

AWI FLYSTRIKE PREVENTION PROGRAM

REPORT CARD: PROGRESS 2005-2016



Updated September 2016

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 \$34 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 outcome 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 heritability of the five key indicator traits (Breech Wrinkle, Dags, Urine Stain, Breech Cover, and Wool Colour) which predispose a sheep to breech flystrike have been determined as moderate. Use of these five key indicator traits has shown good progress for minimizing the risk of flystrike. Genetic correlations between these five 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 to breed sheep more resistant to breech flystrike and monitor the impact on productivity. The use of the visual scores by ram breeders continues to grow each year.
4. Breeding research continues to investigate additional unknown indicator traits that may predispose sheep to breech flystrike. 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

- Commercialized through Leader Products in 2009.

2. Pain Relief

- A post-operative pain relief product (TriSolfen®) commercialised through Bayer has been available since 2006.
 - In 2013 TriSolfen® became more accessible to growers, through the introduction of over the counter sales.
 - Pre-operative pain relief meloxicam-based product:
 - Metacam® 20 - has been developed by Boehringer Ingelheim and became commercially available in April 2016.
 - Buccalgesic® has been developed by Troy Laboratories and is due to be commercially available in late 2016.
 - Work continues on the delivery of a local anaesthetic (lignocaine) to coincide with the application of elastic rings for lamb marking (Numnuts™).
- ### 3. Skintraction™
- APVMA registered Skintraction™ in May 2015 with tight label use protocols and has therefore limited current commercial viability.
- ### 4. Liquid Nitrogen - (R&D stage)
- Liquid nitrogen application to reduce breech wrinkle and breech cover has shown promising results in early field trials.
- ### 5. Laser Application - (yet to achieve proof of concept)
- Early scoping studies have not yet been successful for the use of lasers to permanently reduce wool around the edge of the tail and either side of the breech.
 - New technologies are under review to see if further proof of concept trials are warranted.

IMPROVED MANAGEMENT PRACTICES

Ongoing progress to management practices are providing improved welfare outcomes.

1. Chemical

- 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 withholding periods allowing use closer to shearing.

2. Husbandry

- Trial results indicate double crutching and short lambings can be important tools in reducing the risk, incidence and improving the management of breech flystrike.
- Appropriate nutrition pasture management and worm control are key factors in controlling flystrike. Information is regularly provided to growers to ensure all factors contributing to flystrike are managed appropriately.

3. ParaBoss

- Launch of ParaBoss (that includes FlyBoss, LiceBoss and WormBoss) has provided woolgrowers with an important source of information for minimising impacts of parasites in their flocks leading to improved welfare outcomes for sheep.

4. Blowfly genome

- The blowfly has been gene sequenced, identifying nearly 2,060 unique genes, offering potential opportunities for targeted host-specific control chemicals and vaccines.

GROWER & INDUSTRY EDUCATION & TRAINING

1. National Mulesing Accreditation Program (NMAP) training

- The NMAP training program is being reviewed and updated and is planned to be available in 2017.

2. Grower seminars & updates held nationwide

- Flystrike management seminars and workshops for growers continue to be delivered depending on the season and demand from growers.
- Publication of major extension booklet "Managing Breech Flystrike".
- The fifth biennial Flystrike Technical Seminar was held in July 2016, attended by over 120 researchers, extension staff, farmer representatives and welfare organisations.

SUPPLY CHAIN EDUCATION & TRAINING

1. AWI's Animal Welfare Forum

- Established in 2009, bringing together animal welfare organisations, animal rights groups and researchers allowing for open and transparent communication.

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

- Conducted by Australian Veterinary Association (AVA) and provided since 2005.
- Progress summarised in AWI's RD&E flystrike prevention strategy and provided to retailers annually.

3. Annual report on R&D genetic progress

- Introduced in 2011, genetic experts provide an annual genetic report on progress made.

4. Issues management advice

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