

AWI RESEARCH, DEVELOPMENT, EXTENSION & COMMUNICATIONS STRATEGY: BREECH FLYSTRIKE PREVENTION



Updated September 2011

Australian Wool Innovation (AWI) is the research, development and marketing organisation for the Australian wool industry. Animal welfare and flystrike prevention - a highly complex issue - is AWI's number one research priority. Since 2005, AWI has invested \$41 million in health and welfare R&D activities,

including over \$26 million specifically in flystrike prevention. Considerable progress has been made and AWI remains committed to a fast-tracked research, development and extension (RD&E) program to reduce the reliance on mulesing and improve the lifetime welfare outcome for sheep.

AREAS OF INVESTIGATION	OBJECTIVE	CURRENT STATUS/ PROGRESS MADE	RESEARCH DEVELOPMENT AND EXTENSION PARTNERS
BREEDING & SELECTION	Identify the incidence of flystrike resistance in current population	10% of Merino animals estimated to be resistant to breech flystrike. Final Report delivered June 2010	Commonwealth Scientific & Industrial Research Organisation (CSIRO) & Department of Agriculture and Food Western Australia (DAFWA)
	Determine the relative importance of the four main breech traits (breech wrinkle, dags, breech cover and wool colour) and their association with flystrike	Phase 1 (2005-2010) identified the importance of the traits; Phase 2 (2010-12) is focused on generating more data to improve the overall accuracy	
	Identify breech trait heritability and correlations with other important traits, to be used in the creation of ASBVs	Trait heritabilities and genetic correlations with other important traits identified with Final Report delivered June 2010 and continues to be improved as more data is collected until June 2012	CSIRO & DAFWA
	Produce and extend research prototype breeding values and ASBVs for main breech traits	ASBVs for wrinkles were launched September 2009. ASBVs for dags and breech cover were launched November 2010	Sheep Genetics (SG), Australian Merino Sire Evaluation Association (AMSEA) & Sheep Cooperative Research Centre (CRC)
		Research Breeding Values for wool colour and fleece character were launched November 2010	
	Development of further breeding tools or options by identifying unknown causes of flystrike	Phase 2 (2010-12) is focused on generating more data to improve the overall accuracy and discover new tools	CSIRO & DAFWA
Identify genomic associations with flystrike resistant traits	Project commenced July 2011, Final Report due 2013	CSIRO, DAFWA & Sheep CRC	
BREECH MODIFICATION DEVELOPMENTS	Develop non-surgical breech flystrike prevention alternatives	R&D for Clips completed and commercialised by Leaders Products. Clips available to growers since 2009	Veterinary Health Research, Joan Lloyd Consulting, Strategic Bovine Services, Leader Products et al
		R&D into intradermal options of collagenase and cetrimide ceased in 2008. R&D into other intradermal options being pursued	CSIRO, NSW Dept Primary Industries, Queensland Dep Primary Industries & Fisheries, University of Sydney, University of Queensland, Monash University, University of Adelaide
		Accelerated R&D into intradermal option of Sodium Lauryl Sulphate (Skintraction™) commenced 2008. Optimal concentration and many of the treatment and application variables to provide effective results have been determined. R&D continues to improve consistency of results between sites	Cobbett Technologies
	Develop a welfare-improved surgical procedure	Planning for the commercialisation phase and eventual registration of the intradermal compound by APVMA	RedCap Solutions, Australian Pesticides & Veterinarian Medicines Authority (APVMA) & Cobbett Technologies
		Welfare assessments conducted on non surgical alternatives. Ongoing welfare evaluation	CSIRO and Animal Welfare Science Centre
		Continue to investigate novel breech modification alternatives as they arise	Variety of organisations
		National Mulesing Accreditation Program (NMAP) training delivered nationwide to contractors and growers	Kondinin & Livestock Contractors Association
	Develop a welfare-improved surgical procedure	Commercial release of Tri-Solfen in 2006 by Bayer. Market figures indicate 60% of lambs mulesed were treated with pain relief in 2011.	Developed by Animal Ethics, commercialized by Byer
Ongoing R&D into improvements in pre and post operative pain relief treatments		Variety of organizations	

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IMPROVED MANAGEMENT PRACTICES	Reduce the reliance on mulesing and improve animal welfare by increasing reliance on other management practices	Research indicates successful protection is achieved by long acting chemical treatments in normal seasons. Double crutching and short lambing reduces the risk of flystrike	Sheep CRC, CSIRO, State Departments of Primary Insutry (DPI) agencies, Universities of Melbourne, Adelaide and Sydney
GROWER, INDUSTRY & DOMESTIC STAKEHOLDER EXTENSION, TRAINING & COMMUNICATIONS	Investigate and monitor changes in on farm management strategies for breech flystrike control	Surveys undertaken to determine growers' current use of specific management options	AWI Extension Networks, Sheep CRC, State DPIs
		Development of a national program to collate data and on farm case studies to be published on AWI website and made accessible through various extension outlets	AWI Extension Networks Sheep CRC, State DPIs
		National Wool Declaration (NWD) data statistics used to monitor on farm changes and market feedback	Australian Wool Exchange (AWEX)
		Monitoring of genetic trends in breech flystrike indicator traits and overall sheep productivity	Australian Merino Sire Evaluation Association, Sheep Genetics, and Wether Trials (NSW DPI)
	Provide woolgrowers, the domestic wool industry and relevant stakeholders updates of the RD&E outcomes and welfare advances to manage breech flystrike prevention and improve animal welfare	RD&E available on AWI website and through other extension tools	RD&E partners
		Extension information included quarterly in 'Beyond the Bale', distributed to 29,000 woolgrowers nationwide since 2005. Monthly emails to AWI nationwide grower networks	AWI Nationwide Grower Extension Networks
		Bi-annual Breech Flystrike Technical R&D Update held 2008 and 2010. Next Update scheduled for 2012	All RD&E partners
		Nationwide grower meetings & FlyBoss workshops	AWEX, AWI Networks, Sheep CRC, Ram Breeders, State DPI agencies (eg DAFWA non-mulesing network), Wool Brokers
		Roadshows, field days, ram sales, sheep shows, grower conferences, wool broker client meetings	In association with a range of grower service providers and consultants
		Woolgrower Forum held every six months that reviews AWI strategy and operational plans	Individual wool growers and representative grower groups
INTERNATIONAL SUPPLY CHAIN EXTENSION, TRAINING & COMMUNICATIONS	Ensure international stakeholders are aware of progress in RD&E and welfare, reflecting ongoing commitment to animal welfare	Quarterly Updates provided and annual Flystrike Prevention Seminars with retailers, brands and their associations held each year.	AVA, welfare organisations, retail associations and supply chain partners
		Independent quarterly audit of AWI's RD&E strategy by AVA, reporting on overall progress are provided	
		Annual audit of AWI's Breech Flystrike Breeding & Genetic Selection RD&E program	
	Provide advice and support to retailers and brands in addressing animal welfare and related CSR issues	Ongoing support to individual retailers, brands and processors as required	Individual retailers and brands
	Develop and maintain efficient two-way communication along supply chain between grower and retailer	Information provided along the supply chain appropriate to their role in sourcing or establishing supply chains	AWI staff and various commercial supply chain partners