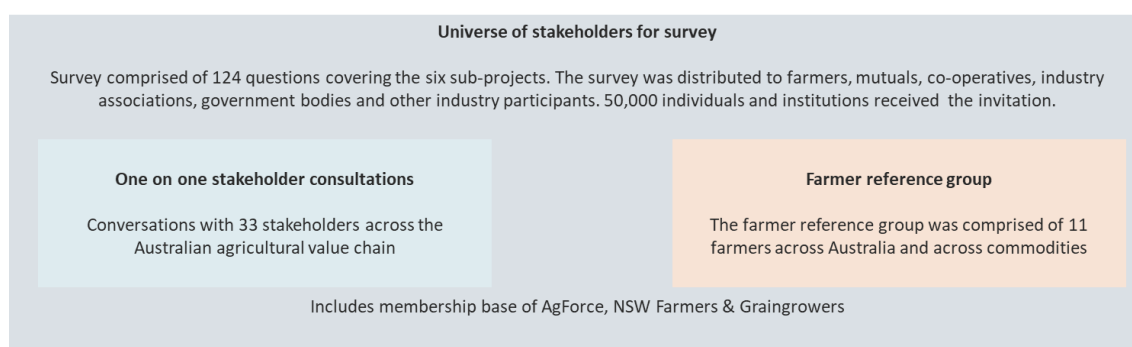
- A national multi-stakeholder online survey;
- Group discussions with a farmer reference group comprising 11 farmers from around Australia spanning different farm sizes and commodities;
- One-on-one consultations with stakeholders who, collectively, are representative of the Australian agricultural value chain, having regard for geographic location, commodity focus and nature of activities.

<sup>3</sup> Note that individual farms may hold more than one Farm Management Deposit account

<sup>4</sup> Department of Agriculture

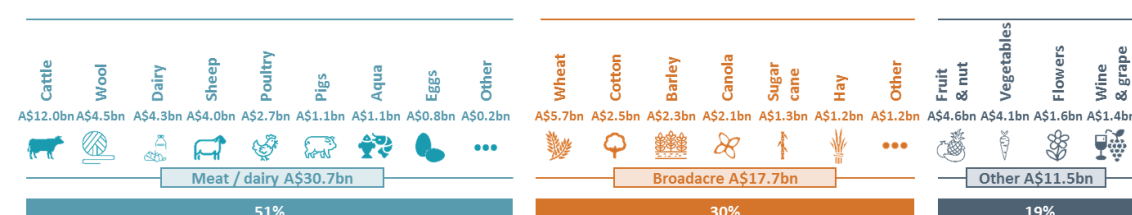
<sup>5</sup> Department of Agriculture, Agricultural Lending Data 2017–18

Figure 19: Stakeholder engagement groups



To ensure a representative sample of the agricultural sector, our stakeholder engagement process addressed eighteen agricultural segments, as summarised below:

Figure 20: Targeted agricultural sectors



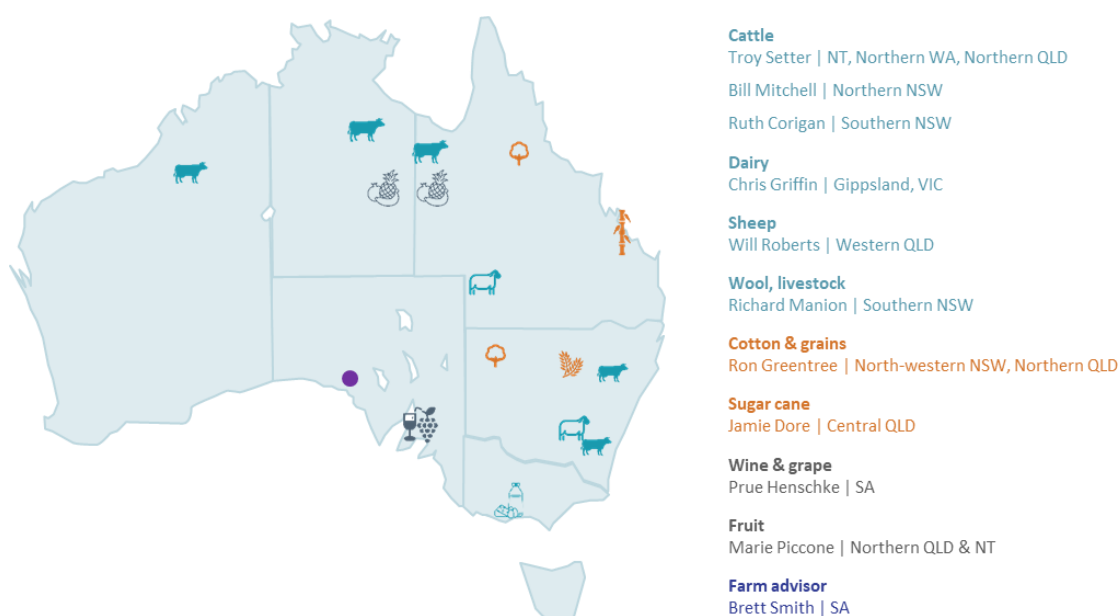
Source: Australian agricultural output 2017/18 ABS and Pottinger analysis

**Our stakeholder survey** comprised 124 questions covering the six approaches to risk management previously outlined. The survey was distributed to farmers, mutuals, co-operatives, industry associations, government bodies and other industry participants.

The survey was distributed to participants by email and other social media channels and delivered using polling software, SurveyMonkey. We received responses from 311 individuals and organisations.

**Our farmer reference group** comprised 11 farmers from around Australia. As shown below, we assembled a panel of farmers with a diverse commodity and geographical focus.

Figure 21: Farmer reference group



We held three workshops with our farmer reference group during which we received feedback on our draft reports and solicited feedback on the topic of education and awareness. The findings and views expressed in our sessions have been incorporated throughout the report.

**Our one-on-one stakeholder consultations** included discussions with a broad range of organisations, as summarised below.

Figure 22: List of stakeholders engaged on a one-on-one basis

Academia	We consulted leading Australian universities offering agricultural degrees	   
Advisors	Pottinger sought input from farmers' financial advisors in order to understand both their role in educating farmers in financial risk as well as to understand their knowledge of risk and the approach of farmers to learning about risk	   
Associations	We consulted farmers' representative bodies including the state affiliates and industry bodies of the NFF and other representative bodies	   
Banks	We sought perspectives from banks actively involved in the agricultural sector to hear views on current levels of awareness of relevant products and services and how this could be improved	  
Farmers	Pottinger considered feedback from a wide range of farmers on ways they are affected by government risk policy including large agricultural corporations and individual farmers along with processors and farming cooperatives	     
Food retailers	We had discussions with major buyers of farm outputs such as supermarkets	
Government	We consulted with State and Federal government departments (Agriculture and Treasury) responsible for agricultural and insurance / financial policy	 
Mutuals	Pottinger consulted members of mutuals who by and large are customers of the underlying services across the agriculture value chain	 
Insurers / brokers	We considered the views of insurance companies manufacturing insurance as well as insurance brokers and agents operating in the agriculture sector. In addition, we engaged with new entrants to the agricultural sector in Australia as well as several leading global reinsurers active in the Australian	  
Research bodies	Pottinger consulted research and development corporations that are the primary funding bodies for rural research and development in Australia. These bodies invest in research and development and innovation to improve productivity and delivery across all products	 
Services / suppliers	We considered farm services organisations engaged in training farmers in financial risk. These included government programmes and risk consultants and trainers	   

## 2.6 Conclusions

Australia's agricultural sector is particularly volatile with the value of the country's agricultural production amongst the most volatile of all large agricultural markets. This is mainly driven by Australia's extreme weather conditions. Risk is an inherent part of farming and farmers, by the nature of their activity, must constantly deal with uncertainty.

Meanwhile, increases in land value and the ability to borrow against this asset has partially shielded farmers from needing tools to manage production and price risk. For this and other reasons, many farmers do not see a need for education on financial risk management products. If there was a correction in land values many farmers could be exposed and a knowledge of financial risk management products for farmers could become critical.

### 3. Farmers' awareness and use of financial risk management tools

This chapter summarises farmers' views on the risks affecting their operations, the suite of financial risk management tools available to mitigate risks and their awareness and use of different financial risk management products and measures. We also set out farmers' preferred sources of financial risk management information and the counterparties they rely on when choosing which products to purchase.

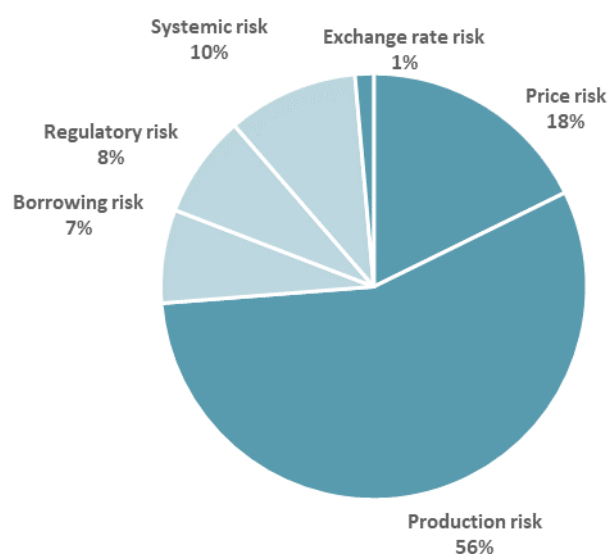
#### 3.1 Farmers' perception of the biggest risks affecting their farms

Risk is an inherent part of the business of farming. As commented by an industry association we consulted with, during our consultation process: *"Farmers are always managing uncertainty."* As a foundation for our analysis, we reviewed the risks that farmers perceive as the most important to their businesses, based on survey findings and our stakeholder engagement discussions.

Three quarters of farmers perceive direct risks to top line revenues as the most important, ie production risk, price risk and exchange rate risk, as illustrated below. Importantly, this perception of risk is very homogeneous across farm sizes (ha), farm scale (by revenue), across states and commodities ie no important differences exist in farmers' minds in terms of risk priorities, farmers across regions, sizes and commodities care first and foremost about the volume of production.

Figure 23: Farmer's perception of the most important risk factor to their business

Question 74: Please rank the following risks facing your business in order of importance for you (1 being the most important and 5 the least important)



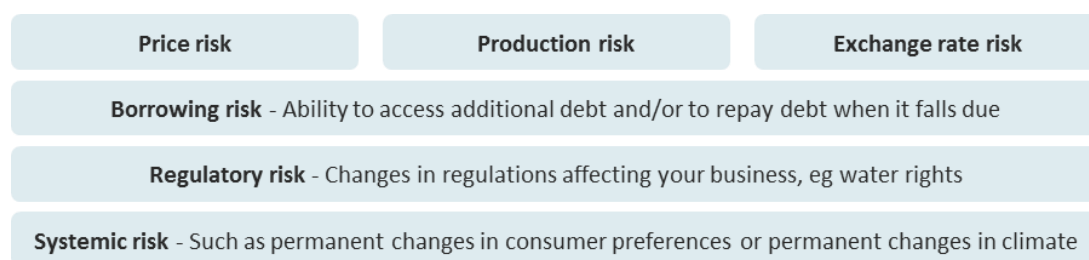
Source: Pottinger analysis of survey data. N = 140

The above is consistent with our stakeholder conversations, according to members of our farmer reference group, production risk is the main focus of many farmers as it is the type of risk that is reasonably within a grower's control.

The categories of risk we have used are summarised below (see section Figure 14: Schematic map of risks impacting farms for further detail).



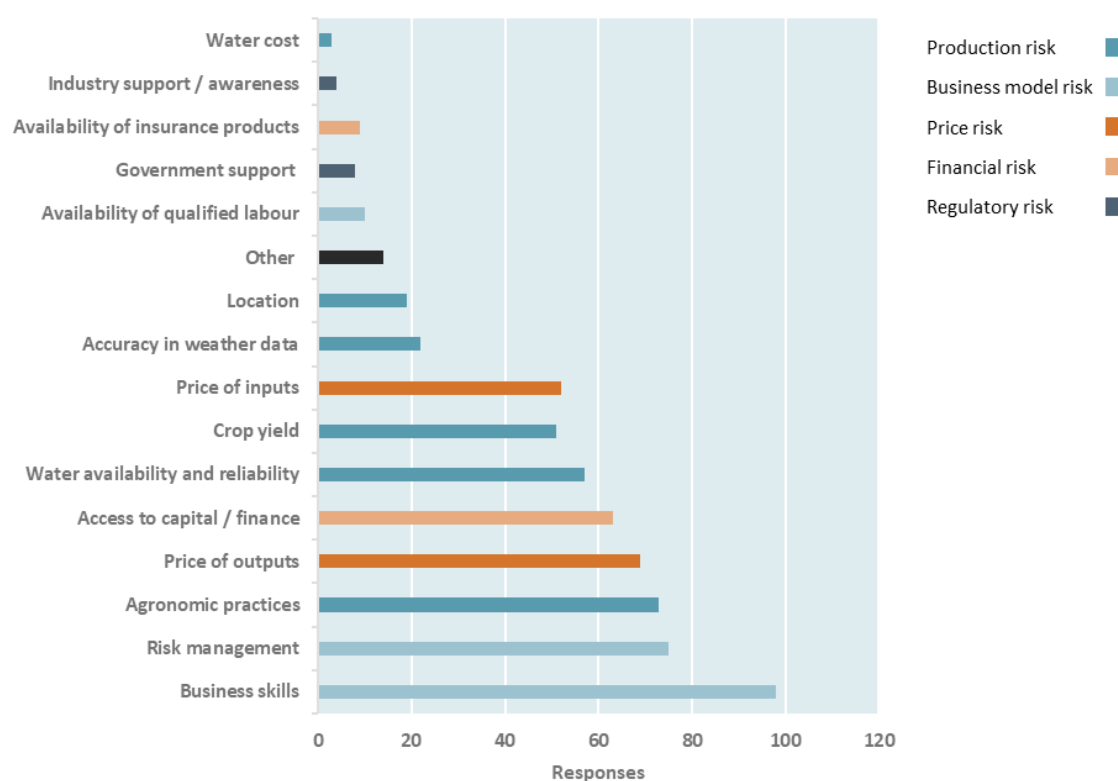
Figure 24: Survey categories used to define risk



To better understand the breadth of risks, we asked farmers to identify the most important factors in operating a sustainable business. The three highest ranking success factors relate to how well farmers can navigate risks and adapt a farm to different environmental and economic conditions. As the CEO of Rabobank Australia put it, “just being good at production to run a successful business is behind us” farmers who “succeed and thrive will be exceptional business people”<sup>6</sup>.

Figure 25: Farmers’ views of the most important factors in running a farm

Question 33: What do you consider to be the most important factors to operate a sustainable business? Select top three



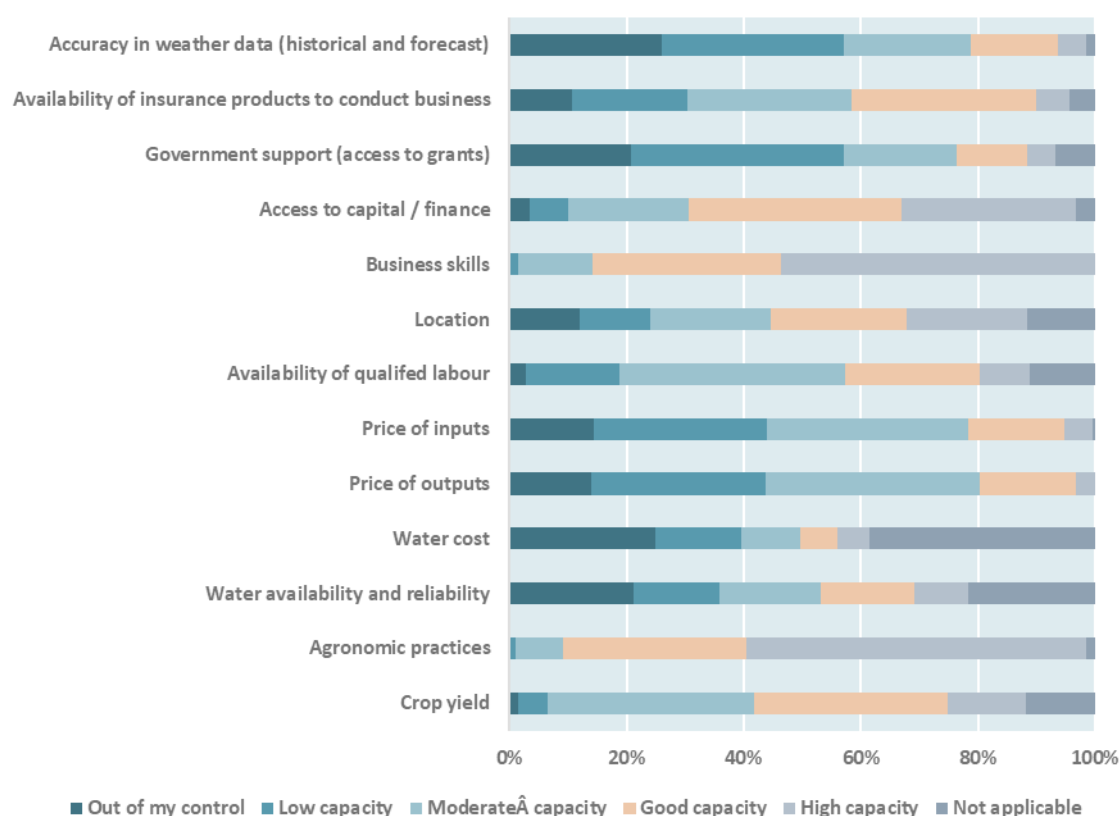
Source: Pottinger analysis of survey data. For this question n = 209

Further survey results indicate that farmers who responded to the survey are confident in their ability to manage business and agronomic matters. These results show that the significant risks (ie those of high importance in operating a sustainable business) that are not easily managed (“low capacity” or “out of my control”) include the price of outputs, price of inputs and water reliability.

<sup>6</sup> Peter Knoblanche, CEO of Rabobank Australia, during his opening speech for Rabobank’s Business Management Program 2018

Figure 26: Farmers' capacity to manage the factors that are important to running a farm

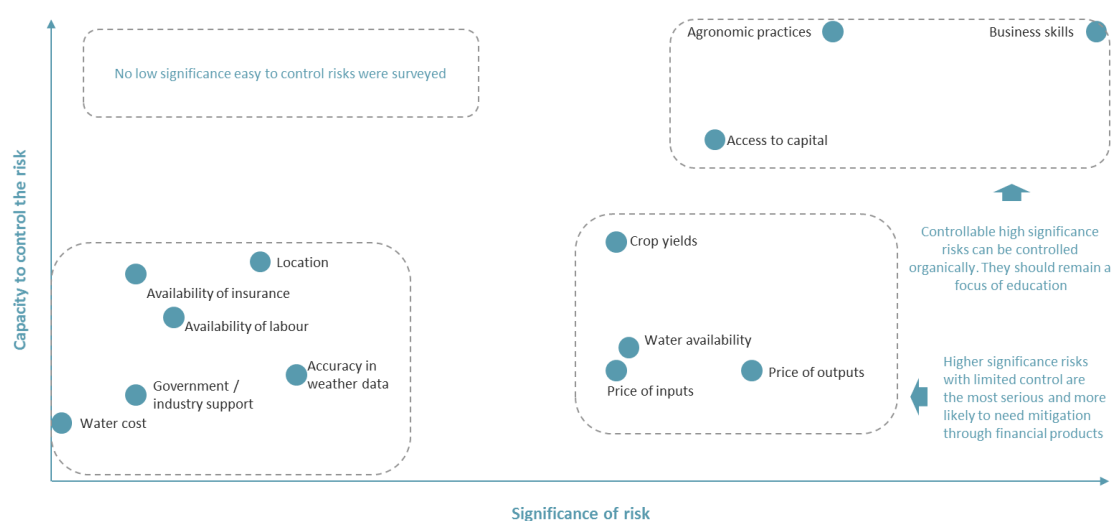
Question 34: How would you rate your capacity to manage these factors?



Source: Pottinger analysis of survey data. For this question n = 209

Taken together, Questions 33 and 34 from the survey show that yield risk is not as difficult to manage as price risk, because farmers are better able to manage yield risks organically whereas they have little to no control over pricing.

Figure 27: Significance of risk compared to capacity to control risk



To construct the axes of the chart above we took the percentage of responses indicating a particular risk was the 'most important factor' in operating a sustainable business (from

Question 33) and compared it with the percentage of responses indicating the farmer had a high or good capacity to manage the risk (from Question 34).

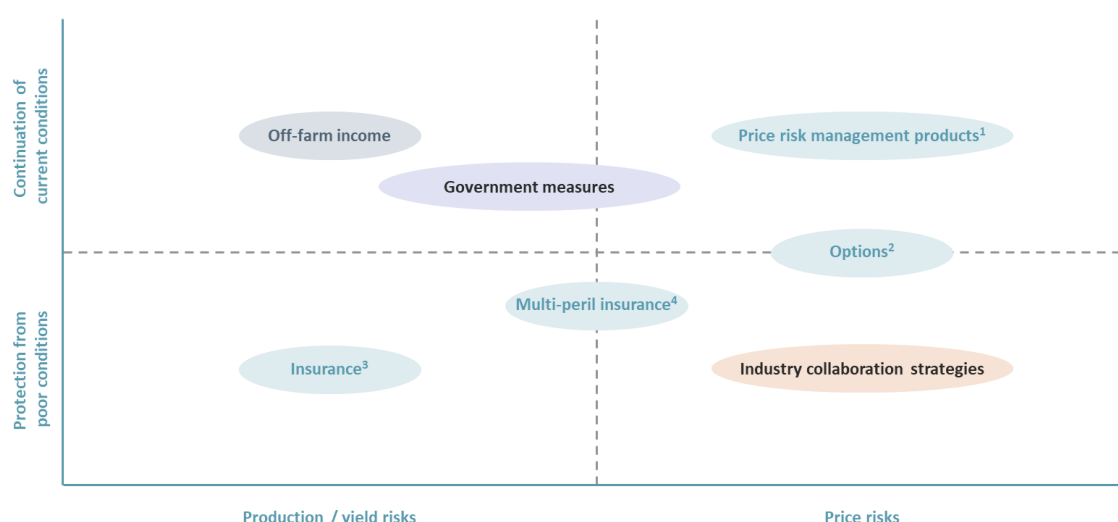
### 3.2 Types of financial risk management products and measures available to farmers

Farmers can use a variety of financial risk management tools in their businesses, including:

- **Financial risk management products**, which refers to three categories including farm production insurance, other types of general insurance, such as fire and general industrial insurance, personal insurance etc and price risk management products which include but are not limited to listed and unlisted derivatives;
- **Industry collaboration strategies**, including mutuals, co-operatives and trade associations;
- **Off-farm income**, including both farm-related income streams<sup>7</sup>, as well as other sources of income that can be utilised to cross-subsidise farms; and
- **Government measures**, including grants, tax incentives and other policy measures that provide financial support to farmers and and/or reduce farm operating costs.

Each of the financial risk management tools may be classified as (primarily) managing either production / yield risks or price risk. Further, each of the products and measures aims to either protect against the arrival of poor conditions or aims to protect against changes (up or down) to the status quo.

Figure 28: Nature of risks managed by different financial risk management products and measures



Note: Items marked (1) to (4) compose the set of financial risk management products. (2) is a type of price risk management product. (3) means farm production insurance and other general insurance and (4) is a type of farm production insurance. Note that this chart shows the flexibility of financial risk management products in affording different types of protection and dealing with different types of risk.

Separately, farmers may either spend savings or borrow against the value of the farm in order to smooth earnings over a farming cycle – effectively self-insuring. In addition, farmers may seek to reduce their overall risk by investing in physical infrastructure or diversifying their crop mix.

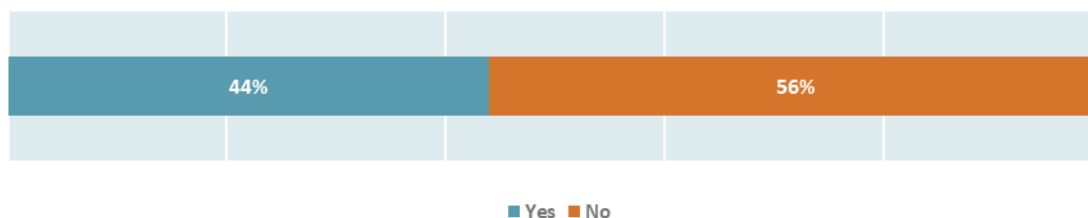
Importantly, many farmers responding to the survey indicated that they manage their risks without using financial risk management products at all.

<sup>7</sup> ie generated from farm property, farming assets and farming expertise

According to an insurance broker we consulted with, some farmers do not perceive financial risk management products as value-adding, this is caused by what this stakeholder refers to as “the fog of the insurance industry”, referring to the fact that there are too many participants delivering inconsistent product information and advice.

Figure 29: Farmers current use of financial risk management products

Question 76: Do you currently use any financial risk management products?



Source: Pottinger analysis of survey data. For this question n = 141

One important factor is that financial risk management products such as publicly traded futures and options contracts are not available in Australia for many types of agricultural commodities. Whilst hedging may still be possible using over-the-counter products, these may not offer good value for money and/or may be perceived as hard to evaluate and high basis risk.

Similarly, whilst some types of farm production and general insurance are readily available and their pricing can be compared between different issuers, this is not the case for all types of risk cover.

As a result, the ability of farmers to utilise financial risk management products varies significant by commodity and is also affected in some cases by material variations in risk profile by region.

### Financial risk management products

Financial risks management products include farm production insurance (eg named peril insurance, multi-peril crop insurance, weather event insurance, etc), general insurance (fire and general industrial insurance, personal injury / workers compensation, key man, etc) as well as other financial risk management products such as derivatives and swaps.

Farm production insurance is designed to protect farmers from the arrival of adverse conditions affecting production volumes. In contrast, all other financial risk management products considered in this study seek to protect against changes (up or down) in the price of a commodity except for options. Options can be used to protect against a change in the status quo or the arrival of adverse conditions.

In addition to managing risks in commodity prices, financial risk management products are also used to protect against variation in input costs, exchange rates and exposure to interest rate movements.

Figure 30: Overview of financial risk management products

Product	Option	Forward	Future	Swap
Publicly traded	Yes	No	Yes	No
Over the counter	Yes	Yes	No	Yes
Typically not available for	Small markets	Products that have uncertain demand	Products that can't be standardised	Any commodity

Product	Option	Forward	Future	Swap
Available for	Futures and listed agricultural businesses	Private sale of any produce	WA wheat Eastern wheat Feed Barley Eastern Canola Energy	Interest rates Exchange rates

Figure 31: Commercial insurance products available in Australia

Product	Description
Commercial property insurances	Protects farmers' real estate and fixed assets against any potential property damage including office buildings, warehouses and industrial properties
Crop / livestock revenue insurance	Protects against revenue loss by insuring farmers against both yield and price risk from a variety of underlying causes
Commercial vehicle insurances	Protects farmers' vehicles (can also include any other equipment) against accidental damage
Inventory insurances	Protects farmers from any damage against livestock and any stored inputs like chemicals, seeds and fertilisers as well as fodder conserved on farm
Single-peril crop insurance <sup>8</sup>	Protects against specific perils, such as frost, hail or fire
Multi-peril crop insurance <sup>9</sup>	Protects farmers from loss of revenue by enabling farmers to insure a percentage of crop production or revenue. Multi-peril crop insurance products cover a range of risks, such as drought, storm-damage, flood, frost and pests and cover a range of crop types. And by insuring revenue directly some multi-peril insurance also covers price risk
Transit insurance	Protects against loss when produce is in transit from farm to market
Weather index derivatives	Protects farmers from certain types of weather event via a payment linked to a single variable (or a set of variables) such as rainfall or temperature. In almost all cases, these variables will be recorded and measured by a reputable and reliable third party, such as data captured by government-operated weather stations. The pay-out is triggered if, for example, rainfall falls below a pre-agreed level over a pre-agreed time period
Yield index insurance	Protects farmers against both climate-related factors as well as crop-specific factors, eg timing of planting. This product's pay-out is determined by comparing the original forecast yield with the updated projection for the yield which utilises the realised weather conditions

Whilst some of these products are traded on public markets, others are only available on a bespoke or "over-the-counter" (OTC) basis. For the latter, pricing and/or non-financial terms may be opaque and hence hard to assess or compare between issuers.

<sup>8</sup> GrainGrowers<sup>9</sup> GrainGrowers



Figure 32: Financial risk management products available in Australia

		Exchange Traded - Derivative				Exchange Traded - Derivative				OTC - Derivative	
		TBC	Cash Sales	Forward Contract Sales	Commodity Pool	Futures (Domestic)	Options (Domestic)	Futures (Intl.)	Options (Intl.)	TBC	TBC
Animal Products	Cattle		✓	✓				✓	✓	✓	✓
	Sheep		✓	✓							✓
	Pork		✓	✓				✓	✓		✓
	Poultry		✓								✓
Broadacre Crops	Wheat	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Barley	✓	✓	✓	✓	✓	✓			✓	✓
	Canola	✓	✓	✓	✓			✓	✓	✓	✓
	Oats	✓	✓	✓				✓	✓	✓	✓
	Sorghum	✓	✓	✓							✓
	Chickpeas	✓	✓	✓							✓
	Cottonseed	✓	✓	✓							✓
	Lupins	✓	✓								✓
	Lentils	✓	✓								✓
	Peas	✓	✓								✓
	Broadbean	✓	✓								✓
	Sunflower	✓	✓	✓							✓
Dairy	Milk		✓								✓
Horticulture	Vegetables		✓								✓
	Fruits		✓								✓
	Nuts		✓	✓							✓
Fibre	Wool	✓	✓	✓	✓						✓
	Cotton	✓	✓	✓	✓			✓	✓	✓	✓
Viticulture	Table		✓								✓
	Wine		✓								✓
Sugar	Sugarcane		✓	✓	✓			✓	✓		✓
Bananas	Bananas		✓								✓

Not all products are available across commodities. For example, beef and dairy cattle have very little ability to forward sell their products in Australia. By contrast, grain farmers and sugar cane farmers have access to a variety of local and international financial risk management tools that they can use either directly or by buying into structured products developed by, eg processors and marketers.

Meanwhile, some financial risk management products have been available in the past but have since been discontinued due to lack of liquidity and low industry participation, such is the case of the MLA/SFE Cattle Futures Contract which was listed for around eight years before being delisted in January 2010<sup>10</sup>. Interestingly awareness of this product was always rated as “high” by the MLA, but the uptake never achieved its target.

Figure 33: Examples of agricultural financial risk management products listed outside Australia

Exchange	ICE Futures	CME	Euronext (MATIF)
Example products	Cocoa	Corn	Rapeseed

<sup>10</sup> <https://www.mla.com.au/globalassets/mla-corporate/about-mla/documents/planning--reporting/improving-and-market-market-information.pdf.pdf>

Exchange	ICE Futures	CME	Euronext (MATIF)
	London cocoa	Soybean	Rapeseed meal
	Euro cocoa	Soybean meal	Rapeseed oil
	Coffee C	Soybean Oil	Corn
	Robusta coffee	Rough rice	Milling wheat
	Sugar No 11	Malay palm oil	UAN 30 Fertiliser
	Sugar No 16	Chicago wheat	Wood pellets
	White sugar	KC wheat	Fish pool index
	Canola	Australian wheat	Oslo seafood index
	Cotton No 2	Black Sea wheat	Skim milk powder
	Orange juice	Black Sea corn	Unsalted butter
	UK Feed wheat	Black Sea sunflower	Sweet whey
		Milk	Maize
		Dry whey	
		Non-fat milk	
		Butter	
		Cheese	
		Coffee	
		Sugar	
		Cotton	
		Feeder cattle	
		Lean hogs	
		Lumber	
		Live cattle	

### ***Mutuals and co-operatives***

Farmers and other relevant stakeholders form mutual and/or co-operative organisations to collaborate to reduce their overall costs and/or risks of doing business. Brief descriptions of these structures from the Business Council of Co-operatives and Mutuals are set out below.

Figure 34: Overview of mutual and cooperative structures

Type or organisation	Description
Mutual	A mutual is an organisation based on the principle of mutuality – people organising together to meet their shared needs. The members of a mutual are its customers, who do not usually contribute to the capital of the organisation through direct investment. Instead, they support the mutual through using its services
Co-operative	Co-ops are businesses that create value to share among their members and their communities. They are the original ‘social enterprises’. In a co-op, ownership and control is shared equally amongst members who use the co-op. Members of a co-op are people, other businesses, employees or other community stakeholders who work together to achieve a common purpose or outcome

Agricultural mutuals and cooperatives typically offer farmers shared access to primary processing facilities, as well as associated infrastructure and other assets. They may also provide group buying services, helping to reduce farmers input costs. Some market agricultural outputs, consolidating supply and so offering a more substantial and reliable counterparty for both intermediaries and end users of agricultural commodities. Occasionally, these organisations source financial risk management products for the benefit of members. By acting together, farmers achieve economies of scale and greater negotiating power, and also secure access to specialised agronomic expertise and management skills via the cooperative or mutual in question.

These arrangements may enable individual producers to gain more cost-effective access to financial risk management products and measures. Some mutuals and co-operatives offer their members financial risk management products, whether manufactured in-house or

underwritten by third-party providers. They aim to deliver benefits for its members (as opposed to a pure profit model), so products often have more attractive terms.

In addition, mutuals and co-operatives often provide a role in farmer education, including in relation to financial risk management products. This can include development of in-house expertise in risk management and the use of financial risk management products and measures, as well as providing access to third party training providers and other resources on cost-effective terms, and can include the provision of financial advice to farmers.

### ***Off-farm income***

Off-farm income refers to the income earned, either actively or passively, by farmers outside of their core, primary production of commodities. The additional revenue streams improve overall business profitability and can at times provide income security when farm profitability is low. This is particularly true when the off-farm income stream is uncorrelated with the income from primary production.

In broad terms, off-farm income comprises:

- Farm-related income streams, ie additional income that can be generated from farm property, farming assets and farming expertise; and
- Non-farm income streams, ie income from other activities or investments that can be utilised to cross-subsidise farming activities and/or generate new capital for investment into farms.

Examples of farm-related income streams include:

- Contract harvesting which utilises existing harvesting assets to achieve additional services revenue;
- Service-based offerings, including farm-stay/ visits, farm shop, agricultural consulting, etc.;
- Meanwhile, common non-farm income streams include income from investments (shares or bonds), rental revenue from real estate, other professional activities, family members employed off-farm, etc.; and
- Ideally, off-farm income will provide additional revenue and also be at least partially counter-cyclical, thus increasing the overall financial stability of the primary farming business.

### ***Government measures***

Both the Australian Government and state governments fund a range of policy measures designed to support the viability and competitiveness of the Australian agricultural sector. Examples include:

- Investment in infrastructure to help improve the overall efficiency of the agricultural sector, from maintenance of road networks to major projects such as the proposed Inland Rail link;
- The collection, validation and publication of weather-related data series of critical importance to the farming sector;
- Investment in the development of export markets for agricultural products;
- Tax management arrangements to help manage the volatility of agricultural production, including Farm Management Deposits;
- Financial and other measures designed to support education and development of the farming sector as a whole;

- Specific measures designed to address market failure, such as the Australian Reinsurance Pool Corporation scheme established to ensure the provision of terrorism insurance in Australia; and
- Financial support for the agricultural industry in times of crisis, such as drought relief assistance programmes.

*The preceding sub-section presents a high-level overview of financial risk management products and measures and should be read in conjunction with the more comprehensive information about financial risk management tools provided in the reports of the other sub-projects.*

In the following sections of this chapter, we address how farmers obtain financial risk management information and assess their overall awareness and use of financial risk management products, other financial risk mitigation measures and government policy initiatives.

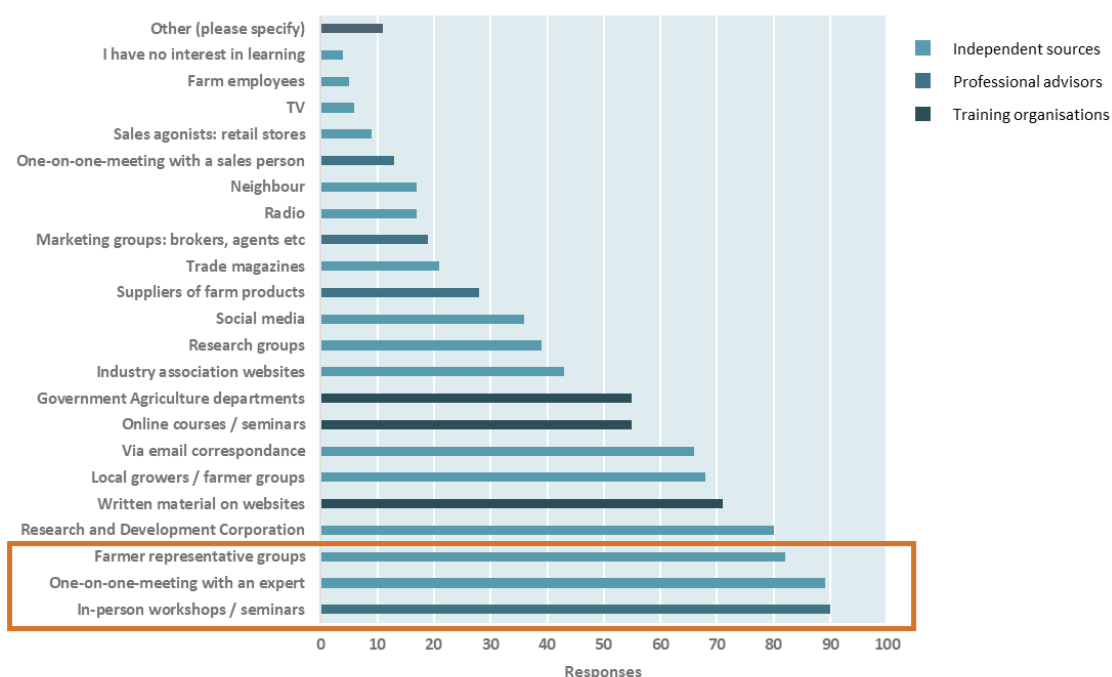
### 3.3 Farmers' sources of information about financial risk management tools

Farmers seek information on financial risk management tools from three broad sources:

- **Independent sources**, which are clearly preferred by those surveyed, such as agricultural business consultants, research and development corporations, other local farmers, representative bodies and government agencies. These organisations and people also provide referrals to third parties for more information and / or product advice;
- **Professional advisors, service providers and product manufacturers**, through written advice, high level marketing and issues papers as well as one-on-one discussions related to particular products. This group is important because it is the group of organisations that transact with, or on behalf of, the farmer. The quality of advice received from these parties is critical; and
- Organisations that provide **training, referrals or briefings on risk**. These organisations include some financial planning groups and advisors alongside government (universities / TAFE) and to a lesser extent industry bodies which highlight the importance of financial literacy while making referrals to training organisations.

Figure 35: Survey responses to how farmers like to learn about financial risk management tools

Question 52: How do you like to learn about the financial risk management products and measures available to you? Select all that apply



Source: Pottinger analysis of survey data. For this question n = 203

Survey results indicate that farmers learn from a diverse *range* and *number* of sources. This is supported by academic research on the point<sup>11</sup>. Information sources cited by farmers in the survey include advisors, associations and research corporations as well as training and educational facilities. In terms of channels for delivery, farmers have a clear preference for in-person learning as shown above (orange rectangle). Independent channels (eg R&D bodies and government) are more popular than sales/marketing channels.

According to an academic study on farmers' learning preferences<sup>12</sup>, farmers in the US prefer a learning process that relies mostly on first-hand experiences motivated by saving time and money. The study also discovered that there are (i) differences in agricultural education needs among types of farmer groups, (ii) farmers enjoy peer teaching, (iii) farmers find value in participatory research (iv) farmers desire more comprehensive educational programs, and (v) farmers want educators to embrace the changing nature of agriculture.

### 3.4 Farmers' awareness and use of financial risk management products

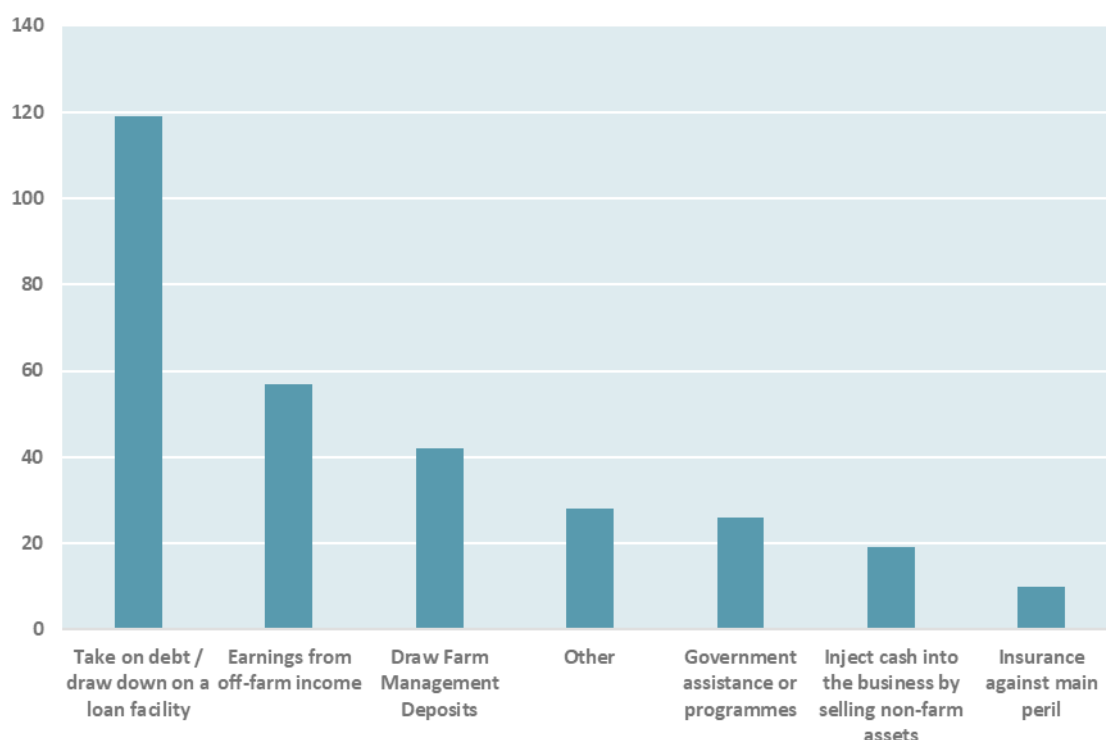
Survey findings suggest that most farmers do not use insurance products to protect against losses incurred in the worst 10% of years.

<sup>11</sup> How farmers learn by Chris Reichstein for the Nuffield Australia Farming Scholars, December 2017

<sup>12</sup> [https://lib.dr.iastate.edu/edu\\_pubs/124/](https://lib.dr.iastate.edu/edu_pubs/124/)

Figure 36: Farmer's primary financial mechanisms used to manage losses

Question 59: What are the primary financial mechanisms you use to manage losses in the worst 10% of years for your main peril?



Source: Pottinger analysis of survey data. For this question  $n = 166$

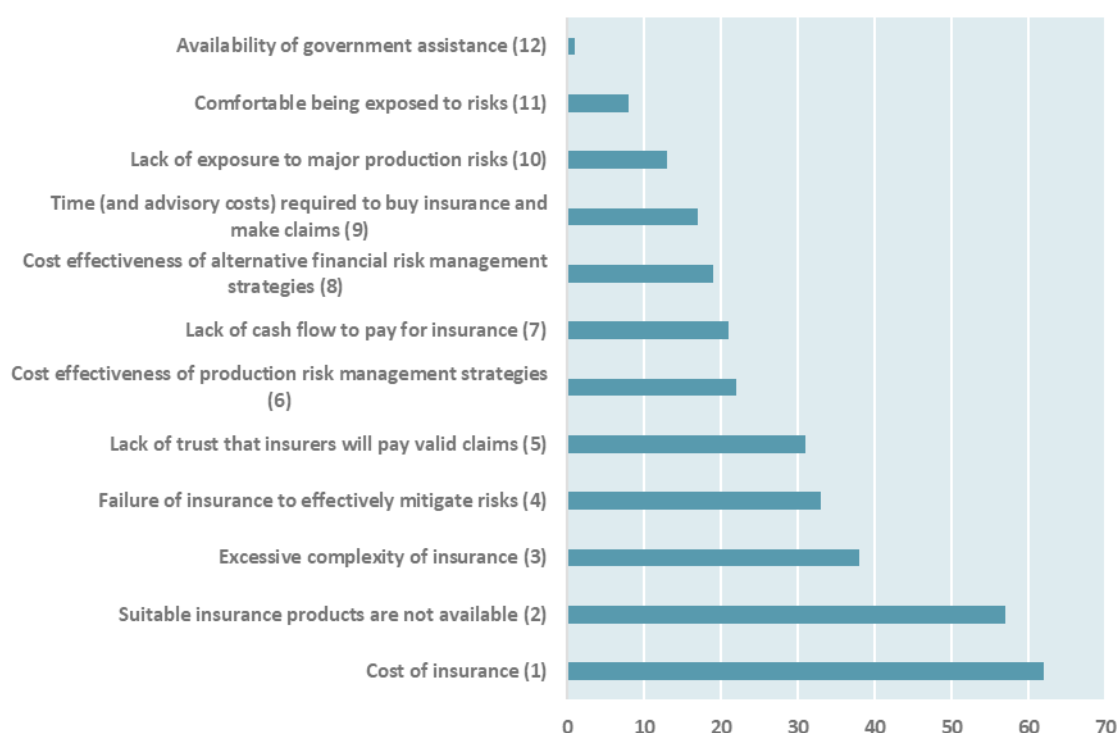
There are a number of reasons why farmers do not buy insurance for these risks. These include:

- **Cost:** 85% of respondents indicated that insurance is too expensive or is not cost-effective compared with other approaches (1, 6, 7, 8 below);
- **Relevance:** 70% of respondents indicated that suitable insurance products were not available, or did not effectively mitigate risks (2, 4 below);
- **Accessibility:** 48% of respondents indicated that insurance products were too complex or required too much time and expense to purchase (3, 9 below); and
- **Efficacy:** 49% of respondents indicated that they were not exposed to major production risks or were happy taking on risks (10, 11 below).

We note that no respondents cited potential government assistance as a reason for not taking on insurance. This data is based on the percentage of respondents who indicated a particular factor was relevant or highly relevant in deciding not to purchase insurance.

Figure 37: Survey responses showing the reasons farmers do not buy insurance

Question 65: How relevant are the following in influencing your decision to not buy insurance against your main peril?

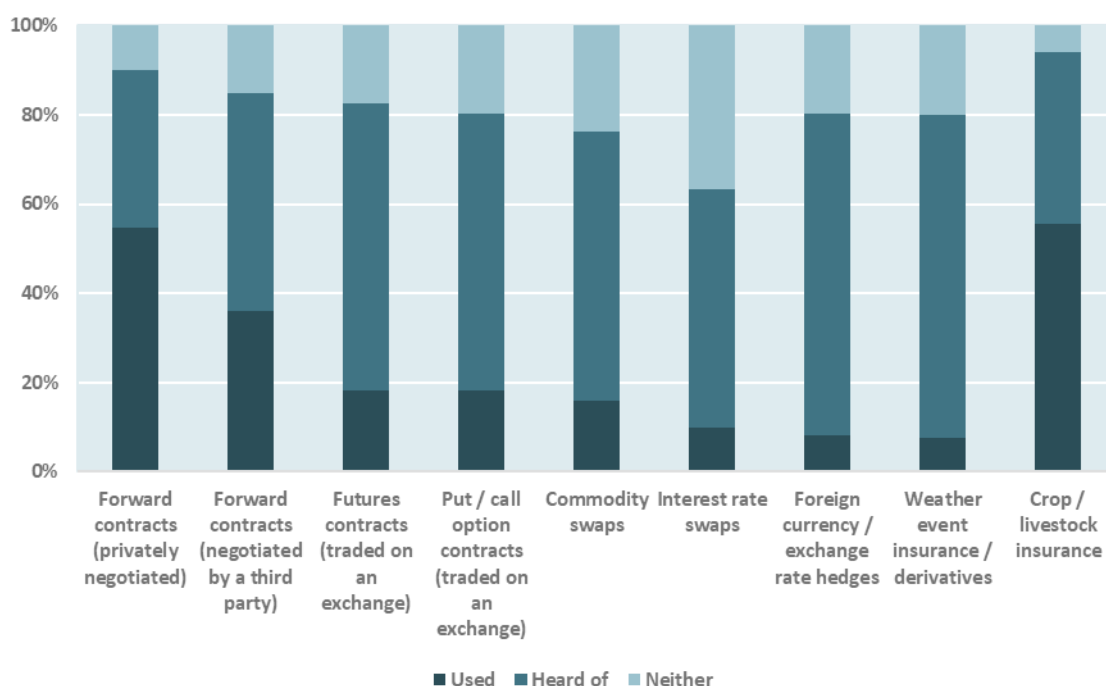


Source: Pottinger analysis of survey data. For this question  $n = 148$

Meanwhile, around half of the farmers responding to the survey used forward contracts and crop or livestock insurance. Whilst most farmers are aware of other financial risk management products, they are not widely used.

Figure 38: Farmer awareness and use of financial risk management products in the last five years

Question 75: Thinking about the last five years, indicate if you have used or heard of the following





Source: Pottinger analysis of survey data. For this question n = 141

According to a listed agribusiness we spoke with, in many cases, the adoption of financial risk management products by farmers is driven by banks' requirements eg farmers are required to purchase insurance in order to access financing.

One way of increasing adoption of relevant and cost-effective financial risk management products could be to allow farmers to experiment with them by using focussed trials. For example, a farm financial advisor we consulted with allows farmers to purchase option contracts over a modest percentage (eg a few tonnes) of their respective commodities. Once a farmer has experienced first-hand the financial impact of these trials, they are more likely to hedge a larger portion of their production.

According to an insurance broker we consulted with it is incumbent on the insurance industry to introduce new products that are relevant to farmers across different regions and commodities. So far, the majority of the financial risk management products introduced have proved to be too generic, according to this stakeholder. Another important consideration in the development of new products is the need to simplify them as much as possible. A government department we spoke with asserts that farmers consider the current suite and nature of products to be too complex and provide the suggestion that pay-outs, for example, should be clearly and transparently defined and explained.

### 3.5 How farmers purchase financial risk management products

Farmers access financial risk management products through three primary channels:

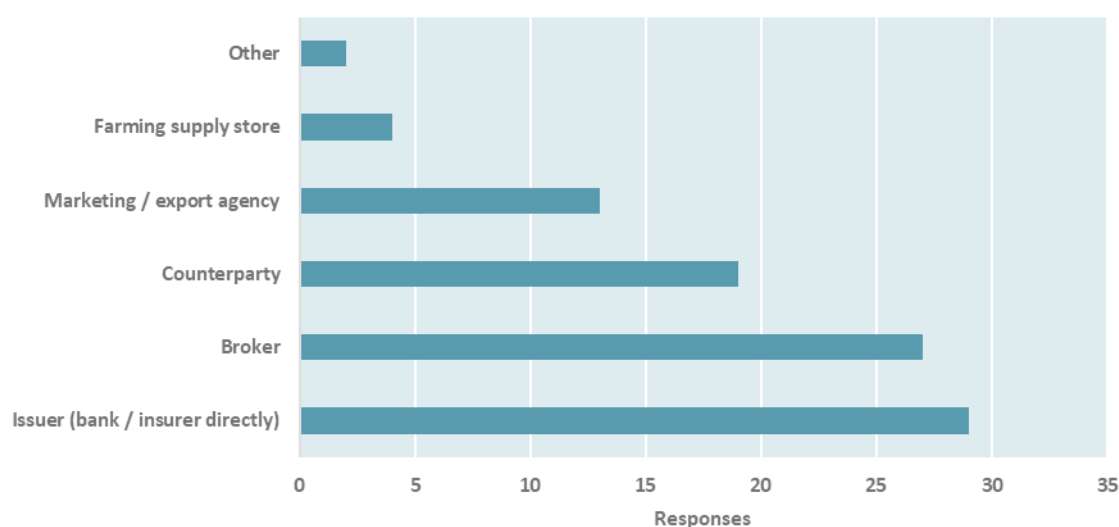
- **Product manufacturers** such as banks and insurance companies, which issue financial risk management products directly to farmers. Typically, product manufacturers provide advice on which of that institution's products may be most relevant to the customer. Manufacturers are remunerated through the interest, fee, premium and other charges they make;
- **Intermediaries** such as financial advisors, financial planners and insurance brokers provide advice and recommendations on financial risk management products. These intermediaries typically sell products from a range of financial services product manufacturers. Intermediaries are remunerated for their services either through commissions paid by the product issuer and/or by charging the customer a fee for the advice provided; and
- **Other advisors**, including accountants and tax advisors, may recommend financial products and/or risk mitigation measures to farmers and may make introductions to product manufacturers and/or intermediaries through whom the farmer can purchase the product in question. They may include this as part of their overall service proposition, charge their clients a fee for the service, or be paid introductory commissions by product issuers or other intermediaries.

We note that advice provided in relation to financial products will almost always fall within the scope of Australia's financial services licencing regime. In addition, both banking institutions and insurance entities are subject to a range of other regulatory requirements. These provide some level of protection to farmers, although in most cases farmers are likely to be classified as wholesale customers where the protections are materially less stringent.

In addition, in some cases financial risk management features are embedded into contracts for the sale of farm produce and sold outside the financial services licensing regime. In the latter case farmers may not consider what was purchased was a product managing financial risk at all.

Figure 39: Purchasing of financial risk management products by source

Question 77: When you use financial risk management products, who do you purchase them from?



Source: Pottinger analysis of survey data. For this question n = 62

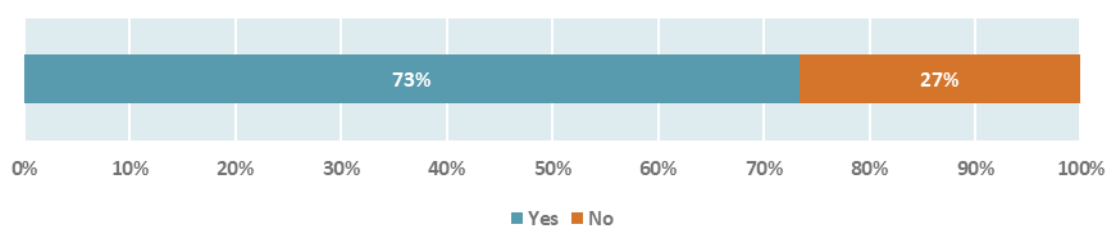
### 3.6 Awareness and use of other financial risk management measures and tools

This section examines the awareness and use of other financial risk management measures and tools, namely participation in cooperatives, mutuals, industry associations, as well as reliance on off-farm income.

#### **Mutuals, co-operatives and industry associations**

While 75% of survey respondents are members of at least one industry association, 18% of respondents claimed to be a member of a mutual or cooperative. 63% of respondents stated they had never been a member of a mutual or cooperative.

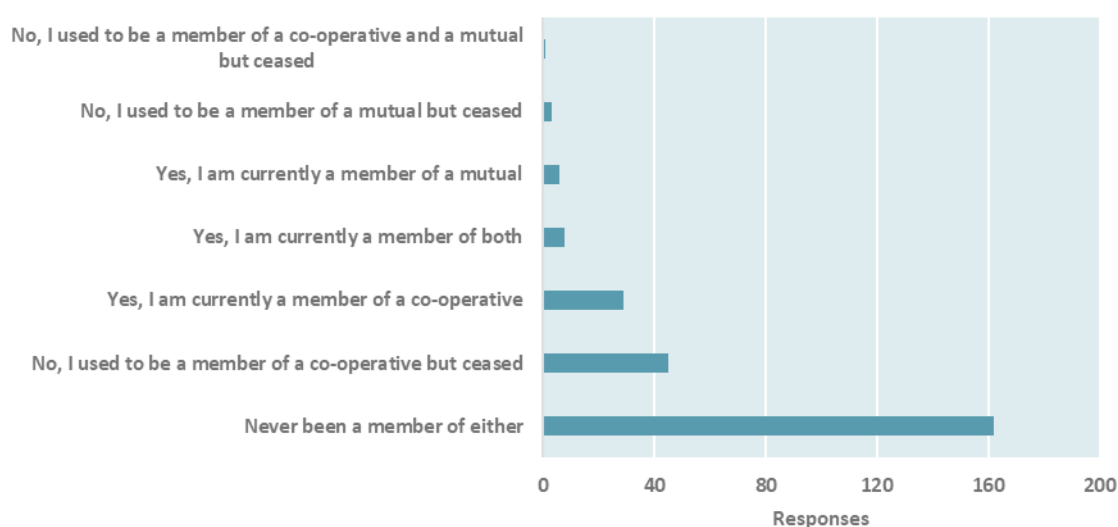
Question 5: Are you a member of an industry association?



Source: Pottinger analysis of survey data. For this question n = 259

Figure 40: Representation of farmers in a co-operative or a mutual

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



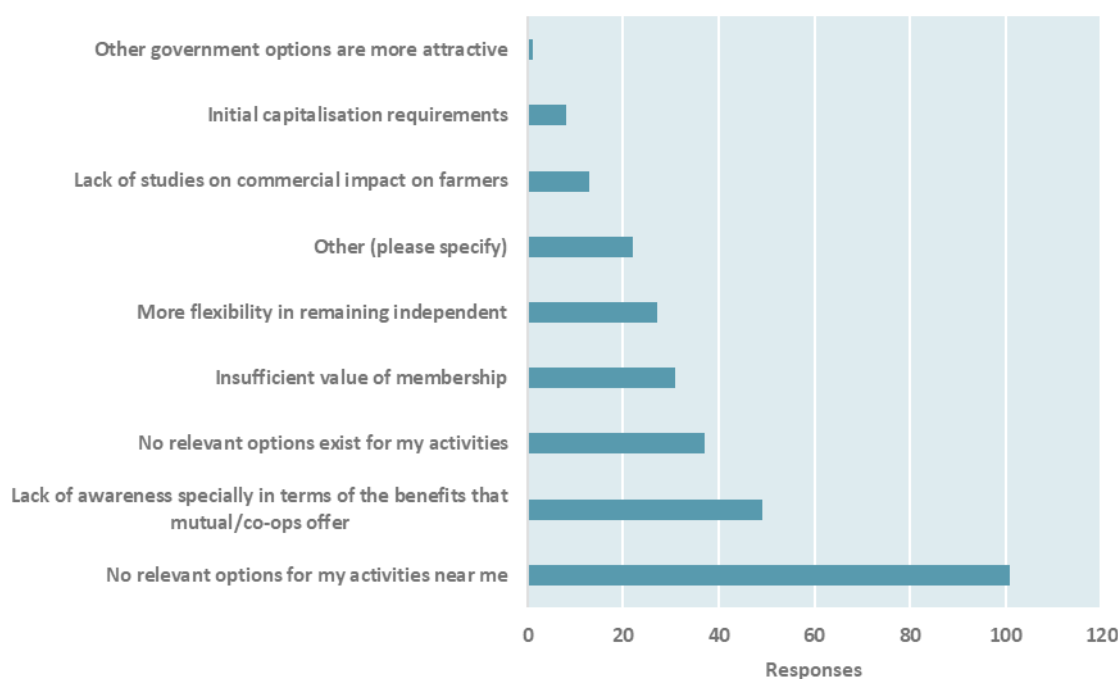
Source: Pottinger analysis of survey data. For this question  $n = 254$

Given the low participation in mutuals and co-operatives compared to industry associations, we asked farmers what factors made them not want to participate in co-operatives or mutuals.

The most common reason cited for not belonging to a mutual or co-operative was that a relevant organisation does not exist. A significant number of respondents also cited lack of awareness of benefits and/or insufficient perceived value in membership.

Figure 41: Reasons for not being a member of a co-operative or a mutual

Question 10: Why aren't you a member of a co-operative / mutual? Tick all that apply

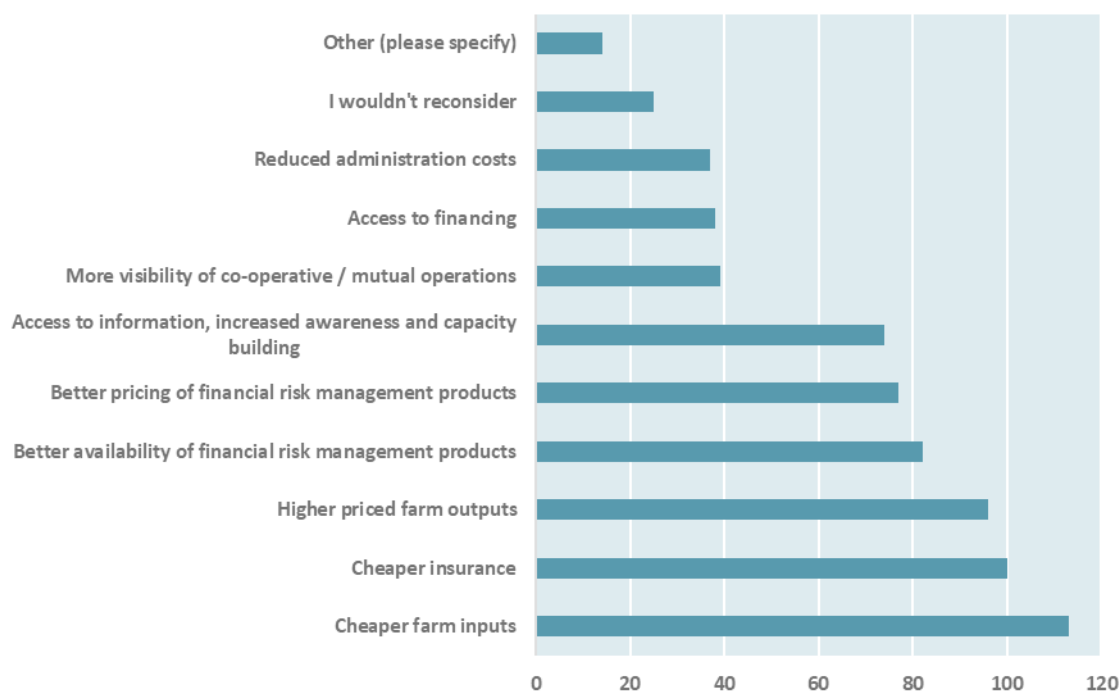


Source: Pottinger analysis of survey data. For this question  $n = 192$

A variety of factors were cited that would make farmers reconsider joining a mutual or co-operative (assuming a relevant organisation was available to them). These included enhanced pricing for farm outputs, cheaper farm inputs, more accessible and/or better priced risk management products, and access to information, as illustrated below.

Figure 42: Factors that would make farmers reconsider joining a mutual or co-operative

Question 11: Which of the below factors would make you reconsider joining a mutual/co-op?



Source: Pottinger analysis of survey data. For this question  $n = 192$

### Off-farm income

27% of farmers surveyed stated they had no off-farm income, while 50% relied on 10% or less off-farm income. Only 20% of farmers responded that 50% or more of their income was off-farm income.

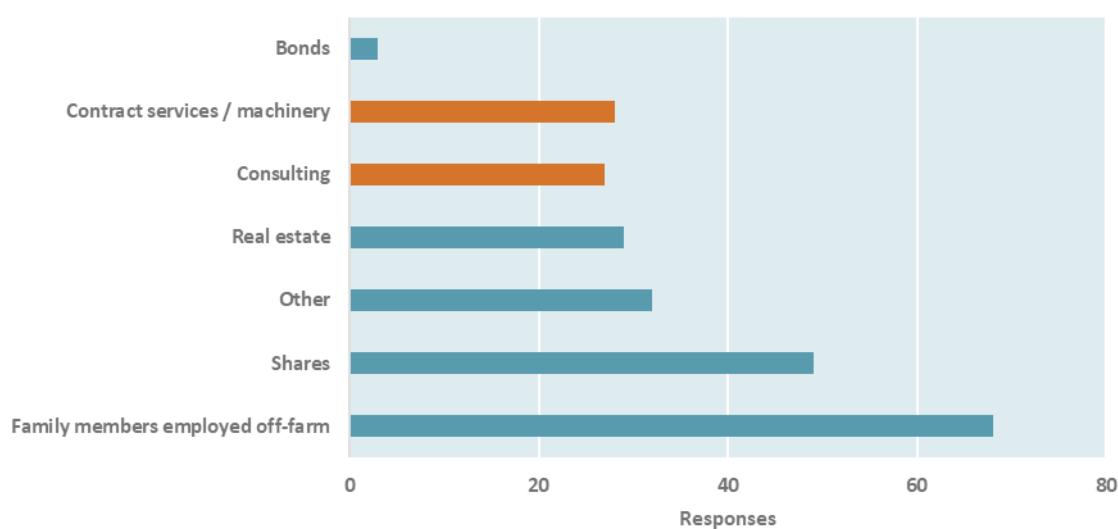
In broad terms, off-farm income comprises:

- Farm-related income streams, ie additional income that can be generated from farm property, farming assets and farming expertise; and
- Non-farm income streams, ie income from other activities or investments that can be utilised to cross-subsidise farming activities and/or generate new capital for investment into farms.

As illustrated below, many farms rely on non-farm income streams (blue bars) to support the day to day operations of the farm. In addition, some farms generate additional farm-related income streams (orange bars).

Figure 43: Off-farm income categories reported by farmers

Question 41: If applicable, what are the sources of your off-farm income?



Other (28) included pensions, superannuation and investments (14), forms of employment (6), business (3) and n/a (5)

Source: Pottinger analysis of survey data. For this question n = 158

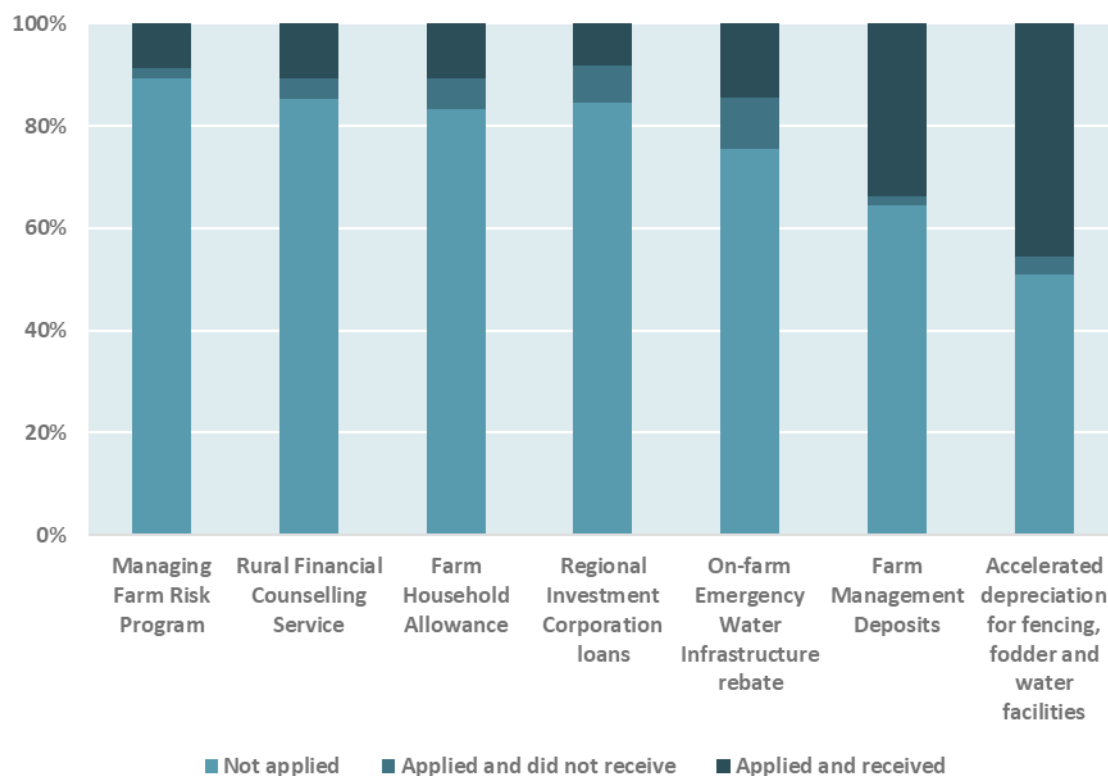
### 3.7 Awareness and use of government policy initiatives

The agricultural sector benefits from a variety of government activities, including investment in transport infrastructure, data gathering, and support for export market development. In addition, farmers have access to a variety of government programmes, including tax incentives, financial support for education and a variety of other measures.

As outlined earlier in this section, farmers are generally well informed regarding the availability of these programmes. The survey findings suggest, however, that many farmers do not utilise them.

Figure 44: Farmer awareness of government programmes

Question 35: Thinking about the last five years, please indicate whether you applied and/or received any of the following government assistance measures



Source: Pottinger analysis of survey data. For this question n = 209

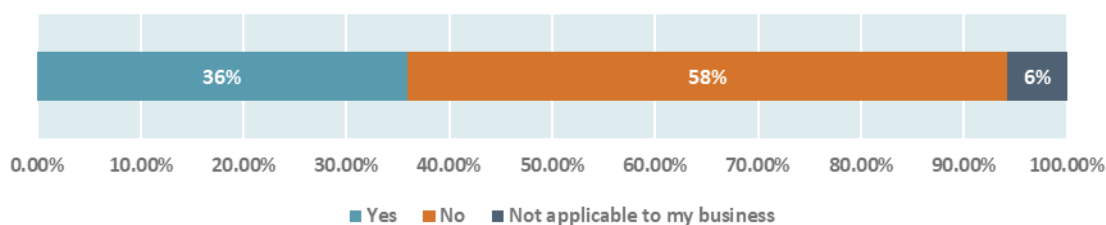
According to the Federal Department of Agriculture there were 49,270 Farm Deposit Accounts with total deposits of A\$6.49bn as of June 2020. According to the NFF there are 85,483 agricultural business in Australia with agricultural operations valued over A\$40,000. This implies that 58% of farms use farm deposit accounts. In contrast 34% of surveyed farmers stated they applied for a farm management deposit. This may indicate a bias in survey respondents towards those ineligible to apply.

Furthermore, we note that where programmes have eligibility constraints (eg Farm Management Deposits) they are also less likely to be used by farmers. For further information, refer to Appendix 9.5: Programmes available to farmers.

Additionally, we asked farmers whether they were generally aware of government financial risk management measures. Notwithstanding that 44% of respondents used accelerated depreciation and 33% applied for Farm Management Deposits, 59% claim to not know of any measures – indicating farmers have taken a narrower view of government financial risk management measures.

Figure 45: Farmers awareness of government measures

Question 91: Are you aware of any government measures or initiatives related to on-farm financial risk management?

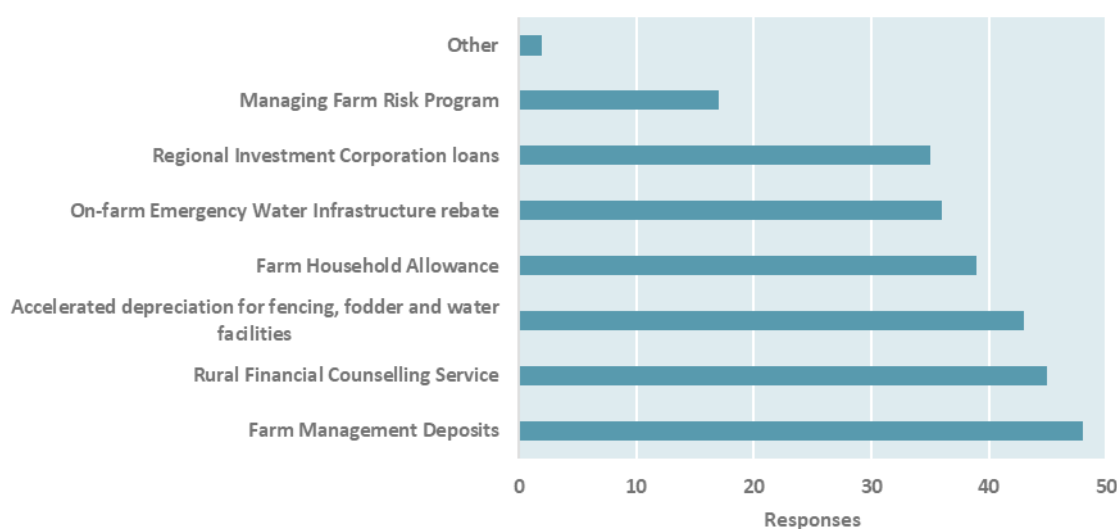


Source: Pottinger analysis of survey data. For this question n = 139

Farmers have a high-level of awareness of long-established schemes including Farm Management Deposits, the Rural Financial Counselling Service and various tax allowances. Conversely, only 40% of farmers are aware of the Managing Farm Risk program, suggesting that this may be a current impediment to uptake.

Figure 46: Farmers awareness of government measures

Question 92: Which government-programmes are you aware of? Select all that apply



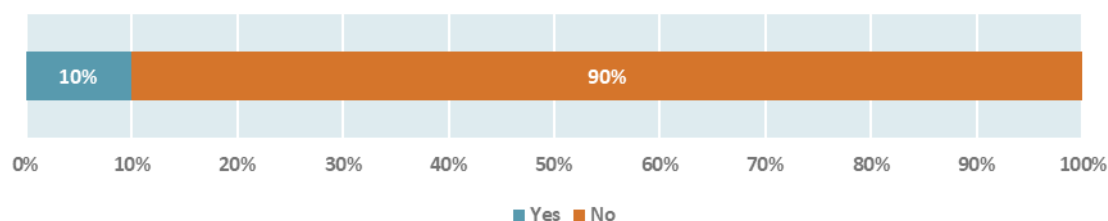
Source: Pottinger analysis of survey data. For this question n = 50



Meanwhile, only one in ten farmers participated in the government-funded educational rebate scheme, as illustrated below.

**Figure 47: Participation in the Federal Government funded educational rebate scheme**

*Question 93: Did you participate in the Federal Government funded educational rebate scheme (A\$2,500 grant) - Managing Farm Risk Program?*

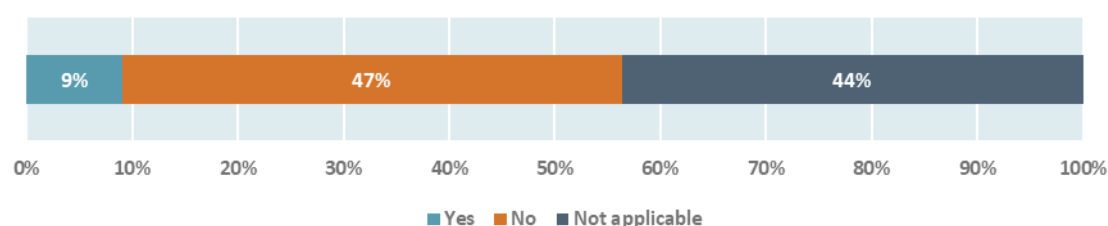


Source: Pottinger analysis of survey data. For this question n = 110

Indicating a higher level of uptake, approximately one in six farmers in NSW participated in the NSW Government's educational rebate program.

**Figure 48: Participation in the NSW Government's educational rebate programme**

*Question 94: If in NSW, did you participate in the NSW Government's educational rebate program (A\$45m) Farms Business Skills Professional Development Program?*



Source: Pottinger analysis of survey data. For this question n = 131

### 3.8 Conclusions

Production risk is top of mind for the majority of farmers we surveyed, this coincides with the views of stakeholders we consulted one-on-one meetings and the findings from our farmer reference group sessions. Production risk is the biggest perceived threat to farmers' businesses. Second to production risk, farmers see price risk associated with their outputs as the next largest threat.

Farmers recognise the importance of business skills in operating their businesses. Most farmers we surveyed chose this factor as the most important factor in operating a sustainable business. Notably, the farmers we surveyed ranked this factor above others such as the cost of inputs, production volumes (yield) or agronomic practices

Farmers can choose from a range of financial risk management products and measures to manage risk. However, even if financial risk management tools are available and farmers understand them, some farmers actively choose not to manage risks by means of financial risk management tools. Instead, they might mitigate risk by other means, such as investing in physical infrastructure that unlocks higher production, through eg irrigation solutions, storage, etc. For example, some farmers we surveyed showed that farmers utilise debt, off-farm income and savings from their farm management deposit accounts as the primary means of mitigating losses.

## 4. Financial advisors' familiarity with financial risk tools

This chapter focuses on the organisations that advise farmers on financial risk management tools. We consider different categories of advisor and analyse their level of financial knowledge as well as the sources of information on which they rely. We also explore the potential conflicts of interest that must be navigated by different types of organisations.

### 4.1 Advisors to farm businesses

Advisors play an important role in the agricultural sector. Various types of advisor provide advice on financial risk management products or practices to farmers, including:

- **Accountants**, who provide tax and accounting advice and occasionally general commercial and financial advice;
- **Bank managers**, who provide general banking product advice, including assistance in selecting and the sale of financial products or credit;
- **Financial planners/advisors**, who provide financial, investment and business planning advice;
- **Insurance brokers**, who facilitate the brokerage of insurance products; and
- **Rural service companies**, including large-scale providers and independent farm consultants, who provide agricultural advice, including agronomy and commodity marketing advice and commercial advice such as business and strategic planning.

For clarity, the use of the term “advisors” in survey findings and throughout this chapter, unless stated otherwise, encompasses the five categories listed above.

There are significant variations by state and by industry segment regarding the nature and extent of use of different types of advisor. For example, in Western Australia, over 70% of farm businesses engage a farm consultant as opposed to less than 25% in NSW<sup>13</sup>. One reason for this may be that, in the 1960s, in seeking to open up new farming areas and support new entrants to the industry (including from other States), the government of Western Australia introduced farm advisory services, giving farmers access to specialist agricultural consultants. Subsequently, many of the individuals employed in these roles by the government transitioned to the private sector, retaining their farming clients, including examples where groups of farmers collectively pooled resources to attract and retain the consultants in a local region. Government intervention may thus be seen to have facilitated a change in business culture in the agricultural community, establishing the value of such consultants in the minds of farmers.

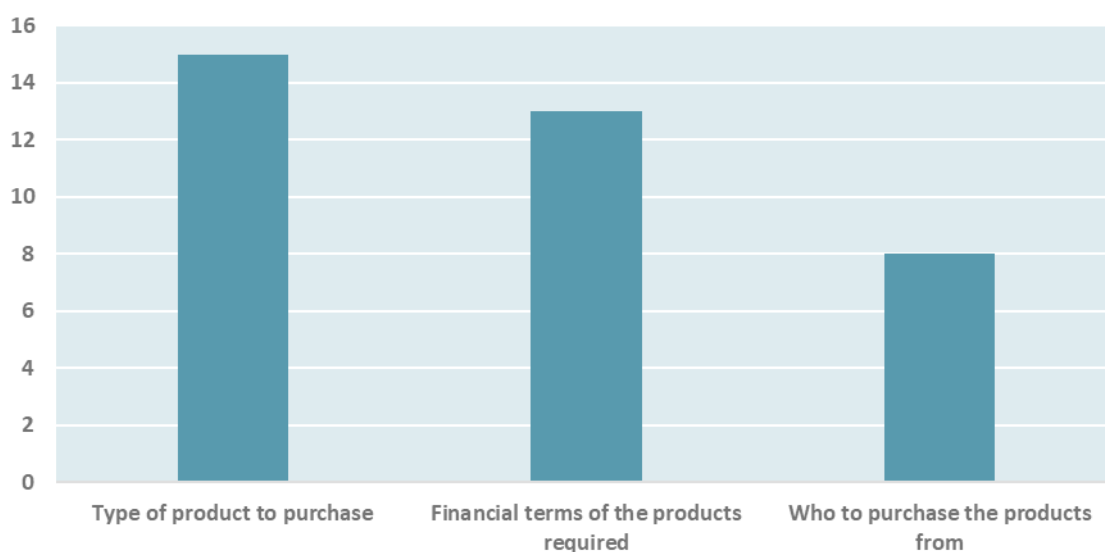
All farm consultants we interviewed place significant value in personal **relationships and trust**. For this reason, farmers tend to choose advisors who are local and understand the nature of agriculture businesses. Such advisors may not, however, have sufficiently detailed financial product knowledge to be able to provide comprehensive advice in relation to the use of some financial products.

Nevertheless, as illustrated below, farmers will often rely on advisors for advice on the type of product to purchase, the financial terms of the product, and the organisation from which it is purchased.

<sup>13</sup> <https://farmanco.com.au/wider-farming-perspective-from-wa-to-nsw/>

Figure 49: Advice provided by financial advisors

Question 81: What advice do you receive from the advisor?



Source: Pottinger analysis of survey data. For this question  $n = 15$

Given the significance of their role in identifying and recommending financial risk management products, it is important for such advisors to be familiar with the suite of financial risk management products in order to ensure that their advice is relevant, accurate and up to date.

## 4.2 Advisors' level of financial knowledge

In this section, we address the level of financial knowledge of advisors. It is important to note that most activities which entail providing advice on a financial product or recommending or introducing financial product providers fall within the scope of Australia's financial services licencing regime.

Individuals involved in these activities must be employed by or be an authorised representative of a business that holds an appropriate financial services licence issued by the Australian Investments and Securities Commission (ASIC). The licence addresses both the type of financial products on which financial advice can be provided as well as the type of customer to which such advice can be provided.

Figure 50: Categories of financial product under Australia's financial services licencing regime

Cash and debt	Equities and derivatives etc		Insurance	Retirement	Other
Deposit and payment products	Securities	Derivatives	General insurance	Superannuation	Carbon credits
Government debentures, stocks or bonds	Margin lending	Foreign Exchange	Life products	Retirement savings account products	Managed investment schemes

ASIC requires all Australian financial services licensees to be competent to carry on the kind of financial services business they operate. This includes ensuring that their employees and authorised representatives are suitably trained, supervised and monitored.

The regime distinguishes between wholesale customers, where very limited protections are provided, and retail customers, where substantially greater protections are afforded to customers.

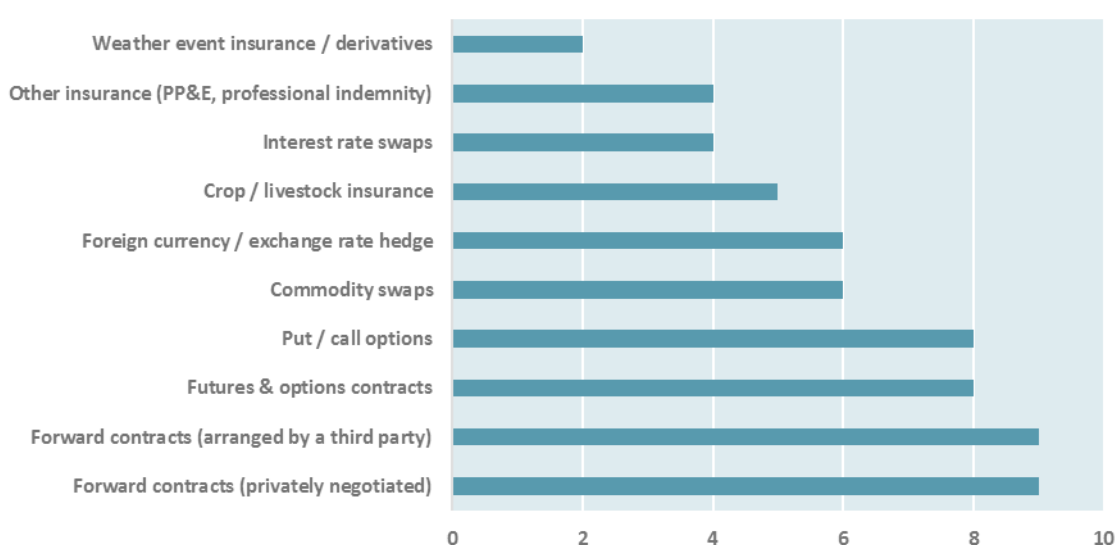
Our desktop research indicates that some ‘financial advisors’ to farms are agronomists and other farm consulting businesses which have subsequently obtained a financial services licence, whilst others are more generalist financial advisory businesses who seek to serve agricultural customers. Members of our farmer reference group as well as several stakeholders consulted during the project noted that it is rare to find an advisor that is proficient in matters of both finance and farm business. As one member of our farmer reference group mentioned “Financial advisors’ knowledge is thin when it comes to agriculture”.

To be effective, advisors need to combine expertise in risk management and the relevant financial products with understanding of the Australian agricultural sector. This highlights the importance of education and awareness to the project as a whole.

From a farmer’s perspective, these advisors often cover a broad variety of financial products.

Figure 51: Products and/or information covered by financial advisors

Question 80: Which products or / information are covered by the advisor when they provide you information?



Source: Pottinger analysis of survey data. For this question n = 15

### 4.3 Advisors’ sources of financial risk management information

Advisors to farm businesses typically hold formal tertiary and/or professional qualifications in their chosen field. The relevant qualifications, and brief commentary about the financial knowledge required in the applicable syllabus, is set out below.

Figure 52: Examples of advisor’s qualifications and knowledge

Type of advisor	Tertiary qualification	Professional qualification/membership	Financial knowledge required
Accountants	Bachelor’s degree (typically in accounting, economics or finance) Masters of Taxation Graduate diploma in advanced accounting	Chartered Accountant Chartered Professional Accountant Chartered Tax Advisor (CTA) A registered agent of The Institute of Certified Bookkeepers Fellow of Taxation Institute of Australia Australian Financial Services License	Professional standards and ethics Tax advice Financial accounting Financial reporting

Type of advisor	Tertiary qualification	Professional qualification/membership	Financial knowledge required
Bank managers	Bachelor's degree (typically in accounting, economics or finance)	No minimum requirement	Commercial lending Government support programmes
Financial planners/advisors	Bachelor's degree	Australian Financial Services License Financial Advisor Standards and Ethics Authority	Professional standards and ethics Financial product knowledge
Insurance brokers	Bachelor's degree	Certificate III in Insurance Broking	Insurance law and regulation Risk assessment and management Types of agricultural insurance
Rural services (agronomist and stock agent)	Farm consultants typically have a bachelor's degree in agribusiness or agricultural science or another related field to work	No minimum requirement for agronomist License for stock agent	No minimum requirement

Source: Pottinger analysis

In order to stay informed, advisors source information on financial risk management products from a variety of sources including:

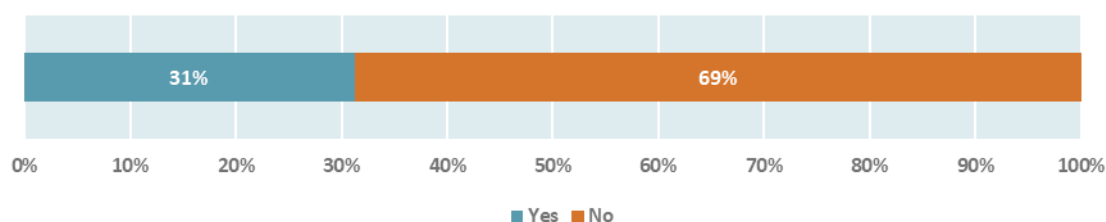
- Continuous professional development requirements, such as required to keep the Chartered Accountant designation;
- Workplace training courses;
- Compliance training, such as that required for ongoing satisfaction of workplace Australian financial service licencing requirements;
- Information published or provided by manufacturers (eg insurer) or distributors (eg brokers and banks) of financial risk management products;
- Information produced by research and development bodies; and
- Professional journals or other relevant industry publications.

Of these options, around two thirds of advisors surveyed expressed a preference to learn through forms of online research or from industry bodies and conferences. Only two respondents stated they stay updated on financial risk management products and practices through training courses. These results tend to indicate that conferences and seminars are filling the role of training courses in advisor education.

Meanwhile, in a separate survey question, advisor respondents were asked to indicate their familiarity with the existence of national competency standards. 18% were aware of them indicating 82% of respondents were training themselves to some different standard.

Figure 53: Advisor's familiarity with national competency standards

Question 104: Are you familiar with the National Competency Standards for price risk management education and training?

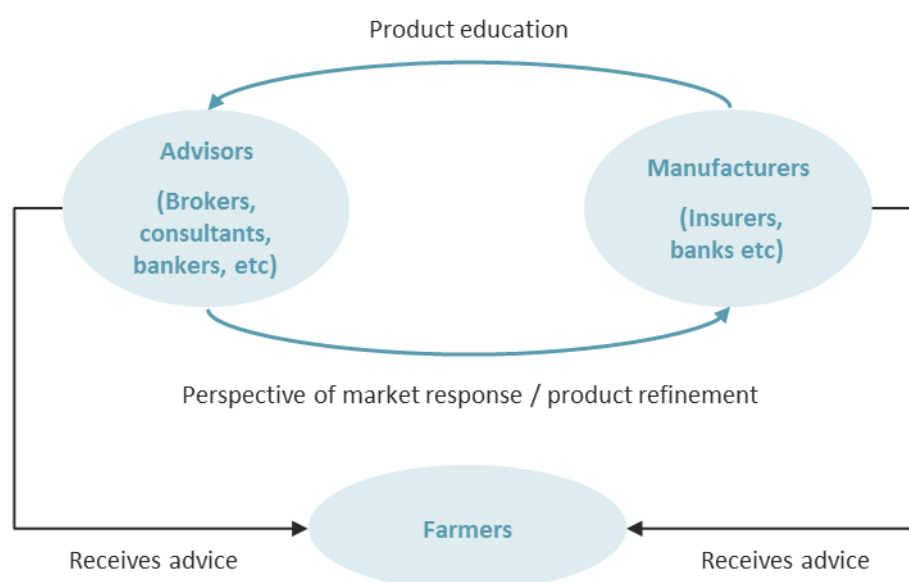


Source: Pottinger analysis of survey data. For this question n = 16

#### 4.4 Information flows, advisor independence and conflicts of interest

The circular flow of information as between farm business-facing advisors and financial risk management product manufacturers is relevant to assessing the level of product literacy of advisors, but also in relation to the nature and quality of that information. A schematic of this information flow is set out below.

Figure 54: Product related flow of information



Relevantly, advisors and manufacturers each have primary commercial drivers. While this may include the provision of independent advice to farmers (in the context of eg farm consultants), the primary commercial motivation of eg insurance manufacturers and brokers is to *produce* and *broker* insurance products, respectively. Thus, the information and advice received by the farmer must be considered with this commercial context front of mind. More simply, there is potential for conflicts of interest to arise in the flow of information. A prominent, agriculture-focussed law firm that we consulted acknowledged this as an issue that needs to be navigated.

On the broader subject of trust in advisors, a study that analysed relations between farmers and advisors around financial management<sup>14</sup> found that "farm financial information and financial management are considered (by farmers) to be sensitive and taboo topics and being good at

<sup>14</sup> <https://www.sciencedirect.com/science/article/pii/S0743016718301918>

financial management is not central to a farmer's identity (relative to eg production management)" which highlights the importance of independent and trusted advice provision.

Certain farm consultants we consulted believe they are capable of providing independent advice despite the fact that they are also commercially motivated to sell products through different arms of their business. One advisor noted that their focus on long-term relationships keeps their advice honest and impartial.

On the other hand, the banks we consulted are much more risk averse, in part potentially due to the recent Royal Commission, and are deeply concerned with actual or perceived conflicts of interest between product manufacturing activities and the provision of advice. These banks employ structural mechanisms including Chinese walls to separate product specialists from relationship managers.

Despite this, on the topic of trust and advisors more generally, a research and development corporation which we consulted reported that farmers have significantly more trust in banks than smaller advisory or broking businesses in relation to training and product advice.

Similarly, an insurance broker which we consulted commented that a trust crisis had in part been fuelled by mis-selling carried out by non-bank product marketers in the industry historically.

Figure 55: Example products requiring a financial services licence

Activity	Requires a license	Does not require a license
Make a financial investment (AFSL)	Advise on raising equity capital for a business	Advise on the purchase of a capital asset increasing production capacity
Manage a financial risk (AFSL)	Advise on the purchase of a futures contract for a commodity	Advise on the sale of produce in the future under terms defined now
Make a non-cash payment (AFSL)	Advise on a direct debit transfer to or from an escrow account	Advise on a payment involving Bitcoin
Provide credit (Credit license)	Advise on taking out a loan to purchase capital equipment	Advise on an instalment plan with a supplier with no interest terms

ASIC regularly issues media statements (almost on a weekly basis) announcing action against unlicensed financial advisors. Sophie Grace, Compliance and Legal, ASIC has stated that "[G]eneric advisory services ... are common, with many providers assuming their services do not fall within the financial licensing regime."

## 4.5 Conclusions

There are a range of parties that provide advice to farmers, including accountants, bank managers, financial planners/advisors, insurance brokers and rural service companies. The minority of these advisors are licensed to provide advice on financial risk management tools.

Care is required to understand the potential conflicts of interest and licensing requirements of different types of advisors and the resulting quality and reliability of the information received by farmers.

Meanwhile, the people providing financial risk management product advice and education to farmers need to be trusted by farmers and understand both financial risk management tools and agriculture. Only this combination ensures that the recommendations are valuable to farmers.



## 5. Assessment of existing farmer financial literacy programmes

This chapter describes the financial literacy programmes available to farmers in Australia and compares this with international benchmarks. We then analyse farmers' awareness and use of financial literacy education opportunities and comment on Government's role and participation in the financial education of farmers.

### 5.1 Existing financial literacy programmes for farmers

Australia is one of the world's leading exporters of education services, ranking fifth in 2019 by the number of foreign students hosted<sup>15</sup>. Historically, the Australian education system has included a wide range of agricultural, agribusiness and food sciences courses. Today these are delivered by some 600 organisations from both the public and private sectors, with some addressing financial literacy for farmers and related matters.

Farmers can build their financial literacy through:

- Tertiary education, including university degrees and TAFE courses;
- Ongoing professional development, ie structured learning delivered by registered training organisations and other similar entities, as well as a variety of TAFE courses; and
- Seminars and other learning opportunities, which are typically provided by industry associations, research and development corporations and advisory firms.

We address each of these three areas briefly below.

#### *Tertiary education*

Most of Australia's major universities offer agricultural science degrees. Several of these are highly ranked in world terms, including University of Melbourne, ANU, University of Sydney, University of Queensland and UNSW.

We compare below the course structure of two of Australia's leading rural universities (University of New England and Charles Sturt University) with two of Australia's leading metropolitan universities (Melbourne and Sydney).

Figure 56: Example university Bachelor of Agricultural Science curricula comparison

University	University of New England	Charles Sturt University	University of Melbourne	University of Sydney
Finance	Elective	Core	Elective	Elective
Business	Core	Core	Elective	Elective

**University of New England** offers seven undergraduate agricultural degree courses and five postgraduate courses. These include double degree courses of Agriculture / Law and Agriculture / Business. The Agricultural Sciences course includes business courses such as marketing, farm management and HR management but does not require finance courses.

**Charles Sturt University's** Agriculture and Wine Sciences faculty offers eleven undergraduate degree courses and nine post graduate courses across agriculture, horticulture and viticulture. These include an Agricultural Business Management degree which teaches commodity trading and pricing, agricultural economics, business risk and investment, property planning and development, agricultural finance and business management, agribusiness planning and business law as core subjects. Its more general Agricultural Science course teaches Agricultural Economics and Agricultural Finance and Business Management as core subjects.

<sup>15</sup> "Global Mobility Trends" – Institute of International Education

**The University of Melbourne** offers a Bachelor of Agriculture with eight majors and ten post graduate agriculture courses. Its agricultural economics major includes farm management economics and other economics courses. This single course examines eight topics including agricultural risk management, cost benefit analyses and financial analysis. Meanwhile its Agricultural science course does not include any core finance or business courses.

**The University of Sydney** offers a Bachelor of Science with eleven agricultural related specialisations. The structure of courses at the university means there was no Agricultural Science course with its own defined core of subjects. We note however that the Agricultural and Resource Economics major includes agricultural finance and risk, agricultural markets, agricultural production economics and concepts in environmental and agricultural economics.

Stakeholder feedback from an independent agricultural college indicated that there has been a reduction in resourcing for agriculture departments in universities across Australia with faculties being reduced to departments and specialised degrees (eg agricultural science) replaced with an agriculture major for a science or arts degree.

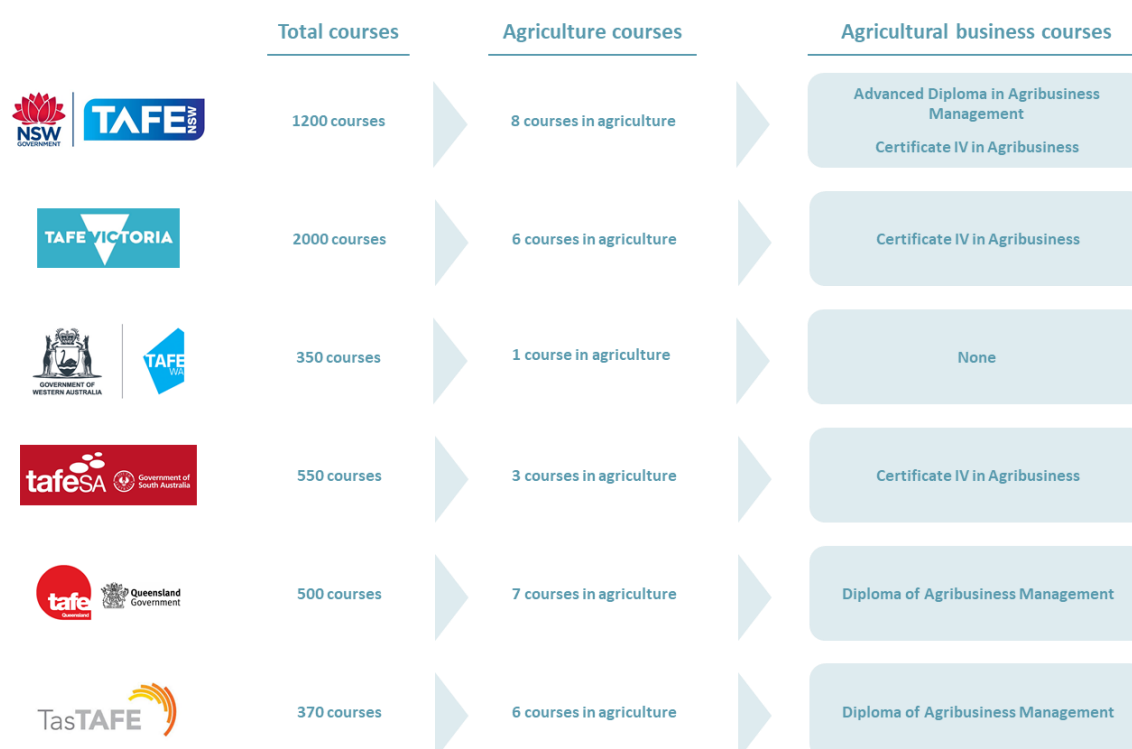
Our desktop research and conversations with a diverse range of industry and education-focused stakeholders have also shown that there is no clear national leader in education or single source of trusted information for farmers wanting objective information on financial literacy or financial risk management products.

Meanwhile, universities are promoting cross-disciplinary study and offering flexibility in selecting individual subjects for degrees. For example, the first reason the University of Sydney gives for “why do an undergraduate course at Sydney?” is “flexible study paths to suit you” offering the “[ability] to gain expertise in more than one field of study”. The University of Melbourne similarly offers “you’re free to shape the degree that’ll ultimately shape your world”. This has had the effect of increasing the range of degrees which may include business or finance risk subjects while reducing the number which include them as core subjects.

Therefore, despite the academic rigour of typical agricultural degrees, the level to which business and financial risk is addressed will vary from almost none to significant depending on the electives a particular student chooses.

The TAFE system meanwhile offers many agriculture-related diploma and/or certificate courses throughout Australia.

Figure 57: Variety of TAFE agriculture courses



We examined the diploma-level agriculture courses offered in the TAFE system to identify if they included finance or business risk-related courses as electives or as part of their core curricula. We have additionally noted the highest agriculture qualification offered by the TAFE.

Figure 58: Example TAFE Agriculture courses

State	NSW	Vic	Qld	WA	SA	Tas
Level	Diploma	Certificate IV	Diploma	Diploma	Certificate IV	Nil
Finance	Elective	Elective	No	Elective	Core	N/A
Business	Elective	Elective	Core	Elective	Elective	N/A

Compared to university courses, TAFE provides less flexibility in choosing electives, unless students elect to pay extra for a one-off course. This is in part driven by the fact that the TAFE system is distributed (eg NSW has 130 sites) and not all sites offer all courses. It also appears partly driven by regulation. This is because training organisations like TAFE must be registered with the Australian Skills Quality Authority in order to offer nationally recognised qualifications or attract Federal Government funding. This means their courses must be aligned to the Federal Government's Australian Qualifications Framework requiring "a pedagogical rationale to justify a decision regarding [its] balance of components" and one training provider's certificate needs to be equivalent to all others' for that course. However, regardless of the reasons, TAFE agriculture courses had a relatively short list of subjects to choose from compared with universities which promote the choice of any course (with few, if any pre-requisite) being studied in any degree.

Further, while TAFE courses offer finance electives, it is unclear if the range of subjects is sufficiently broad to fully cover the business risks and financial products designed to mitigate them.

Overall, our investigation of course descriptions indicates that agriculture courses offered by TAFE have more specialised technical application than those offered by universities, though lack the depth of science, economic or financial theory found in university courses. This result was

primarily driven by the longer length of university courses (allowing more advanced subjects to be taught) compared with TAFE.

To gain international perspective, we benchmarked the Australian universities against US alternatives. We selected Texas A&M (as it is the largest public university in the United States and specialised in agriculture), the University of California Davis, Cornell and Wisconsin-Madison, being the universities with the top three agriculture faculties as ranked by Quacquarelli Symonds, the leading US universities ranking system .

Figure 59: Example US university Bachelor of Agricultural Science curricula comparison

University	Texas A&M	University of California Davis	Cornell	Wisconsin-Madison
Finance	Core	No	Elective	Core
Business	Core	No	Elective	Core

We include below a brief overview of the agricultural course offerings of each of these institutions.

**Texas A&M**, the largest public university in the USA, was founded as the Agricultural and Mechanical College of Texas in 1871, one of the original “Land Grant” universities in the US. Today it has an agriculture and life sciences faculty offering 64 post graduate degrees and 70 undergraduate degrees from the following departments:

- Agricultural Economics
- Agricultural Leadership, Education and Communications
- Animal Science
- Biochemistry and Biophysics
- Biological and Agricultural Engineering
- Ecosystem Science and Management
- Entomology
- Horticultural Sciences
- Nutrition and Food Science
- Plant Pathology and Microbiology
- Poultry Science
- Recreation Park and Tourism Sciences
- Soil and Crop Sciences
- Wildlife and Fisheries Sciences

The breadth of studies at Texas A&M means that the institution offers twelve specialised agricultural degrees that focus on the business or economic considerations of agriculture. These degrees have a range of business, economics and finance subjects in their core requirements. Other Agriculture majors have no finance or business subjects in their core – but students may take them as electives.

**University of California Davis**, via its college of agricultural and environmental sciences, offers 20 agriculture related majors. None of these majors offer business or finance courses. However, it appears that the structure of undergraduate degrees at UC Davis allows for the addition of a major or minor (which may include finance and/or business courses) from a separate faculty.

**Cornell**, which houses a college of agriculture and life sciences, offers 48 undergraduate majors and minors. It additionally jointly houses the Dyson School of Applied Economics and Management which offers a range of business, accounting, economics and finance courses. As

a result, Cornell offers economics and management majors which include extensive finance courses with agricultural minors (or majors). It additionally offers a business minor for life sciences majors which provides a basic level of finance and accounting knowledge.

**University of Wisconsin-Madison**, with its college of agricultural and life sciences, has 17 departments and offers 23 undergraduate majors, including a department specialised in agricultural economics. As a result, its agricultural business management courses and other agricultural science majors can be combined with finance minors.

Based on our research, US universities appear to have deeper agricultural research capabilities and more diversity in the choice of agricultural science majors. As in Australia, however, the extent to which students are exposed to finance and business skills is dependent on their choice of electives (either individual subjects or majors and minors).

Meanwhile, from reading course descriptions, we assess that there is no significant difference in the quality of finance courses taught as the introductory accounting, economics, finance and business subjects cover substantively similar material. That is, notwithstanding US universities (eg Texas A&M, Cornell and University of Wisconsin-Madison) offer specialist “agricultural economics” style degrees unavailable in Australia, the finance courses in those degrees are widely available to agricultural science students in Australia.

Overall, Australian agriculture university students do not appear to be at a disadvantage to their US counterparts when it comes to obtaining education in finance and risk management.

### ***Ongoing professional development***

In addition to obtaining tertiary qualifications, farmers can learn through forms of ongoing professional development entailing shorter courses that do not result in a nationally recognised accreditation. This type of training is offered by universities, TAFE and other registered training organisations but because it does not result in national accreditation, a wider variety of unregistered trainers are also able to operate.

Universities offer executive education programmes and the capacity to study single subjects. Executive education programmes typically provide introductory finance and business skills training as a prelude to further qualification (eg an MBA). These non-award courses are charged at full fee rates with no eligibility for study assist (FEE-HELP). This makes a single unit university course more expensive than a TAFE certificate.

TAFE short courses on the other hand tend to cover narrow technical subject matter – such as training in the use of accounting software companies eg MYOB and do not offer suitable short training programs in financial risk.

In addition to TAFE and other registered training organisations, there are unregistered businesses that provide short courses over one or more full days on aspects of farm operations and management. For example, the KLR Marketing school provides a 2½day course to train farmers to identify when animals become over or under priced by analysing the interdependencies between grass and livestock value. While this course does not investigate financial risk management products, it is designed to optimise one of the key financial risks facing a farm. Other examples include RCS Australia which offers ‘Grazing for Profit’, a week-long course which teaches students how to optimise their decision-making given their financial consequences.

Where organisations like KLR and RCS differ from university and TAFE courses is that they have appeared to distil one (or a few) applications of finance into a farming specific plan for their students to take away. In addition, they both offer advisory consulting services to farmers where they apply the skills they teach to their clients’ farms. Their courses do not have the rigour,

breadth or theoretical base of finance that university courses have, but by distilling the financial lessons and applying them to an immediately relevant farming context they fill a gap left by universities.

### ***Seminars and other learning opportunities***

Desktop research indicated that there is a broad array of professional advisors that offer financial literacy training to farmers. Examples include Farmanco and Riverina Agriconsultants. Meanwhile, consultants such as Megan Rowlands and Rural Business Support offer multi-day courses in farm business management.

Typically, the syllabus for these courses is not public information. The short duration of the courses in question means that they are unlikely to cover relevant issues in as much depth as university courses. Thus, they likely serve to educate farmers as to the nature of relevant financial risks and the types of solutions that are available, thus helping the farmer in question to become more aware of a particular knowledge gap rather than to fill that gap. This underlines their importance in raising awareness of risks.

Finally, we note that agricultural associations and research and development corporations fill a similar role in promoting financial literacy by publishing research and articles, hosting seminars and advertising the importance of financial literacy.

## **5.2 Farmers' awareness and usage of financial literacy programmes**

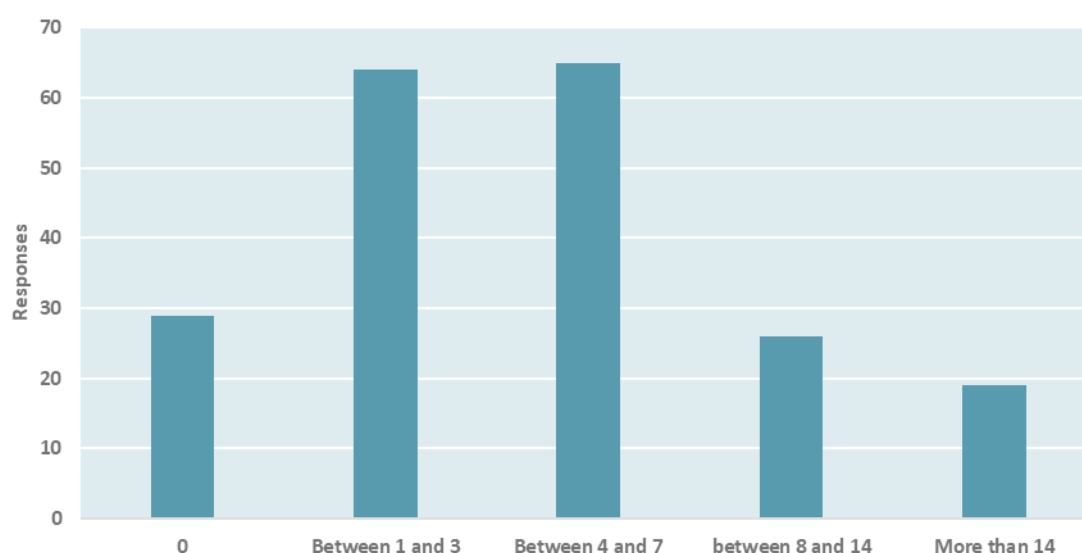
We understand that farmers vary significantly when it comes to awareness and usage of financial literacy programmes. When analysing farmers' education, it is important to bear in mind that most farmers are time-poor and do not always have the appetite to learn about financial risk management tools. Many of the farmers consulted consider financial risk management to be adjacent, and not central, to their core farming business activities.

Survey results suggest that farmers will spend anything from one to seven days on professional development away from the farm on courses such as development days.

Interestingly, farm revenue seems to be correlated with the amount of days that farmers devote to learning, all else equal, farmers with larger revenue spent on average more days per year on professional development

**Figure 60:** Days of the year spent on professional development away from the business

*Question 55: On average, how many days per year do you spend on professional development on-site (eg on your farm)?*

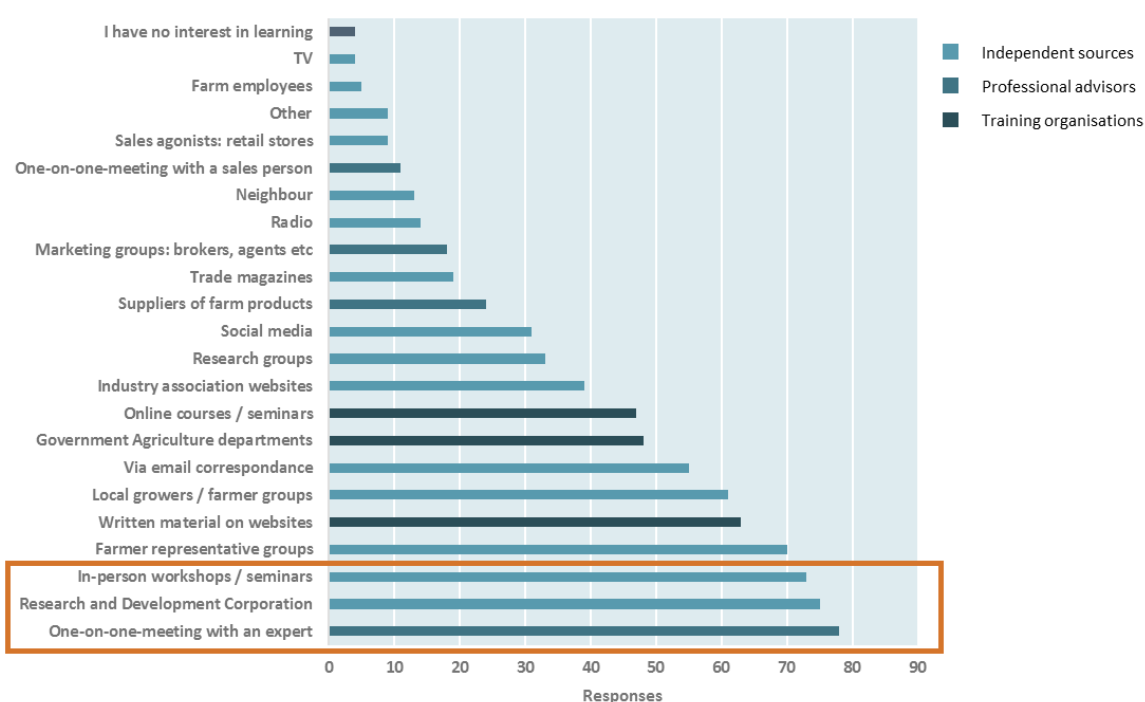


Source: Pottinger analysis of survey data. For this question  $n = 203$

Given farmers' time constraints, it is important to understand the channels through which farmers prefer to learn about financial risk management products. During our survey and stakeholder consultations we note that farmers prefer a more intimate approach. Farmers tended to choose either one-on-one meetings or in-person workshops, as illustrated below.

Figure 61: Survey responses to how farmers like to learn about financial risk management tools

Question 52: How do you like to learn about the financial risk management products and measures available to you? Select all that apply



Source: Pottinger analysis of survey data. For this question  $n = 203$

Farmers who responded to our survey also had a preference for learning about financial risk management products from reputable independent sources or experts. This included research and development corporations, farmer representative groups and experts in the field.

Our literature review showed that few studies have been conducted on the educational approach that farmers prefer. Most such studies typically focus on agricultural practices as opposed to mitigating risk via financial risk management tools.

As one example, Rural Industries Research and Development Corporation (RIRDC, now trading as AgriFutures) completed a study in May 2003<sup>16</sup> that identified a variety of education methods. It concluded, however, that there was little evidence of any one approach being preferred by farmers or more likely to facilitate change.

Meanwhile, a December 2017 report<sup>17</sup> by Nuffield Australia Farming scholars similarly found that farmers learnt via a range of styles and delivery methods including face-to-face, written and online. It observed that individuality in farmers was too broad to conclude that farmers typically liked to learn in one particular way. The report also determined that benchmarking and peer learning were both undervalued as a means of education.

There are certain government initiatives and measures that farmers can take advantage of when it comes to being more aware and taking part in financial literacy programmes. We discuss government's role in more detail in the following section.

### 5.3 Overview of government measures and initiatives

Farms and the broader agricultural sector are regulated by both State and Federal government policies. As a result, government measures to assist farmers vary by State and State and Federal schemes can overlap. These schemes may include the sale of subsidised financial products (eg loans), means tested unencumbered entitlements (eg rent assistance) or entitlements to pay for farm advice and training. Due to issues of Australia's federated state structure there is no single government site covering all opportunities for farmers so advertising government schemes falls to industry associations and other private sector organisations.

Figure 62: Government's participation in education and awareness

Government	Funding	Materials	Courses	Government	Funding	Materials	Courses
Australia	✓	✓		New Zealand	✓	✓	✓
NSW	✓	✓	✓	Canada	✓	✓	✓
Victoria			✓	United States	✓	✓	✓
Queensland	None			United Kingdom		✓	
Western Australia			✓				
South Australia	✓	✓					
Tasmania	None						
NFF		✓	Referrals				

Several of the government measures and initiatives expressly target financial and business literacy. For instance, according to a government department we consulted, in 2017 the Department of Primary Industries and Regional Development in WA ran a successful business

<sup>16</sup> <https://www.agrifutures.com.au/wp-content/uploads/publications/03-032.pdf>

<sup>17</sup> <http://nuffieldinternational.org/live/Report/AU/2014/chris-reichstein>



plan-development programme for farmers in its State. About 40% of the commercial farms in the State attended the course.

We have conducted desktop research to identify government measures and initiatives designed to assist farmers which we summarise below:

Figure 63: Main government programmes relevant to farms and the agricultural sector

Organisation	Programme	Description
<b>National Farmers' Federation</b>	Farm Business Skills Professional Development Program	Provides farm businesses with a subsidy of up to A\$9,000 to help with the costs of vocational and skills training
<b>Australian Department of Agriculture and Water Resources</b>	Managing Farm Risk Program	Provides rebates for advice and assessments to help farmers prepare and apply for a new insurance policy that assists with the management of drought and other production and market risks. These one-off rebates will be for half of the costs incurred up to a maximum of A\$2,500 (closed)
<b>Australian Department of Agriculture and Water Resources</b>	Rural Financial Counselling Service	Provides A\$15m to fund additional rural financial counsellors and support workers to assist primary producers amid the bushfire and drought crisis. Rural financial counsellors help farmers understand their financial position and viability
<b>Australian Government</b>	Farm Household Allowance Program	Provides assistance to farming families experiencing financial hardship. The support includes: <ul style="list-style-type: none"> <li>Fortnightly payment for up to four years;</li> <li>Rent assistance, telephone and pharmaceutical allowances and a Health Care Card;</li> <li>Individual case support with a Farm Household Case Officer (FHCO);</li> <li>A financial assessment of the farm worth up to A\$1,500; and</li> <li>A A\$4,000 activity supplement that gives farmers an opportunity to access training and pay for professional advice to better manage their business into the future.</li> </ul> Additionally, there are one-off relief payments if the 4-year period ends before 1 July 2020. This payment is A\$7,500 for a single farmer of A\$6,500 for each member of a couple
<b>Australian Government</b>	Regional Investment Corporation	Provides A\$2bn for farm business loans: <ul style="list-style-type: none"> <li>Drought loan – Prepare, manage and recover through drought. Maximum amount available A\$2m;</li> <li>AgBiz drought loan – Maximum amount available A\$500,000;</li> <li>Farm investment loan – For farmers who want to invest. Maximum amount available A\$2m; and</li> <li>AgRebuild loan – Disaster recovery loan to help flood-affected Queensland farmers. Maximum amount available A\$5m.</li> </ul>
<b>NSW Government</b>	On-farm Emergency Water Infrastructure rebate	Provides assistance to drought affected livestock farmers to invest in on-farm water infrastructure. The total funding is A\$50m nationally over three years
<b>Australian Taxation Office</b>	Farm Management Deposits	Provides primary producers assistance to deal with fluctuations in cash flows by helping them manage financial risk and meet business costs in low-income years by building cash reserves
<b>NSW Department of Primary Industries</b>	Farm Innovation Fund	Provides a long-term, low interest rate loan for NSW farmers for permanent on-farm infrastructure

Organisation	Programme	Description
<b>Queensland Government</b>	Drought Relief Assistance Scheme	Provides primary producers in the grazing industries manage their livestock during drought. Applications can be up to A\$20,000 per property per financial year
<b>NSW Government</b>	Animal Welfare Transport Subsidy	Provides primary producers a subsidy on the transport of stock at risk. This subsidy covers up to 50% of the total freight cost to a maximum of A\$20,000 per farm business and is available where animals are at significant risk. The subsidy is limited to A\$500,000 in each financial year
<b>NSW Department of Primary Industries</b>	Drought Assistance Fund NSW	Provides a A\$50,000 interest-free loan to transport stock, fodder and water, genetic banking of breeding herds and installing on-farm fodder and water infrastructure. The loan is seven years, with a two-year grace period
<b>Australian Taxation Office</b>	Accelerated depreciation of fencing, fodder and water facilities	Provides tax deductions for the full cost of fencing, fodder and water facility expenses

One of the most significant government measures reducing the cost of agricultural education is the subsidisation of university and TAFE fees.

The Federal Government has announced changes to the level of support provided for a variety of university degrees. Subjects in areas such as agriculture, nursing and mathematics will decrease in price by 62% to c\$3,700 per year. Meanwhile, subjects in law and commerce will increase by 28% to c\$14,500 per year. This pricing applies on a per unit of study basis, pro-rated by the equivalent full-time student load, regardless of the actual degree a student is enrolled in. Thus if a student enrolls in a Band 3 subject (eg a law, finance or business subject) then, irrespective of their degree, they will be charged around four times the price for that subject then they would have if they took a Band 1 subject (eg a mathematics, nursing or agriculture subject) instead. This may create a disincentive to study business and finance subjects within an agricultural science degree. Each student's tertiary education subsidy is determined by computing their pro-rated equivalent full-time student load on a subject by subject basis irrespective of their degree of choice.

At a State level, the NSW Government Smart and Skilled programme subsidises agriculture courses. This has reduced the cost of a Certificate IV in Agriculture from NSW TAFE from A\$10,550 to A\$2,770. The net amount is further reduced to A\$1,385 by the Federal Government's 50% rebate on training costs for farmers from the Farm Household Allowance Program.

## 5.4 Conclusions

There is no evidence of a supply issue, in terms of the number of courses on offer in Australia. A wide range of educational and vocational courses are available to farmers through university degrees, or specialist courses available through TAFE.

However, we note that subjects related to financial risk management and business management more broadly are not always compulsory, in particular, when compared to other universities around the world which include subjects such as accounting, finance and/or management as a core part of the curriculum.

Meanwhile, there is no clear national leader in education or single source of trusted information for farmers wanting objective information on financial literacy or financial risk management tools. Many courses are offered on an ad-hoc basis by a series of different government and industry providers, evidencing the high fragmentation of the sector.

## 6. Barriers impeding farmer awareness of financial products

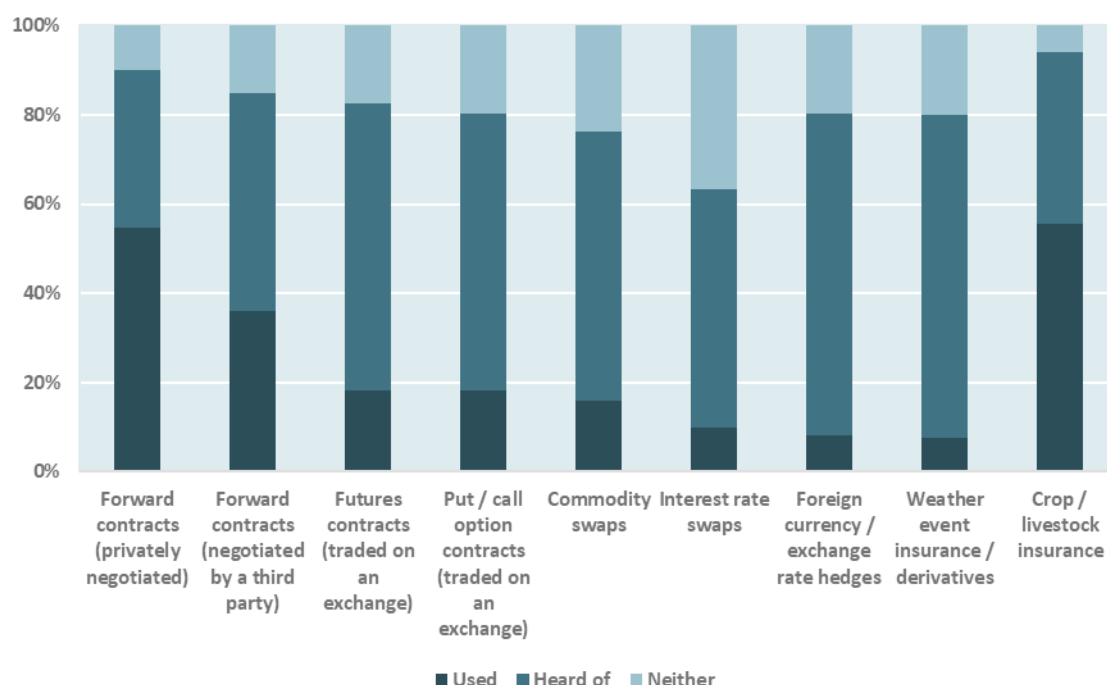
This chapter summarises our findings related to farmers' awareness gaps in relation to financial risk management products. We then present our assessment of the barriers impeding farmers' awareness and understanding of financial risk management products.

### 6.1 Overview of farmers' awareness of financial risk management products

At a national level, among survey respondents, farmers' self-assessment of awareness of financial risk management products is generally high. In particular, forward contracts and crop / livestock insurance are well known to farmers. Awareness of instruments to forward sell goods is unsurprising given that price achieved for their production is top of mind for farmers across regions, commodities and farm sizes (second only to the volume of production according to our survey findings).

Figure 64: Farmer awareness and use of financial risk management products in the last five years

Question 75: Thinking about the last five years, indicate if you have used or heard of the following



Source: Pottinger analysis of survey data. For this question n = 141

There are three main conclusions that can be drawn from our in-depth analysis of survey data:

- **Larger farms (in terms of surface area) have higher levels of awareness** of both financial risk management products and government measures;
- **Farms with larger revenues also have above average awareness** of both financial risk management products and government measures;
- **WA farmers have a significantly higher level of awareness** than those in any other State (for the group we surveyed).

Before exploring the above findings in more detail, three practical issues require consideration:

- Awareness does not necessarily imply detailed understanding, ie while farmers may be aware of the *existence* of certain financial risk management products, there is no evidence to suggest that awareness implies that farmers understand the benefits of products or how they work in absolute terms or compared with other risk mitigation alternatives;

- There is a perception gap between farmers' self-awareness ratings and the industry's opinion of farmers' awareness, ie certain product manufacturers and advisors that we consulted believe that awareness is generally low while farmers rate their awareness as high. This may be explained by the point above, namely that 'awareness' may mean different things to farmers and those in industry we consulted. While farmers are aware of the existence of products, certain industry stakeholders we consulted believe farmers', on average, do not fully understand the benefits of financial risk management products or how they work;
- Farmers can only be expected to be aware of financial risk management products that are practical and relevant to their operations, ie smaller farms might be unaware of products that bear no relevance to their operations. For example, farmers that have modest production volumes simply cannot use some listed derivatives where minimum contract sizes exceed that value of a farmer's production.

What follows is a more detailed analysis of the relationships observed in the survey data between certain factors and self-assessed awareness levels.

## 6.2 Detailed analysis of relevant elements of the national survey

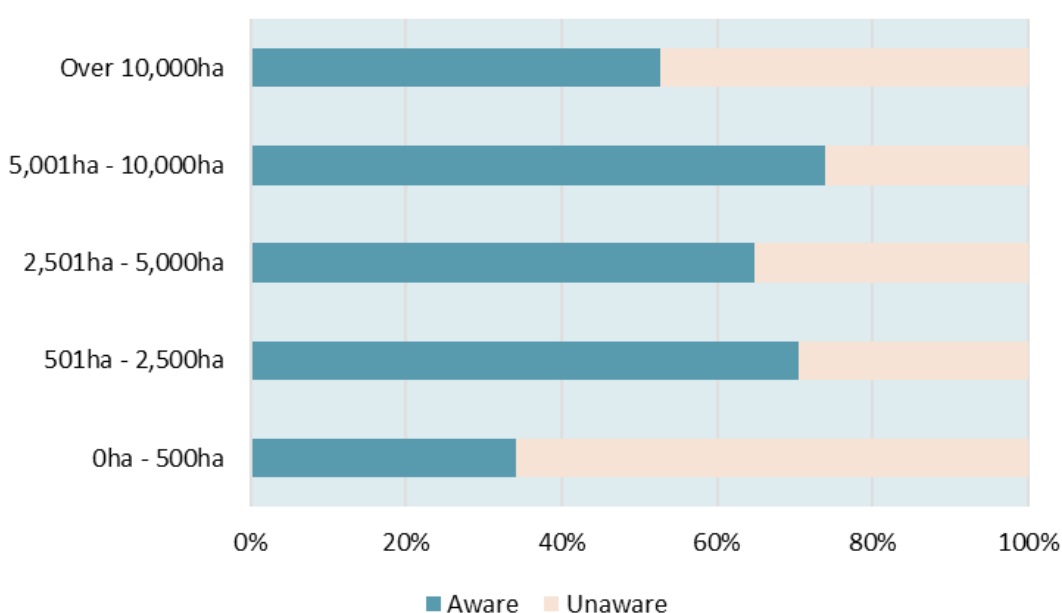
The national survey included several questions which asked farmers and other industry stakeholders to indicate their preference, use and understanding of financial risk management tools. We received a total of 311 responses, the majority of which were from farmers. In each case, we have included the wording of the question that was asked and included in the source the number of responses to the question referenced (ie n = 140 means 140 responses were received to the relevant question).

### **Farm size effect**

As shown below, farms that are smaller than 500 hectares have materially lower levels of awareness.

Figure 65: Farmers' awareness of forward contracts by farm size

Question 75: Thinking about the last five years, indicate if you have used or heard of the following



Source: Pottinger analysis of survey data. N = 140

One potential explanation is that farms with larger operations tend to require a larger labour force to operate and often can afford to have people that are dedicated to the business aspects of running a farm, ie larger farms tend to become professionalised.

As mentioned before, there is also the practical aspect of minimum unit sizes related to financial risk management products, as illustrated below. For certain farms, it is neither practical nor economical to use financial risk management products.

As an example, the underlying for wheat futures contracts is 20 metric tonnes<sup>18</sup>. CSIRO estimates the average yield per hectare for wheat in Australia at 1.74 tonne/hectare<sup>19</sup>. Therefore, for growers to enter into this contract they must have at least 11.5 hectares of wheat. We also note that this would mean locking in a price for 100% of production which might not be attractive or be considered too risky.

The observed differences in the above data coincide with farmers' awareness self-rating, at least as it relates to insurance products. When we asked farmers to rate their knowledge level of agricultural insurance products, farms smaller than 2,500 hectares gave themselves the lowest relative ratings compared with larger farms.

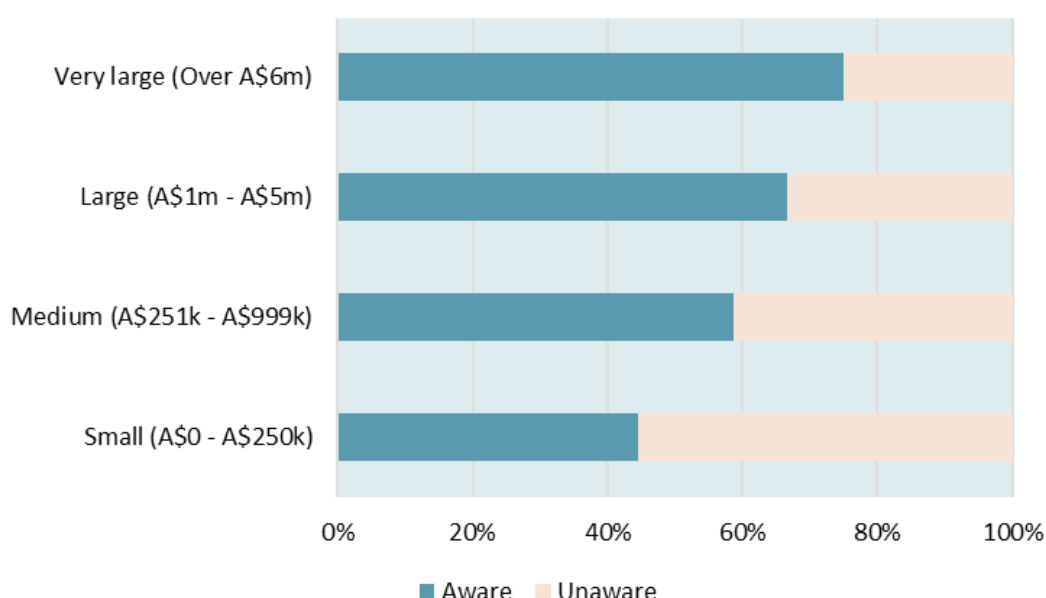
Finally, we found that survey respondents from smaller farms (particularly those under 500 hectares) spend significantly fewer days on professional development per year compared with respondents from larger farms.

### **Revenue scale effect**

As shown below, among survey respondents, there is a direct link between farm revenue and awareness of financial risk management products (exemplified by forwards in this case, but the relationship holds across all products tested).

Figure 66: Farmers' awareness of forward contracts categorised by revenue

Question 75: Thinking about the last five years, indicate if you have used or heard of the following



<sup>18</sup> <https://www.asx.com.au/documents/products/00598-asx-grains-contract-specs-6pp-fa.pdf>

<sup>19</sup> <https://www.csiro.au/en/News/News-releases/2017/Australias-wheat-yields-stalled#:~:text=%22We%20estimate%20that%20the%20recent,tonnes%20per%20hectare%20by%202041.>

Source: Pottinger analysis of survey data. N = 140

This effect occurs in part because larger scale farms can often afford to employ additional people to focus on the business aspects of the farm. This can either be done through direct hires or through the services of advisors such as farm consultants.

Furthermore, as discussed in the previous chapter, farmers with larger revenues spend on average more days per year on professional development.

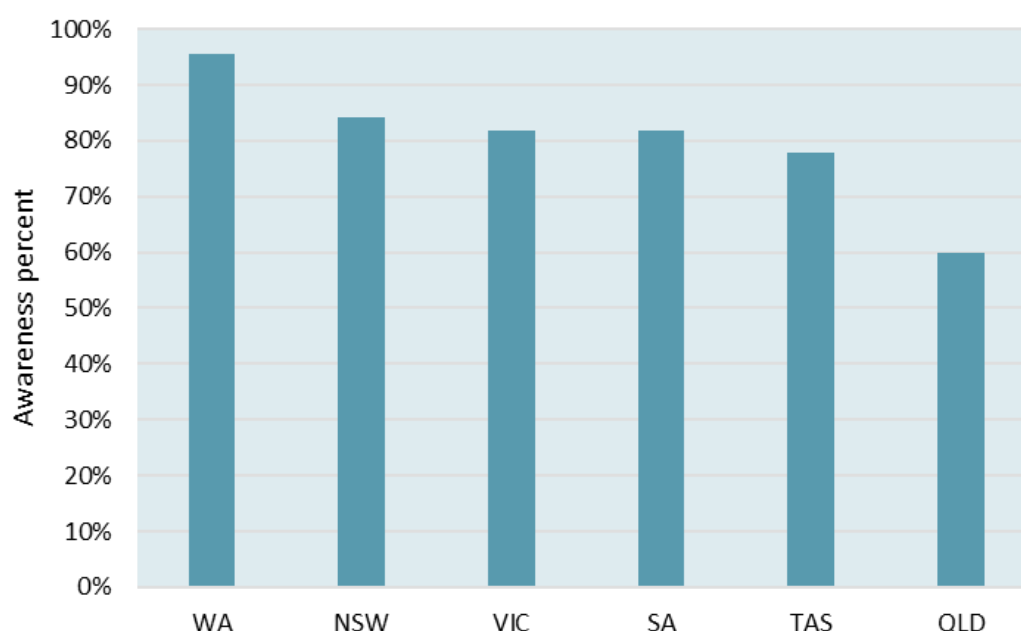
When we analysed farmers self-rating of knowledge of agricultural insurance products, we found that the relationship between revenue and awareness holds, ie the ratings from farmers with the lowest revenues ranked last against other, larger revenue farms.

### **Awareness differences by State**

As shown below, among survey respondents, farmers in WA have a materially higher level of financial risk management product awareness when compared with other states.

Figure 67: Farmers' awareness of products tested by State

Question 75: Thinking about the last five years, indicate if you have used or heard of the following



Source: Pottinger analysis of survey data. N = 140

WA farmers' higher level of awareness cannot be explained by the composition of the sample data. We looked for biases in farm sizes and revenues and could not find material differences.

The above data is consistent with the much higher use of farm consultants in WA as discussed in previous chapters. Farm consultants are a valuable source of financial risk management product information for farmers. It can be reasonably expected that, all things being equal, farmers that use consultants are generally more aware of financial risk management products.

Meanwhile, we do not have any evidence to explain the materially lower awareness level of farmers surveyed in Queensland, ie the differences in awareness cannot be explained by material differences in the sample of farmers polled by scale or commodity.

As discussed previously, financial risk management product awareness among surveyed farmers is generally high (on a self-assessment basis). Out of the products we surveyed for, interest rate swaps are the lowest ranked in terms of awareness.

Few farms have large enough borrowings to merit the use of interest rate swaps, so it is not surprising that awareness and use is much lower. This is not necessarily a problem in itself – much more important is whether farms can access debt on reasonable terms in the first place (whether fixed or floating rate), and secondly whether or not banks offer fixed rate loans to farms obviating the need for swaps. The latter are only relevant to much larger pools of borrowings in any event.

According to several stakeholders consulted, one of the main barriers to awareness and use of financial risk management products is farmers' level of financial literacy. Stakeholders expressed that the base level of financial literacy tends to be very inconsistent across the industry. The top performing farmers generally have a good grasp of financial management, while most farmers across the country have a low to modest base level of financial literacy.

These views were shared by a number of stakeholders across the value chain, from Government Departments and R&D corporations to farm consultants, processors and service providers. The following sub-section explores in more detail some of the possible explanations for farmers' awareness gaps.

### 6.3 Barriers impeding farmer awareness, knowledge and understanding of products

There are financial risk management products in respect of which knowledge by farmers is naturally higher across the entire industry, as they represent larger areas of financial risk. By way of example, such is the case of forward contracts.

Our survey findings indicate that general awareness of financial risk management products among farmers is not an industry-wide issue, at least from the perspective of farmers. Differences in awareness can be observed between states and among farms of different scales. These pockets where awareness is lower provides some useful learning in thinking about barriers.

Meanwhile, there is the threshold matter that not all financial risk management products are relevant or appropriate for the individual risks that farmers are seeking to manage. Thus, our analysis to identify barriers to farmers' awareness of financial risk management products is only concerned with financial risk management products which are relevant. We briefly describe these below.

Figure 68: Barriers to awareness of financial risk management products

Barrier	Description	Stakeholder views
<b>Awareness and/or accessibility of data</b>		
<b>Data is limited</b>	There is need for more and better data for the agricultural sector as a whole and in particular for the likes of weather data. The lack of data has the potential to impact both development of new products and the product's usefulness for farmers. For example, if farmers cannot hedge against weather events that are relevant to their particular location, they will not consider the products	According to an R&D corporation we consulted, there is a need for foundational data sets that enable the development of new products and education. The UK market has developed various tools based on better data transparency and quality
<b>Lack of granularity</b>	Some agricultural sectors do not have the adequate level of detail that is required to	

	make informed business decisions, eg some commodities are grouped by eg ABARES into broad categories that provide limited insight to the segment's participants	
<b>Lack of comparability</b>	Data is not always homogeneous across regions, which makes it difficult to make any significant comparisons. For example, cattle and dairy prices vary materially even within the same State	
<b>Farmers' (and others) ability to interpret data</b>	The volume and complexity of data often requires a level of statistical analysis to derive more meaningful information	
<b>Farmers' interests and behaviour</b>		
<b>Cultural differences across states</b>	Farmers in Western Australia have traditionally relied more on farm consultants advice when compared with eg farmers in New South Wales. Farmers that place more value on the recommendations and advice of farm consultants tend to have higher levels of awareness	According to a farm consultant we consulted, historically, farmers in WA have placed much more importance on the use of farm consultants than any other farmers around the country
<b>Farmers' priorities</b>	Many farmers do not consider financial risk management a priority. Production and their core activity of farming is the focus	<p>An agribusiness service provider we consulted mentioned, by way of example, that farmers are more interested in a new piece of technology (including machinery) than financial risk management. "There's little passion for financial management... Growers' eyes glaze over when you speak about managing risk. When you discuss increasing yield, they are very interested"</p> <p>Speaking about farmers' relative priorities, a farm consultant we consulted commented that "managing financial aspects of farms is something to do in the office when it rains, not a central issue"</p> <p>A State industry association we consulted mentioned that it is hard to get growers interested in discussing farm business management. Education needs to be delivered using the right language. "It's about how to craft the message"</p> <p>A farm advisor we consulted believes "growers perceive financial literacy as a distraction to the business"</p> <p>A sugar co-op we consulted expressed that "Our growers don't want to know anything about it... It's not that we don't tell them - we do a lot of work to tell them what is going on, what markets are, what influences are, but they are still quite satisfied for us to do all of that financial risk management"</p>



<b>Time limitations</b>	Farmers are time constrained, particularly smaller farms where few employees / owners do most of the work	<p>A bank we consulted believes more people are required in a farm to split responsibilities. "We expect farmers to be 'master of everything' eg production, marketing, finance, etc"</p> <p>It is unrealistic for busy farmers to commit much time to financial management, in particular farmers managing smaller enterprises that have less capital (or less access to capital) to employ people</p>
<b>Diversity of need</b>	Farmers in different regions and operating across different commodities have fundamentally different needs. Some farmers might not be aware of products because existing financial risk management products are not fit for purpose	
<b>Factors to do with farmers' advisors</b>		
<b>Conflicts of interest</b>	Some of the best suited candidates to provide education are conflicted, eg banks might have the right talent but the information / advice they provide must be tailored or is constrained having regard for regulation	A service and insurance provider described the current regulatory environment as "swimming against the tide" in reference to its ability to provide advice "you can't say anything that might be irresponsible under the Responsible lending practices"
<b>Apparent shortfall in talent</b>	For professionals that understand both, financial risk management and agriculture. Eg agronomists are physically close to farmers and understand their businesses but are not qualified to provide financial risk management advice. Similarly, accountants are close to farmers but are not specialists in either agriculture or financial risk management. According to research conducted by the GRDC "..... only about 50 publicly funded extension specialists serving Australia's grains industry now, the USDA extension service still has more than 2900 country extension officers and an even greater number of front-line personnel"	<p>According to a bank we consulted, very few people accredited to provide advice and even less people understand financial risk management and agriculture</p> <p>According to a farm consultant we consulted, "first you need to educate the educator" speaking about the shortfall of qualified and certified professionals delivering advice to ag businesses</p> <p>An agribusiness we consulted mentioned that at times Government employs the wrong people to deliver education. "Lacking credibility and not part of the community". "It is important to employ local people to get buy in on any project"</p>
<b>Industry-wide and systemic factors</b>		
<b>No central provider of education</b>	Financial risk management education for farmers is highly fragmented and there is no universal, coordinated message or syllabus	<p>According to a bank and a farm consultant we consulted, there are no clear leaders in education, and education programmes tend to be ad-hoc rather than ongoing courses related to risk management. "No industry-coordinated effort to provide education"</p> <p>These comments are aligned with comments from an insurance broker we consulted. This stakeholder refers to the issue as "the fog of the insurance industry" ie many</p>

		<p>participants deliver inconsistent product information and advice. Too many people are trying to sell similar products in different ways. Government schemes elsewhere control messaging, products, etc. "There is need for a coordinated message"</p> <p>A farm advisor we consulted expressed that the skills (to train farmers) are out there, but often there is no demand for them. This means that there are no consistent courses, "they run them and they then disappear"</p> <p>A university we consulted supports the idea of a central information portal that offers financial risk management education in a practical and simple form</p>
Scale	<p>Sub-scale farming operations often do not have products that fit their needs. For example, the minimum unit sizes for derivative products are too big compared with the volume of their production. Similarly, certain farmers can afford third party advice related to financial risk management products while other, smaller operations cannot</p>	<p>According to a bank we consulted, economic farmers need to have gross income of &gt;A\$250,000 to be sustainable and there are only about 40,000 of those across Australia</p> <p>Another farm advisor we consulted believes that in order to be viable, a farm should have at least A\$10m in assets under management</p>
Product history	<p>Some products have a longer history in the market. For example, crop insurance has been available longer than weather event insurance</p>	
Availability across commodities	<p>Some products are available across more commodities than others. For example, futures contracts are not available for many commodities (see Figure 32: Financial risk management products available in Australia)</p>	<p>An agribusiness we consulted mentioned one issue is that products are rarely fit for purpose, the correlation between payoffs and commodity prices can be poor, which makes it complicated to explain and get buy-in</p>
Product complexity	<p>Financial risk management products can be too complex for farmers to easily use or understand. One example offered was weather index derivatives</p>	<p>According to a government department we consulted. More transparency is needed to deal with product complexity and to improve awareness and uptake</p> <p>According to an agribusiness we consulted the language used to refer to financial risk management products is complicated, this is often a barrier to uptake, the industry's tendency to overcomplicate language results in lower understanding and uptake</p> <p>According to a bank we consulted, one issue with product marketing and offer is that multiple suppliers tweak the product a little bit and refer to products by different names which confuses farmers</p>

**Financial literacy**

There appears to be a low base level of financial literacy among farmers. According to stakeholders consulted, financial literacy is one of the barriers to understanding and use of financial risk management products

A State industry association we consulted with sees its central role as minimising the complexity of products to foster use and understanding of products

A dairy co-op we consulted has set the aim of having more than half of its members have a budget. This co-op's educational effort is focused on helping its members understand pricing which can be very different and complicated across regions

A processor we consulted expressed that many of its customers do not have a thorough understanding of their production costs

An agricultural college we consulted with mentioned that in their experience, the top 20% of farmers have a sound financial literacy level, while the rest of the industry has a relatively low base level

A large agricultural corporation mentioned that "there's a massive education issue in agriculture. A lot of people have a very poor financial acumen for the scale of operations they run"

An agribusiness advisor consulted expressed "(there is a) disconnect between financial literacy and financial management. Growers can take really good farming decisions but are running blind re liquidity in their business, capital structure, debt, etc"

**6.4 Conclusions**

Overall, farmers' self-assessment of awareness of financial risk management products is generally high and does not appear to be an industry-wide issue. Despite this, many industry stakeholders we consulted do not share this view. Meanwhile, there are some differences observed across states and farm scales which have provided useful learnings in developing our recommendations.

Unsurprisingly, all things equal, smaller operations have a more limited awareness of financial risk management products. Meanwhile, there is the threshold matter that not all financial risk management products are relevant or appropriate for the individual risks that farmers are seeking to manage. Further research aimed at creating a deeper understanding of farmers' actual levels of awareness would be beneficial to the exercise of identifying, more accurately, the most pertinent barriers to awareness.

## 7. Addressing barriers to farmers' awareness of financial risk tools

This chapter identifies potential solutions to barriers to awareness, knowledge and understanding of both existing and new financial risk management products and measures. We then evaluate the proposed solutions using bespoke assessment criteria and make recommendations on the relative attractiveness of each category of initiatives. Finally, we discuss the current and potential role of technology to support education and access to financial risk management products and measures.

### 7.1 Overview of options identified for addressing financial awareness barriers

As discussed in the previous chapter, the barriers to awareness of financial risk tools can be classified into four categories:

- Factors related to awareness of and/or accessibility of data;
- Factors related to farmers' interests and behaviour;
- Factors related to farmers' advisors; and
- Industry-wide and systemic factors.

More broadly, general awareness of financial risk management products and measures does not necessarily translate into product uptake. In some cases, these tools may simply not be relevant to the farm in question because they cannot be delivered cost-effectively given the scale of the farm or because they are not applicable to the commodity in question. In other cases, farmers may be aware of the products themselves but may not be aware of the products' benefits, either on a standalone basis or relative to other products, solutions or investments.

One practical example is the Sydney Futures Exchange (SFE) Cattle Futures contracts, which were listed for seven years. While research found awareness to be high, uptake remained very low and the contracts were eventually delisted.

Figure 69: Case study: SFE Cattle Futures Contract

The Meat & Livestock Australia (MLA)/SFE Cattle Futures were first listed on the Sydney Futures Exchange in 2002. From inception, the MLA was responsible for marketing, business development and education to facilitate uptake of the contracts by the Australian beef industry.

In April 2008, MLA conducted its annual market research study through c.350 phone interviews to determine the state of awareness and uptake of the contracts. The survey found that c.78% of participants were aware ("had heard of") of the contract (exceeding the target of 70%). Interestingly, "awareness" decreased materially when the MLA tested for understanding of certain concepts related to the contract, eg "basis". In practice, however, only c.7% of surveyed farmers used the contract. Low uptake and trading volumes led to the eventual delisting of the contract in August 2009.

One factor to bear in mind is that contract size (or the practicality of using the contract for farmers) does not appear to have been a barrier to uptake. The contract was designed with an underlying of 5,000kgs, which is equivalent a modest c.14 head of beef<sup>20</sup>, making it a reasonable size for the large majority of commercial beef cattle farmers.

<sup>20</sup> Assumes average weight per animal of 600kgs, production yield of 60%

We have identified a number of actions that could be taken to address the barriers that we have identified above. We have grouped these into four broad initiatives, as outlined below.

Figure 70: Overview of recommended initiatives

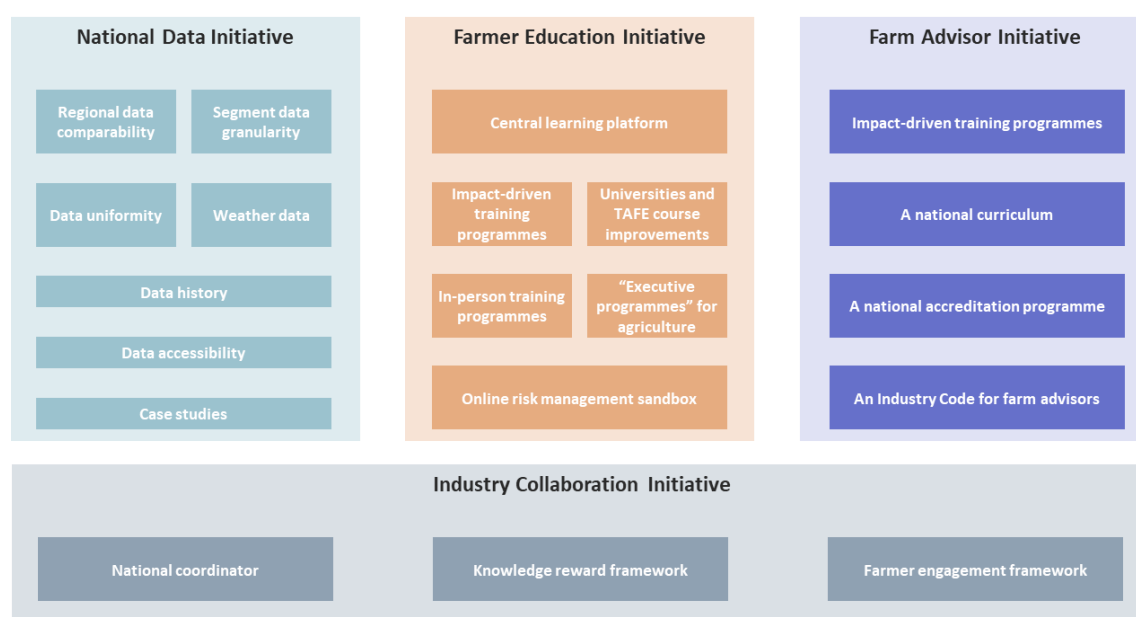
Barrier	Initiative	Objectives
<b>Awareness and/or accessibility of data</b>	National data initiative	To develop more, higher quality, more granular and more comparable datasets for use across the agricultural sector, and make both these and existing data sets more readily accessible to farmers in a more user-friendly, task-oriented manner
<b>Farmers' interests and behaviour</b>	Farmer Education Initiative	To raise the base level of awareness and understanding of financial literacy and financial risk management tools across the industry
<b>Farm advisors' capabilities</b>	Farm Advisor Initiative	To improve the agricultural and financial risk management product-specific knowledge and awareness of those advising farmers, so that their advice adds greater value
<b>Industry-wide and systemic factors</b>	Industry Collaboration Initiative	To design a model for information sharing and cooperation on a national basis, managed through a single, nationally-focussed organisation or secretariat, which draws together resources from the private and public sectors, including amongst education providers, relevant government departments and agencies, industry associations and commercial enterprises

We provide further details of these below.

## 7.2 Details of proposed initiatives to address the barriers identified

For each of the initiatives, we have identified a series of steps which could be undertaken. Most of these steps are designed so that they can be progressed independently of each other, allowing flexibility in both timing and the approach taken to implementation. In some areas, government policy initiatives that align with these initiatives have already been announced.

Figure 71: Overview of individual steps identified to implement the recommended initiatives



For each of the individual steps, we set out below the objectives that they are seeking to achieve and provide some brief commentary.

Figure 72: Details of individual steps identified to implement the recommended initiatives

Steps	Objectives	Commentary
<b>National Data Initiative</b>		
<b>Regional data comparability</b>	Develop a database to increase the comparability of data available across regions as a first step to support understanding of price risk and foster adoption of price risk management products. This would also support more effective capital allocation over time	For example, horticulture, aquaculture, beef and dairy pricing is not transparent and varies materially between regions as processors utilise different formulae
<b>Segment data granularity</b>	Dis-aggregate data into more commodity segments to improve farmers' decision-making tools	For example, current data on peanuts is aggregated within the general category of legumes which means that peanut producers have limited information that is relevant to their particular commodity. One way to increase the volume of data, as recommended by Sub-project 1 (Insurance) is to integrate private sector data with BoM data
<b>Data uniformity</b>	Develop a common language or set of standards that unlocks farmers ability to benchmark and learn across commodities	This could be achieved by developing a set of universal performance indicators that are applicable across commodities, eg gross margin per labour unit
<b>Weather data granularity</b>	To develop farm-level weather data that can be used by farmers to effectively hedge using weather derivatives	This would be implemented through additional weather stations and other devices enabled by technologies such as Internet of Things (IoT). Sub-project 1 (Insurance) has highlighted the importance of this in mitigating basis risk
<b>Data history</b>	Perform a review of historical time series per commodity and acquire/develop more	Greater visibility over eg the historical volatility of commodity prices for a given commodity would assist farmers' business planning generally and would provide

Steps	Objectives	Commentary
	historical data that enables farmers to make informed choices	additional evidence to support the uptake of financial risk management tools
<b>Data accessibility</b>	Leverage existing data to create customisable visualisation tools that enable farmers to explore and take advantage of the data to inform decision-making and/or make standardised templates available in (eg) PowerBI to make ABS/ABARES data more readily accessible	Both ABS/ABARES already provide some high-level visualisations. We propose the development of tools that provide additional flexibility, where, eg farmers can select a commodity, region and range of farm size and output average production and profitability ratios. This would place less dependence on farmers' ability to work with and interpret raw data on their own
<b>Data-driven case studies</b>	Develop case studies from anonymised data presenting information about the impact of using financial risk management tools on the profit and loss statements of farms – ie showcase the contribution to profit of employing financial risk management tools	This would unlock farmers' ability to learn from their peers while removing concerns around privacy. For example, the University of Kentucky has developed such case studies <sup>21</sup>
<b>Farmer Education Initiative</b>		
<b>Central learning platform</b>	Create a central place where farmers access information about financial risk management tools, including definitions, explanations, examples/simulations and access to resources for advice and/or price comparison/purchasing of tools	<p>Develop a database of financial risk management tools available in Australia. Including functionality to enable farmers to access best-fit tools. For example, a farmer enters a postcode, production volume and commodity for which risk needs to be mitigated. The website outputs alternatives relevant to the particular farmer, together with an explanation (and potentially a simulation) of how the tools work. The checkout area could include links to quotes for those tools by product sellers / exchanges as well as links to advisors that can help</p> <p>We note that this idea has been recommended in the past, amongst others by Nuffield Scholar Chris Reichstein<sup>22</sup></p> <p>This should be considered in conjunction with the recommendation of Sub-project 1 (Insurance) to develop a digital insurance platform</p>
<b>Online risk management sandbox</b>	To increase awareness, understanding and uptake of products by providing farmers with a risk-free environment which they can use to familiarise themselves with the operation of financial risk management products and experiment to see the potential impact on their profitability and risk. This could encompass existing products and also be used to test the potential appeal of products under development	This solution is analogous to demo accounts provided by stockbroking companies and could be implemented on a standalone basis or as part of the broader central learning platform. This recommendation should be read in conjunction with the recommendation of Sub-project 2 (Hedging) to increase awareness of risk transfer products through extension work with Rural R&D Corporations
<b>"Impact-driven training"</b>	Form a view on the definitive set of financial risk management tools that are most	In order to develop highly-targeted training programmes and education and awareness campaigns, we propose the development of project that looks into specific segment's

<sup>21</sup> <https://www.joe.org/joe/2018february/tt1.php>

<sup>22</sup> An internet-based portal of all grower groups should be developed with research projects and outcomes, <http://nuffieldinternational.org/live/Report/AU/2014/chris-reichstein>

Steps	Objectives	Commentary
	<p>relevant, needed and impactful for farmers across commodities and regions</p> <p>Develop a plan to ensure that the benefits of the financial risk management tools identified in the previous step are communicated to the appropriate audiences through the best channels</p>	<p>particular needs and compares that with the available suite of financial risk management tools, and the level of awareness and understanding of risk management options by farmers</p> <p>By way of example, a targeted education programme could be developed to support the roll-out of risk insurance pools as proposed by Sub-project 1 (Insurance)</p> <p>More broadly, we note our recommendation is aligned with one of the recommendations of Sub-project 6 (Policy): “Provision of appropriately targeted skill development programs that assist farmers to improve identification, assessment and management of risk”</p>
<b>In-person training programmes</b>	<p>Ensure all farmers have access to reasonably priced in-person training programmes on agricultural and financial risk management matters</p> <p>This would help to address the current fragmentation of information and education provision, and would be supported by broader resources made available through the central learning platform</p>	<p>Training could be provided by the private sector through one or more accounting firms, law firms and/or specialist training organisations, or could use an industry-owned mutual as the primary delivery partner<sup>23</sup>. We envisage five or six delivery partners across the country’s main agricultural activity hubs to act as regional leaders</p>
<b>Universities and TAFE course improvements</b>	<p>Encourage or require all universities and TAFEs to include risk management components in their relevant courses</p> <p>Leverage the knowledge and infrastructure of universities and TAFEs to ensure all agriculture-related degrees include components that address key aspects of agricultural business risk management and the role of financial risk management tools</p> <p>This would commence with a review of current course components on offer, benchmarking this against the strongest international peers</p>	<p>Currently, at both universities and TAFE, business-related courses are often elective. We suggest the review might also consider whether some components should become compulsory</p>
<b>Specialist “executive programmes” for agriculture</b>	<p>In parallel with the development of a national curriculum for farm advisors, develop a financial risk management extension programme with universities, analogous to the executive programmes run by leading business schools globally</p> <p>This would build on the content made available through university degrees, making this education accessible to older farmers in a format that is attractive to them</p>	<p>Universities have the capabilities and subject matter expertise to provide training to farmers beyond their classrooms. This could take the form of both in-person workshops and online tutoring. As an example, UNE has developed its SMART Farms initiative<sup>24</sup>. This programme could potentially be funded in a similar format to the Adoption and Innovation Hubs that were recently announced<sup>25</sup></p>

<sup>23</sup> We note that Sub-project 3 – Mutuals has developed a recommendation to support initiatives that provide training for the leadership and members of insurance-providing co-operatives and mutual enterprises (ICMEs). Meanwhile the report for Sub-project 6 – Policy provides that “risk management training programs should be delivered through a strong partnership between Government, the farm industry and risk management professionals through an appropriate, dedicated, independent organisation funded by Government”.

<sup>24</sup> <https://www.une.edu.au/research/research-centres-institutes/smart-farm>

<sup>25</sup> <https://minister.awe.gov.au/littleproud/media-releases/%2486m-adoption-innovation-hubs>



Steps	Objectives	Commentary
	These programmes might cater both to farmers and to other relevant stakeholders such as farm advisors. They could thus aim to improve both farmers' understanding of financial risk management and the finance industry's understanding of the risk issues that farmers are seeking to address	
<b>Farm Advisor Initiative</b>		
<b>"Impact-driven training"</b>	Form a view on the definitive set of financial risk management tools that are most relevant, needed and impactful for farmers across commodities and regions and then develop a plan to ensure that advisors are qualified to communicate the benefits to farmers through the best channels  Implement an awareness and education campaign for advisors based on the findings and plan set out above	In order to develop suitably targeted training programmes and education and awareness campaigns for advisors, we propose to leverage the findings from the "impact-driven" research project set out above (for farmers)
<b>A national curriculum</b>	Develop a financial risk management tools curriculum for farmers' advisors that sets a base level of knowledge expected from farmers' advisors in connection with agricultural business risks and the financial risk management tools used to manage them	With the collaboration of industry, academia and Government, define the content of the curriculum, eg similar to what CPA has done for accountants, AFS for financial planners require an AFS license, Chartered Tax Advisor for tax professionals, etc
<b>A national accreditation programme</b>	Build trust in advisors who meet certain base standards of knowledge and awareness, via a national accreditation programme  Develop and deliver specialist training courses and continuing education to enable advisors to build and maintain the requisite knowledge, potentially under the aegis of the NFF	Training could be led by the private sector, Government or a combination, with a central body such as NFF administering the accreditation process  We note that some research on the professional development of farm advisers including their curricula has been conducted by AgriFutures (RIRDC) <sup>26</sup>
<b>An "Industry Code" for farmers' financial advisors</b>	Ensure that all financial advisors to farmers maintain suitable knowledge and expertise  This standard could be developed under the aegis of the NFF, with an emphasis on ensuring that it was practical from a financial services advisory perspective whilst improving the relevance and precision of advice provided to farmers	This should also improve confidence in the financial advice industry, in part to help support greater use of specialist advisors in regions and/or segments where use is currently low  Any requirements should be dovetailed carefully with existing legislative and other requirements that are relevant, such as the additional protections afforded to small business customers under the Banking Code of Practice
<b>Industry Collaboration Initiative</b>		
<b>Farmer engagement framework</b>	Develop a more sophisticated framework for farmer engagement  Conduct research to identify specific segments within the farming community that have different attitudes and needs in relation to education, development and decision-making  These profiles should address factors such as appetite for risk, attitude towards adoption of	This would enable much more efficient delivery of information and education to farmers (by customising the content to each segment).  Terminology should be chosen to support engagement and understanding. By way of example, NFU Mutual in the UK has segmented farmers in the UK into four

<sup>26</sup> <https://www.agrifutures.com.au/wp-content/uploads/publications/03-032.pdf>

Steps	Objectives	Commentary
	new technology, preferred learning channels, etc	categories, namely Venturers, Progressives, Defenders and Operators.
<b>Knowledge reward framework</b>	Over the medium term, measures could be implemented to ensure that taxpayers achieve appropriate value for money from the support provided to the agricultural sector. This could include ensuring that farmers who take pro-active steps to manage risk and improve their knowledge in relevant areas receive a greater proportion of future government support.	A regime of this nature would need to be implemented progressively over the medium term to give farmers time to complete the requisite training. This measure would logically be coupled with others that are designed to improve the standardisation and availability of relevant training programmes.
<b>National coordinator</b>	To appoint an organisation that would be responsible for the oversight and implementation of one or more of the recommendations	There are significant interdependencies between education and awareness recommendations (and even more with other, sub-project teams' recommendations). An overall coordinator would ensure a more efficient delivery of initiatives

### 7.3 Implementation, funding and viability

As far as possible, we have sought to present steps that can be implemented independently of each other. Amongst other things, this will allow a staged approach to implementation, with initial emphasis placed on those which are foundational in nature and/or cheaper and easier to implement. In addition, there are areas where implementation can be progressive, with a base-level solution delivered first, allowing the response from stakeholders to be gauged before committing to a large investment.

By way of example, the proposed National Data Initiative could commence with improving the accessibility and usability of existing data sources available from the Bureau of Meteorology, supported by case studies that brought to life how this data was being used to improve risk management and/or reduce associated risks on farms. This would allow data to be gathered as to the uptake of this service and the value ascribed to it by relevant stakeholders. From this, it would be possible to gauge the potential ability to generate revenues from provision of the data that could support the proposed extension and refinement of these data sets.

Wherever possible, we believe that initiatives are more likely to be effective in both the short and long term if they can be delivered in a manner that is essentially self-sustaining. In other words, the proposition to the relevant stakeholder(s) should be sufficiently attractive that those stakeholders are willing to make a sufficient financial contribution to the provider so that the product or service is economic in its own right. The primary exceptions to this will logically be:

- Contributions made to cover one-off research, design and/or launch costs of schemes which can subsequently become self-sustaining;
- Steps where current structure of the industry mean that the costs are likely to fall on one stakeholder, but the benefits will accrue to another; and
- Steps where the benefits will take some time to be realised, and hence where the inherent short-termism of some or all stakeholders may inhibit take-up of an otherwise appealing product or service.

### 7.4 Assessment criteria utilised to rank potential options

We have developed a framework to assess the relative attractiveness of the options outlined above. Our objective is to ensure that our recommendations are likely to be both practical and impactful. We describe these criteria further below.





















Figure 73: Assessment criteria

Effectiveness	<p><b>Is this an impactful solution to the problem?</b></p> <p>This factor assesses the reach of the proposed solution, ie the benefit achieved by all stakeholders from implementing the alternative</p>
Commercial impact	<p><b>Is the solution economically viable?</b></p> <p>This factor analyses the cost to implement the solution and compares it with the expected benefit to determine if it's likely to be commercially viable</p>
Operational viability	<p><b>Is the solution practical in a day to day operational sense?</b></p> <p>This factor considers the operational viability of the proposed solution and any practical barriers there may be to its adoption</p>
Financial viability	<p><b>Are sufficient financial resources available?</b></p> <p>This factor considers the quantum of investment required to fund the proposed solution as well as the feasibility of securing requisite funding</p>
Implementation	<p><b>Can the proposed solution be implemented?</b></p> <p>This factor considers whether it is feasible and practical to implement the proposed solution, including the relative speed and likelihood of securing buy-in from multiple stakeholders</p>

## 7.5 Evaluation of initiatives to address knowledge gaps

In order to determine the relative attractiveness of the proposed solutions and to prioritise the implementation of the preferred alternatives, we have applied the assessment criteria described above. We present our assessment by initiative below.

Figure 74: Initiatives' ranking against our assessment criteria

	National Data Initiative	Farmer Education Initiative	Farm Advisors Initiative	Industry Collaboration Initiative
Effectiveness				
Commercial impact				
Operational viability				
Financial viability				
Implementation				
Overall	13/20	14/20	15/20	15/20

Our appraisal above reflects detailed consideration of the underlying implementation steps that we have identified. Meanwhile, the inherent nature of each of these four initiatives is different:

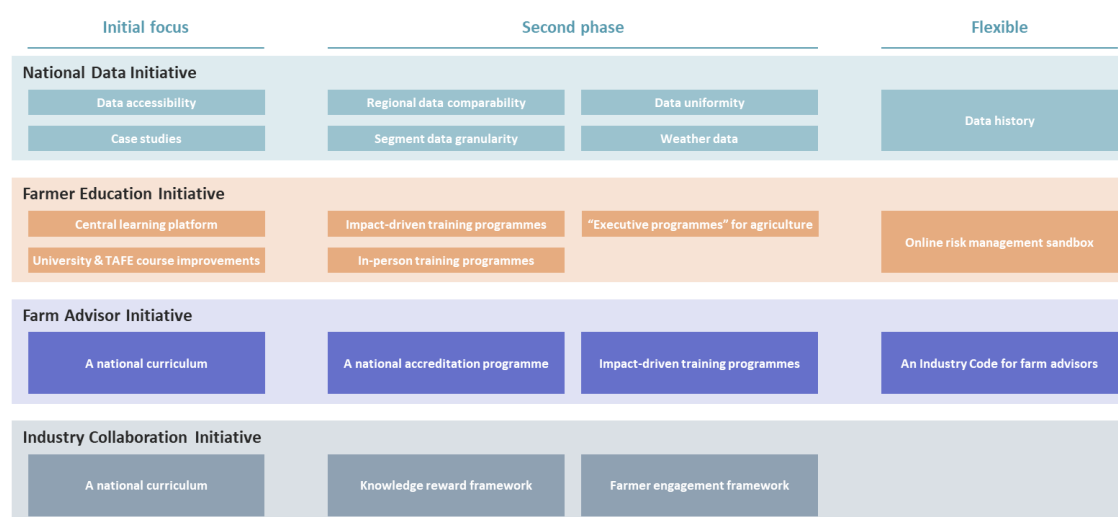
- **National Data Initiative:** This is prospectively highly effective and commercially impactful, but it is materially less certain as to whether uptake of all proposed steps will be sufficient to justify the required investment. Progressive implementation, starting with some of the simpler, lower cost elements, would allow this initiative to progress without committing

significant capital at the outset, and to build data on whether and how farmers and other stakeholders would value the data made available and/or the associated services that might emerge.

- **Farmer Education Initiative:** If implemented successfully, this should be highly effective. The pathway to implementation is relatively straightforward and could readily be funded by payments from end-users. It is less certain, however, as to the level of uptake by farmers and the extent of impact on farm resilience. Either way, this initiative is likely to take some time to achieve full impact.
- **Farm Advisors Initiative:** “Training the trainers” can be implemented with modest upfront investment and would have high impact on farmers using third party advice. However, impact on the broader farmers community would be limited (those not using advisors) unless this initiative is accompanied by an education campaign that promotes the benefits of utilising advisors for financial risk management advice.
- **Industry Collaboration Initiative:** More effective collaboration across the agricultural sector should be commercially impactful and conceptually is not complex to implement from an operational perspective. If achieved, the steps recommended would have a significant positive effect and should be valued by stakeholders, making them intrinsically self-sustainable. Nevertheless, implementation depends on many parties to work together to achieve a long-term agenda, and we recognise that this adds to the complexity and risk of this initiative.

While the nature of these four recommended initiatives are different, they are not mutually exclusive. Indeed, in order to have the greatest level of impact, we recommend that all initiatives are implemented. The pertinent matter which arises is thus the optimal sequencing of any rollout. While the precise staging should be the subject of deeper scrutiny (potentially in parallel with a more detailed feasibility study), we set out below an indicative set of implementation pathways for consideration.

Figure 75: Potential implementation sequence



## 7.6 The role of technology in raising awareness and education

The implementation of any recommendation must have regard for technology given organisations and educators rely on a number of technologies to train farmers. Among survey respondents, the categories below stood out as means of communication and education delivery.

Figure 76: Sample list of technologies employed in education



Although the above list does not include all technologies available, we have not found evidence of wide use of more advanced technologies in the delivery of training. There are several technologies that have the potential to impact where, how and when farmers learn. We present a sample below.

Figure 77: Sample of potential technologies that can be employed in education



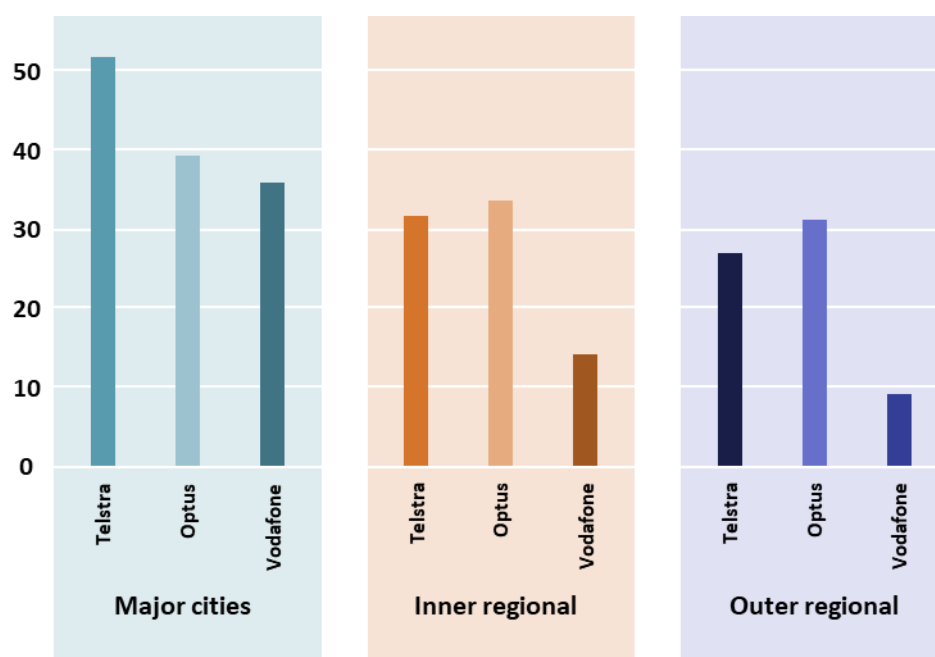
The above technologies have the potential to support access to information about financial risk management tools for farmers. The benefits from these technological advancements can be classified as follows:

- **Increases customisation of education** – Adaptive learning software powered by, eg real-time data, artificial intelligence and machine learning means that the delivery of content can be tailored to a particular individual, depending, for example, on the relative level of skill or knowledge. Technology also enables people with different learning styles to choose their preferred method. For educators this also means receiving real-time feedback. According to a study on the role of learning styles and technology<sup>27</sup> it is fundamental to use technology to cater to different learning styles;
- **Expands delivery channels** – Virtual reality and other applications have the potential to increase the suite of traditional educational channels. For example, the introduction of videoconferencing has had a dramatic effect on how education is delivered;
- **Enables remote / on-the-go learning** – 5G and the ubiquity of internet will unlock the ability for farmers to learn wherever they are, which will particularly benefit people in more remote locations or those who need to travel;
- **Shortens the distance** – Technologies like augmented reality and immersive virtual reality mean that farmers can take virtual field trips to farms in different regions while they learn about managing risk; and
- **Makes certain models feasible** – The use of artificial intelligence, for example, means that every farmer in Australia can receive one-on-one education from a digital tutor. The manpower associated with doing this without technology is prohibitive.

Finally, availability of technology is not the only factor to ensure farmer uptake and engagement. Other variables will need to be considered in the implementation of any proposed solution. For example, as shown below, there is significant variability of download speeds across the country.

<sup>27</sup> <https://www.semanticscholar.org/paper/The-Role-of-Learning-Styles-and-Technology-Collins/64581c2e85aa1571c23c7eb55a9307b9f21aa950>

Figure 78: Download speeds: Urban vs regional



Source: Fogg, I. (2019). 'The difference between Australian rural and urban mobile network experience', OpenSignal, 10 October.

We note that connection speeds in rural Australia have improved markedly through the availability of NBN satellite internet services. These are more than sufficient for many agricultural IoT services to be implemented.

## 7.7 Conclusions

There are a significant number of barriers to farmers' awareness of financial risk management tools. These can generally be grouped into four major categories: (i) Awareness and/or accessibility of data, (ii) Farm advisors' capabilities, (iii) Farmers' interests and behaviour and (iv) Industry-wide and systemic factors.

Meanwhile, there are a number of steps that can be undertaken to address awareness barriers. We categorise these in the form of four recommended initiatives arising from this project, namely a: (i) National Data Initiative, (ii) Farmer Education Initiative, (iii) Farm Advisors Initiative and an (iv) Industry Collaboration Initiative.

Our proposed recommendations are designed, as far as possible, to be capable of implementation independently of each other. Amongst other things, this will allow a staged approach to implementation, with initial emphasis placed on those which are foundational in nature and/or cheaper and easier to implement. That said, we endorse a rollout programme that has proper regard for the optimal sequencing of relevant pathways.

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## 9. Appendix

### 9.1 Financial organisations across Australia

There are various financial types across the agricultural value chain including advisors, mutuals, co-operatives, brokers, insurers and banks. These all play a certain role and part within education which we have highlighted below:

Figure 79: Sample Australian organisations along the agricultural value chain and their education role

Organisation	Role in education
<b>Advisors</b>	
AMP Agrifinance Big 4 banks – CBA, ANZ, Westpac, NAB Elders IOOF Mulcahy & Co Planfarm Rabobank RuralCo Finance	<ul style="list-style-type: none"> <li>• One of the largest direct training providers for farmers</li> <li>• Largest market share represented by large scale aligned advisor businesses (eg Big 4 banks)</li> <li>• Smaller businesses operating in rural areas specialise in agriculture</li> </ul>
<b>Mutuals &amp; co-operatives<sup>28</sup></b>	
AlmondCo Ltd CBH Group Co-operative Dairy Farmers Milk Co-operative Ltd Geraldton Fishermen's Co-operative Ltd International Macadamias Co-op Ltd Namoi Cotton Co-operative Ltd Norco Co-operative Ltd Northern Co-operative Meat Co. Ltd NSW Sugar Milling Co-operative OZ Group Co-op WA Meat Marketing Co-operative Ltd	<ul style="list-style-type: none"> <li>• Price discovery - Commodity pricing information</li> <li>• Pool marketing - Grower information about benefits, including historical pool performance data</li> <li>• Information about government programmes / subsidies</li> <li>• Research and development</li> </ul>
<b>Brokers<sup>29</sup></b>	
Apollo Risk Services Ausbrokers Coast to Coast Aviso WA Insurance Brokers Dunk Insurance Elliott Insurance Brokers IPS Insurance Brokers McLardy McShane Group Shielded Insurance Brokers Sound Insurance Services SRG Group	<ul style="list-style-type: none"> <li>• General education about insurance products / coverage</li> <li>• Calculators to understand pricing of premiums as well as potential claims / payoffs</li> <li>• One-on-one education for farmers about products available and recommended type and amount of cover</li> <li>• Information about risks associated with farming operations and how those can be mitigated by insurance products</li> </ul>
<b>Insurers<sup>30</sup></b>	
Allianz Auto & General Insurance IAG Insurance Manufacturers of Australia QBE RACQ Suncorp The Hollard Insurance Company XL Insurance Zurich	<ul style="list-style-type: none"> <li>• General education about insurance products / coverage</li> <li>• Calculators to understand pricing of premiums as well as potential claims / payoffs</li> <li>• Contribution to development of government policy through submissions about issues identified, eg flood coverage</li> </ul>

<sup>28</sup> By turnover, Business Council of Co-operatives and Mutuals

<sup>29</sup> Insurance Business Magazine ranking 2019

<sup>30</sup> Largest insurance companies by GWP. APRA as at March 2020.

Organisation	Role in education
<b>Banks</b>	
ANZ BankSA Bankwest Bendigo CBA NAB Rabobank Rural Bank Suncorp Westpac	<ul style="list-style-type: none"> <li>Business courses - eg Rabobank runs a Farm Managers Program covering the development of business plans, essentials of financial management and budgeting</li> </ul>

## 9.2 Global agricultural organisations and departments

As part of our analysis, we undertook an international benchmarking, in choosing international comparators, we focused on countries exporting the key commodities Australia produces – ie our competitors and potential competitors. The list below is a non-exhaustive list of agricultural organisations across Australia, Canada, United States, New Zealand and the United Kingdom:

Figure 80: International examples of agriculture organisation or departments

Country	Organisation	Description	Role / services
<b>Australia</b>	Department of Agriculture, Water and the Environment	Federal Government Department	Provides grants and assistance to farmers to promote farmer education generally, including financial literacy and risk management
<b>Australia</b>	NSW Rural Assistance Authority (RAA)	NSW Government Agency	Assessment and administration of financial assistance schemes to primary producers and small business operators in NSW. Specialist administrator of government financial assistance programmes including loans, grants, rebates and subsidies
<b>Australia</b>	National Farmers' Federation	Peak national body representing farmers	Provides access to education and training services with a focus on agricultural skills. Sponsors farm research initiatives such as the On-farm Financial Risk Management Project
<b>Australia</b>	Department of Primary Industries	NSW Government Department	Provides agribusiness training programmes as part of its primary industries programme. DroughtHub provides financial support, farm resources and farmer wellbeing information
<b>Australia</b>	Department of Agriculture and Fisheries	QLD Government Department	DAF strives to create a productive and profitable agriculture ecosystem through sustainability and innovation. Provides education regarding fishing regulations to promote equitable access to fisheries resources
<b>Australia</b>	Agriculture Victoria	VIC Government Department	Conducts business and trade focussed activities for the food and fibre sector. Organises farmer workshops to help sustain agricultural operations through seasonal fluctuations
<b>Australia</b>	Department of Primary Industries, Parks, Water and Environment	Tas Government Department	Tasmania's lead natural resources agency provides information on bushfires, floods and creates awareness in managing coastal hazards
<b>Australia</b>	Primary Industries and	SA Government Department	Provides grants and assistance (emergency and industry specific) to foster the prosperity of SA's

Country	Organisation	Description	Role / services
Australia	Regions SA (PIRSA)		primary industries and regions. Its AgTech initiatives help increase yields and profitability
	Department of Primary Industries and Regional Development	WA Government Department	Supports farmer upskilling through tertiary institutions and farm planning workshops
Canada	Agriculture and Agri-Food Canada		Provides weather and climate information under Drought Watch along with ways to manage farms during drought conditions. Provides information on managing agroclimatic risk and livestock tax deferrals
Canada	Canadian Agricultural Partnership		Five-year, C\$388m investment by federal and provincial governments in strategic initiatives for Saskatchewan agriculture. Funding includes markets and trade and risk management. Including funding programmes to effectively manage risk including Agricultural Skills and Knowledge which provides a rebate to help producers access training related to farm management with the intent of increasing profitability of mitigating risks
United States	USDA – Risk Management Agency		This dedicated risk management agency provides education on crop insurance and financial risk management products for farmers. The agency partners with public and private organisations to deliver the training, it provides funding through the RMEP programme
United States	National Crop Insurance Services (NCIS)		Non-profit trade association representing the interests of crop insurance companies in the United States – limited education initiatives for members  Through the NCIS 1890 Scholarship Program, scholarships are award to deserving students majoring in agriculture-related disciplines, complete their education, while promoting diversity in agriculture
United States	USDA - National Institute of Food and Agriculture (NIFA)		NIFA supports programmes and projects that help farmers make sound financial management decisions and discover new economic opportunities, understand the implications of public policy on their operations and use new tools and technologies to enhance operations and increase profit
New Zealand	Ministry for Primary Industries		The department directly publishes and/or funds teaching resources as part of its Future workforce skills for the primary industries programme. Ministry for Primary Industries includes Agriculture and has funding available to encourage innovation, and support across agriculture and horticulture producers and their communities
United Kingdom	Agriculture and Horticulture Development Board (AHDB)	An agency of the Department of Environment, Food & Rural Affairs	Provides a series of learning tools for farmers, including Farmbench which allows farmers to understand and compare costs of production at both enterprise and farm level

### 9.3 Agribusiness courses in Australia

Below is a non-exhaustive list of available agribusiness courses offered in Australia focussed on those courses that include farm business management and risk management in its curricula:

Figure 81: Illustrative list of agribusiness courses in Australia

Institution	Type	Course	Description
<b>RCS</b>	Advisory and ag training provider	Executive Link	12-month course, including training on risk management, financial and business management, and business plan development
<b>Delta Agribusiness</b>	Advisory and retailer of farm inputs	Drought Recovery & Risk Management Planning	Long-term farm planning (five year) to aid budgeting and risk management, plus development of management strategies
<b>Australian College of Agriculture and Horticulture</b>	Ag training provider	Diploma of Agribusiness Management	52-week long course including climate risk, management strategies and agribusiness risk management modules
<b>KLR Marketing</b>	Ag training provider	KLR Marketing School	Develop skills to mitigate marketing risks and use clear decision-making tools, understand the role of financial resources
<b>BlackburnAgri</b>	Agribusiness consultants	Farm Business Planning	One-on-one consultation with landholders to review future direction of the farm, potential for growth, profitability, risk and methods of managing these risks
<b>Business by Design</b>	Agribusiness consultants	Farming by Design	Increasing production, mitigating risks and building a solid agribusiness. Identification and mitigation of the three most critical risks to farming enterprise
<b>Eksteen Agricultural Consulting</b>	Agribusiness consultants	Improved Cropping Management	Assist growers identify factors that affect productivity and profitability. Paddock-level gross margin. Minimise risk by comparing inputs and cost structure to other growers
<b>Farmanco Management Consultants</b>	Agribusiness consultants	Advanced Business Discussion Group	Discussions revolve around risk management / off-farm investment / succession planning, etc
<b>Hudson Facilitation</b>	Agribusiness consultants	Risky Business	Which decisions have the greatest influence on-farm business profit and wealth, how to improve decision making, the dynamics of managing a farming business and the impact of seasons and commodity prices over time
<b>Megan Rowlands Business Management Services</b>	Agribusiness consultants	5-year Production and Financial Planning Workshop	Two-day workshop to develop financial planning skills. Five-year plan for farm business, investigate varying scenarios and understand the likely performance outcomes
<b>Riverina Agri</b>	Agribusiness consultants	Farm Business Planning	Define strategic direction, identify historical performance, prioritise options, identify risks and mitigants, assess funding requirements
<b>Rabobank</b>	Bank	Farm Managers Program	Week-long programme covering management skills, business plan development, essentials of financial management and budgeting
<b>Australian Rural Leadership Foundation</b>	Not-for-profit ag training provider	Australian Rural Leadership Program	15-month programme covering leadership topics including communication, strategic thinking, industry and community relationships, etc

Institution	Type	Course	Description
<b>Rural Business Support</b>	Not-for-profit ag training provider and consultant	Farm Business Management Programmes	Various programmes developed on an as-needs basis, depending on external funding. Courses include, capital raising, credit access, business skills, succession planning, etc
<b>Dairy Australia</b>	Peak body	Farm Business Fundamentals	Two to three-day course focusing on farm financial management, providing skills to develop annual farm financial numbers, budgeting, compliance and farm financial systems
<b>SA TAFE</b>	TAFE	Certificate IV in Agribusiness	24-month programme covering analysis and interpretation of production data, financial records, insurance and legal requirements
<b>Southregional TAFE WA</b>	TAFE	Advanced Diploma of Agriculture	12-month programme covering crop production advice and business management skills
<b>TAFE NSW</b>	TAFE	Advanced Diploma of Agribusiness Management	Agribusiness specific planning and analysis, financial and human resource management and farming sustainability
<b>TAFE QLD</b>	TAFE	Diploma of Agribusiness Management	Prepare and monitor budgets and financial reports, monitor and review business performance, develop climate risk management strategies
<b>Tasmania TAFE</b>	TAFE	Diploma of Agribusiness Management	Farm business management and administration
<b>VIC TAFE Wodonga</b>	TAFE	Certificate in Agribusiness	12-month programme to develop agribusiness skills, focusing on the business, management, and administrative aspects of agriculture

## 9.4 Financial literacy organisations

Below is a non-exhaustive list of international educational organisations that currently provide a form of financial literacy across agriculture.

Figure 82: Example list of international organisations who provide a financial literacy course

Country	Organisation	Description
<b>Canada</b>	The Canadian Farm Learning Centre	The Canadian Farm Learning Centre is an online management tool created to assist farm business owners in furthering their knowledge and understanding of farm management. Courses include farm business structures, farm financial planning, succession planning and managing risk in agriculture
<b>Canada</b>	Ontario Sheep Farmers	Ontario Sheep Farmers represents Ontario's 3,000 sheep farmers and allied industries. OSF's educational programmes help farmers improve farming operations and develop skills in areas such as record keeping, risk management and traceability
<b>Canada</b>	Olds College	With an aim to promote a robust agriculture industry, Olds College's "Continuing Education Programming" helps impart specific skills for farmers to upgrade their management and financial assessment skills
<b>Canada</b>	AgScape: Educate + Inspire	Provides "food literacy" programmes and resources to Ontario's educators and students

Country	Organisation	Description
United States	New Entry Sustainable Farming Project	New Entry, an initiative of Tufts University, works to strengthen local food systems by supporting new farmers by providing training and career development. Financial literacy courses include Farm Tax Preparation and Income and Expense Tools among others
United States	The Organic Farm School	The Organic Farm School offers practical agricultural education for aspiring farmers with a focus on people, place, and sustainability. Courses include marketing and financial management
United States	The Seed Farm	The Seed Farm's training cover minimisation of risk, maximisation of efficiency and productivity, and cost management. Courses include risk management and business planning
United States	Cornell Small Farms Program	CALS was established to increase research and extension for small farms. Course offerings include programmes in writing business plans, financial records management and planning for farmers
United States	Northeast Iowa Community College	Northeast Iowa Community College provides in-demand education and training through online and blended learning modes. Course cover general farming business and core agriculture finance
United States	Farm Credit University	Farm Credit University offers specialised training opportunities for agriculture professionals to continue learning. Course cover financial and business management skills for farmers
New Zealand	Rabobank	Rabobank in NZ runs a Farm Managers Program, offering farmers skills in business planning and economics along with risk management (modules based in Australia)
New Zealand	Learning Cloud New Zealand	Learning Cloud is a vocational education and training provider, delivering online ecourses. Its "Farm Management" course covers financial planning and risk management for farmers
New Zealand	The Waikato Institute of Technology (Wintec)	Wintec delivers courses across vocational (technical) and professional fields of study. Courses cover topics including financial planning and business risk management for farmers
New Zealand	NorthTec	NorthTec is a northern New Zealand based tertiary education provider which provides courses in various farming and agriculture related disciplines including financial management for agri-businesses
United Kingdom	University of Reading (AgriFood Training Partnership)	Through a partnership between six leading UK universities, the AFTP provides short-term applied industry courses in areas including Farm Business Management and Contemporary Issues in Animal Science
United Kingdom	Royal Agricultural University	The Royal Agricultural University is a leading agricultural education and research provider. Courses include financial and risk management skills
United Kingdom	Cambridge University (Land Economy Programme)	This programme offers a unique combination of law, economics, and agriculture. The course covers areas such as business regulation, the financial aspects of real estate and international development
United Kingdom	ACS Distance Education	ACS Distance Education provides farm management, financial planning and risk management courses

There are a number of co-operative structures to choose from and Australian farmers have different motivations for joining co-operatives. *Marketing co-operatives* provide access to output processing, packaging, branding, distribution and marketing services to their members. In turn, *supply co-operatives* provide members services related to the supply and storage of their production inputs, eg including fertilisers, seeds, fuel, etc.

Figure 83: Top ten agricultural co-operatives in Australia

Organisation	State	Industry	Turnover	Members	Turnover/ member
CBH Group Co-operative	WA	Grains	A\$3.8bn	3,900	A\$0.97m
Norco Co-operative Ltd	NSW	Dairy	A\$556m	326	A\$1.71m
Geraldton Fishermen's Co-operative Ltd	WA	Fishing	A\$372m	240	A\$1.55m
Namoi Cotton Co-operative Ltd	NSW	Cotton	A\$355m	200	A\$1.78m
WA Meat Marketing Co-operative Ltd	WA	Meat	A\$281m	1,000	A\$0.28m
Northern Co-operative Meat Co. Ltd	NSW	Meat	A\$214m	1,002	A\$0.21m
AlmondCo Ltd	SA	Almonds	A\$192m	150	A\$1.28m
Dairy Farmers Milk Co-operative Ltd	VIC	Dairy	A\$130m	448	A\$0.29m
NSW Sugar Milling Co-operative	NSW	Sugar	A\$86m	600	A\$0.14m
OZ Group Co-op	NSW	Berries	A\$82m	100	A\$0.82m
International Macadamias Co-op Ltd	NSW	Macadamias	A\$75m	200	A\$0.38m

Source: Business Council of Co-operatives and Mutuals

## 9.5 Programmes available to farmers

Figure 84: Sample government programmes available for farmers

Programmes available to farmers	
Managing Farm Risk management	Have had a written offer of weather / crop insurance from an insurer plus need to hire an independent advisor to review the offer, assess farm performance. This closed in May 2019
Rural Financial Counselling Service	This service is for farmers, fishing enterprises, forest growers and harvesters and related small business owners who are at risk of financial hardship. The service helps you understand your financial position and gives you advice on implementing plans to improve the financial situation
Farm Household Allowance	To be eligible you must be a farmer, plus pass an income of greater than A\$55,000 and asset test A\$5.5m, plus mutual obligations (compliance with a financial improvement agreement overseen by a case officer)
Regional Investment Corporation Loan	Eligible area, >50% income earned from the farm, >75% of time spent on the farm; capacity to repay the debt
On-farm emergency water infrastructure rebate	Any primary producer with eligible expenditure
Farm management deposits	Non-primary production revenue under A\$100k per year. Max deposit of A\$800k
On-farm emergency water infrastructure rebate	Any primary producer was eligible
NSW Government scheme	It's 50% matching funding to A\$5k then A\$1k each for 4 more people to A\$9k total. This in comparison to the Federal scheme is 50% matching funding up to A\$2.5k



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