

SEPTEMBER 2020

# IN VINO VERITAS

**SOUTH AUSTRALIAN WINE INDUSTRY PREMIUMS AND  
CO-EXISTENCE WITH GM CROP CULTIVATION**



PREPARED BY ANDREW WHITELAW AND MATT DALGLEISH

## Contents

Executive Summary.....	2
Status of GM production .....	3
Distribution of Wine and Canola .....	5
Coexistence of GM Crops and Organic Certified Operations .....	6
Wine Marketing .....	7
Wine Premiums .....	8
Wine Price Spread Comparison .....	10
Thomas Elder Markets .....	15
References .....	16

### Disclaimer

The information contained in this document is given for the purpose of providing general information only, and while Thomas Elder Markets (TEM) has exercised reasonable care, skill and diligence in its preparation, many factors (including environmental and seasonal) can impact its accuracy and currency.

Accordingly, the information should not be relied upon under any circumstances and TEM assumes no liability for any loss consequently suffered.

## Executive Summary

---

There is no evidence that the cultivation of genetically modified crops in wine growing regions has an impact on the marketability of the wine industry. The value of wine is based upon the quality and taste of the wine, the wine variety and brand recognition. The value of wine is neither added to, nor diminished, by the crops which neighbour the vineyards. This sentiment is shared by Wine Australia.

In this analysis, it is demonstrated that co-existence is possible between wine producers and broadacre producers growing genetically modified (GM) varieties. This is highlighted by the fact that the wine production and marketing appears to be unaffected by GM cultivation in states such as Victoria, New South Wales and Western Australia.

Additionally, evidence shows that organic producers can continue operating in states where genetically modified crops are permitted. At present South Australia represents fewer organic operators than Victoria, Queensland and New South Wales. All of these east coast states are significant producers of genetically modified crops.

Analysis of annual average South Australian wine export prices has shown that wine price premiums have been achieved by states with a heavy saturation of GM cropping, such as Western Australia, in key Australian export markets. This suggest that the GM status of a region has little to do with achieving a premium price for the wine that is produced.

Taste is a significant factor in the popularity of wine. In an analysis of James Halliday's top 40 wines, South Australia is strongly represented in the red wine category. Western Australia, a GM producing state, holds a greater proportion of highly rated whites, further reinforcing the notion that wine premiums are attributed to the quality and reputation of the wine, rather than the GM status.

In addition, an assessment of the wine marketing strategies from the websites of the Onkaparinga region wine producers within South Australia demonstrates no use of their GM-free status as a marketing tool. Indeed across the whole of the South Australian wine producing regions it was difficult to find any evidence that wine producers are marketing their products as 'GM-free', nor is there any mention of their product being from a GM-free state on the label. Therefore, it appears spurious to ascertain the existence of a GM-free premium attached to South Australian wine when consumers are unlikely to be aware of this status.

## **Status of GM Production**

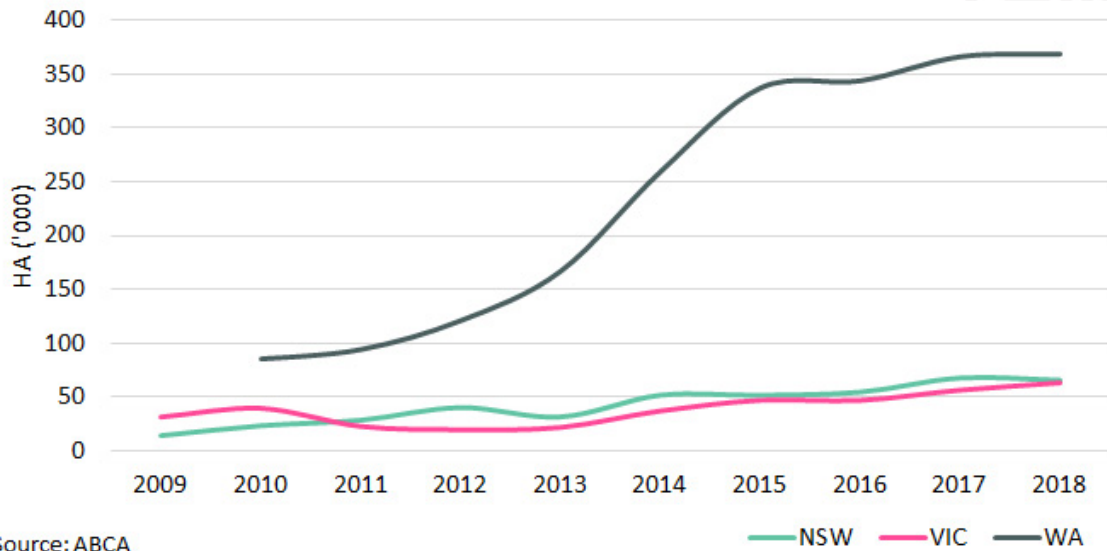
---

Commercial cultivation of genetically modified canola commenced in Australia in 2009. In the initial years after the removal of the GM moratorium, canola will likely be the prime GM crop in South Australia. It is, therefore, appropriate to compare South Australia to other states which actively produce GM canola.

The state with the largest area cultivating GM crops is Western Australia and will generally produce around 50% of the national crop. WA experienced an initial surge in area under GM canola cultivation during 2010 to 2015. However, since 2015 it has stabilised at around 350,000 ha. New South Wales and Victoria did not experience the rapid growth demonstrated in Western Australia, and have typically planted similar areas to GM varieties, of just over 50,000 ha.

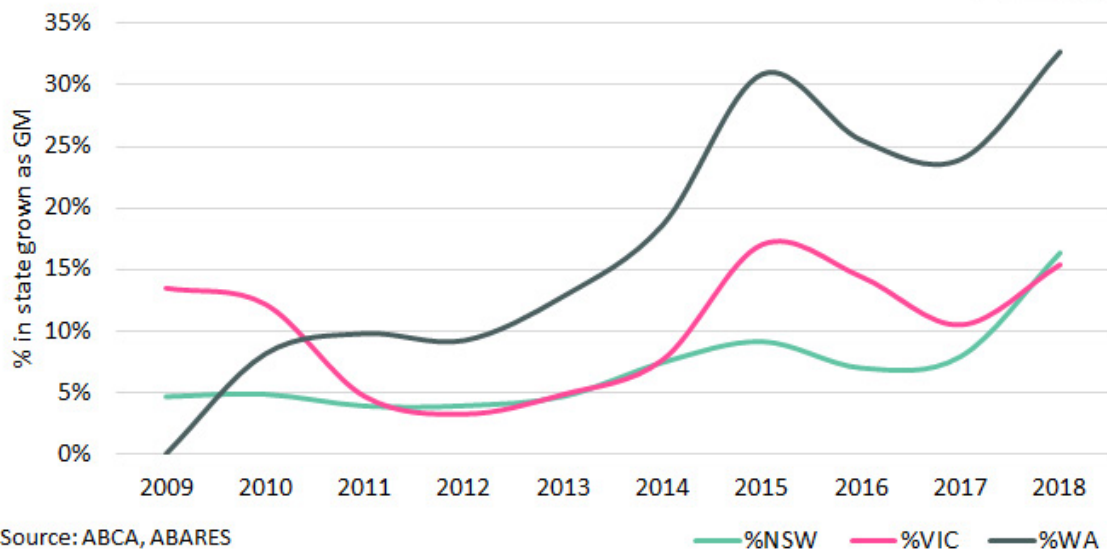
When we examine the percentage of overall canola grown to GM varieties in each state, Western Australian volumes make a considerable overall area planted, at 26% on average for the period 2014-2018. Victoria during the same period has planted 13%, and New South Wales 10% of their canola as GM varieties. This shows that whilst Western Australia plants a larger area due to their overall scale, they also plant more as an overall crop mix.

### Area planted to GM Canola



Source: ABCA

### Percentage of GM Canola



Source: ABCA, ABARES



## Distribution of Wine and Canola

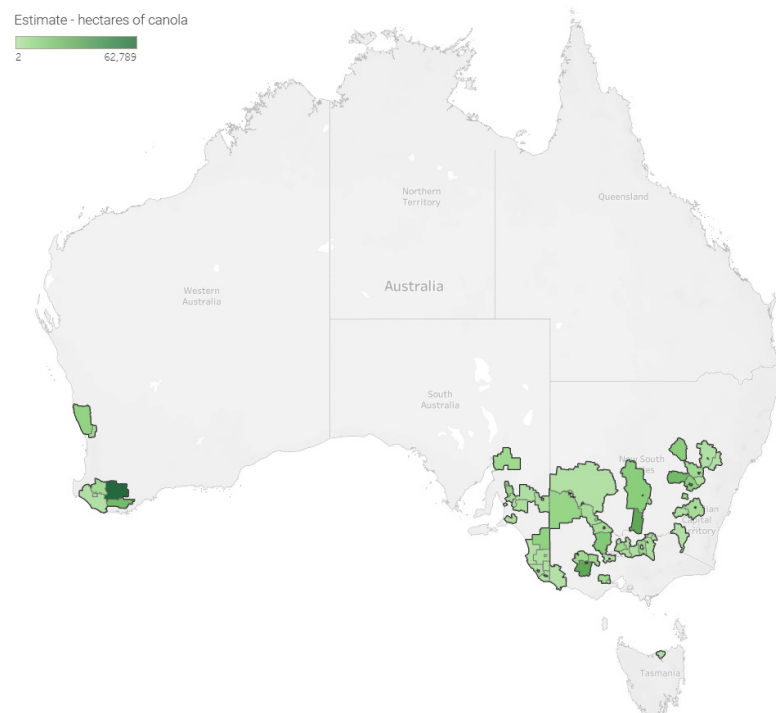
There are areas of significant canola production co-habiting near vineyards. In New South Wales, Victoria and Western Australia, GM crops are permitted. It is highly likely that between 20-30% of these crops are planted close to GM varieties.

There is no publicly available data relating to the composition of the canola crop between GM and non-GM. Although, it is highly likely that GM varieties are planted in wine growing regions outside of South Australia.

As stated earlier, Western Australia has the largest percentage of canola planted to GM, at 26%. In the eastern states, New South Wales has grown 13% and Victoria 10% on average. This percentage split would likely be shared in these regions.

Further clarity on the co-existence of wine and canola, and potentially GM crops, is outlined in the map below.

### Wine regions with canola



The information for this map is sourced from the ABS Agricultural Commodities dataset<sup>1</sup>. The map represents each statistical area (SA2) where there are more than 100 acres of vines for wine production and where canola is also produced.

1. <https://www.abs.gov.au/AUSSTATS/abs@nsf/allprimarymainfeatures/FAC1272BE29F58FBCA2582910013A7D5>

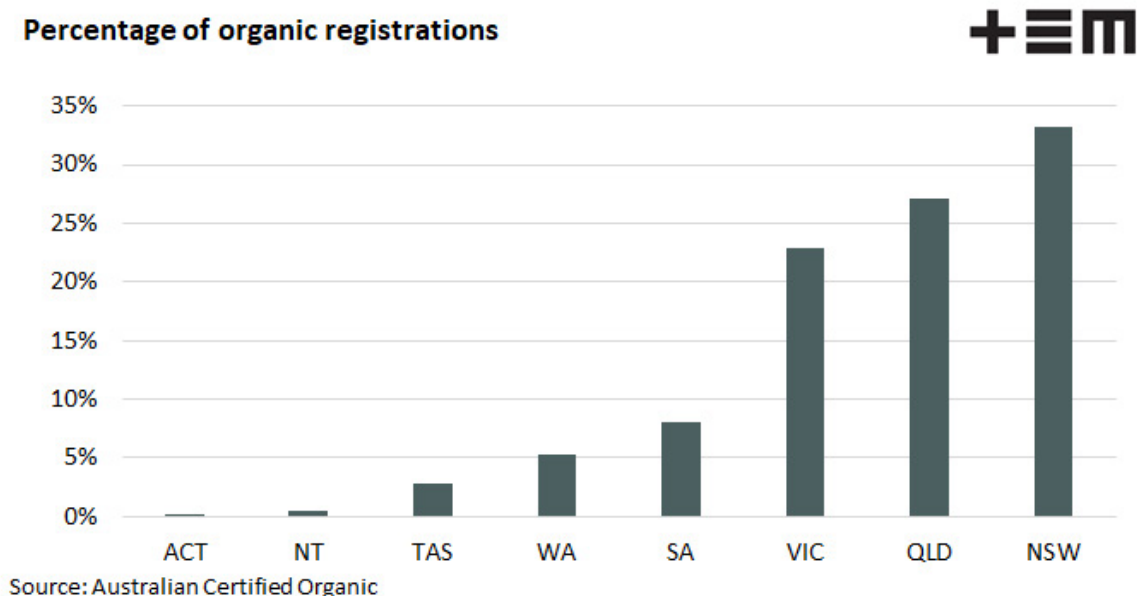
## Coexistence of GM Crops and Organic Certified Operations

There have been concerns raised that permitting the cultivation of GM crops in South Australia will cause issues for South Australian farmers maintaining their organic certifications. However, if the adoption of GM technologies limited the potential of organic operations there should be evidence of this in the number of certifications in states which adopt GM.

In contrast, the number of organic registrations is highest in three states which permit GM cultivation. Overall New South Wales, Victoria and Queensland represent 83% of those registered with 'Australian Certified Organic'.

During the past decade, there have been limited issues of cross-contamination caused by the cultivation of GM canola. The grain supply chain in each state producing GM has created adequate segregation to ensure that supplies are not inadvertently co-mingled, it is anticipated that the modern bulk handling systems utilised in South Australia would ensure compliance.

Furthermore, it is clear from the data that co-existence between organic and GM cultivation is possible in South Australia, as this has been proven in other states.



## **Wine Marketing**

---

There are concerns that South Australian wine producers will lose price premiums due to the inability to market wine as being from a GM-free state. The assertion that South Australian wine was marketed as GM-free was tested and found to be lacking.

The websites of all the local businesses advertised as being involved in the wine industry on the City of Onkaparinga “on business partner program website” were examined in order to test the saturation of GM-free marketing.

This website is a valuable resource which allows residents and others the ability to find businesses local to the city of Onkaparinga. Analysis of thirty-two active websites demonstrated that there was no marketing of wine as being GM-free.

There were nine websites which contained the term organic.

The majority of these ‘organic’ websites required a thorough investigation using specialist search methods to find mention of organic. These are methods not readily used by the average web user.

These nine vineyards mention ‘organic practices’, yet most do not mention being certified organic.

If GM cultivation was permitted in the region, these practices would still be able to continue, as has been displayed by co-existence in other states.

Further investigation of South Australian tourism and trade websites found no use of non-GM status as part of wine marketing in the state. It is difficult to ascertain whether there is a premium provided to South Australian wine producers due to being produced in a GM-free state. This is exacerbated by the lack of any actual marketing of wine as being produced from a GM-free state.



## Wine Premiums

---

The value of wine is based on its taste, and it is this quality which overwhelmingly dictates any price premium achieved through the sale of wine.

The GM status of the state where the wine is produced is unlikely to provide a substantive impact upon price premium levels.

This viewpoint is shared by Wine Australia, who made the following remark in a previous report on the GM moratorium and price premiums<sup>2</sup>.



**Wine grapes are not traded as a homogeneous commodity and the \$/tonne price received by grape growers is determined by a wide variety of factors.**

**The location of the vineyard and quality of the grapes are significant determinants of price, while other factors such as distance to the winery and contract arrangements can also have an influence.**

**It is the view of the industry analysts at Wine Australia that a region or state's status as 'GM-free' would be unlikely to have an effect on grape price and therefore would not be expected to play a role in premiums or discounts to any states."**

- Wine Australia, December 2017

2. Whitelaw, A., M. Dalgleish and O. Agar (2018), Analysis of Price Premiums under the South Australian GM Moratorium

# Wine Premiums

## Taste Preference

As taste is a subjective quality, it is difficult to quantify the value of high-quality wine. As previously outlined, the taste of the wine is more likely to influence buying behaviour as opposed to GM status.

South Australia is considered the leading state for wine in Australia<sup>3</sup>, producing the largest volume whilst also delivering many of the signature wines of Australia. It is important to consider whether any premium is as a result of a moratorium on the cultivation of GM, or due to the quality of the wine.

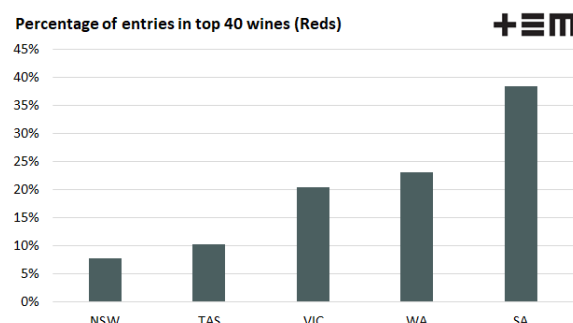
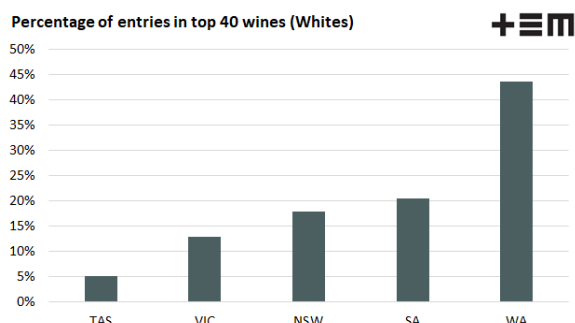
James Halliday AM is one of the most distinguished wine critics in Australia, having written over 40 books on wine, including his annual wine companion. The charts below display the red & white wines which comprise the top 100<sup>4</sup>. South Australia is heavily represented in red wine, with 38% of the top 40 originating from SA based vineyards. The second ranked state is Western Australia at 23% of the top 40.

Although South Australia is well known for its full-bodied reds, the conditions on the limestone coast are beneficial for white wines, especially Riesling. Western Australia is the top-rated producer for white wine varieties at 44% of the top 40, with South Australia placed second at 21%.

The representation in the top 40 is based on the individual taste and is not based on the volume produced in the state. Western Australia is a much smaller producer of white wine than South Australia or New South Wales.

WA has a high concentration of GM cropping, yet wines from both regions are highly rated.

This suggests that the GM status of wine production regions does not contribute to the price premiums being achieved by their respective wine industries. Most notably being the high quality of wine production.



3. [https://www.pir.sa.gov.au/\\_data/assets/pdf\\_file/0006/274065/South\\_Australian\\_Wine\\_Story.pdf](https://www.pir.sa.gov.au/_data/assets/pdf_file/0006/274065/South_Australian_Wine_Story.pdf)

4. <https://www.theaustralian.com.au/life/food-drink/top-100-wines>

## **Wine Price Spread Comparison**

---

### **Export Price Spreads**

Over the last decade Western Australia has consistently recorded the highest proportion of GM grown canola in Australia, while South Australia has enforced a GM moratorium. Analysis of top-rated wine shows that SA holds the highest share of red wine entries, with WA in second place. Meanwhile, the highest share of white entries is held by WA, with SA in second place.

Given the contrast in the use of GM within each state and the similar reputation for high-quality wine production held by SA and WA, analysis of the annual average percentage price spread for bottled table wine exports from both regions was undertaken to determine if the non-GM status of SA over the past decade has contributed to any price advantage for product originating from this region.

Australian Bureau of Statistics annual trade flow data on red, white and rose table wine export volume and value was filtered for containers less than two litres. Annual average export values were calculated for South Australian and Western Australian bottled table wine exports and percentage price spreads were compared for the two regions for a variety of export destination points.

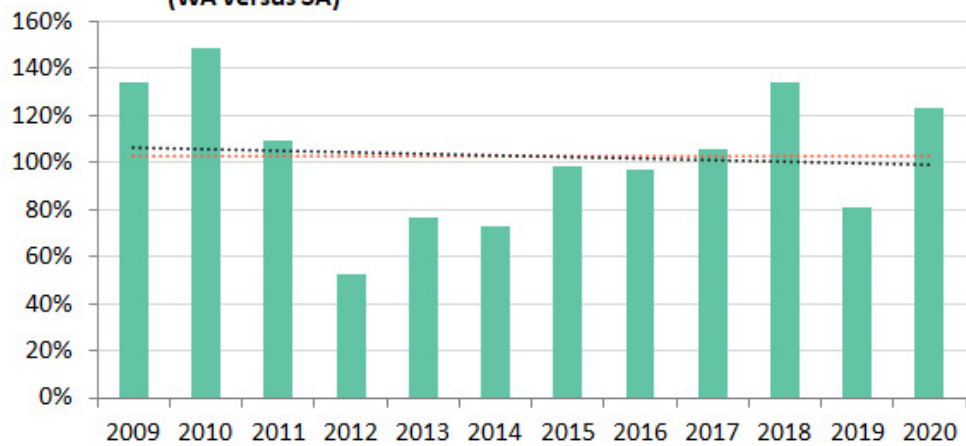
# Wine Price Spread Comparison

## Australia to UK Wine Exports Price Spread

The UK is Australia's largest market for wine exports on a volume basis. Annual average price spread data demonstrates that table wine originating from Western Australia and exported to the UK has achieved an average premium of 103% when compared to product originating from South Australia.

While there has been some variation above and below the average spread throughout seasons, these variations have largely offset each other such that there has been no observable trend in the premium for the last decade.

**Australia to UK Wine Exports Price Spread (WA versus SA)**



Source: ABS, TEM

WA/SA Spread Avg Spread Spread Trend

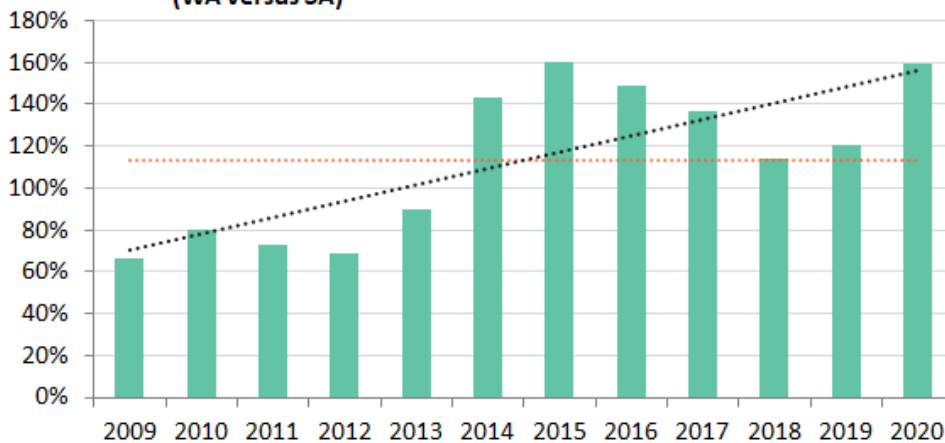
# Wine Price Spread Comparison

## Australia to USA Wine Exports Price Spread

The USA is Australia’s second largest market for wine exports on both a value and volume basis. Analysis of the historic price spread pattern for table wine exports from WA and SA to the USA shows that an average premium spread of 113% has been achieved by WA wine exports over SA.

Interestingly, the trend pattern demonstrates that this premium spread has been widening over the last decade from a 70% premium to nearly an 160% premium.

Australia to USA Wine Exports Price Spread  
(WA versus SA)



Source: ABS, TEM

WA/SA Spread Avg Spread Spread Trend

## Wine Price Spread Comparison

### Australia to China Wine Exports Price Spread

China is Australia's largest market for export wine on a value basis. The historic price spread data shows that WA wine exports held a premium over SA for the first five years of the previous decade and switched to a discount spread for the most recent five-year period.

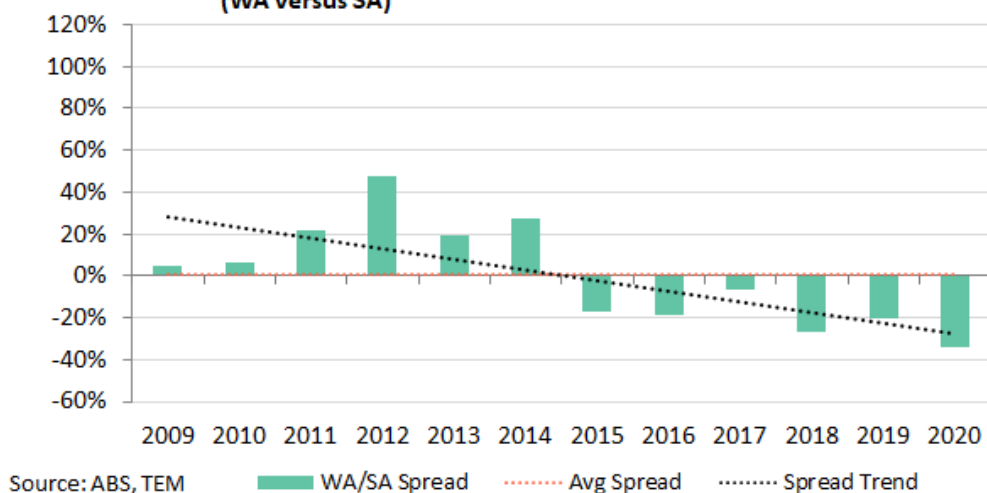
The average spread is at a very marginal premium of 0.3% in favour of WA. Meanwhile the spread trend pattern shows a move from a 30% premium to a 30% discount across the decade.

In 2007 Chinese imports of wine worldwide accounted for less than 1% of the global trade. The growth penetration of Australian wine to China has been significant in the last decade, particularly for Australian red wine. Indeed, red wine accounted for 93% of their Australian wine imports in 2019.

Given the high proportion of Australian red wine imports into China and the high ranking of South Australian red wines in the wine tasting recommendations, it is unsurprising to see South Australian wines attracting a premium in China over Western Australian wines, which is more famous for producing premium whites.

It appears that the premium has more to do with wine variety and South Australia's reputation for producing high-quality red wine than their non-GM status.

**Australia to China Wine Exports Price Spread**  
(WA versus SA)





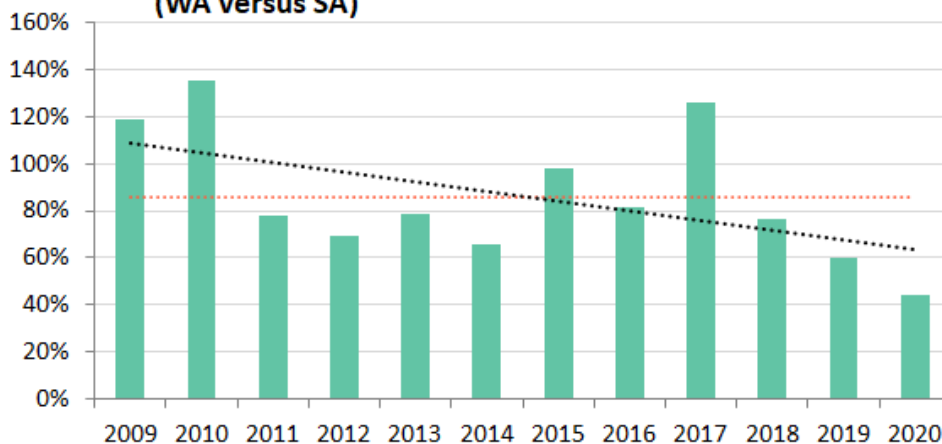
# Wine Price Spread Comparison

## Australia to EU Wine Exports Price Spread

The EU is an important market for Australian wine exports. Since 2003 the EU has enacted a strict process governing the importation of GM food/feed product and is considered to have one of the more stringent regulatory environments governing the trade in GM products in the world. In terms of GM labelling requirements, the EU has a lower threshold than China and the USA, suggesting that consumers/regulators in the EU have a greater sensitivity to the use of GM in food/feed products.

Despite the higher sensitivity towards the use of GM in food/feed across the EU, there does not appear to be any price spread advantage held by SA to WA when comparing wine exports to the EU. Indeed, analysis of the average spread over the last decade shows that WA wine exports have held a premium of 86% to SA wine exports. While the trend has shown a narrowing from 110% to just over 60% there is still a significant price premium held by wine exports originating from WA.

**Australia to EU Wine Exports Price Spread (WA versus SA)**



Source: ABS, TEM

■ WA/SA Spread    ..... Avg Spread    ..... Spread Trend

## **Thomas Elder Markets**

---

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 assists agricultural stakeholders to make better, more informed decisions that drive profitability.

TEM offers high-quality reports for primary producers, government, RDC's and corporate entities, to a subscriber base as well as on a retained basis. Our reports 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.

Our experience gained from working in the markets space, and providing analytical content allows TEM to break down complex situations into easily understood and meaningful insights. TEM is co-managed by Andrew Whitelaw and Matt Dagleish. Matt and Andrew have become a prominent agricultural market analysts, often quoted in the agricultural press and sought after for their independent, data driven assessment of agricultural markets.

### **Andrew Whitelaw**

Andrew Whitelaw started his career in the United Kingdom working for a large-scale grain and animal feed trading business, before moving to Australia in 2010. Since 2010, Andrew has worked in the grains industry for Emerald Grain and Cargill in both Western Australia and Victoria. More recently Andrew was responsible for developing the marketing strategy and leading the grain/oilseed analysis for Mecardo.

Andrew gained an undergraduate degree in Business IT, majoring in e-Business from the University of Western Scotland. Also, during his time in Australia, he has earned a master's degree in Agribusiness from the University of Queensland. At present, Andrew is researching for a PhD with the University of Melbourne, under the Agricultural Economics faculty.

### **Matt Dagleish**

A graduate of Economics and Education Matt has had a keen interest in markets of all sorts from an early age. After more than a decade working in foreign exchange markets in Melbourne and London Matt spent time teaching VCE Economics and Special Needs Education. The lure of markets had Matt back working in real estate when he and his family moved from suburban Melbourne to a hobby farm on the outskirts of Ballarat.

Making the transition into agricultural market analysis was an exciting opportunity, enabling Matt to use his data analysis and forecasting skills to provide commentary and strategic advice to the agricultural industry, particularly within the livestock sector.

## References

---

1. <https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/FAC1272BE29F58FBCA2582910013A7D5>
2. Whitelaw, A., M. Dalglish and O. Agar (2018), Analysis of Price Premiums under the South Australian GM Moratorium, Report prepared by Mecardo for the GPSA and ABCA, Adelaide: Grain Producers of South Australia and Melbourne: Agricultural Biotechnology Council of Australia, March.  
<https://www.abca.com.au/wp-content/uploads/2018/03/Analysis-of-price-premiums-under-the-SA-GM-moratorium.pdf>
3. [https://www.pir.sa.gov.au/\\_\\_data/assets/pdf\\_file/0006/274065/South\\_Australian\\_Wine\\_Story.pdf](https://www.pir.sa.gov.au/__data/assets/pdf_file/0006/274065/South_Australian_Wine_Story.pdf)
4. <https://www.theaustralian.com.au/life/food-drink/top-100-wines>

