

Objective grain marketing – What does the formula say?

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Key Messages

It is said that human beings make all decisions based on emotion, but deciding how to market your grain can be a particularly emotional process. In bringing the decision back to three fundamentals - price, production and propensity to sell – we provide an objective framework for making decisions that helps remove some of that emotion.

Aims

Since the deregulation of the wheat market in Australia, the Australian farmer has been on an emotional roller coaster journey, learning how to sell their own wheat.

Who doesn't know of someone who despaired having forward sold a third of their wheat crop (employing the time-activated sales strategy of $\frac{1}{3} : \frac{1}{3} : \frac{1}{3}$) but then watched as prices rose throughout the year? And one who then switched to an alternative (time-activated) strategy of not forward selling anything before harvest, only to watch (again in despair) as prices slid down continuously into harvest and beyond? Or a grower who targeted a price of \$X or above through the whole season (a price-activated strategy), and faced the end of harvest with nothing sold, so became a forced (and very unhappy) seller for cashflow reasons.

Which leaves you wondering whether a price-activated strategy or a time-activated sales strategy is better? Or if in fact neither, or both, should be employed?

We propose combining the two approaches: sell as much as the price justifies, targeting higher sales at higher prices, but set yourself time-activated hedge targets to fulfil (sometimes regardless of price) in order to reduce exposure to price risk. Using this approach, you can set your strategy early in the season when you are relatively emotionally balanced or detached. With the strategy is set, you avoid making emotionally driven decisions later in the season when your emotions may be heightened, such as if prices move suddenly.

With this goal in mind, we developed a formula based purely on objective and quantifiable factors, which cuts out the emotional pitfalls. We examine its effectiveness in this paper.

Method

The most important factors a grower should consider when selling wheat are: the current price; the current production estimate; and their propensity to sell (which will be influenced by factors such as cashflow requirements, and current production risk, amongst others).

Planfarm Marketing and Profarmer worked together to create a formula that combined these factors, with the result being how many tonnes should be sold at any one point in the year. We

also developed an app SalesMate® that uses this formula and is freely available on the Apple App Store.

To test the effectiveness of this formula in practice, we applied it to the seasons 2010 to 2015, working through each season and calculating how many tonnes should be sold at certain points each season.

The season was split into six parts, intended to coincide with important tipping points in production risk.

Table 1. Tipping points in production risk

Period	Tipping points in production risk
By 31 st March	Before seeding starts
By 30 th June	Before crop emergence
By 31 st October	Before flowering window ends
By 30 th December	Before end of harvest
By 28 th February post harvest	Before new crop is seeded
By 31 st July post harvest	Allows for carry into new financial year

As a measurement of yield, we used yield estimates from the GIWA crop reports that most closely matched the timing at each point in the season. In this way, we accounted for changes in 'current' production through the season.

The price used is the cash price at that point in the season, expressed as a decile.

To account for different propensities to sell, we created 5 different grower profiles with different propensities to sell through the year, as detailed below.

Table 2. Grower profiles and propensities to sell

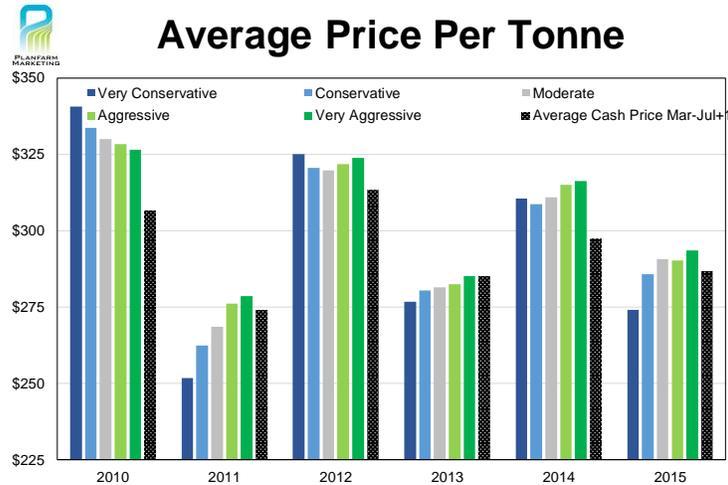
(Denoted as a percentage range of wheat they will sell at different points in the year)

Period	Very Conservative	Conservative	Moderate	Aggressive	Very Aggressive
By 31 st March	0% - 0%	0% - 10%	0% - 20%	0% - 40%	0% - 50%
By 30 th June	0% - 0%	0% - 20%	0% - 40%	0% - 50%	0% - 60%
By 31 st October	0% - 0%	0% - 40%	30% - 60%	30% - 70%	30% - 80%
By 30 th December	30% - 100%	30% - 100%	30% - 100%	50% - 100%	50% - 100%
By 28 th February post harvest	60% - 100%	60% - 100%	60% - 100%	60% - 100%	70% - 100%
By 31 st July post harvest	100%	100%	100%	100%	100%

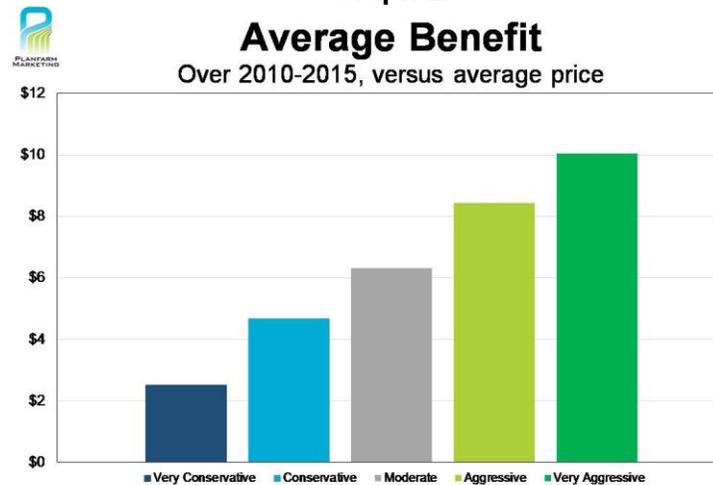
Results

The graphs below illustrate how the different strategies performed in comparison to each other, and the average price over each season.

Graph 1.



Graph 2.



Although there were years when a more conservative approach performed better than more aggressive approaches, more benefit was accumulated by the more aggressive approaches over the 6 years in the study. This is because they include a greater number of opportunities to sell at good prices. Where opportunities to sell are restricted, so are chance to access good prices.

Conclusions

This approach helps remove some of the emotion from the decision. By combining both a price-activated and time-activated strategy, users can reduce the pitfalls of emotionally-driven decisions.

Growers can choose the profile that best suits them. Although the result will vary depending on their profile, they can be confident knowing that they can clearly rationalize their decisions of when to sell, and when not to sell, based on the objective factors.

The results show greater benefit can be accrued where there is a greater propensity to sell throughout the marketing period, but where circumstances restrict the ability to sell, there is still some benefit to be accrued by using this approach.

Key words

Grain marketing, wheat, prices

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