



## Risk and Uncertainty Advisory Group

# Forum Report

*Outcomes of the initial meeting held  
on Friday 21<sup>st</sup> October 2011  
at The Guildford Landing, Guildford.*

**This report was prepared by**

Danielle England

Planfarm Pty Ltd

PO Box 1126 / U1 / 2 Williams Road

Narrogin WA 6312

Danielle@planfarm.com.au

---

*Grain and Graze 2 is partially funded through Grains Research and Development Corporation and the Australian Government's Caring for our Country Programme.*



CARING  
FOR  
OUR  
COUNTRY

**GRDC**  
Grains  
Research &  
Development  
Corporation

## Contents

Risk and Uncertainty Advisory Group .....	1
Workshop introduction.....	3
Advisory Group members .....	3
Workshop agenda .....	3
Project Aims, Objectives and Goals .....	3
Evaluation results.....	3
Facilitator Summary .....	4
Meeting outcomes.....	5
Key thoughts on @Risk .....	5
What are the key issues .....	5
Prioritisation of the issues .....	7
Project ideas.....	8
Quantify Risk.....	8
@Risk .....	9
Quality risk: Flexibility vs Locked .....	10
Flexibility in budgeting.....	11
Profile of attitude to risk of people in business.....	12
Profile of risk of people in the business.....	13
Application tools and processes .....	14
Applications, tools, processes.....	15
Appendix 1 – facilitator’s agenda .....	16
Appendix 2 – Project Aims, Objectives and Goals .....	17
Appendix 3 – Evaluation results.....	18

## **Workshop introduction**

A forum was held with twelve members of WA agriculture to discuss the issues surrounding risk and uncertainty in the industry. The aim of the forum was to present all the work that had been done at a State and National level on the subject, and to determine the place for Grain and Graze 2 to invest in the topic over the next two years.

## **Advisory Group members**

Shane Sander, AgAdvise; Rob Sands, Farmanco; David Falconer, ConsultAg; Decan Keogh, Rabobank; Audrey Bird, Wickepin; Toll Temby, Bodallin; Brad Wooldridge, Arthur River; Keith Carter, Wubin; Phil Barrett-Lennard, ag-Vivo; Danielle England, Planfarm; Glen Brayshaw, Planfarm; Susan Hall, GGA.

## **Workshop agenda**

See Appendix 1

## **Project Aims, Objectives and Goals**

See Appendix 2

## **Evaluation results**

See Appendix 3

## Facilitator Summary

Eight projects were developed by the group. They focused on an issue or topic that they would like to see developed further, or where they believed they could have a positive input. These were;

1. Quantify Risk - using the @Risk model
2. @Risk
3. Quality risk: Flexibility vs Locked
4. Flexibility in budgeting
5. Profile of attitude to risk of people in business – general risk profile and decision making
6. Profile of risk of people in the business – break / end of the season decision making
7. Application tools and processes – measuring the non-financial aspects of a business
8. Applications, tools, processes – yield risk (David Falconer)

It is now the responsibility of the Relative Advantage Project Officer to work with the people involved to develop the projects further.

From this list there are a couple which could be combined, and some which could be addressed in other Grain and Graze 2 areas. For example; the break / end of season decision making can be included in other work being undertaken within the project.

Thus the final four which will be developed during 2011 and 2012 are;

1. Quantify Risk - using the @Risk model
2. Quality risk: Flexibility budgeting
3. Profile of attitude to risk of people in business/Application tools and processes – general risk profile and decision making and measuring the non-financial aspects of a business
4. Applications, tools, processes – yield risk (David Falconer)

## Meeting outcomes

### Key thoughts on @Risk

- Quality of the info
  - Know what you want from it
  - Know what you are looking for
- Making robust decisions
  - Grabbing all the data; more info
  - Taking bias and emotion out
  - Still needs fine tuning
- Useful
  - To get across all risks to clients
  - An easy way of outlining probabilities
  - Help them to understand where they are
- Doesn't build in financial risks or costs such as capital investment and financing costs
- It is a tool analysing current business and enterprise mix
  - Not at new enterprises mixes or systems
  - But can look at comparative numbers
- Scaling-up one enterprise – doesn't show changes to the other
- Person putting the data in is very important
- Positive and negative tails – what impact do they have on the business
  - Identify the negative tail
- Can you change literally anything – that's not in the examples
- Consider the risk focus of farmer – is the business right?

### What are the key issues

List the opportunities and issues

- What do we know
  - What has challenged our understanding
  - What opportunities/issues/topics have been highlighted
1. Calculate risk
    - a. Uncertainty can't be calculated, but can be withstood by a more resilient business
  2. Understanding the need to quantify risk
    - a. We are facing increased volatility and therefore increased risk
    - b. Understanding different attitudes to risk/return.
    - c. Mode average vs median
    - d. Realisation of need to increase risk awareness and management
    - e. Increased complexity in farming systems
  3. Determining and quantifying all the risks in order to manage them
    - a. Opportunity to increase or improve consideration of quantifiable risk management on-farm
    - b. Business acumen?
    - c. Opportunity to road test risk management options

4. What do we know?
  - a. A key concept in agriculture
  - b. Yield, price and season
  - c. More inputs – bigger turnover – more risk
  - d. Risk profile changes over people/family lifespan
  - e. Consultants: easy to add technical, hard to add managerial skills
  - f. Last few years has made people realise size of risks
  - g. Better understanding of production drivers rather than need to improve risk drivers
  - h. Recently bias used when buying, leasing land and analysis using average for short-term costs/prices
  - i. Cost of production per ha – capital/overheads – cash – lower greatly reduces risks of a loss
  - j. Capacity to recover from bad years = resilience
    - i. Equity is critical
  - k. Risk can drive risky decisions because risk brings reward – ‘gambling’
5. What has changed?
  - a. Models and tools for analysis
  - b. Definition of risk and uncertainty
  - c. More specific about LMVs and their use/inputs
  - d. Importance of mode and distribution rather than average
  - e. Size of the tail and the drivers
  - f. Drivers of tail and positive very different
6. Issues/opportunities
  - a. MIDAS vs MUDAS modelling -> specific to soil types
  - b. Assumes skills set may not be changeable or equal
    - i. Importance of identifying individual people and skills
  - c. Incorporate fixed costs
  - d. Farm paddock variability
  - e. Loss has bigger impact than profit (size of loss is important)
  - f. Responsibility for risk (personal)
  - g. Robust business leads and ability to manage risk
  - h. Interaction of variables (inputs/commodity prices) in different cycles
  - i. Other sources of data (eg Landgate)
  - j. Margins are slimmer (?), ability to recover is harder
  - k. Need to expand to keep margins there – more capital outlaid
  - l. Massive capital vs small business in the city
  - m. Must get all analysis to be on true profit
7. Major discussion points
  - a. Seasonal outlook
    - i. Unreliable tool for aid -> not the decision maker (especially at high stress times)
    - ii. Prices
  - b. Pressure to take risk
    - i. Confidence, recency, emotional vs economic
  - c. Do we have a problem because we’ve taken more risks?

## Prioritisation of the issues

- What are the key issues/topics/opportunities
- What is the subsequent research question?

1. Why is it more risky today?
  - a. Change of prices – costs and income creep and size of farms is larger
  - b. Leasing or land purchase
  - c. Financing
  - d. Agronomics
    - i. Potential vs actual yield
2. Different skills
  - a. Not for everyone
  - b. Farmers – business acumen
  - c. Agronomists – sales vs consultant
  - d. Bad decisions in good times - NOW
  - e. Different for every business
  - f. Discipline
    - i. Seasonal
      1. Stick to the plan
      2. Promote flexible
      3. \$ return
    - ii. Longer term economics and personal goals
    - iii. Stages of the business
3. Decision making process
4. Capital/equity – purchasing land
5. Crop production and cash flow – operating

### 2a Key issues for development

1. Quantifying risk
  - a. @Risk – severity of the worst case
  - b. Why is it more risky today
  - c. Flexibility vs locked – long-term vs short-term decisions
  - d. Characteristics of businesses at risk of failure
2. Profile of risk of people in business
  - a. What's next . . .
  - b. Different skills
  - c. Decisions in different times
3. Applications, tools, processes
  - a. Increased resilience/robust business
  - b. Off computer and into the business
  - c. Research data

## Project ideas

### Quantify Risk

Rob Sands, Brad Wooldridge, Phil Barrett-Lennard.

#### Key issue

- A number of vulnerable businesses that need to manage the risk of losses

#### Key outcome

- To have a tool available to consultants (and farmers) to understand and manage risk by quantifying the percentage of below profit threshold events.

#### Objective

- Assess the current risk of the business and the components and look at risk of alternatives

#### Current work

- Cam Nicholson (Victoria)
- Glen Brayshaw (WA)
- Tom (PHD student – Melbourne University)
- DAFWA resilience budgeting work (?)

#### Target audience

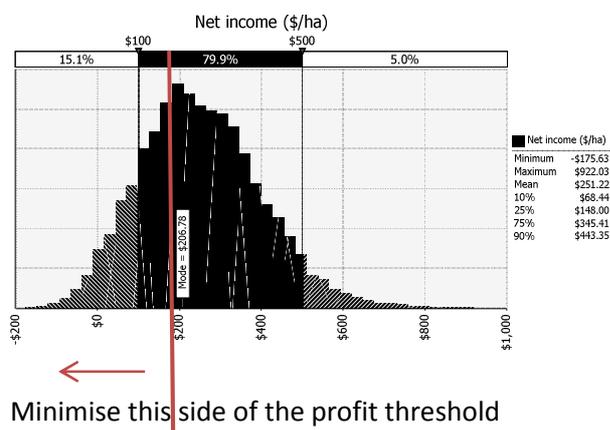
- Consultants and farmers
- Individual businesses through industry level (for common messages)

#### Stakeholders

- Ross Kingwell
- Bill Malcolm
- GRDC
- Grain and Graze 2 (Victoria)
- Consultants
- Farmers

#### Activities/ideas

- Establish profit thresholds for a business and look at percentage of outcomes below that using @Risk
- Use real long-term data to develop the probabilities of inputs



## @Risk

- Profit – cash surplus
- Include debt repayments

### Consultants

- One-day training before early December
- Take back to consultancy business before reviews
- Everyone welcome – advertise through the AAAC
  - Good interaction
- Shane, Dani and Glen to progress

### Farmers

- GGA series
- Dani and Susan to develop
- Shane Sander keen to progress
- Baseline case to be developed
- Play with variance on the day

## Quality risk: Flexibility vs Locked

*Toll Temby, Keith Carter, Declan Keogh*

### Key issues and research

- Flexible planning
- Risk = return (quantify the risk appetite for how much return)

### Key outcomes

- Stress tested budget in Feb – business is ready to respond to seasonal change

### Objectives

- Up-skill farmers to understand rigorous flexible budgets
- Introduce more complex budgeting
  - Sensitivity tested
  - Buffers set for in-season budget changes

### Any work currently happening

- Complex decision paper – RMCG
- Timeline business – DAFWA Geraldton
- MIDAS

### Target audience

- Farmers
- Consultants
- Budgeting software providers

### Stakeholders

- The above
- Banks

### Activity ideas/things to do

- Chart business opportunities
- Develop timelines for different enterprises and areas

## Flexibility in budgeting

- Maintain flexibility to increase upside
- Within budget, reduce the risk

### Deliverables

- Increased sensitivity testing in the budget
  - Model or computer program
  - Farmer friendly – already there

### Agronomist creep

- Pub farming factor
- Fun police vs reality/boring
- Potential vs expected vs actual yield
- Paper's presented at crop updates over time

### Issues

- Key profit drivers
- Financing changes

## Profile of attitude to risk of people in business

*Glen Brayshaw, David Falconer, Keith Carter, Toll Temby*

### Key issue

- Each individual attitude to risk
  - Different risk'
  - Different circumstances
- Developing guidelines

### Key outcome

- Risk questionnaire – attitude to risk
- Maintaining yourself to be able to make decision
- So the participants understand own risk profile
- Talking to risk vs opportunity under risk

### Objectives

- Making good decisions
- Or happy with the decision made
- What is client's objectives

### Current work

- Drought reform pilot
- Bridging the yield gap
- Off the shelf/profile/analysis

### Target audience

- Farmers
- Consultants
- Banks
- Suppliers
- Government/DAFWA

### Stakeholders

- Wheatbelt Men's Health

### Activity ideas

- Risk questionnaire
  - On-line
  - One-on-one
- Warning – they could get it wrong

## Profile of risk of people in the business

Shane Sander, Audrey Bird, Brad Wooldridge

Decisions at difficult times

Rigour at the break of the season/end of season decision making

### Key research questions

- Quantify the important/critical decisions in difficult times
- Quantify the important/critical decisions in good times

### Outcomes

- Clarity, logic, de-stress the business, non-bias
- Communicable, blue-print plan, sacred decisions
- *How do you act on the decision*

### Objectives

- Logical tool to challenge the ?
- Reason through the problem
- Identify the critical trigger points
- Tool the challenges the norm
- Risky decisions in other businesses – how do they do it?

### Current work

- @risk model
- Computer program
- Risky business
  - How do you make better decisions

### Target

- Farmers, consultants
- Group theme – study it over the season

### Stakeholders

### Activities

- Workshop themes

## Application tools and processes

Audrey Bird, Shane Sander, Declan Keogh

*Increasing business resilience*

*Increased business resilience, increased robustness*

*Research data*

### Key issue/research questions

- How do you measure the non-financial aspects of a resilient business?
- Eg succession planning, wills, family, time, sport

### Outcomes

- Defined process
  - Measurable
  - Health scoreboard
- Linkages to financial performance
- Understanding personality types

### Objectives

- Develop tools to outcomes and strategies
- Ownership of decisions

### Current Work

- SA
- Low rainfall – what makes a resilient farm business
- DAFWA program?
- EDPs – business theory
- Expertise in the area of outcomes – rural financial councillors

### Target

### Stakeholders

- Everybody

### Activity ideas

- Desktop study –
  - Review what has been done
  - What's next, what does it mean for your business
- Flowchart

## Applications, tools, processes

*David Falconer, Phil Barrett-Lennard, Glen Brayshaw, Rob Sands*

**Issue** – unrealistic expectations (potential : expected : actual)

**Outcome** – better analysis of yield risk

**Objective** – yield bell curves for different crops x locations

### Current work

- Yield prophet – in-season yield prediction
- Multi-season

**Target Audience** – farmers, agronomists, researchers

### Stakeholders

- ConsultAg (David Falconer)
- Extension through grower groups
  - Customised to their area

### Ideas/things

- Start as a fact sheet/article – tool available
- Combination of modelled WUE driven yield and ground truth
- Compare medium and mode
- Analyse frequency of tail (based on profit)
- Could develop a simple tool for farmers to use
- Bell curves for different crops x locations
- Shire by shire WUE and \$/ha land cost
- @Risk – looking at overhead costs – machinery, land
- Trends in business performance
  - AAC (DAFWA, Kingwell)
  - Robust vs vulnerable
  - What common mistakes/decisions have people made

## Appendix 1 – facilitator’s agenda

8.45am	Welcome and introductions	Name badges
9am	<b>Stand-out messages from background material</b> Groups of 3 or 4 Hold those thoughts and discussions until after morning tea	
9.15am	National forum report	Phil, Audrey and Susan
9.25am	WA Surveys	Dani
9.30am	Phone hook-up with Cam Nicholson	
9.45am	Presentation from Glen	
10.00am	Key thoughts on @risk	Dani
10.15am	Morning tea	
10.30am	Identification of the key issues <b>Table talk/reflection</b> <ul style="list-style-type: none"> <li>• What do we know</li> <li>• What has challenged our understanding</li> <li>• What opportunities/issues/topics have been highlighted</li> </ul> MAKE A LIST OF THE OPPORTUNITIES OR ISSUES	Dani  <b>1</b>
11.00am	Report lists back to group	
11.30am	<b>Prioritisation</b> <ul style="list-style-type: none"> <li>• What are the key issues/topics/opportunities</li> <li>• What is the subsequent research question</li> </ul>	Dani / Susan  <b>2</b>
	<b>Think of two issues you are keen to develop</b> Over lunch <ul style="list-style-type: none"> <li>• Put your name near two (2) issues/topics</li> <li>• Groups to develop the idea further</li> </ul>	  <b>3</b>
12 noon	LUNCH	
1.00pm	Session 1	<b>4</b>
1.45pm	Session 2	<b>5</b>
	<b>Development topics</b> <ul style="list-style-type: none"> <li>• Key issue</li> <li>• Objectives – what will be developed or delivered</li> <li>• Key outcomes – what we do we want at the end of 2 years</li> <li>• Target audience</li> <li>• Stakeholders               <ul style="list-style-type: none"> <li>○ Key</li> <li>○ Other</li> <li>○ Possible lead</li> </ul> </li> <li>• Activity ideas</li> </ul>	
2.30pm	Afternoon tea	
3.00pm	Report projects back to the group	
3.45pm	Evaluation and wrap-up	
4.00pm	Close	

## Appendix 2 – Project Aims, Objectives and Goals

### **Grain and Graze 2 Risk and Uncertainty WA Project Aim**

“To quantify the risk, to the risk: return, using the correct decision that suits the risk profile of the farmer.”

#### **National programme objectives**

- To support farmers to work through and make informed decisions
- To enhance the capacity of the advisory community to integrate multiple enterprises

#### **WA programme goals**

- ‘Operationalise’ National Risk ‘think tank’ findings/tools
- Up-skilling of WA farm management consultants in risk management tools/techniques to encourage them to incorporate into their current services.

Including

- Training for consultants and other advisors, with the emphasis on making the theory operational (ie putting the theory of risk management into a practical process they can use.)
- Support and mentoring to the advisory community who are embracing the risk and uncertainty concept
- A think tank that generates ideas but also discusses the learning and questions that arise through implementation. This will link in with the national initiative on managing risk.

#### **R&U Advisory Group**

An advisory group is to be established containing equal mixes of consultants and farmers. Each of the major consultancy firms are to be represented on the group. Farmers are to be from a mix of consultancies.

#### **Advisory Group terms of reference are to;**

- Engage in a robust discussion about risk and uncertainty in the WA agricultural industry.
- Identify the issues surrounding risk and uncertainty in our industry.
- Develop a program that will identify possible GG2 activities (tools, training or techniques) that will address these issues in WA.
- Manage the R&U program in WA, in cooperation with GG2.

## Appendix 3 – Evaluation results

Were your expectations met?

Yes 1 1 1 1 1 1 1 1 1

No ?

- Comprehensive discussion about risk and uncertainty
- Good discussion on risk and skills to bring poor performing farms up to speed
- Better understanding of project and application to farm business
- Good discussion, dissemination of information
- Got the outcomes we came for
- Still probably struggling to get a full idea of the project
- Good discussion around risk and uncertainty and the key areas for research/improvement

<i>Pace of the forum</i>	4 4 4 5 5 3 4 4 5 5 4
<i>Forum content</i>	4 4 4 3 5 4 4 3 4 4 4
<i>Facilitators/presenters</i>	n/a 4 4 5 5 4 5 5 4 4
<i>My participation</i>	3 4 4 3 3 4 3 5 4 4
<i>Handouts</i>	3 3 4 3 5 3 n/a 3 5 2
<i>Food and venue</i>	4 4 (except aeroplanes) 4 5 5 3 4 4 3 4
<i>My knowledge and skills before the forum</i>	3 n/a 3 1 3 3 4 4 4 3
<i>My knowledge and skills after the forum</i>	4 4 4 3 4 4 5 4 5 4
<i>My willingness to implement new knowledge and skills before the forum</i>	3 3 4 5 4 4 4 5 5 4
<i>My willingness to implement new knowledge and skills after the forum</i>	4 4 4 5 5 4 4 5 5 4

What will you do differently as a result of this forum?

- Add risk analysis to our annual farm business review
- Quantify risk/looking at the tale
- Discuss more with others in the business. Better time lines and budgets
- Look at how I can quantify my risk performance – and how I can have more control over decision making
- Analyse risk of different businesses
- Look at old yield data
- Follow the implementation of the @Risk program and its outcomes
- Look at decision making stuff. Consider past research into the topic.
- Looking forward to reviewing the @Risk program
- Discuss risk, uncertainty and risk/reward in more depth with clients

The best part of today's forum was:

- The diversity within the group – GGA, consultants, bankers and farmers
- Cam's presentation is comprehensive (@Risk)
- Talk on @Risk
- The general discussion throughout the day – the introduction to national adaptive program.
- Participant interchange
- The mix of industry people from a variety of regions
- Discussion, level of interest, variety of perspectives

- Good discussion and time on ideas
- Collaboration by experienced, knowledgeable people on the issue

*Suggestions for future Grain and Graze 2 events*

- Have demonstrations of models.
- Needed 1 or 2 more farmers.
- I'd probably like to see a bigger group of farmers
- Potentially some more farmers/farmer input, farmers from varied growing regions/operations

*Any other comments*

- Well done. Difficult topic so good to get some project ideas scoped up.
- Enjoyed the non-agro type of event.