



# RiskWi\$e

## Behavioural Science Research Activities

Dr Fay Rola-Rubzen

NSW ARG Meeting  
Griffith, NSW

22-23 August 2024

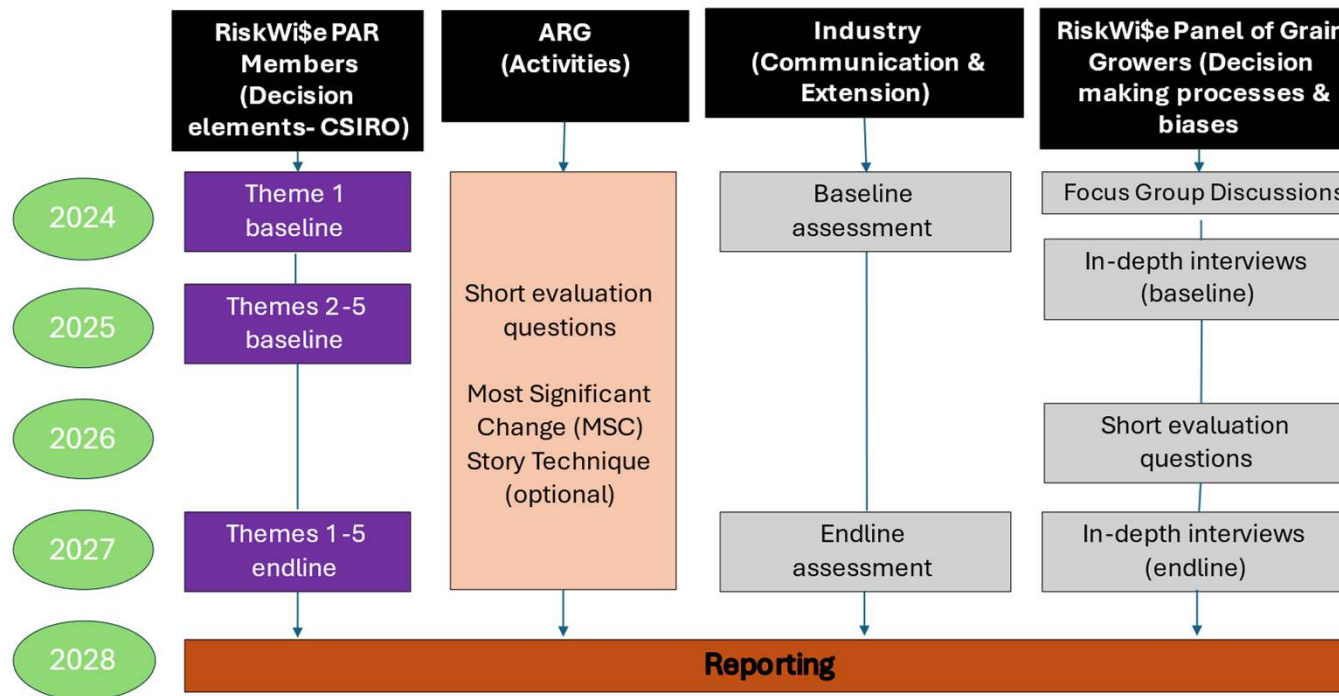


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# RiskWi\$e (Behavioural Science)

**Target:** 80% of farmers able to articulate their production management decisions in terms of probability of upside returns (rewards) offset against the associated downside risks

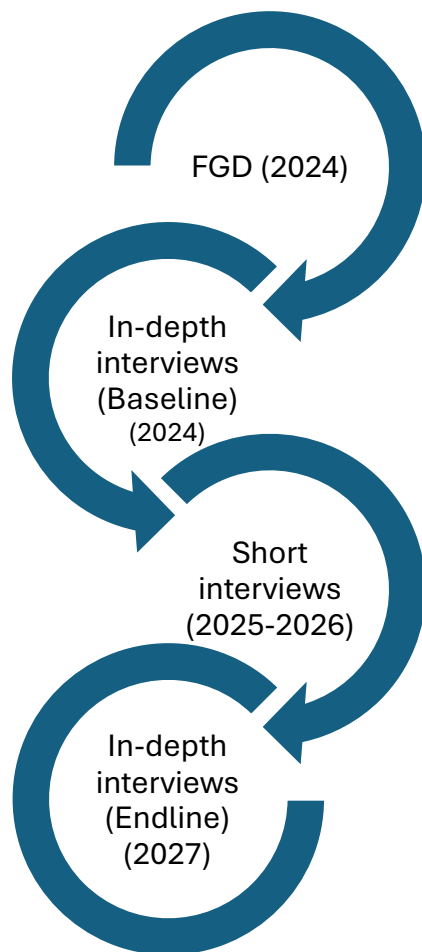
## RiskWi\$e Monitoring Evaluation & Learning Framework





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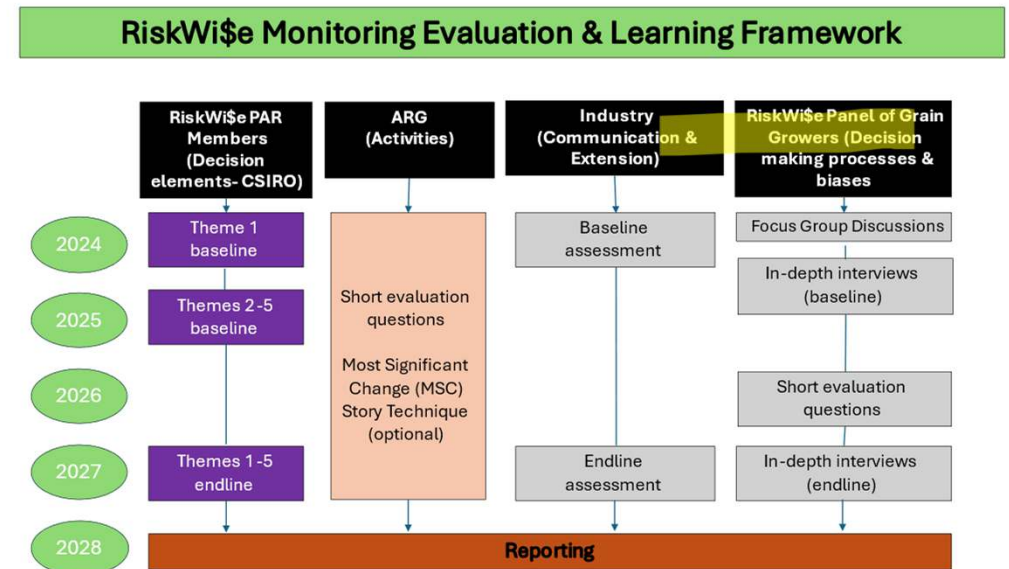
# RiskWi\$e (Behavioural Science)



- FGDs – Min 6 FGDs (1 per ARG)
- In-depth interviews (Grower panel -100 farmers)

# Focus group discussion

- Focus of FGD is on decision-making processes and practices and biases, rules of thumbs
- To understand:
  - Decision making process
  - Behavioural drivers in decision making
- Inform the interview question design + research approach





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## Value Proposition for 100-grower panel



### Understand your decision making relative to others

You will receive feedback on the type of decision-maker you are and how you compare relative to other farmers on the panel.



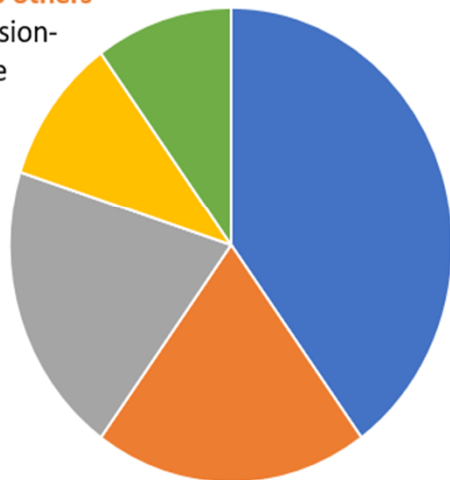
### Capacity Building

You are likely to learn new ways of dealing with risk and to raise your awareness of the decision traps to avoid and the behavioural factors that might be influencing your decisions.



### Relationship with researchers / access to outputs

You are likely to gain new connections in the academic industry and develop relationships with the research team, which will ensure early access to outputs.



### Opportunity to reflect


The panel acts as a forum to reflect on how you make your decisions, when you use fast intuitive versus slow analytical thinking, and how you consider risk and uncertainty in your decisions.



### Contribution to RiskWi\$e's success

You are the audience that RiskWi\$e needs to measure changes in thinking/approach in more depth and to test ideas. Your input is a valuable contribution to RiskWi\$e.

## Join our farmer panel



RiskWi\$e is seeking your participation in a panel of grain growers across Australia.

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**What's the panel about?**

Through group discussions or interviews, the panel members will discuss:

- How you make business decisions (e.g., Nitrogen application rate, machinery purchases)
- How you consider risk and uncertainty in your decisions
- What influences or informs your decisions


**Why get involved?**

The benefits of being on the panel, include:

- A forum to reflect on your decision-making processes
- Opportunity to learn new ways of dealing with risk


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**Contact Us**

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## RiskWi\$e Pannell Discussion Series:

- 15 article blogs on risk and decision-making

**RISK IN AGRICULTURE**  
A series of easy-to-read discussions, explanations and examples

- Risk in Australian grain farming**  
Risk is a pervasive issue in agriculture, arising from many sources and affecting every farm-related decision farmers make.
- Risk means probability distributions**  
Risk is a situation where there is a probability distribution of outcomes.
- Farmers' risk perceptions**  
Risk perceptions are about how risky someone thinks a particular strategy is.
- Diversification to reduce risk**  
Diversification is one of the most effective and widely used ways to reduce risk.
- Strategic decision, tactical decisions & Risk**  
Strategic decisions chart a general direction while tactical decisions are about deviations from that general direction.
- Risk aversion and fertiliser decisions**  
Changing fertiliser rate has little impact on the riskiness of a crop.
- Farmers' risk preferences**  
Risk preferences are about how much the person cares about the riskiness of a strategy.
- Intuitive vs analytical thinking about risk**  
Analytical thinking is slow whereas intuitive thinking is quick. Intuitive thinking can lead into biases or misjudgments.
- Learning about riskiness**  
It takes time to learn how risky a new practice is, especially if it is novel.
- More articles coming soon**

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- **Price volatility analysis**

- Modelling price volatility
- Models ran for Kwinana port
- Wheat, barley, canola, oats and lupin at port level
- Report (targeted for consultants) and a 1-2 pages research brief (targeted for farmers) – Oct/ Nov



**Bloomberg**



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## Video of biases in farm decisions:

- *Decision-making process: affected by many factors*
- *Sometimes, the way the human brain works can sabotage our decisions: Biases, rules of thumb, irrational anomalies*
- *Canvassed consultants and farmers to start with top 5 biases in farm decision making*
  - Recency bias - More weight in decision making is given to recent events.
  - Anchoring bias - You rely heavily on the first piece of information you receive.
  - Sunk cost fallacy - You stick with something not working due to what you've already put into it.
  - Confirmation bias - Favour information that confirms existing belief.
  - Bandwagon effect - Tendency for people to adopt certain behaviours, styles, or attitudes simply because others are doing so.

*"I think I should be spreading fertiliser, but there's a low chance of rain on the forecast. I've seen my neighbour spreading so I will too. He might know something I don't..."*

Video 1: [Overcoming Recency Bias in Agriculture](#)





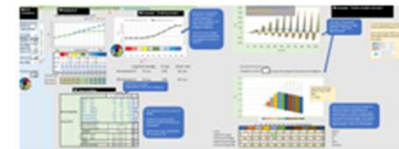
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• **Database** of current tools available to grain farmers for farm, business and price risk management and decision-making

- 200 farm decision-making tools
- Brief description, Developer, Funder, Context and intended use, Availability, Cost, Strengths/advantages, Limitations/issues, Status, Website address



N Budget across deciles



Rapid Climate Decision Analysis Tool



2022 Farm Gross Margin and Enterprise Planning Guide



> FARM DECISIONS MADE CLEAR <

GRDC South Rainfall history & climate driver tool



# What we've heard so far...

- Sources of information:
  - Past experience (AIR-EP)
  - Past generations ie. “old man” (AIR-EP)
  - Trials (Birchip)
  - Neighbours (AIR-EP)
- Decision making process:
  - Trials, spreadsheets (Birchip)
  - Agronomist (Birchip)
  - “Close your eyes and pray”
- Behavioural drivers/ factors:
  - Neighbours (AIR-EP)
  - Rules of thumb (AIR-EP+Birchip)
  - “if your canola will not germinate by the 15th of May, drag it from the program”

<https://youtu.be/FXTbapVs8UM>

# Learnings so far “...” Jacob Giles, AIR-EP

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- “In this group there are some very well thought out growers with a strong decision making process that is both intuitive and calculated”
  - Choose a decision topic that is current/ timely
  - Be ready to type/ record, growers will freely speak in decision language
  - Audio recording is helpful for reflection
  - Be mindful not to “formalise” the small group dynamic with “serious” questions
- [Since starting group discussions] “groups are able to talk back, explain and question what I present and I see this as a great indicator of knowledge and curiosity on the concept”

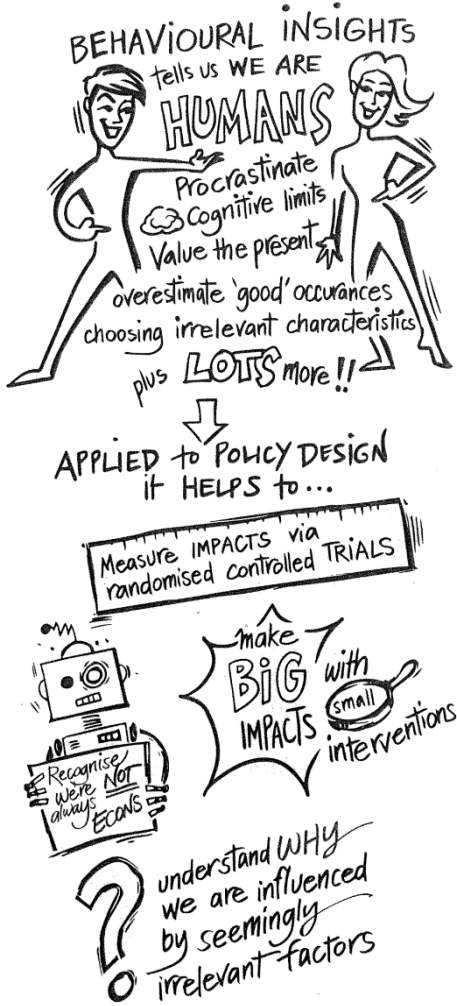
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# How to link Theme 1 & Theme 2 trials with behavioural science to improve risk management decision-making?



## Influencers of behaviour and change

<b>Messenger</b>	we are heavily influenced by who communicates information
<b>Incentives</b>	our responses to incentives are shaped by predictable mental shortcuts such as strongly avoiding losses
<b>Norms</b>	we are strongly influenced by what others do
<b>Defaults</b>	we 'go with the flow' of pre-set options
<b>Salience</b>	our attention is drawn to what is novel and seems relevant to us
<b>Priming</b>	our acts are often influenced by sub-conscious cues
<b>Affect</b>	our emotional associations can powerfully shape our actions
<b>Commitments</b>	we seek to be consistent with our public promises, and reciprocate acts
<b>Ego</b>	we act in ways that make us feel better about ourselves

Source: Mindspace

## Informational nudges?

*Nudges* - liberty-preserving approaches that steer people in particular directions, but that also allow them to go their own way  
(Sunstein 2014)



### 10 Common nudges:

- Default rules
- Simplification
- Uses of social norms
- Increases in ease & convenience
- Disclosure
- Warnings, graphic or otherwise
- Pre-commitment strategies
- Reminders
- Eliciting implementation intentions
- Informing people of the nature and consequences of their own past choices

# Indicative outputs

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- Basket of decision support tools that can be used for various decision areas
- Risk decision framework(s)
  - Decision tree framework
  - Decision-making checklists
- Behaviourally-informed extension materials
- Case studies

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***Thank you***

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## GROWER | ADVISOR | EXTENSION GROUPS



## RESEARCH PARTNERS



## ACTION RESEARCH GROUP LEADS



## PRINCIPAL PARTNER



## NATIONAL PROJECT LEAD

