Climate information to support farm management decisions

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The issue
Risk is inherent in most farm businesses. It can be associated with a range of factors including production, markets and climate. In many cases, variations in these elements are beyond individual control but risk can be reduced, to a greater or lesser extent, by knowledge and informed management decisions.

Some farmers assess and manage risk with an informal or ‘gut feel’ approach. However, as the complexity of the farm enterprise increases with more diversified and intensive production systems, managing risk also becomes more complex. It is important to be as informed as possible.

What we know
Most producers are adept at managing risk through good planning and farm practices. For example, managing production risks has been the major focus for many producers through:
- Crop rotation to reduce pest and disease risks;
- Diversification to reduce market risks;
- Adoption of practices such as minimum tillage to reduce resource degradation risks;
- Use of integrated pest management (IPM) to reduce risks associated with pesticide use;
- Creating and maintaining stocks of feed (hay, grain, etc);
- Reorganising farm layout to reduce degradation risks.

Landholders may need to look at off-farm instruments as well in order to manage potential negative impacts.

Examples include:
- Management of price fluctuations through forward selling;
- Insurance;
- Utilisation of climate and weather information services.

This farmtalk concentrates on climate and weather risk management information for the farm business.

What it means
If the seasonal outlook is known, management decisions can be made accordingly. Options may include:
- Planting a smaller area of a different cultivar from the usual crop;
- Planting a larger area;
- Planting a different crop;
- Reducing the seed rate and applying less fertiliser;
- No plantings.

Thus, risk is reduced through more informed crop management decisions.

Knowledge of the weather and climate is an important risk management tool and the development of skills in this area should be pursued.
Climate considerations for farm businesses

To reduce risk using climate information, the following questions are relevant:

- What climatic conditions are needed for a good season or to finish the crop?
- What is the probability of getting these conditions?
- What can be done if these conditions are not met?
- What strategies can be put in place to minimise the downside risk?

To answer these questions:

- Identify the key issues and concerns;
- Examine the historic climate variability of the location;
- Carefully consider the effects of climate variability on production and returns;
- Gain an understanding of the forces that drive climate variability in Australia e.g. ocean temperatures, the Walker Circulation;
- Use forecast tools that explain the causes of climate variability such as El Nino Southern Oscillation (ENSO), Southern Annular Mode (SAM) and Indian Ocean Dipole (IOD);
- Develop a good understanding of probabilities;
- Assess the current short and long term outlook.

Where to now - Information services

There are a number of tools and resources available to provide information on climate and risk management. For example:

- The Bureau of Meteorology has a range of information including short term weather forecasts, 3 month forecasts and information on climate influences. The best starting point is www.bom.gov.au then to the Water and the Land tab on the left side of the page.
- The Centre for Ocean-Land-Atmosphere Studies in the USA has forecast information for all areas of the world including Australia. COLA can be found at www.wxmaps.org.
- Economic budgeting tools for risk management include www.agrigater.com.au (no charge) and www.plantoprofit.biz.

Final tips

- Be aware of climate variability;
- Understand climate and the causes of climate variability;
- Utilise knowledge of historical information for the local area;
- Use forecasting tools to gain advance warning of likely seasonal conditions;
- Utilise other information tools and resources to assist in key farm decisions.

For further general information please contact MSF on 03 5021 9100

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Acknowledgements

The sustainable farming project of the Lower Murray Darling Catchment Management Authority (CMA) has been undertaken by MSF through funding from the Australian Government National Landcare Program.

Special thanks to Dr Steven Crimp (CSIRO) and Mr Michael Cashen (NSW DPI) for peer review.