



## Reference List of Published Outputs (2022)

### Journal Articles

**Banks, R** (2022). Long-term Challenges for Animal Breeding. In: Meyers, R.A. (eds) *Encyclopedia of Sustainability Science and Technology*. Springer, New York, NY. [doi.org/10.1007/978-1-4939-2493-6\\_1123-1](https://doi.org/10.1007/978-1-4939-2493-6_1123-1)

**Banks, R G** (2022). Evolution of genetics organisations' strategies through the implementation of genomic selection: learnings and prospects. *Agriculture* 12(10): 1524  
[doi.org/10.3390/agriculture12101524](https://doi.org/10.3390/agriculture12101524)

Charlesworth, B; Goddard, M E; **Meyer, K**; Visscher, P M; Weir, B S and Wray, N R (2022). From Mendel to quantitative genetics in the genome era: the scientific legacy of W. G. Hill. *Nature Genetics* 54(7): 934–939 [doi.org/10.1038/s41588-022-01103-1](https://doi.org/10.1038/s41588-022-01103-1)

**Nel, C; Gurman, P M; Swan, A A**; van der Werf, J H J; Snyman, M; Dzama, K; **Gore, K P**; Scholtz, A and Cloete, S (2022). The genomic structure of isolation across breed, country and strain for important South African and Australian sheep populations. *BMC Genomics* 23: 23 [doi.org/10.1186/s12864-021-08020-3](https://doi.org/10.1186/s12864-021-08020-3)

**Samaraweera, A M**; van der Werf, J H J; Boerner, V and **Hermesch, S** (2022). Economic values for production, fertility and mastitis traits for temperate dairy cattle breeds in tropical Sri Lanka. *Journal of Animal Breeding and Genetics* 139: 330-341 [doi.org/10.1111/jbg.12667](https://doi.org/10.1111/jbg.12667)

**Samaraweera, A M**; Boerner, V; van der Werf, J H J; Disnaka, S and **Hermesch, S** (2022). Genetic associations between mastitis, milk electrical conductivity, and milk flow rate in temperate dairy cows in the tropics. *Livestock Science* 264: 105064 [doi.org/10.1016/j.livsci.2022.105064](https://doi.org/10.1016/j.livsci.2022.105064)

Vargas Jurado, N; Notter, D R; Taylor, J B; **Brown, D J**; Mousel, M R and Lewis, R M (2022). Model definition for genetic evaluation of purebred and crossbred lambs including heterosis. *Journal of Animal Science* 100(6); 1-14 [doi.org/10.1093/jas/skac188](https://doi.org/10.1093/jas/skac188)

**Vargovic, L; Harper, J** and **Bunter, K L** (2022). Traits defining sow lifetime maternal performance *Animal* 12(18): 2451 [doi.org/10.3390/ani12182451](https://doi.org/10.3390/ani12182451)

**Vargovic, L**; Athorn, R Z; **Hermesch, S** and **Bunter, K L** (2022). Improving sow welfare and outcomes in the farrowing house by identifying early indicators from pre-farrowing assessment. *Journal of Animal Science* 100(11): 1-13 [doi.org/10.1093/jas/skac294](https://doi.org/10.1093/jas/skac294)

**Wahinya, P K; Jeyaruban, M G; Swan, A A** and van der Werf, J H J (2022). Breeding objectives for dairy cattle under low, medium and high production systems in the tropics. *Animal* 16(5): 100513  
[doi.org/10.1016/j.animal.2022.100513](https://doi.org/10.1016/j.animal.2022.100513)

**Wahinya, P K; Jeyaruban, G M; Swan, A A** and van der Werf, J H J (2022). Optimization of dairy cattle breeding programs with genotype by environment interaction in Kenya. *Agriculture* 12(8): 1274  
[doi.org/10.3390/agriculture12081274](https://doi.org/10.3390/agriculture12081274)

**Wahinya, P K;** Oddy, V H; Dominik, S; **Brown, D J;** Macleay, C A; Paganoni, B; Thompson, A N; Donaldson, A J; Austin, K; Cameron, M and van der Werf, J H J (2022). Genetic parameters for methane emissions in Australian sheep measured in portable accumulation chambers in grazing and controlled environments. *Animal Production Science* 62(9): 818-827 [doi.org/10.1071/AN21270](https://doi.org/10.1071/AN21270)

**Walkom, S F; Bunter, K L;** Raadsma, H W; **Gurman, P M; Brown, D J;** Gibson, W; Wilding, E and Ferguson, M B (2022). Development of breeding values for susceptibility to virulent footrot in sheep: A strategy to accommodate variable disease progression at time of scoring. *Animal* 16(5): 100514 [doi.org/10.1016/j.animal.2022.100514](https://doi.org/10.1016/j.animal.2022.100514)

## Conference Papers

**Alexandri, P; Walkom, S F; Swan, A A;** van der Werf, J H J and **Brown, D J** (2022). Value of data from ram breeding flocks as an industry reference population for Australian sheep. Proceedings of the 12<sup>th</sup> World Congress on Genetics Applied to Livestock Production, Rotterdam, The Netherlands, 3 – 8 July, paper [29\\_014](#)

**Banks, R G** (2022). Strategies to support phenotyping for genomic selection R&D and implementation in beef and sheep industries. Proceedings of the 12<sup>th</sup> World Congress on Genetics Applied to Livestock Production, Rotterdam, The Netherlands, 3 – 8 July, paper [45\\_001](#)

Barati, A; **Ferdosi, M;** Etzadifar, E; Major, R; Andrew, R and McDonald, P (2022). Geographic isolation and sex-biased dispersal impact gene flow among multiple populations of the Noisy Miner: implications for population control. Proceedings of the 112<sup>th</sup> Australasian Ornithological Conference, Auckland, New Zealand, 8-10 February, Poster 67

**Brown, D J; Gurman, P M** and **Swan, A A** (2022). Genetic benchmarking of carcass traits in Terminal sheep flocks possible with genomic testing. Proceeding so the 34<sup>th</sup> Biennial Conference of Australian Association of Animal Sciences, Cairns, Queensland 5-7 July, pp. xx

**Brown, D J;** McCrabb, E J; Bradley, P E; Rose, I J; **Banks, R G** and **Guy, S Z Y** (2022). The Data Quality Score: objective assessment of data quality for Australian sheep breeders. Proceedings of the 12<sup>th</sup> World Congress on Genetics Applied to Livestock Production, Rotterdam, The Netherlands, 3 – 8 July, paper [34\\_012](#)

Campbell, J and **Johnston, D J** (2022). Genetics of heifer puberty and growth in tropically adapted beef breeds. Proceeding so the 34<sup>th</sup> Biennial Conference of Australian Association of Animal Sciences, Cairns, Queensland 5-7 July, pp. lxiii

Chapman, N C; **Frost, E A** and **Banks, R G** (2022). A model for, and early implementation of, genomic selection in the Australian honey bee population. Proceedings of the 12<sup>th</sup> World Congress on Genetics Applied to Livestock Production, Rotterdam, The Netherlands, 3 – 8 July, paper [53\\_003](#)

**Dehnavi, E** and **Swan, A A** (2022). Enhancement of the Terminal Carcass Production index to incorporate birth weight and lambing ease in Australian sheep. Proceedings of the 12<sup>th</sup> World Congress on Genetics Applied to Livestock Production, Rotterdam, The Netherlands, 3 – 8 July, paper [51\\_010](#)

**Ferdosi, M H;** Masoodi, S and Khansefid, M (2022). Efficient algorithms to identify duplicated genotypes in large datasets. Proceedings of the 12<sup>th</sup> World Congress on Genetics Applied to Livestock Production, Rotterdam, The Netherlands, 3 – 8 July, paper [30\\_004](#)

**Frost, E A;** Chapman, N C; **Banks, R G;** **Walkom, S F** and **Hermesch, S** (2022). Economic value and production characteristics of table honey. Proceedings of the 12<sup>th</sup> World Congress on Genetics Applied to Livestock Production, Rotterdam, The Netherlands, 3 – 8 July, paper [53\\_001](#)

Grant, T and **Johnston, D J** (2022). Poll genotype or phenotype are not associated with growth performance in tropical beef breeds. Proceeding so the 34<sup>th</sup> Biennial Conference of Australian Association of Animal Sciences, Cairns, Queensland 5-7 July, pp. lxxvi

**Gurman, P G;** **Li, L;** **Swan, A A;** Moghaddar, N and van der Werf, J H J (2022). Variance component estimation for single-step genomic BLUP for Australian terminal sire sheep. Proceedings of the 12<sup>th</sup> World Congress on Genetics Applied to Livestock Production, Rotterdam, The Netherlands, 3 – 8 July, paper [19\\_013](#)

**Guy, S Z Y;** Mortimer, S I; Pannier, L; McGilchrist, P; **Brown, D J;** Pethick, D and **Swan, A A** (2022). Genetic selection for sensory eating quality of lamb using consumer assessments. Proceedings of the 12<sup>th</sup> World Congress on Genetics Applied to Livestock Production, Rotterdam, The Netherlands, 3 – 8 July, paper [29\\_012](#)

**Hermesch, S** and Isberg, S R (2022). Economic values for skin grade, days to market and number of hatchlings in the Australian saltwater crocodile industry. Proceedings of the 12<sup>th</sup> World Congress on Genetics Applied to Livestock Production, Rotterdam, The Netherlands, 3 – 8 July, paper [37\\_015](#)

**Sharif-Islam, M;** van der Werf, J H J, Henryon, M; Chu, T T; Wood, B J and **Hermesch, S** (2022). Genotyping dead animals improves post-weaning survival of pigs in breeding programs. Proceedings of the 12<sup>th</sup> World Congress on Genetics Applied to Livestock Production, Rotterdam, The Netherlands, 3 – 8 July, paper [68\\_010](#)

**Johnston, D J;** **Ferdosi, M H;** **Cook, J A** and Savage, D B (2022). Polled Accelerator - a unique application of genomic technologies to address a beef breeding challenge. Proceedings of the 12<sup>th</sup> World Congress on Genetics Applied to Livestock Production, Rotterdam, The Netherlands, 3 – 8 July, paper [45\\_005](#)

**McMillan, A J;** **Brown, D J;** Burke, J M; Morgan, J and Lewis, R M (2022). Cross-validation of single-step genetic evaluation in U.S. Katahdin sheep. Proceedings of the 12<sup>th</sup> World Congress on Genetics Applied to Livestock Production, Rotterdam, The Netherlands, 3 – 8 July, paper [29\\_002](#)

**Meyer, K** (2022). Accounting for trait-specific genomic and residual polygenic covariances in multivariate single-step genomic evaluation. Proceedings of the 12<sup>th</sup> World Congress on Genetics Applied to Livestock Production, Rotterdam, The Netherlands, 3 – 8 July, paper [36\\_007](#)

**Miller, S P** and Retallick, K J (2022). Breeding for a future social license for beef production. Proceedings of the 12<sup>th</sup> World Congress on Genetics Applied to Livestock Production, Rotterdam, The Netherlands, 3 – 8 July, paper [03\\_008](#)

**Moore, K L;** **Ferdosi, M H;** **Girard, C G;** **Walkom, S F** and **Johnston, D J** (2022). A new metric to assess Australian beef cattle reference population suitability for genomic selection. Proceedings of the 12<sup>th</sup> World Congress on Genetics Applied to Livestock Production, Rotterdam, The Netherlands, 3 – 8 July, paper [08\\_008](#)

**Samaraweera, A M;** van der Werf, J H J; **Boerner, V** and **Hermesch, S** (2022). Response to index selection for temperate dairy cattle breeds in tropical Sri Lanka. Proceedings of the 12<sup>th</sup> World Congress on Genetics Applied to Livestock Production, Rotterdam, The Netherlands, 3 – 8 July, paper [55\\_008](#)

**Sarker, N R; Walmsley, B J and Hermes, S (2022).** Improving carcass value by incorporating primal weights into beef breeding objectives. Proceedings of the 12<sup>th</sup> World Congress on Genetics Applied to Livestock Production, Rotterdam, The Netherlands, 3 – 8 July, paper [51\\_004](#)

Soleimani, T; **Hermesch, S** and Gilbert, H (2022). Life cycle assessment to predict individual environmental impacts: towards selection for sustainable pig production. Proceedings of the 12<sup>th</sup> World Congress on Genetics Applied to Livestock Production, Rotterdam, The Netherlands, 3 – 8 July, paper [74\\_001](#)

Van Eenennaam, A L and **Hermesch, S** (2022). History and author analysis of the World Congresses on Genetics Applied to Livestock Production. Proceedings of the 12<sup>th</sup> World Congress on Genetics Applied to Livestock Production, Rotterdam, The Netherlands, 3 – 8 July, paper [31\\_001](#)

**Vargovic, L; Bunter, K L and Hermes, S (2022).** The value of innate sow appetite as a model trait for maternal breeding objectives. Proceedings of the 12<sup>th</sup> World Congress on Genetics Applied to Livestock Production, Rotterdam, The Netherlands, 3 – 8 July, paper [68\\_013](#)

**Walkom, S F and Swan, A A (2022).** Using historic data to understand the cost of an extra condition score in sheep AAAS. Proceeding so the 34<sup>th</sup> Biennial Conference of Australian Association of Animal Sciences, Cairns, Queensland 5-7 July, pp. xii

**Walmsley, B J (2022).** Consequences of using different economic selection index methods on greenhouse gas emissions in beef cattle. Proceedings of the 12<sup>th</sup> World Congress on Genetics Applied to Livestock Production, Rotterdam, The Netherlands, 3 – 8 July, paper [62\\_008](#)