Reagan N. (Cauble) Sims, Ph.D.
Assistant Professor | Applied Animal Science | Beef Cattle Researcher

EDUCATION

Ph.D., Animal Science 2022
University of Arkansas (UofA), Fayetteville, AR
- *Emphasis*: Ruminant Nutrition with Production Systems Emphasis
- *Dissertation Title*: Effects of an injectable zinc solution at weaning as an alternative castration method in beef cattle.
- *Advisor*: Jeremy G. Powell, DVM, PhD

M.S., Animal Science 2017
Tarleton State University, Stephenville, TX
- *Emphasis*: Meat Science with Beef Emphasis
- *Thesis Title*: The impact of endpoint temperature on cooked quality characteristics on the biceps femoris, semimembranosus, and semitendinosus of pork.
- *Advisor*: Jason T. Sawyer, PhD

B.S., Agribusiness 2015
Tarleton State University, Stephenville, TX

SKILLS SUMMARY

- Applied animal science research in bovine respiratory disease, defensins, microbiome populations, stress physiology, and cattle health.
- Research design, experimental methods, data interpretation, scientific writing, scholarly publication, and conference presentation.
- External and internal grant development, proposal submission, research funding administration, and industry partnerships.
- Collaborative research with university, producer, association, and private-sector stakeholders.
- Ruminant nutrition, mineral and vitamin supplementation, and feed efficiency.
- Reproductive physiology and management.
- Peer review for animal science, agricultural research, meat science, and poultry science journals.
- Graduate thesis supervision, research committee service, proposal development, and exit-exam advising.
- Undergraduate honors thesis supervision, applied-research mentoring, independent-study instruction, and internship mentorship.
- Animal science instruction and curriculum development across undergraduate and graduate programs.
- Academic and professional service, including faculty committees, student organizations, livestock teams, and agricultural outreach.
- Proficient in lab techniques for colorimetric analysis (BUN, NEFA, ELISA), GC-MS fatty acid analysis, feed analysis, PCR, and cell culture.
- Proficient with SAS.

PROFESSIONAL EXPERIENCE

Assistant Professor - Beef Cow-Calf Management and Production Researcher 2023-Present
Texas State University, Department of Agricultural Sciences, College of Science and Engineering
- 55% Research, 40% Teaching, 5% Service

- Develop and lead collaborative, applied research with university, producer, breed association, and industry partners to improve cow-calf productivity, health, and breed improvement strategies.
- Secured more than $240,000 in competitively awarded external funding as principal investigator, including a **$200,000 Elanco** award.
- Mentor 15+ undergraduate and graduate student researchers through applied research, Honors theses, graduate theses, independent studies, internships, and professional development.
- Build and sustain partnerships with allied-industry, breed-association, and commodity-group stakeholders to advance applied research, student opportunities, and producer engagement.
- Developed and taught undergraduate and graduate courses in beef cattle management, meat and muscle biology, and graduate lab techniques.
- Coach and advise student teams and organizations including Cattlemen's, TXST Show Team, ASAS Quiz Bowl, and Steak Cookoff, to strengthen technical proficiency, leadership, and industry engagement.
- Conduct industry outreach and collaborative research with Santa Gertrudis Breeders International.

Ruminant Nutritionist and Research Director 2020–2022

Ten X Ranch, Glen Rose, TX

- Managed a 10,000+ acre private cattle and wild game ranch, overseeing 600 head of commercial Angus and Hereford cattle alongside diverse exotic wildlife populations. Directed pasture utilization and development, herd health, reproductive management, and species-specific nutrition programs.
- Applied pasture-based management principles through ranch pasture-use planning and nutritional decision making.
- Established a collaborative research herd supporting cattle and wildlife research partnerships with universities, including Oklahoma State University.
- Increased beef-cattle live calving rates by 20% in the first year by introducing improved genetics and an artificial-insemination program; enhanced bison breeding and calving performance through reassessment of nutritional requirements.
- Designed and managed nutrition programs for elk, red stag, banteng cattle, bison, and other wildlife species, aligning diets with reproductive, health, and production objectives.
- Led product-development field trials with commercial partners, evaluating cattle fly-control technology and harvest/fabrication knives for wild game.
- Coordinated a first-of-its-kind banteng cattle gene-sequencing project with Oklahoma State University, the University of California, Davis, Beijing University scientists, and the Source Population Alliance.
- Supported an Oklahoma State University bovine respiratory disease study evaluating use of a modified-live vaccine at branding.
- Created and administered an internship program providing college and FFA students with hands-on training in innovative ranch-management techniques and real-world livestock and wildlife production systems.

Graduate Research Assistant 2018–2019

University of Arkansas, Department of Animal Science, Dale Bumpers College

- Directed graduate thesis, undergraduate Honors thesis, and dissertation research projects, providing mentorship in experimental design, animal management, data collection, laboratory methods, statistical analysis, manuscript preparation, and publication.
- Led the development, funding, execution, and administration of animal-science research studies from proposal development through laboratory analysis, interpretation, and dissemination of findings.
- Secured approximately $40,000 in Beef Council grant funding to support beef-cattle research.
- Supervised M.S. students and supported their progress through research planning, data analysis, thesis completion, and professional development.

- Managed a university beef-cattle research herd (250 head), overseeing daily animal care, breeding schedules, sample collection, active research protocols, and research-data management.
- Improved cow–calf research data retention and integrity by implementing standardized data-collection protocols; supported stocker-unit data collection and research operations.
- Assisted with instruction in undergraduate and graduate animal-science courses, including *Companion Animal Management* (ANSC 4482), ***Cow-calf Management*** (ANSC 5052), and *Advanced Analytical Laboratory Methods* (ANSC 5743), contributing to 20% of the graduate-level course.
- Delivered Extension presentations for beef-cattle producers in the Fayetteville–Rogers area, translating research findings into practical management and production decisions.
- Supported the University of Arkansas Young Cattlemen's Association program through hands-on demonstrations and professional presentations for emerging beef-industry leaders.

Meat Lab Manager 2013 – 2017

Tarleton State University, Department of Animal Science, College of Agriculture and Natural Resources

- Managed Tarleton State University's meat laboratory and provided feed-consulting services to local cattle ranchers developing direct-to-consumer boxed-beef programs, advising on nutrition strategies to support animal performance, carcass quality, and market-ready cattle.
- Oversaw daily laboratory operations and trained students in humane harvest, carcass evaluation, fabrication, packaging, and processing of cattle, swine, goats, and sheep.
- Directed custom-harvest operations, food-quality assurance, HACCP compliance, budgeting and financial operations, and client service.
- Supervised and trained students in safe, industry-relevant meat-processing practices, from animal harvest through value-added fabrication and final packaging.
- Taught and supported laboratory instruction in undergraduate meat-science curricula, including *Advanced Meat Science* (ANSC 3421), *Meats Processing* (ANSC 4312), *Livestock and Meat Animal Evaluation* (ANSC 3307), and *Meat and Carcass Evaluation* (ANSC 2308).
- Coached the 2015–2016 Meat Judging Team, preparing students for competitive carcass and meat-evaluation events.
- Served as the primary liaison for external and university-sponsored research conducted through the meat laboratory, coordinating facility access, student involvement, and project operations.
- Led the FFA Regional Meats Judging Competition and delivered professional outreach presentations to local producers on beef-production strategies to improve carcass characteristics and meat quality.

PUBLICATIONS

Dridi, S., L. Liu, E. Greene, **R. N. Sims**, B. Roach, A. Dhamad, et al., and W. Bottje. 2026. In-feed *Arthrospira (Spirulina) platensis* supplementation enhances breast yield in heat-stressed broilers through modulation of proteostasis network. *Front. Physiol.* doi:10.3389/fphys.2026.1912121.

Wang, X., C. Nursyifa, S. Aninta, G. Garcia-Erill, L. Bertola, A. Khan, **R. N. Sims**, et al., and R. Heller. 2026. Population structure and domestication history of the Javan banteng. *Curr. Biol.* 36:458–473. doi:10.1016/j.cub.2025.01.017.

Wang, X., C. Nursyifa, S. Aninta, G. Garcia-Erill, L. Bertola, A. Khan, **R. N. Sims**, et al., and R. Heller. 2025. The genetic diversity of Indonesian cattle has been shaped by multiple introductions and adaptive introgression. *Nat. Commun.* 16:8192. doi:10.1038/s41467-025-62692-z.

Vázquez-García, J., G. Ballesteros-Rodea, V. Cuevas-Reyes, L. Hernández-Arteaga, L. Peña-Avelino, S. López-Aguirre, **R. N. Sims**, et al., and C. A. Rosales Nieto. 2025. Impact of *Kalanchoe (Kalanchoe*

daigremontiana) supplementation in goat maternal diet on hepatic and renal function and reproductive performance. *Biology* 14:376. doi:10.3390/biology14040376.

Hernández-Arteaga, L., J. Vázquez-García, M. Flores-Najera, M. Mellado, **R. N. Sims**, B. L. Bruner, et al., and C. A. Rosales Nieto. 2025. Evaluating reproductive outcomes in Saanen and Alpine doelings with suboptimal live weight and performance of their progeny. *Span. J. Agric. Res.* 23:21200. doi:10.5424/sjar/2025231-21200.

Cuevas-Reyes, V., J. Flores-Sánchez, E. Ramírez de la Cruz, J. M. Vázquez-García, L. Hernández-Arteaga, **R. N. Sims**, et al., and C. A. Rosales Nieto. 2025. Effects of prenatal herbal methionine supplementation on growth indices, onset of puberty, blood metabolites, and fertility of Alpine doelings. *Biology* 14:237. doi:10.3390/biology14030237.

García-Mendoza, A., D. Vega-Manríquez, V. Cuevas-Reyes, M. Flores-Najera, F. Almendárez-Navarro, E. Felix Santiago, **R. N. Sims**, et al., and C. A. Rosales Nieto. 2024. Association between colostrum quality, passive transfer of colostral immunoglobulin, and postnatal growth in neonatal calves. *J. Hellenic Vet. Med. Soc.* 75:8381–8388. doi:10.12681/jhvms.37201.

Sims, R. N., and B. L. Bruner. 2024. Growing and learning about Santa Gertrudis at Texas State University. *Santa Gertrudis Source.* December 2024.

McNeff, C. A., C. A. Robison, B. K. Wilson, F. J. White, **R. N. Cauble**, R. Biggs, J. L. Salak-Johnson, and P. A. Beck. 2023. Modified-live versus inactivated respiratory viral vaccines for revaccinating beef calves at weaning. *Appl. Anim. Sci.* 39:1–13. doi:10.15232/aas.2022-02332.

Sims, M. B., **R. N. Cauble**, J. G. Powell, E. B. Kegley, A. P. Foote, J. L. Salak-Johnson, and P. A. Beck. 2023. Association of maternal temperament and offspring disposition on growth performance. *Transl. Anim. Sci.* 7:txac164. doi:10.1093/tas/txac164.

Cauble, R. N., J. J. Ball, V. E. Zorn, T. M. Reyes, M. P. Wagoner, M. M. Coursen, B. D. Lambert, J. K. Apple, and J. T. Sawyer. 2021. Characteristics of pork muscles cooked to varying end-point temperatures. *Foods* 10:2963. doi:10.3390/foods10122963.

Backes, E. A., **R. N. Cauble**, E. B. Kegley, K. M. Loftin, and J. G. Powell. 2021. Evaluation of postweaning performance and reproductive measurements in fall-born replacement beef heifers treated with different anthelmintic regimens. *Appl. Anim. Sci.* 37:314–319. doi:10.15232/aas.2020-02125.

Emami, N. K., **R. N. Cauble**, A. E. Dhamad, E. S. Greene, C. S. Coy, S. G. Velleman, S. Orlowski, N. B. Anthony, M. Bedford, and S. Dridi. 2021. Hypoxia further exacerbates woody breast myopathy in broilers via alteration of satellite cell fate. *Poult. Sci.* 100:101167. doi:10.1016/j.psj.2021.101167.

Greene, E. S., **R. N. Cauble**, H. Kadhim, B. de Almeida Mallmann, I. Gu, S. O. Lee, S. Orlowski, and S. Dridi. 2020. Protective effects of the phytogenic feed additive "Comfort" on growth performance via modulation of hypothalamic feeding- and drinking-related neuropeptides in cyclic heat-stressed broilers. *Domest. Anim. Endocrinol.* 74:106487. doi:10.1016/j.domaniend.2020.106487.

Greene, E. S., **R. N. Cauble**, A. E. Dhamad, M. T. Kidd, B. Kong, S. M. Howard, H. F. Castro, S. R. Campagna, M. Bedford, and S. Dridi. 2020. Muscle metabolome profiles in woody breast–(un)affected broilers: Effects of Quantum Blue phytase-enriched diet. *Front. Vet. Sci.* 7:458. doi:10.3389/fvets.2020.00458.

Cauble, R. N., E. S. Greene, S. Orlowski, C. Walk, M. Bedford, J. K. Apple, M. T. Kidd, and S. Dridi. 2020. Dietary phytase reduces broiler woody breast severity via potential modulation of breast muscle fatty acid profiles. *Poult. Sci.* 99:4009–4015. doi:10.1016/j.psj.2020.05.005.

Orlowski, S. K., **R. N. Cauble**, T. Tabler, J. Z. Hiltz, E. S. Greene, N. B. Anthony, and S. Dridi. 2020. Processing evaluation of random bred broiler populations and a common ancestor at 55 days under chronic heat stress conditions. *Poult. Sci.* 99:3491–3500. doi:10.1016/j.psj.2020.03.036.

Yazwinski, T. A., C. Tucker, E. Wray, and **R. N. Cauble**. 2020. Distribution of four parasitic helminth species in one pen-free, egg-laying housing facility, and the corresponding efficacy of nutraceutical and pharmaceutical administrations. *Avian Dis.* 64:556–560. doi:10.1637/0005-2086-64.4.556.

Cauble, R., S. Hamad, E. Herring, C. Lichtenwalter, C. McGuire, and S. Dridi. 2018. Leptin activates NLRP3 inflammasome-associated with type II diabetes and obesity. *Adv. Food Technol. Nutr. Sci. Open J.* 4:e13–e16. doi:10.17140/AFTNSOJ-4-e016.

Manuscripts Under Review

Schroer, R. C., E. B. Kegley, R. A. Cheek, **R. N. Sims**, J. L. Reynolds, K. A. Midkiff, and J. G. Powell. Under review. Utilization of dried citrus pulp, a source of flavonoids and other bioactive compounds, to replace a portion of corn in the receiving supplement for beef heifers. *Appl. Anim. Sci.*

Rojas, A., L. K. Solice, **R. N. Sims**, B. L. Bruner, A. A. Olanrewaju, R. C. Cardoso, and C. A. Rosales Nieto. Under review. Bee pollen and goat physiology: Insights from a pilot study on liver and metabolic function. *Transl. Anim. Sci.*

Ready for Submission

Special issue paper initiation: "Assisted Reproductive Technologies and Their Impact on Livestock Health and Development." *Animals.*

Brummett, O. S., A. Dela Rosa, M. B. Sims, B. L. Bruner, S. Dridi, E. S. Greene, and **R. N. Sims**. In preparation. Characterization of cytokine and β-defensin expression in blood and nasal mucosal secretions of calves affected with bovine respiratory disease. *Transl. Anim. Sci.*

Solice, L. K., A. Dela Rosa, O. S. Brummett, N. Reyes, A. K. Dela Rosa, M. B. Sims, B. L. Bruner, et al., and **R. N. Sims**. In preparation. Effects of a bovine appeasing substance applied at estrous synchronization on reproductive performance in beef cows. *Transl. Anim. Sci.*

Sims, R. N., E. B. Kegley, M. S. Gadberry, J. L. Reynolds, S. Dridi, E. S. Greene, M. B. Sims, P. A. Beck, C. Robinson, and J. G. Powell. In preparation. Injectable zinc as an alternative castration method at weaning in beef bulls: Effects on testosterone concentrations, growth performance, health, and carcass characteristics. *J. Anim. Sci.*

Sims, R. N., M. C. Hickinbotham, E. B. Kegley, and J. G. Powell. In preparation. Determining the effect of zinc status on eye health and the ocular bacterial community and its relationship with infectious bovine keratoconjunctivitis in beef calves. *Animal Science.*

Sims, R. N., T. W. Glascock, E. B. Kegley, P. A. Beck, J. G. Powell, and J. K. Apple. In preparation. A comparison of conventional and grass-finishing systems in crossbred beef steers: Effects on growth performance, carcass merit, and economics. *Appl. Anim. Sci.*

Sims, R. N., E. B. Kegley, M. S. Gadberry, J. L. Reynolds, S. Dridi, E. S. Greene, and J. G. Powell. In preparation. Effects of intratesticular injectable zinc as an alternative castration method compared with banding 1 week postweaning in beef bulls: Effects on health, inflammation, behavior, and growth during the backgrounding period. *Appl. Anim. Sci.*

CONFERENCE PROCEEDINGS

Brummett, O. S., A. E. Evans, A. K. Dela Rosa, V. Barrera, B. L. Bruner, M. B. Sims, C. A. Rosales Nieto, E. S. Greene, S. Dridi, and **R. N. Sims**. 2026. Bovine β-defensin and cytokine expression in blood of calves diagnosed with bovine respiratory disease by lymphocyte or neutrophil concentrations. *J. Anim. Sci.* ASAS National Meeting. Accepted.

Dela Rosa, A. K., O. S. Brummett, A. E. Evans, V. Barrera, B. L. Bruner, M. B. Sims, C. A. Rosales Nieto, E. S. Greene, S. Dridi, and **R. N. Sims**. 2026. Expression of β-defensins in nasal mucosal secretions in calves affected with bovine respiratory disease. *J. Anim. Sci.* ASAS National Meeting. Accepted.

Evans, A. E., O. S. Brummett, A. K. Dela Rosa, V. Barrera, B. L. Bruner, M. B. Sims, C. A. Rosales Nieto, E. S. Greene, S. Dridi, and **R. N. Sims**. 2026. β-Defensin gene expression in nasal mucosal secretions of calves affected by bovine respiratory disease. *J. Anim. Sci.* ASAS National Meeting. Accepted.

Amaro, A., V. Barrera, O. S. Brummett, A. E. Evans, A. K. Dela Rosa, M. B. Sims, C. A. Rosales Nieto, B. L. Bruner, E. S. Greene, S. Dridi, and **R. N. Sims**. 2026. Defensin, cytokine, and C-reactive protein expression within blood in calves diagnosed with bovine respiratory disease. *J. Anim. Sci.* ASAS National Meeting. Accepted.

Dela Rosa, A. K., O. S. Brummett, **R. N. Sims**, E. Pierdolla, and D. Morrish. 2026. From theory to smoke: Experiential learning in undergraduate meat science education for smoked success. Western Region AAAE Meeting. Accepted.

Brummett, O. S., A. E. Evans, A. K. Dela Rosa, V. Barrera, B. L. Bruner, E. S. Greene, et al., and **R. N. Sims**. 2026. Bovine defensin expression in nasal mucosal secretions of calves challenged with bovine respiratory disease: A preliminary analysis. *J. Anim. Sci.* ASAS Southern Section Meeting. Accepted.

Dela Rosa, A. K., L. K. Solice, N. Reyes, O. S. Brummett, M. B. Sims, E. L. Pierdolla, et al., and **R. N. Sims**. 2026. Effects of a bovine appeasing substance applied at estrous synchronization on stress, cyclicity, and pregnancy. *J. Anim. Sci.* ASAS Southern Section Meeting. Accepted.

Solice, L. K., N. Reyes, O. S. Brummett, M. B. Sims, E. L. Pierdolla, C. A. Rosales Nieto, et al., and **R. N. Sims**. 2025. Effects of a bovine appeasing substance applied at estrous synchronization on stress and reproductive performance. *J. Anim. Sci.* 103(Suppl. 3):376–377. Abstract 433. doi:10.1093/jas/skaf300.433.

Rojas, A., L. K. Solice, **R. N. Sims**, B. L. Bruner, A. A. Olanrewaju, R. Cardoso, and C. A. Rosales Nieto. 2025. Evaluating bee pollen supplementation for enhancing health parameters in crossbred goats: A focus on complete blood count. *J. Anim. Sci.* 103(Suppl. 2):116. Abstract 900. doi:10.1093/jas/skae165.900.

Rojas, A., B. V. Trochez Vargas, L. K. Solice, **R. N. Sims,** B. L. Bruner, R. Cardoso, and C. A. Rosales Nieto. 2025. Investigating bee pollen's role in fecal parasite management and FAMACHA scoring in crossbred goats. *J. Anim. Sci.* 103(Suppl. 2):154. Abstract 732. doi:10.1093/jas/skae165.732.

Brummett, O. S., E. B. Kegley, M. B. Sims, S. Dridi, P. A. Beck, J. G. Powell, and **R. N. Sims**. 2025. Injectable zinc as an alternative castration method at weaning in beef bulls: Effects on growth performance and carcass characteristics. *J. Anim. Sci.* ASAS Southern Section Meeting.

Solice, L. K., N. E. Reyes, O. S. Brummett, M. B. Sims, E. L. Pierdolla, C. A. Rosales Nieto, B. L. Bruner, J. G. Powell, and **R. N. Sims**. 2025. Effects of a bovine appeasing substance applied at estrous synchronization on stress and reproductive performance. *J. Anim. Sci.* ASAS National Meeting.

Ávila-Tenorio, C., L. Hernández-Arteaga, J. Vázquez-García, M. Flores-Najera, V. Cuevas-Reyes, **R. N. Sims**, et al., and C. A. Rosales Nieto. 2024. Bioestimulación preconcepcional reduce la duración del empadre en cabras. *Proc. REBIZA.*

Reyna-Vargas, F., J. Vázquez-García, L. Hernández-Arteaga, V. Cuevas-Reyes, M. Flores-Najera, **R. N. Sims**, et al., and C. A. Rosales Nieto. 2024. Efecto de la bioestimulación preconcepcional sobre variables reproductivas en cabras. *Proc. REBIZA.*

Sims, R. N., L. K. Solice, J. G. Powell, E. B. Kegley, S. Dridi, E. S. Greene, and M. S. Gadberry. 2023. Effects of intratesticular injectable zinc as an alternative castration method compared with banding 1 week postweaning in beef bulls: Effects on health, inflammation, behavior, and growth during the backgrounding period. *J. Anim. Sci.* ASAS Southern Section Meeting.

Martínez-Lara, G., M. Hernández-Padilla, J. Vázquez-García, L. Hernández-Arteaga, F. Villegas-Rodríguez, V. Cuevas-Reyes, **R. N. Sims**, et al., and C. A. Rosales Nieto. 2023. Inclusión de concentrado a base de residuos de panadería durante la preconcepción sobre el peso y tamaño al nacimiento de la progenie. *Proc. REBIZA.*

Hernández-Padilla, M., G. Martínez-Lara, J. Vázquez-García, L. Hernández-Arteaga, F. Villegas-Rodríguez, M. Flores-Najera, **R. N. Sims**, et al., and C. A. Rosales Nieto. 2023. Respuesta reproductiva de cabras multíparas al incluir residuos de panadería en dieta. *Proc. REBIZA.*

Cauble, R. N., M. C. Hickinbotham, E. B. Kegley, and J. G. Powell. 2022. Determining the effect of zinc status on eye health and its relationship with infectious bovine keratoconjunctivitis in beef calves. *J. Anim. Sci.* ASAS National Meeting.

Cauble, R. N., J. G. Powell, E. B. Kegley, S. Gadberry, P. A. Beck, M. B. Sims, and C. T. Shelton. 2020. Effects of an injectable zinc solution at weaning as an alternative castration method during the backgrounding period in beef bulls. *J. Anim. Sci.* 98(Suppl. 2):46–47. Abstract 54. doi:10.1093/jas/skz397.106.

Cauble, R. N., E. S. Greene, and S. Dridi. 2020. Heat stress dysregulates intestinal mitochondrial function and dynamics in broilers. Poultry Science National Meeting.

Cauble, R. N., E. S. Greene, B. de Almeida Mallmann, S. Orlowski, C. Walk, J. K. Apple, M. Bedford, and S. Dridi. 2020. Fatty acid properties and breast-myopathy occurrences in chickens fed Quantum Blue at increasing dietary inclusions. Poultry Science National Meeting.

Martin, B. E., **R. N. Cauble**, E. B. Kegley, P. A. Hornsby, J. L. Reynolds, B. P. Shoulders, and J. G. Powell. 2020. Effect of Zelnate administered at initial processing in high-risk, newly received beef calves on performance and morbidity. *J. Anim. Sci.* 98(Suppl. 2):47. Abstract 47. doi:10.1093/jas/skz397.108.

Zammit, L. M., J. G. Powell, **R. N. Cauble**, T. D. Lester, C. A. Lichtenwalter, E. M. Herring, C. L. McGuire, A. T. Pickett, E. Wray, and C. A. Tucker. 2020. Evaluation of extended-release eprinomectin efficacy on multiparous beef cow performance. *J. Anim. Sci.* 98(Suppl. 2):60–61. Abstract 80. doi:10.1093/jas/skz397.024.

Sims, M. B., P. A. Beck, C. B. Stewart, C. T. Shelton, and **R. N. Cauble**. 2020. Effects of maternal disposition and calf chute behavior at weaning on calf finishing performance. *J. Anim. Sci.* 98(Suppl. 2):64–65.

Hilfiker, H., E. B. Kegley, R. W. Rorie, P. A. Hornsby, J. L. Reynolds, B. P. Shoulders, **R. N. Cauble,** and J. G. Powell. 2020. Impacts of phosphorus intake on beef heifer growth performance and reproductive tract scores. *J. Anim. Sci.* 98(Suppl. 2):57–58.

Burnett, R. H., M. A. Duvic, B. R. Kutz, A. H. Brown, J. G. Powell, T. Smith, D. G. Riley, and **R. N. Cauble**. 2020. Evaluation of hair coat shedding ability as an adaptive trait in Angus cattle in the southern United States. *J. Anim. Sci.* 98(Suppl. 2):1–2.

Cauble, R. N., E. A. Palmer, E. B. Kegley, P. A. Hornsby, J. L. Reynolds, B. P. Shoulders, M. D. Cravey, and J. G. Powell. 2019. Immune function and growth performance in beef calves supplemented during backgrounding with live yeast and yeast cell wall in combination with supplemented dams. *J. Anim. Sci.* 97:446–447.

Rook, W. L., J. G. Powell, **R. N. Cauble**, R. W. Rorie, D. H. Hubbell, and C. R. Looney. 2019. Effect of presynchronization using prostaglandin F2α before a shortened progesterone exposure in fixed-time AI of crossbred beef cows nursing calves. *J. Anim. Sci.* 97:260.

Sims, M. B., P. A. Beck, C. B. Stewart, and **R. N. Cauble**. 2019. Maternal disposition as related to calf weaning performance using chute scores. *J. Anim. Sci.* 97(Suppl. 3):259. Abstract PSIII-34. doi:10.1093/jas/skz258.528.

Cauble, R. N., J. G. Powell, B. R. Kutz, K. S. Anschutz, T. D. Lester, and W. A. Gragg. 2019. Winter hair coat shedding effects on prebreeding, weaning, and calf performance of fall-calving beef cows. *J. Anim. Sci.* 97(Suppl. 1):50–51. Abstract 120. doi:10.1093/jas/skz053.113.

McGuire, C. L., J. G. Powell, **R. N. Cauble**, B. R. Kutz, K. S. Anschutz, T. D. Lester, and W. A. Gragg. 2019. Foot scoring effects on cow and calf performance at breeding and weaning. *J. Anim. Sci.* 97(Suppl. 1):50. Abstract 119. doi:10.1093/jas/skz053.112.

Davis, E. N., **R. N. Cauble**, J. G. Powell, T. D. Lester, W. A. Gragg, B. R. Kutz, and C. F. Rosenkrans. 2019. Relationships among circulating prolactin concentrations, hair coat score, and weights of grazing cows. *J. Anim. Sci.* 97(Suppl. 1):45. Abstract 159. doi:10.1093/jas/skz053.101.

Landers, S. F., J. G. Powell, C. A. Tucker, E. M. Wray, **R. N. Cauble**, and T. D. Lester. 2019. The efficacy of extended-release eprinomectin for the reduction of horn flies, face flies, and fecal egg counts of parasitic nematodes in adult mixed-breed cattle. *J. Anim. Sci.* 97(Suppl. 1):53. Abstract 122.

Cauble, R. N., J. T. Sawyer, B. D. Lambert, J. P. Muir, and J. K. Apple. 2018. Fresh ham chop characteristics cooked to various internal endpoint temperatures. *Proc. Am. Meat Sci. Assoc. Reciprocal Meat Conf.* Kansas City, MO.

GRANTS

Awarded projects are identified in bold.

Sims, R. N., B. L. Bruner, M. B. Sims, L. K. Solice, and O. S. Brummett. 2025. ***The impacts of monensin on fetal programming and postnatal supplementation to improve reproductive efficiency of heifers.*** **Elanco**. **$200,000. Awarded**

Sims, R. N., B. L. Bruner, M. B. Sims, and O. S. Brummett. 2025–present. ***SGBI genetic variation and meat quality***. Santa Gertrudis Breeders International. **$20,000. Awarded.**

Sims, R. N., B. L. Bruner, O. S. Brummett, and A. K. Dela Rosa. 2025. Resubmission: *Investigating defensin function and expression in bovine bronchial tissue in calves infected with bovine respiratory disease: Potential biomarkers for resistant cattle.* USDA Agriculture and Food Research Initiative. $300,000. **Under Review**

Sims, R. N., and S. Dridi. 2025. *Prevention against bovine respiratory disease in feedlot cattle: Effects of dietary XPM postbiotic supplementation.* DairyLac. $65,112.

Sims, R. N., and S. Dridi. 2025. *Evaluating the efficacy of XPM postbiotic supplementation for reducing liver abscesses and improving feed efficiency in feedlot cattle.* DairyLac. $145,068.

Sims, R. N., B. L. Bruner, O. S. Brummett, and A. K. Dela Rosa. 2025. Resubmission: *Investigating defensin function and expression in bovine bronchial tissue in calves infected with bovine respiratory disease: Potential biomarkers for resistant cattle.* Texas State University Research Enhancement Program.

Sims, R. N., L. K. Solice, and O. S. Brummett. 2024–2025. ***Meat judging team start-up funds.*** **American Meat Science Association. $20,000. Awarded.**

Sims, R. N., and L. K. Solice. 2024-2025. ***Meat judging team***. Hold 'Em and Hit 'Em. **$20,000. Awarded.**

Sims, R. N., and B. L. Bruner. 2024. *Investigating defensin function and expression in bovine bronchial tissue in calves infected with bovine respiratory disease: Potential biomarkers for resistant cattle.* USDA Agriculture and Food Research Initiative. $300,000.

Sims, R. N., B. L. Bruner, M. B. Sims, and C. S. Thomas. 2024. *Livestock nutrition and agricultural research center.* USDA Research Facilities Act Grant. $250,000.

Dridi, S., E. S. Greene, and **R. N. Sims**. 2024. *Role of Spirulina platensis in ameliorating heat-stress productivity losses in broilers.* Arkansas Biosciences Institute. $300,000.

Sims, R. N., B. L. Bruner, L. K. Solice, and O. S. Brummett. 2024. *Investigating defensin function and expression in bovine bronchial tissue in calves infected with bovine respiratory disease: Potential biomarkers for resistant cattle.* Texas State University Research Enhancement Program.

Drewery, M. L., B. L. Bruner, **R. N. Sims**, and D. Valles Molina. 2023. *C-Lock equipment grant.* C-Lock Inc. $299,549.

Sims, R. N., and L. K. Solice. 2023. *Nasal and rectal microbiome populations during weaning as a predictive model for instances of bovine respiratory disease.* Texas State University Research Enhancement Program.

Sims, R. N., and L. K. Solice. 2023. *Nasal and rectal microbiome populations during weaning as a predictive model for instances of bovine respiratory disease.* Texas State University College of Applied Arts Undergraduate Research Learning Communities Grant.

Cauble, R. N., J. G. Powell, and E. B. Kegley. 2020. *Replacing corn with citrus pulp, a source of flavonoids and other bioactive compounds, in the receiving supplement for high-risk beef calves.* Arkansas Animal Health Funds.

Cauble, R. N., J. K. Apple, and S. Dridi. 2019. *Muscle mitochondrial efficiency and its effects on dark cutter beef.* Beef Council Grant.

Cauble, R. N., J. G. Powell, E. B. Kegley, J. K. Apple, and P. A. Beck. 2019. *The use of QScout BLD upon arrival as a means to reduce antibiotic use and improve performance.* Arkansas Beef Council.

Cauble, R. N., J. G. Powell, and E. B. Kegley. 2019. *The use of QScout BLD on arrival as a means to reduce antibiotic use and improve performance in high-risk stocker calves from the southeastern region of the United States.* Iowa Beef Council.

Cauble, R. N., J. G. Powell, E. B. Kegley, and S. Dridi. 2019. *The effects of an injectable zinc solution as an alternative castration method in beef bulls at weaning.* Animal Health Funds and Sustainable Research Funds.

Cauble, R. N., J. G. Powell, and E. B. Kegley. 2018. *Growth performance for newly received stocker calves on liquid diets.* Kenny Berg Research and Education Fund.

Cauble, R. N., J. G. Powell, and E. B. Kegley. 2018. *The effects of deworming on Escherichia coli O157:H7 in bovine intestine.* Zoetis.

Cauble, R. N., J. G. Powell, E. B. Kegley, P. A. Beck, and J. K. Apple. 2018. *The effects of preconditioning on carcass traits, health, well-being, and behavior in beef calves.* Arkansas Beef Council.

Cauble, R. N., J. G. Powell, E. B. Kegley, and P. A. Beck. 2018. ***The effects of an injectable zinc solution as an alternative castration method in beef bulls at weaning.*** Arkansas Beef Council Grant. **$39,645. Awarded.**

TEACHING AND MENTORSHIP

Assistant Professor - Beef Cow-Calf Nutritionist, Management and Production Researcher
Texas State University, Department of Agricultural Sciences, College of Science and Engineering

- Courses taught: Beef Cattle Management 3381; Feeds and Feeding 4325; Food Technology: Processing Meats 4330; Basic Animal Science 1301; Anatomy & Physiology of Livestock and Poultry 2318; Animal Health 3314; Reproduction of Farm Animals 3331; Minerals and Vitamins in Animal Nutrition 5362
- Developed two undergraduate courses: *Beef Cattle Management* and *Meat and Muscle Biology*; and one graduate-level course, *Laboratory Techniques*.
- Advise the TXST Cattlemen's Association, supporting student learning through industry tours, professional networking, and engagement with the beef cattle industry.
- Advise the TXST Show Team, preparing undergraduate students to exhibit Santa Gertrudis and Star Five cattle at open shows throughout Texas.
- Mentor to the Santa Gertrudis Breeders International (SGBI) Cohort, a selective group of undergraduate students who collaborate closely with the SGBI association to conduct research that advances breed standards and supports the long-term improvement of the Santa Gertrudis breed.
- Serve as a mentor to undergraduate students enrolled in Agricultural Internship 4310 or Independent Study 4185 and graduate students enrolled in Special Problems in Technical Agriculture 5370.
- Serve as the coach for the ASAS Quiz Bowl team and Steak Cookoff team.
- Mentor graduate thesis and non-thesis students through exit exam or thesis completion.

Ruminant Nutritionist and Research Director
Ten X Ranch, Glen Rose, TX

- Created and administered an internship program providing college and FFA students with hands-on training in innovative ranch-management techniques and real-world livestock and wildlife production systems.

Graduate Research Assistant
University of Arkansas, Department of Animal Science, Dale Bumpers College

- Assisted with instruction in undergraduate and graduate animal-science courses, including *Companion Animal Management* (ANSC 4482), ***Cow-calf Management*** (ANSC 5052), and *Advanced Analytical Laboratory Methods* (ANSC 5743), contributing to 20% of the graduate-level course.
- Delivered Extension presentations for beef-cattle producers in the Fayetteville–Rogers area, translating research findings into practical management and production decisions.
- Supported the University of Arkansas Young Cattlemen's Association program through hands-on demonstrations and professional presentations for emerging beef-industry leaders.
- Mentored 8+ M.S. students through their research which included experimental design, lab analysis, statistical analysis, and theses completion.

Meat Lab Manager
Tarleton State University, Department of Animal Science, College of Agriculture and Natural Resources

- Taught and supported laboratory instruction in undergraduate meat-science curricula, including *Advanced Meat Science* (ANSC 3421), *Meats Processing* (ANSC 4312), *Livestock and Meat Animal Evaluation* (ANSC 3307), and *Meat and Carcass Evaluation* (ANSC 2308).
- Coached the 2015–2016 Meat Judging Team, preparing students for competitive carcass and meat-evaluation events.
- Led the FFA Regional Meats Judging Competition and delivered professional outreach presentations to local producers on beef-production strategies to improve carcass characteristics and meat quality.

SERVICE

- Assistant Professor of Instruction Hiring Committee (Member, 2026)
- SGBI Cohort Research Team – RASE (Co-Chair, 2025-Present)
- Academic Quadrathlon (Advisor, 2025-Present)
- Cattle Show Team (Co-Chair, 2024-Present)
- Cattlemen's Association (Advisor, 2024-Present)
- Graduate Scholarship Award Committee (Chair, 2023-Present)
- Governance Committee (Elected Member, 2024-2025)
- Leading Hispanics Research Program Advisor (2023-2025
- Meat Judging Team (Chair, 2023-2025)
- Faculty Senate Liaison (Chair, 2023-2025)
- Geneticist Hiring Committee (Member, 2025)
- Curriculum Committee (Member, 2023-2024)
- CDE Vet Tech Contest (2023-2024)
- LDE Judge (2023-2024)
- Pre-Vet Society (Co-Chair, 2023-2024)
- Academic Advising II Interviews (Committee Member, July 2023)
- Santa Gertrudis Better Beef Program (2023-Present)

Professional Service

- Reviewer, *New Zealand Journal of Agricultural Research* (2024–Present)
- Reviewer, *Meat and Muscle Biology* (2024–Present)
- Reviewer, *Poultry Science* (2024–Present)

AWARDS AND RECOGNITION

- Santa Gertrudis Breeder Feature Interview (January 2026)
  Featured in SGBI newsletter highlighting research and show team initiatives at Texas State University.
  Co-interviewed with Brian Bruner
- Presidential Award for Teaching Excellence Texas State University, 2025
- College Achievement Award for Excellence in Teaching, Texas State University, 2024
- Paul Noland Award, University of Arkansas 2019
- Dean's Honor Roll, Tarleton State University, 2013, 2014, and 2015.

ADDITIONAL PROFESSIONAL ACTIVITIES AND AFFILIATION

- Santa Gertrudis Breeders Annual Meeting, TXST Faculty Representative (April 2026)
- Guest Lecturer for POSC Seminar 5901, University of Arkansas (March 2026)
- Santa Gertrudis Breeders Annual Meeting, TXST Faculty Representative (April 2025)
- Santa Gertrudis Breeders Annual Meeting, TXST Faculty Representative (April 2024)
- Tyson Beyond Fresh Meats Short Course, Faculty Internship, Springdale, AR (March 2024)
- STEP Program, San Marcos, TX (Fall 2023)
- Santa Gertrudis Better Beef Program, Gonzales, TX (June 2023)
- Santa Gertrudis Annual Meeting, Amarillo, TX (April 2023)
- American Society of Animal Science (ASAS) (2023–Present)

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