Publications

*Peer reviewed*

1. Abdoli, R., S.Z. Mirhoseini, N. Ghavi Hossein-Zadeh, P. Zamani, M.H. Ferdosi and C. Gondro (2019). Genome-wide association study of four composite reproductive traits in Iranian fat-tailed sheep. Reproduction, Fertility and Development 31:1127-1133.
2. Abdoli, R., S.Z. Mirhoseini, N. Ghavi Hossein-Zadeh, P. Zamani, M.H. Moradi, M.H. Ferdosi, C. Gondro (2019). Genome-wide association study of first lambing age and lambing interval in sheep. Small Ruminant Research 178:43-45.
3. Aguilar, I., A. Legarra, F. Cardoso, Y. Masuda, D.A.L. Lourenco, I. Misztal. 2019. Frequentist p-values for large-scale single step genome-wide association, with an application for birth weight in American Angus. Genet. Sel. Evol. 51:28. <https://doi.org/10.1186/s12711-019-0469-3>
4. Baller, J. L., J. T. Howard, S. D. Kachman, and M. L. Spangler. 2019. The impact of clustering methods for cross-validation on the accuracy of genomic predictions. J. Anim. Sci. 97:1534-1549.
5. Bradford, H. L., Y. M. Masuda, J. B. Cole, I. Misztal, and P. M. VanRaden. 2019. Modeling pedigree accuracy and uncertain parentage in single-step evaluations of simulated and Holstein datasets. J. Dairy Sci. 102:2308–2318. <https://doi.org/10.3168/jds.2018-15419>.
6. Bradford, H. L., Y. M. Masuda, P. M. VanRaden, A. Legarra, and I. Misztal. 2019. Modeling missing pedigree in single-step genomic BLUP. J. Dairy Sci. 102:2336–2346. <https://doi.org/10.3168/jds.2018-15434>
7. Butler, M. L., J. M. Bormann, R. L. Weaber, D. M. Grieger, and M. M. Rolf. 2019. Selection for beef bull fertility: A review. Trans. An. Sci. <https://doi.org/10.1093/tas/txz174>
8. Cantrell, B. H. Lachance, B. Murdoch, J. Sjoquist, R. Funston, R. Weaber and S. McKay. 2019. Global DNA Methylation in the Limbic System of Cattle. Epigenomes 2019, 3(2), 8; <https://doi.org/10.3390/epigenomes3020008>.
9. Cesarani, A., I. Pocrnic, N. Macciotta, I. Misztal, and D.A.L. Lourenco. 2019. Bias in heritability estimates from genomic restricted maximum likelihood (GREML) methods under different genotyping strategies. J. Anim. Breed. Genet. 136:40-50. <https://doi.org/10.1111/jbg.12367>
10. Cockrum, R. R., S. E. Speidel, N. F. Crawford, X. Zeng, H. D. Blackburn, T. N. Holt, R. M. Enns and M. G. Thomas. 2019. Genotypes identified by genome-wide association analyses influence yearling pulmonary arterial pressure and growth traits in Angus heifers from a high altitude beef production system. Livest. Sci. 224:75-86. doi:10.1016/j.livsci.2019.04.004.
11. Crum, T. E., Schnabel R.D., Decker J.E., Regitano L.C.A., Taylor, J.F., 2019. CRUMBLER: A tool for the prediction of ancestry in cattle. PloS one, 14(8), p. e0221471. doi: 10.1371/journal.pone.0221471.
12. Cuyabano, C. D., B., H. Wackel, D. Shin and C. Gondro (2019). A study of genomic prediction across generations of two Korean pig populations. Animals 9:672.
13. de las Heras-Saldana, S., K.Y. Chung, S.H. Lee and C. Gondro (2019). Gene expression of Hanwoo satellite cell differentiation in longissimus dorsi and semimembranosus. BMC Genomics 20:156.
14. Fragomeni, B.O., D.A.L. Lourenco, A. Legarra, P. VanRaden, I. Misztal. 2019. Alternative SNP weighting for SSGBLUP evaluation of stature in US Holstein in the presence of selected sequence variants. J. Dairy Sci. <https://doi.org/10.3168/jds.2019-16262>
15. Fragomeni, B.O., Y. Masuda, H.L. Bradford, D.A.L. Lourenco, and I. Misztal. 2019. International bull evaluations by GBLUP with a prediction population. J. Dairy Sci. 102:2330-2335. <https://doi.org/10.3168/jds.2018-15554>
16. Guarini, A.R., D.A.L. Lourenco, L.F. Brito, M. Sargolzaei, C. Baes, F. Miglior, S. Tsuruta, I. Misztal, and F. Schenkel. 2019. Genetics and genomics of reproductive disorders in Holstein cattle. J. Dairy Sci. 102:1341-1353. <https://doi.org/10.3168/jds.2018-15038>
17. Guarini, A.R., D.A.L. Lourenco, L.F. Brito, M. Sargolzaei, C. Baes, F. Miglior, S. Tsuruta, I. Misztal, and F. Schenkel. 2019. Use of a single-step approach for integrating foreign information into national genomic evaluation in Holstein cattle. J. Dairy Sci. 102:8175-8183. <https://doi.org/10.3168/jds.2018-15819>
18. Guarini, A.R., M. Sargolzaei, L.F. Brito, V. Kroezen, D.A.L. Lourenco, C.F. Baes, F. Miglior, J.B. Cole, and F.S. Schenkel. 2019. Estimating the impact of the deleterious recessive haplotypes AH1 and AH2 on reproduction performance of Ayrshire cattle. J. Dairy Sci. <https://doi.org/10.3168/jds.2018-15366>
19. Hoff, J.L., Decker, J.E., Schnabel, R.D., Seabury, C.M., Neibergs, H.L. and Taylor, J.F., 2019. QTL-mapping and genomic prediction for bovine respiratory disease in US Holsteins using sequence imputation and feature selection. BMC genomics, 20(1), p.555.
20. Kirkpatrick, B.W., Thallman, R.M., Kuehn, L.A. 2019. Validation of SNP associations with bovine ovulation and twinning rate. Animal Genetics. 50:259-261. <https://doi.org/10.1111/age.12793>.
21. Krafsur, G.M., J.M. Neary, F. Garry, T. Holt, D.H. Gould, G.L. Mason, M.G. Thomas, R.M. Enns, R.M. Tuder, M.P. Heaton, R.D. Brown, and K.R. Stenmark. 2019. Cardiopulmonary remodeling in fattened beef cattle: a naturally occurring large animal model of obesity-associated pulmonary hypertension with left heart disease. Pulm. Circ. 9:1-13. doi:10.1177/2045894018796804.
22. Krehbiel, B., M. G. Thomas, C. Wilson, S. E. Speidel, R. M. Enns, S. Paiva, H. Blackburn. 2019. Evaluation of genetic structure across U.S. Climate zones using prominent AI sires of Red Angus cattle. Livest. Sci. 225:26-31. doi:10.1016/j.livsci.2019.04.012.
23. Lindholm-Perry, A.K., Kuehn, L.A., McDaneld, T.G., Miles, J.R., Workman, A.M., Chitko-McKown, C.G., Keele, J.W. 2018. Complete blood count data and leukocyte expression of cytokine genes and cytokine receptor genes associated with bovine respiratory disease in calves. BMC Research Notes. 11:786. <https://doi.org/10.1186/s13104-018-3900-x>.
24. Maiorano, A.M., A. Assen, P. Bijma, C.Y. Chen, J.A. II V. Silva, W.O. Herring, S. Tsuruta, I. Misztal, and D.A.L. Lourenco. 2019. Improving accuracy of direct and maternal genetic effects in genomic evaluations using pooled boar semen: a simulation study. J. Anim. Sci. 97:3237-3245. <https://doi.org/10.1093/jas/skz207>
25. Munro, J.C., P.W. Physick-Sheard, W.G. Pyle, F.S. Schenkel, S.P. Miller and Y.R. Montanholi. 2019. Cardiac function and feed efficiency: Increased right-heart workload in feed inefficient beef cattle. Livest. Sci. 229:159-169.
26. Oliveira, H.R., L.F. Brito, F.F. Silva, D.A.L. Lourenco, J. Jamrozik, and F.S. Schenkel. 2019. Accessing the impact of including information from bulls and their daughters in the training population of a multiple-step genomic evaluation. J. Anim. Breed. Genet. <https://doi.org/10.1111/jbg.12407>
27. Oliveira, H.R., L.F. Brito, D.A.L. Lourenco, F.F. Silva, J. Jamrozik, L.R. Schaeffer, and F.S. Schenkel. 2019. Invited review: Random regression models in the genomic era. J. Dairy Sci. 102:7664-7683. <https://doi.org/10.3168/jds.2019-16265>
28. Oliveira, H.R., D.A.L. Lourenco, Y. Masuda, I. Misztal, S. Tsuruta, J. Jamrozik, L.F. Brito, F.F. Silva, J. P. Cant, and F. S. Schenkel. 2019. Single-step genome-wide association and functional analysis for longitudinal traits of Ayrshire, Holstein and Jersey dairy cattle. <https://doi.org/10.3168/jds.2019-16821>
29. Pocrnic, I., D.A.L. Lourenco, C.Y. Chen, W.O. Herring, and I. Misztal. 2019. Crossbred evaluations using single-step genomic BLUP and algorithm for proven and young with different sources of data. J. Anim. Sci.97:1513-1522. <https://doi.org/10.1093/jas/skz042>
30. Reppert, E.J., M. F. Chamorro, L. Robinson, N. Cernicchiaro, J. Wick, **R. L. Weaber**, and D. M. Haines. 2019. Effect of vaccination of pregnant beef heifers on the concentrations of serum IgG and specific antibodies to bovine herpesvirus 1, bovine viral diarrhea virus 1, and bovine viral diarrhea virus 2 in heifers and calves. Can. J. Vet. Res. 83:313-316.
31. Rowan, T.N., Hoff, J.L., Crum, T.E., Taylor, J.F., Schnabel, R.D. and Decker, J.E., 2019. A Multi-Breed Reference Panel and Additional Rare Variation Maximizes Imputation Accuracy in Cattle. bioRxiv, p.517144.
32. Runcie, D., Cheng, H.. (2019). Pitfalls and Remedies for Cross Validation with Multi-trait Genomic Prediction Methods. G3, 9(11), g3.400598.2019–3741. <http://doi.org/10.1534/g3.119.400598>
33. Snelling, W.M., Kuehn, L.A., Thallman, R.M., Bennett, G.L., Golden, B.L. 2018. Genetic correlations among weight and cumulative productivity of crossbred beef cows. Journal of Animal Science. 97:63-77. <https://doi.org/10.1093/jas/sky420>.
34. Sollero, B. P., J. T. Howard, and M. L. Spangler. 2019. The impact of reducing the frequency of animals genotyped at higher density on imputation and prediction accuracies using ssGBLUP. J. Anim. Sci. 97:2780-2792.
35. Stafuzza, N.B., R.M.O. Silva, B.O. Fragomeni, Y. Masuda, Y. Huang, K. Gray, and D.A.L. Lourenco. 2019. A genome-wide single nucleotide polymorphism and copy number variation analysis for number of piglets born alive. BMC Genomics 20:321. <https://doi.org/10.1186/s12864-019-5687-0>
36. Steyn, Y., D.A.L. Lourenco, and I. Misztal. 2018. Accuracies of multi-breed genomic evaluation using joint estimation of SNP effects. J. Anim. Sci. <https://doi.org/10.1093/jas/skz296>
37. Tsuruta, S., D.A.L. Lourenco, Y. Masuda, I. Misztal, T.J. Lawlor. 2019. Controlling bias in genomic evaluations for young genotyped bulls. J. Dairy Sci. <https://doi.org/10.3168/jds.2019-16789>
38. Williams,, A. F., J. A. Boles, M. Herrygers, J. Berardinelli, M.C. Meyers, J. M. Thomson. 2019. Blood lactate and rectal temperature can predict exit velocity of beef feedlot steers. Translational Animal Science 3:1530-1542 doi: 10.1093/tas/txz135
39. Zimmermann, M. J., L. A. Kuehn, M. L. Spangler, R. M. Thallman, W. M. Snelling, and R. M. Lewis. 2019. Comparison of different functions to describe growth from weaning to maturity in crossbred beef cattle. J. Anim. Sci. 97:1523-1533.

*Abstracts and proceedings*

1. Abbas, W., J. T. Howard, H. A. Paz, K. E. Hales, J. E. Wells, L. A. Kuehn, M. L. Spangler, G. E. Erickson, S. C. Fernando. 2019. Host genetics help shape the rumen microbiome in beef cattle. MWASAS.
2. Baller, J.L., J. T. Howard, S. D. Kachman, and M.L. Spangler. 2019. A comparison of clustering methods for cross-validation of genomic predictors when training on phenotypes or deregressed Estimated Breeding Values. MWASAS.
3. Blatter, S. A., J. A. Boles, J. G. Berardinelli, J. M. Thomson. 2019 Gene Expression in muscle and adipose tissue of steers classed as Choice or Standard. In: M. L. Chizzotti (Ed.), Energy and Protein Metabolism and Nutrition; Belo Horizonte, Brazil. pp. 383-384. Wageningen Academic Publishers, The Netherlands. Doi: 10.3920/978-90-8686-891-9\_115
4. Briggs, E. A., R. M. Enns, M. G. Thomas, and S. E. Speidel. 2019. Genetic and phenotypic parameter estimates for feed intake and pulmonary arterial pressure. Western Section ASAS. Trans. Anim. Sci. Vol. E. Suppl.
5. Cantrell B., S. Bhattarai, E. Stassen, S. Liu, T. Buttolph, H. Lachance, J. O'Neil, J. F. Garcia, B. Murdoch, R. Schnabel, J. Taylor, R. Funston, R. Weaber, G. Liu, S. McKay. 2019. DNA methylation dynamic across the bovine genome. 37th International Society of Animal Genomics, conference, Lleida Spain.
6. Foxworthy, H. M., R. M. Enns, M. G. Thomas, and S. E. Speidel. 2019. The estimation of heritability and repeatability of first service conception and first cycle calving in Angus cattle. Western Section ASAS. Trans. Anim. Sci. Vol. E. Suppl.
7. Golden, B.L., M. L. Spangler, W. M. Snelling, D. J. Garrick. 2018. Current single-step national beef cattle evaluation models used by the American Hereford Association and International Genetic Solutions, computational aspects, and implications of marker selection. Proc. Beef Improv. Fed. Genetic Prediction Workshop.
8. Hieber, J. K., J. M. Dafoe, C. T. Parsons, D. C. Anderson, D. L. Boss, J. Thomson. 2019. PSVIII-24 Inbreeding levels of the Line 4 Hereford population. Journal of Animal Science. In Press.
9. Jennings, K. J., G. M. Krafsur, R. D. Brown, T. N. Holt, S. J. Coleman, S. E. Speidel, R. M. Enns, K. R. Stenmark, and M. G. Thomas. 2019. Characterizing the impact of altitude and finishing system on mean pulmonary arterial pressure and carcass characteristics in Angus Cattle. Western Section ASAS. Trans. Anim. Sci. Vol. E. Suppl.
10. Mercadante, V., R. White, J. Currin, H. L. Bradford, S. Clarke, J. Stewart, N. Dias, C. Timlin, S. Pancini. 2019. Effects of dam relative calving date on progeny performance. J. Anim. Sci.
11. Mercadante, V., R. White, H. L. Bradford, N. Dias, C. Timlin, S. Pancini, J. Currin, S. Clarke, J. Stewart. 2019. Repeatability of estrus detection patch readings and relationship with breeding success. J. Anim. Sci.
12. Plotzki Reis, A., F. F. e Silva, F. F. Cardoso, and M. L. Spangler. 2019. The impact of selective phenotyping and genotyping over generations in beef cattle. MWASAS.
13. Sanchez-Castro, M. A., M. G. Thomas, R. M. Enns and S. E. Speidel. 2019. Stability of genetic predictions for stayability using random regression models that include endpoints beyond 6 year of age. Western Section ASAS. Trans. Anim. Sci. Vol. E. Suppl.
14. Santos, B., J. Archer, D. Martin-Collado, C. Quinton, J. Crowley, P. Amer and S. Miller. 2019. Industry consultation survey for the American Angus $Value indexes review. Proc. Assoc. Advmt. Anim. Breed. Genetic. 23: 55-58.
15. Sollero, B., J. T. Howard, V. Junqueira, F. Cardoso, and M. Spangler. 2019. The impact of reducing the frequency of animals genotyped at higher density on imputation and prediction accuracies using ssGBLUP. Plant and Animal Genome Conference XXVI Conference, San Diego, CA.
16. Spangler, M.L. 2019. Genomics and the beef industry: Missing links. Proc. American Association of Bovine Practitioners.
17. Spangler, M.L. 2019. US National Beef Cattle Single Step Genomic Evaluations. Plant and Animal Genome Conference XXVI Conference, San Diego, CA.
18. Spangler, M.L., B.L. Golden, L.A. Kuehn, W.M. Snelling, R.M. Thallman, R.L. Weaber. 2018. Decision support using customizable indices across breeds. Proc. Beef Improv. Fed. Genetic Prediction Workshop
19. Speidel, S. E., M. G. Thomas, R. M. Enns. 2019. Pulmonary Arterial Pressure EPD and their utility for cow-calf producers. Proc. 26th Range Beef Cow Symp. 26:95-99.
20. Stassen E., B. Cantrell, S. Liu, N. Jebbett, R. C. Switzer, E. Delay, S. Zinn, S. Aborn, J. O’Neil, B. M. Murdoch, R. Funston, R. Weaber, G. Liu, S. McKay. 2019. Analysis of single nucleotide polymorphisms in the cattle genome and epigenome. The 27th International Plant and Animal Genome Conference. San Diego, CA
21. Thomas, M.G., M.M. Culbertson, T. Holt, R.D. Brown, G.M. Krafsur, S.E. Speidel, R.M. Enns, R. Bowen, M. Li, and K. Stenmark. 2019. Metabolism and inflammation predict cardiopulmonary disease outcomes in fattening beef cattle.: Animal Model. 100th Conf. Res. Workers Anim. Disease. P165, Chicago, Ill.
22. Upperman, L.R., E. J. Pollak, and M. L. Spangler. 2019. The impact of putative causal variants and animal misidentification on genome-wide association studies for carcass traits in beef cattle. MWASAS.
23. Weaber, R.L., L. A. Kuehn, W. M. Snelling, R. M. Thallman, B. L. Golden and M. L. Spangler. Beef Cattle Genetic Technology Utilization - Survey of Stakeholders 2018. 2019. ASAS meetings.

*Extension*

1. Bouffiou, J., J. K. Hieber, J. A. Boles, J. M. Thomson.2019. Investigating the Relationship Between Temperament and Performance Traits in Feedlot Cattle. (Vol 5) College of Agriculture Extension Research Report
2. Enns, R. M., S. E. Speidel, M. G. Thomas. 2019. Report to Select Sires Inc. Results of pulmonary arterial pressure tests on progeny of Select Sires Angus sires.
3. Enns, R. M., S. E. Speidel, M. G. Thomas. 2019. Report to ABS Global. Results of pulmonary arterial pressure tests on progeny of ABS Global sires.
4. Hieber, J. K., J. M. Dafoe, C. T. Parsons, D. C. Anderson, D. L. Boss, J. M. Thomson.2019. Inbreeding levels of the Line 4 Hereford cattle population. (Vol 5) College of Agriculture Extension Research Report
5. Miller, S. 2019. Reproductive Technology Adoption. By the Numbers - Angus Journal, November:68-69.
6. Miller, S. 2019. $C – A Way to Balance Traits. By the Numbers - Angus Journal, September:31-32.
7. Miller, S. 2018. Angus $Value Visioning Project. By the Numbers - Angus Journal, July:45-46.
8. Miller, S. 2018. Can we stop collecting data? By the Numbers - Angus Journal, December:35-36.
9. Miller, S. 2019. Evaluating Cow Longevity. By the Numbers - Angus Journal, July:36.
10. Miller, S. 2019. Introducing the New Beef Value. By the Numbers - Angus Journal, April:64-65.
11. Segers, J. and D. Lourenco. 2019. Genomic Testing in Beef Cattle: How Does it Work? UGA extension Bulletin 1506.
12. Speidel, S. E., and R. M. Enns. 2019. Report to Leachman Cattle of Colorado. Results from the analysis of Random Regression Stayability.

Presentations

1. Bormann, J. M. 2019. Genetic control of cattle feet and leg structure. American Simmental Association Fall Focus. Manhattan, KS.
2. Bormann, J. M. 2019. Heritability of Water Intake in Beef Cattle. American Simmental Association Fall Focus. Manhattan, KS.
3. Bormann, J. M. 2019. Genetic control of cattle feet and leg structure. Beef Improvement Federation Annual Meeting and Research Symposium. Brookings, SD.
4. Bradford, H. L. 2019. Genomic selection and opportunities for commercial cattlemen. Livestock-Dairy-Forages Extension Agent Inservice Training, Blacksburg, VA
5. Bradford, H. L. 2019. Understanding EPDs. VT Bovine Artificial Insemination School. Blacksburg, VA
6. Bradford, H. L. 2019. Modern Genomic Selection. Montgomery County 4-H meeting. Blacksburg, VA
7. Canovas, A., S. Id-Lahoucine, A. Suarez-Vega, P. Fonseca, S.P. Miller, M. Lohuis, F. Schenkel, M. Sargolzaei, F. Miglior, J.F. Medrano and J. Casellas. 2019. Identification of novel haplotypes and recessive lethal alleles affecting reproduction and its pleiotropic effects in cattle. 37th International Society of Animal Genetics Conference, Lleida, Spain.
8. Id-Lahoucine, S., J. Casellas, A. Suárez-Vega, P. Fonseca, F. Schenkel, S. Miller, M. Sargolzaei, M. Lohuis, J. Medrano and A. Cánovas. 2019. Parent- and offspring-specific transmission ratio distortion on the cattle sex chromosome. 37th International Society of Animal Genetics Conference, Lleida, Spain.
9. Lourenco, D. A. L. 2019. Current status of ssGBLUP for beef cattle evaluation. Brazilian Bovine Genomics Workshop. Ribeirao Preto, Brazil.
10. Lourenco, D. A. L. 2019. Developing genomic strategies for the livestock industries: all implementations are challenging. Keynote Speaker at the 23rd AAABG. Armidale, Australia.
11. Lourenco, D. A. L. 2019. The promise of genomics for breeding and genetics. Ernst Federal Science Center for Animal Husbandry. Podolsk, Russia.
12. Lourenco, D. A. L. 2019. Challenges with Big Data in animal breeding and genetics. Animal Science Department at University of Sao Paulo. Piracicaba, Brazil.
13. Lourenco, D. A. L. 2019. Large-scale genomic evaluations: easier said than done. CGDG Seminar – Roslin Institute. Edinburgh, UK.
14. Lu, D., M. Sargolzaei, D. Moser and S. Miller. 2019. Inbreeding in Angus cattle via pedigree and runs of homozygosity. 37th International Society of Animal Genetics Conference, Lleida, Spain Miller, S.P. 2019. Zimbabwe Herd School. Bulawayo, Zimbabwe. Oct 22-23.
15. Miller, S.P. 2019. Aldam Stockman’s School. Aldam, South Africa. Oct 16-18.
16. Miller, S.P. 2019. Employing DNA Technology to Expedite Beef Cattle Improvement: Developing AngusGS. Neogen Brazil Genomics Workshop, Expogenetica – ABCZ – Uberaba, Minas Gerais, Brazil.
17. Miller, S.P. 2019. What is after genomic selection at American Angus? Genetic Symposium. Roslin Institute, Edinburgh, Scotland. Jan 29.
18. Miller, S.P. 2019. Genetic advancements at American Angus. Irish Cattle Breeders Federation Breeders seminar. Portlaoise, Ireland. Jan 24.
19. Miller, S.P. 2019. British Cattle Breeders Conference. Shropshire, England. Jan 21-22.
20. Miller, S.P., K.R. Retallick and D. Moser. 2019. Updates to Angus EPD and $Values. Beef Improvement Federation Annual Research Symposium. June 20, Brookings SD.
21. Miller, S.P. and D. Lu. 2019. The latest on fertility haplotypes, Angus University, Angus Convention, Reno, NV, Nov 2-4.
22. Miller, S.P. 2019. Panel participant: International Genomics Symposium, Angus Convention, Reno, NV, Nov 2-4.
23. Miller, S. P. 2019. Updates to Angus EPD and $Values. North Carolina Angus Field Day, Olin, NC, Sept 28.
24. Miller, S.P. 2019. Genomics pipeline at American Angus Association. Livestock Recording Federation board meeting, Aldam, South Africa. Oct 15.
25. Miller, S.P. 2019. Genomics pipeline at American Angus Association. Agricultural Research Council Biotechnology Platform, Onderstepoort Veterinary Institute campus, Pretoria, South Africa. Oct 14.
26. Miller, S.P. 2019. Genomic adoption and research at American Angus Association. Agricultural Research Council, Irene, South Africa. Oct 14.
27. Miller, S.P. 2019. Introducing $C. 2 Bar and Goode Angus 13th Annual PDF Sale. Hereford, TX. Oct 4.
28. Miller, S. P. 2019. Updates to Angus EPD and $Values. Ohio Angus Field Day, Danville, OH, Sept 8.
29. Misztal, I. 2019. Genomic selection of beef cattle in USA. SBMA Symposium. Salvador, Brazil.
30. Misztal, I. 2019. Current status of genomic selection. ASAS Annual Meeting. Austin, Texas.
31. Misztal, I. 2019. Single-step GBLUP for livestock genomic evaluations. Miratorg. Moscow, Russia.
32. Retallick, K.R., S.P. Miller and D. Moser. 2019. $Value Changes. American Angus Webinar, May 20.
33. Rolf, M. 2019. Update to BIF Guidelines Wiki. Beef Improvement Federation Annual Meeting and Research Symposium.  Brookings, SD.
34. Rolf, M. 2019. Beef cattle water intake and drought adaptability. 2019 Annual Agricultural Research Congressional Exhibition and Reception.  Washington, DC.
35. Rolf, M. 2019. Is water intake a heritable trait? Grazing CAP webinar series.  Manhattan, KS.
36. Spangler, M. L. 2019. US national beef cattle single step genomic evaluations, Plant and Animal Genome meeting, San Diego, CA
37. Spangler, M. L. 2019. Using genomics to improve cattle: Now and in the future. Saskatchewan Beef Industry Conference, Regina, Canada
38. Spangler, M. L. 2019. Bull selection and breeding tools, Nebraska Cattlemen Lancaster/Seward Affiliate meeting, Milford, NE
39. Spangler, M. L. 2019. History and status of genomics for ranchers, Cow-calf Symposium for Southwestern Ranchers, Phoenix, AZ
40. Spangler, M. L. 2019. Bull selection for large, arid, and sparse feed ranches, Cow-calf Symposium for Southwestern Ranchers, Phoenix, AZ
41. Spangler, M. L. 2019. Genetic selection of beef cattle: Past, present, and future. Nuffeld Contemporary Scholars Conference, Ames, IA
42. Spangler, M. L. 2019. Application of advanced genetic technology in beef cattle. King Ranch Institute for Ranch Management, Denver, CO
43. Spangler, M. L. 2019. Development of a web-based sire selection tool, Beef Improvement Federation annual meetings, Brookings, SD
44. Spangler, M. L. 2019. Decision support using customizable indices across breeds, Beef Improvement Federation annual meetings, Brookings, SD
45. Spangler, M. L. 2019. Getting the most from our selection tools: Decision Support, Beef Improvement Federation annual meetings, Brookings, SD
46. Spangler, M. L. 2019. Genetic Selection 101, American Dexter Association annual meeting, Lincoln, NE
47. Spangler, M. L. 2019. Evolving genetic selection tools in beef cattle, Texas A&M beef cattle shortcourse, College Station, TX
48. Spangler, M. L. 2019. The current state of beef cattle genomics and the future, Select Sires annual sales conference, Columbus, OH
49. Spangler, M. L. 2019. Genomics and the beef industry: Missing links, American Association of Bovine Practitioners, St. Loius, MO
50. Speidel, S. E. 2019. Pulmonary Arterial Pressure EPD for the cow-calf producer. Range Beef Cow Symposium XXVI. Mitchell, NE.
51. Speidel, S. E. 2019. Development of genetic selection programs for grazing distribution. Society for Range Management Annual Meeting. Minneapolis, MN.
52. Speidel, S. E. 2019. Maternal Function: Stayability’s relationship to other traits in the breeding objective. Leachman Cattle of Colorado Annual Bull Sale. Wellington, CO.
53. Thomas, M.G, 2019. PAP-an important trait for mountain and feedlot cattle. Leachman Cattle of Colorado Fall Bull Sale Educational Program.
54. Weaber, R. L. 2019. Crossbreeding-a cattlemen’s free ride. National Cattlemen’s Beef Association Cattlemen’s College. New Orleans, Louisiana.
55. Weaber, R. L. 2019. Selection for efficiency-the right way. Corn-belt Cow-calf Conference. Ottumwa, IA.
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