

Tess C. Stahl, Ph.D.

Assistant Extension Professor

Department of Animal Sciences
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EDUCATION

Ph.D. in Agricultural Sciences, Dairy Nutrition

University of New Hampshire, Durham, NH

Graduation August 2023

Dissertation: “Effects of Dietary Cation Anion Difference and Nicotinic Acid Supplementation Prepartum on Jersey Cows, Colostrum, and Calves AND Creating a Model for the Prediction of Colostrum Quality and Quantity in Jersey Cows from Performance in the Previous Lactation and Environmental Changes”

M.S. in Agricultural Sciences, Dairy Nutrition

University of New Hampshire, Durham, NH

Graduation December 2019

Thesis: “Sodium Butyrate and Monensin Supplementation to Post-weaned Heifer Diets: Effects on Growth Performance, Nutrient Digestibility, and Health”

B.S. in Animal Science: Livestock Science and Management, Dairy Science minor

Delaware Valley University, Doylestown, PA

Graduation May 2017

A.A.S. in Business Management, Magna Cum Laude

Warren County Community College, Washington, NJ

Graduation May 2015

EMPLOYMENT HISTORY

2023 – present **Rutgers, the State University of New Jersey**, School of Environmental and Biological Sciences, Department of Animal Sciences, New Brunswick, NJ
Assistant Extension Professor (equivalent to Assistant Professor)

POSITION DETAILS

Research Specialization: The broad theme of my research area is ruminant nutrition. My research interests can be grouped into three areas: prepartum ruminant nutrition, ruminant colostrum production and early youngstock development, and co-product and byproduct feed

utilization. To expand upon each, prepartum ruminant nutrition is an important research area for ruminants, particularly in feeding the dam for the purpose of improving colostrum production for the offspring. Ruminants are born in a placental type that does not allow for the passage of immune building proteins (immunoglobulins), so consumption of colostrum is vital to their survival. Our understanding of colostrum production in the dairy cow is vast, however, there is less research done in this area with beef cows, sheep, and goats. Thus, an important area of focus for my research program are nutrition changes during the prepartum period and the impact that can have on the dams, as well as the early development and health of calves, lambs, and goat kids through the consumption of colostrum. It is also important to focus on the development of our understanding of colostrum quality, quantity, and bioactive compound production in beef cattle, sheep, and goats. A second area of focus is applied research with co-product and byproduct feed utilization. This is a major area of importance because finding new alternative feeds in ruminant diets will assist in aiding the maintenance of economic and environmental sustainability in a densely populated state like New Jersey. Ultimately, the research that I conduct will be of benefit to farmers in the state.

Extension Responsibilities: I facilitate and coordinate educational programs for the livestock industry in NJ. These educational programs involve livestock nutrition, husbandry and management, lactation physiology, and the environmental impact of byproduct/coproduct feeds. I also plan to be involved in multidisciplinary programs in agrivoltaics (as it pertains to livestock grazing and management) and beginning farmer training (RU Ready to Farm).

Teaching Responsibilities: Currently, I am responsible for 2 classroom lecture classes. In the Fall session I teach Production Animal Management, and in the Spring session I teach Farm Productivity Analysis. I also teach 1 field course during Spring break (Dairy Cattle Artificial Insemination). Some of my other teaching responsibilities include providing various guest lectures for other Animal Science courses (or courses within the School of Environmental and Biological Sciences that relate to Animal Science, i.e. microbiology).

PUBLICATIONS

MANUSCRIPTS IN REVIEW:

1. Erickson, P.S., **T.C. Stahl**, and S.C. Allen. 2024. Factors Influencing Colostrum Production in Multiparous Holstein and Jersey Cows. *Appl. Anim. Sci.*
2. Johnson, K.R., D.C. Reyes, K.N. Klobucher, **T.C. Stahl**, N. Price, P.S. Erickson, and A.F. Brito. 2024. Prepartum supplementation of *Ascophyllum nodosum* meal or ethylenediamine dihydroiodide: Effects on colostrum yield and growth and health of dairy calves. *J. Dairy Sci.*

ACCEPTED MANUSCRIPTS AND ABSTRACTS:

PEER-REVIEWED PUBLICATIONS:

1. **Stahl, T.C.**, E. M. Mullin, J. M. Piñeiro, M. Lunak, M. Chahine, and P.S. Erickson. 2024. Creating models for the prediction of colostrum quantity, quality, and Immunoglobulin G yield in multiparous Jersey Cows from performance in the previous lactation and environmental changes. *J. Dairy Sci.* 107(7): 4855–4870.
2. Klobucher, K.N., **T.C. Stahl**, T. Islam, A.S. Gray, S.I. Curreri, and P.S. Erickson. 2023. Supplementing sodium butyrate to limit-fed heifers: Effects on growth, coccidiosis, urinary purine derivatives and apparent total tract nutrient digestibility. *J. Dairy Sci.* 106: 6894–6902.
3. Hatungimana, E, **T.C. Stahl**, and P.S. Erickson. 2021. Effect of storage of wet brewer’s grains with incremental levels of salt on apparent total-tract nutrient digestibility and purine derivative excretion in dairy heifers. *J. Anim. Sci.* 99(1): 1–8.
4. Clark, M. O. C., **T.C. Stahl**, and P.S. Erickson. 2020. The effect of meloxicam on neonatal dairy calves: IgG uptake and preweaning performance. *J. Dairy Sci.* 103: 11363–11374.
5. **Stahl, T.C.**, E. Hatungimana, K.D. Klanderman, S.C. Moreland, and P.S. Erickson. 2020. Sodium butyrate and monensin supplementation to post-weaned heifer diets: Effects on growth performance, nutrient digestibility, and health. *J. Dairy Sci.* 103: 10207–10218.
6. Hatungimana, E, **T.C. Stahl**, and P.S. Erickson. 2020. Growth performance and apparent total tract nutrient digestibility of precision-fed diets containing wet brewer’s grains to Holstein heifers. *Trans. Anim. Sci.* 4(3): 1–12.

ABSTRACTS AND CONFERENCE PROCEEDINGS:

1. **Stahl, T.C.**, L.J. Valentine, A. Abend, T. Islam, and P.S. Erickson. 2024. PSV-29 In vitro digestibility and in situ degradability of lobster and mixed crab shell waste material. *J. Anim. Sci.* 102(Suppl. 3): 738–739. (Abstr.)
2. **Stahl, T.C.**, M.C. McBride, K.N. Klobucher, K.R. Johnston, T. Islam, and P.S. Erickson. 2023. Evaluation of colostrum quantity, quality, and bioactive compounds from Jersey cows fed two concentrations of dietary cation-anion difference with or without nicotinic acid and its effect on calf performance. *J. Dairy Sci.* 106(Suppl. 1): 342. (Abstr.).
3. **Stahl, T.C.**, E. Hatungimana, K.D. Klanderman, S.C. Moreland, and P.S. Erickson. 2021. Sodium butyrate and monensin supplementation to postweaned heifer diets: Effects on growth performance, nutrient digestibility, and health. *J. Dairy Sci.* Vol. 104(Suppl. 1): 252. (Abstr.)
4. Hatungimana, E., **T.C. Stahl**, and P.S. Erickson, 2021. Growth performance and apparent total tract nutrient digestibility of limit-fed diets containing wet brewer’s grains to Holstein heifers. *J. Dairy Sci.* Vol. 104(Suppl. 1): 252. (Abstr.)

5. Hatungimana, E., **T.C. Stahl**, and P.S. Erickson. 2021. Effect of storage of wet brewer's grains with incremental levels of salt on in vivo total-tract nutrient digestibility and purine derivative excretion in dairy heifers. *J. Dairy Sci.* Vol. 104(Suppl. 1): 253. (Abstr.)

EXTENSION FACT SHEETS AND BULLETINS:

1. Westendorf, M.L., and **T.C. Stahl**. 2024. Llamas and Alpacas. Rutgers Cooperative Extension. FS917. New Brunswick, NJ. pp. 1–4.
2. Westendorf, M.L., and **T.C. Stahl**. 2024. Deer and Elk Farming. Rutgers Cooperative Extension. E259. New Brunswick, NJ. pp. 1–7.
3. **Stahl, T.C.**, and M.L. Westendorf. 2024. Feeding Nitrate-Containing Forages Rutgers Cooperative Extension. E291. New Brunswick, NJ. pp. 1–6.
4. Westendorf, M.L., and **T.C. Stahl**. 2024. Bison Husbandry. Rutgers Cooperative Extension. FS945. New Brunswick, NJ. pp. 1–5.

ARTICLES IN EXTENSION NEWSLETTERS:

1. **Stahl, T.C.** 2024. Research and Outreach Plans for New Jersey. In: *New Jersey Ruminant Report*, edited by T.C Stahl, D.M. Fonseca, M.L. Westendorf, W.T. Hlubik, and H.D. Bignell. Rutgers Cooperative Extension. Spring issue, p. 2.
2. **Stahl, T.C.** 2024. Filling the Nutritive Plate: Shellfish Dinner... for Ruminants? In: *New Jersey Ruminant Report*, edited by T.C Stahl, D.M. Fonseca, M.L. Westendorf, W.T. Hlubik, and H.D. Bignell. Rutgers Cooperative Extension. Spring issue, p. 5.

ARTICLES IN POPULAR PRESS PUBLICATIONS:

Author:

1. **Stahl, T.C.** 2024. Your Animal's First Superfood (Animal Science Update). In: *New Jersey Farmer*. October 1.
2. **Stahl, T.C.** 2024. Find the right feeding strategy for dairy beef (Animal Science Update). In: *New Jersey Farmer*. June 1. pp 6 & 12.
3. **Stahl, T.C.** 2024. Spring weather may have raised mycotoxin count (Animal Science Update). In: *New Jersey Farmer*. May 1. pp. 6 & 16.

Interview:

1. **November 25, 2019:** Kimberley Hass. "UNH dairy researchers studying calves and heifers to improve farming in state." In: New Hampshire Union Leader (https://www.unionleader.com/news/animals/unh-dairy-researchers-studying-calves-and-heifers-to-improve-farming-in-state/article_b5173f12-9490-5f9e-82ab-0c63bef8369d.html)

PROFESSIONAL ASSOCIATIONS

American Registry of Professional Animal Scientists, American Society of Animal Science, American Dairy Science Association

LECTURES AND MEDIA

Scientific Meetings and Academic Settings

1. **October 5, 2023:** “Improving the Productivity of New Jersey's Ruminant Animals.” Rutgers University Department of Agriculture and Natural Resources Faculty and Staff Meeting- Meeting the New Extension Specialists.
2. **September 22, 2023:** “Evaluating Colostrum Production in Multiparous Jersey Cows.” Rutgers University Department of Animal Science Fall Seminar Series.

Talks and Presentations in Outreach Meetings (Extension Teaching)

1. **February 5, 2025:** “What’s in Your Feed Bag?” NJ Agricultural Convention and Trade Show.
2. **October 11, 2024:** “Comparative Ruminant Anatomy.” Garden State Sheep Breeders Association Annual Meeting.
3. **April 22, 2024:** “Goat Nutrition.” Hunterdon County Kick Butt Kids 4H Goat Club. Number of attendees: 20
4. **March 23, 2024:** “What Makes a Ruminant a Ruminant and Why Does it Matter?” Rutgers Jr. Animal Science Symposium. Number of attendees: 57
5. **March 8, 2024:** “Moo-ving Forward: Navigating the Pastures of Animal Science and Livestock Research.” Somerset County 4-H Women in Agriculture Career Night (Hybrid). Number of attendees: 37
6. **February 23, 2024:** “Mycotoxins in Forage Crops and their Impact on Animal Performance.” Salem County Pesticide Meeting. Number of attendees: 37
7. **January 27, 2024:** “Small Ruminant Nutrition for Grazers.” Northeast Organic Farming Association NJ Winter Conference. Number of attendees: 12

Participation in Organizing or Chairing Conferences, Workshops, and Organizations

1. 2025: NJ Agricultural Convention and Trade Show Livestock session chair

Other Presentations (TV, Radio, Podcasts) and Web-based Media

1. **Stahl, T.C.** 2024. Additional Information for New Jersey Farm Owners on H5N1 Bird Flu. In: *Rutgers Cooperative Extension Plant & Pest Advisory*. June 13. (<https://plant-pest-advisory.rutgers.edu/additional-information-for-new-jersey-farm-owners-on-h5n1-bird-flu/>)

2. **Stahl, T.C.** 2024. Effective today, 4/29/2024: USDA Federal Order on testing and reporting Influenza A in cattle. In: *Rutgers Cooperative Extension Plant & Pest Advisory*. April 29. (<https://plant-pest-advisory.rutgers.edu/effective-today-4-29-2024-usda-federal-order-on-testing-and-reporting-influenza-a-in-cattle/>)
3. **Stahl, T.C.** 2024. Update on HPAI in cattle (called Bovine Influenza A Virus (BIAV)). In: *Rutgers Cooperative Extension Plant & Pest Advisory*. April 8. (<https://plant-pest-advisory.rutgers.edu/update-on-hpai-in-cattle/>)
4. **Stahl, T.C.** 2024. USDA Confirms Highly Pathogenic Avian Influenza in Dairy Cattle. In: *Rutgers Cooperative Extension Plant & Pest Advisory*. March 28. (<https://plant-pest-advisory.rutgers.edu/usda-confirms-highly-pathogenic-avian-influenza-in-dairy-cattle/>)
5. **June 26, 2023:** “Balchem Real Science Exchange Podcast”- *2023 ADSA Research Highlights Day 2*; Recorded a podcast with Scott Sorrell and Dr. Marcos Zenobi briefly discussing my poster presented at the 2023 ADSA conference (<https://balchem.com/animal-nutrition-health/resources/2023-adsa-research-highlights-day-2/>)
6. **October 2021:** “Adisseo USA, Inc. Smart Science Series™ Ruminant Podcasts”- *How Sodium Butyrate Compares to Monensin*; Recorded a podcast with Dr. Dan Luchini and Dr. Keith Klanderman briefly discussing my M.S. research presented at the 2021 ADSA conference (<https://www.adisseo.com/en/products/smartline/smart-science-series-ruminant-podcasts/>)
7. **November 2021:** “University of Illinois Department of Animal Science Dairy Focus PaperCast”- *Ep #10 Sodium butyrate and monensin supplementation to postweaning heifer diets*; Recorded a podcast with Dr. Phil Cardoso to promote my M.S. research after earning Journal of Dairy Science Editor’s Choice in November 2020 (https://www.youtube.com/watch?v=dyWjnxC_xW4)

FUNDING

INTERNAL GRANTS

| PROJECT TITLE/PURPOSE | YEAR | AMOUNT | SPONSOR |
|---|-------------|---------------|--|
| Nutrient and Phytoestrogen Analysis of Wet Okara to Evaluate its Potential as a Byproduct Feed in the Diets of Ruminant Animals | 2023 | \$1,000 | The John and Anne Gerwig Director's Fund for Rutgers Cooperative Extension |

GRANTS PREVIOUS TO RUTGERS

| PROJECT TITLE/PURPOSE | YEAR | AMOUNT | SPONSOR |
|--------------------------------|-------------|---------------|----------------|
| In vitro estimation of ruminal | 2022 | \$2,456 | University of |

and intestinal digestion of
lobster and crab meal

Massachusetts: Boston

| | | | |
|--|------|----------|-----------------------------------|
| Developing a model for the prediction of Jersey cow colostrum yield and quality | 2020 | \$15,880 | George Walker Milk Research Trust |
| Does dietary cation-anion difference and nicotinic acid supplementation affect colostrum yield and quality in multiparous Jersey cows? | 2019 | \$20,500 | George Walker Milk Research Trust |

TEACHING ACTIVITIES

COURSES OR LECTURES TAUGHT

Rutgers, The State University of New Jersey, New Brunswick, NJ

Undergraduate Courses:

| | |
|--|---|
| 2025 (Spring Semester) | Farm Productivity Analysis (11:067:406), 3 credits |
| • 100% responsibility for this course | |
| 2024-present (Fall Semester) | Production Animal Management (11:067:336), 3 credits |
| • 2024: 50% responsibility with Dr. Michael Westendorf providing the other 50% | |
| 2024-present (Spring Break) | Dairy Cattle Artificial Insemination (11:067:322), 1 credit |
| • 2024: 50% responsibility with Dr. Michael Westendorf providing the other 50% | |

Guest Lecturer:

1. **November 12, 2024:** Introduction to Animal Science (11:067:142); Guest Lecturer for Small Ruminants lecture
2. **October 14, 2024:** Comparative Mammalian Anatomy (11:067:391); Guest Lecturer for Digestive System lecture
3. **March 27, 2024:** Microbial Ecology and Diversity Lab (11:680:492); Guest Lecturer to discuss Diets Effect on the Rumen Microbe
4. **November 14, 2023:** Introduction to Animal Science (11:067:142); Guest Lecturer for Dairy Science lecture

University of New Hampshire, Durham, NH

Teaching Assistant:

| Course | Year(s) as a TA |
|---|---|
| ANSC 698: Cooperative for Real Education in Agricultural Management | Spring 2023; Under the supervision of Dr. Andrew Conroy |
| ANSC 406: Careers in Animal Science | Spring 2023; Under the supervision of Dr. Andrew Conroy |
| ANSC 511: Anatomy and Physiology | Spring 2022; Under the supervision of Dr. Elizabeth Brock |
| ANSC 511 and 512: Anatomy and Physiology | Fall 2017 – Spring 2019; Under the supervision of Dr. Vanessa Grunkemeyer |

Guest Lecturer

2021, 2022- ANSC 698: Cooperative for Real Education in Agricultural Management, lecturing on a graduate student panel

Fall 2017 – Fall 2021- *with guidance from Dr. Peter Erickson, for:*

- ANSC 543: Technical Writing in Animal Science
- ANSC 715/815: Physiology of Lactation
- ANSC 727/827: Advanced Dairy Management I
- ANSC 710/810: Dairy Nutrition

Delaware Valley University, Doylestown, PA

Undergraduate Learning Assistant

Spring 2017: Introduction to Animal Science (AS 1006), under the supervision of Mr. Aaron Stepnoski

Guest Lecturer

April 5, 2022: Livestock Industries and Careers (AS 1045), lecturing on the process of applying to graduate school and my own experiences in teaching, research, and publishing

RESEARCH STUDENTS SUPERVISED

Graduate Students at Rutgers University:

Ph.D.

External Committee Member:

| Student | Degree | Department Affiliation | Major Advisor |
|-----------------|--------|---|-----------------------|
| Lydia Valentine | M.S. | U. of NH Department of Agriculture, Nutrition, and Food Systems | Dr. Peter Erickson |

SERVICE

Departmental Service

1. 2024: Undergraduate Student Advising

University Service

1. 2024: Department of Agriculture and Natural Resources Salem County Agent III (Commercial Agricultural Production) search committee member

Professional Service

1. August 2024: Asked to serve on USDA NIFA SBIR (Small Business Innovation Research) grant review panel to review grant submissions to the Animal Production and Protection program
2. October 2023: Debriefer for the Northeast Regional Dairy Challenge
3. July 2021: Judge for the ADSA Virtual Conference Undergraduate Student Division (ADSA-SAD) Oral Presentation contest
4. November 2018: Spoke on a career panel for Northeast Regional Dairy Challenge

Scientific Journal Peer Reviews (with number reviewed in parentheses)

2024:

- Journal of Dairy Science (1)

2023:

- Animal Nutrition (3)
- Frontiers in Animal Science (1)
- Applied Animal Science (1)

Community Service

1. October 29, 2023: Farm volunteer at School Lunch Farm & CSA

ACTIVITIES, HONORS, AND AWARDS

1. January 2024: Professional Animal Scientist Certification through the American Registry of Professional Animal Scientists

2. August 2020 until August 2023: University of New Hampshire Department of Agriculture, Nutrition, and Food Systems seminar committee member (graduate student representative)
3. October 20, 2022: graduate student poster contest participant, Northeast ADSA/ASAS joint meeting
4. 2021 University of New Hampshire Little Royal Livestock Show dedication
5. November 2020: Journal of Dairy Science Editor's Choice (for "Sodium butyrate and monensin supplementation to post-weaned heifer diets: Effects on growth performance, nutrient digestibility, and health")
6. March 2020: GRA awarded for 2 years through the New Hampshire Agricultural Experiment Station Doctoral Graduate Research Assistant support program
7. January 6, 2016: Completed the Select Sires Course: Instruction in the Techniques of Artificial Insemination (AI certification)