

Western Section

American Society of Animal Science

78th Annual Meeting



Utah State University

Logan, Utah

Eccles Conference Center

June 21–23, 2006

WESTERN SECTION – AMERICAN SOCIETY OF ANIMAL SCIENCE

**June 21-23, 2006
Utah State University
Logan, Utah**

Summary of Scheduled Events

Tuesday, June 20, 2006

- 4:00-7:00 PM Registration
 Eccles Conference Center
 Registration Booth
- 4:30-6:00 PM WSASAS Executive Committee
 Meeting
 Eccles Conference Center
 Room 208

Wednesday, June 21, 2006

- 7:00 AM-5:00 PM Registration
 Eccles Conference Center
 Registration Booth
- 9:00 AM-5:00 PM Symposium: “What to do with
 all the omics – genomics,
 proteomics, etc.?”
 Eccles Conference Center
 Auditorium, Room 216
- 6:30-9:00 PM Informal Reception
 American West Heritage
 Center
 (4025 S. Highway 89-91)

Thursday, June 22, 2006

- 7:00 AM-NOON Registration
 Eccles Conference Center
 Registration Booth
- 8:00-9:45 AM Graduate Student Competition
 Eccles Conference Center
 Auditorium, Room 216
- 9:45-10:00 AM BREAK
 Eccles Conference Center
 Lobby
- 10:00-11:30 AM Graduate Student Competition
 (continued)

11:30 AM-NOON	Distinguished Service Award Paper Dr. Mark Petersen, New Mexico State University Eccles Conference Center Auditorium, Room 216
1:30-4:00 PM	Breeding/Genetics Eccles Conference Center Room 303/305
1:30-3:50 PM	Extension Symposium Eccles Conference Center Auditorium, Room 216
2:00-4:00 PM	Poster Session I Eccles Conference Center Rooms 201/203, 205/207 (Environment/Livestock Management; Growth/ Development; Nonruminant Nutrition; Physiology; Ruminant Nutrition)
3:00-3:15 PM	BREAK Eccles Conference Center Lobby
3:15 PM	ARPAS exams Eccles Conference Center Room 307 (also available on an appointment basis)
6:30 PM	Awards Program/Banquet Coppermill Restaurant (55 North Main)

Friday, June 23, 2006

7:30 AM	ARPAS exams Eccles Conference Center Room 307 (also available on an appointment basis)
8:00-9:00 AM	WSASAS Business Meeting Eccles Conference Center Auditorium, Room 216
9:15-11:15 AM	Poster Session II Eccles Conference Center Rooms 201/203, 205/207 (Extension; Food Safety; Meat Science/Muscle Biology; Pastures/Forages; Ruminant Nutrition)

9:15-10:30 AM	Environment/Livestock Management Eccles Conference Center Auditorium, Room 216
9:15-10:30 AM	Physiology Eccles Conference Center Room 303/305
10:30-10:45 AM	BREAK Eccles Conference Center Lobby
10:45-11:30 AM	Ruminant Nutrition Eccles Conference Center Auditorium, Room 216
11:30 AM-1:00 PM	WSASAS Executive Committee Meeting Eccles Conference Center Room 208
NOON	ADJOURN

2006 ASAS Western Section Meeting

Wednesday, June 21, 2006 to
Friday, June 23, 2006

Wednesday, June 21

**“What to do with all the omics - genomics,
proteomics, etc.?”**

**Eccles Conference Center Auditorium,
Room 216**

- 7:00 AM **Registration**
- 9:00 AM **MIXER**
- 10:00 AM **Introductions & Welcome**
James Thompson, Oregon State University,
Department of Animal Sciences - WSASAS
President
Mark Healey – Utah State University, Animal,
Dairy, and Veterinary Sciences
Department Chair
Terry Engle, Department of Animal Sciences,
Colorado State University, CO - Symposium
Chair
Dorian Garrick – Department of Animal Sciences,
Colorado State University, CO - Moderator
- 10:15 AM **“Visioning the future of animal sciences in
the world of ...omics”**
Key Note Speaker: Noelle Cockett, Utah State
University
- “Statistical” genomics**
- 11:00 AM **“Experimental approaches for discovery and
refinement of quantitative trait loci”.**
Speaker: Mike MacNeil, ARS Miles City, MT
- 11:45 AM **Introduction of Sponsors**
- 12:00 NOON **LUNCH**
- Use of functional genomics tools to tackle
problems in animal production**
- 1:30 PM **“An introduction to microarrays and their use
in evaluating gene expression”**
Speaker: Andy Roberts, ARS Miles City, MT
- 2:15 PM **“Use of gene expression arrays in identifying
new research targets in animal science”**
Speaker: Bob Collier, University of Arizona
- 3:00 PM **BREAK**
- Use of omics tools by industry and summary
of symposium**
- 3:30 PM **“Exploiting “omics” for animal improvement”**
Speaker: Dorian Garrick, Colorado State
University
- 4:15 PM **Panel of Speakers - Questions**

Thursday, June 22

SYMPOSIA AND ORAL SESSIONS

Graduate Student Paper Competition

Chair: Dr. R. Mark Enns, Colorado State University
Eccles Conference Center Auditorium - Room 216

- 8:00 AM 2 **Effects of supplemental RDP versus increasing supplemental RUP on visceral N flux in lambs fed a low-quality forage.** R. L. Atkinson*¹, C. D. Toone¹, D. L. Harmon², and P. A. Ludden¹, ¹University of Wyoming, Laramie, ²University of Kentucky, Lexington.
- 8:15 AM 3 **Body condition score at parturition and day of lactation affect lipogenic enzyme messenger RNA abundance in milk somatic cells from lactating beef cows fed supplemental fat.** C. M. Murrieta*¹, S. L. Lake², E. J. Scholljegerdes³, B. W. Hess¹, and D. C. Rule¹, ¹University of Wyoming, Laramie, ²Purdue University, West Lafayette, IN, ³USDA ARS, Mandan, ND.
- 8:30 AM 4 **Body condition and somatotropin influence endocrine and follicular dynamics of postpartum Brahman-influenced cows.** R. Flores*¹, M. L. Looper², R. W. Rorie¹, M. A. Lamb¹, S. T. Reiter¹, D. M. Hallford³, D. L. Kreider¹, and C. F. Rosenkrans, Jr.¹, ¹University of Arkansas, Fayetteville, ²USDA-ARS, Dale Bumpers Small Farms Research Center, Booneville, AR, ³New Mexico State University, Las Cruces.
- 8:45 AM 5 **AP-2 γ is necessary for normal embryonic epithelial development.** J. Guttormsen*¹, H. Gavin¹, A. Howlett¹, M. Koster², D. Roop², and Q. Winger¹, ¹Utah State University, Logan, UT, ²Baylor College of Medicine, Houston, TX.
- 9:00 AM 6 **Growing beef steers do not require supplemental dietary methionine during an endotoxin challenge.** J. W. Waggoner*, C. A. Loest, T. M. Thelen, M. K. Petersen, D. M. Hallford, M. D. Remmenga, and C. P. Mathis, *New Mexico State University, Las Cruces.*
- 9:15 AM 7 **Inheritance of hair slickness score and its correlation with growth.** J. L. Williams*, D. J. Garrick, R. M. Enns, and K. L. Shirley, *Colorado State University, Fort Collins.*
- 9:30 AM 8 **Effects of hCG and progesterone administered to ewes post breeding on serum concentrations of progesterone and estradiol.** R. R. Redden*, B. J. Herron, C. H. Martinez, and T. T. Ross, *New Mexico State University, Las Cruces.*
- 9:45 AM **BREAK.**
- 10:00 AM 9 **Effects of leafy spurge (*Euphorbia esula*) on ruminant gas production and in vitro digestion.** K. D. Richardson*¹, W. L. Kelly², M.

S. Reil², R. C. Waterman², and S. L. Lodge-Ivey¹,
¹*New Mexico State University, Las Cruces,*
²*USDA-ARS, Fort Keogh Livestock and Range
Research Laboratory, Miles City, MT.*

- 10:15 AM 10 **Effects of ractopamine in combination with various hormone implant regimens on feedlot performance and carcass attributes in calf-fed Holstein steers.** P. Bass*, J. Beckett, and R. Delmore, *California Polytechnic State University, San Luis Obispo.*
- 10:30 AM 11 **Genetic parameters for mature weight and lifetime litter weight weaned in Rambouillet and Targhee ewes.** A. L. Kelley*, K. C. Davis, P. G. Hatfield, R. W. Kott, and J. M. Rumph, *Montana State University, Bozeman.*
- 10:45 AM 12 **Estimation of digesta kinetics of forage kochia and tall wheatgrass using Yb and Dy when fed alone or mixed together.** A. R. Wall*, K. C. Olson, C. A. Stonecipher, M. Stuart, M. A. Maughn, and J. C. Malechek, *Utah State University, Logan.*
- 11:00 AM 13 **Effects of ovariectomization (OVX) and Synovex-Plus on the somatotropic axis in feedlot heifers.** C. R. Bailey*, S. R. Sanders, G. C. Duff, S. P. Cuneo, C. P. McMurphy, S. W. Limesand, J. A. Marchello, and D. W. Schafer, *The University of Arizona, Tucson.*
- 11:15 AM 14 **Effects of supplemental safflower and vitamin E during late gestation on lamb growth and thermogenesis.** J. M. Dafoe*, P. G. Hatfield, R. W. Kott, B. G. Sowell, J. G. Berardinelli, and K. C. Davis, *Montana State University, Bozeman.*

2005 Distinguished Service Award

**Chair: Dr. Tim Ross, New Mexico State University
Eccles Conference Center Auditorium - Room 216**

- 11:30 AM 1 **Strategic low-cost supplementation.** M. K. Petersen*, *New Mexico State University, Las Cruces.*

Breeding and Genetics

**Chair: Dr. Janice Rumph, Montana State University
Eccles Conference Center - Room 303/305**

- 1:30 PM 15 **Inheritance of facial hair whorl attributes in Holstein cattle.** K. L. Shirley*, D. J. Garrick, T. Grandin, and M. Deesing, *Colorado State University, Fort Collins.*
- 1:45 PM 16 **Genetic parameters of first lactation curve traits for Holstein-Friesian cows in Tunisia.** B. Rekik¹, A. Ben Gara¹, and N. Medini^{*2}, ¹*ESA Mateur, Mateur, Tunisia,* ²*INAT, Tunis, Tunisia.*
- 2:00 PM 17 **Breed of the dam effects on carcass traits and shear force of beef cattle.** D. C. Anderson^{*1,2},

M. W. Tess¹, K. C. Davis¹, D. L. Boss², and D. D. Kress¹, ¹Montana State University, Bozeman, Montana, USA, ²Northern Agricultural Research Center, Havre, Montana, USA.

- 2:15 PM 18 **Genetic correlations of component carcass traits with retail product percentage in Simmental cattle.** D. H. Crews, Jr.*^{1,2}, R. M. Enns², J. M. Rumph³, E. J. Pollak⁴, and R. L. Quaas⁴, ¹Agriculture and Agri-Food Canada, Lethbridge, Alberta, Canada, ²Colorado State University, Ft. Collins, ³Montana State University, Bozeman, ⁴Cornell University, Ithaca, NY.
- 2:30 PM 19 **Parameter estimates and breeding values for days to finish to a constant fat endpoint.** B. W. Brigham*¹, S. E. Speidel¹, D. W. Beckman¹, D. J. Garrick¹, S. Willmon², W. Vanderwert², and R. M. Enns¹, ¹Colorado State University, Fort Collins, ²American Gelbvieh Association, Westminster, CO.
- 2:45 PM 20 **Insignificant re-ranking of sires for weaning weight in above- and below-average environments.** S. E. Speidel*, R. M. Enns, and D. J. Garrick, Colorado State University, Fort Collins.
- 3:00 PM **BREAK.**
- 3:15 PM 21 **Breed comparisons and trends for ewe productivity and lamb growth traits in sheep managed as contemporaries in a western range system.** T. D. Leeds* and G. S. Lewis, USDA, ARS, U.S. Sheep Experiment Station, Dubois, ID.
- 3:30 PM 22 **Analysis of scrotal circumference adjusted for age or weight in Charolais field data.** J. M. Rumph*¹ and R. E. Williams², ¹Montana State University, Bozeman, ²American-International Charolais Association, Kansas City, MO.
- 3:45 PM 23 **Genetic parameters for stayability and body condition score in beef females.** D. W. Beckman*, S. E. Speidel, B. W. Brigham, D. J. Garrick, and R. M. Enns, Colorado State University, Fort Collins.

Extension Symposium

**Chair: Dr. Dale ZoBell, Utah State University
Eccles Conference Center Auditorium - Room 216**

- 1:30 PM 24 **Working together to achieve natural resource sustainability in central Oregon.** C. Parsons*¹, G. Hudspeth², and J. Dedrick³, ¹Oregon State University, Baker County Extension, Baker City, OR, ²Crook County Soil and Water Conservation District, Prineville, OR, ³Crooked River Watershed Council, Prineville, OR.
- 1:50 PM 25 **Dutchwoman Butte revisited: Examining paradigms for livestock grazing exclusion.** J. Sprinkle*¹, M. Holder², C. Erickson², A. Medina³, D. Robinett⁴, G. Ruyle¹, J. Maynard⁵, S. Tuttle¹, J.

Hays, Jr.¹, W. Meyer¹, S. Stratton⁶, A. Rogstad¹, K. Eldredge⁷, J. Harris⁵, L. Howery¹, ¹*University of Arizona, Tucson*, ²*Gila County Cattlegrowers, Tonto Basin, AZ*, ³*Rocky Mountain Research Station, Flagstaff, AZ*, ⁴*Natural Resources Conservation Service, Tucson, AZ*, ⁵*Southwest Resource Consultants, LLC, Las Cruces, NM*, ⁶*Natural Resources Conservation Service, Chandler, AZ*, ⁷*Arizona State Land Department, Pinetop, AZ*, ⁸*Tonto National Forest, Phoenix, AZ*.

- 2:10 PM 26 **Digital imagery and landscape-scale range-land monitoring.** J. B. Taylor*¹, D. T. Booth², and C. M. Moffet¹, ¹*USDA, ARS, U. S. Sheep Experiment Station, Dubois, ID*, ²*USDA, ARS, High Plains Grasslands Research Station, Cheyenne, WY*.
- 2:30 PM 27 **Vegetative management using controlled sheep grazing – The Montana Sheep Institute.** L. M. M. Surber*¹, R. W. Kott¹, J. D. Moore¹, B. L. Roeder¹, G. Hewitt¹, J. Smith², and K. Williams³, ¹*Montana State University, Bozeman*, ²*Powell County Weed District, Deer Lodge, MT*, ³*Custer County Extension, Miles City, MT*.
- 2:50 PM **BREAK.**
- 3:10 PM 28 **Using pre-weaning and post-weaning variables to predict carcass quality.** J. S. Davy*, D. J. Drake, J. W. Oltjen, and A. L. Van Eenennaam, *University of California, Davis*.
- 3:30 PM 29 **Survey provides information on cow-calf handbook use and value.** J. B. Glaze, Jr.*¹, J. W. Oltjen², and D. J. Drake², ¹*University of Idaho, Twin Falls*, ²*University of California, Davis*.

POSTER PRESENTATIONS

Eccles Conference Center - Room 201/203, 205/207

Environment and Livestock Management

- 30 **Effects of early weaning on cow performance, grazing behavior, and winter feed costs in the intermountain west.** D. W. Bohnert¹, D. C. Ganskopp², D. D. Johnson², S. J. Falck², M. L. Merrill*¹, and A. A. Clark¹, ¹*Oregon State University, Burns*, ²*Eastern Oregon Agricultural Research Center, USDA-ARS, Burns, OR*.
- 31 **Vitamin D supplementation in fall born Rambouillet lambs raised on small grain pastures.** J. M. Self¹, M. W. Salisbury*¹, B. J. May¹, G. R. Engdahl¹, C. B. Scott¹, and R. Horst², ¹*Angelo State University, San Angelo, TX*, ²*National Animal Disease Laboratory, Ames, IA*.
- 32 **Fenceline weaning and forage barley to extend the grazing season for replacement heifers.** R. J. Pruitt*,

W. B. Epperson, V. N. Owens, and A. J. Smart, *South Dakota State University, Brookings*.

33 **Corn germ as a source of supplemental fat for cows in late gestation.** R. J. Pruitt*, J. A. Clapper, W. B. Epperson, and G. A. Perry, *South Dakota State University, Brookings*.

34 **Reproductive wastage and lamb survival of Western White Face sheep grazing rangelands.** R. R. Redden*, S. H. Cox, M. R. Rubio, and T. T. Ross, *New Mexico State University, Las Cruces*.

35 **Effect of early weaning and retained ownership on cattle performance, forage disappearance, and annualized net return in a spring-calving beef system.** D. G. Landblom*¹, S. Paisley², S. Fausti³, P. Johnson³, R. Gates³, R. Salverson³, and H. H. Patterson⁴, ¹*North Dakota State University, Dickinson*, ²*University of Wyoming, Laramie*, ³*South Dakota State University, Rapid City*, ⁴*Padlock Ranch, Ranchester, WY*.

36 **Alternative supplementation strategies for replacement beef heifers grazing dry California foothills annual range or irrigated pasture during summer.** R. B. Monteiro*, G. D. Cruz, D. M. Myers, J. Maas, J. W. Oltjen, and R. D. Sainz, *University of California, Davis, Davis*.

Growth and Development

37 **Metabolic hormone profiles in Rambouillet lambs during the preweaning period.** M. J. McBee*, R. L. Knight, J. M. Benavidez, L. D. Abercrombie, and D. M. Hallford, *New Mexico State University, Las Cruces*.

38 **The effects of breed type and growing program on feedlot performance and fat gains in beef steers.** D. I. Jones*, F. R. C. Araujo, F. R. B. Ribeiro, M. J. Yokoo, A. C. Sanches, J. W. Oltjen, and R. D. Sainz, *University of California, Davis*.

Nonruminant Nutrition

39 **Organic Zinc in diets for weaned pigs.** M. Muniz¹, D. Berto¹, F. Wechsler¹, C. Fracaroli¹, A. Passos*², G. Lima³, and V. Castro¹, ¹*UNESP, Botucatu, Sã o Paulo, Brasil*, ²*TORTUGA, Sã o Paulo, Sã o Paulo, Brasil*, ³*EMBRAPA, Concórdia, Santa Catarina, Brasil*.

40 **A study of sweet (Surumi, Patacamaya, Sayana, Chucapca) and bitter (Real) Bolivian quinoa cultivars compared to corn, barley, and oats on the growth of improved Guinea pigs.** R. N. Pate¹, N. P. Johnston*¹, E. Rico², A. Bonifacio³, R. O. Kellems¹, and D. L. Kooyman¹, ¹*Brigham Young University, Provo, UT*, ²*University Mayor of San Simojn, Cochabamba, Bolivia*, ³*University of San Andres, La Paz, Bolivia*.

41 **The palatability of sweet (Surumi, Pagacamaya, Sayana, Chucapaca) and bitter (Real) Bolivian quinoa cultivars, corn, barley, and oats as Guinea pig footstuffs.** R. N. Pate¹, N. P. Johnston*¹, E. Rico²,

A. Bonifacio³, R. O. Kellems¹, and D. L. Kooyman¹,
¹*Brigham Young University, Provo, UT*, ²*University
Mayor of San Simon, Cochabamba, Bolivia*, ³*University
Mayor of San Adres, La Paz, Bolivia*.

Physiology

- 42 **Effects of preservation and time of processing on blood glucose concentrations in beef heifers.** S. L. Lake*, V. Nayigihugu, and B. W. Hess, *University of Wyoming, Laramie*.
- 43 **Effect of dilution, refrigeration and cryopreservation on capacitation-like changes in ram spermatozoa.** F. A. Rodríguez-Almeida*, C. O. Ávila, A. Anchondo, B. E. Sánchez, and J. A. Jiménez, *Universidad Autónoma de Chihuahua, Chihuahua, México*.
- 44 **Estrus synchronization and fertility in Creole cows treated with CIDR[®], progesterone, β - estradiol and PGF2A.** J. P. Zarate Martinez*, J. A. Ramirez Godinez, and F. A. Rodriguez Almeida, *Universidad Autonoma de Chihuahua, Chihuahua, Mexico*.

Ruminant Nutrition

- 45 **Effect of ferrous chloride on suckling calves and on microbial growth and metabolism using an *in vitro* rumen culture system.** P. S. Hole*¹, M. B. Schelvan², and J. O. Hall¹, ¹*Utah State University, Logan*, ²*University of Montana, Missoula*.
- 46 **Correlation between water mineral content and production parameters in dairy cattle.** P. S. Hole*, A. J. Young, and J. O. Hall, *Utah State University, Logan*.
- 47 **Effects of graded levels of Zeolite on digestibility and nutrient intake in sheep.** O. Ruiz-Barrera, Y. Castillo-Castillo*, C. Arzola-Alvarez, and C. Rodriguez-Muela, *Universidad Autonoma de Chihuahua, Chihuahua, Mexico*.
- 48 **Phosphorus absorption of feed ingredients commonly used in ruminant production systems in Venezuela.** S. Godoy* and C. F. Chicco, *Instituto Nacional de Investigaciones Agrícolas, Maracay, Aragua, Venezuela*.
- 49 **Effect of level of urea and soybean meal in solid state fermentation of apple byproducts.** D. Díaz-Placencia*, C. Rodríguez-Muela, F. Salvador-Torres, A. Alarcón-Rojo, O. Ruiz-Barrera, C. Arzola-Alvarez, and J. Jiménez-Castro, *Universidad Autónoma de Chihuahua, Chihuahua, México*.
- 50 **Effect of organic and inorganic selenium supplementation on weight performance of ewes and lambs.** C. Arzola*¹, J. Segovia¹, O. Ruiz¹, C. Rodriguez-Muela¹, J. Salinas², and J. Jimenez¹, ¹*Universidad Autonoma de Chihuahua, Mexico, Chihuahua, Chihuahua, Mexico*, ²*Universidad Autonoma de Tamaulipas, Mexico, Cd.Victoria, Tamaulipas, Mexico*.
- 51 **Protein supplementation of low-quality forage: Influence of frequency of supplementation on**

- ruminant and nutrient utilization.** C. S. Schauer*¹, M. M. Stamm¹, D. W. Bohnert², and J. S. Caton³, ¹*North Dakota State University, Hettinger*, ²*Oregon State University, Burns*, ³*North Dakota State University, Fargo*.
- 52 **Lamb muscle selenium concentration plateaus following 56 days of selenium supplementation.** C. S. Schauer*¹, J. Held², J. A. Daniel², J. S. Caton³, P. G. Hatfield⁴, R. Stobart⁵, and J. O. Hall⁶, ¹*North Dakota State University, Hettinger*, ²*South Dakota State University, Brookings*, ³*North Dakota State University, Fargo*, ⁴*Montana State University, Bozeman*, ⁵*University of Wyoming, Laramie*, ⁶*Utah State University, Logan*.
- 53 **Profitable calf backgrounding integrating annual forage crops.** M. M. Stamm*¹, C. S. Schauer¹, L. M. M. Surber², S. D. Cash², and A. L. Todd², ¹*North Dakota State University, Hettinger*, ²*Montana State University, Bozeman*.
- 54 **Effects of energy level on post-ruminal valine utilization by sheep.** S. Kuykendall* and C. A. Loest, *New Mexico State University, Las Cruces*.
- 55 **Effects of maternal selenium supply and dietary restriction on cellularity estimates of fetal jejunum, heart, and skeletal muscle.** T. L. Neville*¹, M. A. Ward¹, J. J. Reed¹, J. B. Taylor², K. A. Vonnahme¹, A. T. Grazul-Bilska¹, P. P. Borowicz¹, D. A. Redmer¹, L. P. Reynolds¹, and J. S. Caton¹, ¹*Dakota State University, Fargo*, ²*USDA-ARS, US Sheep Experiment Station, Dubois ID*.
- 56 **Influence of slice baling alfalfa hay on hay quality and digestive function of steers consuming a feedlot finishing diet.** F. Loya-Olguin¹, A. M. Encinias¹, D. A. Walker¹, N. A. Elam¹, and S. A. Soto-Navarro*², ¹*New Mexico State University, Clayton*, ²*New Mexico State University, Las Cruces*.
- 57 **Effects of urea supplementation level on performance of Suffolk lambs consuming a high concentrate diet.** A. Islas*, L. E. Camacho, K. Beebe, S. A. Soto-Navarro, J. M. Benavidez, R. L. Knight, M. J. McBee, F. O. Loya, L. D. Abercrombie, and D. M. Hallford, *New Mexico State University, Las Cruces*.

Friday, June 23

SYMPOSIA AND ORAL SESSIONS

Environment and Livestock Management

Chair: Kim Chapman, Utah State University
Eccles Conference Center Auditorium - Room 216

- 9:15 AM 58 **Performance of early weaned (\approx 80 d) vs normal weaned (\approx 215 d) cows in the northern great plains.** T. Geary*¹, R. Waterman¹, J. Paterson², R. Ansoategui², and R. Lipsey³, ¹USDA-ARS, Miles City, MT, ²Montana State University, Bozeman, ³American Simmental Association, Bozeman, MT.
- 9:30 AM 59 **Performance of early weaned (\approx 80 d) vs normal weaned (\approx 215 d) calves in the northern great plains.** R. C. Waterman*¹, T. W. Geary¹, J. A. Paterson², R. P. Ansoategui², and R. J. Lipsey³, ¹USDA-ARS, Fort Keogh Livestock and Range Reserch Laboratory, Miles City, MT, ²Montana State University, Bozeman, ³American Simmental Association, Bozeman, MT.
- 9:45 AM 60 **Growth performance and carcass characteristics of lambs fed Carnival or Forager field peas.** P. L. Price*, J. M. Krall, S. L. Lake, T. R. Weston, V. Nayigihugu, and B. W. Hess, *University of Wyoming, Laramie.*
- 10:00 AM 61 **Growth and reproductive performance of beef heifers fed Carnival or Forager field peas.** B. W. Hess*, J. M. Krall, B. K. Stevens, S. L. Lake, T. R. Weston, and V. Nayigihugu, *University of Wyoming, Laramie.*
- 10:15 AM 62 **The effects of timber harvest, herbivory, and season of use on diet selection of steers grazing forested rangelands.** K. J. Walburger*¹, T. DelCurto², and M. Vavra³, ¹University of Saskatchewan, Saskatoon, SK, Canada, ²Oregon State University, Union, ³USDA, Forest Service, La Grande, OR.
- 10:30 AM **BREAK.**

Physiology

Chair: Dr. Jason Ahola, University of Idaho
Eccles Conference Center - Room 303/305

- 9:15 AM 63 **Breeding performance of primiparous beef cows exposed to the biostimulatory effect of bulls using a progestin-based estrous synchronization protocol.** S. A. Tauck* and J. G. Berardinelli, *Montana State University, Bozeman.*
- 9:30 AM 64 **Comparison of CIDR and MGA as progestin sources in an estrus synchronization protocol that included progestin, PGF_{2A}, and timed AI and GnRH in beef heifers.**

S. A. Tauck*, J. R. C. Wilkinson, and J. G. Berardinelli, *Montana State University, Bozeman.*

- 9:45 AM 65 **Superimposing 14 d MGA Pre-feeding and(or) 7 d CIDR on the Select Synch (GnRH-PG) estrous synchronization protocol in beef cows.** J. K. Ahola*¹, V. A. Aznarez², G. E. Seidel, Jr.², and J. C. Whittier², ¹*University of Idaho, Caldwell*, ²*Colorado State University, Fort Collins.*
- 10:00 AM 66 **Microarray analysis of gene expression in anterior pituitary glands from anestrous and cycling postpartum beef cows.** A. J. Roberts*¹ and D. J. McLean², ¹*USDA, ARS, Ft Keogh LARRL, Miles City MT, Miles City, MT*, ²*Washington State University, Pullman.*
- 10:15 AM 67 **Effects of dam nutrition on growth and reproductive performance of heifer calves.** J. Martin*¹, K. Vonnahme², D. Adams¹, G. Lardy², and R. Funston¹, ¹*University of Nebraska, North Platte*, ²*North Dakota State University, Fargo.*
- 10:30 AM **BREAK.**

Ruminant Nutrition

**Chair: Dr. Duarte Diaz, Utah State University
Eccles Conference Center Auditorium - Room 216**

- 10:45 AM 68 **Determination of diet protein and digestibility of native Sandhills upland range.** B. G. Geisert*, T. J. Klopfenstein, D. C. Adams, and J. A. Musgrave, *University of Nebraska, Lincoln.*
- 11:00 AM 69 **Diet quality impacts on ewe nutrient partitioning.** R. L. Endecott*, S. L. Lodge-Ivey, K. K. Kane, L. M. Dixon, M. E. Giacomini, B. R. Schilling, S. A. Soto-Navarro, C. A. Löest, D. E. Hawkins, and M. K. Petersen, *New Mexico State University, Las Cruces.*
- 11:15 AM 70 **Effect of fat supplementation of steers grazing wheat pasture on forage intake and characteristics of digestion.** D. Chabot*, C. Chabot, L. K. Conway, and S. A. Soto-Navarro, *New Mexico State University, Las Cruces.*

POSTER PRESENTATIONS

Eccles Conference Center - Room 201/203, 205/207

Extension

- 71 **Case study: A five year summary of carcass data from calves enrolled in the Montana Beef Network** K. M. Rolfe*¹, J. A. Paterson¹, S. Suther³, M. King², and L. Corah³, ¹*Montana State University, Bozeman*, ²*Colorado State University, Ft. Collins*, ³*Certified Angus Beef, Manhattan, KS.*

- 72 **Effect of decreasing temperature on the readability of six different radio frequency electronic identification transponders scanned by five different transceivers.** L. E. Wallace*, J. A. Paterson, R. Clark, A. Kellom, T. Standley, and M. Vogel, *Montana State University, Bozeman.*
- 73 **Readability and retention rates of radio frequency identification (RFID) ear tags when tracking the movement of calves using three scanning methods.** A. Kellom*, J. A. Paterson, R. Clark, and L. Duffey, *Montana State University, Bozeman.*
- 74 **Effects of prophylactic administration of Ceftiofur crystalline free acid on health and performance of newly received beef calves.** A. M. Encinias*¹, D. A. Walker¹, C. W. Murdock¹, L. A. Reeves¹, K. J. Malcolm-Callis¹, and S. A. Soto-Navarro², ¹*New Mexico State University, Clayton*, ²*New Mexico State University, Las Cruces.*

Food Safety

- 75 **Prevalence of Shiga toxin-producing *Escherichia coli* in feedlot steers during winter and spring.** L. M. Bollinger*¹, H. S. Hussein¹, M. R. Hall¹, and E. R. Atwill², ¹*University of Nevada, Reno*, ²*University of California, Tulare.*

Meat Science and Muscle Biology

- 76 **Feedlot performance and carcass characteristics of steers treated with two beta-adrenergic agonists.** L. Avendano*¹, V. Torres², F. J. Meraz², C. Perez¹, F. Figueroa¹, P. H. Robinson³, A. Correa¹, and F. D. Alvarez¹, ¹*Universidad Autonoma de Baja California, Mexicali, Baja California, Mexico*, ²*Asociacion Ganadera Local Especializada en Bovinos Para Engorda de Baja California, Mexicali, Baja California, Mexico*, ³*University of California, Davis.*
- 77 **Meat quality of steers treated with two beta-adrenergic agonists.** L. Avendano*¹, V. Torres², F. J. Meraz², C. Perez¹, F. Figueroa¹, P. H. Robinson³, F. D. Alvarez¹, and A. Correa¹, ¹*Universidad Autonoma de Baja California, Mexicali, Baja California, Mexico*, ²*Asociacion Ganadera Local Especializada en Bovinos Para Engorada de Baja California, Mexicali, Baja California, Mexico*, ³*University of California, Davis.*
- 78 **Effects of feeding olive pomace on the fatty acid profile of pork.** S. P. Doyle*¹, K. R. Harrison¹, C. A. Daley¹, P. C. Hamilton², and D. K. Sinnott¹, ¹*California State University, Chico*, ²*Sam Houston State University, Huntsville, TX.*

Pastures

- 79 **Use of a Russian knapweed as a protein supplement for beef cows consuming low-quality forage.** D. W. Bohnert*¹, R. L. Sheley², S. J. Falck², and A. A. Nyman¹, ¹*Oregon State University, Burns*, ²*Eastern*

Oregon Agricultural Research Center, USDA-ARS, Burns, OR.

- 80 **Evaluating beef cow performance: Comparing crested wheatgrass/legume, big bluestem, and foxtail millet in swath grazing.** B. W. Neville^{*1}, G. P. Lardy¹, P. Nyren², and K. K. Sedivec¹, ¹*North Dakota State University, Fargo*, ²*Central Grasslands Research Center, Streeter, ND.*
- 81 **Comparison of techniques for quantitative analysis of acid detergent lignin in roughages.** T. R. Weston, V. Nayigihugu*, and B. W. Hess, *University of Wyoming, Laramie.*
- 82 **Comparison of catalysts for direct transesterification of fatty acids in freeze-dried forage samples.** T. R. Weston¹, J. D. Derner², C. M. Murrieta¹, D. C. Rule^{*1}, and B. W. Hess¹, ¹*University of Wyoming, Laramie*, ²*High Plains Grasslands Research Station, USDA-ARS, Cheyenne, WY.*
- 83 **Beef cattle grazing and forage production comparisons of alfalfa-grass versus sainfoin pastures.** A.D. Iwaasa*, P.G. Jefferson, and R. Lemke, *Agriculture and Agri-Food Canada - Semiarid Prairie Agricultural Research Centre, Swift Current, Saskatchewan, Canada.*
- 84 **Relationships among harvest index, forage quality, maturity and other factors in hay barley varieties.** A. N. Hafla*, S. D. Cash, P. F. Hensleigh, and L. M. M. Surber, *Montana State University, Bozeman.*
- 85 **Assessing the nutritive value of one-seed juniper in sheep.** M. E. Giacomini*, S. Utsumi, S. Lodge-Ivey, A. Cibils, S. Soto-Navarro, R. L. Endecott, and M. K. Petersen, *New Mexico State University, Las Cruces.*

Ruminant Nutrition

- 86 **Feeding value of corn and “Valier” barley for finishing steers.** N. L. Iversen*, A. V. Grove, J. G. P. Bowman, B. L. Robinson, and T. K. Blake, *Montana State University, Bozeman.*
- 87 **Digestibility of barley beta-glucan in beef cattle.** A. V. Grove*, C. R. Kaiser, N. L. Iversen, A. Hafla, B. L. Robinson, and J. G. P. Bowman, *Montana State University, Bozeman.*
- 88 **Feeding value of corn, “Haxby”, “Valier”, and “H3” barley varieties for finishing steers.** A. V. Grove*, J. G. P. Bowman, D. L. Boss, and T. K. Blake, *Montana State University, Bozeman.*
- 89 **Feeding value of “Haxby”, “Valier”, “MT960099”, and “Eslick” barley varieties for finishing steers.** A. V. Grove*, J. G. P. Bowman, L. M. M. Surber, D. L. Boss, and T. K. Blake, *Montana State University, Bozeman.*
- 90 **Feeding value of corn, “Valier” barley, and corn/Valier combinations for finishing steers.** A. V. Grove*, J. G. P. Bowman, L. M. M. Surber, and T. K. Blake, *Montana State University, Bozeman.*

- 91 **Feedlot performance and serum metabolic hormone profiles in lambs receiving four levels of soybean meal supplementation.** L. E. Camacho*, S. A. Soto-Navarro, J. M. Benavidez, R. L. Knight, M. J. McBee, F. O. Loya, L. D. Abercrombie, and D. M. Hallford, *New Mexico State University, Las Cruces.*
- 92 **Evaluation of animal performance in crossbred hair lambs fed with a high concentrate diet.** G. Villalobos*, F.A. Rodríguez-Almeida, G. Lara-Camargo, J.C. Estrada, M. Zapata, and D. Domínguez, *Universidad Autónoma de Chihuahua, Chihuahua, Chih., México.*
- 93 **Effect of white corn processing method on some digestion indicators of Brahman cross finishing bulls.** R. Barajas*¹, B. J. Cervantes¹, I. G. Gonzalez², J. M. Romo¹, and J. J. Lomeli², ¹*FMVZ-Universidad Autónoma de Sinaloa, Culiacan, Sinaloa, Mexico,* ²*EB-Universidad Autónoma de Sinaloa, Culiacan, Sinaloa, Mexico.*
- 94 **Effect of white corn processing method on feedlot performance of Brahman cross finishing bulls.** R. Barajas*¹, B. J. Cervantes¹, R. J. Virgilio², J. M. Romo¹, and J. J. Lomeli¹, ¹*FMVZ-Universidad Autónoma de Sinaloa, Culiacan, Sinaloa, Mexico,* ²*Tecnología de Máxima Producción, S.A. de C.V., Culiacan, Sinaloa, Mexico.*
- 95 **Effect of white corn processing method on carcass characteristics of Brahman cross finishing bulls.** R. Barajas*¹, B. J. Cervantes¹, R. J. Virgilio², J. M. Romo¹, and J. J. Lomeli¹, ¹*FMVZ-Universidad Autónoma de Sinaloa, Culiacan, Sinaloa, Mexico,* ²*Tecnología de Máxima Producción, S.A. de C.V., Culiacan, Sinaloa, Mexico.*
- 96 **Performance and residual feed intake are similar in Angus-Hereford steers housed in individual or group pens.** G. D. Cruz*, R. B. Monteiro, J. A. Rodriguez, D. B. Monteiro, and R. D. Sainz, *University of California, Davis.*
- 97 **Carcass composition and visceral organs are similar at harvest in low- and high-residual feed intake groups of Angus-Hereford steers.** R. D. Sainz, G. D. Cruz*, R. B. Monteiro, J. A. Rodriguez, D. B. Monteiro, V. Guidi, and R. J. Anaruma, *University of California, Davis.*
- 98 **The effect of feeding whey silage to beef cows under maintenance conditions.** D. R. ZoBell*, K. C. Olson, R. D. Wiedmeier, C. Stonecipher, and C. K. Chapman, *Utah State University, Logan.*

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