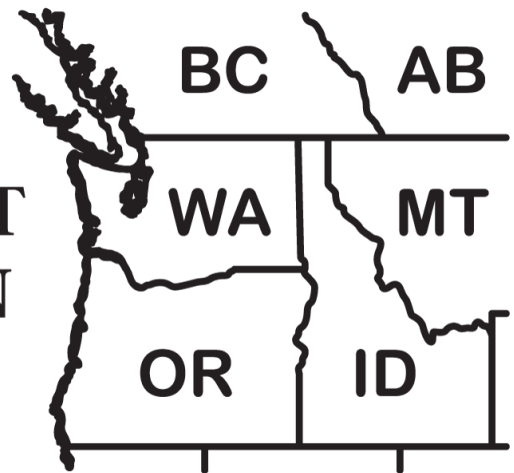


55th Annual Pacific Northwest Animal Nutrition Conference

PROCEEDINGS

**PACIFIC NORTHWEST
ANIMAL NUTRITION
CONFERENCE**



and
Alltech Preconference

January 17-18, 2022
Grove Hotel
Boise, Idaho

- Organized By -

Oregon State University, University of British Columbia, University of Alberta, University of Idaho, Montana State University, and Washington State University

- Committee -

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Creating your defense on barnyard pathogens —Luke Miller, DVM, Alltech Inc.	
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<u>MAIN CONFERENCE</u>	
Environment, climate change, and ag sustainability —Frank Mitloehner, PhD, University of California, Davis	
Ruminal Microbiome: What is new about their contributions to ruminal fermentation and digestion and ruminant productivity? —T. G. Nagaraja, Kansas State University	
Economics of improved dairy reproduction considering conventional, sexed and beef semen —Albert De Vries, University of Florida	
Predicting economic implications of weaning programs in young dairy calves —Jim Quigley, PhD, PAS, Dpl. ACAS, Cargill, Inc.	
The value of forage quality when feeding dairy cows —Marcos Inacio Marcondes, Washington State University	
Protein Supplementation for Beef Cattle —Evan C. Titgemeyer, Kansas State University	
General Management Considerations to Improve Success of Artificial Insemination and Natural Service Conception Rates —R.N. Funston, University of Nebraska, West Central Research and Extension Center	
The High Fertility Cycle —Paul M. Fricke, University of Wisconsin—Madison	
Adipose tissue as an integrator of metabolic and inflammatory signals in periparturient cows —G. Andres Contreras, DVM MS PhD, Michigan State University	
Managing extensive winter grazing systems in arid/semi-arid environments —H.A. (Bart) Lardner, University of Saskatchewan	
Bull Development and Nutrition: Fertility and Beyond —Carl R. Dahlen, North Dakota State University	
Sustainable Animal Agriculture in 21st century —Robert Collier, University of Idaho	

GRADUATE STUDENT POSTER ABSTRACTS

Effect of weaning pace and age on the health measures and tissue gene expression of inflammatory markers in Holstein dairy calves

B.C. Agostinho, A. Wolfe, C.Y. Tsai, D.E. Konetchy, A.H. Laarman, and P. Rezamand.

Evaluation of Forage Quality of Alfalfa from 200 Varieties Produced in the Pacific Northwest

S. Dreger, D.A. Llewellyn, O.S. Norberg, S. Fransen, G. Wang, D. Combs, G. Shewmaker, E. van Santen, L.X. Yu

Management Strategies to Reduce Negative Health Outcomes in Transported Pre-weaned Calves

K.K. Elmore, P. Rezamand, D. Konetchy, M. Chahin, B.C. Agostinho, A.H. Laarman, and G.E. Chibisa

Evaluation of Growth, Meat Quality, and Sensory Characteristics of Wool, Hair and Composite lambs

M.L. Heimbuch, J.B. Van Buren, B.S. Epperson, O.F. Kayleen, S.M. Jepson, J.A. Nasados, D.A. Vinci, W.J. Price, K.R. Vierck, D.E. Konetchy, P.D. Bass, and M.J. Colle.

The effect of feeding supplemental zeolite (clinoptilolite) of two different particle sizes on measures of nitrogen utilization and nutrient digestibility in finishing beef heifers

C.A. Myers, M.E. de Haro Marti, M. Chahine, and G.E. Chibisa

Impact of maternal nutrition on postnatal growth of crossbred beef steers

K.F. Oliver, J.B. Van Buren, J.B. Hall, M.L. Heimbuch, S. Jepsen, B. Epperson, J.A. Nasados, P.D. Bass, and M.J. Colle

The effects of allyl isothiocyanate inclusion as an additive on whole-plant corn silage

L.D.M. Pereira, P. Rezamand, B.C. Agostinho, G.L.D. Vigne, D. Volpi, N.N. de Mello, Q.G. Tavares, P. Schmid, M. Zopollatto

Impacts of heifer post-weaning intake classification on performance measurements of lactating and non-lactating two-, five- and eight-year-old Angus beef females

K.R. Wellnitz, C.T. Parsons, J.M. Dafoe, S.A. Wyffels, D.L. Boss, T. DelCurto, and M.L. Van Emon

PNWANC Program Agenda

Monday, January 1

- 11:45 am ARPAS Chapter Luncheon – Graduate Students Invited
1:00 PM – 5:00 PM Preconference, *sponsored by Alltech*



Preconference Agenda

- 1:00 pm Introduction - Alltech
- 1:00 pm Causes and Physiological Consequences of Intestinal Barrier Dysfunction - Lance Baumgard, PhD, Iowa State University
- 1:45 pm The Role of Mycotoxin Challenges in Gut Health and Rumen Function - Alexandra Weaver, PhD, Alltech
- 2:30 pm Break
- 2:45 pm Barnyard Pathogens and Their Effects on Ruminant Production - Luke Miller, DVM, PAS, Alltech
- 3:30 pm New Frontiers: Premix Interactions, Epigenetic Effects, and Antimicrobial Resistance - Vaughn Holder, PhD, Alltech
- 4:15 pm Celebrating Past Successes and Facing Tomorrow's Challenges During a Season of Disruption - Jim Spain, PhD, University of Missouri
- 5:00 pm Reception hosted by Alltech
Refreshments and Graduate Student Poster viewing
- 6:00 pm ARPAS Exam Session

Tuesday, January 1

- 7:00 AM Continental breakfast
- 7:00 AM ARPAS PNW Chapter meeting

Session I: General Topics

- 8:15 am Welcome, Celebration of the late Dr. Carl Hunt -*Pedram Rezamand, University of Idaho*
- 8:20 am Livestock's Path to Climate Neutrality - Frank Mitloehner, PhD, University of California-Davis
- 9:00 am Ruminant Microbiome: What is new about their contributions to ruminal fermentation and digestion and ruminant productivity? - T.G. Nagaraja, PhD, Kansas State University
- 9:40 am Economics of improved dairy reproduction considering conventional, sexed and beef semen - Albert De Vries, PhD, University of Florida

10:20 am **Coffee Break I** - *Sponsored by Simplot Western Stockmen's*

Session II: Dairy Topics

- 10:40 am Predicting economic implications of weaning programs in young dairy calves - Jim Quigley, PhD, PAS, Dpl. ACAS, Cargill
- 11:20 am The value of forage quality when feeding dairy cows - Marcos Marcondes, PhD, Washington State University

Session II: Beef Topics

- 10:40 am Protein supplementation for beef cattle - Evan Titgemeyer, PhD, Kansas State University
- 11:20 am Increasing production efficiency in western beef cattle operations - Rick Funston, PhD, PAS, University of Nebraska - *Sponsored by CHR HANSEN and Performix Nutrition Systems*

12:20 pm **Lunch**

Poster Competition Results
Speaker Dr. Mireille Chahine, University of Idaho - Idaho Center for Agriculture, Food and the Environment (CAFE)

Session III: Dairy Topics

- 1:00 pm The High Fertility Cycle - Paul Fricke, PhD, University of Wisconsin-Madison
- 1:50 pm Adipose Tissue as an Integrator of Metabolic and Inflammatory Signals in Periparturient Cows - Andres Contreras, PhD, Michigan State University - *Sponsored by Perdue Agribusiness*

Session III: Beef Topics

- 1:00 pm Managing Extensive Winter Grazing Systems in Arid/Semi-Arid Environments - Bart Lardner, PhD, University of Saskatchewan
- 1:50 pm Bull Development and Nutrition: Fertility and Beyond - Carl Dahlen, PhD, North Dakota State University

2:50 pm **Coffee Break II** - *Sponsored by Central Life Sciences*

Session IV: General Topics

- 3:15 pm Sustainable Animal Agriculture in 21st century - Robert Collier, University of Idaho
- 4:00 pm Adjourn