Thomas Elder Markets

A guide to marketing grain

Understanding why the market moves, and what you can do about it.

GPSA

BEYOND THE SILO
Grain marketing tips for growers

Government of South Australia
Department of Primary Industries and Regions

This booklet is produced in partnership with GPSA under the Grain Marketing Operations and Diversification Project.

This project is proudly supported by the SA Government, Regional Growth Fund.

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Introduction

Australian grain producers operate in an environment of high risk, from the political risk of the export nations we trade with, to a variable climate which swings from drought to deluge.

There is little that farmers can do to control these risks. However, one element which can be better managed is price risk.

This guide, produced as part of Grain Producers SA's 'Beyond the Silo' campaign, is designed as an introduction to grain markets. The intention is to provide the reader with a greater understanding of the marketplace, which can be used as a reference guide.

The areas covered include:

- The drivers of markets
- The elements of grain pricing
- Marketing options
- How to manage risk through derivatives
- A guide to some useful analysis tools

Beyond the Silo is an initiative of the Grain Marketing Operations and Diversification Project, which is being run by GPSA in partnership with Grain Trade Australia. This project captures a key priority of the SA Grain Industry Blueprint, which is to increase business resilience and sustainability in the grain production sector.

The project is proudly supported by the SA Government, Regional Growth Fund.

About Grain Producers SA
GPSA is the peak industry body representing the 4,500 grain farms in South Australia. GPSA develops and implements policies and projects that promote the economic and environmental sustainability of South Australian grain growing businesses.

www.grainproducerssa.com.au

Who is TEM?

Thomas Elder Markets (TEM) is an independent, data-driven market analysis service that provides premium agricultural market insights and reports.

Through robust analytical assessment, TEM helps agricultural stakeholders make better, more informed decisions that drive profitability.

TEM offers high-quality reports for primary producers, government, RDCs and corporate entities.

Our reports will help guide you to understand the critical factors in agricultural and commodity markets. These reports will be short and easy to understand and free from as much jargon as possible.

We gained our experience from working in the markets space. Providing analytical content allows TEM to break down complex situations into easily understood and meaningful insights.

The drivers of the market

The wheat market is exceptionally volatile, with prices having large swings both upwards and downwards. It is not unusual to awaken in the morning to a large change in price due to an event overnight.

Information is the key driver of markets, and there is no exception for wheat markets. The trade participants who influence the grain price base their trades on data across a wide range of factors.

Whilst we cannot control these factors, it is essential to understand some of the critical factors that drive the grain market.

Supply

The most fundamental driver of grain markets is supply. Whilst demand is a driver, which will be covered in the next section, the reality is that it is less volatile. However, supply is very volatile.

Australian farmers are well qualified to understand the vagaries of supply. In the past five years, we have had seasons of surplus and deficit production.

The price we receive in Australia is impacted by changes in supply both locally and also overseas. At its most basic, when supply is low, then prices rise. Conversely, if supply is high, then prices drop. This is a basic tenet of all markets, supply and demand.

Whilst we are all acutely aware of the impact of events impacting our own local production from drought to hail, the same occurrences in other parts of the world impact us, and an eye always has to remain on other grain-growing nations.

On a per-capita basis, Australia produces the most significant volume of wheat in the world. At 1mt per person, we provide more than enough to meet demand. This is a considerable amount when you compare to the United States at 170kg per person.

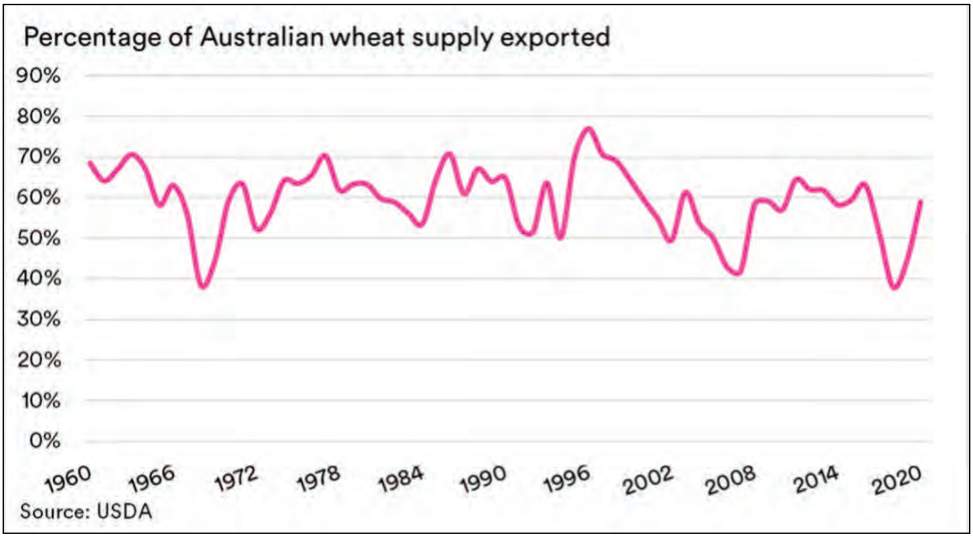
Australia cannot consume our full production domestically. Therefore a large proportion of our wheat will head for the export market. During the recent drought, overall exports dropped to their lowest levels at 40%.

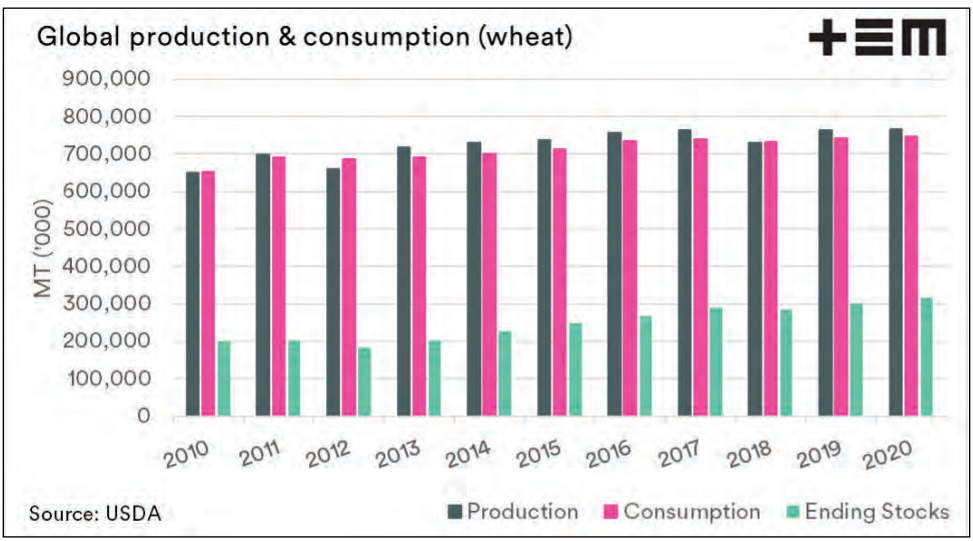
In South Australia, especially the Eyre Peninsula, a large percentage is exported due to the low domestic demand.

The reliance on export markets means that events which occur overseas impacting our customers and competitors will have implications for the local grain industry.

The past decade has seen world wheat production rise to record levels, with the majority of years experiencing production levels above consumption. The result of this is that stocks have also grown to record levels.

The high supply of wheat (and other grains) has contributed to the low priced environment the world has experienced since the middle of the 2010s.


Percentage of Australian wheat supply exported
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1960
1966
1972
1978
1984
1990
1996
2002
2008
2014
2020
Source: USDA


Global production & consumption (wheat)
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
MT ('000)
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Source: USDA
Production
Consumption
Ending Stocks

Since the turn of the century, wheat supplies have also been supported by a resurgent Russia. At the time of the fall of communism, Russia did not produce enough wheat to meet its domestic requirements.

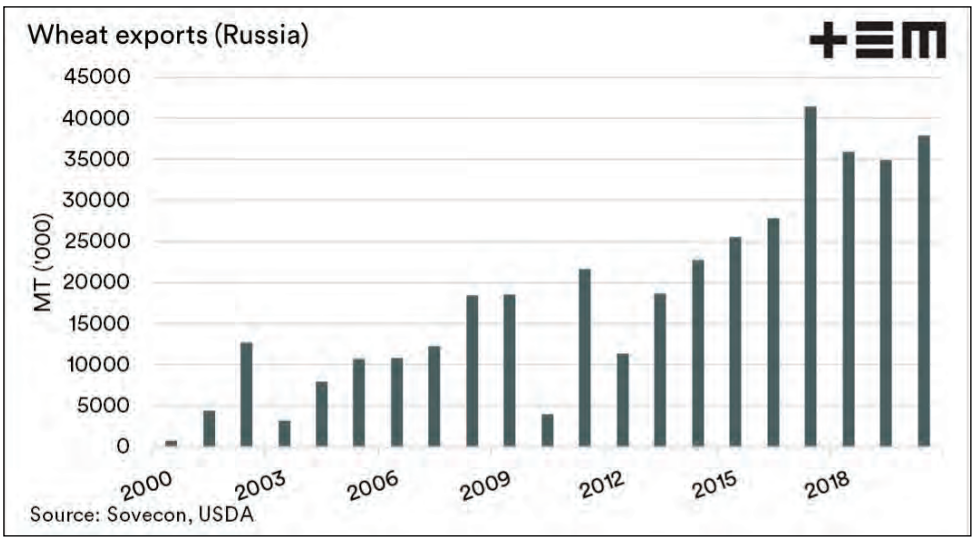
The injection of investment capital, along with a warming climate, has resulted in growing yields and the opening up of vast tracts of land which were previously unviable.

The result is that Russia has transitioned from a net importer in the early to mid-'90s, to the world's largest exporter of wheat.

This increases the importance of Russia to global pricing. If issues arise within Russia (or the wider Black Sea region), then prices are likely to react strongly.

As an example, during 2010, Russian production was impacted by drought. The result was a ban on exports, which drove wheat prices substantially higher around the world. There are also suggestions that this sudden price rise was a precursor to many of the uprisings throughout the Middle East during that period.

Their continuing advance is set to see them dominate in the coming years. The reality is that keeping a close eye on Russia will provide an insight into how prices on a global level will perform.



Beyond the global picture

The global situation paints a picture of very high supply, with stockpiles at record levels. Although, as the numbers around stock figures are analysed on a country by country basis, the outlook is not necessarily as gloomy as the global picture would suggest.

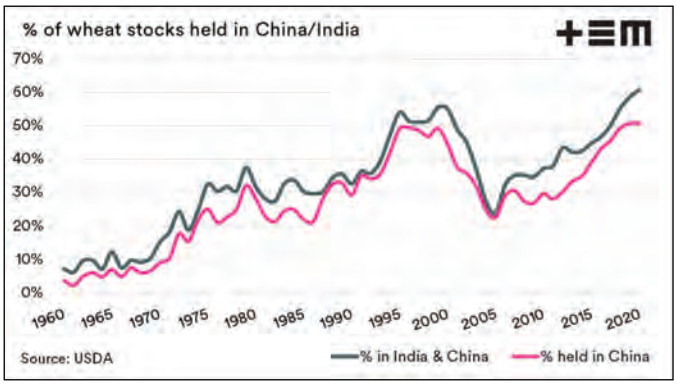
Whilst global stockpiles are at record highs, the composition of those stocks is heavily swayed toward China. At present, 50% of global wheat stockpiles are held within China, with a further 10% held within India.

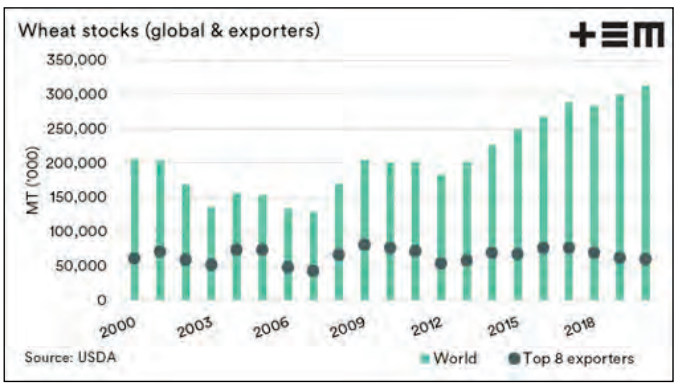
There are two reasons why it is important to separate these two nations. Firstly, there are concerns about whether these stocks exist to the reported levels and whether the quality is adequate.

Secondly, these two nations do not tend to be major exporters of grain. The reality is that these stocks, if they exist, are unlikely to be made available to the wider market. Therefore their influence on supply is reduced.

Whilst understanding global stock positions is important, availability through exporters is essential information. Many countries are net importers of wheat, especially nations in northern Africa and the Middle East.

If stocks within exporting nations are low, then that points towards a situation where their access becomes curtailed. At present, the stocks held by the top 8 wheat exporting nations is at the lowest level since 2013. This signals a situation where prices could drive higher if a significant crop production issue occurs in one or more exporting nations.





Demand

Whilst the supply of grains can be quite volatile due to the uncertain nature of production around the world, the demand for grain tends to be relatively easy to predict.

At the simplest of analysis, the demand for grain increases in line with the number of people in the world.

Whilst the global population has grown considerably during the past 50 years, the technology to produce grain to fulfil these needs has also improved. This has resulted in a general pattern of grain production meeting the needs of the population.

In general terms, grains are destined for food or animal feed use. There are now more extensive uses of grains (and oilseeds) for industrial processes such as fuel production.

During the start of the century, there was a monumental change to the demand for corn. Previously, most corn was consumed by animals. However, there was a switch to increased ethanol production about two decades ago.

This was to achieve mandates that defined the minimum levels of fuel required to originate from renewable sources.

During the first five years of the 2000s, an average of 10 per cent of corn was converted to ethanol; during the past five years, this had increased to 38 per cent.

This contributes to a change in demand, which would have a dramatic downward impact on grain prices if removed.

US government mandates are unlikely to change in the near term. Still, globally many governments are moving to the electrification of vehicles, which in time may reduce the demand for ethanol produced from corn.

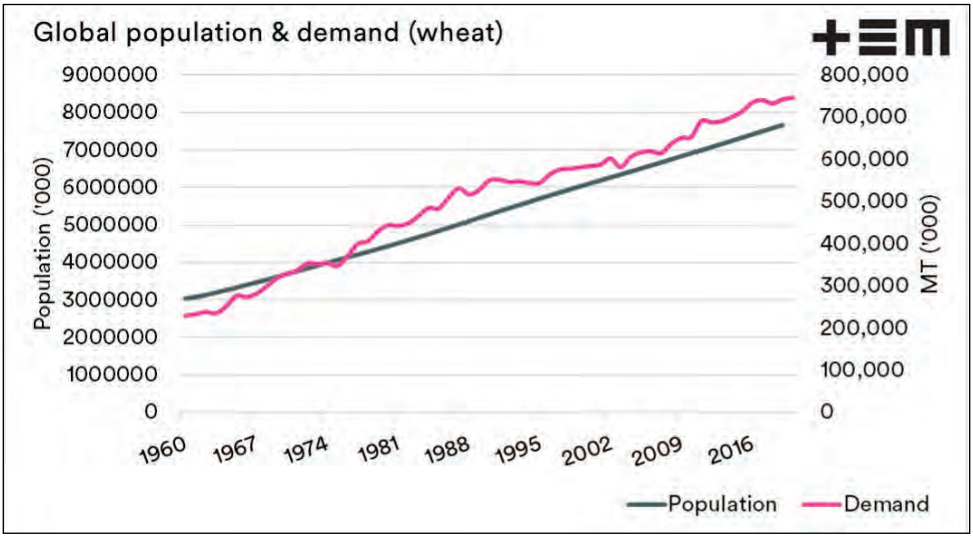
We may not grow much corn in Australia, but that does not mean price movements in corn will not affect the commodities we produce. There is a degree of interchangeability between corn and wheat, as they can be used for similar applications.

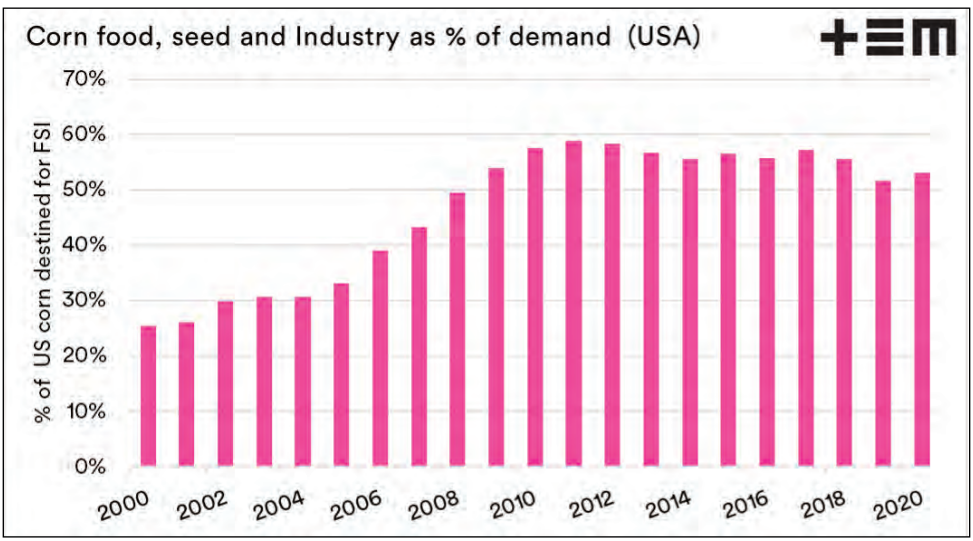
Corn and wheat tend to follow one another, with a correlation of 0.81. A value of 1 is a perfect correlation, and 0 signifies no correlation.

If we see a future lack of demand for corn for ethanol production, this corn will find alternative markets.

If corn futures remain depressed, this would likely pressure wheat futures. This, in turn, would flow through to the wheat prices received within Australia.

Whilst there is a move to additional uses of grains, demand still tends to increase by 2% every year.


Global population & demand (wheat)
9000000
8000000
7000000
6000000
5000000
4000000
3000000
2000000
1000000
0
Population ('000)
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
MT ('000)
1960
1967
1974
1981
1988
1995
2002
2009
2016
Population
Demand


Corn food, seed and Industry as % of demand (USA)
70%
60%
50%
40%
30%
20%
10%
0%
% of US corn destined for FSI
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020

Political intervention

In the past three years, political intervention into grain markets has increased. It was rare in the previous decade to be impacted by government decisions in Australia or overseas.

The past years have seen more and more intervention as government look to preserve food products domestically, or alternatively move towards a more protectionist stance. These decisions by governments can be either negative or positive for our trade flows.

This section will briefly discuss three scenarios from the past year, which have been negative, positive, and neutral.

Phase 1 Deal

One of the most prominent impacts the Trump administration made on agriculture was the trade war between China and the US. Trump hit out with tariffs against Chinese imports, which resulted in China slapping hefty tariffs on a range of US agri-products.

The result was that a large volume of products usually sourced from the US switched to other origins. The biggest example was the large switch of soybeans from the US to Brazil.

China and the USA negotiated the phase 1 deal at the end of 2019. This was an agreement that China would purchase a large volume of various US products in 2020 and 2021.

The area we are focused on is the agreement concerning agricultural commodities. The terms of the deal were that China would purchase US$36.6bn, a significant rise above the US$24.1bn in the pre-tariff year of 2017.

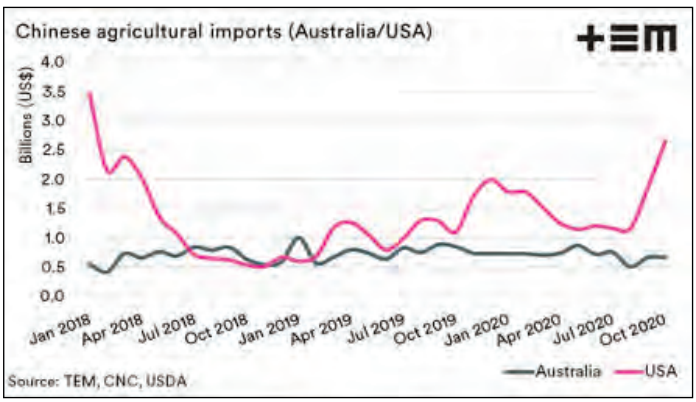
It was anticipated that this trade deal would discourage purchases of Australian products by China. Thomas Elder Markets highlighted those agricultural products likely to be impacted by Chinese trade flows away from Australia and toward the USA, as outlined below:

- Wood products
- Wine
- Beef
- Milk
- Almonds
- Crustaceans
- Barley
- Skins
- Malt extract

Wood, wine, beef, crustaceans and barley have all had major issues in China in recent months. That leaves only almonds and milk as the majors from our list not impacted.

China did not meet the target set with the USA during 2020, and in 2021 this target rises from US$36.5 to US$43.5bn.

If the target remains for 2021, then China will continue to preference US goods. If this eventuates, it would not be surprising to see more products move from Australian origin.



Russian export tax

What happens in the Russian grain market drives the rest of the world. There have previously been rumours of the introduction of export barriers in Russia.

Despite a very large Russian crop, the falling ruble has resulted in very high domestic wheat prices. This has resulted in food inflation impacting many staple products.

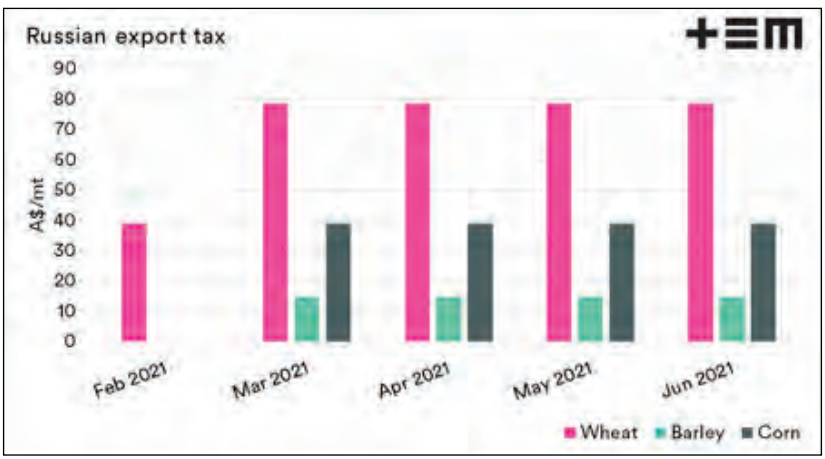
In order to attempt to alleviate domestic food prices, an export tax was introduced. This started with a wheat export tax of A$40/mt, due to commence in February 2021, with further revisions to A$80/mt for exports from March 2021 to June 2021.

The introduction of an export tax is intended to make exports unattractive, allowing for more product to be retained in the domestic market place. In the case of the Russian wheat export tax, there were some unintended consequences.

As the world's number one wheat exporter, a wheat export tax resulted in all pricing around the world increasing approximately in line with the value of the export tax, which in turn increased prices within Russia.

The end result of the tax is that other exporting nations, such as Australia, were able to gain an advantage, as those who ship from our country are not impacted by an export tax.

When the current export tax lapses in June, it will be replaced with a floating tax. It is unknown what the overall impact will be. However, the expectation is that it will discourage investment in farming in Russia due to the uncertainty.



The barley ban

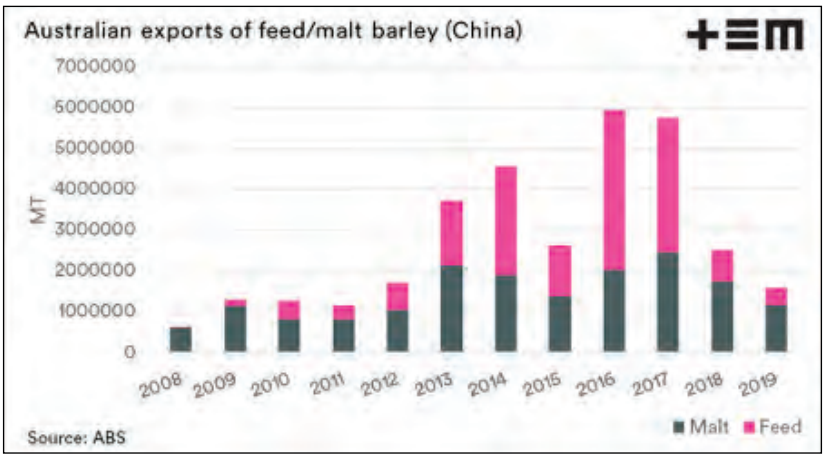
In 2016 weather conditions were good for Australian growers, resulting in a record barley crop of 13.5mmt. To put this in perspective, Australia's average barley crop during the previous 10 years was 7.7mmt. If you have an abundant supply of a commodity, and demand which is relatively stable, then you end up with lower prices.

As the country exported our enormous surplus, large volumes of barley were shipped to China at prices that were at decade lows. In this case, usually, the customer is happy as they receive cheap produce. Generally, the farmer isn't that happy with the price but has the volume to make up for the discount somewhat, so overall, their revenue situation remains pretty healthy.

However, in late 2018 the Chinese government launched an investigation into allegations of anti-competitive dumping. This shocked most Australian producers, as all of them would have been more than willing to sell their barley at higher prices into China.

This investigation was due to be completed in late 2019; however, an extension was granted until May 2020. As expected, China enforced a hefty tariff of 73.6% as an anti-dumping duty and 6.9% as a countervailing duty.

The combined duties of 80.5% have made Australian barley uncompetitive into China. During the second half of the last decade, China has become Australia's largest customer for barley.

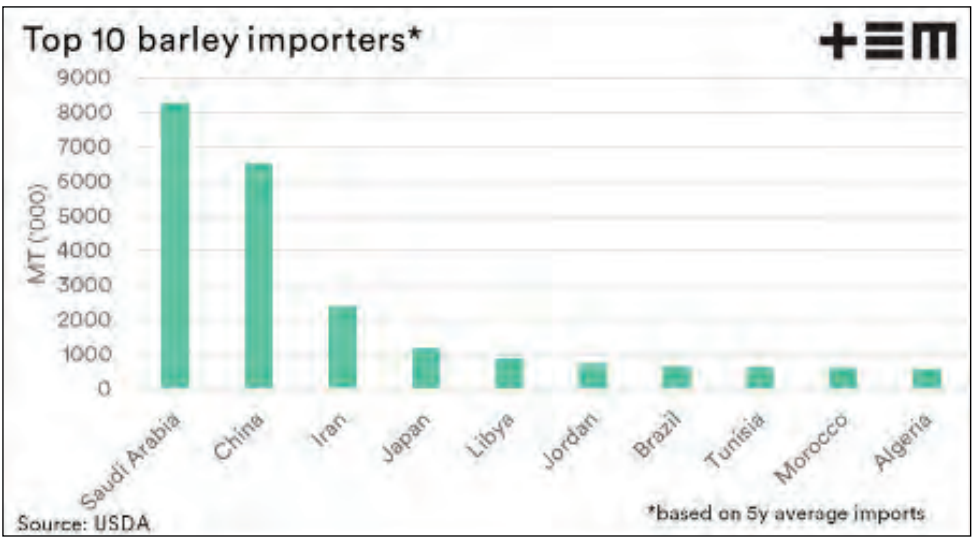


As Australia recovers from drought, a sizeable exportable surplus is available. What are we going to do with it all?

Historically, Saudi Arabia had been the largest customer for Australian barley. However, it was usurped by China more recently. Saudi Arabia has not been waiting patiently for Australia to return as a significant supplier. To meet their demand, they have been purchasing from former Soviet bloc nations, along with Europe.

Our barley pricing in the post-harvest period has been at levels which have seen our trade flows with Saudi Arabia improve, and they will remain a significant customer whilst China is locked out of the trade with Australia.

The decision to introduce an anti-dumping tariff was unfavourable. However, the trade flows have moved, and the impact is closer to neutral than negative.



The elements of grain pricing

In general terms, most growers' marketing revolves around the flat price offered by their local buyer(s). The flat price is the physical cash price offered to you; an example would be A$310/mt delivered to Adelaide port.

This flat price for grain offered by our local buyer(s) comprises three elements. It is extremely important to understand these three elements: futures, basis and foreign exchange.

Futures

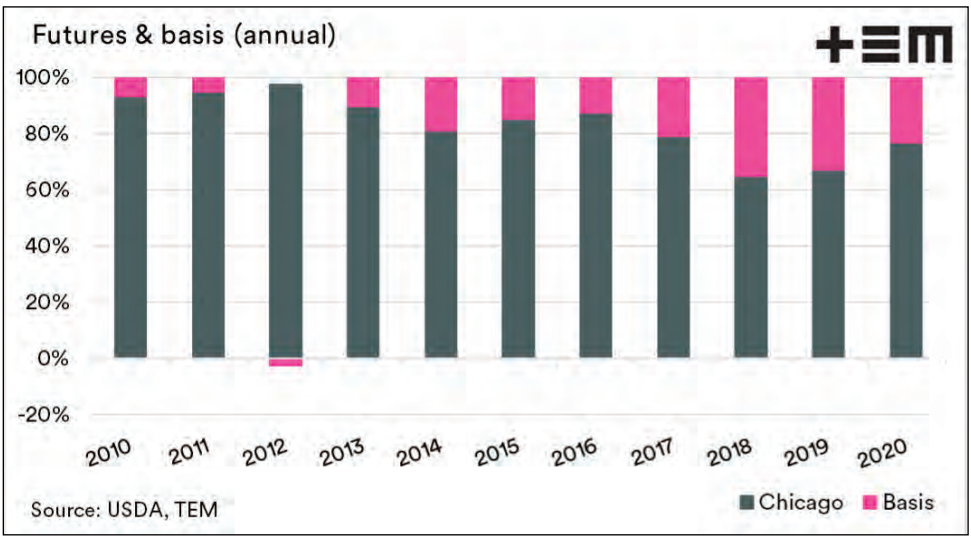
A wheat futures contract is a commitment between a buyer and seller to a standardised contract for an agreed price and delivery period.

A derivative or futures contract, which is traded on a commodity exchange like the Australian Stock Exchange (ASX) or the Chicago Mercantile Exchange (CME), are to lock in a future selling price for your crop.

While many futures contracts are able to be settled with physical delivery of the relevant commodity, this need not always be the case. A futures position can be closed out prior to settlement in order to cash settle any difference in price. Furthermore, some futures contracts are strictly cash-settled and involve no physical delivery of product, but these futures contracts can still be used to manage price risk.

Generally the futures price of wheat – such as CME wheat – represents the majority of the price received by farmers in Australia. This therefore makes it important to maintain a close vigil on the movements in futures prices overseas.

A guide on using futures and options is included in a later section of this booklet.



Basis

Basis is a term which is used regularly in the grain industry, and it is one which unnecessarily caused confusion. The word basis is exchangeable with difference. When someone is talking about basis, they are discussing the difference between two different prices, generally between physical and futures.

In general, in Australia, the basis is a comparison of against CBOT soft red winter wheat (in A$/MT). However, it could be a comparison between other futures contracts such as Matif or KCOT.

The basis level can be either positive (premium) or negative (discount) to CBOT futures. Australian basis levels tend to be positive, with very minimal time at neutral or negative levels.

The largest driver of basis levels is the local supply of grain. Recent years have seen basis levels rise to record levels. The premium was due to the drought-induced deficit of grain on the east coast. When domestic supply is low, the basis level tends to rise rapidly, providing producers with a very strong premium over international values.

The converse occurs when Australia has a good year. When the local supply of grain is at a large surplus, the basis level declines, as the domestic market does not have to pay higher prices to cover requirements.

Whilst basis is important, it has to be reiterated that it only generally contributes <20% of the overall price received. It is also important to note that a high basis level could be considered negative, as it generally means that production has been diminished, and more often than not a high basis level signals that there is little available to sell.

Foreign exchange

In an average year, the majority of the Australian grain crop is exported. Our wheat is sold into an international market which predominantly trades in US dollars.

Australian farmers are paid in Australian dollars. Those buying our grain in overseas destinations will be purchasing in US dollars.

The exchange rate between Australian and US dollars has a considerable impact upon the price we receive for our exports (and conversely our imports).

If our Australian dollar falls relative to the US dollar, then purchasing Australian wheat becomes more attractive. Conversely when our Australian dollar appreciates, then our wheat becomes less attractive, and buyers may favour wheat from other origins.

To provide an example, the Chicago futures price at the time of writing is 640¢ per bushel. At current exchange rates (0.77US cents), the wheat futures converted into Australian dollar are trading at A$304/mt. If the exchange rate increases to 0.80US cents, then the grower has to lower the price they recieve to A$293 in order for their wheat to stay competitive globally.

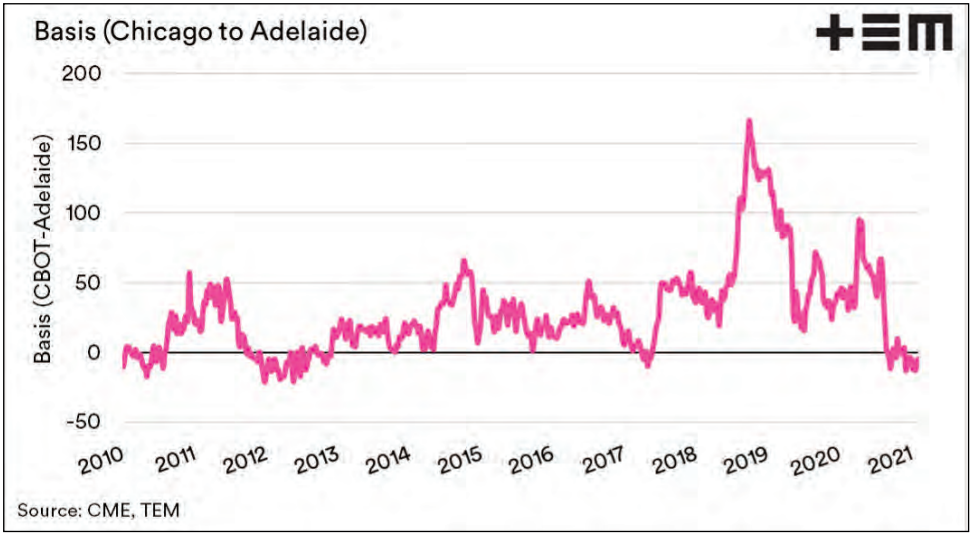
Conversely, if the exchange rate drops to 0.70US cents, then the grower is able to achieve a higher price for their wheat of A$335 and still remain competitive on the global marketplace.

Bearing in mind that this example is just the A$ adjusted futures price, and does not take into account basis, it could be either positive or negative.

The importance of these elements

The previous sections have provided a brief and simple explanation of what each of the three pricing elements are, and the impact which they have upon pricing. These factors are influenced by different factors, for instance, local events drive basis. Events in Australia can move the futures, but generally, global factors are the driver.

By understanding these factors, it is possible to create more diverse marketing strategies to ensure that more of the value in the grain is held with the grower.


Basis (Chicago to Adelaide)
Basis (CBOT-Adelaide)
200
150
100
50
0
-50
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
Source: CME, TEM


Australian to US dollar
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

Marketing options

Spot contracts

The majority of grain sold by farmers in Australia is through the spot cash market. A simple way of thinking of this market is 'on the spot'. It is the price which the grower receives from a buyer with prompt or close to prompt delivery.

A grower selling into the cash market must have the grain immediately available for delivery. This type of selling is usually conducted at harvest or during the post-harvest period. The grower in this instance should have no production risk as the grain has already been harvested, and is either in centralised storage or in on-farm storage.

Once the grower accepts a price from a buyer, there is no longer any price risk. If the market falls, they will still receive the price agreed.

By selling through the cash market, all elements of pricing are locked in.

The only further risk in a spot contract is counterparty risk, as the buyer will likely receive your grain with a payment date in the future. Whilst payment dates are reducing throughout the grain industry, there are still risks of non-performance. A later section includes tips for minimising counterparty risk.

Forward contracts

The wheat market can regularly provide opportunities for attractive pricing ahead of harvest. Farmers are able to access the market through the use of forward physical cash contracts. These are contracts agreed with a buyer for a future delivery period (usually harvest). This gives the grower the ability to lock in a price without having to use a futures contract.

There are, however, significant risks involved in utilising a forward physical contract.

Quality risk
The longer the period between taking out a contract and delivery can result in a quality risk. Suppose a contract is taken out for a specific quality parameter. In that case, there is a risk that the seasonal conditions do not produce wheat of the required quality.

Production risk
Recent years have seen favourable conditions during the early parts of the growing calendar, only for conditions to deteriorate. There is a possible risk of overselling forward and not producing the required volume.

It is therefore sensible to ensure that forward contracts are taken out at conservative volume estimates.

Price risk
The forward contract locks out all three elements of pricing. This precludes the grower from participating in the market for any parcels sold. For example, the grower is securing their basis level, but would not be participating in any rise in basis due to Australian based issues.

Therefore, it is important to examine both the futures and basis component of any price received to ensure that the contract's value is in your favour.

Counterparty risk
As with the spot cash contract, there is a risk of non-performance by the buyer.

Pools

During the days of the single desk, the national pool marketed the bulk of the nation's wheat. These days farmers have access to a wide selection of tools and mechanisms for pricing grain. Managed programs (or pools) have been relegated to a niche marketing choice for producers in Australia. They do have a place for some producers, as they provide a route for diversifying marketing of grain.

During the period immediately after the end of the single desk, many companies were offering a managed program. The number of offerings has significantly declined due to reduced participation by producers. The following are organisations currently advertising a form of pool:

- Advantage Grain
- CBH
- Flexi Grain
- Graincorp
- Market Check

A pool is a product in which growers provide grain to a pool manager with no set price. The expectation would be that the manager would be able to provide a substantially higher return than marketing the grain oneself.

In other industries, they would be considered a managed investment scheme. Interestingly a product akin to a grain pool outside of this industry would be viewed as a financial product and require an Australian Financial Services License (AFSL). The Australian Securities and Investments Commission (ASIC) has continued to provide an exemption for grain pools, which removes significant barriers to become a pool provider.

The large 2020-21 crop has resulted in growers considering a managed product this season, and we have fielded several requests on what they should contemplate when assessing.

How has the pool performed previously?
Past performance is not an indicator of future performance. A poor performer can improve, and a vice versa. A consistently well-performing pool does potentially point towards an operation with sound systems in place.

Do you think the pool provider has the experience to operate the pool?
This is quite an obvious point but has the pool manager run pools in the past? Do they have the experience to manage the pool to a set strategy?

What is the strategy?
Does the strategy fit with your view of the market? Does it give exposure to the time frame that you would like to be exposed?

You must understand the strategy of the pool, as you are effectively giving the manager a large chunk of your income. Conversely, if the program is simple, then why pay a manager to do what you can easily perform yourself?

Does the provider have an AFSL?
As mentioned previously, pool providers do not require an AFSL. Although an AFSL is not a requirement, it does indicate that the provider must take compliance seriously.

Payment schemes
Pools have a myriad of different payment options. Ensure that you discuss these with your accountant as they can impact your cash flow and taxation.

Compare to current market
What is the current cash market offering you? The grain provided to a managed product is effectively unpriced and can go down as well as up.

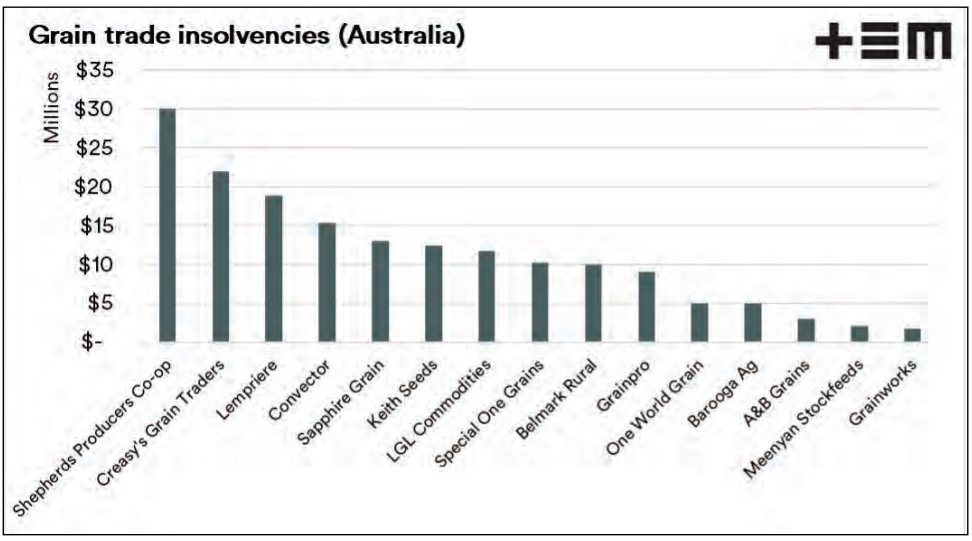
Does the provider adhere to the pool code of conduct?
Is the pool provider a member of Grain Trade Australia, and do they adhere to the pool code of conduct? A pool provider adhering to the pool code of conduct has outlined that they will follow a strict set of principles. Whilst this is not a guarantee of performance, it is a sign of an organisation which takes compliance seriously.

Counterparty Risk

In recent years the Australian grain industry has been rocked by grain traders going into liquidation. Generally, resulting debts are left unpaid, with both growers and other traders losing money.

The total value for the insolvencies for recent years is A$170m. This total value is not great when compared to the overall value of the grain trade in Australia. The impact on individuals, especially farmers, is enormous.

The following page contains some tips and warning signs which may assist in reducing the risk of being a victim of a default.



Tip 1. Paying well above the market
The market is the market; there is generally little difference between buyers. A trader's capacity to buy is based on their ability to sell/manage the risk of their position. This means that there is little opportunity for buyers to be substantially higher than the pack.

There have been examples of buyers offering substantially higher prices than other buyers, then later going into administration.

There are some exceptions such as buyers paying up during harvest in order to fill a vessel. In general, though, if a trader – especially a small one – is offering a substantial premium, have a think about how they can show that price.

Tip 2. Counterparty Insurance
It is possible to take out counterparty insurance when selling grain. There are a number of insurance companies which offer this as a service.

These insurance policies are relatively complicated; however, it will provide some protection if the buyer goes bust. This insurance will generally have to be taken out prior to entering into a contract. It is important to note that there will likely be an excess on these products, which despite providing more than the insolvency process will still be a significant cost.

Tip 3. Online trading
In recent years online transacting of physical grain has come of age in Australia. There are a few offerings, two of which are below which offer a form of security over the grain. Clear Grain Exchange (CGX) is the oldest online exchange which provides the ability to trade at most bulk handling facilities in Australia. The title of the grain is held with a custodian, which means that if the buyer goes bust, the grain stays under the control of the seller.

A large proportion of grain insolvencies tend to occur in grain outside of the bulk handling system, i.e. ex-farm or delivered homes. It is also possible to route these type of contracts through CGX.

GrainCorp released a similar offering in recent years called CropConnect. CropConnect provides the ability to have secured payments with retained title but only betweeen eligible growers and approved buyers. This service is available solely through GrainCorp sites.

Tip 4. Don't put all your eggs in one basket
It is a basic tenet of risk management – spread your risk. When constructing a portfolio of shares, it is advisable to have a wide mix in differing fields. This way if the market moves, your entire portfolio shouldn't be disrupted.

The same occurs when selling grain. If you have sold all to one buyer and they go belly up, you have lost everything. If your trades are spread across many, then you will feel a reduced impact in the event of insolvency.

Tip 5. Research and choose wisely
Talk to others in your region to find out if the buyer is paying on time.

Check out the buyer on Google/social media. Are there negative reviews/commentary about the buyer?

Although a credit check-in may not show any red flags, for a small amount of money, it may give peace of mind. A buyer with assets (bulk handler etc.) will have more for creditors to go for in the event of insolvency.

Whilst there are no guarantees in life, these are some actions which can be taken to reduce the potential of being impacted by a buyer defaulting.

Using derivatives as a risk management tool

Generally, risk for a cropper can fall into two broad categories of production risk and price risk. Fortunately, farmers are generally pretty good at managing risk, particularly when it comes to production risk.

Farmers can spend time prior to seeding preparing the soil with the help of consultants, like an agronomist, to ensure it has the necessary minerals and nutrients for good crop growth prospects. They can plan out a schedule of weed and pest maintenance during the growth phase of the crop to help enhance yield at harvest.

However, when it comes to managing price risk some farmers are often hesitant to seek help from consultants to find out about the available methods to manage their price risk or to plan ahead and have a strategy in place to market their produce.

A farmer that waits until near or after harvest to decide what to do with their crop is akin to a farmer not worrying about fertilising prior to seeding or not spraying during the crop's life cycle.

This section of the report will provide an insight into price risk management, and examine a number of strategies which can be used to reduce price risk.

Price Risk Management

Managing the price risk of the commodity that you produce doesn't need to be difficult nor complex. Indeed, many farmers already enter into a form of price risk management by using forward contracts.

Many producers would be familiar with this forward contracting process, whereby the farmer enters into a legally binding contract to deliver a specified volume of a commodity, of a specific type, to a purchaser at an agreed price for an agreed date in the future.

However, forward contracts can have their limitations in terms of finding a suitable buyer in the right location for the right price and the right contract delivery time frame. Thankfully, there are alternatives that can be used to manage price risk.

When assessing price risk the producer usually thinks of the downside risk of prices easing either before they have the product ready for sale or before a forward contract can be negotiated. However, there is also the risk of locking in a sale price too early and having the price subsequently rise, thereby creating a missed opportunity for greater margins.

There are two alternatives to using forward contracts when selling your crop. Namely, a swap or an option.

Swaps

Swaps involve the use of a derivative or futures contract, which are traded on a commodity exchange like the Australian Stock Exchange (ASX) or the Chicago Mercantile Exchange (CME) to lock in a future selling price for your crop.

While many futures contracts are able to be settled with physical delivery of the relevant commodity this need not always be the case. A futures position can be closed out prior to settlement in order to cash settle any difference in price. Furthermore, some futures contracts are strictly cash settled and involve no physical delivery of product, but these futures contracts can still be used to manage price risk.

Consider the following example of a wheat swap.

It is July 2020 and a farmer estimates that they will have 100 tonnes of wheat to sell in early January 2021. The ASX wheat contract unit size is 20 tonnes per contract, so the farmer decides to sell 5 contracts at the current market price for January 2021 delivered wheat at $300 per tonne.

To keep it simple, let's assume the current spot price of wheat in July 2020 is also $300 per tonne and the futures curve (the price that wheat can be traded at for a selection of future dates) is flat.

It no longer matters now what happens to the price of wheat from July 2020 until January 2021 as the farmer has locked in a price of $300 per tonne. If the wheat price has declined to $280 per tonne in January 2021, the farmer is not disadvantaged as they have a contract to sell their wheat at $300.

However, if the wheat price in January 2021 is $320 per tonne the farmer cannot benefit from the price gain as they had already agreed to sell their wheat for $300 per tonne. It will not matter if the farmer settles the futures contract by physical delivery or by closing out their futures position and cash settling, the net result will be the same – a sale price of $300 per tonne.

A trade summary of this scenario is demonstrated below:
Physical delivery of wheat futures contract

Date	Action	Result	Current Wheat Market Price
July 2020	Farmer sells 5 wheat futures contracts at $300		$300
January 2021	Farmer delivers wheat	Farmer receives a price of $300 per tonne as per the futures contract	$280
January 2021	Farmer delivers wheat	Farmer receives a price of $300 per tonne as per the futures contract	$320

Cash settlement of wheat futures contract (wheat price decline)

Date	Action	Result	Current Wheat Market Price
July 2020	Farmer sells 5 wheat futures contracts at $300		$300
January 2021	Farmer buys 5 wheat futures contracts at $280	Farmer receives a profit of $20 per tonne on the futures contract trade	$280
January 2021	Farmer sells wheat locally at $280 per tonne	Farmer receives a price of $280 per tonne from the sale plus the $20 per tonne futures trade profit, net price achieved $300 per tonne	$280

Cash settlement of wheat futures contract (wheat price rise)

Date	Action	Result	Current Wheat Market Price
July 2020	Farmer sells 5 wheat futures contracts at $300		$300
January 2021	Farmer buys 5 wheat futures contracts at $320	Farmer receives a loss of $20 per tonne on the futures contract trade	$320
January 2021	Farmer sells wheat locally at $320 per tonne	Farmer receives a price of $320 per tonne from the sale less the $20 per tonne futures trade loss, net price achieved $300 per tonne	$320

Options

There is some level of mystery and confusion around the use of option contracts, sometimes called minimum price contracts, and this often stems around the use of different terminology and financial market jargon.

However, in its simplest form an option contract is merely a swap where the producer pays a fee to enable them to walk away from the contract should the future price movement go in their favour.

In essence, and using the previous swap example, if the price of the wheat in January 2021 was trading at $280 the grower takes up their "option" to enforce the contract and deal at $300, which was the price they locked in originally in July 2020.

However, if the price of wheat in January 2021 was at $320 the grower has the "option" to walk away from the contract, thereby not selling at $300 and taking advantage of the higher current market price of $320.

In order to have this "option" to sell at $300 if it suits or walk away from the contract if it doesn't suit, the grower has to pay a fee. This fee is called the option premium and the size of this fee can vary according to the specifics within the option contract.

For the example demonstrated above, assume the premium paid by the grower was $2 per tonne for an option to sell wheat in January 2021 at $300/t. The net result of the option trade would be $298/t ($300 sale price as per the option contract price, less the $2 option premium paid).

Conversely, if the market price was $320 in January 2021 then the net result of the option trade for the grower would be $318 per tonne ($320 sale price achieved by taking the option of walking away from the option contract and selling into the current market less the $2 per tonne premium paid to enter into the option contract).

Option contracts can be entered into either to buy or sell the underlying commodity that the option is based upon. Irrespective of which side of the market is taken, the downside risk of an option contract is limited to the option contract price agreed less the option premium paid. However, option contracts are different to swaps in the sense that if the market moves in the grower's favour at settlement (in this case, higher than the option contract price) then the grower can effectively void the option contract and deal directly into the physical market. In essence, the grower's upside is somewhat unlimited, and they can take advantage of a price rally above the option contract price, achieving a higher market price at settlement less the cost of the option premium paid.

At this point it would be useful to outline some key terminology when it comes to option contracts.

Call – a call option is a contract that allows the owner of the option to buy the underlying commodity, should the option exercise price (also known as strike price) be favourable at the time of contract settlement.

Put – a put option is a contract that allows the owner of the option to sell the underlying commodity, should the option exercise price (also known as strike price) be favourable at the time of contract settlement.

Exercise price or strike price – this is the settlement price that is agreed to by the participants of the option contract.

Spot price – this is the current market price of the underlying commodity that the option is based upon.

Premium – this is the cost paid by the grower when the option contract is entered into.

Exercise date or maturity date – the date when the option contract settles, and the grower decides to enforce the terms of the contract or walk away from their obligations.

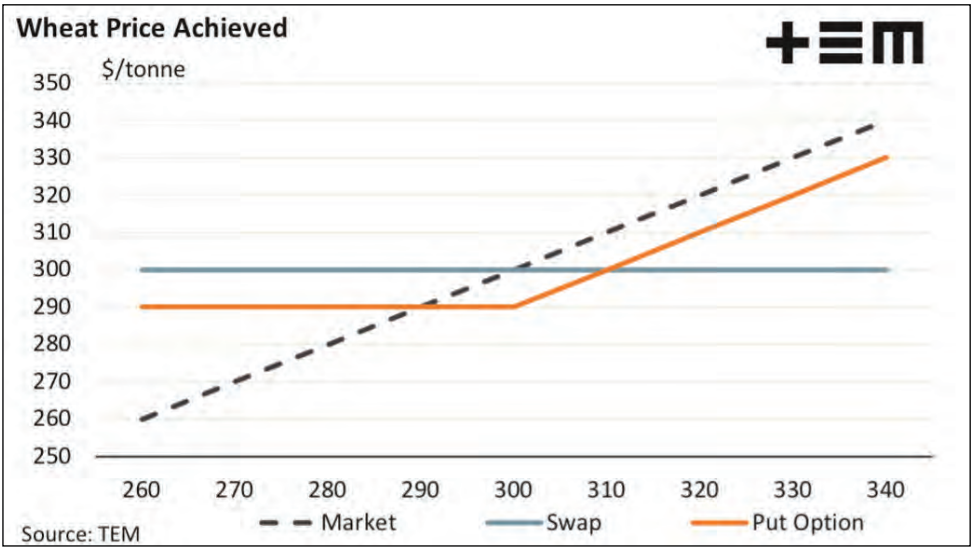
Returning to the example used in the wheat swap scenario we can demonstrate the outcome for the grower based on them entering into an option contract in July 2020 to sell wheat at a strike price of $300 in January 2021 which cost them a $10 premium to arrange.

Wheat put option contract

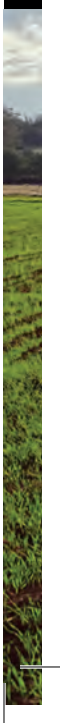
Date	Action	Result	Current Wheat Market Price
July 2020	Farmer arranges an option contract to sell 5 wheat futures contracts at $300 per tonne	Option premium cost is $10 per tonne paid by the farmer	$300
January 2021	Farmer decides to exercise their option to enforce the futures contract and delivers wheat	Farmer receives a price of $300 per tonne as per the futures contract. Net result is a price of $290 per tonne	$280. However, it is irrelevant to the farmer what the price is as no matter how far wheat falls below $300 their worst-case price will be $290
January 2021	Farmer takes the option to walk away from the futures contract and sells their wheat into the current physical market	Farmer receives a price of $320 per tonne as per the current market price, less the $10 premium paid in July 2020. Net result to farmer is a price of $310 achieved	$320. However, if the market price is higher, for example at $340 then the net price achieved is $330.

A payoff chart of these scenarios is as follows:

- A grower without any price management strategy is totally exposed to the market movements and will achieve a current market price when they sell their wheat as per the dotted line
- A grower with a swap will achieve $300 per tonne irrespective of how the market price performs
- A grower with an option will achieve a minimum price of $290 (if the market is at or below $300 at settlement) and a market price less $10 if the market is above $300 at settlement



Using a put option to help manage price risk can be a useful tool but sometimes the cost of the premium isn't cheap. The manner in which option premiums are priced involves rather complex mathematics that is beyond the requirement of this booklet. Nevertheless, option premium prices do take into account factors such as the underlying price volatility in the underlying commodity the option is based upon. So, when prices for wheat are volatile then premiums can become expensive. Think of it like the premium paid for car insurance for an inexperienced P plate driver versus a 40 year old experienced driver. The higher the risk, the higher the premium.



Strategic management using options

There are a multitude of ways that options and combinations of derivative products can be used to tailor a price risk management strategy and professional advice should be sought before considering any individual approach.

Two relatively simple strategies for growers are:

1. Cash and call strategy
2. Low-cost option cap and collar

Cash and call strategy

Imagine a grower that has wheat for sale or will soon have wheat for sale. They are considering if they should sell at the current market price or store the wheat and sell it within the next six months, hopefully at a higher price (less the storage costs).

If we assume that storage costs for six months equate to approximately $15 per tonne, a grower could consider the following strategy instead of storing their grain and waiting for a price increase.

Suppose the current market price for wheat is $300 per tonne. The farmer can sell their grain at this price and in order to continue to have some exposure to the wheat price fluctuation (if there is a rally in prices) they could use some, or all, of the $15 per tonne they would have spent on grain storage to pay a premium on a six-month wheat call option.

Let's assume that a six-month wheat call option with a strike price of $300 has a premium cost of $15 per tonne. Instead of storing the wheat, the grower could sell and get access to their money, but still be able to benefit if the wheat market price goes up over the next six months.

Wheat cash and call strategy

Date	Action	Result	Current Wheat Market Price
January 2021	Farmer sells their 100 tonnes of wheat at $300 per tonne and arranges an option contract to buy 5 wheat futures contracts at $300 per tonne	Farmer has access to their funds from the wheat sales. Option premium cost is $15 per tonne paid by the farmer	$300
June 2021	Farmer lets the option contract lapse as the market price is lower than the $300 option strike price	Farmer is better off than if he placed the wheat in storage. Selling their wheat now at the current market rate of $280 would achieve a net result of $265 per tonne	$280. The cash and call strategy has protected the farmer from a decline in price
June 2021	Farmer exercises their option to buy wheat futures at $300 per tonne as per the option contract and simultaneously closes out this futures position at the current market price of $320 per tonne	Farmer receives the $300 per tonne for the physical wheat sold in June plus the $20 per tonne profit from the call option trade (less the $15 premium cost). Net result is a price of $305 achieved	$320. The farmer has been able to benefit from a price rise in wheat over the six-month option period, akin to if they held the physical wheat in storage

Low-cost option cap and collar

Options are not cheap products. When considering price risk management strategies involving options, the premium cost can become quite expensive, particularly over longer time horizons. A strategy that can be used to enable the producer to access some of the increased movement in grain price but limits their downside price risk is called a cap and collar. Effectively, the grower sells an option contract to earn the premium and uses that premium to buy another option contract, from which they can benefit in any potential price rise. This strategy can be at a much cheaper premium cost than arranging a put option or cash and call strategy.

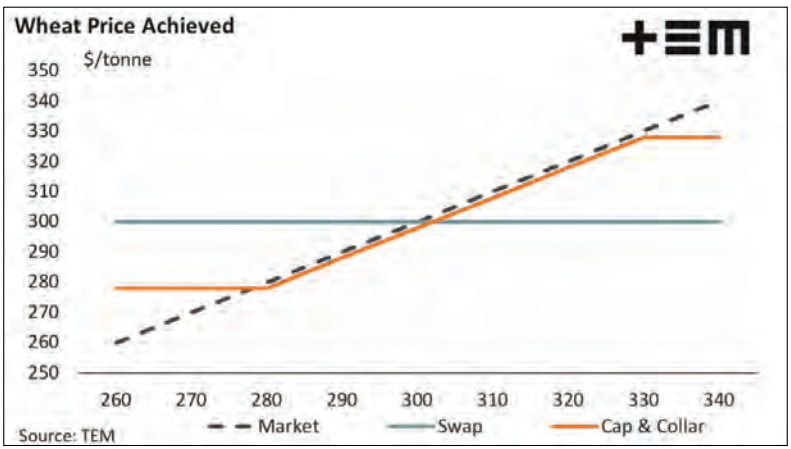
Let's assume the current market price for wheat is $300. A producer can arrange the following option structure:

- Buy a put option with a strike price of $280 per tonne, that has a premium cost of $10 per tonne
- Sell a call option with a strike price of $330 per tonne, that has a premium fee earned of $8 per tonne

The net premium cost to the producer of this option collar strategy is $2 per tonne. Under this strategy the grower has exposure to the wheat market price fluctuations for the period of the option maturity between $280 and $330 per tonne. If the market goes below $280 the worst case to the grower is $278 per tonne ($280 less the $2 premium), no matter how far the market falls.

If the market goes up the grower can benefit in the price rise up to $330 per tonne. However, any price movement above this the grower will not participate. The best net outcome the grower can achieve is capped at $328 per tonne ($330 less the $2 premium).

The chart below illustrates the payoff for the producer under this strategy compared to using a swap.



Under this cap and collar approach the producer can participate in some of the market price movement but the extremes are limited. They agree to forego some of their upside price potential to limit their downside risk with a cheap option strategy.

Derivative products like swaps, futures and options can be confusing, but with the right advice and guidance a producer can become familiar with their use and better understand how they can incorporate these products into their price risk management strategy.

Analysis tools

The role of a farmer is varied, with many tasks that require attention daily, from agronomy to repairs. It is therefore not expected that farmers will spend vast amounts of time analysing markets.

However, it is vital to maintain an understanding of what is transpiring in the grain market. There are a series of analysis tools which provide a very quick and straightforward insight into the market, without expending substantial time resources.

Through using these tools, in conjunction with reading your favoured information sources, you will be able to remain abreast of developments. This will improve your ability to make the best decisions for your farm, and hopefully not be surprised by market moves.

The areas chosen for their ease of use and effectiveness are:

- Percentiles
- Baltic Dry Index
- Forward Curve
- Seasonality
- Volatility
- The Commitment of Traders (CoT) report
- Correlations
- Stocks to use ratio

Percentiles

Deciles are an important reference tool to gain a summary of the market structure. A decile table is one of the quickest ways of gaining insight into the market. If you were told that the price was A$300/mt, that doesn't really tell you anything about how that relates to historical pricing.

A decile measures how often, historically, prices have fallen below (risen above) a particular pricing point. It gives a brief snapshot of whether a market has more upside or downside and how large this may be.

For example, if a price is at its 45th decile, this means that 45% of the time prices have been below that value and 55% of prices higher. Similarly, a 99% percentile means that 99% of the time, prices have been lower and higher just 1% of the time.

Decile tables should always display the timeframe which they cover. If deciles are not taking into account inflation 5 to 10 years, the maximum time frame should be used. Wherever possible, deciles should be viewed in nominal terms (not taking inflation into account) and in real values (taking inflation into account).

The table below is an example of a decile table:

2010	Adelaide APW1	Adelaide APW1	Chicago Futures	Kansas Future	Chicago Basis (Adelaide)	Kansas Basis (Adelaide)
Min	180	180	180	183	-21	-41
10%	214	209	209	204	-4	-19
20%	240	238	238	219	2	-9
30%	255	252	252	230	11	-3
40%	263	262	262	241	18	2
50%	274	272	272	250	23	12
60%	283	283	283	259	29	23
70%	297	295	295	272	37	33
80%	311	307	307	283	46	54
90%	332	324	324	300	61	93
Max	433	405	405	354	167	165

This table should only be used as a guide for understanding percentiles tables. This is current between 2010 and February 2021.

Baltic Dry Index

The Baltic Dry Index (BDI) is an indicator of bulk shipping costs. It is important for several reasons, especially for those involved in bulk industries such as grain or fertiliser.

The BDI is an indicator which is released daily by the Baltic Exchange in London. This index tracks 20 routes, over three different dry bulk vessel classes (capesize, panamax & supramax). The exchange gathers assessment of freight rates from a qualified panel, to then form the index.

The index, therefore, provides a guide to the cost of shipping bulk goods such as grain, minerals or fertiliser around the world. Through using the BDI, we are able to gain an insight into whether freight is becoming cheaper or more expensive.

As an example of the importance of freight rates to general pricing, when the cost of shipping increases, then this makes geographic advantages critical.

The BDI also holds a further, and likely equally important role. The BDI is considered by many economists to be a leading economic indicator.

As mentioned previously the BDI represents bulk cargoes, which typically require further processing. A good example is iron ore, which is shipped to other nations to produce steel. A higher BDI signifies increased demand for bulk vessels, and as a proxy for the materials which they transport.

A higher BDI therefore points to an indication of future economic growth, and vice versa. This can be seen in the early 2000s during the commodities boom. During this period of accelerated economic growth, there was a massive demand for bulk carriers which drove the BDI to a record 11793.

Forward curve

The forward curve is a chart which we will often refer to in TEM articles, as it provides a quick view of the market. The forward curve details the price for each of the contract expiry date for the futures contract of a commodity.

The curve gives an instant snapshot of where you could theoretically buy or sell the commodity.

The forward curve can be in either contango or backwardation. In typical financial/economic gobbledygook fashion, the terms sound more complicated than reality. Although there are a range of economic theories behind contango and backwardation, we will try to explain succinctly below.

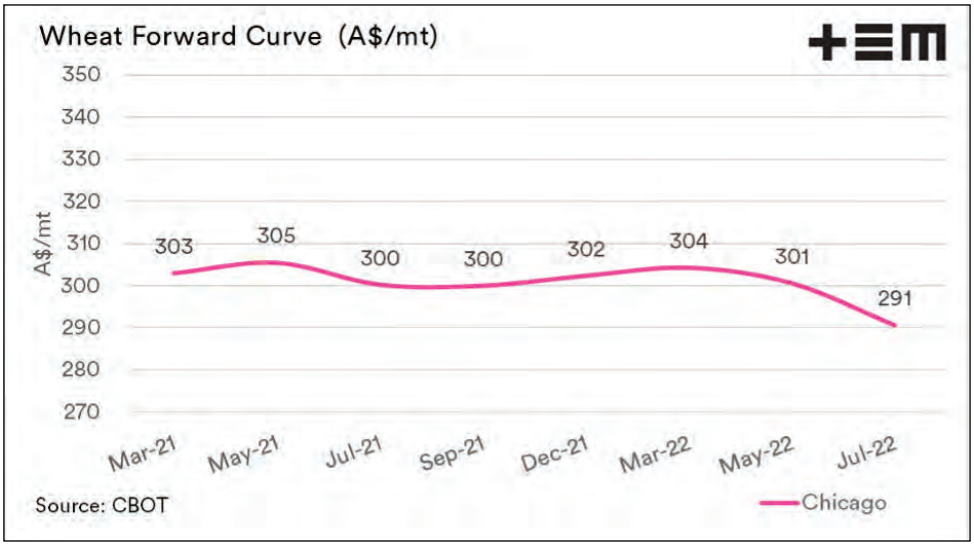
Contango:
A forward curve is in contango when the forward futures months are at a premium to the spot level. In the above chart, the market is in contango, as each of the months ahead is higher than the September contract.

The futures market in contango is effectively paying a premium for the seller to carry the crop.

Backwardation:
As you might expect, backwardation is the opposite of contango. The forward curve is in backwardation when the forward market is trading at a discount to the spot market.

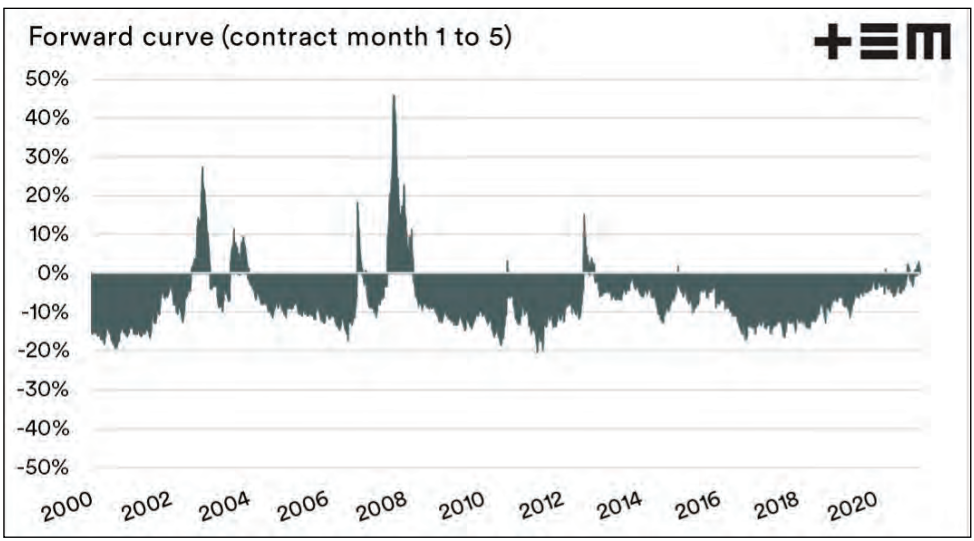
When in backwardation, the market is effectively wanting access to grain as soon as possible and does not want to pay you to carry the grain.

At the time of writing, the chart on page 40 shows a market that is currently flat to falling (or backwardation). The price of Chicago futures for December 2021 is at A$301, which is lower than the current spot price of A$303.



It is however very unusual to see a market with this structure. The chart below shows the discount or premium between contract period, and the contract 5 periods forward. The chart when below zero is a discount for the spot versus the forward period.

As we can see between 2000 and present, the forward months have very rarely been at a discount. There are two practical ways farmers can use the forward curve to their advantage, which are outlined below.



Banking the carry
In recent years, the wheat futures market has tended to be in contango and effectively provided a premium versus spot. This offers the opportunity to lock in futures on the forward curve, i.e beyond the current harvest at a premium to spot.

It is important to note that the price can (and will) change between taking out a contract and when it expires. However, if you are locking in a price you are happy with, that becomes less of an issue.

Through using the forward curve, you can 'bank' the carry on the proviso that you are locking in a suitable value.

Checking a forward price
If you receive a forward price from your local buyer, you can use the forward curve to check whether the price is attractive.

Let's say the price on offer for the following December is A$315/mt delivered port. This may seem like an attractive price. However if the futures contract for December is at A$320, due to the carry on offer, then this means the buyer is purchasing your wheat at a basis level of negative A$5/mt.

Historically basis in all Australian ports has been positive. Therefore by selling physical with a negative basis level, you potentially leave 'value on the table'.

At this point, it may be better to negotiate a better price with the knowledge that they are offering you a basis level which benefits them, but not you.

Alternatively, it may be worthwhile using a strategy where you sell futures, and lock in the basis level at a future date.

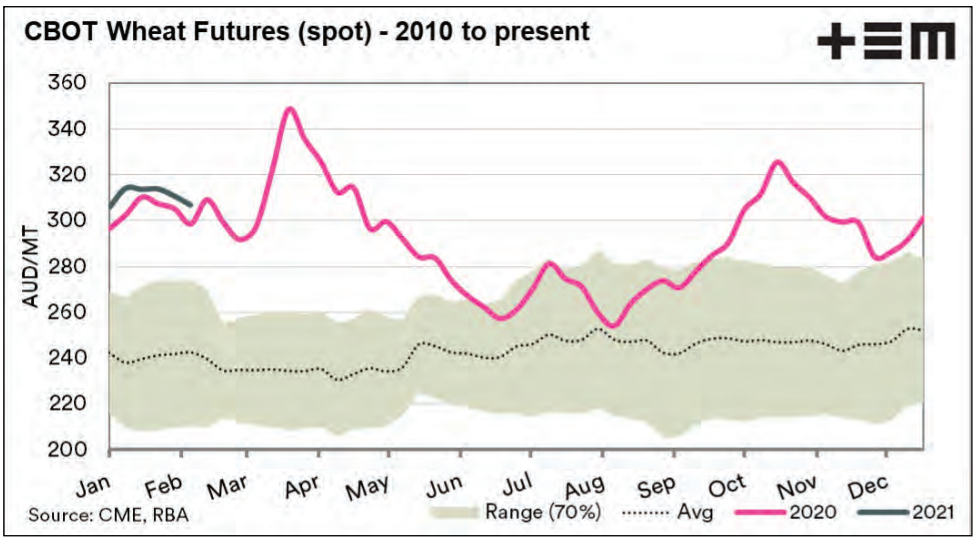
Seasonality

Examining the price seasonality indicates the performance of a commodity. They can be used to determine whether commodities have a seasonal pattern. This seasonal pattern can then be used to assess trading opportunities.

In these seasonality charts, rather than use a min/max for the seasonality banding (shaded area) we use a 70% range. The 70% banding is used to remove the extremes in the marketplace, which provides a better indication of the seasonality instead of a min/max, which can be extremely volatile.

In these charts, we also overlay the average for the timeframe and the recent seasons. In all commodities, the seasonality, – when presented over a long enough time frame – tends to become relatively neutral.

In the chart below, we can see that the current pricing levels are well above what would be considered the seasonal norm (yellow banding). From a seasonal point of view, the long term pricing tends to show a spike in the May-August period, whilst on average being lower for most of the first two quarters.



Volatility

Many people fear volatility, however, it can bring benefits to farmers. It is also a very confusing topic. The term volatility often brings thoughts of a rapidly rising or falling market. This is not the case. It is important to note that volatility does not equal higher prices; it refers to the range of trading.

A market moving up by A$1 every day for a week is less volatile than one moving up and down a A$1 each day for a week.

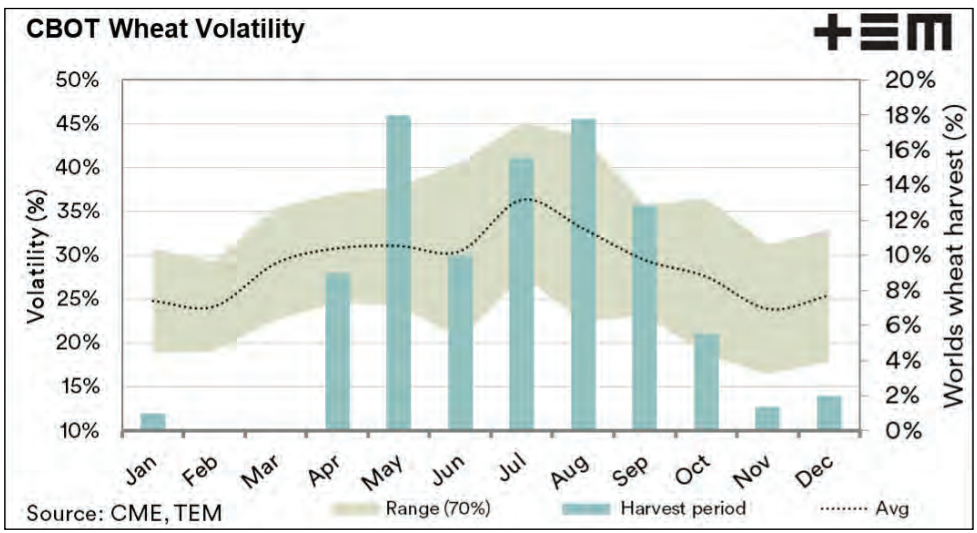
Approximately 90% of the world's wheat crop is grown in the northern hemisphere and will be harvested between March/April and October. Due to the large volume of grain due to be harvested in those months, all eyes are on our northern cousins.

If a disaster occurs, especially in one of the critical regions such as the Black Sea or North America, then it will have a correspondingly significant impact upon prices.

If we use CBOT as an indicator of global wheat markets, the volatility increases towards the middle of the year. The chart below shows the volatility range since 2010, and it is clear that volatility reaches its peak during July.

This volatility occurs because any news report of worsening or improving crop conditions leads to movements in pricing. At times this movement can occur as speculators look to take profits, leading to short-term corrections.

In the preceding five seasons to 2020 the year's highest futures prices were achieved during June/July.



Commitment of traders

As a grower, you are naturally 'net long'. You will grow a commodity that will at some point in time be sold; you have a supply (long) of a commodity. Conversely, if you are a consumer of grain, you are generally 'net short' and you need to buy a commodity.

A speculator can be either long or short. Speculators trade the market based upon their viewpoint. They have no interest in the physical production or consumption of the commodity; they just want to make money from a position.

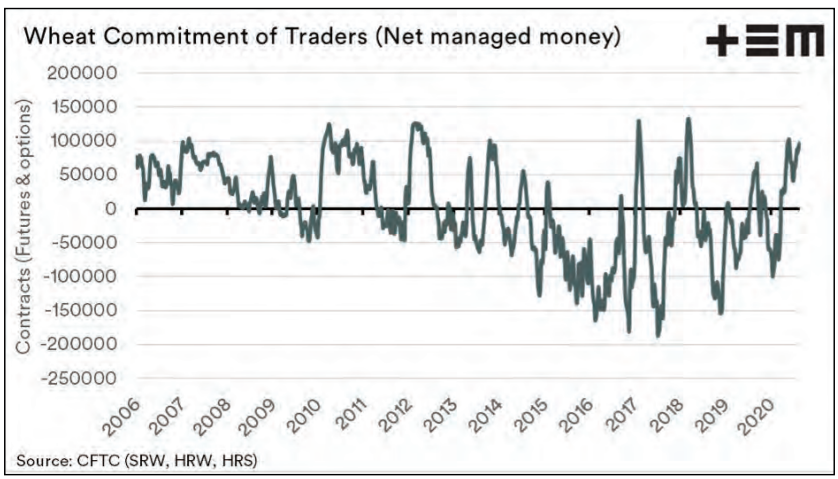
Gaining an understanding of how speculators are positioned is valuable. It provides us with a market signal and gives an insight into their sentiment of the market. The Commodity Futures Trading Commission (CFTC) provides a weekly report called the commitment of traders (CoT), which provides this insight.

The CoT report is released every week, on a Friday. The weekly data is the positions held as of Tuesday; therefore, there is a delay.

The full report provides details on how many contracts are short (sold) or long (bought) positions for a range of different trader types. The type of trader that we are interested in viewing is the 'managed money', which is a proxy for speculators.

When we examine the report, we add the sold and bought positions for futures (and options), to provide a net position. This gives us an indication of the overall market sentiment. When the market has a negative position, then the speculators overall are bearish on the market, and vice versa when positive.

In the chart below, the combined position for Minneapolis, Kansas and Chicago wheat derivatives is displayed. At the time of writing, we can see that speculators have increased their long position in recent weeks. For example last week they were -60807 contracts short, this week they are -36915 contracts short.



Correlations

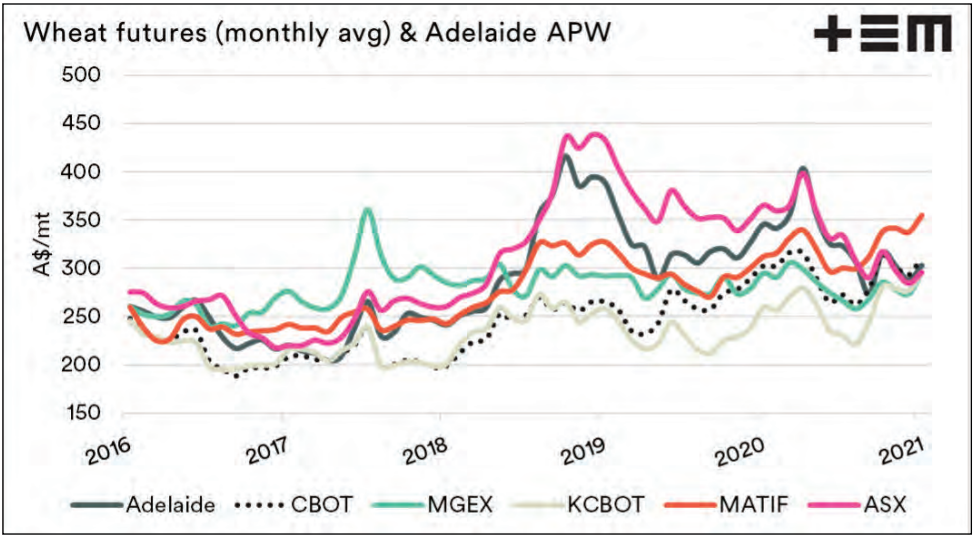
There are many ways to protect from price risk, and one of them is through the use of futures contracts. These tools are generally underutilised by Australian producers but are a valuable resource.

There are numerous futures exchanges and contracts around the world which could feasibly be used for hedging wheat. The most commonly referred to exchange globally is CBOT and locally ASX. There are however others which are available.

The chart shows the price of Kwinana APW against a selection of contracts since 2016.

From this chart, we can see that whilst there is a spread between each of the contracts, they tend to follow a general pattern. There will be times when some contracts become less correlated than others due to local factors here or in the futures locality.

In the case of ASX in 2018 to mid-2020, it was trading higher than the other futures contracts due to the Australian drought.



Old adages that apply in hedging correlation do not equal causation and past performance is not an indicator of future performance.

That being said, it is always worthwhile looking into the data to see which hedging tools have traditionally had the strongest correlation.

If the hedging tool has a strong correlation, it is more likely to relate to your own price risk. There is no point protecting price risk with a product which moves in the opposite direction to your own local pricing.

The table below shows the correlations between the Adelaide price and a selection of futures contracts.

A correlation of 1 implies a perfect relationship, with 0 being no relationship. The top 3 contracts which correlate with the Adelaide APW are:

- ASX 0.96
- MATIF 0.86
- CBOT 0.77

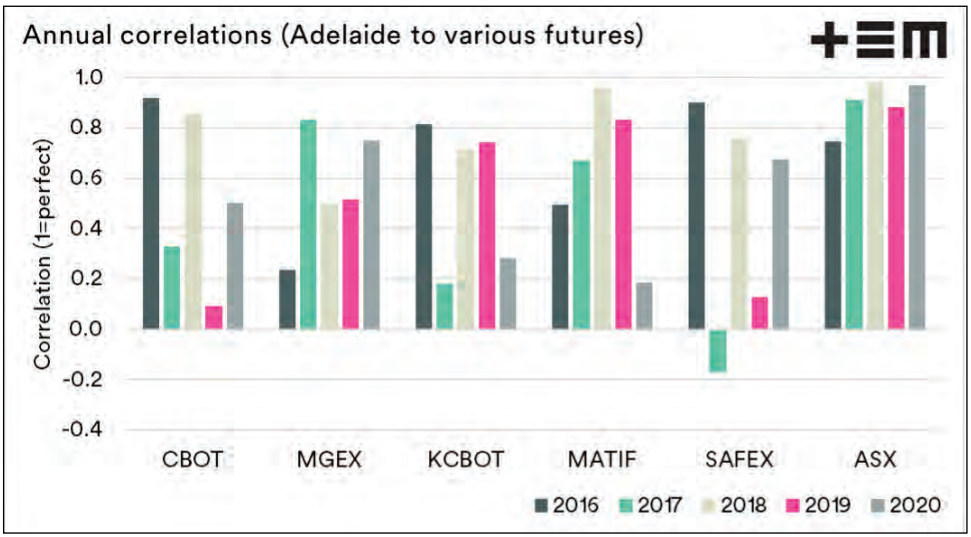
Correlation table - Adelaide (APW1)

	Adelaide	CBOT	MGEX	KCBOT	MATIF	SAFEX	ASX
Adelaide	1.00						
CBOT	0.77	1.00					
MGEX	0.40	0.31	1.00				
KCBOT	0.71	0.87	0.40	1.00			
MATIF	0.86	0.89	0.39	0.86	1.00		
SAFEX	0.57	0.70	0.25	0.45	0.59	1.00	
ASX	0.96	0.68	0.37	0.58	0.78	0.56	1.00

Whilst the overall correlation over time is valuable, it is also important to examine the variability of that correlation. Suppose the correlation is regularly high, but occasionally loses correlation. In that case, a high risk remains that any risk management strategy will be adversely affected.

In the chart below, we can see that the ASX contract has a high correlation and that it has maintained this throughout the last five years. A good example of the opposite is the SAFEX (South Africa) contract. In 2016 it maintained a very strong correlation, in 2017 it had a poor correlation.

It is logical that this would be the case as the ASX contract is physically delivered. If hedging using ASX, then based on historical data, it is less likely to have a large degree of variability to your physical price.



Stocks to use

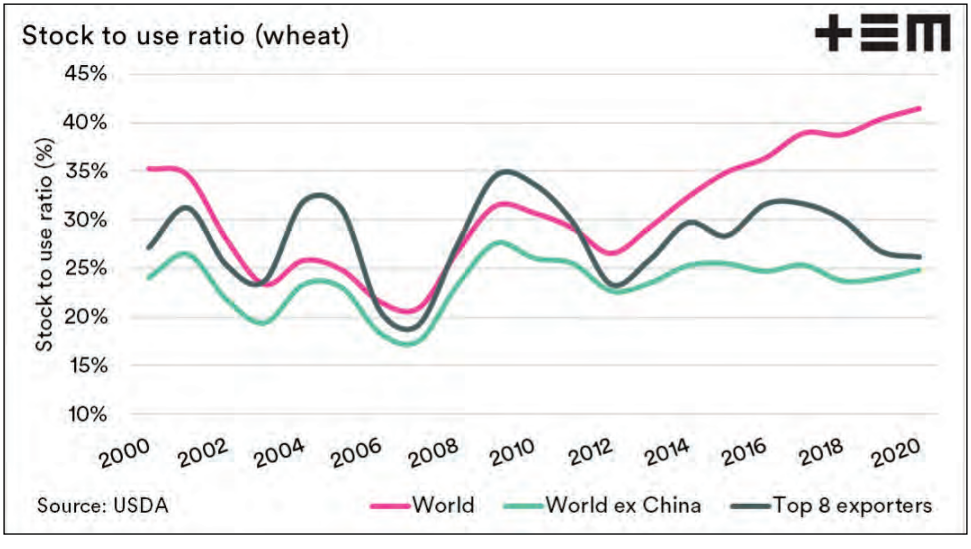
The stocks to use (STU) ratio is a crucial barometer which is used to provide an insight into the relationship between supply and demand.

The STU ratio is displayed as either a percentage or a number of days. There is no right or wrong to which option of the display, as both indicate the same number.

The higher the ratio, the better supplied the world is. As an example, in the chart below, wheat is at 41.5%. This means that the world has enough wheat in stores to meet 41.5% of a year's demand in theory.

An STU chart will regularly display alternate STUs along with the global headline number. The chart below includes the world excluding China and the exporting nations. The reason for excluding China is that they as a nation hold approximately 50% of the worlds wheat stocks and are unlikely to export their stocks. This means that it is most unlikely (but not impossible) that this volume will be available to the global market.

The top exporters are responsible for the majority of global trade flows in wheat. Suppose these nations start to have very tight ratios. In that case, it is likely to be a sign that global availability will diminish.



Term	Meaning
American-style option	An option that can be exercised at any time prior to its expiration date. See also European-style option.
At-the-money / ATM	A term that describes an option with a strike price that is equal to the current market price of the underlying commodity. The spot price is equal to the strike price.
Backwardation	A market where the forward months are at a discount to the present month (or inverse).
Basis	The difference between the physical price and a futures price.
Bearish	A view that the market will fall.
Bid	An offer of a price from a buyer
Bullish	A view that the market will rise.
Call option	An option contract that gives the owner the right, but not the obligation, to buy the underlying commodity at a specified price (its strike price) for a certain, fixed period (until its expiration).
Call option	An option contract that gives the owner the right, but not the obligation, to buy the underlying commodity at a specified price (its strike price) for a certain, fixed period (until its expiration). For the writer of a call option, the contract represents an obligation to sell the underlying product if the option is exercised.
Carry	The cost of holding grain, can include storage and finance costs.
CBOT	Chicago Board of Trade (the original name of Chicago Mercantile Exchange).
CIF	The quoted price for the goods including freight and insurance costs delivered to final destination.
Close a position	When hedging, the closure of your position, through taking out the opposite action from the opening of a position (either buy or sell).
CME	Chicago Mercantile Exchange (usually referred to as CBOT).
Collar	A protective strategy in which a written OTM call and a long OTM put are taken against an underlying long position and are exposed to potential falling prices. The options typically have different strike prices (put strike lower than call strike).
Contango	A market where the forward months are at a premium to the present month (or in carry).
Correlation	The degree to which two data series vary. A correlation of 1 equals a perfect relationship, with 0 no relationship.
Counterparty Risk	The risk that the seller will not be paid by the buyer.
Currency risk	The risk that an appreciation in the A$ will negatively impact on the price received by growers.
Decile	Also called a percentile.
Deferred payment	A contract where payment is deferred to a future date after delivery. See also counterparty risk.

Early exercise	A feature of American-style options that allows the owner to exercise an option at any time prior to expiration.
Estimated pool return	An estimate of the return provided by a pool manager.
European-style option	An option that can be exercised only during a specified period just prior to expiration. See also American-style option.
Exercise	To invoke the rights granted to the owner of an option contract. In the case of a call, the option owner buys the underlying commodity. In the case of a put, the option owner sells the underlying commodity.
Exercise price	The price that the owner of a call option can purchase, or the owner of a put can sell, the underlying commodity. Used interchangeably with strike or strike price.
Export parity	A situation where Australian pricing is competitive versus overseas values.
Fixed grade contract	A contract for one specific grade.
Floating multigrade contract	A physical contract with a base grade, with the option to deliver alternate grades. In a floating multigrade, the premiums and discounts are not set.
FOB	Free on board. A contract priced FOB includes the cost of loading onto a nominated vessel.
Forward Contract	A physical contract taken out ahead of harvest. This can be multigrade or fixed grade.
Futures contract	A standardised contract for grain made through a futures exchange (e.g. ASX, Matif, CME).
GPSA	Grain Producers SA
GTA	Grain Trade Australia
Hedging	Using the futures market to reduce risk in the physical market.
Import parity	A situation where overseas pricing is competitive for entry into Australia. Only likely to occur during drought when domestic premiums (basis) rises.
In-the-money / ITM	A term used to describe an option with intrinsic value. For vanilla options, a call option is in-the-money if the spot price of the underlying commodity is above the strike price. A put option is in-the-money if the spot price is below the strike price.
Intrinsic value	The in-the-money proportion of an option's premium. See also in-the-money.
Inverse	A market where the forward months are at a discount to the present month (or backwardation).
KCBOT	Kansas hard red winter wheat futures traded on Chicago Mercantile Exchange.
Long Position	A strategy which benefits from a rising market. A farmer is generally 'long' grain.

Mark-to-market	An accounting process by which the price of financial products held in an account are valued each day to reflect the closing price. As a result, the equity in an account is updated daily to reflect current market prices.
Matif	French wheat futures based in Paris
Multigrade contract	A contract with a base grade with the option to delivery other grades. The different grades will offer a discount or premium dependent upon quality.
Offer	An offer of a price from a seller.
Option	A contract that gives the owner the right, but not the obligation, to buy or sell a commodity at a fixed price (the strike price) for a specific period of time (until expiration). The contract also obligates the writer to meet the terms of delivery if the owner exercises the contract right.
Option writer	The seller of an option contract who is obligated to meet the terms of delivery if the option owner exercises his or her right.
OTC option	An over-the-counter option is traded in the over-the-counter market. OTC options are not listed on an options exchange and do not have standardised terms. These are to be distinguished from exchange-listed options, which are standardised.
Out-of-the-money / OTM	A term used to describe an option that has no intrinsic value. The option's premium consists entirely of time value.
Payment Terms	The payment terms which are agreed when engaging in a contract.
Payoff diagram	A chart of the profits and losses for a particular options strategy prepared in advance of the execution of the strategy. The diagram is a plot of expected profits or losses against the price of the underlying security
Percentile	The value of a variable below which a certain percent of observations fall. For example, the 15th percentile is the value below which 15% of the observations may be found.
Political risk	The risk of a political decision having an adverse impact.
Pool	A marketing tool which combines your grain with other farmers with the intention of gaining a better return for the farmer than they would otherwise be able.
Premium	Total price of an option paid to the writer of the option by the owner of the option (the buyer of the put or call).
Production risk	The risk of reductions in production between seeding and harvest.
Put option	An option contract that gives the owner the right to sell the underlying commodity at a specified price (its strike price) for a certain, fixed period (until its expiration). For the writer of a put option, the contract represents an obligation to buy the underlying commodity from the option owner if the option is assigned.
Quality Risk	The risk of not achieving the required quality parameters on a contract.
Rally	A market which is rising.
Short Position	A strategy which benefits from a falling market.

Speculator	A trader with no underlying relationship to the commodity. They aim only to profit from the movement of price.
Spot price	The current price.
Stocks to use ratio	A measure of both the supply and demand of a commodity. Expressed either as a % of annual requirements or number of days. A lower STU is supportive of higher pricing (and vice versa).
Strike / Strike price	The price at which the owner of an option can purchase (call) or sell (put) the underlying commodity. Used interchangeably with exercise price.
Swap	A pricing tool purchased OTC through a financial institution, normally a bank. This provides access to the futures market without risking margin calls, however does have a cost. This leaves basis open.
The Commitment of traders report	A report outlining the positions of various categories of traders. It is most commonly used to get an insight into whether speculators are either bullish or bearish.
USDA	United States Department of Agriculture
Volatility	A measure of commodity price fluctuation. Mathematically, volatility is the annualised standard deviation of a commodity's daily price changes.
WASDE	World Agricultural Supply and Demand Estimates. A monthly report providing data on world supply and demand for various commodities.
Washout	A negotiated settlement on a contract when delivery is not possible.

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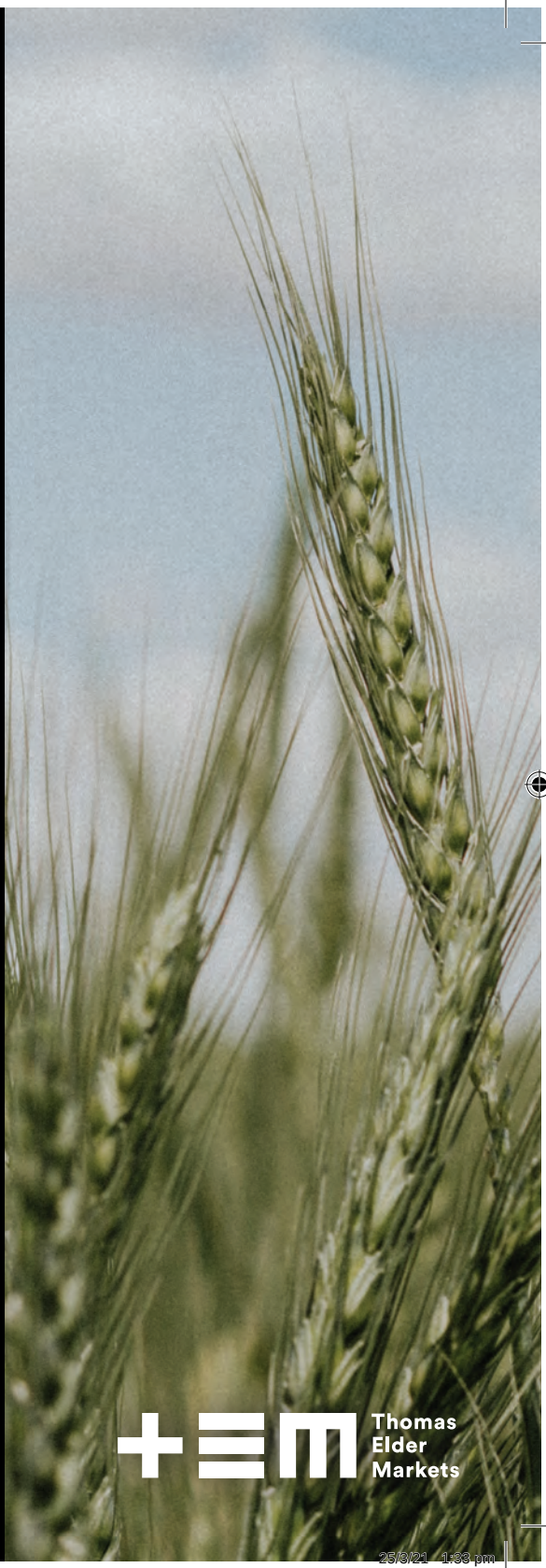

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