

# AWI FLYSTRIKE PREVENTION REPORT CARD: PROGRESS 2005-2017



Updated September 2017

1. Australian Wool Innovation (AWI) is the research, development and marketing organisation for the Australian wool industry.
2. Since 2005, AWI has invested \$59 million in animal health and welfare research, development and extension (RD&E), including over \$35 million on flystrike prevention.
3. Animal health and welfare is AWI's highest research priority.
4. AWI remains committed to the research, development and extension (RD&E) program to both reduce the reliance on mulesing and improve the lifetime welfare of sheep.

## BREEDING & SELECTION

Development of tools to assist woolgrowers make informed decisions.

1. Visual Score Guide for breech flystrike indicators has been established to standardise visual score and language standards. The Guide was updated and re-released in 2013.
2. The heritabilities of the five key indicator traits of breech strike (Breech Wrinkle, Dags, Urine Stain, Breech Cover, and Wool Colour) are "moderate" and thus relatively good rates of gain can be obtained. Use of these five key indicator traits in trials has shown good reductions in the risk of breech strike. Genetic correlations between these traits and other important production traits have also been quantified.
3. Practical genetic benchmark tools – Australian Sheep Breeding Values (ASBVs) – have been developed and commercially released to assist woolgrowers breed sheep more resistant to breech strike and higher in productivity. The use of the visual scores by breeders continues to grow each year.
4. Research continues to investigate additional unknown indicator traits that may predispose sheep to breech strike. The key areas under investigation are wool odour and skin bacteria.
5. Investigations to identify the DNA differences or genomic associations between highly resistant and susceptible sheep for breech flystrike require further work.

## BREECH MODIFICATION

Several breech modification alternatives have either been developed or are still in the R&D stage.

1. **Anti-flystrike clips**
  - Commercialised through Leader Products in 2009.
2. **Post-Operative Topical Anaesthetic Pain Relief from 2006**
  - Tri-Solfen® was commercialised for mulesing through Bayer Animal Health in 2006.
  - Tri-Solfen® became more accessible to growers, through the introduction of over the counter sales in 2013.
  - Tri-Solfen® was registered for castration and tail docking in 2016.
3. **Pre-Operative Analgesic Pain Relief from 2016**
  - Metacam 20® was developed by Boehringer Ingelheim and commercially available in 2016.
  - Buccalgesic® was developed by Troy Laboratories and commercially available in 2016.
  - Work continues on the delivery of a local anaesthetic (Lignocaine) with the application of elastic rings for lamb marking (Numnuts™).
4. **Skintraction®**
  - APVMA registered Skintraction® in 2015 with tight label use protocols. Further R&D is required prior to commercialisation.
5. **Liquid Nitrogen – (R&D stage)**
  - Liquid nitrogen application to reduce breech wrinkle and breech cover has shown promising results in field trials.

## IMPROVED MANAGEMENT PRACTICES

Ongoing changes to management practices are providing improved welfare outcomes.

### 1. Chemical Prevention and Control

- Trial results have indicated that dicyclanil (Clik™) a long-acting, relatively expensive, preventative chemical treatment provides good flystrike control for up to six months.
- Short-acting products are available with lower with-holding periods allowing application closer to shearing.

### 2. Husbandry

- Trial results indicate more frequent shearing and crutching and short lambing periods are important tools available to reduce the risk of breech flystrike.
- Appropriate nutrition and pasture management are key factors in controlling breech strike eg dag control. Research continues and information is regularly provided to growers to ensure all controllable factors contributing to breech strike can be managed appropriately.

### 3. ParaBoss

- ParaBoss launched in 2013, which includes FlyBoss, LiceBoss and WormBoss, continues to provide woolgrowers with important information for minimising impacts of sheep parasites leading to improved sheep lifetime welfare.
- The number of ParaBoss users has doubled from 2014 to 2017, to 13,275 per month.

### 4. Blowfly genome

- The blowfly has been gene sequenced, identifying 576 genes that are unique to the blowfly, of which 26 hold specific R&D interest at this stage.

## GROWER & INDUSTRY EDUCATION & TRAINING

### 1. National Mulesing Accreditation Program (NMAP) training

- The NMAP training program is being reviewed and updated by WoolProducers Australia and Animal Health Australia.

### 2. Grower seminars & updates held nationwide

- Flystrike management presentations for growers continue to be delivered.
- Communications continue to woolgrowers through AWI's Beyond The Bale, Newsletters and website.
- Review and publication of "Managing Breech Flystrike" undertaken in 2017.
- The fifth biennial Flystrike RD&E Update was held in 2016, attended by over 120 researchers, extension staff, woolgrowers and welfare organisations. Earlier updates were held in 2008, 2010, 2012 and 2014.
- An additional staff member was employed in 2016 to increase focus on woolgrower engagement and extension.

### 3. Consultation with woolgrower organisations

- AWI regularly meets with a wide range of Woolgrower Organisations to constantly review and update the Breech Strike RD&E Strategy.

## SUPPLY CHAIN EDUCATION & TRAINING

### 1. AWI's Animal Welfare Forum

- Established in 2009, bringing together animal welfare organisations, animal rights groups and researchers to improve understanding and awareness of the RD&E program.

### 2. Six-monthly audits of flystrike RD&E program

- Conducted independently by the Australian Veterinary Association (AVA) since 2005 and reported to stakeholders annually.

### 3. Annual report on R&D genetic progress

- Introduced in 2011, genetic experts provide an annual genetic report on progress made which is reported to stakeholders annually.

### 4. Issues management advice

- Ongoing updates of RD&E progress to the domestic and international supply chain partners, including wool processors and retailers.
- Ongoing support and issues management advice provided as required.