1997

Wheat and wool prices : lessons from the past

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The role of stocks in influencing the prices of storable commodities has long been recognised. For example, the Commonwealth Government's Year Book for 1939 states "The collapse in the price of wheat which occurred between 1928 and 1931 was chiefly due to the accumulation of stocks in exporting countries" (p.618).

In Western Australia since 1906, very high wool prices have been observed for only a small number of years in the late 1940s and early 1950s, and high prices have occurred in 1924, 1925, 1973, 1974, 1988 and 1989 (see Figure 4). A study of Victorian wool prices from 1885 until 1969 suggests that booms in wool prices are expected about once in 30 years.

For wheat, very high prices were recorded in Western Australia in the decade following World War II and other years of high prices were 1915, 1921, 1937 and 1974 and 1975 (see Figure 5). For wheat and wool, there are long periods when prices are fairly low or moderate and in these periods price changes between years are not dramatic. Then there are often brief periods of very high prices. Why is this the pattern of price movements?

Production, stocks and demand
The answer lies chiefly in the interaction between stocks, production and demand changes. When weather conditions are favourable for wheat and wool production in the countries that are the major exporters of these commodities then the increased supply of these commodities onto the world markets usually causes a fall in their market price. In these situations where the supply of wool or wheat is high relative to demand, it becomes relatively cheap to buy and store the commodity. If these stockholdings are large enough then they in turn depress prices. These low prices ensure that storage remains attractive and hence low prices tend to persist from year to year.

However, analyses of wool and wheat prices reveal that their distributions are not the typical bell-shape. Rather, the distributions are skewed (see Figures 2 and 3). There is a greater chance of receiving a lower price than a higher price, yet there are brief periods of very high prices. Viewing historical prices (especially for wool) reveals there are fairly long periods of relatively low prices and much briefer periods of very high prices.

Historical information about wool and wheat prices can help farmers to plan and manage their wheat and wool production. Ross Kingwell describes some management lessons derived from analysing wheat and wool price movements.

Historical prices
A conventional view of commodity prices is that they follow a bell-shaped distribution (see Figure 1). In such a distribution most prices received by the farmer are close to the average or mean price and the farmer has an equal chance of receiving a price higher or lower than the mean price.

However, analyses of wool and wheat prices reveal that their distributions, particularly for wool, are not the typical bell-shape. Rather, their distributions are skewed (see Figures 2 and 3). There is a greater chance of receiving a lower price than a higher price, yet there are brief periods of very high prices. Viewing historical prices (especially for wool) reveals there are fairly long periods of relatively low prices and much briefer periods of very high prices.

On the other hand, widespread unfavourable weather conditions for wheat and wool production or a rapid increase in demand or a rundown in stocks or some combination of these changes, can cause prices to jump suddenly. For example, the period of high prices for wool and wheat in the years immediately following World War II were due to the rapid increase in demand for these commodities as part of post-war reconstruction, plus there was an additional military demand for wool due to the Korean War. Another example of very high prices resulted from the 1914 drought that affected most Australian States. This severe drought caused a significant decrease in the supply of wool and wheat to the market, which led to a sharp increase in prices.
However, more often farmers will have little anticipation of a price spike and less knowledge about the duration of the spike. The decisions made by a farmer in these periods of high prices and in the immediately subsequent years can greatly affect the future viability or prosperity of their business. Hence, one lesson from the history of price movements for wheat and wool is that a farmer can greatly affect his prosperity by capitalising on the limited number of very favourable price years he will experience as a farmer. Because these windows of opportunity do not last long, often decisions will need to be made sooner rather than later and tactically rather than strategically. Although when a pronounced rundown in stocks occurs, then a farmer might prepare strategic farm plans to capitalise on the increased likelihood of higher prices often associated with lower stocks.

**Implications for management**

The nature of the price distributions for wheat and wool with their infrequent price spikes mean that in the lifetime of a farmer there may be only a handful of years when prices are markedly high. These years are unique and provide a farmer with a brief 'window of opportunity'. Some farmers will be fortunate to experience favourable seasons when they also receive these high prices. Others will experience the high prices when seasons are poor or mediocre. Nonetheless often the profits a farmer earns in these high price years act as a store of wealth that the farmer can draw upon in subsequent leaner years.

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However, more often farmers will have little anticipation of a price spike and less knowledge about the duration of the spike.
Farmers now don't need only to sell after harvest or shearing. They can sell their production while it's growing and sell it in many different ways to capitalise on price spikes. For example, in 1996 farmers fortunate enough to sow early could have sold a portion of their potential crop, immediately after planting, for around $215 per tonne. By contrast a pool return equivalent price of the traditional method of selling after harvest seems likely to return to farmers a price around $190 per tonne pool return. So 1996 typifies the brevity of a price spike and is an example of how farmers well before harvest could have capitalised on high prices. This example, however, does not imply that selling early is always the best strategy for capitalising on brief periods of high prices.

Accordingly most farmers will be limited in their response to the very high prices. Land use decisions in previous seasons or borrowing restrictions will limit a farmer's ability to react to the favourable price years. A rapid switch in the farm's enterprise mix is usually not possible. Besides, investing in a large switch in enterprise mix will prove unwise if the weather-years during the price spike are unfavourable or if the brevity of the price spike significantly reduces the return on the capital purchased as part of the enterprise switch. Hence, most of the less risky yet profitable decisions will be tactical ones regarding stocking rates, crop areas, fertiliser and herbicide rates, selling options, casual labour, and the amount and timing of sheep sales, purchases and shearing.

Besides the decisions made during the price spike, decisions made in the years immediately subsequent to the price spike also are important. Sometimes the high profits earned in years with very favourable prices lure some farmers into a false belief about the profitability of agriculture. Expensive purchases of land and machinery can subsequently prove to be unwise. For example, following the commodity price spike of the mid-1970s land and machinery purchases were common. Poor seasons, more typical prices and very high interest rates saw many farmers who made these expensive purchases in the late 1970s face bankruptcy in the early 1980s.

A feature of current farming is that farmers now can respond to high price years by using selling methods that were not available a decade or more ago. Traditionally farmers produced wheat and wool which was delivered to selling agents. Farmers' education, advice and skill equipped them to be very competent at production. But now farmers need to be competent at production and selling, or at least they should employ advisers who can inform them about when and how to sell their wheat and wool to either reduce the price uncertainty they face or to increase the likelihood of receiving a high price.

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