AUSTRALIAN VETERINARY ASSOCIATION

2nd July 2019 Adjust date

Ms Bridget Peachey
Program Manager Sheep Health and Welfare,
Australian Wool Innovation Limited
Level 6, 68 Harrington St.
The Rocks
Sydney NSW 2001

Dear Bridget,

RE: AVA REPORT ON PROGRESS OF AWI R&D ON MULESING ALTERNATIVES AGAINST WOOL INDUSTRY COMMITMENTS TO INTERNATIONAL RETAILERS

On 16th April 2019 AVA representatives Dr David Hucker and Professor Bruce Allworth joined you and Geoff Lindon as representatives of Australian Wool Innovation Limited (AWI) and Associate Professor Forbes Brien and Dr Peter James as advisers on genetic issues to conduct a review of progress against Research, Development and Extension milestone commitments made to overseas retailers utilising Australian wool.

The report detailing their findings is attached.

If you require further details or clarification of any points raised please do not hesitate to contact me.

Yours sincerely,

Julia Crawford.

Dr Julia Crawford
President
Australian Veterinary Association

Cc	Mr Stuart McCullough CEO Australian Wool Innovation Level 6, 68 Harrington St The Rocks SYDNEY NSW 2001	Mr Ed Storey President WoolProducers Australia PO Box E10 KINGSTON ACT 2604

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AUSTRALIAN VETERINARY ASSOCIATION

REPORT BY AVA REPRESENTATIVES ON PROGRESS OF AUSTRALIAN WOOL INNOVATION'S BREECH FLYSTRIKE RESEARCH, DEVELOPMENT and EXTENSION STRATEGY

April 2019

Scope of Review:
This review is intended to provide an independent assessment of the Australian Wool Innovation (AWI) Breech Strike Research, Development and Extension Program since the last report in June 2018. The AWI Program Review is a consequence of an undertaking in 2005 to overseas manufacturers and retailers of clothing incorporating Australian wool by the Australian wool industry.

Approach:
A review of the AWI research program was held between representatives of the Australian Veterinary Association (Dr David Hucker and Professor Bruce Allworth) and AWI (Ms Bridget Peachey and Mr Geoff Lindon) on 16th April 2019. Written reports from AWI together with relevant verbal reports were provided across a range of areas.

Findings:
AWI continues to invest in research aimed at decreasing breech strike and specifically to decrease the reliance of wool producers on mulesing. AWI managed a total of 27 projects, including 6 projects that came to completion, during the reporting period. This work, while still focused on "solving" the mulesing issue, continues to support much broader sheep welfare outcomes, and in this reporting period, had increased emphasis specifically on reducing sheep exposure and susceptibility to the sheep blowfly. A total of 17 of the 26 projects were in the Improved Management Practices portfolio.

Breeding and selection projects (2 current, 3 completed) include a review of flystrike risk factors including odour, and re-analysis of data sets with a view to explain variation between resistant and susceptible sheep. It is anticipated that each of these projects will contribute to a greater understanding of selection of sheep for greater flystrike resistance and will fill some of the current knowledge gaps in merino breeding.

Breech Modification Alternatives are not currently being further funded by AWI.

Improved Management Practices (14 current, 3 completed) is the main area of current research activity. Projects include chemicals (resistance in current chemicals, new chemical discovery, nanotechnology), vaccine development (2 projects), evaluation of further areas for pain alleviation research, and overcoming dags.

Wool Industry Training and Engagement (4 projects) continues to focus on the support of the successful ParaBoss website and extension activities with producer groups, as well as extension on pain relief.

Supply Chain Engagement activities include the AVA independent auditing and engagement with various stakeholders. On 17th July 2018, AWI held its biannual RD&E technical update to provide an overview of flystrike research and extension to 150 industry representatives. On 12th December, 2018, AWI held its Welfare Forum meeting with representatives from animal welfare groups.

The auditors noted in their last report the "need for AWI to develop the methodology to monitor and report on the adoption of genetic advances within industry". Given the importance of changing the Merino to a less susceptible genotype, an area strongly supported by AWI in its research portfolio, reporting and extension in this area is seen as essential. This is still not occurring on a sufficiently active scale. A concern with adoption of genetic change remains that important productivity traits may be adversely affected. Importantly AWI has used recent data from other genetic work to further inform the SheepGenetics team of the need to routinely report adult fleece weight, which is now occurring. This added transparency will further provide producers with increased ability to utilise genetics to reduce breech strike AND improve productivity. Added communications to woolgrowers of this transparency needs to occur.

A description of current projects and some commentary is provided in Table1.

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Table 1. Progress for AWI's BreechStrike Prevention Program, Apr 2019

	Current / Proposed Projects	*Current work / Progress*	*Comments*
Breeding and selection			
	1.Review of flystrike risk factors 2. Analysis of breech flystrike data	Final report due Jun 2019 Work in progress	Aims to prioritise future genetic work Re-examining existing data
Breech Modification Alternatives			No current AWI funded work
Improved Management Practices			
Improved pain relief options	Evaluation of pain alleviation research. Residue Depletion Study	Report in progress. Lab work completed. Final report due June.	Aims to identify areas for research. Assessing lignocaine, bupivacaine, cetrimide.
Reduce the impact of flies	1. CRISPR Project to modify genome 2. Histone deacetylase project 3. Vaccine development(2) 4. Nanotechnology 5. Insect pathogen review	CRISPR phase III – continuation of work. Three year project underway Projects underway Project commenced Final report due April	These projects have implications for both breech strike and body strike.
Chemical resistance, producer actions	1. Improved diagnostics for Worm Egg Counts(2), Review of dags 2. Ectoparasite Resistance Project (2)	Five projects in progress across a range of areas	Five projects aimed at (1) improving diagnostics for worm control (2) understanding/managing resistance status of flies/lice (3) dags
Wool Industry Training and Engagement			
Communication to woolgrowers	1. Paraboss Phase II 2. Flystrike Extension materials 3. Putting Wormboss into Practice. 4. Pain Relief Package	In progress	Ongoing support for Paraboss, and extension activity, with 20 Publications on AWI website.
Supply Chain engagement			
	Flystrike RD and E Update Forum 2018 AWI Animal Welfare forum		On-going commitment for transparency and dialogue.