CAMERA, VIDEO CAMERA, AND CELL PHONE POLICY

Use of cameras, video cameras, and cell phones (for calls or as cameras) is prohibited during oral and poster presentations to minimize disruption and unauthorized dissemination of data. Violators may be asked to leave the session/conference. Exceptions to this policy must be approved in advance by WSASAS Scientific Program Coordinator.
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Dr. Connie K. Larson (2016), Industry Director Zinpro Corporation, Eden Prairie, MN

Dr. Boone Carter (2017), Industry Director Performix Nutrition, Boise, ID

Kelsey Quinn, (2016), Graduate Student Representative
New Mexico State University, Las Cruces, NM

Melinda Ellison, (2015-Interim),
Graduate Student Representative
University of Wyoming, Laramie, WY
2015 Western Section American Society of Animal Science Annual Meeting

SUMMARY OF
SCHEDULE OF EVENTS

Unless otherwise noted, all events will be held in rooms of the Ruidoso Convention Center.

**Monday, June 22, 2015**

1:00 pm – 6:00 pm  AQ Written Exams and Oral
Rooms: Capitan, Camelot, Aspen, Ponderosa, Pinon

1:30 pm – 3:30 pm  WSASAS Strategic Planning Committee Meeting
Room: Sierra Blanca

3:00 pm – 4:00 pm  Registration, Lobby of Convention Center

4:00 pm – 6:00 pm  WSASAS Executive Committee Pre-conference Meeting
Room: Sierra Blanca

**TUESDAY, JUNE 23, 2015**

8:00 am - 12:00 pm  AQ Lab Practicum, Lincoln County Fairgrounds

1:30 pm - 6:00 pm  AQ Quiz Bowl, Lincoln County Fairgrounds

7:00 am – 6:00 pm  Registration, Lobby of Convention Center

7:30 am – 4:00 pm  Beef Symposium: This symposium is a tour to Greene Ranch, 99 Cattle Co., Corona Range and Livestock Research Center and includes invited speakers at Corona Range and Livestock Research Center. Meet in Ruidoso Convention Center Lobby.

9:00 am – 5:00 pm  Sheep and Goat Symposium Ruidoso Convention Center, Rooms: Bonito and Paradise

6:30 pm – 8:00 pm  Opening Reception, Lodge at Sierra Blanca
**WEDNESDAY, JUNE 24, 2015**

<table>
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<th>Time</th>
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<tr>
<td>7:00 am – 4:00 pm</td>
<td>Registration, Lobby of Convention Center</td>
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| 7:30 am – 12:00 pm | Graduate Student Paper Competition  
                    | Rooms: Bonito and Paradise                                       |
| 12:00 pm | Posters should be placed for display in rooms Sierra Blanca, Capitan and Camelot by 12:00 pm |
| 12:00 pm – 2:00 pm | Graduate Student "Lunch and Learn"  
                    | Rooms: Ponderosa and Pinon                                       |
| 1:30 pm – 5:00 pm | Oral Presentations  
                    | Rooms: Bonito, Paradise and Aspen                                |
| 4:00 pm – 5:30 pm | Scientific Poster Presentations.  
                    | Rooms: Sierra Blanca, Capitan and Camelot                        |
| 5:30 pm – 8:00 pm | Reception  
                    | Rooms: Bonito and Paradise                                       |
| 6:45 pm | AQ Quiz Bowl Finals  
                    | Rooms: Bonito and Paradise                                       |
| 8:30 pm | Graduate Student Mixer, Farley's Food, Fun, and Pub – 1200 Mechem Dr., Ruidoso, NM 88345 |

**THURSDAY, JUNE 25, 2015**

<table>
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<th>Time</th>
<th>Event</th>
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<tr>
<td>7:30 am – 4:00 pm</td>
<td>Registration, Lobby of Convention Center</td>
</tr>
<tr>
<td>8:00 am – 9:45 am</td>
<td>Oral Presentations, Room: Bonito and Paradise</td>
</tr>
</tbody>
</table>
| 10:00 am – 12:00 pm | Young Scholars Recognition Program and Distinguished Service Lecture  
                    | Room: Bonito and Paradise                                         |
| 12:00 pm – 5:00 pm | Extension Symposium: Value of Low Stress Livestock Handling in Livestock Production Practices  
                    | Room: Bonito and Paradise                                         |
| 12:00 pm – 1:30 pm | Committee Meetings  
                    | Rooms: Aspen, Ponderosa, and Pinon                                |
1:30 pm – 4:15 pm Oral Presentations, Room: Aspen
5:00 pm – 9:00 pm Awards Banquet, Flying J Chuckwagon, 1028 NM-48, Alto, NM 88312

FRIDAY, JUNE 26, 2015

8:30 am – 10:00 am Business Meeting Room: Aspen
10:00 am Meeting Adjourns
1:00 pm Horse Races, Ruidoso Downs, 26225 US Highway 70 East, Ruidoso Downs, NM 88346

ARPAS exams will be scheduled as applications are received. Contact the ARPAS headquarters office to schedule an exam (arpas@assochq.org)

UPLOADING PRESENTATION FILES

Only PowerPoint presentations will be accommodated (i.e., no slides, no overheads, no alternative programs allowed).

1. All session rooms will have Master PCs running PowerPoint 2007/2010/2012 in Windows 7.
2. Individual laptops may not be connected to the projectors in the session rooms.
3. Presentations for Wednesday and Thursday MUST be presented to a volunteer manning a laptop computer in the “WSASAS Registration Area” in the Ruidoso Convention Center Lobby on Tuesday and Wednesday between 8:00 am and 5:00 pm, respectively. Preferably, presentations for upload should be on flash drives.

PREVIEW ROOMS FOR ORAL PRESENTATIONS

There will be at least one room for preview of oral presentations. It will have equipment for this purpose. You must provide your own flash drive. There will be a sign up sheet for use of this room. The room is Sierra Blanca in the Ruidoso Convention Center.
TUESDAY, JUNE 23, 2015
Scientific Sessions

SYMPOSIA

WSASAS BEEF SYMPOSIUM

CO-Chairs:
Eric Scholljegerdes, New Mexico State University
and Reinaldo Cooke, Oregon State University

Registrants for Bus Tour meet in the Lobby of the Ruidoso Convention Center; buses depart at 7:30 am.

7:30 am  B01  Buses depart Convention Center
9:00 am  B02  Stop 1  Greene Ranch
10:30 am B03  Stop 2  99 Cattle Company
12:00 pm Lunch, Corona Range and Livestock Research Center
1:00 pm  B04  Understanding critical components of beef cow fertility and practical implementation to improve reproductive efficiency.  G. Allen Bridges*, AgriSci Consulting LLC
2:00 pm  B05  Practical applications and scientific progress in bull fertility for the beef producer.  Tom Geary*, USDA-ARS Fort Keogh, Mile City, MT.
3:00 pm  B06  Sexed semen: Current commercial applications and what the future may hold for the beef producer.  John B. Hall* and Nancy M. Cummings, University of Idaho
4:00 pm  Return to Convention Center
WSASAS SHEEP AND GOAT SYMPOSIUM

Chair: Travis Whitney, Texas A&M AgriLife Research
Room: Bonito

9:00 am SG01 Introduction. Tim Ross*, Professor Emeritus, New Mexico State University

9:15 am SG02 Opportunities to Increase Cash Flow. Whit Stewart*, Montana State University

9:45 am SG03 Designing Supplementation Strategies for Sheep and Goats. Chris Schauer*, Director of Hettinger Research Extension Center, North Dakota State University

10:15 am Break

10:30 am SG04 Cooperatives & American Sheep Industry (ASI) activities. Mike Corn*, ASI Vice President, Chairman of the Let's Grow Committee, Roswell Wool (Owner), and a member of one of New Mexico’s most historic sheep ranching families

11:00 am SG05 The American Sheep and Goat Industry: Current Pulse and a 20-yr Prediction. Reid Redden*, Sheep and Goat Extension Specialist, Texas A&M AgriLife Extension

11:30 am Lunch on own

1:30 pm SG06 Early History of Sheep in the West. Tim Ross*, Professor Emeritus, New Mexico State University

2:15 pm Break

2:30 pm SG08 Estate Planning: Keep it in the Family. Bill Thompson*, Assistant Professor and Extension Economist, Texas A&M AgriLife Extension

3:30 pm SG09 Round Table Discussion. Tim Ross, Bret Taylor, Amy Hendrickson, Reed Redden, Mike Corn, Caren Cowen (President, New Mexico Wool Growers), Whit Stewart, and Pat Hatfield (Professor, Montana State University)
WEDNESDAY, JUNE 24, 2015

ORAL PRESENTATIONS

GRADUATE STUDENT PAPER COMPETITION

Chair: Brenda Alexander, University of Wyoming

Rooms: Bonito and Paradise

7:30 AM Introduction. J. Berardinelli*, Western Section ASAS President

7:45 am GS01 Effects of Organic or Inorganic Co, Cu, Mn, and Zn Supplementation to Late-Gestating Beef Cows on Productive and Physiological Responses of the Offspring. R. Marques¹, R. F. Cooke¹, M. C. Rodrigues², T. Guarnieri Filho³, B. I. Cappellozza¹, P. Moriel⁴, and D. W. Bohnert¹, ¹Oregon State University - EOARC Burns, Burns, OR, ²Oregon State University - Eastern Oregon Agricultural Research Center, Burns, ³Faculdade de Medicina Veterinária e Zootecnia, UNESP – Univ. Estadual Paulista, Botucatu, Brazil, ⁴North Carolina State University - Mountain Research Station, Waynesville

8:00 am GS02 Effect of maternal mid- to late gestational energy source on expression of anglogenic factors in fetal lamb jejunal tissue. H. C. Cunningham¹, K. J. Austin², K. M. Cammack³, M. A. Berg³, A. E. Radunz³, and A. M. Meyer³, ¹Department of Animal Science, University of Wyoming, Laramie, ²University of Wyoming, Laramie, ³Department of Animal Sciences, University of Wisconsin-Madison, Madison, ⁴Department of Animal and Food Science, University of Wisconsin-River Falls, River Falls, ⁵Division of Animal Sciences, University of Missouri, Columbia
8:15 am GS03 Influence of dried distiller’s grains with solubles on ram lamb growth and reproductive traits. A. R. Crane¹,², R. R. Redden², M. S. Crouse², J. D. Kirsch², J. E. Held³, and C. S. Schauer¹, Hettinger Research Extension Center, Hettinger, ND, ²North Dakota State University, Fargo, ³South Dakota State University, Brookings

8:30 am GS04 Effects of nose flap devices applied to calves on cow body condition, calf performance, and calf humoral immune response. K.D. Lippolis¹, R.J. Callan¹, C.E. Mayo³, M. Fischer¹, and J.K. Ahola¹, Department of Animal Sciences, Colorado State University, Fort Collins, ²Department of Clinical Sciences, Colorado State University, Fort Collins, ³Department of Microbiology, Immunology and Pathology, Colorado State University, Fort Collins

8:45 am GS05 An evaluation of biofuel coproducts in feedlot diets: cattle growth performance, carcass characteristics, apparent nutrient digestibility, and water use assessment of feedstock sources. T. L. Opheim¹, P. R. B. Campanili¹, B. J. M. Lemos¹, L. A. Ovinge¹, J. O. Baggerman¹, K. C. McCuistion², J. Dwyer¹, M. L. Galyean¹, J. O. Sarturi¹, and S. J. Trojan³, Texas Tech University, Lubbock, ²Texas A&M University - Kingsville, Kingsville, ³Texas Tech University, Department of Animal and Food Sciences, Lubbock

9:00 am GS06 Nutrient transporters in bovine utero-placental tissues on days 16 to 50 of gestation. M. S. Crouse¹, K. J. McLean¹, L. P. Reynolds², C. R. Dahlen¹, B. W. Neville³, P. P. Borowicz¹, and J. S. Caton², North Dakota State University, Fargo, ²Animal Sciences Dept., North Dakota State University, Fargo, ³NDSU Central Grasslands Research Extension Center, Streeter, ND
9:15 am GS07 Effect of chronic administration of oxytocin on corpus luteum function in cycling mares. K. C. Parkinson*, D. K. Vanderwall, J. Rigas, and A. Sweat, Utah State University, Logan

9:30 am GS08 Inhibition of chemokine receptor four (CXCR4) signaling in vivo suppresses trophoblast invasion during early gestation in sheep. K. E. Quinn*, S. Z. Prosser, and R. L. Ashley, New Mexico State University, Las Cruces

9:45 am Break

10:00 am GS09 Intrauterine transfer of autologous interferon tau-primed peripheral blood mononuclear cells increases pregnancy rates after embryo transfer in cattle. J. L. Chase1, J. A. Hernandez-Gifford2, D. M. Hallford2, T. L. Ott4, and C. A. Gifford3, 1Department of Animal Science, Oklahoma State University, Stillwater, 2Oklahoma State University, Stillwater, 3Animal and Range Science Dept., New Mexico State University, Las Cruces, 4Department of Animal Science, Pennsylvania State University, University Park

10:15 am GS10 IGF-1 attenuates WNT inhibition on FSH target genes and estradiol production in granulosa cells. B. I. Gomez1, C. A. Gifford1, D. M. Hallford2, and J. A. Hernandez-Gifford3, 1Department of Animal Science, Oklahoma State University, Stillwater, 2Animal and Range Science Dept., New Mexico State University, Las Cruces

10:30 am GS11 Meloxicam as an Alternative to Alleviate inflammatory and Acute-Phase Reactions in Beef Cattle Upon Lipopolysaccharide Administration or Vaccination. M. C. Rodrigues1, R. F. Cooke2, R. Marques2, S. Arispe3, D. H. Keisler4, and D. W. Bohnert2, 1Faculdade de Medicina Veterinária e Zootecnia, UNESP – Univ. Estadual Paulista, Botucatu,
Performance of Beef-Cattle as influenced by controlled and uncontrolled populations of horn flies (Diptera: Muscidae). B. G. Smythe*, M. E. Wise, and E. J. Scholljegerdes, New Mexico State University, Las Cruces


Late gestation supplementation of corn dried distiller’s grains plus solubles to beef cows fed a low-quality forage: Impacts on mammary gland blood flow, colostrum and milk production, and calf weights. V. C. Kennedy*, B. Mordhorst, J. J. Gaspers, G. L. Stokka, M. L. Bauer, K. C. Swanson, and K. A. Vonnahme, North Dakota State University, Fargo

Comparison of titanium dioxide vs. chronic oxide as an external marker to estimate fecal output in horses. T. D. Morgan*1, A. L. Salazar1, F. R. Melgar1, E. J. Scholljegerdes1, C. A. Loest1, L. M. White1, K. Marchetti1, S. A. Soto-Navarro1, K. M. Winsco2, and S. L. Ivey1, 1New Mexico State University, Las Cruces, 2Truman State University, Kirksville, MO

Chemokine ligand twelve and T-helper 1 cytokines increase in corpus luteum during implantation in sheep. S. Z. Prosser*, K. E. Quinn, and R. L. Ashley, New Mexico State University, Las Cruces
GRADUATE STUDENT “LUNCH AND LEARN”

Co-Chairs:
Kelsey Quinn, New Mexico State University and Melinda Ellison, University of Wyoming, WSASAS Executive Committee Graduate Representatives

Rooms: Ponderosa and Pinon

12:00 pm  **Introduction.** Kelsey Quinn, Co-Chair of Program

12:15 pm  **Panel Discussion.** Questions & Answers Panelists:

Dr. Adam Summers, Assistant Professor, New Mexico State University

Mrs. Laura Tracey, Land O’Lakes Purina Animal Nutritionist

Dr. Boone Carter, Performix Nutrition Systems

Dr. Scott Lake, Associate Professor and Beef Cattle Extension Specialist, University of Wyoming

### ORAL PRESENTATIONS

**RUMINANT NUTRITION**

Chair: David Bohnert, Oregon State University

Rooms: Bonito and Paradise

1:30 pm  001  **Effect of inorganic or amino acid complexed trace mineral supplementation on growth performance, carcass characteristics and prevention of digital dermatitis of growing and finishing beef cattle in a southern Alberta feedlot.**  

M. E. Brarine, J. Van Donkersgoed, M. T. Socha, and C. K. Larson, Zinpro Corporation, Eden Prairie, MN, Alberta Beef Health Solutions, Picture Butte, AB, Canada
1:45 pm 002 Effects of high-tannin substrate, dietary tannin adaptation, antibiotic inclusion, and animal species on mean gas pressures, ammonia concentrations, and total volatile fatty acid concentrations following a 48-h in vitro incubation. A. N. McKiearnan*, M. D. Miesner1, E. C. Titgemeyer1, T. G. Nagaraja1, J. S. Drouillard1, and K. C. Olson2, 1Kansas State University, Manhattan, 2Department of Animal Science and Industry, Kansas State University, Manhattan

2:00 pm 003 Effects of high-tannin substrate, dietary tannin adaptation, antibiotic inclusion, and animal species on individual volatile fatty acid concentrations following a 48-h in vitro incubation. A. N. McKiearnan*, T. G. Nagaraja1, E. C. Titgemeyer1, J. S. Drouillard1, M. D. Miesner1, and K. C. Olson2, 1Kansas State University, Manhattan, 2Department of Animal Science and Industry, Kansas State University, Manhattan

2:15 pm 004 Influence of sampling time on carbon dioxide and methane emission by grazing cattle. S. A. Gunter and J. A. Bradford, USDA-ARS, Woodward, OK

2:30 pm 005 Effects of using ground woody plants in kid goat feedlot diets on growth performance. J. L. Glasscock3, T. R. Whitney1, J. R. Roper1, A. R. Holmes1, S. G. Marrs1, N. M. Cherry2, J. P. Muir2, W. C. Stewart2, and E. Scholljegerdes3, 1Texas A&M AgriLife Research, San Angelo, 2Texas A&M AgriLife Research, Stephenville, 3New Mexico State University, Las Cruces
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<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
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<tr>
<td>2:45 pm</td>
<td>006</td>
<td>Performance of beef replacement heifers supplemented with dried distillers grains or a mixture of soybean meal and ground sorghum grain.</td>
<td>C. J. McMullen*¹, J. R. Jaeger², K. R. Harmoney¹, J. W. Waggoner², and K. C. Olson³, ¹Western Kansas Agricultural Research Center, Kansas State University, Hays, ²Western Kansas Agricultural Research Center, Kansas State University, Garden City, ³Department of Animal Science and Industry, Kansas State University, Manhattan</td>
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<tr>
<td>3:00 pm</td>
<td>Break</td>
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<td>3:15 pm</td>
<td>007</td>
<td>Effects of altering supplementation frequency during the prepartum period of beef cows.</td>
<td>C. J. McMullen*¹, J. R. Jaeger¹, J. W. Waggoner², K. R. Harmoney¹, and K. C. Olson³, ¹Western Kansas Agricultural Research Center, Kansas State University, Hays, ²Western Kansas Agricultural Research Center, Kansas State University, Garden City, ³Department of Animal Science and Industry, Kansas State University, Manhattan</td>
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<td>3:30 pm</td>
<td>008</td>
<td>Health, performance, and ovalbumin-specific immunoglobulin titers of feedlot receiving calves in response to intranasal or subcutaneous vaccination programs.</td>
<td>E. R. Oosthuysen*¹, M. Hubbert², J. R. Graves¹, A. K. Ashley¹, and C. A. Loest¹, ¹New Mexico State University, Las Cruces, ²Clayton Livestock Research Center, NMSU, Clayton, NM</td>
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<tr>
<td>3:45 pm</td>
<td>009</td>
<td>Intake and grazing activity of mature range cows on Arizona rangelands.</td>
<td>C. W. Knight*, University of Arizona, Tucson</td>
</tr>
</tbody>
</table>
4:00 pm O10 The effect of dry-rolled corn particle size on feed efficiency in feedlot finishing diets containing wet distiller's grains. E. F. Schwandt*, D. U. Thomson, S. J. Bartle, T. E. Engle, J. J. Wagner, and C. D. Reinhardt. 1Kansas State University, Manhattan, 2Colorado State University, Fort Collins

4:15 pm O11 Impact of maternal protein restriction in first-calf heifers during mid- to late-gestation on dam and suckling calf performance through weaning. J. J. Kincheloe*, K. C. Olson, A. D. Blair, K. R. Underwood, M. G. Gonda, A. A. Harty, and R. N. Funston. 1South Dakota State University, Rapid City, 2South Dakota State University, Brookings, 3University of Nebraska, West Central Research and Extension Center, North Platte


4:45 pm O13 Effects of feeding ground juniper to gestating ewes on pre- and postpartum ewe performance, serum metabolites, and progeny preweaning performance. W. C. Stewart*, T. R. Whitney, E. J. Scholljegerdes, D. M. Hallford, S. A. Sotano Navarro, and H. D. Naumann. 1New Mexico State University, Las Cruces, 2Texas A&M AgriLife Research, San Angelo, 3Animal and Range Science Dept., New Mexico State University, Las Cruces, 4University of Missouri, Columbia
EXTENSION

Chair: Jim Sprinkle, University of Arizona
Rooms: Bonito and Paradise

1:30 pm  O14  The Navajo Livestock Reduction of the 1930s: An historical, economic, and animal husbandry perspective. J. D. Keyes*, Utah State University, Monticello

1:45 pm  O15  The PregCard study; assessing the impact of routine management strategies on reproductive performance of beef herds in the upper Great Plains. C. R. Dahlen* and C. L. Stoltenow, North Dakota State University, Fargo

SCIENTIFIC POSTER PRESENTATIONs

Rooms: Sierra Blanca, Capitan and Camelot

UNDERGRADUATE POSTER COMPETITION

Chair: Kasey DeAtely

4:00 pm  P1  Preliminary study of the influence of 2,4-D on the digestibility of ensiled lawn clippings and the level of acceptance by lambs. A. R. Hicks-Lynch*, S. J. Meyer, D. L. Ragen, P. G. Hatfield, and E. C. Glunk, Montana State University, Bozeman

4:00 pm  P2  Gene expression of skeletal muscle of red faced Hereford steers. B. Engle*, M. Hammond, J. A. Boles, and J. M. Thomson, Montana State University, Bozeman

4:00 pm  P3  Evaluation of Scenedesmus sp. microalgae on rumen fermentation and growth of Rambouillet lambs. B. E. Bonfantini*, K. Marchetti, S. L. Ivey, and S. A. Soto-Navarro, New Mexico State University, Las Cruces
Serum proteins protect against histone toxicity and inhibition of toll-like receptor signaling increases histone cytotoxicity in cattle. J. A. Matera*, J. A. Hernandez- Gifford, and C. A. Gifford, Oklahoma State University, Stillwater

Quality of movement and gait kinematics are similar for horses wearing a perimeter fit and square toe horseshoe. P. Q. Underwood¹, L. K. Hirtz², K. W. Walter², and L. M. White¹, ¹New Mexico State University, Las Cruces, ²Truman State University, Kirksville, MO

Growth performance, feed efficiency, and carcass measures of commercial and half-blood Lowline-Angus steers. G. E. Woodmansee⁶, S. P. Doyle, K. A. Moore, D. A. Daley, and K. L. DeAtley, California State University, Chico

Nutrient profiles of wet brewers grain while in storage. K. N. Bohn¹, S. P. Doyle, D. A. Daley, K. A. Moore, and K. L. DeAtley, California State University, Chico

Comparison of the vaginal microbiota in non-pregnant and pregnant ewes during early pregnancy. A. L. Garza*, K. Marchetti, K. E. Quinn, R. L. Ashley, C. Shelley, and S. L. Ivey, New Mexico State University, Las Cruces

Effects of rumen-protected niacin on cold stress in neonatal beef calves C. M. Hand¹, J. L. Robins¹, D. K. Meissner¹, D. Clark¹, J. Dafoe², D. L. Boss³, and G. C. Duff⁴, ¹Montana State University, Bozeman, ²Northern Ag Research Center, Montana State University, Havre, ³Montana State University, Havre
BEHAVIOR

Chair: Dale Zobell, Utah State University

4:00 pm  P10  Fate of free ferulic acid and ethyl ferulate in beef cattle. C. González-Plascencia¹, D. Dominguez², G. Villalobos², F. Castillo Rangel², and J. A. Ortega¹, ¹Facultad de Zootecnia y Ecología, Chihuahua, Mexico, ²Universidad Autonoma de Chihuahua, Chihuahua, Mexico, ³Universidad Autonoma De Chihuahua, Chihuahua, Mexico, ⁴Universidad Autónoma de Chihuahua, Chihuahua, Mexico

BREEDING AND GENETICS

Co-Chairs: Milt Thomas and Scott Speidel, Colorado State University

4:00 pm  P11  Effect of high sulfate water on rumen microbial populations in lambs. C. J. Clarkson¹, A. N. Abrams¹, K. J. Austin¹, M. Ellison¹, H. C. Cunningham², G. C. Conant³, W. R. Lamberson³, T. M. Taxis³, and K. M. Cammack³, ¹University of Wyoming, Laramie, ²Department of Animal Science, University of Wyoming, Laramie, ³University of Missouri, Columbia

4:00 pm  P12  Candidate Gene Molecular Breeding Value Prediction of Reproductive Performance in Holstein Dairy Cows Managed under Heat Stress Conditions from Southern Sonora in Mexico. P. Luna-Nevarez¹, M. G. Thomas², R. Zamorano-Algandar³, A. Correa-Calderon³, M. Sanchez-Castro³, G. Rincon⁴, J. F. Medrano⁵, A. I. Hernandez⁶, G. Luna-Nevarez⁷, R. M. Enns⁵, and S. E. Speidel², ¹Instituto Tecnologico de Sonora, Ciudad Obregon, Mexico, ²Department of Animal Sciences, Colorado State University,
ENVIRONMENT & LIVESTOCK MANAGEMENT

Chair: Kris Johnson, Washington State University

4:00 pm  P13  Short and long-term forensic evaluation of cattle brand burn scar healing.  D. R. Tolleson* and D. W. Schafer, University of Arizona, Camp Verde

4:00 pm  P14  Non-invasive detection of external parasites on free-ranging cattle in the Edwards Plateau region of Texas.  D. R. Tolleson1, P. D. Teel2, O. F. Strey2, S. D. Prince3, J. P. Angerer4, and C. A. Taylor5, 1University of Arizona, Camp Verde, 2Texas A&M University, College Station, 3Texas A&M AgriLife Research, Temple, 4Texas A&M AgriLife Research, Temple, 5Texas A&M AgriLife Research, Sonora

4:00 pm  P15  Comparison between the birth weight crosses native cattle as an alternative to European breeding to fight global warming in México.  J. Espinoza1, O. Roacho1, R. M. Quintana1, and D. Dominguez2, 1Autonomous University of Chihuahua, CHIHUAHUA, Mexico, 2Universidad Autonoma de Chihuahua, Chihuahua, Mexico
NONRUMINANT NUTRITION

Chair: David Bohnert, Oregon State University

4:00 pm  P16  Performance in rabbits fed diets supplemented with CLA.
S. Ramirez*, University of Papaloapan, Loma Bonita, Mexico

PASTURES AND FORAGES

Chair: Richard Waterman,
USDA-ARS Fort Keogh, Miles City, MT

4:00 pm  P17  Validation of fecal microhistology for assessing dietary botanical composition of beef-cattle using diets of fixed composition.
C. J. McMullen1, J. Lemmon2, and K. C. Olson3, 1Western Kansas Agricultural Research Center, Kansas State University, Hays, 2Kansas State University, Manhattan, 3Department of Animal Science and Industry, Kansas State University, Manhattan

4:00 pm  P18  Interseeding cool-season forages into corn to increase yield and quality of residue grazed in the fall. L. A. Villalobos*, Colorado State University, Fort Collins

PHYSIOLOGY

Chair: Ryan Ashley, New Mexico State University

4:00 pm  P19  Relationship Among Feed Efficiency Traits and Reproduction in Heifers. J. B. Hall1, J. B. Glaze, Jr.2, W. K. Smith1, and M. C. Roberts1, 1University of Idaho, Carmen, 2University of Idaho, Twin Falls
Effects of arginine supplementation in adult exercising horses on heart rate and blood metabolites. L. R. Owensby1, L. M. White1, B. Housewright2, E. J. Scholljegerdes1, and K. W. Walter3, 1New Mexico State University, Las Cruces, 2Sul Ross State University, Alpine, TX, 3Truman State University, Kirksville, MO

RUMINANT NUTRITION

Co-Chairs: David Bohnert and Reinaldo Cooke, Oregon State University

Effect of supplementing spring-calving beef cows grazing barley crop residue with canola meal and wheat-based dry distillers’ grains with solubles on beef cow performance, and reproductive efficiency. D. Damiran1,2, H. Lardner1,2, and J. J. McKinnon1, 1University of Saskatchewan, Saskatoon, SK, Canada, 2Western Beef Development Centre, Humboldt, SK, Canada

Phenotypic relationships of residual feed intake with growth, feeding behavior, and reproductive performance of beef heifers. D. Damiran1, G. B. Penner2, K. Larson1, and H. Lardner1, 1Western Beef Development Centre, Humboldt, SK, Canada, 2University of Saskatchewan, Saskatoon, SK, Canada

Effects of maternal nutrition and rumen-protected arginine supplementation on circulating hormone and metabolite concentrations in both ewes and lambs. J. L. Peine1, K. E. Chilcoat1, M. S. Crouse1, M. Kapphahn1, S. T. O’Rourke2, D. M. Hallford3, L. P. Reynolds1, and J. S. Caton1, 1Animal Sciences Dept., North Dakota State University, Fargo, 2Pharmaceutical Sciences Dept., North Dakota State University, Fargo, 3Animal and Range Science Dept., New Mexico State University, Las Cruces


Effect of dietary level of oregano essential oil and monensin on ruminal fermentation of hair lambs. G. Flores-Zesati, D. Dominguez, G. Villalobos, F. Castillo, L. Carlos-Valdez, L. A. Duràn-Meléndez, J. A. Ortega, and R. Silva-Vázquez, Universidad Autónoma de Chihuahua, Chihuahua, Mexico, Universidad Autónoma de Chihuahua, Chihuahua, Mexico, Universidad Autónoma de Chihuahua, Chihuahua, Mexico, CIRENA, Salaices, Mexico

Effect of ferulic acid supplementation on animal performance of preconditioning calves. J. P. Flores-Campos, G. Villalobos, D. Dominguez, R. A. Loya-Rodríguez, J. A. Ortega, and F. Castillo, Universidad Autónoma de Chihuahua, Chihuahua, Mexico, Universidad Autónoma de Chihuahua, Chihuahua, Mexico, Universidad Autónoma de Chihuahua, Chihuahua, Mexico
Dry matter intake, ruminal pH, and plasma glucose of beef heifers fed finishing feedlot diet and ferulic acid. L. F. Soto-Casas1, I. García-Roque1, D. Domínguez2, G. Villalobos2, J. A. Ortega3, and F. Castillo2, 1Universidad Autónoma de Chihuahua, Chihuahua, Mexico, 2Universidad Autónoma de Chihuahua, Chihuahua, Mexico, 3Universidad Autónoma de Chihuahua, Chihuahua, Mexico

Effect of processing conditions on nutrient disappearance of cold-pressed and hexane-extracted camelina and carinata meals in vitro. A. Sackey, E. E. Grings*, D. W. Brake, and K. Muthukumarappan, South Dakota State University, Brookings

THURSDAY, JUNE 25, 2015

ORAL PRESENTATIONS

Room: Bonito

PASTURES AND FORAGES

Chair: Richard Waterman,
USDA-ARS Fort Keogh, Miles City, MT

Effects of intensive late-season grazing following early-season steer grazing on population dynamics of sericea lespedeza in the Kansas Flint Hills. J. Lemmon2, W. H. Fick1, J. A. Alexander1, A. G. Lemmon1, D. C. Shaw1, G. W. Preedy1, C. A. Gurule1, and K. C. Olson1, 1Kansas State University, Manhattan, 2Department of Animal Science and Industry, Kansas State University, Manhattan

Effect of corn residue stocking rate on cattle performance and subsequent grain yield. A. Stalker*, University of Nebraska-Lincoln, North Platte.


PHYSIOLOGY

Chair: Ryan Ashley, New Mexico State University
ENVIRONMENT AND LIVESTOCK MANAGEMENT

Chair: Kris Johnson, Washington State University

9:00 am  O20  Effects of weaning method on finishing performance and carcass characteristics of early-weaned beef steers. G. W. Preedy¹, J. R. Jaeger², J. W. Waggoner³, and K. C. Olson⁴, ¹Kansas State University, Manhattan, ²Western Kansas Agricultural Research Center, Kansas State University, Hays, ³Western Kansas Agricultural Research Center, Kansas State University, Garden City, ⁴Department of Animal Science and Industry, Kansas State University, Manhattan

BEHAVIOR

Chair: Dale Zobell, Utah State University

9:15 am  O21  Validation of BQA Feedyard Assessment for cattle handling. R. Woiwode¹, T. Grandin¹, B. H. Kirch¹, and J. A. Paterson², ¹Colorado State University, Fort Collins, ²National Cattlemen’s Beef Association, Centennial, CO

9:30 am  O22  Ram reproductive behavior and serum Testosterone of white faced rams during the early and mid-breeding season and out of season. J. L. Wyatt*, K. J. Austin, K. C. Otto, and B. M. Alexander, University of Wyoming, Laramie
YOUNG SCHOLARS RECOGNITION PROGRAM
AND DISTINGUISHED SERVICE LECTURE

Chair: Ryan Ashley, New Mexico State University
Rooms: Bonito and Paradise

10:00 am Introduction. Ryan Ashley, Chair of Program

10:15 am O23 Effects of supplementation of acyl-homoserine lactones on in vitro digestibility of a poor quality forage diet. Katelin Marchetti¹, M.S., New Mexico State University

10:45 am O24 Effects of feeding ground juniper to gestating ewes on pre- and postpartum ewe performance, serum biochemistry and hormones, milk fatty acid composition and progeny preweaning performance. Whit Stewart¹, PhD, New Mexico State University

11:15 am O25 Introduction and Historical Perspectives on NM Sheep Industry. Tim Ross¹, Professor Emeritus, New Mexico State University

EXTENSION SYMPOSIUM

VALUE OF LOW STRESS LIVESTOCK HANDLING IN LIVESTOCK PRODUCTION PRACTICES

Co-Chairs: Jim Sprinkle, University of Arizona, Benton Glaze, University of Idaho, and Ken Olson, South Dakota State University
Rooms: Bonito and Paradise

12:00 pm Lunch

1:00 pm ES01 Addressing Animal Welfare and Low Stress Livestock Handling. T. Grandin², Professor of Animal Sciences, Colorado State University, Fort Collins
1:30 pm ES02 Principles of Low Stress Stockmanship. G. Glosson*, Mesquite Grove Ranch, Jayton, TX

2:20 pm ES03 NCBA producer education. J. Paterson*, National Cattlemen’s Beef Association Producer Education

2:25 pm ES04 Managing a Successful Feedyard BQA and Animal Care Program: Lessons Learned, Challenges and Opportunities. B. Weinheimer*, Vice President, Texas Cattle Feeders Association, Amarillo

2:55 pm Break

3:15 pm ES05 Extension Programming in South Dakota to Improve Livestock Handling. K. Olson1 and H. Carroll2, 1South Dakota State University, Rapid City, 2South Dakota State University, Brookings

3:35 pm ES06 Teaching Stockmanship Across the Generations. B. Whitehurst*, Extension Agent, Madison-Jefferson Counties, Whitehall, MT, Montana State University


4:15 pm ES08 Roundtable Discussion: Future Topics and Format for the WSASAS Extension Symposium. J. Sprinkle*, Moderator, University of Arizona
Rooms: Aspen, Ponderosa, Pinon and Bonito

12:00 pm  Advising and Coordinating Committee. Chair: Connie Larson
Room: Aspen

12:00 pm  Beef Symposium Committee.
Co-Chairs: Eric Scholljegerdes and Reinaldo Cooke
Room: Ponderosa

12:00 pm  Undergraduate Poster Competition Committee.
Chair: Kasey DeAtley
Room: Aspen

12:00 pm  Graduate Paper Competition Committee.
Chair: Brenda Alexander
Room: Aspen

12:00 pm  Awards Committee.
Chair: J. Bret Taylor
Room: Pinon

12:00 pm  Academic Quadrathlon Committee.
Chair: Rachel Endecott
Room: Ponderosa

12:00 pm  Young Scholars Recognition Committee.
Chair: Ryan Ashley
Room: Pinon
Breeding and Genetics

Chair: Milt Thomas, Colorado State University
Room: Aspen

1:30 pm  O24  Relationship of Pulmonary Arterial Pressure and Terrain Use of Beef Cows Grazing High-Altitude Foothill Rangelands. D. W. Bailey*, M. G. Thomas, T. N. Holt, M. B. Stephenson, R. M. Enns, and S. E. Speidel, 1New Mexico State University, Las Cruces, 2Department of Animal Sciences, Colorado State University, Fort Collins, 3College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins, 4University of Nebraska - Lincoln, Scottsbluff, 5Colorado State University, Department of Animal Sciences, Fort Collins

1:45 pm  O25  SNP query in candidate genes that affect puberty in Bos indicus-influenced heifers. M. M. Dias*, A. Canovas, C. Mantilla-Rojas, D. Riley, P. Luna, S. E. Speidel, M. Enns, I. D. P. S. Diaz, F. R. P. de Souza, J. F. Medrano, H. N. de Oliveira, and M. G. Thomas, 1Sao Paulo State University (UNESP), Jaboticabal, Brazil, 2University of California, Davis, 3Texas A&M University, College Station, 4Instituto Tecnologico de Sonora, Ciudad Obregon, Mexico, 5Department of Animal Sciences, Colorado State University, Fort Collins, 6Colorado State University, Fort Collins, 7Federal University of Pelotas, Pelotas, Brazil, 8University of California, Davis

2:00 pm  O26  Variance Components for Genetic Evaluation of Body Condition Score in Beef Cattle. R. J. Boldt*, S. E. Speidel, M. G. Thomas, and R. M. Enns, 1Colorado State University, Department of Animal Sciences, Fort Collins, 2Department of Animal Sciences, Colorado State University, Fort Collins
2:15 pm  O27  Effects of beef cow milk production levels on longevity from Colorado State University’s Beef Improvement Center. M. M. Culbertson1, S. E. Speidel2, M. G. Thomas2, and R. M. Enns1, 1Colorado State University, Department of Animal Sciences, Fort Collins, 2Department of Animal Sciences, Colorado State University, Fort Collins

2:30 pm  O28  Genotypes within the prolactin and GH-IGF1 pathways association with 305 d milk yield in heat stressed lactating Holstein cows in Sonora, Mexico. A. I. Hernandez1, M. A. Sanchez2, R. Zamorano2, P. Luna3, G. Rincon4, J. F. Medrano5, S. E. Speidel6, R. M. Enns6, and M. G. Thomas6, 1Colorado State University, Department of Animal Sciences, Fort Collins, 2Instituto de Ciencias Agrícolas, Universidad Autonoma de Baja California, Ejido Nuevo Leon, Baja California, Mexico, 3Instituto Tecnológico de Sonora, Ciudad Obregón, Mexico, 4Zoetis Inc., Kalamazoo, MI, 5University of California, Davis, 6Department of Animal Sciences, Colorado State University, Fort Collins

2:45 pm  Break

3:00 pm  O29  Angus Cattle at High Altitude: Relationship Between Age and Pulmonary Arterial Pressure. X. Zeng1, T. N. Holt2, R. M. Enns1, S. E. Speidel1, and M. G. Thomas1, 1Department of Animal Sciences, Colorado State University, Fort Collins, 2College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins
Untapped genetic variability in Herefords: Implications for climate change. B. C. Krehbiel\textsuperscript{12}, S. Paiva\textsuperscript{2}, C. Wilson\textsuperscript{2}, S. Ericsson\textsuperscript{4}, J. Boatright\textsuperscript{4}, M. G. Thomas\textsuperscript{1}, and H. D. Blackburn\textsuperscript{2}, \textsuperscript{1}Department of Animal Sciences, Colorado State University, Fort Collins, \textsuperscript{2}National Animal Germplasm Program, National Center for Genetic Resources Preservation, ARS, USDA, Fort Collins, CO, \textsuperscript{3}Embrapa Labex - US Secretariat International Affairs, Brasilia, Brazil, \textsuperscript{4}Department of Animal Sciences, Sul Ross State University, Alpine, TX

Multivariate analysis for genetic relationships between pulmonary arterial pressure and performance traits in an Angus herd at high elevation. N. F. Crawford\textsuperscript{1}, S. E. Speidel\textsuperscript{2}, X. Zeng\textsuperscript{2}, T. N. Holt\textsuperscript{3}, M. G. Thomas\textsuperscript{2}, and R. M. Enns\textsuperscript{2}, \textsuperscript{1}Colorado State University, Department of Animal Sciences, Fort Collins, \textsuperscript{2}Department of Animal Sciences, Colorado State University, Fort Collins, \textsuperscript{3}College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins

Performance losses due to selection for low birth weight versus high calving ease: A simulation study in beef cattle. H. M. Saad\textsuperscript{12}, R. M. Enns\textsuperscript{2}, M. G. Thomas\textsuperscript{2}, and S. E. Speidel\textsuperscript{2}, \textsuperscript{1}Department of Animal Production, Omar Al-Mukhtar University, Al Bayda, Libya, \textsuperscript{2}Department of Animal Sciences, Colorado State University, Fort Collins

The effect of residual feed intake status on rumen microbial profiles in ewe lambs. M. Ellison\textsuperscript{1}, G. C. Conant\textsuperscript{2}, W. R. Lamberson\textsuperscript{2}, T. M. Taxis\textsuperscript{2}, H. C. Cunningham\textsuperscript{3}, K. J. Austin\textsuperscript{1}, and K. M. Cammack\textsuperscript{1}, \textsuperscript{1}University of Wyoming, Laramie, \textsuperscript{2}University of Missouri, Columbia, \textsuperscript{3}Department of Animal Science, University of Wyoming, Laramie
PAST PRESIDENTS

Western Section / American Society of Animal Science

2013-14  J.B. Taylor, USDA, ARS
2012-13  G. C. Duff, Montana State University
2011-12  A. J. Roberts, USDA, ARS
2010-11  D. H. Crews, Jr., Colorado State University
2009-10  G. E. Moss, University of Wyoming
2008-09  R. A. Battaglia, University of Idaho
2007-08  K. C. Olson, South Dakota State University
2006-07  T. T. Ross, New Mexico State University
2005-06  J. M. Thompson, Oregon State University
2004-05  E. E. Grings, USDA ARS, Miles City, MT
2003-04  J. C. Whittier, Colorado State University
2002-03  P.G. Hatfield, Montana State University
2001-02  J.W. Oltjen, University of California, Davis
2000-01  N.E. Cockett, Utah State University
1999-00  J.A. Paterson, Montana State University
1998-99  M.S. Daugherty, California Polytechnic State University
1997-98  R.E. Short, USDA, Montana
1996-97  G.H. Coulter, Agriculture Canada, Lethbridge
1995-96  M.L. Galyean, New Mexico State University
1994-95  R.A. Roeder, University of Idaho
1993-94  K.G. Odde, Colorado State University
1992-93  R.A. Field, University of Wyoming
1992-92  D.L. Garner, University of Reno-Nevada
1990-91  R.A. Bellows, USDA, Miles City
1989-90  M. Vavra, Oregon State University
1988-89  A.C. Linton, Montana State University
1987-88  D.M. Hallford, New Mexico State University
1986-87  R.C. Bull, University of Idaho
1985-86  D.E. Ray, University of Arizona
1984-85  R.W. Wright, Jr., Washington State University
1983-84  J.D. Wallace, New Mexico State University
1982-83  R.M. Tait, University of British Columbia
1981-82  R.W. Stanley, University of Hawaii
1980-81  C.B. Tueurer, University of Arizona
1979-80  M.H. Kennington, California State Poly Univ.
1978-79  R.W. Gardner, Brigham Young University
1977-78  R.L. Preston, Washington State University
1976-77  T.R. Greathouse, Colorado State University

32
1975-76 D.C. England, Oregon State University
1974-75 R.L. Blackwell, Montana State University
1973-74 D.M. Bowden, Agriculture Canada Research
1972-73 W.N. Garrett, University of California
1971-72 J.E. Butcher, Utah State University
1970-71 C.J. Kercher, University of Wyoming
1969-70 L.E. Orme, Brigham Young University
1968-69 V.R. Bohman, University of Nevada-Reno
1967-68 A.L. Newmann, New Mexico State University
1966-67 V.B. Swanson, Colorado State University
1965-66 O.O. Thomas, Montana State University
1964-65 R. Bogart, Oregon State University
1963-64 P.O. Stratton, University of Wyoming
1962-63 T.D. Bell, University of Idaho
1961-62 J.A. Bennett, Utah State University
1961 O.F. Pahnish, University of Arizona
1960 G. P. Lofgreen, University of California
1959 M.E. Ensminger, Washington State University
1958 J.F. Kidwell, University of Nevada
1957 N.W. Hilston, University of Wyoming
1956 F.F. McKenzie, Oregon State University
1955 L.E. Washburn, Colorado State University
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
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<td>2014</td>
<td>Timothy Ross</td>
<td>New Mexico State University</td>
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<td>2013</td>
<td>Pat Hatfield</td>
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<td>Doug Hixon</td>
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**Young Scientist Awards**

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<td>Eric Scholljegerdes</td>
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<td>Kim Vonnahme</td>
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<td>Shanna Ivey</td>
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<td>Shawn Archibeque</td>
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<td>Joshua Bret Taylor</td>
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<td>Min Du</td>
<td>University of Wyoming</td>
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<td>Lance H. Baumgard</td>
<td>University of Arizona</td>
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<td>1994</td>
<td>Mark E. Wise</td>
<td>University of Arizona</td>
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<td>1993</td>
<td>Joseph D. Tatum</td>
<td>Colorado State University</td>
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<td>1992</td>
<td>Mark Peterson</td>
<td>New Mexico State University</td>
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<td>1991</td>
<td>William J. Murdoch</td>
<td>University of Wyoming</td>
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<td>1990</td>
<td>Don C. Adams</td>
<td>University of Nebraska</td>
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<td>1989</td>
<td>Alfred R. Menino, Jr.</td>
<td>Oregon State University</td>
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<td>1988</td>
<td>Michael L. Galyean</td>
<td>New Mexico State University</td>
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<td>1987</td>
<td>Ronald E. Allen</td>
<td>University of Arizona</td>
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<td>1986</td>
<td>James R. Males</td>
<td>Washington State University</td>
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<td>1985</td>
<td>Gary B. Anderson</td>
<td>University of California, Davis</td>
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<tr>
<td>1984</td>
<td>Edward L. Squires</td>
<td>Colorado State University</td>
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1983 George E. Seidel, Jr., Colorado State University
1982 Peter J. Burfening, Montana State University
1981 Raymond W. Wright, Jr., Washington State University
1980 Torrance M. Nett, Colorado State University
1979 Peter R. Cheeke, Oregon State University
1978 Steven L. Davis, University of Idaho
1977 Jerry Reeves, Washington State University
1976 Colin C. Kaltenbach, University of Wyoming
1975 Gordon Niswender, Colorado State University

Extension Awards

2014 Rick Funston, University of Nebraska
2013 Scott Lake, University of Wyoming
2012 Rachel Endecott, Montana State University
2011 Steven Paisley, University of Wyoming
2010 Allison van Eenennaam, University of California, Davis
2009 James M. Thompson, Oregon State University
2008 J. Benton Glaze, University of Idaho
2007 Daniel J. Drake, University of California, Davis
2006 James Sprinkle, University of Arizona
2005 Clay Mathis, New Mexico State University
2004 Wayne F. Gipp, Montana State University
2003 John A. Paterson, Montana State University
2002 Stephen B. LeValley, Colorado State University, Fort Collins
2001 Dale R. Zobell, Utah State University
2000 Ronald L. Hathaway, Oregon State University
1999 Ann M. Swinker, Colorado State University
1998 Jack C. Whittier, Colorado State University
1997 James W. Oltjen, University of California, Davis
1996 Rodney W. Kott, Montana State University
1995 Norris J. Stenquist, University of Utah
1994 Rodney C. Torrell, University of Nevada, Reno
1993 Johannes E. Nel, University of Wyoming
1992 Doug Hixon, University of Wyoming
1991 Les J. Krysl, University of Nevada
1990 Tim L. Stanton, Colorado State University
1989 Chad C. Gibson, University of Idaho
1988 Roger M. Brownson, Montana State University
1987 James M. Sachse, New Mexico State University
Teaching Awards

2014  Mark Nelson, Washington State University
2013  Kristen Johnson, Washington State University
2012  James G. Berardinelli, Montana State University
2011  Daniel C. Rule, University of Wyoming
2010  Amin Ahmadzahdeh, University of Idaho
2009  Terry E. Engle, Colorado State University
2008  Paul A. Ludden, University of Wyoming
2007  James R. Carpenter, University of Hawaii
2006  Anita Oberbauer, University of California, Davis
2005  C. Chris Calvert, University of California
2004  Janice G. P. Bowman, Montana State University
2003  Timothy T. Ross, New Mexico State University
2002  Raymond P. Ansotegui, Montana State University, Bozeman
2001  Bok F. Sowell, Montana State University
2000  Thomas R. Famula, University of California, Davis
1999  Dale W. Holcombe, University of Nevada
1998  J. Daryl Tatum, Colorado State University
1997  Jerry J. Reeves, Washington State University
1996  Ronald D. Green, Colorado State University
1995  Thomas G. Field, Colorado State University
1994  Dale W. Weber, Oregon State University
1993  William A. Schurg, University of Arizona
1992  Mel Riley, University of Wyoming
1991  Dennis M. Hallford, New Mexico State University
1990  Leon E. Orme, Brigham Young University
1989  Everett L. Martin, Washington State University
1988  John A. Froseth, Washington State University
1987  Robert E. Taylor, Colorado State University

Executive Board Outstanding Service Award

2011  Paula Schultz, ASAS

First Place Recipient of the Competition Paper Awards

2014  K. Samuelson, New Mexico State University
2013  J.L. Peine, North Dakota State University
2012  M.K. Beckman, New Mexico State University
2011  F.M. Abreu, Ohio State University
2010  P. Moriel, University of Wyoming
2009  C.M. McAllister, Colorado State University
2008  S. A. Kuykendall, New Mexico State University
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
1978  M.K. Petersen, University of Idaho
1977  C.A. Hildebrand, University of Idaho
1976  S.R. Becker, Washington State University
1975  C.C. Calvert, Montana State University
1974  T.M. Bray, Washington State University
1973  C. Shreffler, Oregon State University
1972  P.V. Rattray, University of California
1971  A. Booren, University of Wyoming
1970  R.L. Quaas, Colorado State University
1969  D. Wideman, Colorado State University
1968  A.A. Howells, Washington State University

**First Place Recipient of the Applied Animal Science Awards**

2014  T.A. Guarnieri Filho, Oregon State University
2013  R.P. Arias, University of Wyoming
2012  J.T. Mulliniks, New Mexico State University
2011  J.E. Sprinkle, University of Arizona
2010  A.F. Summers, University of Nebraska
2009  J.T. Mulliniks, New Mexico State University
2008  A. J. Roberts, USDA, ARS, Fort Keogh Livestock and Range Research Lab
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
2001  R. L. Hathaway, Oregon State University

Institutional Graduate Student Paper Competition Awards

2014  New Mexico State University
2013  New Mexico State University
2012  New Mexico State University
2011  New Mexico State University
2010  New Mexico State University
2009  University of Wyoming
2008  New Mexico State University
2007  University of Wyoming
2006  University of Wyoming
2005  University of Wyoming
2004  New Mexico State University
2003  University of Wyoming

Young Scholars Recognition Awards

2014  Leticia Camacho, Ph.D., University of Arizona
2014  Bryan Welly, M.S., University of California, Davis
2014  Hanah Cunningham, M.S., University of Wyoming
2013  K. P. Sharon, M.S., Montana State University
          M. K. Beckman, M.S., New Mexico State University

First Place Recipient of the Undergraduate Poster Competition Awards

2014  F. R. Melgar, B.S., New Mexico State University
The Western Section American Society of Animal Science gratefully acknowledges the financial contributions of the following organizations:

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Western Section, American Society of Animal Science
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2016  Salt Lake City, Utah

2017  Fargo, North Dakota