Western Section

American Society of Animal Science

80th Annual Meeting

University of Wyoming
Laramie, Wyoming
June 24–26, 2008
Officers

American Society of Animal Science

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Western Section American Society of Animal Science

June 24-26, 2008
University of Wyoming
Laramie, Wyoming

Summary of Scheduled Events

Monday, June 23, 2008

4:00 pm – 7:00 pm Registration
University of Wyoming Conference Center, Grand Ballroom Lobby

Tuesday, June 24, 2008

7:00 am – 8:00 pm Registration
Grand Ballroom Lobby
9:30 am – 12:00 pm Beef Symposium “Addressing high input costs in the beef cattle industry: Striving for greater efficiency” Salon C & D
12:00 pm – 1:30 pm Lunch
1:30 pm – 2:15 pm Beef Symposium, Salon C & D
2:15 pm – 2:30 pm Break, Grand Ballroom Lobby
2:30 pm – 4:00 pm Beef Symposium, Salon C & D
4:30 pm – 6:00 pm WSASAS Executive Committee Meeting UW Boardroom
6:30 pm – 9:00 pm Welcome Reception
Grand Ballroom

Wednesday, June 25

7:00 am – 12:30 pm Registration
Grand Ballroom Lobby
8:10 am – 9:45 am Graduate Student Competition
Salon C & D
9:45 am – 10:00 am Break, Grand Ballroom Lobby
10:00 am – 11:00 am Graduate Student Competition (Continued)
Salon C & D
11:00 am – 11:30 am Distinguished Service Award Paper, Dr. Noelle Cockett, Utah State University, Salon C & D
11:30 am – 1:00 pm Lunch Break
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<th>Time</th>
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<td>1:00 pm – 2:30 pm</td>
<td>Breeding and Genetics</td>
<td>Salon B</td>
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<td>1:00 pm – 3:20 pm</td>
<td>Extension Symposium</td>
<td>Salon D</td>
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<td>1:00 pm – 4:45 pm</td>
<td>Ruminant Nutrition</td>
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<td>3:00 pm – 3:15 pm</td>
<td>Break, Grand Ballroom Lobby</td>
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<td>3:30 pm – 4:45 pm</td>
<td>Extension</td>
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<td>4:45 pm – 5:00 pm</td>
<td>Nonruminant Nutrition</td>
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<td>1:00 pm – 3:00 pm</td>
<td>Poster Presentations</td>
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<td>Management, Growth &amp; Development,</td>
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<td>Meat Science &amp; Muscle Biology, Pastures</td>
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<td>and Forages, Physiology)</td>
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<td>6:30 pm – 9:00 pm</td>
<td>Awards Program/Banquet</td>
<td>Laramie Country Club</td>
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**Thursday, June 26**

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<tr>
<td>8:00 am - 9:00 am</td>
<td>WSASAS Business Meeting</td>
<td>Salon C</td>
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<tr>
<td>9:15 am – 11:00 am</td>
<td>Environment and Livestock Management</td>
<td>Salon C</td>
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<td>9:15 am – 10:45 am</td>
<td>Pastures and Forages</td>
<td>Salon D</td>
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<td>9:15 am – 11:15 am</td>
<td>Physiology</td>
<td>Salon B</td>
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<td>10:00 am – 10:15 am</td>
<td>Break, Grand Ballroom Lobby</td>
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<td>11:15 am – 11:30 am</td>
<td>Behavior</td>
<td>Salon B</td>
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<td>9:15 am – 11:15 am</td>
<td>Poster Presentations</td>
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<td>Nonruminant Nutrition, Ruminant Nutrition</td>
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<td>11:45 am – 1:15 pm</td>
<td>WSASAS Executive Committee Meeting</td>
<td>UW Boardroom</td>
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*ARPAS exams will be scheduled as applications are received. Contact the ARPAS headquarters to schedule an exam (arpas@assochq.org).*
Tuesday, June 24

SYMPOSIA AND ORAL SESSIONS

Beef Symposium

Addressing high input costs in the beef cattle industry: striving for greater efficiency

Chair: Dr. Benton Glaze, University of Idaho
Salon C & D

9:30 AM Welcome and Introduction. Kenneth C. Olson, Department of Animal & Range Sciences, South Dakota State University, WSASAS President, Douglas Hixon, Department Head, Department of Animal Science, University of Wyoming; J. Benton Glaze, Jr., Department of Animal & Veterinary Sciences, University of Idaho, WSASAS Symposium Chair.

9:45 AM The Beef Industry in Transition. Tom Field, Department of Animal Sciences, Colorado State University.

10:30 AM Matching Genetics with Feedstuffs in an Era When Feed Costs are Increasing. Michael D. MacNeil, USDA - Research Service, Miles City, Montana.

11:15 AM Fitting Feed Efficiency Into the Beef Profit Equation. Gordon Carstens, Department of Animal Science, Texas A&M University.

12:00 PM Lunch.

1:30 PM The Effect of High Input Costs on the Cattle Feeding Industry. Tom Brink, Five Rivers Ranch Cattle Feeding LLC, Loveland, Colorado.

2:15 PM Break.

2:30 PM The Effect of High Input Costs on Cow-Calf Producers. Chip Ramsay, Rex Ranch, Ashby, Nebraska.

3:15 PM Questions, Answers, and Discussion. Speaker Panel.

Opening Reception

Tuesday 6:30 – 9:00 PM
Grand Ballroom
Wednesday, June 25

Graduate Student Paper Competition
Chair: Dr. Amin Ahmadzadeh, University of Idaho
Salon C & D

8:10 AM  Introductions.


8:45 AM 2 An evaluation of extruded-expelled cottonseed meal as a protein supplement to beef cows consuming low quality forage. S. J. Winterholler*, D. L. Lalman, M. D. Hudson, and C. L. Goad, Oklahoma State University, Stillwater.


9:30 AM 5 Reproductive abnormalities in omega-3 fatty acid desaturase transgenic mice. W. E. Pohlmeier*, K. A. Lewis, and A. L. Van Eenennaam, University of California, Davis.

9:45 AM  BREAK.

10:00 AM 6 The effects of dietary potassium, source, and water quality on performance and carcass characteristics of finishing cattle. J. L. Lacey*, J. J. Wagner1, T. E. Engle1, J. W. Spears2, and S. L. Archibeque1, 1Colorado State University, Fort Collins, 2North Carolina State University, Raleigh.

10:15 AM 7 Gestational nutrition affects growth and adipose tissue deposition in steers. K. R. Underwood1, J. F. Tong1, J. M. Kimzey1, P. L. Price1, E. E. Grings2, B. W. Hess3, W. J. Means3, and M. Du1, 1University of Wyoming, Laramie, 2USDA-ARS, Miles City, MT.

10:30 AM 8 Effect of duration of intravaginal progesterone insert (CIDR) treatment on pregnancy rate per AI in dairy heifers using a timed-AI protocol. C. R. Johnson*, A. Ahmadzadeh*, K.S. Jensen2, S. Etter1, R. Wilson2, N. Dalton2, and J.C. Dalton1, 1Caldwell Research and Extension Center, Caldwell, ID, 2University of
Effects of ractopamine hydrochloride and feeding period on carcass quality and sensory characteristics in market dairy cows. J. D. Allen*1, J. K. Ahola2, M. Chahine3, J. I. Szasz1, and C. W. Hunt1, 1University of Idaho, Moscow, 2University of Idaho, Caldwell, 3University of Idaho, Twin Falls.

2007 Distinguished Service Award

Chair: Dr. Richard Battaglia, University of Idaho
Salon C & D

The future of animal scientists at western land-grant institutions: Challenges and opportunities. Dr. Noelle Cockett. Utah State University.

Breeding and Genetics

Chair: Dr. Kristi Cammack, University of Wyoming
Salon B

Relationship between residual feed intake and growth performance, EPD profiles, and value indices of spring-born Angus bulls. J. M. Cardin*1, S. P. Doyle1, J. A. Harrington1, K. L. Cooprider1, C. R. Johnson1, and L. Rechei1, 1California State University, Chico, 2Snyder Livestock Company, Inc., Yerington, NV.

Altered growth curve characteristics and pregnancy rate levels in 34 years of Brangus cattle production in the Chihuahuan Desert. P. Luna-Nevarez*1, D. VanLeeuwen1, D.W. Bailey1, R. M. Enns2, S. A. Soto-Navarro1, G. A. Silver1, and M. G. Thomas1, 1New Mexico State University, Las Cruces, 2Colorado State University, Fort Collins.

Effect of previous experience on grazing distribution and diet quality of Brangus cows in the Chihuahuan Desert. D. W. Bailey*1, M. G. Thomas1, J. W. Walker2, B. K. Witmore1, D. Tolleson3, and C. C. Bailey1, 1New Mexico State University, Las Cruces, 2Texas A&M University, San Angelo, 3Texas A&M University, College Station.
1:45 PM 13 Evaluation of Columbia, USMARC-Composite, Suffolk, and Texel rams as terminal sires: Effects of ram breed on ewe productivity and F₁ lamb survival and growth. T. D. Leeds*, M. R. Mousel1, D. R. Notter2, K. A. Leymaster3, and G. S. Lewis1, 1USDA, ARS, U.S. Sheep Experimental Station, Dubois, ID, 2Virginia Polytechnic Institute and State University, Blacksburg, 3USDA, ARS, U.S. Meat Animal Research Center, Clay Center, NE.

2:00 PM 14 Association of microsatellite ETH10 genotypes with growth and carcass trait levels in Brangus cattle. K. L. DeAtley*, G. Rincon2, C. R. Farber2, J. F. Medrano2, R. M. Enns3, G. A. Silver4, and M. G. Thomas3, 1New Mexico State University, Las Cruces, 2University of California, Davis, 3Colorado State University, Fort Collins.


Extension Symposium

Chair: Dr. Jason Ahola, University of Idaho, Caldwell
Salon D

1:00 PM 16 Essential components for development, implementation, and evaluation of integrated research and extension proposals submitted to the USDA National Research Initiative (NRI) Competitive Grants Program. M. A. Mirando*, Competitive Programs, Cooperative State Research, Education, and Extension Service, Washington, DC.


3:00 PM Panel Discussion: What factors are critical for an integrated research and extension program to be successful? An interactive panel with discussion with USDA-NRI, extension, and research perspectives.
Ruminant Nutrition
Chair: Scott Lake and Shawn Archibeque,
University of Wyoming and
Colorado State University
Salon C

1:00 PM 18 Limit feeding non-lactating, non-pregnant beef cows with bunkered WDGS or distillers' solubles. L. M. Kovarik*, M. K. Luebbe, R. J. Rasby, and G. E. Erickson, University of Nebraska, Lincoln.

1:15 PM 19 Effects of distiller's dried grains with solubles and crude glycerin on performance and carcass characteristics in early weaned beef calves. P. J. Gunn*, R. P. Lemenager, M. C. Claeys, and S. L. Lake, Purdue University, West Lafayette, IN.

1:30 PM 20 Diverse diets: The inclusion of distillers dried grains and field peas in feedlot rations. B. R. Ilse* and V. L. Anderson, North Dakota State University, Carrington.

1:45 PM 21 Effects of added dietary protein and fat on subcutaneous adipose tissue when fed differing levels of dried distiller's grains with solubles. M. L. Van Emon*, A. F. Musselman1, P. J. Gunn1, E. J. Scholljegerdes2, M. K. Neary1, R. P. Lemenager1, and S. L. Lake1, 1Purdue University, West Lafayette, IN, 2USDA-ARS Northern Great Plains Research Laboratory, Mandan, ND.

2:00 PM 22 Evaluation of in vitro degradation of plant cell walls with ruminal microbes. R. Reyna-Islas, S. L. Lodge-Ivey*, J. Browne-Silva, R. Creamer, and R. Al-Khatib, New Mexico State University, Las Cruces.

2:15 PM 23 Effects of short-term oilseed supplementation on plasma fatty acid composition in lactating beef cows. E. J. Scholljegerdes*1, L. A. Lekatz2, and K. A. Vonnahme2, 1USDA-ARS, Northern Great Plains Research Laboratory, Mandan, ND, 2North Dakota State University, Fargo.


2:45 PM 25 Effects of maternal nutrition and selenium supply during gestation on jejunal growth, vascularity, and mRNA expression of angiogenic factors and receptors in offspring. T. L. Neville*, J. J. Reed1, K. A. Vonnahme1, P. P. Borowicz1, J. B. Taylor2, D. A. Redmer1, J. S.
Luther1, C. J. Hammer1, L. P. Reynolds1, and J. S. Caton1, 1North Dakota State University, Fargo, 2USDA, ARS, U. S. Sheep Experiment Station, Dubois, ID.

3:00 PM  
Break.

3:15 PM  
**Use of a self-fed, small-package protein supplement for beef cows post-weaning.** R. L. Endecott1 and R. C. Waterman2, 1Montana State University, Miles City, 2USDA-ARS, Fort Keogh Livestock and Range Research Laboratory, Miles City, MT.

3:30 PM  

3:45 PM  
**Sorghum silage digestibility in sheep.** G. Abdelrahim1, C. Melton2, V. Allen2, and K. Pond2, 1Alabama A&M University, Norma, 2Texas Tech University, Lubbock.

4:00 PM  
**Effects of elevated dietary nitrate on production and reproduction parameters in Suffolk ewes.** R. Cockrum, K. Austin, P. Ludden, and K. Cammack*, University of Wyoming, Laramie.

4:15 PM  
**Effects of vitamin E, zinc, by-pass protein, and chlortetracycline supplemented to ewes of different age and body condition on lamb production, and indices of immune function.** R. R. Redden1, R. W. Kott1, J. A. Boles1, A. W. Layton2, and P. G. Hatfield1, 1Montana State University, Bozeman, 2Montana Department of Livestock, Bozeman, MT.

4:30 PM  
**Natural source vitamin E supplementation and reproductive efficiency in beef cows.** M. J. Richardson*, R. P. Lemenager1, N. Pyatt2, and S. L. Lake1, 1Purdue University, West Lafayette, IN, 2ADM Animal Nutrition Research, Decatur, IN.

## Nonruminant Nutrition

**Chair:** Scott Lake and Shawn Archibeque, University of Wyoming and Colorado State University

**Salon C**

4:45 PM  
**Effect of sepiolite supplementation on broiler growth performance and carcass yield.** M. Hadjayed*, I. Zghal1, and B. Rekik2, 1Institut Supérieur Agronomique, Chott Mariem, Sousse, Tunisia, 2Ecole Supérieure d’Agriculture, Mateur, Tunisia.
3:30 PM 32 Factors influencing price of North Dakota, South Dakota, and Montana feeder calves. J. L. Leupp*, G. P. Lardy, R. Daly, C. L. Wright, and J. A. Paterson, 1North Dakota State University, Fargo, 2South Dakota State University, Brookings, 3Montana State University, Bozeman.


4:00 PM 34 The effects of age and source verification of calves on value received on Superior Livestock Video Auctions. A. Kellom*, J. Paterson, J. Vanek, M. Watts, and M. Harbac, Montana State University, Bozeman.


4:30 PM 36 The Montana BVD-PI Biosecurity Project. M. Harbac*, C. Peck, J. Paterson, and B. Hoffman, 1Montana State University, Bozeman, 2API, Portland, OR.
POSTER PRESENTATIONS

Poster sessions will be located in Salon E of the Grand Ballroom. Presenters are to mount their poster for viewing on the appropriate board (see below) prior to the reception on Tuesday evening (June 24). Posters will be removed after the last session on Thursday (June 26). Specific times for manning posters are indicated below.

Chair: Bret Hess, University of Wyoming
Salon E

(Authors Present 1:00 pm – 3:00 pm)

Behavior


Environment & Livestock Management

Weaning date impacts on backgrounding and finishing performance of May born Angus calves. M. M. Stamm*, C. S. Schauer¹, V. L. Anderson², and B. R. Ilse², ¹North Dakota State University, Hettinger, ²North Dakota State University, Carrington.

Using a yeast preparation and fibrolytic enzyme as replacements for growth hormone and antibiotic in natural beef production. D. G. Landblom**, C. J. Wachenheim*, and T. A. Petry², ²North Dakota State University, Dickinson, ²North Dakota State University, Fargo.

Cow nutrition impacts feedlot pull rate. J. T. Mulliniks*, S. H. Cox¹, S. L. Ivey¹, C. P. Mathis¹, J. E. Sawyer¹, and M. K. Petersen¹, ¹New Mexico State University, Las Cruces, ²Texas A&M University, College Station.

Feedlot performance of lambs backgrounded from weaning to feedlot. R. R. Redden*, R. W. Kott¹, L. M. M. Surber¹, J. A. Boles¹, A. W. Layton², and P. G. Hatfield¹, ¹Montana State University, Bozeman, ²Montana Department of Livestock, Bozeman, MT.

Evaluation of implantable RFID microchips for read-ability and measurement of body temperature in mature horses. L. Wallace*, J. A. Paterson, L. Gagnon, R. Clark, K. Davis, and M. Miller, Montana State University, Bozeman.


Use of the Cornell net carbohydrate and protein system (CNCPS) for predicting beef cattle cow-calf production in Hawaii. K. Buck¹, J. R. Carpenter*¹, M. K. Thorne¹, and B. W. Mathews², ¹University of Hawaii at Manoa, Honolulu, ²University of Hawaii at Hilo, Hilo.

In vitro digestibility and chemical composition of kikuyugrass as influenced by soil silicon, liming and genotype. J. R. Carpenter*¹, L. E. Sollenberger², and B. W. Mathews³, ¹University of Hawaii at Manoa, Honolulu, ²University of Florida, Gainesville, ³University of Hawaii at Hilo, Hilo.

Nutritional value, milk yield and gas production of corn silage cut at different height. D. Domínguez*¹, A. Corral¹, G. Villalobos¹, H. Castillo¹, S. Ramírez¹, J. Ortega¹, and A. Muro², ¹Universidad Autónoma de Chihuahua, Chihuahua, Chihuahua, México, ²Universidad Autónoma de Zacatecas, Zacatecas, Zacatecas, México.

Effects of compost, manure, and urea on yield and forage quality when topdressed on a perennial forage mix of irrigated, cool season grasses. K. C. Doesken*, J. G. Davis, J. E. Brummer, and T. E. Engle, Colorado State University, Fort Collins.

Planting system and maturity stage on production and nutritional value of oat hay. D. Domínguez*¹, S. Ramírez¹, J. Salmerón², G. Villalobos¹, A. Corral¹, and J. Ortega¹, ¹Universidad Autónoma de Chihuahua, Chihuahua, Chihuahua, México, ²INIFAP, Cuauhtémoc, Chihuahua, México.

Evaluation of winter cereals for pasture in Montana. A. N. Hafla*¹, S. D. Cash¹, L. M. M. Surber¹, J. A. Patterson¹, A. Lenssen², A. L. Todd³, and M. S. Huffman¹, ¹Montana State University, Bozeman, ²Northern Plains Agricultural Systems Research Unit, Sidney, MT.

Nutritional implications of fatty acid composition of marrow of four bones from grass-fed cattle. D.
Perennial forage kochia for improved productivity of grass dominated winter grazing pastures. L. K. Greenhalgh1, K. C. Olson2, D. R. ZoBell*1, B. L. Waldron3, A. R. Moulton1, and B. W. Davenport4, 1Utah State University, Logan, 2South Dakota State University, Rapid City, 3USDA-ARS Range and Research Lab, Logan, UT, 4USDA-NRCS, Tooele, UT.

**Physiology**

Age at puberty in beef heifers: Criollo cattle versus British crossbred cattle. S. I. Valverde-Saenz*1, J. D. Walsh1, C. M. Gardner1, J. T. Mulliniks1, B. S. Schilling1, D. M. Hallford1, A. L. Gonzales2, E. L. Fredrickson2, K. K. Kane1, and D. E. Hawkins1, 1New Mexico State University, Las Cruces, 2ARS-USDA Jornada Experimental Range, Las Cruces, NM.


Pregnancy rates and serum insulin-like growth factor-I, triiodothyronine, and progesterone profiles in Rambouillet ewes treated with recombinant bovine somatotropin before breeding. L. E. Camacho*, J. M. Benavidez, and D. M. Hallford, New Mexico State University, Las Cruces.


**WSASAS Awards Program/ Banquet**

Wednesday 6:30 – 9:00 pm  
Chair: Dr. Richard Battaglia, University of Idaho  
Laramie Country Club
Thursday, June 26

WSASAS Business Meeting
Thursday 8:00 – 9:00 am
Chair: Dr. Kenneth Olson, WSASAS President
Salon C

SYMPOSIA AND ORAL SESSIONS

Environment and Livestock Management
Chair: Dr. Rick Funston, University of Nebraska, North Platte
Salon C

9:15 AM  59  Effects of winter grazing system and supplementation during late gestation on performance of beef cows and progeny. R. N. Funston*, J. L. Martin, D. C. Adams, and D. M. Larson, University of Nebraska, North Platte.

9:30 AM  60  Effect of calving season and wintering system on cow performance. W. A. Griffin*1, T. J. Klopflenstein1, D. C. Adams2, G. E. Erickson1, L. A. Stalker2, and R. N. Funston2, 1University of Nebraska, Lincoln, 2University of Nebraska, North Platte.

9:45 AM  61  Influence of grazing deferments following summer fire on ewe performance and forage quality. R. C. Waterman* and L. T. Vermeire, USDA-ARS, Fort Keogh Livestock and Range Research Laboratory, Miles City, MT.

10:00 AM  Break.


10:45 AM  64  Evaluation of calf output and progeny carcass data of commercial beef bulls. A. L. Van Eenennaam and D. J. Drake*, University of California, Davis.
Pastures and Forages
Chair: Dr. Rachel Endecott, Montana State University
Salon D


9:30 AM 66 Evaluation of annual forages as alternatives to native range forage in south-central North Dakota. B. W. Neville*, D. Whitted*, P. Nyren*, G. P. Lardy*, and K. K. Sedivec*. 1North Dakota State University, Fargo, 2Central Grasslands Research Extension Center, Streeter, ND.


10:00 AM Break.

10:15 AM 68 Effect of dry distillers grains plus solubles supplementation level on forage intake and characteristics of digestion of beef heifers grazing wheat pasture. A. Islas*, M. Horvath, L. E. Camacho, and S. A. Soto-Navarro, New Mexico State University, Las Cruces.


Physiology
Chair: Dr. Brenda Alexander, University of Wyoming
Salon B

9:15 AM 70 Assessment of insulin-like growth factor-1 as an indicator of competence for rebreeding in first calf heifers. A. J. Roberts*, USDA, ARS Ft. Keogh LARRL, Miles City, MT.


9:45 AM 72 Seasonal and pregnancy-associated changes in energy-related metabolites and hormones in Elk. J. Berardinelli*, J. Olsen, S.
10:00 AM  
Break.

10:15 AM  
Histological examination of major organs from rats fed in vitro digested or undigested snakeweed. L. J. Hill*¹, T. T. Ross¹, R. F. Taylor², D. T. Yates¹, and R. Halalsheh¹, ¹New Mexico State University, Las Cruces. ²New Mexico Department of Agriculture Veterinary Diagnostic Services, Albuquerque, NM.

10:30 AM  
Effect of wintering system, nutrition around breeding and prostaglandin on, reproduction and calf production of beef heifers. D. M. Larson*¹, R. D. Richardson², and R. N. Funston³, ¹University of Nebraska, Lincoln, ²Rex Ranch, Ashby, NE, ³West Central Research and Extension Center, North Platte, NE.

10:45 AM  

11:00 AM  
Efficacy of the PortaSCC® milk test to estimate somatic cell count (SCC) and the effect of sampling day on constituents in sheep milk. E. R. Kretschmer, D. W. Holcombe*, G. C. J. Fernandez, and D. Redelman, University of Nevada, Reno.

Behavior
Chair: Dr. Brenda Alexander, University of Wyoming  
Salon B

11:15 AM  
Poster sessions will be located in Salon E of the Grand Ballroom. Presenters are to mount their poster for viewing on the appropriate board (see below) prior to the reception on Tuesday evening (June 24). Posters will be removed after the last session on Thursday (June 26). Specific times for manning posters are indicated below.

Chair: Bret Hess, University of Wyoming
Salon E

(Authors Present 9:15 am–11:15 am)

**Breeding and Genetics**

78

Estimates of genetic and phenotypic parameters of performance traits in postweaning in Limousin cattle. A. P. Marquez*, J. S. Saucedo, and J. N. Guerrero, Universidad Autónoma de Baja California, Mexicali, Baja California, México, and Natural and Agricultural Resources, Holtville, CA.

**Extension**

79


80


81


**Nonruminant Nutrition**

82

Effect of the chromium addition at the diet on reproductive performance of sows served during the summer season. J. A. Romo*, R. Barajas, H. R. Guemez, J. M. Romo, and F. Juarez, Universidad Autonoma de Sinaloa, Sinaloa, Mexico, and Granja Porcina La Huerta, Sinaloa, Mexico.
Ruminant Nutrition

83 Effect of level of dry distillers grains plus solubles on serum hormone concentrations in of feedlot lambs. Y. Diaz*, A. Islas, D. M. Hallford, L. E. Camacho, J. M. Benavidez, and S. A. Soto-Navarro, New Mexico State University, Las Cruces.


85 The effects of co-ensiling wet distiller’s grains plus solubles with corn silage on growth performance of bred beef heifers during late pregnancy. R. P. Arias*, R. P. Lemenager, L. J. Snyder, and S. L. Lake, Purdue University, West Lafayette, IN.


87 Effect of maternal dietary Se and nutrient restriction on fetal jejunal proliferation and vascularity. J. J. Reed*, M. A. Ward1, K. A. Vonnahme1, T. L. Neville1, P. P. Borowicz1, J. B. Taylor2, D. A. Redmer1, A. T. Grazul-Biliska1, L. P. Reynolds1, and J. S. Caton1, 1North Dakota State University, Fargo, 2USDA-ARS, U.S. Sheep Experiment Station, Dubois, ID.


89 Sulfur-induced polioencephalomalacia in roughage-fed feedlot steers administered high-sulfur water. C. W. Knight1, K. C. Olson2, C. L. Wright2, K. J. Austin1, and K. M. Cammack1, 1University of Wyoming, Laramie, 2South Dakota State University, Brookings.

90 Extract from Larrea influences rumen fermentation. J. Petersen*, S. L. Lodge-Ivey, J. Browne-Silva, and M. B. Horvath, New Mexico State University, Las Cruces.

91 Ruminal degradation kinetics of diets of manzarina and cornsilage for sheep with the in vitro technique of gas production. C. Arzola1, A. Muro2, M. R. Murphy3, O. Ruiz1, C. Rodriguez-Muela1, J. Salinas4, and F. Salvador1, 1Universidad Autonoma de Chihuahua, Chihuahua, Chihuahua, Mexico, 2Universidad Autonoma de Zacatecas, Zacatecas, Zacatecas, Mexico, 3University of Illinois, Urbana, 4Universidad Autonoma de Tamaulipas, Cd. Victoria, Tamaulipas, Mexico.

92 Chromium methionine supplementation on feedlot performance and carcass characteristics of bulls: II. Results including through hot and humidity season in the northwest of Mexico. R. Barajas*, B. J. Cervantes2,1, E. A. Velazquez1, J. A. Romo1, F. Juarez1, P. J.
Effect of nutrient restriction in early gestation beef cows on maternal and fetal intestinal mass and jejunal proliferation, vascularity, and morphology. A. M. Meyer*, J. J. Reed1, K. A. Vonnahme1, L. P. Reynolds1, S. A. Soto-Navarro3, B. W. Hess2, S. P. Ford2, and J. S. Caton1, 1North Dakota State University, Fargo, 2University of Wyoming, Laramie, 3New Mexico State University, Las Cruces.

Chromium methionine supplementation on feedlot performance and carcass characteristics of bulls: I. Results during cool season in the northwest of Mexico. R. Barajas*1, B. J. Cervantes2,1, E. A. Velazquez1, J. A. Romo1, F. Juarez1, and P. J. Rojas3,1, 1FMVZ-Universidad Autonoma de Sinaloa, Culiacan, Sinaloa, Mexico, 2Ganadera Los Migueles SA de CV, Culiacan, Sinaloa, Mexico, 3Tecnología de Máxima Producción, S.A. de C.V., Culiacan, Sinaloa, Mexico.


60% dried distillers drains in lamb rations results in acceptable performance and carcass quality. C. S. Schauer1, M. M. Stamm*1, T. Maddock2, and P. B. Berg2, 1North Dakota State University, Hettinger, 2North Dakota State University, Fargo.

Effect of flax grain inclusion on rumen fermentation, digestion, and microbial protein synthesis in growing and finishing diets for beef cattle. T. C. Gilbery*, G. P. Lardy, D. S. Hagberg, and M. L. Bauer, North Dakota State University, Fargo.


Effects of feeding dried distillers grains and solubles to growing and finishing beef steers on production, digestibility, ruminal fermentation and carcass characteristics. D. R. ZoBell*, C. K. Chapman, R. D. Wiedmeier, and M Stuart, Utah State University, Logan.

Effect of a fibrolytic enzyme supplementation on growing beef steers. J.-S. Eun*, D. R. ZoBell, C. M. Dschaak, and D. E. Diaz, Utah State University, Logan.
<table>
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<tr>
<th>Year</th>
<th>President</th>
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<td>T. T. Ross</td>
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1954  H. Heitman, Jr., University of California  
1953  J. L. VanHorn, Montana State University  
1952  L.E. Harris, Utah State University  
1951  C.E. Terrill, USDA, Idaho  
1950  A.W. Oliver, Oregon State University  
1949  R.F. Miller, University of California  
1948  E.B. Stanley, University of Arizona  
1947  F.S. Hultz, University of Wyoming  
1943-46  J.H. Knox, New Mexico State University  
1942  R.T. Clark, Montana State University  
1941  H.R. Guilbert, University of California  
1940  J. Sotola, Washington State University  
1938-39  J.E. Norby, University of Idaho  
1937  E.H. Hughes, University of California  
1935-36  C.W. Hickman, University of Idaho  
1934  F.S. Hultz, University of Wyoming  
1932-33  J.F. Wilson, University of California  
1930-31  J.A. Hill, University of Wyoming  
1929  E.L. Potter, Oregon State University  

AWARDS  
Western Section  
American Society of Animal Science  

Distinguished Service Awards  

2007  N. E. Cockett, Utah State University  
2006  Not Given  
2005  M. K. Petersen, New Mexico State University  
2004  M. Vavra, Oregon State University  
2003  T. Grandin, Colorado State University  
2002  D.M. Halford, New Mexico State University  
2001  P.R. Cheeke, Oregon State University  
2000  G.E. Bradford, University of California  
1999  R.E. Short, USDA, Montana  
1998  D.E. Johnson, Colorado State University  
1997  M.W. McCollough, Moorman's High Plains SMA.  
1996  R.A. Field, University of Wyoming  
1995  C.F. Nockles, Colorado State University  
1994  K. Koong, Oregon State University  
1993  J.S. Brinks, Colorado State University  
1992  J.D. Wallace, New Mexico State University  
1991  C.B. Theurer, University of Arizona  
1990  M.H. Kennington, California State Poly Univ.  
1989  C.W. Newman, Montana State University  
1988  C.J. Kercher, University of Wyoming  
1987  D.C. England, Oregon State University  
1986  W.N. Garrett, University of California-Davis  
1985  R.L. Blackwell, Montana State University  
1984  V.R. Bohman, University of Nevada-Reno  
1983  R.A. Bellsows, USDA, Montana  
1982  D.C. Church, Oregon State University  
1981  W.H. Hale, University of Arizona  
1980  R.J. Raleigh, Oregon State University  
1979  J.K. Matsushima, Colorado State University  
1978  P.T. Cupps, University of California-Davis  
1977  J.P. Bowland, University of Alberta  
1976  G.P. Lofgreen, University of California-Davis
1975  I.A. Dyer, Washington State University  
1974  J.E. Oldfield, Oregon State University  
1973  H.H. Stonaker, Colorado State University  
1972  L.E. Harris, Utah State University  
1971  R. Bogart, Oregon State University  

**Young Scientists**  

2007  L. H. Baumgard, University of Arizona  
2006  T. E. Engle, Colorado State University  
2005  D. W. Bohnert, Oregon State University  
2004  D. H. Crews, Jr., Agriculture Canada  
2003  B.W. Hess, University of Wyoming  
2002  T.W. Geary, USDA-ARS, Miles City, MT  
2001  D.E. Hawkins, New Mexico State University  
2000  T.J. DelCurto, Oregon State University  
1999  K.E. Belk, Colorado State University  
1998  N.E. Cockett, Utah State University  
1997  J.G.P. Bowman, Montana State University  
1996  M.E. Mirando, Washington State University  
1995  M.B. Judkins, University of Nevada-Reno  
1994  M.E. Wise, University of Arizona  
1993  J.D. Tatum, Colorado State University  
1992  M.K. Petersen, New Mexico State University  
1991  W.J. Murdock, University of Wyoming  
1990  D.C. Adams, USDA, Miles City  
1989  A.R. Menino, Oregon State University  
1988  M.L. Galyean, New Mexico State University  
1987  R. Allen, University of Arizona  
1986  J.R. Males, Washington State University  
1985  G.B. Anderson, University of California-Davis  
1984  E.L. Squires, Colorado State University  
1983  G.E. Seidel, Colorado State University  
1982  P.J. Burfening, Montana State University  
1981  R.W. Wright, Jr., Washington State University  
1980  T.M. Nett, Colorado State University  
1979  P.R. Cheeke, Oregon State University  
1978  S.L. Davis, University of Idaho  
1977  J.J. Reeves, Washington State University  
1976  C.C. Kaltenbach, University of Wyoming  
1975  G.D. Niswender, Colorado State University  

**Extension Award**  

2007  D. J. Drake, University of California, Davis  
2006  J. E. Sprinkle, University of Arizona  
2005  C. Mathis, New Mexico State University  
2004  W. F. Gipp, Montana State University  
2003  J. A. Paterson, Montana State University  
2002  S. B. LeValley, Colorado State University  
2001  D.R. Zobell, Utah State University  
2000  R.L. Hathaway, Oregon State University  
1999  A.M. Swinker, Colorado State University  
1998  J.C. Whittier, Colorado State University  
1997  J.W. Oltjen, University of California-Davis  
1996  R.W. Kott, Montana State University  
1995  N.J. Stenquist, University of Utah  
1994  R.C. Torrell, University of Nevada-Reno  
1993  J.E. Nel, University of Wyoming  
1992  D.L. Hixon, University of Wyoming  
1991  L.J. Krysl, University of Nevada-Reno  

22
Teaching Award

2007  J. R. Carpenter, University of Hawaii
2006  A. M. Oberbauer, University of California, Davis
2005  C. C. Calvert, University of California, Davis
2004  J. Bowman, Montana State University
2003  T. T. Ross, New Mexico State University
2002  R. P. Anstotegui, Montana State University
2001  B. F. Sowell, Montana State University
2000  T. R. Famula, University of California
1999  D. W. Holcombe, University of Nevada, Reno
1998  J. D. Tatum, Colorado State University
1997  J. J. Reeves, Washington State University
1996  R. D. Green, Colorado State University
1995  T. G. Field, Colorado State University
1994  D. W. Weber, Oregon State University
1993  W. A. Schurg, University of Arizona
1992  M. L. Riley, University of Wyoming
1991  D. M. Hallford, New Mexico State University
1990  L. E. Orme, Brigham Young University
1989  E. L. Martin, Washington State University
1988  J. A. Froseth, Washington State University
1987  R. E. Taylor, Colorado State University

First Place Recipients of the Competition Paper Award

2007  P. L. Price, University of Wyoming
2006  J. W. Waggoner, New Mexico State University
2005  T. M. Thelen, New Mexico State University
2004  S. L. Lake, University of Wyoming
2003  E. J. Scholljegerdes, University of Wyoming
2002  J. A. Morrison, Oregon State University
2001  O. J. Dennison, New Mexico State University
2000  M. Bertolini, University of California
1999  L. Brokaw, University of Wyoming
1998  L. R. McMahon, University of Saskatchewan
1997  T. E. Ludwig, Washington State University
1996  T. M. M. Bernardini, Montana State University
1995  L. M. M. Surber, Montana State University
1994  S. I. Paisley, University of Wyoming
1993  K. A. Naivar, University of Wyoming
1992  M. J. Guthrie, New Mexico State University
1991  T. W. Geary, Washington State University
1990  M. A. Lane, Montana State University
1989  D. L. Rankins, New Mexico State University
1988  D. M. Grieger, Washington State University
1987  M. Flood, Washington State University
1986  J. M. Miner, Montana State University
1985  J. S. Caton, New Mexico State University
1984  M. J. Garber, Washington State University
1983  J. Brown, Washington State University
1982  D. Honeyfield, Washington State University
1981  M. U. Marcano, Washington State University
1980  J. C. Throckmorton, Oregon State University
1979  C. L. Griggin, New Mexico State University
First Place Recipients of the
Applied Animal Science Awards

2007  C. P. Mathis, New Mexico State University
2006  J. J. Martin, University of Nebraska
2005  R. R. Salverson, South Dakota State University
2004  E. H. Ward, South Dakota State University
2003  H. H. Patterson, South Dakota State University
2002  H. H. Patterson, South Dakota State University
2001  D. D. Kress, Montana State University
             R. L. Hathaway, Oregon State University

Institutional Graduate
Student Paper Competition

2007  University of Wyoming
2006  University of Wyoming
2005  University of Wyoming
2004  New Mexico State University
2003  University of Wyoming
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