Western Section

American Society of Animal Science

72nd Annual Meeting

University of California

Davis, California

June 21-23, 2000
Western Section American Society of Animal Science

Summary of Scheduled Events

Tuesday, June 20, 2000
2:00 p.m. - 5:00 p.m.  Registration, Primero Grove Community Center

Wednesday, June 21, 2000
7:15 a.m. - 5:00 p.m.  Registration, Rm 1100, Social Sciences Bldg.
8:00 a.m. - 4:00 p.m.  Symposium: “Visions for U.S. Beef Production Systems” - Rm 1100, Social Sciences Bldg.
6:00 p.m. - 8:00 p.m.  Registration, Primero Grove Community Center
6:00 p.m. - 9:00 p.m.  Informal Reception - Primero Grove Community Center

Thursday, June 22, 2000
8:00 a.m. - 5:00 p.m.  Registration, Rm 1100, Social Sciences Bldg.
8:00 a.m. - 8:40 a.m.  Distinguished Service Award Presentation, Dr. Robert Short, USDA-ARS, Miles City, MT, Rm 1100, Social Sciences Bldg.
8:30 a.m. - 5:00 p.m.  Spouses and Youth Tours, Primero Grove Community Center
8:45 a.m. - 12:00 p.m.  Graduate Student Competition, Rm 1100, Social Sciences Bldg.
12:30 p.m. - 5:00 p.m.  Posters: Ruminant and Non-Ruminant Nutrition, Rm II (Second Floor), Memorial Union Bldg. (Authors Present: 3:30 p.m. - 5:30 p.m.)
1:00 p.m. - 3:00 p.m.  Extension Symposium: “Innovative Extension Programs in the West”, Rm 1130, Hart Hall
2:00 p.m. - 3:15 p.m.  Graduate Student Competition, Rm 1100, Social Sciences Bldg.
3:30 p.m. - 5:00 p.m.  Breeding and Genetics/Extension/Teaching, Rm 1100, Social Sciences Bldg.
3:30 p.m. - 5:00 p.m.  Pastures and Forages, Rm 1130, Hart Hall
3:30 p.m. - 5:00 p.m.  Growth and Development/Meat Science/Environment and Livestock, Rm 1150, Hart Hall
6:30 p.m. - 9:00 p.m.  Awards - Barbecue Dinner, Putah Creek Lodge

Friday, June 23, 2000
8:00 a.m. - 12:00 p.m.  Registration, Rm 1100, Social Sciences Bldg.
8:00 a.m. - 8:55 a.m.  Business Meeting, Rm 1100 Social Sciences Bldg.
8:00 a.m. - 1:00 p.m.  Posters: Room II (Second Floor), Memorial Union Bldg. (Authors Present: 9:00 a.m. - 11:00 a.m.)
9:00 a.m. - 12:00 p.m.  Ruminant Nutrition/Non-Ruminant Nutrition, Rm 1100, Social Sciences Bldg.
9:00 a.m. - 12:00 p.m.  Pastures and Forages/Environment and Livestock, Rm 1130, Hart Hall
9:00 a.m. - 11:30 a.m.  Physiology, Rm 1150, Hart Hall
PROGRAM
Wednesday, June 21, 2000
SYMPOSIUM
Visions for U.S. Beef Production Systems
Dr. Rodney Preston, Pagosa Springs, CO, Presiding

Wednesday, 8:00 a.m. - 4:00 p.m.
Room: 1100 Social Science

8:00 a.m.  Introduction
Dr. James Sprinkle, University of Arizona, Payson

8:15 a.m.  Historical overview of U.S. beef production (1870-2000)
Mr. Charles Ball (Author - “Building the Beef Industry”), Amarillo, TX

9:00 a.m.  Can the cattle industry be structured to lower production costs and be less capital intense
Mr. David Pratt, Ranch Management Consultants, LLC, Fairfield, CA

9:45 a.m.  Break

10:10 a.m.  New approaches for enhancing grazing productivity
Dr. Karen Launchbaugh, University of Idaho, Moscow

10:55 a.m.  Environmental stewardship in the future
Dr. Michael Galyean, Texas Tech University, Lubbock

11:40 a.m.  Introduction of sponsors

11:50 a.m.  Lunch

1:00 p.m.  Future technologies available and applied by the beef industry
Dr. Robert Bellows, USDA-ARS, Miles City, MT

1:45 p.m.  Beef production systems in the future
Dr. Larry Corah, Certified Angus Beef Program, Manhattan, KS

2:30 p.m.  Break

2:50 p.m.  Panel discussion: Characteristics of a profitable cattle operation
Dr. Jack Whittier, Colorado State University, Ft. Collins, Moderator
Mr. James Almond, V.P. & General Manager, Grierson Ranch, Hysham, MT
Dr. Larry Corah, Certified Angus Beef Program, Manhattan, KS
Dr. James Oltjen, University of California, Davis
Mr. Dennis Sun, CRM Consultant, Wyoming Department of Agriculture

3:30 p.m.  Questions to panel from the audience
INFORMAL RECEPTION

Wednesday, 6:00 p.m. - 9:00 p.m.
Primero Grove Community Center

Thursday, June 22, 2000

DISTINGUISHED SERVICE AWARD PRESENTATION

1999 Awardee

Dr. Robert Short, USDA-ARS, Miles City, MT

Thursday, 8:00 a.m. - 8:40 a.m
Room 1100 Social Sciences

GRADUATE STUDENT COMPETITION

Chair: Dr. Thomas Geary
(Chair of Competition Committee)
USDA-ARS, Miles City, MT

Thursday, 8:45 a.m. - 12:00 p.m.
Room: 1100 Social Sciences

<table>
<thead>
<tr>
<th>Time</th>
<th>Abstract</th>
<th>Author(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:45</td>
<td>1 Maternal biological efficiency in beef cattle.</td>
<td>J. D. Stevens*, D. D. Kress, D. C. Anderson, and K. C. Davis, Montana State University, Bozeman, Northern Agricultural Research Center, Havre, MT.</td>
</tr>
<tr>
<td>9:00</td>
<td>2 Effects of season of use on beef cattle distribution patterns and subsequent vegetation use in mountain riparian areas.</td>
<td>C. Parsons, P. Momont, T. DelCurto, and J. Sharp, University of Idaho, Caldwell, Oregon State University, Union.</td>
</tr>
<tr>
<td>10:00</td>
<td>BREAK</td>
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<tr>
<td>11:00</td>
<td>9 Effects of supplemental energy and DIP on performance, grazing behavior, forage intake and digestion of steers grazing winter range.</td>
<td>T. N. Bodine, H. T. Purvis II, and D. A. Cox, Oklahoma State University, Stillwater.</td>
</tr>
<tr>
<td>11:15</td>
<td>10 Supplement and forage intake by grazing ewes fed either a block or pelleted supplement.</td>
<td>N. Taylor, P. G. Hatfield, B. F. Sowell, J.G.P. Bowman, J. S. Drouillard, and D. V. Dhuyvetter, Montana State</td>
</tr>
</tbody>
</table>

11:45 12 Effects of postpartum supplementation with two types of cracked safflower on production, reproduction, metabolites, and hormonal profiles of primiparous beef heifers. J.D. Bottger*, D.L. Hixon, B.W. Hess, R.N. Funston, D.M. Halford, L.F. Woodard, and G.E. Moss; University of Wyoming, Laramie, USDA-ARS, Miles City, MT; New Mexico State University, Las Cruces.

GRADUATE STUDENT CAREER FORUM
Moderator: Ria de Grassi, Director of National Affairs & Research, California Farm Bureau, Sacramento

Thursday, 12:05 p.m. - 1:55 p.m.
East Room, Memorial Union

Box lunch provided, courtesy of Western Section Executive Committee

Panelists: Mr. Patrick Blacklock, Vice-President, Government Relations, California Cattlemen’s Association
Dr. Eric Erba, Economist, Dairy Marketing Branch, California Department of Food & Agriculture
Dr. Carl Old, Nutrition Consultant, LeGrand, California
Dr. Jan Roser, Department of Animal Science, University of California, Davis

EXTENSION SYMPOSIUM
Innovative Extension Programs in the West

Dr. Rodney Kott, Montana State University, Bozeman, Presiding

Thursday, 1:00 p.m. - 3:00 p.m.
Room: 1130 Hart Hall

Software Tools for Rangeland Management Plans
John Harper, University of California Cooperative Extension.
“A to Z Retained Ownership, Inc”: Cattle for Grid 2000
Pat Momont, University of Idaho.
Risk Management In Retained Ownership Programs
Ben Bruce and Ron Torell, University of Nevada.
Montana Beef-ability
Marc King and Ron Carlstrom. Montana State University.
Oregon Steer Feeding Trials: An Extension Demonstration Project for Alternative Marketing Options and the Genetic Improvement of Commercial Beef Cattle
Marketing Strategies for Cow-Calf Operations
Montana Beef Network
Léif Anderson and John Paterson, Montana State University.
Achieving and Surviving Improved Beef Quality
Dan Drake and Jim Oltjen, University of California Cooperative Extension.
Resource for the Future: Cow-Calf Management Guide on CD-ROM
GRADUATE STUDENT COMPETITION
Chair: Dr. Thomas Geary, USDA-ARS, Miles City, MT
Thursday, 2:00 p.m. - 3:15 p.m.
Room: 1100 Social Sciences

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>2:15</td>
<td>14</td>
<td>Winter supplementation of primiparous heifers grazing winter range based on the Metabolizable Protein System versus the Crude Protein System. H. H. Patterson*, D. C. Adams, T. J. Klopfenstein, and B. Teichert, University of Nebraska, Lincoln.</td>
</tr>
<tr>
<td>2:30</td>
<td>15</td>
<td>Effect of increasing undegradable intake protein (UIP) on net portal and hepatic flux of nutrients and insulin in beef heifers that consume low-quality forage. G. D. Pulsipher*, C. R. Krehbiel, L. A. Balstad, B. M. Capitan, M. S. Brown, and D. M. Halford, New Mexico State University, Las Cruces.</td>
</tr>
<tr>
<td>2:45</td>
<td>16</td>
<td>Effect of ethanol and oil supplementation on site and extent of digestion in wethers fed forage-based diets. J. Gould*, E. Scholljegerdes, B. Hess, P. Ludden, and D. Rule, University of Wyoming, Laramie.</td>
</tr>
<tr>
<td>3:00</td>
<td>17</td>
<td>The influence of level of feed restriction on forage digestibility by beef cattle. E. J. Scholljegerdes*, B. W. Hess, and P. A. Ludden, University of Wyoming, Laramie.</td>
</tr>
</tbody>
</table>

BREEDING & GENETICS, EXTENSION, TEACHING
Chair: Dr. Roberto Sainz, University of California, Davis
Thursday, 3:30 p.m. - 5:00 p.m.
Room: 1100 Social Sciences

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<th>Time</th>
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<tbody>
<tr>
<td>4:00</td>
<td>20</td>
<td>Development of economic expected progeny differences. K. Giacomini* and J. L. Beckett, California Polytechnic State University, San Luis Obispo.</td>
</tr>
<tr>
<td>4:45</td>
<td>23</td>
<td>Randomizing variables in quantitative animal science assignments. J. L. Beckett*, Cal Poly State University, San Luis Obispo.</td>
</tr>
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</table>
# PASTURES/FORAGES

Chair: Dr. James Sprinkle, University of Arizona, Payson

Thursday, 3:30 p.m. - 5:00 p.m.
Room: 1130 Hart Hall

<table>
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<tr>
<th>Time</th>
<th>No.</th>
<th>Abstract</th>
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<tbody>
<tr>
<td>3:30</td>
<td>24</td>
<td>Relationship between esophageal diet samples, clipped forage samples, and weight gain of steers. M. Blummel* and E. E. Grings, USDA-ARS, Fort Keogh LARRL, Miles City, MT.</td>
</tr>
<tr>
<td>4:00</td>
<td>26</td>
<td>Influence of cow age on consumption of hand-fed supplements and subsequent performance of beef cows winter grazing stockpiled forage. N. A. Suverly**, T. DelCurto², J. Jaeger², and M.R. Keller¹, ¹Oregon State University, Corvallis, ²Eastern Oregon Agricultural Research Center, Oregon State University, Union.</td>
</tr>
<tr>
<td>4:45</td>
<td>29</td>
<td>Summer grazing and fall grazing pressure effects on protein content and digestibility of fall range diets in the Nebraska Sandhills. H. H. Patterson*, T. J. Klopfenstein, D. C. Adams, W. H. Schacht, P. E. Reece, and A. E. Herron, University of Nebraska, Lincoln.</td>
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</table>

# GROWTH/DEVELOPMENT, MEAT SCIENCE, ENVIRONMENT/LIVESTOCK MGT

Chair: Dr. Pat Hatfield, Montana State University, Bozeman

Thursday, 3:30 p.m. - 5:00 p.m.
Room: 1150 Hart Hall

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<thead>
<tr>
<th>Time</th>
<th>No.</th>
<th>Abstract</th>
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<tbody>
<tr>
<td>3:30</td>
<td>30</td>
<td>PCR cloning and expression of chicken myostatin cDNA in E.coli. Y.S. Kim¹, K.S. Baek², M.A. Dunn¹, and D. Borthakur¹, ¹University of Hawaii at Manoa, Honolulu, ²National Livestock Research Institute, Namwon, Korea.</td>
</tr>
<tr>
<td>3:45</td>
<td>31</td>
<td>Ultimate pH affects the tenderness of longissimus muscle in callipyge lamb. Y. B. Lee* and S. Zhang, University of California, Davis.</td>
</tr>
<tr>
<td>4:00</td>
<td>32</td>
<td>Marketing lamb as a branded product. T. P. Ringkob**, H. A. Glimp¹, D. W. Holcombe¹, R. F. Butler¹, and E. F. Cox², ¹School of Veterinary Medicine, University of Nevada, Reno, ²Meat Marketing Consultant, Reno, NV.</td>
</tr>
<tr>
<td>4:30</td>
<td>34</td>
<td>Preliminary description of swainsonine flux across ovine splanchnic tissue. J. B. Taylor**, J. R. Strickland¹, and C. R. Krehibiel², ¹New Mexico State University, Las Cruces, ²Oklahoma State University, Stillwater.</td>
</tr>
<tr>
<td>4:45</td>
<td>35</td>
<td>Serum profiles in ewe lambs fed commercial feed with accidentally elevated copper and treated with</td>
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</table>
Ruminant & Non-Ruminant Nutrition

POSTERS
Thursday
Authors present: 3:30 p.m. - 5:30 p.m.
Room: Memorial Union II (Second Floor)

Abstract Number
36 Influence of oral natural interferon-alpha (IFN-a) on performance and rectal temperature of newly received beef steers. N. K. Chirase* and L. W. Greene, Texas Agricultural Experiment Station, Amarillo, West Texas A&M University, Canyon.

37 Effect of Bovipro™ on performance and serum metabolite concentrations of beef steers. N. K. Chirase*, L. W. Greene, F. T. McCollum, B. W. Auvermann, and N. A. Cole. 1Texas Agricultural Experiment Station, Amarillo, 2West Texas A&M University, Canyon, 3Texas Agricultural Extension Service, 4USDA/ARS, Bushland, TX.


39 Short and long term gas production in selected California feedstuffs. G. Getachew* and P.H. Robinson, University of California, Davis.

40 Nutritive value and storage characteristics of Pima cottonseed. P.H. Robinson*, G. Getachew, and E.J. DePeters, Department of Animal Science, University of California, Davis.

41 The effect of an accelerated feeding program on dairy beef steers: production, carcass characteristics and economic returns. D. R. ZoBell* and R. D. Wiedmeier, Utah State University, Logan.

42 Influence of flake thickness of roasted barley on in situ ruminal rate and extent of digestion of dry matter, protein, fiber, and starch in cattle. S. J. Sorensen and D. D. Hinman*, University of Idaho, Caldwell.

43 Effect of inoculants on whole-crop barley silage fermentation and dry matter degradability in the rumen. A. N. Hristov*, T. A. McAllister, and S. Graham, 1University of Idaho, Moscow, 2Agriculture and Agri-Food Canada, Lethbridge, Alberta, 3Chr. Hansen Ltd., Mississauga, Ontario.

44 Effect of processing and ensiling on microbial attachment and degradability in the rumen of corn silage kernels. A. N. Hristov*, T. A. McAllister, K. Claypool, and D. ZoBell*, 1University of Idaho, Moscow, 2Agriculture and Agri-Food Canada, Lethbridge, Alberta, 3Utah State University, Logan.

45 Effects of dietary vitamin E on performance and health of newly received beef steers. J. D. Rivera*, G. C. Duff, M. L. Galyean, and D. A. Walker, 1Clayton Livestock Research Center, New Mexico State University, Clayton, 2Texas Tech University, Lubbock.

46 Effect of protein level on the activity of trypsin and chymotrypsin, and the apparent ileal amino acid digestibility in pigs fed grain sorghum-soybean meal diets. N. Bautista, M. Cervantes*, M. Cuca, A. Pro, C. Becerril, and S. Rodríguez, 1Colegio de Postgraduados, Montecillos, Edoméx, 2ICA, Universidad Autónoma de Baja California, Mexicali.

47 Effects of calcium soaps of fatty acids and bovine tallow on milk yield and composition in Native x Nubian goats. J. L. Espinoza*, A. Monroy, J. A. Armenta, and R. Ortega, Universidad Autónoma de Baja California Sur, La Paz, Mexico.

48 Effect of dietary protein level and the addition of a fungal protease on the performance of growing pigs. M. Cervantes*, J. González, M. Cuca, and N. Torrejera, 1ICA, Universidad Autónoma de Baja California, Mexicali, 2COLEGIO POSTGRADUADOS, MONTECILLOS, EDOMÉXICO.

49 Performance of finishing pigs fed wheat-based diets containing low levels of inorganic phosphorus. M. Cervantes*, A. Araiza, J. H. Espinoza, and M. Cuca, 1ICA, Universidad Autónoma de Baja California, Mexicali, 2COLEGIO POSTGRADUADOS, MONTECILLOS, EDOMÉXICO.

Interaction of maceration and fibrolytic enzyme supplementation on digestion of rice straw in Holstein cows. M. A. Lopez-Soto*, A. Plascencia*, and R. A. Zinn*, Universidad Autonoma, Baja California, Mexico, University of California, Davis.

Metabolizable amino acid requirement of feedlot calves. M. N. Machado*, M. F. Montano, and R. A. Zinn, University of California, Davis.

Comparative feeding value of elephant grass in growing diets for feedlot cattle. E. G. Alvarez**, M. F. Montano, and R. A. Zinn, Universidad Autonoma, Baja California, Mexico, University of California, Davis.


Influence of tempering on the steaming requirements of flaked corn for feedlot cattle. R. A. Ware, J. Salinas*, and R. A. Zinn, University of California, Davis.

Comparative feeding value of corn seed byproduct pellets in growing-finishing diets for feedlot cattle. R. A. Ware, H. Perez, F. Sanchez*, B. R. Tonroy, and R. A. Zinn, University of California, Davis.

Influence of maceration on the feeding value of rice straw in growing-finishing diets for feedlot cattle. N. Torrentera*, E. G. Alvarez, and R. A. Zinn, University of California, Davis.

Health and growth-performance merits of feeding shipping-stressed calves on a chopped forage blend prior to feeding a 70% concentrate receiving diet. S. A. Rodriguez* and R. A. Zinn, University of California, Davis.

The interaction of flake density and tempering on the comparative feeding value of steam-flaked corn for feedlot cattle. R. A. Zinn, E. G. Alvarez, M. F. Montano, S. A. Rodriguez, and R. A. Ware*, University of California, Davis.

Efficacy of feeding a probiotic to yearling replacement beef heifers in a wintering backgrounding program. J.R. Jaeger* and T. DelCurto, Eastern Oregon Agricultural Research Center, Oregon State University, Union.

Use of microtracers as a reliable and inexpensive tool for rapid assessment of microingredient distribution in diets for feedlot cattle: molasses- and forage-level effects. J. F. Calderon*, J. Melendrez*, M. Machado*, M. Ambrozio*, A. Pereira*, and R. A. Zinn*, Universidad Autonoma, Baja California, Mexico, University of California, Davis.

A comparison of bite-count derived botanical composition of diet and clipping vs. rumen evacuation as techniques to estimate diet quality with grazing beef cattle. D. Damiran*, S. Findhold, T. DelCurto*, and B.K. Johnson*, Eastern Oregon Agricultural Research Center, Oregon State University, Union, Oregon Department of Fish and Wildlife, La Grande.

Interaction of dietary calcium and fat on digestive function in cattle fed high-forage diets. H. L. Castro†, J. F. Sanchez*, M. S. Vasquez*, E. G. Alvarez*, and R. A. Zinn, Universidad Juarez, Durango, Mexico, University of California, Davis.


Influence of level of supplementation of the feeding value of cane molasses in growing-finishing diets for feedlot cattle. M. F. Montano†, K. Preciado†, M. Ambrozio, A. Pereira*, and R. A. Zinn*, Universidad Autonoma, Baja California, Mexico, University of California, Davis.

Influence of close-up starting programs on performance of feedlot steers during the early receiving period. M. Machado* and R. A. Zinn, University of California, Davis.

Comparative digestion of steam flaked corn, barley, wheat and oats in finishing diets for feedlot cattle. S. A. Rodriguez*, M. F. Montano, and R. A. Zinn, University of California, Davis.


Influence of variation in supplement inclusion rate and lairomycin propionate on growth performance of feedlot cattle. R. A. Zinn\(^1\), A. Plascencia\(^2\), M. F. Montano\(^2\), and A. Pereira\(^1\), \(^1\)University of California, Davis, \(^2\)Universidad Autonoma, Baja California, Mexicali, Mexico.

**AWARDS**

**BARBECUE DINNER**

Thursday, 6:30 p.m. - 9:00 p.m.
Putah Creek Lodge

**Friday, June 23, 2000**

**BUSINESS MEETING**

Friday, 8:00 a.m. – 8:55 a.m.
Rm 1100 Social Sciences Bldg

**RUMINANT & NON-RUMINANT NUTRITION**

Chair: Dr. Peter Robinson, University of California, Davis

Friday, 9:00 a.m. - 12:00 p.m.
Room: 1100 Social Sciences

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>9:00</td>
<td>73 Integration of early weaning and sexed semen into a single-calf heifer system to increase the value of non-replacement heifers. B.A. Ereth*, J.C. Whittier, P.D. Burns, D.N. Schutz, D.W. Couch, and G.E. Seidel, Jr, Colorado State University, Fort Collins.</td>
</tr>
<tr>
<td>9:30</td>
<td>75 Effect of hay source and level on tissue trace mineral concentrations in growing steers. E. E. Grings*(^1) and W. W. Poland(^2), (^1)USDA-ARS, Miles City, MT, (^2)Dickinson Research Extension Center, North Dakota State University, Dickinson.</td>
</tr>
<tr>
<td>9:45</td>
<td>76 Effects of a slow-release urea product on performance and carcass characteristics of feedlot cattle. G. C. Duff*(^1), D. A. Walker(^1), K. J. Malcolm-Callis(^1), M. W. Wiseman(^1), J. D. Rivera(^1), and M. L. Galyean(^2), (^1)Clayton Livestock Research Center, New Mexico State University, Clayton, (^2)Texas Tech University, Lubbock.</td>
</tr>
<tr>
<td>10:00</td>
<td>77 Influence of betaine on pasture, finishing and carcass performance, and backfat and marbling deposition in steers. B.J. Bock*(^1), J.R. Brethour(^2), K.R. Harmount(^2), and S.R. Goodall(^2), (^1)Fort Hays State University, Hays, (^2)Agricultural Research Center, Kansas State University, Hays, (^2)Gladwin A. Read Co., Elgin, IL.</td>
</tr>
<tr>
<td>10:15</td>
<td>BREAK</td>
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</table>
Development of a low-cost, easy-to-assemble, and durable ruminal cannula for cattle. E. G. Alvarez* and R. A. Zinn*, 1Universidad Autonoma, Baja California, Mexicali, Mexico, 2University of California, Davis.

Effects of fructooligosaccharides on fecal characteristics, digestibility of nutrients, and concentration of fecal odor components in dogs. H. S. Hussein* and G. D. Sunvold, 1University of Nevada, Reno, 2The Iams Company, Lewisburg, OH.

Effects of fructooligosaccharides on fecal characteristics, digestibility of nutrients, and concentration of fecal odor components in cats. H. S. Hussein* and G. D. Sunvold, 1University of Nevada, Reno, 2The Iams Company, Lewisburg, OH.

PASTURES/FORAGES, ENVIRONMENT/LIVESTOCK MGT

Chair: Dr. Tim DelCurto, Oregon State University, Union

Friday, 9:00 a.m. - 12:00 p.m.
Room: 1130 Hart Hall

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>9:00</td>
<td>83</td>
<td>Conservative and moderate stocking effects on Chihuahuan desert forage production. J. L. Holechek*, M. Thomas, D. Galt, and F. Molinar, New Mexico State University, Las Cruces.</td>
</tr>
<tr>
<td>9:15</td>
<td>84</td>
<td>Conservative and moderate stocking effects on cow-herd performance in the Chihuahuan Desert. M. G. Thomas, C. C. Bailey, and J. L. Holechek, New Mexico State University, Las Cruces.</td>
</tr>
<tr>
<td>9:30</td>
<td>85</td>
<td>In-vitro digestibility of grazed mixed native range forage using inoculum from alternative sources. N. Butler*, G.A. Younglove, J.W. Waggoner, and R.H. Hart, Chadron State College, Chadron, NE, 1University of Wyoming, Laramie, 2ARCS-USDA, High Plains Grassland Research Station, Cheyenne, WY.</td>
</tr>
<tr>
<td>9:45</td>
<td>86</td>
<td>Effects of season of calving and weaning age on cow and calf production through weaning. E. E. Grings, R. E. Short*, and R. K. Heitschmidt, Ft. Keogh LARRL, USDA-ARS, Miles City, MT.</td>
</tr>
<tr>
<td>10:00</td>
<td>87</td>
<td>The influence of season on distribution patterns relative to water and resource use by cattle grazing mixed forested rangelands. T. DelCurto*, B.K. Johnson, M. Vavra, P.K. Coe, and A.A. Ager, Eastern Oregon Agricultural Research Center, Oregon State University, Union, Oregon Department of Fish and Wildlife, La Grande, USDA Forest Service, Pacific Northwest Research Station, La Grande, OR.</td>
</tr>
<tr>
<td>10:15</td>
<td></td>
<td>BREAK</td>
</tr>
<tr>
<td>10:45</td>
<td>88</td>
<td>Influence of a grazing system, season of use, and aspect on the nutritional quality of forages, and subsequent performance and distribution of beef cattle grazing forested rangelands. K. Walburger*, T. DelCurto*, M. Vavra, L. Bryant, and J.G. Kie, Eastern Oregon Agricultural Research Center, Oregon State University, Union, USDA Forest Service, Pacific Northwest Research Station, La Grande, OR.</td>
</tr>
<tr>
<td>11:00</td>
<td>89</td>
<td>Critical control points affecting profitability in beef cow production: using SPA data. T. Baird and N. Dalsted*, Colorado State University, Fort Collins.</td>
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<tr>
<td>11:15</td>
<td>90</td>
<td>Manure production characteristics from lactating Holsteins. D. Meyer, V. Erikson*, E. Tooman, and T. James, University of California, Davis.</td>
</tr>
<tr>
<td>11:30</td>
<td>91</td>
<td>Evaluation of the melengesterol acetate/prostaglandin (MGA/PGF) and MGA/Select Synch estrous synchronization protocols in beef heifers. R. N. Funston*, R. P. Ansotegui, B. D. Thompson, J. J. Lipsey, M. D. Ropp, and T. W. Geary, Montana State University, Bozeman, Miles City Veterinary Clinic, Miles City, MT, American Simmental Assoc., Bozeman, USDA-ARS, Miles City.</td>
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**PHYSIOLOGY**

Chair: Dr. Jack Whittier, Colorado State University, Fort Collins

Friday, 9:00 a.m. - 11:30 a.m.
Room: 1150 Hart Hall

<table>
<thead>
<tr>
<th>Time</th>
<th>Abstract</th>
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<tbody>
<tr>
<td>9:15</td>
<td>Evaluation of fixed-time AI with GnRH on pregnancy rate of beef heifers synchronized with the MGA/PGF&lt;sub&gt;2α&lt;/sub&gt; protocol. B.W.P. Sasongko*1, J.C. Whittier1, P.D. Burns1, T.W. Geary2, and R.G. Mortimer1,1Colorado State University, Fort Collins, 2Fort Keogh Livestock and Range Research Station, Miles City, MT.</td>
</tr>
<tr>
<td>10:00</td>
<td>Effects of the polyamine putrescine on serum progesterone and steady state levels of mRNA encoding steroid enzymes in the bovine corpus luteum. D. J. Denniston*, K. K. Kane, C. N. Roybal, M. L. Vogt, and D. E. Hawkins, New Mexico State University, Las Cruces.</td>
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<tr>
<td>10:15</td>
<td>BREAK</td>
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<tr>
<td>10:45</td>
<td>Dose-response of rumen and plasma glucose and lactate to intraruminally administered wheat flour in sheep. V. Kuncharapu*, N. S. Sundar, and M.L. Bruss, University of California, Davis.</td>
</tr>
<tr>
<td>11:00</td>
<td>Oral treatment of aromatase inhibitor (Letrozole): Effects on hormone and sperm production in the stallion. T.A. Stein*, J.F. Roser, B.A. Ball, and A.J. Conley, University of California, Davis.</td>
</tr>
</tbody>
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**BREEDING/GENETICS, ENVIRONMENT/LIVESTOCK MGT, EXTENSION, GROWTH/DEVELOPMENT, MEAT SCI., PASTURES/FORAGES, PHYSIOLOGY, TEACHING**

**POSTERS**

Friday
Authors present: 9:00 a.m. - 11:00 a.m.
Room: Memorial Union II (Second Floor)

<table>
<thead>
<tr>
<th>Abstract Number</th>
<th>Abstract</th>
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<tbody>
<tr>
<td>99</td>
<td>Linoleic acid supplementation improves fertility in oMt1a-oGH transgenic mice. A. Thomas*, J. D. Murray, and A. M. Oberbauer, University of California, Davis.</td>
</tr>
</tbody>
</table>
Effects of feeding soybean oil pre-breeding as a supplement to flush mature Suffolk ewes on body weight change, conception rate, and lamb birth weight. M. W. Salisbury, T. T. Ross*, L. L. Melton, and S. Langley, New Mexico State University, Las Cruces.


Effect of ionophore supplementation on selected serum constituents of sheep consuming locoweed. K. M. Whittet†, H. B. Encinias², J. R. Strickland³, and J. B. Taylor⁴, New Mexico State University, Las Cruces, North Dakota State University, Fargo.

Effects of hexane and ether fractions of snakeweed (Gutierrezia spp) on selected serum constituents of male Sprague-Dawley rats. D. S. Al-Ajmi, J. R. Strickland*, T. T. Ross, and D. J. Padilla, New Mexico State University, Las Cruces.

Influence of shade and time of feeding on feedlot performance of crossbred steers during periods of high ambient temperature. W. Chai, N. Torrentera*, and R. A. Zinn, University of California, Davis.


An animal behavior modifier (ABM®), tail stimulation, affects performance and serum metabolite concentrations of beef steers. N. K. Chirase* and L. W. Greene, Texas Agricultural Experiment Station, Amarillo, West Texas A&M University, Canyon.

The effects of phytohemagglutinin and pokeweed mitogen on bovine oocyte maturation in vitro. S. Wang¹, K.E. Panter¹, J.N. Stellflug², R.C. Evans³, and T.D. Bunch⁴, ADVS Department, Utah State University, Logan, USDA-ARS, Poisonous Research Laboratory, Logan, USDA-ARS, U.S. Sheep Experiment Station, Dubois, ID.

Effects of transforming growth factor-b1 (TGF-b1) on isolated growth plate chondrocytes. J.E. Haut and A.M. Oberbauer*, University of California, Davis.

Effect of chromium picolinate on growth and carcass traits of growing-finishing pigs in commercial conditions. J. L. Espinoza¹, R. Ortega¹, R. Barroso¹, J. A. Guevara¹, R. Gonzalez¹, A. Palacios¹, and O. Ruiz¹, Universidad Autonoma de Baja California Sur, La Paz, Mexico, Universidad Autonoma de Chihuahua, Chihuahua, Mexico.

Survival of Listeria monocytogenes B4 in soil. C. L. Melendrez, R. G. Espinosa, T. May, and J. D. Thomas*, New Mexico State University, Las Cruces.


Influence of grass-legume pastures on forage availability and growth performance of Holstein heifers. R. Lopez¹, C. R. Kreibiel¹, K. Duncan¹, E. Hanson¹, M. G. Thomas¹, M. Looper¹, E. Castellanos¹, G. Donart¹, R. Flynn¹, and C. Barnes¹, New Mexico State University, Las Cruces, Oklahoma State University, Stillwater.

Influence of supplemental protein degradability on energy utilization and methane emission by beef cows on dormant, cool-season forages. M.D. Palmer* and K.C. Olson, Utah State University, Logan.

Influence of type of supplemental carbohydrate on ruminal responses and methane output from ruminants consuming low-quality forage. R.J. Lira, A.A. Davis*, and K.C. Olson, Utah State University, Logan.

Influence of magnesium supplementation on performance of cattle grazing ryegrass pasture. H. Castro¹, M. S. Vasquez¹, F. Sanchez¹, R. Rosales¹, C. Casas¹, E. G. Alvarez¹, and R. A. Zinn², Universidad Juarez, Durango, Mexico, University of California, Davis.
A potential simple and inexpensive method for estimating crude protein and forage intake of grazing cattle. S. L. Kronberg* and A.V. Grove, South Dakota State University, Brookings.

Interaction of forage level and fibrolytic enzymes on digestive function in cattle. M. Murillo*, H. L. Castro†, J. F. Sanchez‡, M. S. Vasquez‡, J. Cruz‡, E. G. Alvarez‡, and R. A. Zinn‡, †Universidad Juarez, Durango, Mexico, ‡University of California, Davis.


Comparative feeding value of high-pressure flaked sudangrass in growing diets for cattle. M. Ambrozio*, E. G. Alvarez, and R. A. Zinn, University of California, Davis.


In vitro digestibility of soybean hulls varying in their soluble and insoluble fiber by using fecal inoculum from horses. H. S. Hussein, H. Han, and J. P. Tanner*, University of Nevada, Reno.

The effects of bovine follicular fluids supplemented to maturation medium on subsequent embryo development in vitro. S. Wang*, Y. Liu†, K.E. Panter‡, J.N. Stellflug‡, R.C. Evans†, and T.D. Bunch†, †Utah State University, Logan, ‡USDA-ARS Poisonous Research Laboratory, Logan, §USDA-ARS Sheep Experiment Station, Dubois, ID.

Effects of fat intake on hormone secretion and lipid metabolites in cycling Pelibuey ewes. J. L. Espinoza*, S. Soto-Simental, J. A. Ramirez‡, A. Palacios‡, and R. Ortega†, †Universidad Autonoma de Baja California Sur, La Paz, Mexico, ‡Universidad Autonoma del Estado de Hidalgo, Pachuca, Mexico, §Universidad Autonoma de Chihuahua, Chihuahua, Mexico.


Estrogen concentrations in milk and plasma in relation to estrus and ovulation in dairy cows. H. Lopez*, T.D. Bunch†, K.E. Panter‡, and M.P. Shipka‡, †Utah State University, Logan, §University of Alaska, Fairbanks.

Predicting growth performance from pituitary responsiveness to growth hormone releasing hormone in bulls selected for semi-arid environments. M. G. Thomas†, R. M. Enns**, H.M. Zhang‡, C. C. Rasor*, D. M. Hallford‡, and J. D. Thomas†, †New Mexico State University, Las Cruces, **University of Arizona, Tucson.


A comparison of the effects of equine chorionic gonadotropin (eCG) and equine luteinizing hormone (eLH) on cultured adult equine Leydig cells. M.F. Hess* and J.F. Roser, University of California, Davis.