

# Taylor N. Andrews

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## Summary

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- Reproductive physiologist with 6 years of experience in reproductive management and 12 years of experience in beef production
- Primary author of 8 abstracts and contributing author of 7 peer-reviewed publications
- Experience in teaching reproductive physiology, artificial insemination, transrectal ultrasonography, and laboratory techniques in lecture, laboratory, and extension settings
- Experience in conceptualizing, drafting, and managing grants

## Education

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### **Doctor of Philosophy in Animal Science, Reproductive Physiology**      **Aug. 2021-Aug. 2025**

*New Mexico State University (NMSU), Las Cruces, NM*

*Dissertation Title: Evaluation of development strategies on growth, ovarian function, uterine environment and embryonic development in beef heifers.*

- Advisors: Drs. Adam Summers and Eric Scholljegerdes
- Minor in applied statistics
- 4.00/4.00 cumulative GPA

### **Master of Science in Animal Science, Reproductive Physiology**      **August 2019-August 2021**

*South Dakota State University (SDSU), Brookings, SD*

*Thesis Title: Andrews, T.N. (2021). The interactions of change in nutrition prior to and after artificial insemination on plasma metabolites, steroid hormones, and uterine histotroph in beef heifers.*

- Advisors: Drs. George Perry and Julie Walker
- 4.00/4.00 cumulative GPA

### **Bachelor of Science in Agriculture, Animal Sciences**

**August 2015-May 2019**

*The Ohio State University (OSU), Columbus, OH*

- Minor: Biosciences

## Professional Experience

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### **Assistant Professor of Beef Cattle Production Systems**

**August 2025- Present**

*Texas A&M AgriLife Research and Extension, Beeville, TX*

### **Graduate Research and Teaching Assistant**

**August 2021-August 2025**

*New Mexico State University, Las Cruces, NM*

- Conceptualize and direct research ideas with proper methodology for direct application to the beef industry
- Manage and direct nutrition and reproductive physiology interaction research projects within groups of ranch labor, graduate students, and undergraduate students
- Prepare and analyze data, including utilizing appropriate models in statistical software
- Draft and edit abstracts, manuscripts, and presentations for submission and publication
- Communicate research results at 2 regional and 1 national conference
- Awarded 2<sup>nd</sup> place in WSASAS graduate student paper competition

**Graduate Research and Teaching Assistant**

**August 2019-August 2021**

*South Dakota State University, Brookings, SD*

- Managed and directed in multiple reproductive physiology research projects and trials
- Promoted research and applied research project outcomes to beef producers
- Promoted and assisted in extension events, including artificial insemination schools and beef producer meetings
- Communicated research at 1 regional and 1 national conference
- Managed multiple research projects utilizing cooperating herds in South Dakota
- Drafted and edited abstracts, manuscripts, and presentations for submission and publication

**Intern**

**June 2018-August 2018**

*Country View Family Farms, Willow Hill, PA*

- Artificially inseminated 450 sows per week
- Assisted in herd health of 5,500 head farm

**Farm Hand**

**2010-2019**

*Andrews Genetics, Bellevue, OH*

- Promoted and represented farm at beef industry events
- Managed breeding records and breeding selections for sheep flock
- Managed herd and flock health
- Directed and managed synchronization of estrus protocols for cattle herd

**Teaching Experience**

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**Teaching Assistant**

*New Mexico State University, Las Cruces, NM*

*ANSC 1110: Animal Science Careers*

**Spr. 2022, Spr. 2023, Spr. 2024, and Spr. 2025**

- Graded weekly assignments
- Lecture section of 140 students

*ANSC 1120: Introduction to Animal Science*

**Fall 2023 and Fall 2024**

- Graded weekly assignments and labs
- Assisted in teaching labs (4 sections)
- Lecture section of 160-200 students
- Lab section of 40-50 students (4 sections)

*ANSC 424: Swine Production*

**Fall 2023**

- Graded assignments
  - Lecture section of 30 students
- ANSC 301: Animal and Carcass Evaluation* **Spring 2022-Fall 2023**
- Graded weekly assignments
  - Lecture section of 20 students
- ANSC 351: Agricultural Animals* **Fall 2022**
- Graded weekly assignments
  - Lecture section of 30 students
- ANSC 423: Animal Breeding* **Fall 2021**
- Graded monthly worksheets
  - Assisted in lab sections
  - Lecture section of 60 students

### **Teaching Assistant**

*South Dakota State University, Brookings, SD*

*ANSC 285: Livestock Evaluation and Marketing* **Spring and Fall 2020**

- Graded weekly worksheets and exams
- Assisted in lab sections
- Lecture section of 80 students

*ANSC 333: Reproductive Physiology* **Fall 2019**

- Graded weekly quizzes and exams
- Assisted in teaching the ultrasonography lab
- Held office hours and tutored students weekly on lecture material
- Lecture section of 100 students

### **Undergraduate Teaching Assistant**

*The Ohio State University, Columbus, OH*

*Food, Agricultural, and Environmental Sciences 1100* **Fall 2016 and 2017**

- Assisted ten incoming students to transition to The Ohio State University
- Assisted in the ten students' four-year plans and course requirements
- Lecture section of 200 students

### **Guest Lecturer**

*New Mexico State University, Las Cruces, NM*

*ANSC 1120: Introduction to Animal Science* **Fall 2024**

- Lectured on female reproductive anatomy and physiology
- Lecture section of 195 students

*ANSC 1120: Introduction to Animal Science* **Fall 2024**

- Lectured on digestion and absorption of monogastric and ruminants
- Lecture section of 195 students

*ANSC 1110: Animal Science Careers* **Spring 2023 and Spring 2024**

- Lectured on graduate school experiences
- Lecture section of 140 students

*ANSC 1120: Introduction to Animal Science* **Fall 2023**

- Lectured on relevant topics on animal health

- Lecture section of 160 students
- ANSC 424: Swine Production* **Fall 2023**
- Lectured on female and male anatomy and physiology
  - Lecture section of 30 students

*South Dakota State University, Brookings, SD*  
*ANSC 285: Livestock Evaluation and Marketing* **Spring 2020 and Fall 2020**

- Lectured on growth and development in livestock
- Lecture section of 55 students

*ANSC 101: Introduction to Animal Science* **Fall 2019 and Spring 2021**

- Lectured on various equipment and tools utilized in reproduction for livestock
- Taught male and female reproductive anatomy using reproductive tracts
- Lab sections of 30 students (3 sections)

*DS 130: Introduction to Dairy Science* **Fall 2019**

- Assisted in demonstrating ultrasonography for pregnancy detection in cattle
- Taught female reproductive anatomy using reproductive tracts

### **Undergraduate Supervision**

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| 1. Ashton Henington- NMSU Undergraduate Research Assistant   | <b>Spring 2024-2025</b> |
| 2. LEEANNE Padilla- NMSU Undergraduate Research Assistant    | <b>Spring 2024-2025</b> |
| 3. Natalie Grimm- NMSU Undergraduate Research Assistant      | <b>Spring 2024-2025</b> |
| 4. Adigail Aizpuru- NMSU Undergraduate Research Assistant    | <b>Spring 2024-2025</b> |
| 5. Aria Christianson – NMSU Undergraduate Research Assistant | Spring 2024-2025        |
| 6. Santiago Garcia- NMSU Undergraduate Research Assistant    | <b>Spring 2024</b>      |
| 7. Samantha Ekstrom- NMSU Undergraduate Research Assistant   | <b>Spring 2024</b>      |

### **Extension Experience**

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**United States Beef Academy Presenter** **May 2022 and May 2023**  
*Corona, NM*

- Female anatomy and physiology, estrous cycles, and beef cattle fertility

**Small Ruminant Field Day Presenter** **November 2022**

*New Mexico State University, Corona, NM*

- Small ruminant female anatomy and physiology and estrous cycles

**Cattle Artificial Insemination Schools** **2019-2021**

*South Dakota State University, Brookings, SD*

- Demonstrated artificial insemination in live cattle and female reproductive tracts
- Lectured on the benefits and disadvantages of natural service and artificial insemination
- Assisted at five artificial insemination schools and approximately 100 people trained (20 per school)

### **Grants and Fellowships**

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#### **Federal Grants**

1. “Evaluation of reproductive parameters and embryo development in beef heifers supplemented rumen undegradable protein” USDA NIFA Predoctoral Grant. PI: Taylor Andrews. Primary Mentor: Adam Summers. **Requested amount: \$114,948.** Grant was funded.

### **Industry Donations**

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1. “Evaluation of reproductive parameters and embryo development in beef heifers supplemented rumen undegradable protein” Zoetis Inc. University Small Research Grant Program. PI: Taylor Andrews, Adam Summers, and Eric Scholljegerdes. Product support grant. **Requested amount: \$3,230.** Zoetis Inc. donated products for the synchronization of estrus.
2. “Impacts of source and level of rumen undegradable protein on embryonic development in developing beef heifers” Reprologix. PI: Taylor Andrews. **Requested amount: \$12,000.** Reprologix donated time and services for oocyte pick-ups.

### **Invited Presentations**

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1. The evaluation of source and level of rumen undegradable protein on growth performance, follicular parameters, and embryonic development in beef heifers grazing native rangelands. Annual American Society of Animal Science. July 2025.
2. The evaluation of management and protein supplementation strategies on growth and ovarian-follicular parameters in developing beef heifers grazing native rangelands. Western American Society of Animal Science. April 2025.

### **Technical Skills**

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#### **Beef Cattle Management:**

- Transrectal ultrasonography for pregnancy diagnosis from 28-150+ days of gestation
- Transrectal ultrasonography for significant ovarian significant structures and ovarian antral follicle count
- Artificial insemination
- Non-surgical castration of bulls from birth to 6 months of age
- Administering growth implants in growing calves from birth to 6+ months of age
- Vaccine and pharmaceutical administration following BQA standards
- Bull Breeding Soundness Exams
- Ovariectomies

#### **Sheep Management:**

- Non-surgical castration of ram lambs from birth to 4 months of age
- Vaccine and pharmaceutical administration
- Paint Branding
- Transabdominal ultrasonography for pregnancy diagnosis from 60+ days of gestation

#### **Lab Procedures:**

- Blood centrifugation for harvest of serum and plasma
- Radioimmunoassays for estradiol and progesterone

- Enzyme-linked immunosorbent assays
- Colorimetric assays
- Tissue sectioning
- Immunofluorescence staining
- Preparation of oocytes for in-vitro fertilization
- Preparation of blastocyst embryos for culture

**Data Analysis:** SAS coding

**Inventory and Record Management:** Microsoft Excel

**Tissue Collection:**

- Blood collection via coccygeal and jugular vein
- Semen collection via electroejaculation
- Ovariectomy assistance
- Ovarian follicle aspiration
- Excision of corpus luteum from the ovary
- Oocyte collection
- Granulosa and theca cell collection

**Publications**

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**Peer reviewed (7)**

1. **Andrews, T. N.**, K. M. Epperson, J. J. J. Rich, S. M. Zoca, A. C. Kline, L. K. Quail, S. R. McCoski, C. Sanford, A. L. Zezeski, T. W. Geary, J. A. Walker, and G. A. Perry. 2025. Interactions of change in nutrition prior to and after artificial insemination on plasma and uterine histotroph mineral concentrations in beef heifers. *Applied Animal Science*. 41:215-229. doi.org/10.15232/ass.2024-02634.
2. Epperson, K.M., J.J.J. Rich, S. Menegatti Zoca, L.K. Quail, **T.N. Andrews**, A.C. Kline, F.J. White, R.F. Daly, R.A. Cushman, A.P. Snider, and G.A. Perry. 2024. Influence of commercial inactivated and modified-live virus vaccination at time of AI on corpus luteum function and development in beef cattle. *Reproduction Science*. *Accepted*.
3. Kline, A.C., S. Menegatti Zoca, K.M. Epperson, L.K. Quail, J.N. Ketchum, **T.N. Andrews**, J.J.J. Rich, J.R. Rhoades, J.A. Walker, and G.A. Perry. 2024. Evaluation of pregnancy associated glycoproteins assays for on farm determination of pregnancy status in beef cattle. *Plos One*. 19. doi.org/10.1371:journal.pone.0306325.
4. Ketchum, J. N. , L. K. Quail, K. M. Epperson, C. P. Guy, J. J. J. Rich, S. Menegatti Zoca, A. C. Kline, **T. N. Andrews**, J. A. Walker, P. L. Piza Fontes, S. K. Johnson, M. P. T. Owen, D. Ehorn, K. M. Harvey, A. F. Summers, and G. A. Perry. 2023. Evaluation of two beef cow fixed-time AI protocols that utilize resynchronization. *Theriogenology*. 213: 59-65. doi.org/10.1016/j.theriogenology.2023.09.017.
5. Ketchum, J.N., G.A. Perry, L.K. Quail, K.M. Epperson, M.A. Ogg, A.L. Zezeski, J.J.J. Rich, S. Menegatti Zoca, A.C. Kline, **T.N. Andrews**, M.S. Ortega, M.F. Smith, and T.W. Geary. 2023. Influence of preovulatory estradiol on the maintenance of pregnancy in beef cattle. *Animal Reproduction Science*. 255:107274. doi.org/10.1016/j.anireprosci.2023.107274.

6. Menegatti Zoca, S. J. A. Walker, A. C. Kline, **T. N. Andrews**, J. J. J. Rich, K. M. Epperson, J. Nora Drum, M. Sofia Ortega, R. A. Cushman, and G. A. Perry. 2023. Relationship of field and *in vitro* fertility of dairy bulls with sperm parameters, including DAG1 and SERPINA5 proteins. *Frontiers in Animal Science*. 4:58. doi.org/10.3389/fan-im.2023.1180967.
7. Perry, G. A., S. D. Perkins, E. J. Northrop, J. J. J. Rich, K. M. Epperson, **T. N. Andrews**, A. C. Kline, L. K. Quail, J. A. Walker, C. L. Wright, and J. R. Russell. 2021. Impact of trace mineral source on beef replacement heifer growth, reproductive development, and biomarkers of maternal recognition of pregnancy and embryo survival. *Journal of Animal Science* 99: doi.org/10.1093/jas/skab160.

### **In Preparation/ Submitted (2)**

1. **Andrews, T.N.**, M.K. Chavez, E.A. Melchior-Tiffany, C. Anderson, A.B. Selman, S.L. Rosasco, S.H. Cox, R.L. Dunlap, R.A. Cushman, J.A. Hernandez-Gifford, E.J. Scholljegerdes, and A.F. Summers. The evaluation of ruminal undegradable protein supplementation level on growth performance and ovarian development in beef heifers grazing native rangelands. *Animal Reproduction*. *Submitted*.
2. Melchior, E.A., S.L. Rosasco, J.C. Wenzel, S.H. Cox, R.L. Dunlap, S.L. Lodge-Ivey, **T.N. Andrews**, A.B. Tamez, A.F. Summers, P.H. Walz, S.M. Falkenberg, M.R. Blanding, J.P. Pollreisz, D.W. Scruggs, and E.J. Scholljegerdes. Evaluation of humoral and cell mediated responses, reproductive performance, and herd longevity of cows grazing native rangelands when vaccinated with modified-live viral or killed viral vaccine against bovine viral diarrhea virus. *Journal of Animal Science*. *Submitted*.

### **Proceedings (8)**

1. **Andrews, T.N.**, E.J. Scholljegerdes, R.A. Cushman, A.P. Snider, G.A. Perry, S.H. Cox, R.L. Dunlap, J.A. Cooper, C.D. Bedke, K.J. Richardson, and A.F. Summers. 2025. The Evaluation of Source and Level of Ruminal Undegradable Protein on Growth Performance and Ovarian Parameters in Beef Heifers Developed in Dry-Lots. Western Section American Society of Animal Science 2025. *Accepted*.
2. **Andrews, T.N.**, E.J. Scholljegerdes, G.A. Perry, S.H. Cox, R.L. Dunlap, C.D. Bedke, K.L. Gallacher, J.A. Cooper, and A.F. Summers. 2024. The Influence of Growth Promoting Implants at Weaning with Different Supplementation Levels on Growth Performance and Ovarian Parameters in Developing Beef Heifers. Western Section American Society of Animal Science 2024.
3. Zoca, S. M., J. A. Walker, J. J. J. Rich, K. M. Epperson, **T. N. Andrews**, A. C. Kline, J. N. Drum, M. S. Ortega, and G. A. Perry. 2022. Relationship of DAG1 and SERPINA5 sperm proteins with bull fertility. South Dakota Beef Day.
4. Kline, A. C., J. A. Walker, **T. N. Andrews**, S. M. Zoca, K. M. Epperson, L. K. Quail, J. J. J. Rich, J. R. Rhoades, and G. A. Perry. 2022. Use of Pregnancy Associated Glycoproteins to Determine Fetal Age Throughout Gestation and Clearance Rate in Postpartum Beef Cattle. South Dakota Beef Day.
5. Kline, A. C., J. A. Walker, **T. N. Andrews**, S. M. Zoca, K. M. Epperson, L. K. Quail, J. N. Ketchum, J. J. J. Rich, J. R. Rhoades, and G. A. Perry. 2022. Comparison of Lateral Flow to Other Pregnancy Determination Methods in Order to Determine Accuracy of Pregnancy Status in Beef Cattle Pre and Postpartum. South Dakota Beef Day.

6. **Andrews, T. N.**, K. M. Epperson, J. J. J. Rich, S. M. Zoca, A. C. Kline, L. K. Quail, A. L. Zezeski, T. W. Geary, J. A. Walker, and G. A. Perry. 2021. Interactions of change in nutrition on plasma metabolites, steroid hormone production, and uterine environment. South Dakota Beef Day.
7. Kline, A. C., K. M. Epperson, J. J. J. Rich, S. M. Zoca, **T. N. Andrews**, L. K. Quail, J. R. Rhoades, and G. A. Perry. 2021. Use of Pregnancy Associated Glycoproteins to Determine Fetal Age Throughout Gestation. South Dakota Beef Day.
8. Zoca, S. M., K. M. Epperson, J. J. J. Rich, **T. N. Andrews**, A. C. Kline, G. A. Perry. 2020. Use of Sperm Proteins as a Putative Fertility Marker. South Dakota Beef Day.

### **Popular press (1)**

1. Epperson, K. M., S. M. Zoca, **T. N. Andrews**, A. C. Kline, and G. A. Perry. Reproductive Success is Dependent on Nutritional Management Pre and Post-Breeding. Progressive Cattle Magazine. January 2020.

### **Abstracts**

#### **Primary Author (8)**

1. **Andrews, T.N.**, C.D. Bedke, J.A. Cooper, K.J. Richardson, C.A. Gifford, R.L. Dunlap, S.H. Cox, R.A. Cushman, A.P. Snider, E. Mesen, E.J. Scholljegerdes, and A.F. Summers. 2025. The evaluation of source and level of rumen undegradable protein on growth performance, follicular parameters, and embryonic development in beef heifers grazing native rangelands. Annual American Society of Animal Science. doi.org/10.1093/jas/skaf300.254.
2. **Andrews, T.N.**, E.J. Scholljegerdes, G.A. Perry, S.H. Cox, R.L. Dunlap, C. Anderson, M.K. Chavez, K.L. Gallacher, E.A. Melchior, A. B. Selman, J.A. Cooper, C.D. Bedke, and A.F. Summers. 2025. Awardee Talk: The evaluation of management and protein supplementation strategies on growth and ovarian-follicular parameters in developing beef heifers grazing native rangelands. Western American Society of Animal Science 2025. doi.org/10.1093/jas/skaf170.026.
3. **Andrews, T.N.**, E.J. Scholljegerdes, R.A. Cushman, A.P. Snider, G.A. Perry, S.H. Cox, R.L. Dunlap, J.A. Cooper, C.D. Bedke, K.J. Richardson, and A.F. Summers. 2025. The Evaluation of Source and Level of Rumen Undegradable Protein on Growth Performance and Ovarian Parameters in Beef Heifers Developed in Dry-Lots. Western American Society of Animal Science. doi.org/10.1093/jas/skaf170.059.
4. **Andrews, T.N.**, E.J. Scholljegerdes, G.A. Perry, S.H. Cox, R.L. Dunlap, C.D. Bedke, K.L. Gallacher, J.A. Cooper, and A.F. Summers. 2024. The influence of growth promoting implants at weaning with different supplementation levels on growth performance and ovarian parameters in developing beef heifers. Western American Society of Animal Science. doi.org/10.1093/jas/skae234.486.
5. **Andrews, T.N.**, R. A. Cushman, A. P. Snider, G. A. Perry, S.H.Cox, R.L. Dunlap, C. Anderson, M.K. Chavez, K.L. Gallacher, E.A. Melchior-Tiffany, A. B. Selman. E.J. Scholljegerdes, and A.F. Summers. 2023. The influence of Synovex- C growth implants at weaning with different supplementation levels on ovarian parameters in developing beef heifers. Annual American Society of Animal Science. doi.org/10.1093/jas/skad281.481

6. **Andrews, T.N.**, R.A. Cushman, A.P. Snider, S.H. Cox, R.L. Dunlap, C. Anderson, M.K. Chavez, K.L. Gallacher, E.A. Melchior-Tiffany, E.J. Scholljegerdes, and A.F. Summers. 2022. The influence of Synovex-C growth implants at weaning with different supplementation levels on growth performance and antral follicle counts in developing beef heifers. Western American Society of Animal Science. doi.org/10.1093/jas/skac313.044.
7. **Andrews, T. N.**, J. A. Walker, K. M. Epperson, J. J. J. Rich, S. M. Zoca, A. C. Kline, L. K. Quail, S. R. McCoski, C. Sanford, A. L. Zezeski, T. W. Geary, and G. A. Perry. 2021. The interactions of change in nutrition after artificial insemination on plasma metabolites, steroid hormones, and uterine histotroph in beef heifers. Annual American Society of Animal Science. doi:10.1093/jas/skab235.533.
8. **Andrews, T. N.**, J. A. Walker, K. M. Epperson, J. J. J. Rich, S. M. Zoca, R. D. Lawrence, A. L. Zezeski, T. W. Geary, and G. A. Perry. 2021. The interactions of change in nutrition on uterine environment and cholesterol concentrations in beef cattle. Midwest Section American Society of Animal Science. doi:10.1093/jas/skab054.180.

### Contributing Author (17)

1. Christianson, A.R., **T.N. Andrews**, A.P. Snider, R.A. Cushman, C.D. Bedke, K.J. Richardson, G.A. Perry, A.F. Summers, and E.J. Scholljegerdes. 2025. Annual American Society of Animal Science. doi.org/10.1093/jas/skaf300.498.
2. Cooper, J.A., **T.N. Andrews**, C.D. Bedke, K.J. Richardson, K.L. Gallacher, J.A. Hernandez Gifford, S.H. Cox, R.L. Dunlap, A.F. Summers, and E.J. Scholljegerdes. 2025. Effects of transportation on serum cortisol concentrations and laparoscopic artificial insemination pregnancy rates in Boer goats. Western American Society of Animal Science. doi.org/10.1093/jas/skaf170.193.
3. Aizpuru, A.M., **T.N. Andrews**, C.D. Bedke, J.A. Cooper, K.J. Richardson, R.L. Dunlap, S.H. Cox, R.A. Cushman, A.P. Snider, P.L. Fontes, M.S. Smith, E. Mesen, A.F. Summers, and E.J. Scholljegerdes. 2025. The influence of source and level of ruminal undegradable protein on antral follicle count and circulating concentrations of urea, glucose, and insulin in beef heifers grazing native rangelands. Western American Society of Animal Science. doi.org/10.103/jas/skaf170.198.
4. Henington, A.R., **T.N. Andrews**, C.D. Bedke, J.A. Cooper, K.J. Richardson, R.A. Cushman, A.P. Snider, P.L. Fontes, M.S. Smith, A.F. Summers, and E.J. Scholljegerdes. 2025. Effects of source and level of ruminal undegradable protein on serum glucose, insulin, and urea nitrogen in developing beef heifers fed in a dry-lot. Western American Society of Animal Science. doi.org/10.1093/jas/skaf170.199.
5. Weidman, H.N., S.G. Blaske, K.M. Epperson, L.K. Quail, J.N. Ketchum, S. Menegatti Zoca, J.J.J. Rich, **T.N. Andrews**, A.C. Kline, R.F. Daly, A.P. Snider, R.A. Cushman, C.R. Long, and G.A. Perry. 2025. Changes in cytokine concentrations among animals that had a normal and abnormal estrous cycle after vaccination with a modified live viral vaccine: a meta-analysis. Southern American Society of Animal Science. doi.org/10.1093/jas/skaf170.064.
6. Quail, L. K., J. N. Ketchum, K. M. Epperson, S. Menegatti Zoca, **T. N. Andrews**, A. C. Kline, J. J. J. Rich, A. L. Zezeski, M. A. Ogg, M. F. Smith, G. A. Perry, and T. W. Geary. 2023. Survival analysis of pregnancy considering estrual activity by the time of embryo transfer in beef cattle. International Ruminant Reproduction Symposium.

7. Gallacher, K.L., R.L. Dunlap, S.H. Cox, **T.N. Andrews**, E.A. Melchior-Tiffany, and A.F. Summers. 2022. The influence of a single administration of prostaglandin on estrous synchronization in range ewes. Western American Society of Animal Science. doi.org/10.1093/jas/skac313.034.
8. Ketchum, J. N., L. K. Quail, K. M. Epperson, C. P. Guy, J. J. J. Rich, S. M. Zoca, A. C. Kline, **T. N. Andrews**, J. A. Walker, P. L. P. Fontes, S. K. Johnson, M. P. T. Owen, K. M. Harvey, A. F. Summers, and G. A. Perry. 2022. Evaluation of two beef cow fixed-time AI protocols that utilize pre-synchronization. Annual American Society of Animal Science. doi.org/10.1093/jas/skac247.257.
9. Zoca, S. M., J. A. Walker, A. C. Kline, **T. N. Andrews**, J. J. J. Rich, K. M. Epperson, J. N. Drum, M. S. Ortega, and G. A. Perry. 2022. Relationship of sperm plasma serine protease inhibitor (SERPINA5) and dystroglycan (DAG1) proteins with dairy bull fertility. Annual American Society of Animal Science. doi.org/10.1093/jas/skac247.640.
10. Epperson, K. M., L. K. Quail, J. J. J. Rich, S. M. Zoca, **T. N. Andrews**, A. C. Kline, F. J. White, R. F. Daly, and G. A. Perry. 2022. Bovine luteal cell apoptosis following administration of a commercial inactivated or modified-live virus vaccine at time of AI. Annual American Society of Animal Science. doi.org/10.1093/jas/skac247.631.
11. Quail, L. K., J. N. Ketchum, K. M. Epperson, S. M. Zoca, **T. N. Andrews**, A. C. Kline, J. J. J. Rich, A. L. Zezeski, M. A. Ogg, J. R. Rhoades, M. F. Smith, G. A. Perry, and T. W. Geary. 2022. Factors impacting abundance of PAGs after embryo transfer in beef cattle. Southern American Society of Animal Science. doi:10.1093/jas/skac028.060.
12. Epperson, K. M., J. J. J. Rich, S. M. Zoca, L. K. Quail, **T. N. Andrews**, A. C. Kline, J. A. Carroll, N. C. Burdick Sanchez, F. White, R. F. Daly, and G.A. Perry. 2021. Influence of commercial inactivated and modified-live virus vaccination at time of AI on corpus luteum function and development in beef cattle. Society for the Study of Reproduction, Meeting.
13. Ketchum, J. N., G. A. Perry, K. M. Epperson, L. K. Quail, M. A. Ogg, A. L. Zezeski, J. J. J. Rich, S. M. Zoca, A. C. Kline, **T. N. Andrews**, M. S. Ortega, M. F. Smith, and T. W. Geary. 2021. Preovulatory estradiol elicits an effect on pregnancy maintenance. Society for the Study of Reproduction, Meeting.
14. Kline, A. C., J. A. Walker, **T. N. Andrews**, S. M. Zoca, K. M. Epperson, L. K. Quail, J. N. Ketchum, J. J. J. Rich, J. R. Rhoades, and G. A. Perry. 2021. Use of a lateral flow PAG assay for determination of pregnancy status and clearance of PAGs in beef cattle. Society for the Study of Reproduction, Meeting.
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17. Kline, A. C., K. M. Epperson, J. J. J. Rich, S. M. Zoca, **T. N. Andrews**, J. R. Rhoades, and G. A. Perry. 2021. Use of pregnancy associated glycoproteins to determine fetal age throughout gestation. Midwest American Society of Animal Science. doi:10.1093/jas/skab054.339.

## Professional Organizations

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<b>American Society of Animal Science (ASAS)</b>	<b>2021-Present</b>
<b>The Honor Society of Agriculture-Gamma Sigma Delta</b>	<b>April 2021-Present</b>

## Service

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<b>Graduate Student Association</b>	<b>2021-2025</b>
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*New Mexico State University, Las Cruces, NM*

- Vice President **2021-2022**
  - Oversaw meetings in the absence of the president
  - Assisted in planning events

<b>Annual ASAS Undergraduate Academic Quadrathlon</b>	<b>July 2023</b>
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- Volunteered to assist with laboratory practicum
- Assisted with the beef cattle station including directing participants to collect blood samples, body condition score cattle, proper semen handling, etc.

<b>Graduate Student Association</b>	<b>2019-2021</b>
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*South Dakota State University, Brookings, SD*

- Social Chair
  - Organize and manage social events for the members
  - Assist in catering events to earn funds for the association

<b>Livestock Judging Team</b>	<b>2018</b>
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*The Ohio State University, Columbus, OH*

- Evaluated livestock and presented oral reasons
- Navigated working with a team
- Learned how to make and defend quick decisions

<b>Alpha Sigma Upsilon</b>	<b>2016-2019</b>
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*The Ohio State University, Columbus, OH*

- Vice President
  - Improved forms of communication between chairmen and executive board
  - Improved constitution for future generations of sorority women
- Philanthropy and Service Chairmen
  - Planned an event benefitting Farm Aid for 100 people

<b>Saddle and Sirloin Club</b>	<b>2015-2019</b>
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*The Ohio State University, Columbus, OH*

- Scarlet and Gray Midwest Showdown Co-Chairmen
  - Decreased production costs
  - Managed all the revenue and expenses for the show

## Awards

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1. Western Section ASAS, Graduate Student Paper Competition, 2<sup>nd</sup> place **2024**
2. Western Section ASAS, Young Scholar **2025**
3. ASAS, National Young Scholar **2025**