

AAABG 19TH CONFERENCE PROGRAM	
TUESDAY 19 JULY	
Auditorium	
07:00 - 08:30	Registration
08:30 - 10:15	Animal Breeding and Selection
8:30 - 8:45	Welcome <i>Rob Delane (Director General DAFWA)</i>
8:45 - 9:15	Genetic architecture of complex traits <i>M.E. Goddard</i>
9:15 - 9:45	Animal breeding objectives: balancing productivity and ecological impact <i>Johan van Arendonk</i>
9:45 - 10:15	Automated mate selection analyses <i>Brian Kinghorn</i>
10:15 - 10:45	Morning tea
10:45 - 12:15	Breeding Objectives
10:45 - 11:15	Experience in breeding objectives for beef cattle, sheep and pigs, new developments and future needs <i>S. Barwick</i>
11:15 - 11:30	Is breeding for profit still the answer? <i>P. Amer</i>
11:30 - 11:45	Preference-based approaches to deriving breeding objectives: application to sheep and plant breeding <i>T.J. Byrne</i>
11:45 - 12:00	Breeding objectives and breeding strategies for Philippine dairy buffaloes <i>E.B. Flores and J.H.J. van der Werf</i>
12:00 - 12:15	The impact on selection for economic merit of including residual feed intake traits in breeding objectives and of having pedigrees available <i>S.A. Barwick, M.G. Jeyaruban, D.J. Johnston, M.L. Wolcott and H-U. Graser</i>
12:15 - 12:30	Poster Viewing
12:30 - 13:30	Lunch
13:30 - 15:00	Genetic Parameters I
13:30 - 13:45	Genetic variation in growth patterns is associated with sow lifetime performance <i>K.L. Bunter and C.R.G. Lewis</i>
13:45 - 14:00	Survival analysis for the productive life of commercial sows <i>C.R.G. Lewis and K.L. Bunter</i>
14:00 - 14:15	Genetic parameters associated with adult ewe liveweight and body condition <i>G.H. Shackell, N.G. Cullen and G.J. Greer</i>
14:15 - 14:30	Heritability estimates for retail colour stability of lamb meat <i>S.I. Mortimer, R.H. Jacob, R.D. Warner, K.L. Pearce, D.W. Pethick, J.H.J. van der Werf, A.J. Ball and D.L. Hopkins</i>
14:30 - 14:45	Genetic relationships between objectively measured and subjectively assessed traits in the South African Dorper sheep breed <i>O.T. Zishiri, S.W.P. Cloete, J.J. Olivier and K. Dzama</i>
14:45 - 15:00	Piglet traits at birth are associated with their survival until weaning <i>P. Tabuaciri, K.L. Bunter and H-U. Graser</i>
15:00 - 15:30	Afternoon tea

15:30 - 17:00	Genetic Parameters II
15:30 - 15:45	Genetic (co)variances for hogget traits and reproduction in the South African Dohne Merino breed <i>J.J. Olivier and S.W.P. Cloete</i>
15:45 - 16:00	Different methods detected different loci involved in resistance to facial eczema disease of sheep <i>S.H. Phua and K.G. Dodds</i>
16:00 - 16:15	Genetic parameters for breech strike indicator traits and yearling production traits in Merinos <i>A.J. Scholtz, S.W.P. Cloete, J.J.E. Cloete, A.C.M. Kruger, J.B. van Wyk and T.C. de K. van der Linde</i>
16:15 - 16:30	Is there a relationship between temperament and internal parasite resistance in Merinos? <i>J.E. Newton, S. Dominik, J.M. Henshall and J.H.J. van der Werf</i>
16:30 - 16:45	Genetic variation and heritability of ostrich weight traits <i>A. Engelbrecht, S.W.P. Cloete, K.L. Bunter and J.B. van Wyk</i>
18:00 - 19:00 *	Poster Viewing
19:00 *	Informal Dinner

* times to be confirmed

TUESDAY 19 JULY	
Room 2	
10:15 - 10:45	Morning tea
10:45 - 12:15	Cattle I
10:45 - 11:00	Repeatability of residual feed intake on ad-libitum pasture and restricted feeding in Angus cows <i>R.M. Herd, P.F. Arthur and J.A. Archer</i>
11:00 - 11:15	The effect of breed on the onset of puberty in heifers <i>R.E. Hickson, C.C. Balcomb, K.R. Fraser, N. Lopez-Villalobos, P.R. Kenyon and S.T. Morris</i>
11:15 - 11:30	<i>Bull traits measured early in life as indicators of herd fertility</i> <i>N.J. Corbet, B.M. Burns, D.H. Corbet, J.M. Crisp, D.J. Johnston, M.R. McGowan, B.K. Venus and R.G. Holroyd</i>
11:30 - 11:45	Effect of previous reproductive status of dam on the preadjustment of weaning weight for genetic evaluation in tropical beef breeds <i>M. G. Jeyaruban, M.L. Wolcott, D. J. Johnston and H-U. Graser</i>
11:45 - 12:00	The effect of imprinted genes on carcass traits in Australian Angus and Hereford cattle <i>B. Tier and K. Meyer</i>
12:00 - 12:15	Genetic evaluation of post-partum reproductive status in beef cattle from Northern Australia <i>Yuandan Zhang, Bruce Tier and Rachel Hawken</i>
12:15 - 12:30	Poster Viewing
12:30 - 13:30	Lunch
13:30 - 15:00	Cattle II
13:30 - 13:45	Comparison of genetic parameters for calving difficulties in Angus, Charolais, Hereford and Limousin <i>M.G. Jeyaruban, D.J. Johnston and H-U. Graser</i>
13:45 - 14:00	Trends in estimated breeding values in response to selection using visual muscle score in beef cattle <i>B.J. Walmsley and W.A. McKiernan</i>
14:00 - 14:15	Milk and Weight EBVs are associated with cow and calf gain during lactation but carcass EBVs are not <i>S.J. Lee, K. Donoghue, M.L. Hebart and W.S. Pitchford</i>
14:15 - 14:30	The effective management of deleterious genetic conditions in cattle <i>C.F. Teseling and P.F. Parnell</i>
14:30 - 14:45	Information empowers - Arthrogyrosis Multiplex in Angus Australia <i>J.M. Allen and C.F. Teseling</i>
14:45 - 15:00	Managing deleterious genetic conditions at the herd level <i>J.M. Allen, P.F. Parnell and C.F. Teseling</i>
15:00 - 15:30	Afternoon tea
15:30 - 17:00	Cattle III
15:30 - 15:45	Breeding Angus cattle that naturally emit less methane <i>R.M. Herd, K.A. Donoghue, S.H. Bird, R.F. Hegarty and P.F. Arthur</i>
15:45 - 16:00	The effect of duration and frequency of milk yield recording on lactation curve modelling <i>P.C. Thomson, E. Jonas, M. Abdelsayed and H.W. Raadsma</i>
16:00 - 16:15	Breeding for extended lactation in Australian dairy cows: a review <i>M. Abdelsayed, H.W. Raadsma and P.C. Thomson</i>
16:15 - 16:30	Age at first calving and its relationship with other dairy traits in Holstein cattle in Australian herds <i>M. Haile-Mariam and J.E. Pryce</i>

TUESDAY 19 JULY	
Room 3	
10:15 - 10:45	Morning tea
10:45 - 12:00	Statistical Genetics
10:45 - 11:15	Multivariate estimation of genetic parameters: quo vadis? <i>Karin Meyer</i>
11:15 - 11:30	Effects of ascertainment bias when testing for polled in Australian beef cattle <i>J.M. Henshall, E. Piper and C.A. McDonald</i>
11:30 - 11:45	Penalized maximum likelihood estimates of genetic covariance matrices with shrinkage towards phenotypic dispersion <i>Karin Meyer, Mark Kirkpatrick and Daniel Gianola</i>
11:45 - 12:00	Performance of cross-validation and likelihood based strategies to select tuning factors for penalized estimation <i>Karin Meyer</i>
12:00 - 12:15	Partitioning genetic variance in composite sheep <i>S.F. Walkom, A.P. Verbyla, F.D. Brien, M.L. Hebart and W.S. Pitchford</i>
12:15 - 12:30	Poster Viewing
12:30 - 13:30	Lunch
13:30 - 15:00	Sheep I
13:30 - 14:00	Genetic frontiers in the development of 'clean, green and ethical' management systems for the extensive sheep industry <i>G.B. Martin and J.C. Greeff</i>
14:00 - 14:30	Selection strategies for the genetic improvement of reproductive performance in sheep <i>F.D. Brien, G.N. Hinch, J.H.J. van der Werf, D.J. Brown and A.A. Swan</i>
14:30 - 14:45	Factors affecting variability in feed intake of sheep with ad libitum access to feed and the relationship with daily methane production <i>D.L. Robinson, S.L. Bickell, A.F. Toovey, D.K. Revell and P.E. Vercoe</i>
14:45 - 15:00	Genetic and phenotypic parameters for temperament in weaned lambs <i>J.E. Hocking Edwards, F.D. Brien, M.L. Hebart, G.N. Hinch, J. Hoad, K.W. Hart, G. Gaunt, M. Robertson, G. Refshauge, and T. Bird-Gardiner</i>
15:00 - 15:30	Afternoon tea
15:30 - 17:00	Gene expression
15:30 - 15:45	Characterisation in the New Zealand dairy industry of a polymorphism modulating the transcription rate of a chromosome domain encompassing PLAG1 <i>R.J. Spelman, T. Druet, W. Coppieters and M. Georges</i>
15:45 - 16:00	Expression of candidate gene for residual feed intake in beef cattle <i>W. Al-Husseini, K. Quinn, R.M. Herd, C. Gondro, J.P. Gibson, L.M. Cafe, P.L. Greenwood and Y. Chen</i>
16:00 - 16:15	Recent ancestry for the 821del11 double muscling allele <i>Brendon A. O'Rourke, P.L. Greenwood, P.F. Arthur and M.E. Goddard</i>
16:15 - 16:30	Mapping of congenital contractural arachnodactyly in cattle <i>I. Tammen, M.S. Khatkar, J.A.L. Cavanagh, P.A. Windsor, P.C. Thomson and H.W. Raadsma</i>
16:30 - 16:45	GDF8 c.1232 G>A mutation effect consistent in an industry collected resource <i>P.L. Johnson, T.C. Van Stijn, H. Henry and N.J. McLean</i>
16:45 - 17:00	Gdf8 c.1232 G>A frequency in commercially slaughtered lambs <i>P.L. Johnson, T.C. Van Stijn, H. Henry, N.J. McLean and K.G. Dodds</i>

WEDNESDAY 20 JULY	
Auditorium	
08:30 - 10:00	Sheep II
08:30 - 08:45	Genetic correlation estimates for lamb carcass composition <i>S.I. Mortimer, A.A. Swan, R.H. Jacob, R.D. Warner, K.L. Pearce, D.W. Pethick, J.H.J. van der Werf, J.E. Hocking Edwards, G.H. Geesink, G.E. Gardner, A.J. Ball and D.L. Hopkins</i>
08:45 - 09:00	Pedigree matchmaker: can it tell us more than just pedigree? <i>D.J. Brown, A.A. Swan and M.L. Mortimer</i>
09:00 - 09:15	Will Merino sheep with smooth bare breeches grow soft, white, photostable wool? <i>S. Hatcher, K.J. Thornberry and S. Gabb</i>
09:15 - 09:30	How do sheep breeders benefit from new technologies? <i>J.A. Sise, E.M. Linscott and P.R. Amer</i>
09:30 - 10:00	Results of an exploratory study of the application of agent-based modelling of sheep genetic progress using network theory <i>A. Reverter, S. Dominik, S. Field and R. Banks</i>
10:00 - 10:30	Morning tea
10:30 - 11:00	The John Vercoe Memorial Lecture
	Beef translational genomics: lessons from the literature <i>Alison Van Eenennaam</i>
11:00 - 12:15	Genomics
11:00 - 11:30	Beef cattle genetic evaluation in the genomics era <i>D.J. Johnston, B. Tier, and H-U. Graser</i>
11:30 - 11:45	Effect of relationship and age structure between training and validation set on the accuracy of genomic breeding value prediction using Genomic BLUP <i>M. Erbe, F. Seefried and H. Simianer</i>
11:45 - 12:00	The relative importance of information on unrelated individuals on the prediction of genomic breeding values <i>S.A. Clark, J. M. Hickey and J.H.J. van der Werf</i>
12:00 - 12:15	A Kernel Method For Genome-Wide Selection Using Haplotypes <i>G. Moser, M.S. Khatkar and H.W. Raadsma</i>
12:30 - 13:30	Lunch
13:30 - 15:00	Genomics - Sheep
13:30 - 14:00	Optimizing sheep breeding programs with genomic selection <i>J.H.J. van der Werf, B.J. Horton and R.G. Banks</i>
14:00 - 14:15	The value of genomic selection for stud and commercial Merino rams <i>S. Dominik, J.H.J. van der Werf and R.G. Banks</i>
14:15 - 14:30	The importance of population structure on the accuracy of genomic prediction in a multi-breed sheep population <i>H.D. Daetwyler, K.E. Kemper, J.H.J. van der Werf and B.J. Hayes</i>
14:30 - 14:45	Use of genomic information to estimate breeding values for carcass traits in sheep <i>A.A. Swan, D.J. Brown, B. Tier and J.H.J. van der Werf</i>
15:00 - 15:30	Afternoon tea
15:30 - 16:00	Helen Newton Turner Oration
16:00 - 17:00	AAABG Ordinary General Meeting
time *	Conference dinner - Depart for Oakover restaurant by bus

* to be confirmed

WEDNESDAY 20 JULY	
Room 2	
08:30 - 10:00	Biotechnology I
08:30 - 08:45	The effect of telomere length variation on lifetime productivity traits in sheep <i>G.S. Nattrass, R.G. Banks and W.S. Pitchford</i>
08:45 - 09:00	Quantitative real-time PCR revealed differentially expressed genes between high and low residual feed intake Angus cattle <i>Y. Chen, K. Quinn, R.M. Herd, P.F. Parnell and P.F. Arthur</i>
09:00 - 09:15	Use of SNP chip technology for improved utilisation of livestock genetic resources in developing countries <i>K. Marshall</i>
09:15 - 09:30	Using the GeSNP algorithm to quality control and prioritize differentially expressed genes from comparative genomics <i>Y. Li, N. Andronicos, A. Ingham, P. Hunt, R. Windon, W. Barris and A. Reverter</i>
09:30 - 09:45	Accuracy of SNP imputation using a multi-tiered genotyping approach in dairy cattle <i>M.S. Khatkar, G. Moser, B. Hayes and H.W. Raadsma</i>
09:45 - 10:00	Principal component analysis in a population of Brahman bulls genotyped with 50k SNP chip revealed a genetic structure <i>M. R. S. Fortes, S. Bolormaa, L.R. Porto Neto, R. G. Holroyd and A. Reverter</i>
10:00 - 10:30	Morning tea
11:00 - 12:00	Maternal efficiency
11:00 - 11:15	Merino ewes with higher breeding values for fatness and muscling have improved maternal efficiency <i>M.B. Ferguson, B.L. Paganoni, K.L. Kennedy and A.N. Thompson</i>
11:15 - 11:30	Selection for superior growth advances the onset of puberty in merino ewes <i>C.A. Rosales Nieto, M.B. Ferguson, C.A. Macleay, J.R. Briegel, G.B. Martin and A.N. Thompson</i>
11:30 - 11:45	The potential value of genetic differences in liveweight loss during summer and autumn in Merinos ewes differs with production environment <i>J.M. Young, M.B. Ferguson and A.N. Thompson</i>
11:45 - 12:00	Adult Merino ewes can be bred for live weight change to be more tolerant to climate change <i>G. Rose, A. Kause, J.H.J. van der Werf, A.N. Thompson, M.B. Ferguson and J.A.M van Arendonk</i>
12:30 - 13:30	Lunch
13:30 - 15:00	Sheep III
13:30 - 13:45	Effects on lifetime reproductive performance of phenotypic selection for fleece weight, fibre diameter, body weight and related selection indexes. II. Selection group x environment interaction <i>L.R. Piper, A.A. Swan and H.G. Brewer</i>
13:45 - 14:00	Different mature ewe sizes require different stocking rates and lamb slaughter weights to maximise whole-farm profit <i>A.J. Kennedy, M.B. Ferguson, G.B. Martin, A.N. Thompson and D.J. Pannell</i>
14:00 - 14:15	The mobilisation of fat in response to adrenaline is greater in Merino ewes with higher breeding values for coefficient of variation of fibre diameter <i>M.B. Ferguson, J.R. Briegel, A.N. Thompson and G.E. Gardner</i>
14:15 - 14:30	Use of automatic feeder data for behaviour studies in sheep <i>E. Jonas, E. Webster, P.C. Thomson and H.W. Raadsma</i>
14:30 - 14:45	Does the lamb birth weight response to mid pregnancy shearing differ in two breeds of disparate size? <i>P.R. Kenyon, H.T. Blair and C.M.C. Jenkinson</i>
14:45 - 15:00	The necessary paradigm change in quantitative genetics <i>R.G. Beilharz</i>
15:00 - 15:30	Afternoon tea

THURSDAY 21 JULY**Auditorium**

09:00 - 10:00	Genomics in Dairy cattle
09:00 - 09:15	Choice of parameters for removal of inflation in genomic breeding values for dairy cattle <i>B.L. Harris, D.L. Johnson and R.J. Spelman</i>
09:15 - 09:30	Implementation of genomics in Australian dairy cattle <i>G.J. Nieuwhof, M. Haile-Mariam, K.T. Beard, K.V. Konstantinov and B.J. Hayes</i>
09:30 - 09:45	Accuracy of genomic selection for residual feed intake and 250-day liveweight in dairy heifers using high density (630k) SNP <i>J.E. Pryce, J. Arias, P.J. Bowman, K.A. Macdonald, G.C. Waghorn, Y.J. Williams, W.J. Wales, R.J. Spelman and B.J. Hayes</i>
09:45 - 10:00	Optimising multistage dairy cattle breeding programs with regard to genomic selection <i>Vinzent Börner and Norbert Reinsch</i>
10:00 - 10:30	Morning tea
10:00 - 12:00	Industry I
10:30 - 11:00	Increasing uptake of genetic technologies across the beef value chain <i>H.M. Burrow and R.G. Banks</i>
11:00 - 11:20	Progress in implementation of a beef information nucleus portfolio in the Australian beef industry <i>R.G. Banks</i>
11:20 - 11:40	Genetic progress in Australian young sire programs: a model for increasing the rate of genetic improvement <i>A.J. Ball, R.G. Banks, D.J. Brown and S.R. Field</i>
11:40 - 12:10	Ram breeding in New Zealand two decades after the introduction of exotic sheep <i>H.T. Blair</i>
12:10 - 12:30	Limitations to uptake of breeding technologies in the Wool industry <i>Geoff Lindon</i>
12:30 - 13:30	Lunch
13:30 - 16:10	Industry II
13:30 - 13:50	Genetic changes in Australian dairy herds <i>Daniel Abernethy</i>
13:50 - 14:10	Genetic changes in Australian beef herds <i>C. Teseling - Angus</i>
14:10 - 14:30	Genetic changes in Australian beef herds <i>A. MacDonald - Limousin</i>
14:30 - 15:00	Open discussion
15:00 - 15:30	Afternoon tea
15:30 - 15:50	Genetic changes in sheep flocks in South Africa <i>Schalk Cloete</i>
15:50 - 16:10	Genetic changes in Australian sheep flocks <i>Sam Gill</i>
16:10 - 16:30	Summary <i>Rob Banks</i>
16:30	CONFERENCE CLOSE

THURSDAY 21 JULY

Room 2	
09:00 - 10:00	Biotechnology II
09:00 - 09:15	Towards a comprehensive recombination map of hotspots in sheep <i>C. Massault, J. Henshall, C. Gondro and J.H.J. van der Werf</i>
09:15 - 09:30	Imputation of single nucleotide polymorphism genotypes in a crossbred dairy cattle population using a reference panel <i>D.L. Johnson, R.J. Spelman, M.K. Hayr and M.D. Keehan</i>
09:30 - 09:45	Single nucleotide polymorphisms in the bovine leptin gene and their association with carcass and efficiency traits, and endocrine profiles, in female Angus cows <i>M. Laurence, J.M. Accioly, A.L. Barnes, D. Blache, N.D. Costa1, F.M. Jones, E.J. Speijers and W.S. Pitchford</i>
09:45 - 10:00	Association between SNP intensity data and growth and meat yield traits in sheep <i>G.M. Payne, M.E. Goddard, J.C. McEwan, M.A. Black and K. G. Dodds</i>
10:00 - 10:30	Morning tea

POSTER PRESENTATIONS**Banquet Hall**

p01	Genetic, phenotypic and environmental correlations between footrot and fleece traits in sheep <i>M. Abdelsayed, P.C. Thomson and H.W. Raadsma</i>
p02	Four week repeatability of daily and one hour methane production of mature merino wethers fed <i>ad libitum</i> <i>S.L. Bickell, D.L. Robinson, A.F. Toovey, J.P. Goopy, R.S. Hegarty, D.K. Revell and P.E. Vercoe</i>
p03	Genetic and environmental parameters of milk production and milk composition in South African Merinos <i>S.W.P. Cloete, M.A. Snyman and A.J. Scholtz</i>
p04	Use of residual feed intake as an indirect selection trait for reduction of methane emissions in grazing beef cattle <i>D.J. Cottle</i>
p05	QTL analyses of beef taste panel data <i>N.G. Cullen, C.A. Morris and H.V. Henderson</i>
p06	The expression of genes encoding lipid storage proteins is correlated with intramuscular fat percentage in Brahman steers <i>N. De Jager, N.J. Hudson, A. Reverter, R. Barnard, L.M. Cafe, P.L. Greenwood and B.P. Dalrymple</i>
p07	Carcase quality of two year old steer progeny of Angus heifers divergently selected on rib fat estimated breeding values and subjected to two levels of nutrition pre-weaning <i>M.P.B. Deland, K. Copping, J.F. Graham and W.S. Pitchford</i>
p08	The effect of subcutaneous fat, muscle and body weight during mating on fertility in Merino and Border Leicester x Merino lambs <i>K.W. Hart and J.C. Greeff</i>
p09	Genetic diversity in Alpacas: can inbreeding explain the high prevalence of congenital defects? <i>F.C. Jackling, J.L. Vaughan, M.E. Goddard and B.R. Appleton</i>
p10	Opportunities for genetic management of the retail colour stability of lamb meat <i>R.H. Jacob, S.I. Mortimer, D.L. Hopkins, R.D. Warner, and M.F. D'Antuono</i>
p11	Fluctuation in ewe liveweight during periods of restricted nutrition is influenced by sire <i>S.E. John, M.B. Ferguson, G.E. Gardner and A.N. Thompson</i>
p12	Analysis of udder health in dairy ewes <i>E. Jonas, P.C. Thomson and H.W. Raadsma</i>
p13	Does dam age, ewe birth rank and sex of a co-twin affect a ewe's lifetime performance? <i>P.R. Kenyon, L.M. Cave, H.T. Blair, N. Lopez-Villalobos and G.B. Nicoll</i>
p14	Basic coat color gene polymorphism in Jeju horses <i>N.Y. Kim, S.H. Han, S.S. Lee, C.E. Lee, N.G. Park, M.S. Ko and Y.H. Yang</i>
p15	Functional genomics of estimated breeding value for eye muscle depth in sheep <i>L.J.A. Kogelman, N.S. Watson-Haigh, H.N. Kadarmideen, J.W. Kijas, T. Vuocolo, K. Byrne, H. Oddy, G.E. Gardner, C. Gondro and R.L. Tellam</i>
p16	Genetic variation in growth and the optimisation of snp molecular markers for parentage assignment in pasture-based crossbred sheep <i>A.E.O. Malau-Aduli, A. Kashani, S. McCammon and A. Smolenski</i>
p17	Constraints associated with the improvement of animals through breeding as perceived by poor livestock keepers of west africa <i>K. Marshall and M. Ejlersten</i>
p18	Variation in merino wethers for growth and carcass traits <i>S.J. Martin, C.A. Wilson, M.J. Moses, R. van de Ven and D.L Hopkins</i>
p19	Reproduction traits in Holstein cows: Towards the development of a genetic evaluation system for cow fertility <i>C.J.C. Muller, J.P. Potgieter, O.T. Zishiri and S.W.P. Cloete</i>
p20	Exploring fertility traits other than calving interval for inclusion in a national genetic evaluation for South African Holstein cows <i>J.P. Potgieter, C.J.C. Muller, S.W.P. Cloete, O.T. Zishiri and K. Dzama</i>
p21	Genetic parameters for ostrich chick mortality to six months post hatch <i>M.D. Wang, S.W.P. Cloete, and K. Dzama</i>