Alexandra grew up loving all kinds of animals, and decided to enrol in the Animal Science degree at UWA since it covered a broad range of animals. Her first introduction to agriculture was through the degree. Though she enjoyed learning about the zoological side of animal science, she found agricultural research to be more rewarding as it had an obvious and direct impact on both people’s and animal’s lives. Alex became interested in studying farmer decision-making behaviour. Her PhD has evolved into a project looking at what motivates the decisions of farmers to make changes on-farm in response to the growing social concerns over ethical issues in agriculture, using the example of mulesing. Alex has thoroughly enjoyed her research experience engaging with agricultural issues and communities, and hopes that her research can provide both theoretical and practical information for agriculture.
Farmer’s intentions to make changes in response to social concerns for farm animal welfare:

The case of mulesing

By Alexandra Wells

Supervisors: Assoc/Prof Dominique Blache and Prof Julie Lee and Assoc/Prof Joanne Sneddon
Farmers ultimate enactors of change

therefore….

Important to understand reasons and intentions for adopting change

so that we can…

Address reasons for adoption/non-adoption
Background

• Mulesing: surgically remove folds of skin in the breech area without anaesthetic, done to reduce risk of breech strike

• Breech strike: flies lay eggs in moist folds of skin around breech, maggots feed on live flesh

• Both have negative effects on sheep welfare
Background

• PETA calls for boycott of Australian wool in 2004

• Industry announced phase out by end of 2010, but uncertain whether Australian wool producers will stop:
  • Reneged deadline in 2009
  • Stopping mulesing is not law
  • 80% merinos mulesed in 2007
  • $31 million p/a loss due to flystrike
  • Alternatives not proven as effective cheap, easy as mulesing

• Increased activism and boycotts possible if 2010 deadline not achieved
It is important to understand intentions to stop mulesing and adopt alternatives after 2010

But…

How can we understand why they have adoption intentions?
Answer: find out what factors influence adoption intentions

- Perception of risk
- Certainty about risk
- Attitude
- Past experience with stopping mulesing
- Intention to stop mulesing after 2010
- Desire to stop mulesing after 2010
- Positive emotions
- Negative emotions
- Social pressure
- Perceived control over decision
- Intention to stop mulesing after 2010
Method

• **Stage 1: Phone interviews (n=22) WA wool producers and consultants**
  • Identify breech strike prevention methods that producers know of
  • Explore relevance of the factors in research model

• **Stage 2: Survey (n=170) Australian wool producers**
  • Test differences in intentions to adopt various prevention methods identified in Stage 1
  • Understanding intentions to stop mulesing and adopt alternatives after 2010 by testing proposed research model
Results: Stage 1 (Interviews)

Alternatives identified: Clips
Results: Stage 1 (Interviews)

Alternatives identified: Intra-dermal injections
Results: Stage 1 (Interviews)

Alternatives identified: Husbandry

Jetting

Crutching
Results: Stage 1 (Interviews)

Alternatives identified: Genetics
Results and Implications – Stage 1 (Interviews)

How interviewees felt about mulesing and alternatives:

• Negative attitude towards mulesing but intend to continue, even more negative attitude towards breech strike
  • Mulesing is goal-directed

• Negative attitudes towards clips, mixed attitudes towards intradermal injections, husbandry, genetics
  • Attitudes towards alternatives need improving

• Don’t feel social pressure to stop mulesing after 2010, but market/demand an influential factor
  • Social/market pressure (consumer, retailer etc) needs increasing
Results and Implications – Stage 1 (Interviews)

- Perceive control over decision
  - Legislation could be necessary

- Past experience with not mulesing increased intent to stop in the future
  - Alternatives need to be readily trialable

- Perception and certainty of increased risk of breech strike if not mulesing
  - Need to reduce perceptions of risk in adopting alternatives
Results – Stage 2 (Survey)

% of respondents

- **Mulesing**
- **Genetics**
- **Husbandry**
- **Injections**
- **Clips**

- **Current method**
- **Most likely to use**
- **Least likely to use**
## Results – Stage 2 (Survey)

<table>
<thead>
<tr>
<th>Factors</th>
<th>Average</th>
<th>Mode</th>
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<tbody>
<tr>
<td>Attitude (negative-positive)</td>
<td>2.89</td>
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<tr>
<td>Perceived behavioural control (low-high)</td>
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<td>7</td>
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<tr>
<td>Positive emotion (low-high)</td>
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<tr>
<td>Negative emotion (towards continuing mulesing; low-high)</td>
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<td>Risk (low-high)</td>
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<tr>
<td>Certainty (low-high)</td>
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<td>Past experience (0 upwards)</td>
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<td>Desire (low-high)</td>
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<tr>
<td>Intention (low-high)</td>
<td>3.32</td>
<td>1</td>
</tr>
</tbody>
</table>
Results – Stage 2 (Survey)

Perceptions of risk
- Certainty about risk
- Attitude: 57%
- Past experience with stopping mulesing
  - Significant at p < 0.001
- Intention to stop mulesing after 2010: 70%
- Desire to stop mulesing after 2010: 83%
- Positive emotions
- Negative emotions
- Social pressure
- Perceived control over decision
  - Significant at p < 0.01
  - Not significant
  - N.A.
Conclusions – Stage 2 (Survey)

Widespread cessation of mulesing and adoption of alternatives after 2010 not likely because:

• Mulesing most popular method now and for future

• Low desire/intent to stop mulesing, explained by…

• Attitude being negative

• Emotions being negative

• Perception of risk being high

• Experience with not mulesing being low
Implications

Need to address:

High perceptions of risk
Negative attitudes
Negative emotions
Need for more experience

When under pressure to change for animal welfare
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• Kerryn Mickle (Elders)
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• Facey Group (Felicity Astbury)
• Sandy McEachern (Holmes and Sackett)
Implications

Need to address:

High perceptions of risk
Negative attitudes
Negative emotions
Need for more experience

When under pressure to change for animal welfare