



## Discussion Paper - Making Confident Decisions in Drought.

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### Introduction

Grain and Graze is a National project aimed at improving profitability and sustainability of mixed farming systems. The project recognised the need for social research to improve the effectiveness of Grain and Graze. In-depth interviews carried out with eighty farming families and twenty advisors throughout Australia raised many issues about decision making in mixed farming. These issues have been accentuated by the severe drought many Grain and Graze regions have been and continue to be experiencing. Drought poses many challenges for farming families, far beyond the question of how to manage with less water. Research with farming families on the drought conducted for Birchip Cropping Group<sup>1</sup> demonstrates that drought introduces a large number of uncertainties for families – political, social, and financial uncertainties as well as environmental and technical. It raises more profound, difficult questions and decisions than many farming families have faced before. For this reason, understanding farm family decision making and how best to assist it is more important than ever.

This paper presents some findings of the research with farmers and advisors and suggests approaches to decision making on mixed farms, particularly in the context of drought,

### Complexity of Decisions

Mixed farming is the predominant farming system throughout Australia. The majority of these farms are managed by a farming family. The mixed farming enterprises are often a range of crops and one or more livestock enterprises. The land or pasture resources are often fragile or in need of repair. This is a difficult system to manage and a difficult environment in which to make decisions. The theories proposed by Snowden about simple, complicated and complex decisions<sup>2</sup>, discussed below, are very useful in understanding how farmers make decisions.

#### *Simple Decisions*

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<sup>1</sup> BCG (2007) 'Critical Breaking Point? Understanding the effects of drought and other pressures on farming families'. A report produced by Lauren Rickards, RMCG, for Birchip Cropping Group. <http://www.bcg.org.au>

<sup>2</sup> Snowden D.J. (2003) Managing for serendipity or why we should lay off "best practice" in KM.

The easiest decisions are simple. There are a few variables and there is a clear right or wrong answer. For example, deciding how much drench to give a 45kg wether may be considered a simple decision. The farmer would refer to the label recommendation and drench accordingly. Throughout the day, many simple decisions are made with little conscious thought.

#### *Complicated decisions*

When a number of variables are involved, but the relationships between variables are clear and well documented, a decision can be considered complicated. Deciding on a pest control program in a wheat crop could be considered complicated. Significant expertise and experience is required, however information on relationships and responses is available which the expert can use to make a decision. Again, many complicated decisions are required on mixed farms. For example, a range of crops are grown and different soils and paddocks have different histories and weeds which need to be considered. These decisions are often made by the farmer with assistance from a trained and experienced agronomist.

#### *Complex decisions*

When a number of complicated decisions come together and interact and the variables and trade offs cannot be quantified or weighed against each other, the decisions may be considered complex. For example, deciding how many livestock to run on a farm, which also has a range of crops, is a complex decision. Although a theoretical optimum number of livestock could be calculated using a modelling approach, many variables would remain unaccounted for such as the effect on the environment, the need to manage labour, the impact on recreation time, the increased risks, and long-term price forecasts. The number of variables is very high and cannot be modelled.

Drought can dramatically increase the complexity of decisions faced by farming families. Large and long-term questions about the families' future intersect with seemingly small and simple questions about production. The uncertainties that drought introduces make it difficult to know what can be relied on. 'Simple' parts of the decision become complicated and complicated parts of the decision become complex. The BCG research suggests that farmers are losing faith in "rules of thumb" they have previously relied on, as patterns such as "a good year always follows a bad year" seem to no longer hold. Climate change predictions meant that even the question of whether the drought will truly break is up in the air, as is the question of what problems are attributable to drought (and will therefore be relieved when (if) the drought breaks).

How can farmers make decisions in such a difficult, complex environment? The theory on decision-making suggests:

- we can improve decision making when the decisions are complex by "story telling". This is, of course, what farmers have been doing for many years. They like to learn by discussing options with others.
- a set of principles or boundaries are established and decisions are made within these boundaries in an ongoing way. For example, farmers will apply a principle such as "I don't want to put all my eggs in one basket" and then adjust the systems to suit.
- past experience is very important in making complex decisions. This tends to result in complex decisions being conservative.

## Improving decision making on farm

Success in farming comes from making the best decisions you possibly can at all times. The Grain and Graze social research gives some tips on how to make the best possible decisions.

### Be clear on your goals

Firstly, and most importantly, everyone in the business must know why they are in business and what they are trying to achieve. Be aware that some goals may be hard to define. It is important to make time to sit down and work out what everyone wants both now and in the future.

### Be objective where possible with separate parts of the decision

Complex decisions involve many complicated parts. Some of these parts have a quantifiable relationship which is known, while other parts have relationships which are unknown. Where the relationships are quantitative or logical, make sure you know what they are.

### Trust gut feelings in making overall, complex decisions

Where the relationships are known, you need to use a combination of gut feeling and past experience to put together all the parts of a decision and make a decision. Your gut feelings are usually a guide to your goals and motivations.

### Do not delay in making decisions

Delaying a decision, due to uncertainty, can be the worst thing to do. It often means that in effect you are making a decision, but passively rather than actively. This is not a good route to making the right decision. Drought and the uncertainties it introduces often mean people fall into the trap of continually watching and waiting.

### Simple and smart, but keep synergy

Because running a farm is getting more and more complex, it is important you simplify your system. Previous work by RMCG has shown simple uniform systems are a characteristic of many successful farming businesses. At the same time, farmers need to develop a system where the enterprises work together so they have optimal synergy.

### Story Telling' is Helpful

By sharing openly and honestly your stories about complex decisions, you will improve your decision making. It will help you understand your goals, motivations, fears, experiences and biases. To tell your story effectively you need to trust others and be prepared to talk about profitability.

## Working With Advisors

If we recognise mixed farming decisions are complex, then the following issues may be helpful for those whose work it is to help with them:

- Farmers have been making complex decisions for many years and have had a lot of experience. Advisors must understand the farmer's situation before they can adapt their advice to suit.
- Advisors and researchers can help farmers make complex decisions by asking which parts of the decision (the complicated parts) can be clarified by a greater understanding of the interaction between variables. Farmers will often delegate complicated parts of the complex decisions to advisors. For example, agronomy decisions are often made by a consultant agronomist with little input from the farmer. This allows farmers to focus on the complex decisions.

- Farmers may be helped in making complex decisions, by their advisors providing a forum for “story telling”. This forum can be assisted by a range of information being provided. (e.g. research results, demonstrations).

### **An Example – Drought strategies.**

Making confident decisions during a drought is very difficult. The decision making process is made even more difficult than usual because of the extra stress and uncertainty in a drought.

By following the ideas in this paper, farmers should be more confident by following these steps:

- Firstly remember there is no one right answer and there is an answer which suits each situation. Recipes may be helpful but need to be adapted to the individual, unique situation.
- It is essential to know where you are at. To help understand this, calculate the profitability of the business over the past five years. This will give a good guide to profitability. A simple model can then be used to understand the sensitivity to varying commodity prices.
- Estimate the profitability of the farming system in the future. Consider the effect of varying price and yield.
- Look at the effect on labour requirements.
- Consider the effect of things getting worse. – Another drought.
- Ask yourself what you prefer to do, what strategy is most appealing?
- Discuss the above with other family members who are affected.
- Discuss all of the above, (warts and all) with someone you trust and is objective.
- After you have done all of the above, do what you think is most right, and then RELAX.

### Conclusion

There is an increasing need to help farming families make confident decisions about their future directions. Understanding the importance and limits of their role gives advisors a good base from which to help mixed farmers and their families make decisions towards their goals. Such assistance is only of growing importance in the context of drought and the large number of uncertainties and pressures it introduces.