

A large herd of dairy cows, including several prominent black and white Friesian cows, are grazing in a vast, green field. The cows are scattered across the landscape, with some in the foreground and others extending to the horizon. The sky is overcast with soft, grey clouds. The overall scene is a typical pastoral dairy farm setting.

PREFERENCE-BASED APPROACHES TO DERIVING BREEDING GOALS IN THE NZ DAIRY INDUSTRY

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Dairy industry change

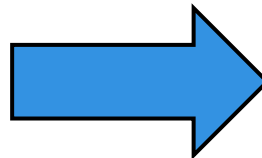


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- Cow biology
- Technology use
- Structure of the industry

Review of breeding goals for the NZ dairy industry is underway





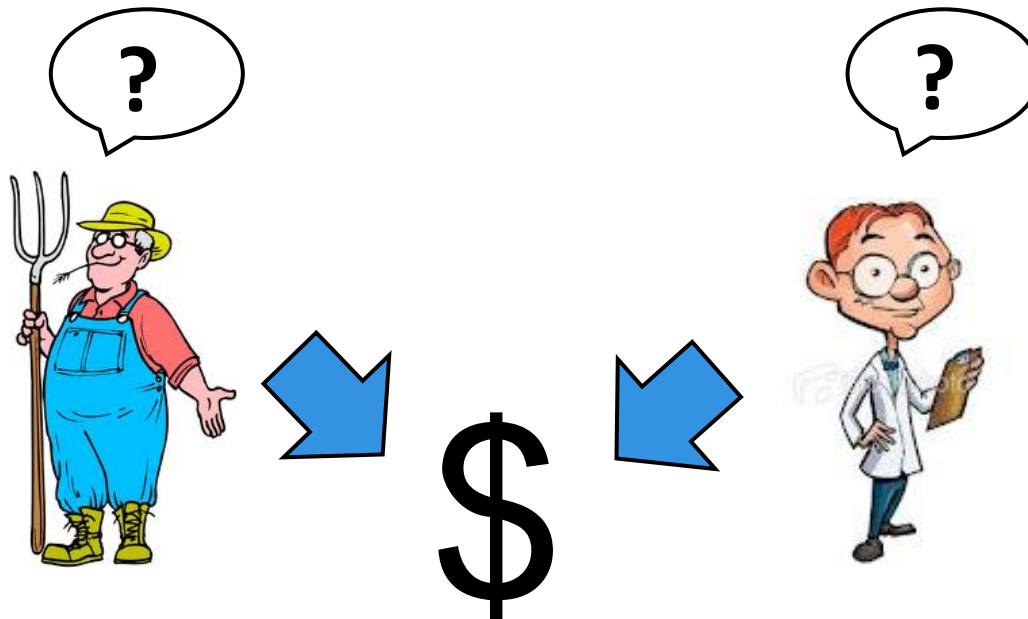
Key question



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- Scientists design breeding goals and objectives
- Not always the same as farmers breeding goals
- How can we better develop breeding goals that align the opinions of scientists and farmers?





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Survey methodology



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- Software called *1000Minds*
- Allows surgeons to rank patient for heart surgery in a fair way
- Objective and transparent
- Very successful in the health system
- Used widely in all sorts of fields





- For the New Zealand dairy industry we want to:
 - ▣ Rank the importance of traits
 - ▣ Assess whether breeding objectives align with industry expectations
 - ▣ Provide a farmer-driven mandate for a review and re-analysis of the breeding objective
- **Understand the opinions of farmers**
- **Design better breeding goals**



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Workshops



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- 19 meetings across New Zealand
- General information survey
 - ▣ Type of farming system
 - ▣ Use of merit index
 - ▣ Average herd merit
 - ▣ Breed of the herd
 - ▣ And some others
- *1000Minds* survey



The questionnaire



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Which of these 2 (hypothetical) herds do you prefer?

(given they're identical in all other respects)

(Left)

f 3 less empty cows per 100 cows

or

(Right)

n 5% better feed conversion efficiency per cow

this one

they are equal

this one

this one is impossible

skip this question for now

this one is impossible

Trade off



Results - General



- 253 farmers/ stakeholders attended workshops
- Largest respondent groups were
 - ▣ Farm owners
 - ▣ Equity partners
 - ▣ Over 40 years-of-age



Results - General



- Breed percentages from survey:
 - ▣ 40% Friesian
 - ▣ 40% Crossbred
 - ▣ 12% Jersey
 - ▣ 8% Other
- Balanced industry representation



Results – Trait ranks



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Trait	Rank (farmers)
Fertility	1
Feed Conversion Efficiency	2
Mastitis	3
Longevity	4
Milk Solids Production	5
Lameness	6
Live weight	11



Results – Trait ranks



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Trait	Rank (farmers)	Rank (current)	Correct rank?
Fertility	1	3	
Feed Conversion Efficiency	2	Not included	
Mastitis	3	4	
Longevity	4	5	
Milk Solids Production	5	1	
Lameness	6	Not included	
Live weight	11	2	



Results – Trait ranks



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Trait	Rank (farmers)	Rank (current)	Correct rank?
Fertility	1	3	
Feed Conversion Efficiency	2	Not included	
Mastitis	3	4	
Longevity	4	5	
Milk Solids Production	5	1	
Lameness	6	Not included	
Live weight	11	2	



- Greater preference for fertility over milk solids production
- Farmers want more traits included (e.g. lameness)
- Customised indexes & bull rankings for specific farming circumstances



Results



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- Type of farming system
 - ▣ Fertility most important low-input system
 - ▣ Lameness most important high-input systems

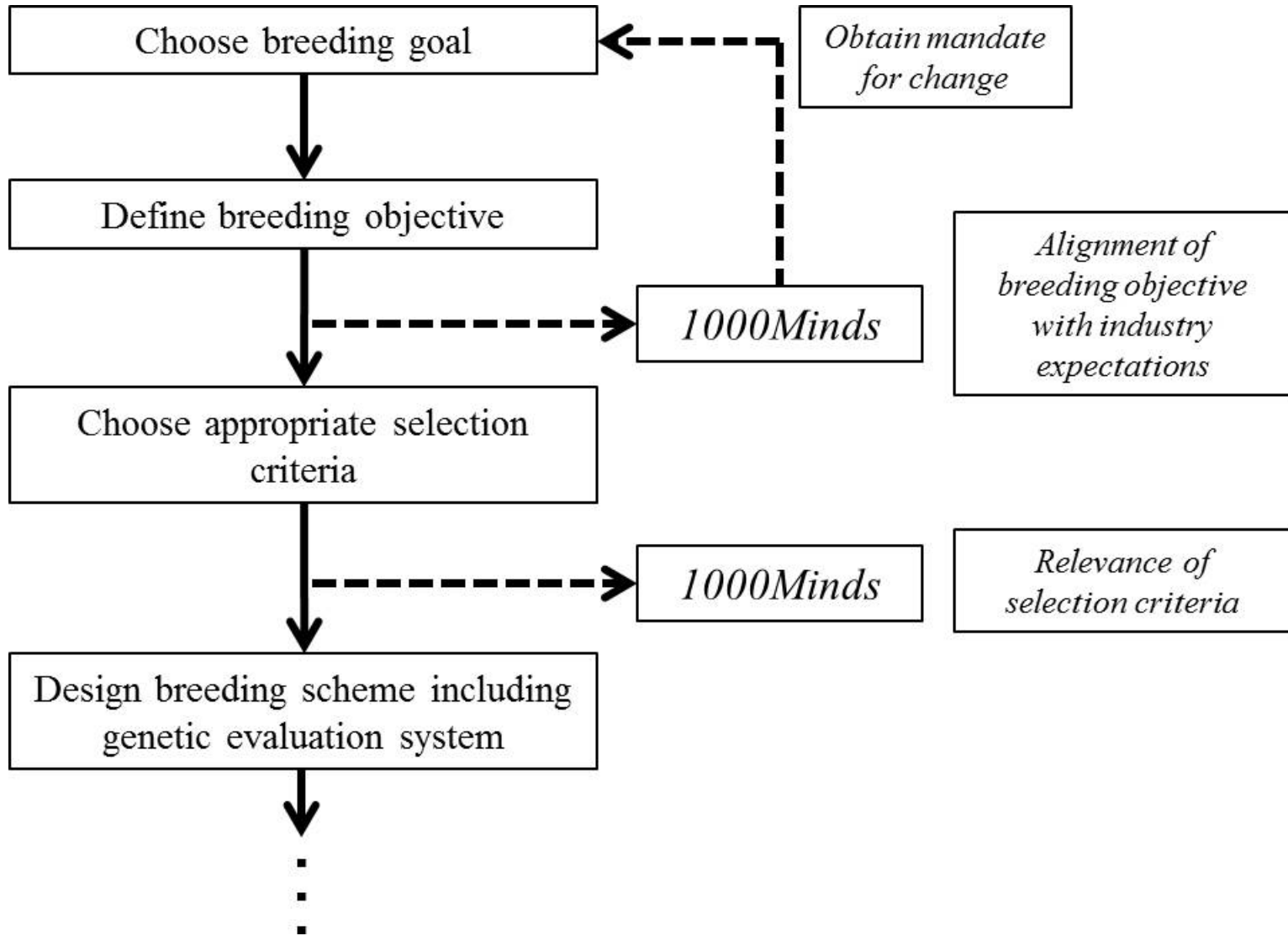




- Breed of the herd
 - ▣ FCE and Once-a-Day Milking most important Friesian herds
 - ▣ Udder Conformation important Friesian herds least important crossbred herds
 - ▣ Calving Difficulty most important Friesian herds least important Jersey herds



Programme design





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Key points



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- *1000Minds* method:
 - ▣ Objective and fair
 - ▣ Farmer input
 - ▣ Informative



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Where to next?



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- Industry buy-in
- Mandate for change
- Better targeted research