‘Rubbish in, rubbish out’

Price risk information is more important in agriculture than in many other business sectors, writes **Jeremy Cole.**

Agricultural commodity markets have always been volatile. They always will be: the final output of crop production is uncertain and farmers must react to these short, medium and long term changes to ensure continued business viability.

Profit is the reward for risk-taking. So any profit seekers in the business of farming, or in any other business, must be prepared to bear some risk. Ways of establishing which risks are bearable and which are not for particular farmer are the heartland of agricultural decision analysis/risk analysis/policy analysis. While virtually every decision will have risky consequences, it is clear that not every decision exposes a business or dependent household to ‘unbearable’ risk.

Price fluctuations are a key component to volatility in the agricultural commodity markets. A more realistic indicator of the trend in world food security is the probability with which aggregate production can fall substantially below the trends.

The variance of world cereal production is directly attributable to changes in the variances and co-variances of crop yields and so world cereal production is likely to continue to become more variable in the years ahead.

Agricultural production is subject, in many cases, to production lags, with producers making production decisions based on imperfect knowledge of future prices. This is predominantly due to the uncontrollability of the weather and disease during the growing season. But other factors too – such as technological change, input prices and their usage – can increase the variance of yields.

Price movements and their effect on net margins are thus huge. Decision-making is also not confined to the beginning of one season. Inter-temporal decision-making must also be investigated.

The increased demand for food, resulting from an ever-increasing world population and the use of ever more marginal land for production, manifests itself in two ways. An increased risk of yield variation and a change in the use of that land for a particular crop as a result of market prices determining whether or not a crop can be profitable grown that season.

Market price fluctuations are an integral part of this adjustment process and transmit market signals to producers and consumers. This works well if the changes are gradual and both parties have time to adjust inputs and output levels, but with agricultural commodities there are often sudden fluctuations or ‘shocks’ as the nature of production is ‘lumpy’. This results in surpluses, and so prices fall, or shortages, with associated price rises. Resources are misallocated, the market becomes, in the short term, ‘inefficient’ and overall welfare or utility falls.

Not all sectors of the world economy are affected in the same way though. Countries that are more self sufficient, and so less reliant on world trade, are less affected by international trade issues. They may however have a system of government stocks/storage to administer, very useful in evening out supply fluctuations, but it does have a real and political cost, which has increasingly been seen as unacceptable to politicians and their electorate.

The flow of goods up until the mid-90’s was from developed countries in the ‘North’ to developing countries in the ‘South’. This remains the case, in general, with information about areas, yield, and stocks regularly announced by impartial organisations. With the emergence of China and Asia as economic powerhouses, the break-up of the Soviet Union, these traditional flows have been altered and reduced the level of reliable production, demand and stock holding information.

Without good information decision making is harder. ‘Rubbish in, rubbish out’.