

ADSA 2026 Annual Meeting

June 21–24, 2026
Milwaukee, Wisconsin

#ADSA2026



© Dairy Farmers of Wisconsin

Abstracts

www.adsa.org/2026

Uniting the Dairy Science Community

**Abstracts of the
2026 American Dairy Science Association®
Annual Meeting**

***Journal of Dairy Science*®
Volume 109, Supplement 1**





JOURNAL OF DAIRY SCIENCE[®] SINCE 1917

1800 S. Oak St., Ste. 100, Champaign, IL 61820 Phone 217-356-5146 | Fax 217-378-4083 | <http://www.journalofdairyscience.org>

Laura L. Hernandez, Editor in Chief (28)

University of Wisconsin–Madison; lhernandez@wisc.edu; 608-263-9867

INVITED REVIEWS

Gerd Bobe, Senior Editor (27)
Oregon State University

DAIRY FOODS

Bioactivity and Human Health Dairy Product Microbiology and Safety Food Systems and Environment

Nicole Martin, Senior Editor (27)
Cornell University

Denis Roy, Editor (27)
Université Laval

Robert Ward, Editor (26)
Utah State University

Chemistry and Materials Science Processing and Engineering Sensory Analysis

Federico Harte, Senior Editor (28)
The Pennsylvania State University

Adriano Cruz, Editor (28)
IFRR

Grace Lewis, Editor (26)
University of Wisconsin–River Falls

PRODUCTION

Animal Nutrition

Timothy J. Hackmann, Senior Editor (27)
University of California–Davis

Mélissa Duplessis, Editor (27)
Agriculture and Agri-Food Canada

Gonzalo Ferreira, Editor (26)
Virginia Tech

Kevin Harvatine, Editor (28)
The Pennsylvania State University

Diwakar Vyas, Editor (28)
University of Florida

Farm Systems and Environment

Bradley J. Heins, Senior Editor (27)
University of Minnesota

Victor E. Cabrera, Editor (27)
University of Wisconsin–Madison

Pablo Pinedo, Editor (27)
Colorado State University

Genetics and Genomics

Daniela Lourenco, Senior Editor (27)
University of Georgia

Francisco Peñagaricano, Editor (26)
University of Wisconsin–Madison

Donagh Berry (28)
Teagasc, Animal & Grassland Research and Innovation Centre

Health, Welfare, and Behavior

Stephen LeBlanc, Senior Editor (26)
University of Guelph

Ángel Abuelo, Editor (27)
Michigan State University

Richard Laven, Editor (27)
Massey University

John Middleton, Editor (26)
University of Missouri

Katy Proudfoot, Editor (27)
University of Prince Edward Island

Olga Wellnitz, Editor (26)
University of Bern

Physiology

Paul Fricke, Senior Editor (27)
University of Wisconsin–Madison

Theresa Casey, Editor (27)
Purdue University

Xin Zhao, Editor (26)
McGill University

JOURNAL ADVISORY COMMITTEE

B. J. Bradford (27)
Michigan State University
N. Silva Del Rio (27)
University of California,
Davis

O. McAuliffe (28)
Teagasc Food Research Centre
& Teagasc Climate Centre

P. L. Ruegg (28)
Michigan State University

K. Stelwagen (28)
SciLactis Ltd.

Ex officio
Jessica A. A. McArt,
Cornell University

Laura L. Hernandez
University of Wisconsin–
Madison

Laura Esterman,
Managing Editor

Karie Simpson,
Lead Technical Editor

EDITORIAL BOARD

P. Adkins (28) USA
M. Aguerre (27) USA
O. Al Haj (27) Jordan
S. Arriola Apelo (27) USA
M. Ayyash (27) United Arab Emirates
F. Bargo (26) Argentina
P. Behare (27) India
R. Bisinotto (27) USA
J. Boerman (26) USA
A. Bouwman (26) Netherlands
D. Brake (26) USA
J. Bromfield (26) USA
M. Cantor (26) USA
A. Carpenter (28) USA
M. Castillo (26) Spain
E. Cuttance (26) New Zealand
J. Dalton (26) USA

J. De Souza (28) USA
C. Dechow (27) USA
T. DeVries (27) Canada
M. Endres (26) USA
B. Enger (26) USA
L. Ferraretto (27) USA
L. Giblin (26) Ireland
J. Gross (28) Switzerland
G. Habing (26) USA
H. M. Hammon (27) Germany
L. Ibarra Sanchez (26) USA
L. Izzo (27) Italy
Y. Kim (26) Korea
S. Kvidera (27) USA
J. Laporta (27) USA
C. Lee (26) USA
N. Lopez-Villalobos (27) New Zealand

L. Ma (26) USA
M. Marcondes (26) USA
P. Martin (27) France
S. Martinez-Monteagudo (28) USA
J. McFadden (27) USA
M. Mohan (26) USA
S. Moore (27) Ireland
K. Nichols (27) USA
P. Ospina (27) USA
M. O'Sullivan (28) Ireland
S. Ozturkoglu-Budak (28) Turkey
B. Pardon (26) Belgium
N. Raak (26) Denmark
D. Renaud (28) Canada
A. Rius (27) USA
H. Rojas de Oliveira (27) USA
I. Salfer (27) USA

J. E. P. Santos (27) USA
D. Sepulveda (26) Mexico
P. Sharma (26) USA
N. Silvia-del-Rio (26) USA
A. Skibieli (27) USA
E. Stefanovic (28) Ireland
C. Strieder-Barboza (27) USA
V. Sunkesula (28) USA
J. Tobin (26) Ireland
A. Valdecabres (28) Spain
J. Van Os (27) USA
J. Vandenplas (28) Netherlands
J. Wang (26) China
M. Zachut (28) Israel
H. Zheng (27) USA
M. Ziarno (28) Poland

PUBLICATIONS STAFF (JOURNALS@ASSOCHQ.ORG)

Laura Esterman, Managing Editor
Karie Simpson, Lead Technical Editor
Jess Townsend, Director of Marketing
and Communications

Ron Keller, Production Manager
Shauna Miller, Editorial Assistant
Jeanne Baird, Technical Editor
Rick Dains, Designer/Compositor

Katy Henkel, Senior Technical Editor
Christine Horger, Senior Technical Editor
Lisa Krohn, Senior Technical Editor
Theresa Lawrence, Technical Editor

Hannah Park, Designer/Compositor
Julie Poudrier, Technical Editor
Jana Rittenhouse, Designer/Compositor
Dan Yockel, Technical Editor

ADSA BOARD

President
D. Everett
Riddet Institute
Vice President
J. Drackley
University of Illinois
Treasurer
M. Overton
Zoetis

Past President
M. VandeHaar
Michigan State
University
Editor in Chief, JDS
L. L. Hernandez
University of
Wisconsin–Madison

Editor in Chief, JDSC
J. A. A. McArt
Cornell University
Director
N. Martin (26)
Cornell University

Executive Director
J. Bowman ADSA
Director
F. Cardoso (26)
University of Illinois

Director
L. Colby (27)
Land O'Lakes
Director
M. Rhoads (27)
Virginia Tech

Director
H. Eshpari (28)
Tillamook County
Creamery Association
Director
T. DeVries (28)
University of Guelph

and culling dates. The final dataset contained 1,360 animals; 24% were BLV-seropositive, and 13% had at least one recorded disease. Logistic regression was used to evaluate the association between seropositivity and (1) the occurrence of ≥ 1 recorded disease before 250 DIM, (2) conception risk at first service, (3) pregnancy by 120 DIM, and (4) risk of culling to 250 DIM, with parity included as a fixed effect in all models and disease incidence included in models 2–4. Farm was included as a random effect in all models. Survival analyses were used to assess time to pregnancy, with parity included as a fixed effect and farm as a frailty term. Seropositive cows had greater odds of ≥ 1 disease (LSM = $8\% \pm 3\%$ vs. $5\% \pm 2\%$, $P = 0.05$, AOR = 1.76, CI: 1.19–2.62) and lower odds of pregnancy at first service (LSM = $42\% \pm 4\%$ vs. $50\% \pm 3\%$, $P = 0.05$, AOR = 0.73, CI: 0.53–1.01) and of pregnancy by 120 DIM (LSM = $72\% \pm 5\%$ vs. $80\% \pm 3\%$, $P = 0.03$, AOR = 0.66, CI: 0.45–0.97). No difference in the hazard of pregnancy by 250 DIM was observed (HR = 0.89, CI: 0.76–1.05, $P = 0.16$). Seropositive cows had higher odds of culling by 250 DIM (LSM = $32\% \pm 6\%$ vs. $9\% \pm 2\%$, AOR = 4.62, $P < 0.01$). The BLV seropositivity is associated with greater disease and culling risk and reduced reproductive performance.

Key Words: bovine leukemia virus, disease, pregnancy

W122 Energy balance, methane production, and blood metabolites of calves with anaplasmosis. L. Ferreira¹, A. Silva^{2,3}, J. Diavão³, M. Campos³, V. Teixeira³, S. Coelho¹, J. de Silveira¹, T. Tomich³, E. Facury Filho¹, and L. Pereira⁴, ¹Universidade Federal de Minas Gerais, Belo Horizonte, Minas Gerais, Brazil, ²Empresa Brasileira de Pesquisa Agropecuária - Embrapa Amazônia Ocidental, Manaus, Amazonas, Brazil, ³Empresa Brasileira de Pesquisa Agropecuária - Embrapa Gado de Leite, Juiz de Fora, Minas Gerais, Brazil, ⁴University of Copenhagen, Frederiksberg C, Denmark.

This study aimed to evaluate DMI, water intake, energy balance, methane production, and blood metabolites in dairy calves affected by anaplasmosis. Eight post-weaning male Holstein calves with mean (SD) age and BW of 139 ± 28.4 d-old and 164 ± 31.6 kg, respectively, were assigned to one of 3 treatments in a completely randomized design: healthy (32% globular volume [GV]); sick (18.5% GV); and recovery (25.9% GV; recovery calves restored $\geq 80\%$ of their baseline GV after treatment) in a within-subject experimental design, allowing intra-animal comparisons across the healthy, diseased, and recovery conditions. Calves were experimentally infected with the UFMG1 strain (*Anaplasma marginale* EU676176), with a concentration of 2×10^7 infected erythrocytes. Energy partitioning, methane production, DMI and water intake, blood glucose, BHB, and ionized calcium (iCa) were measured when calves were healthy, sick, or in recovery. The statistical model included treatment as a fixed effect and calves nested within treatment as a random effect. Statistical significance was declared at $P \leq 0.05$. Healthy and recovery had 54.2% greater DMI than sick calves ($P < 0.01$), and water intake was also higher in healthy and recovery calves (59.1%; $P < 0.01$). Net energy intake was reduced by approximately 2-fold in sick calves (healthy = 10.2 vs. sick = 6.13 vs. recovery = 10. Eight Mcal/d; $P = 0.02$). Sick calves showed reduced digestible energy intake ($P = 0.02$) and energy balance (healthy = 4.27 vs. sick = -2.69 vs. recovery = 4.04 Mcal/d; $P = 0.02$). Heat production was similar between sick and recovery but lower in healthy calves ($P = 0.01$). Methane production was not influenced by treatment ($P = 0.07$). Sick calves had lower blood glucose than healthy and recovery calves (healthy = 5.72 vs. sick = 5.01 vs. recovery = 5.47 mmol/L), whereas BHBA did not differ ($P > 0.05$). Sick calves also had lower iCa (healthy = 1.41 vs. sick = 1.35 vs. recovery = 1.44 mmol/L; $P < 0.01$). Anaplasmosis reduced DMI

and water intake, digestible energy, blood glucose, ionized calcium, and altered energy partitioning in dairy calves.

Key Words: calf health, disease, tick fever, respirometry, metabolism

W123 Breed-specific physiological, immune, and stress responses to organic mineral supplementation in Holstein and Simmental calves. A. Rahman^{*1}, C. Uyarlar², E. E. Gultepe², I. S. Cetingul², M. U. Akhtar³, and I. Bayram², ¹University of Veterinary and Animal Sciences, Lahore, Pakistan, ²Afyon Kocatepe University, Afyonkarahisar, Turkey, ³Cholistan University of Veterinary and Animal Sciences, Bahawalpur, Pakistan.

This study examined the effects of supplementing Holstein and Simmental male calves with a blend of organic minerals (chromium, selenium, and zinc) on immune and stress responses and blood metabolites. Twenty Holstein and 20 Simmental male calves were divided into 4 groups in a 2×2 factorial arrangement, with breed as the first and organic mineral supplementation as the second factor. The calves were not suckling, while fresh, healthy milk from the cows was offered to the calves without pasteurization. In addition to milk, each calf received a mixture of organic selenium, chromium, and organic zinc (0.5 g each) orally for 21 d after birth. Calves in the control group did not receive any organic mineral supplements. During supplementation period of 21 d, blood samples were collected from the calves via jugular vein at an interval of 3 d, that is, on 0 d, 3, 6, 9, 12, 15, 18, and 21, then weekly blood sampling was performed for the rest of the period, that is, 28, 35, 42, 49, 56, and finally 63 d at weaning age. Additional blood samples were taken from calves on d 14 and 21 after birth to determine the level of immunoglobulin G. Serum alanine transaminase, aspartate transaminase, gamma glutamyl transferase, high-density lipoprotein, low-density lipoprotein, and total cholesterol concentrations were 27%, 19.1%, 21.2%, 15.5%, 12.5%, and 13% higher, respectively, in Simmental calves than in Holstein calves, during the first week postpartum. The addition of an organic mineral mixture to drinking milk did not affect blood metabolites in either breed ($P > 0.05$), except for a 35% decrease in serum cortisol levels in both breeds during wk 3 ($P \leq 0.021$). Overall, it was concluded that organic mineral supplementation, in addition to milk, was associated with lower serum cortisol concentrations, indicating potential influence on physiological stress responses in newborn calves of both Simmental and Holstein breeds.

Key Words: calf nutrition, calf breed, immunity, organic mineral, stress

W124 Assessing the effect of precalving intramammary antibiotics, teat sealant, and genomic predictions for mastitis resistance and somatic cell score on intramammary infections in Holstein heifers. A. Ueda^{*1}, B. Melody², T. J. Almand¹, M. C. G. M. Silva¹, R. Wood², P. Bos², E. Regusci², I. S. Ferreira¹, P. Pivetta de Campos¹, C. A. Baretta¹, D. Bruno³, and H. F. Monteiro⁴, ¹Department of Population Health and Reproduction, University of California, Davis, CA, ²Lander Veterinary Clinic Inc., Turlock, CA, ³Cooperative Extension, University of California Agriculture and Natural Resources, Fresno, CA, ⁴Department of Animal Sciences, Ithaca, NY.

Intra-mammary infections (IMI) are prevalent in primiparous cows during early lactation. Control strategies include pre-calving intramammary antibiotics, internal teat sealant, and selection based on genomic resistance to mastitis (GMAS) and genomic somatic cell score (GSCS). The objective was to evaluate the effects of pre-calving intramammary treatment, GMAS, and GSCS on IMI in Holstein heifers during early lac-