



**WESTERN SECTION
American Society of
Animal Science
87th Annual Meeting**

**Ruidoso Convention Center
Ruidoso, NM
June 23-26, 2015**

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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Western Section American Society of Animal Science

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USDA – ARS, Dubois, ID

Dr. Jack C. Whittier (2016), ASAS National Director
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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

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|-------------------|--|
| 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

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|--------------------|---|
| 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

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| 7:00 am – 4:00 pm | Registration, Lobby of Convention Center |
| 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

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| 7:30 am – 4:00 pm | Registration, Lobby of Convention Center |
| 8:00 am – 9:45 am | Oral Presentations, Room: Bonito and Paradise |
| 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 |

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|-------------------|---|
| 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

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| 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.**

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| 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 compo- nents of beef cow fertility and practical implementation to improve reproductive efficiency. <i>G. Allen Bridges*, AgriSci Consulting LLC</i> |
| 2:00 pm | B05 | Practical applications and scien- tific progress in bull fertility for the beef producer. <i>Tom Geary*, USDA-ARS Fort Keogh, Mile City, MT.</i> |
| 3:00 pm | B06 | Sexed semen: Current commercial applications and what the future may hold for the beef producer. <i>John B. Hall* and Nancy M. Cummings, University of Idaho</i> |
| 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 **Desinging 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. Rodrigues^{2,3}, T. Guarnieri Filho^{1,3}, 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 anglogenetic factors in fetal lamb jejunal tissue.** *H. C. Cunningham^{*1}, K. J. Austin², K. M. Cammack¹, M. A. Berg³, A. E. Radunz⁴, and A. M. Meyer⁵, 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. Crane^{*1,2}, R. R. Redden², M. S. Crouse², J. D. Kirsch², J. E. Held³, and C. S. Schauer¹, ¹Hettinger 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. Lippolis^{*1}, R.J. Callan², C.E. Mayo³, M. Fischer¹, and J.K. Ahola¹, ¹Department 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. Opheim^{*1}, P. R. B. Campanili¹, B. J. M. Lemos¹, L. A. Ovinge¹, J. O. Baggerman¹, K. C. McCuiston², J. Dwyer¹, M. L. Galyean¹, J. O. Sarturi¹, and S. J. Trojan³, ¹Texas 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. Crouse^{*1}, K. J. McLean¹, L. P. Reynolds², C. R. Dahlen¹, B. W. Neville³, P. P. Borowicz¹, and J. S. Caton², ¹North 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. Hallford³*, *T. L. Ott⁴*, and *C. A. Gifford¹*, ¹*Department of Animal Science, Oklahoma State University, Stillwater*, ²*Oklahoma State University, Stillwater*, ³*Animal and Range Science Dept., New Mexico State University, Las Cruces*, ⁴*Department of Animal Science, Pennsylvania State University, Univeristy 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-Gifford¹*, ¹*Department of Animal Science, Oklahoma State University, Stillwater*, ²*Animal 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*, ¹*Faculdade de Medicina Veterinária e Zootecnia, UNESP – Univ. Estadual Paulista, Botucatu*,

Brazil, ²Oregon State University - EOARC Burns, Burns, ³Oregon State University – Malheur County Extension, Ontario, ⁴University of Missouri, Columbia

- 10:45 am GS12 **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*
- 11:00 am GS13 **Carcass characteristics and body composition of lambs selected for divergent residual feed intake.** *K. A. Perz*, M. R. Whitmore, A. F. Williams, A. R. Hicks-Lynch, M. R. Herzygers, J. A. Boles, J. G. Berardinelli, and J. M. Thomson, Montana State University, Bozeman*
- 11:15 am GS14 **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*
- 11:30 am GS15 **Comparison of titanium dioxide vs. chronic oxide as an external marker to estimate fecal output in horses.** *T. D. Morgan¹, 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*
- 11:45 am GS16 **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 Profes-
sor, New Mexico State University*
- Mrs. Laura Tracey, *Land O'Lakes Pu-
rina 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 supple-
mentation on growth perfor-
mance, carcass characteristics and
prevention of digital dermatitis of
growing and finishing beef cattle
in a southern Alberta feedlot.** *M. E.
Branine^{*1}, J. Van Donkersgoed², M. T.
Socha¹, and C. K. Larson¹, ¹Zinpro Cor-
poration, Eden Prairie, MN, ²Alberta
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. McKiernan^{*1}, 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. McKiernan^{*1}, 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. Glasscock^{*1}, T. R. Whitney¹, J. R. Roper¹, A. R. Holmes¹, S. G. Marrs¹, N. M. Cherry², J. P. Muir², W. C. Stewart³, and E. Scholljegerdes³, ¹Texas A&M AgriLife Research, San Angelo, ²Texas A&M AgriLife Research, Stephenville, ³New Mexico State University, Las Cruces

- 2:45 pm 006 **Performance of beef replacement heifers supplemented with dried distillers grains or a mixture of soybean meal and ground sorghum grain.** *C. J. McMullen^{*1}, J. R. Jaeger¹, K. R. Harmony¹, 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*
- 3:00 pm **Break**
- 3:15 pm 007 **Effects of altering supplementation frequency during the prepartum period of beef cows.** *C. J. McMullen^{*1}, J. R. Jaeger¹, J. W. Waggoner², K. R. Harmony¹, 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*
- 3:30 pm 008 **Health, performance, and ovalbumin-specific immunoglobulin titers of feedlot receiving calves in response to intranasal or subcutaneous vaccination programs.** *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*
- 3:45 pm 009 **Intake and grazing activity of mature range cows on Arizona rangelands.** *C. W. Knight^{*}, University of Arizona, Tucson*

- 4:00 pm 010 **The effect of dry-rolled corn particle size on feed efficiency in feedlot finishing diets containing wet distiller's grains.** *E. F. Schwandt^{*1}, D. U. Thomson¹, S. J. Bartle¹, T. E. Engle², J. J. Wagner², and C. D. Reinhardt¹* ¹Kansas State University, Manhattan, ²Colorado State University, Fort Collins
- 4:15 pm 011 **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^{*1}, K. C. Olson¹, A. D. Blair¹, K. R. Underwood², M. G. Gonda², A. A. Harty¹, and R. N. Funston³* ¹South Dakota State University, Rapid City, ²South Dakota State University, Brookings, ³University of Nebraska, West Central Research and Extension Center, North Platte
- 4:30 pm 012 **Assessment of supplemental trace mineral level and source on liver and serum mineral concentrations after feeding cattle a diet deficient in trace minerals.** *M. Garcia^{*1}, E. R. Oosthuisen¹, M. Hubbert², M. E. Branine³, C. K. Larson³, C. A. Loest¹, and E. J. Scholljegerdes¹* ¹New Mexico State University, Las Cruces, ²Clayton Livestock Research Center, NMSU, Clayton, NM, ³Zinpro Corporation, Eden Prairie, MN
- 4:45 pm 013 **Effects of feeding ground juniper to gestating ewes on pre- and postpartum ewe performance, serum metabolites, and progeny preweaning performance.** *W. C. Stewart^{*1}, T. R. Whitney², E. J. Scholljegerdes¹, D. M. Hallford³, S. A. Soto-Navarro¹, and H. D. Naumann⁴* 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 014 **The Navajo Livestock Reduction of the 1930s: An historical, economical, and animal husbandry perspective.** *J. D. Keyes**, Utah State University, Monticello
- 1:45 pm 015 **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

- 4:00 pm P4 **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*
- 4:00 pm P5 **Quality of movement and gait kinematics are similar for horses wearing a perimeter fit and square toe horseshoe.** *P. Q. Underwood*¹*, *L. K. Hirtz²*, *K. W. Walter²*, and *L. M. White¹*, ¹*New Mexico State University, Las Cruces*, ²*Truman State University, Kirksville, MO*
- 4:00 pm P6 **Growth performance, feed efficiency, and carcass measures of commercial and half-blood Lowline-Angus steers.** *G. E. Woodmansee**, *S. P. Doyle*, *K. A. Moore*, *D. A. Daley*, and *K. L. DeAtley*, *California State University, Chico*
- 4:00 pm P7 **Nutrient profiles of wet brewers grain while in storage.** *K. N. Bohn**, *S. P. Doyle*, *D. A. Daley*, *K. A. Moore*, and *K. L. DeAtley*, *California State University, Chico*
- 4:00 pm P8 **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*
- 4:00 pm P9 **Effects of rumen-protected niacin on cold stress in neonatal beef calves** *C. M. Hand*¹*, *J. L. Robins¹*, *D. K. Meissner¹*, *D. Clark¹*, *J. Dafoe²*, *D. L. Boss³*, and *G. C. Duff¹*, ¹*Montana State University, Bozeman*, ²*Northern Ag Research Center, Montana State University, Havre*, ³*Montana 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-Plascencia^{*1}, D. Dominguez², G. Villalobos², F. Castillo Rangel³, and J. A. Ortega⁴, 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. Abrams^{*1}, K. J. Austin¹, M. Ellison¹, H. C. Cunningham², G. C. Conant³, W. R. Lamberson³, T. M. Taxis³, and K. M. Cammack², 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-Nevarez^{*1}, M. G. Thomas², R. Zamorano-Algandar³, A. Correa-Calderon³, M. Sanchez-Castro³, G. Rincon⁴, J. F. Medrano⁵, A. I. Hernandez⁶, G. Luna-Nevarez¹, R. M. Enns², and S. E. Speidel², ¹Instituto Tecnológico de Sonora, Ciudad Obregon, Mexico, ²Department of Animal Sciences, Colorado State University,*

Fort Collins, ³Universidad Autonoma de Baja California, Mexicali, Mexico, ⁴Zoetis Inc., Kalamazoo, MI, ⁵University of California, Davis, ⁶Colorado State University, Department of Animal Sciences, Fort Collins

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. Tolleson*¹, 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 Mexico.** *J. Espinoza*¹, 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. McMullen*¹, 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*

- 4:00 pm P20 **Effects of arginine supplementation in adult exercising horses on heart rate and blood metabolites.** *L. R. Owensby^{*1}, 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

- 4:00 pm P21 **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. Damiran^{*1,2}, H. Lardner^{1,2}, and J. J. McKinnon¹, ¹University of Saskatchewan, Saskatoon, SK, Canada, ²Western Beef Development Centre, Humboldt, SK, Canada*
- 4:00 pm P22 **Phenotypic relationships of residual feed intake with growth, feeding behavior, and reproductive performance of beef heifers.** *D. Damiran^{*1}, G. B. Penner², K. Larson¹, and H. Lardner¹, ¹Western Beef Development Centre, Humboldt, SK, Canada, ²University of Saskatchewan, Saskatoon, SK, Canada*
- 4:00 pm P24 **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. Chilcoat^{*1}, M. S. Crouse¹, M. Kappahn¹, 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*
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- 4:00 pm P25 **Impact of dietary forage quality on ruminal by-pass of calcium salts of long-chain omega-3 fatty acids in beef heifers when provided in dried molasses lick tubs.** *D. C. Rule**, *P. A. Ludden, T. D. Draney, and K. M. Cammack, University of Wyoming, Laramie*
- 4:00 pm P26 **Evaluation of implant strategies in Angus-sired steers with high and low genetic potential for marbling and gain.** *D. N. Black¹, B. W. Neville², M. R. Crosswhite¹, and C. R. Dahlen¹,* ¹*North Dakota State University, Fargo,* ²*NDSU Central Grasslands Research Extension Center, Streeter, ND*
- 4:00 pm P27 **Effect of dietary level of oregano essential oil and monensin on ruminal fermentation of hair lambs.** *G. Flores-Zesati¹, D. Dominguez², G. Villalobos², F. Castillo², L. Carlos-Valdez², L. A. Duràn-Meléndez¹, J. A. Ortega³, and R. Silva-Vázquez⁴,* ¹*Universidad Autónoma de Chihuahua, Chihuahua, Mexico,* ²*Universidad Autónoma de Chihuahua, Chihuahua, Mexico,* ³*Universidad Autónoma de Chihuahua, Chihuahua, Mexico,* ⁴*CIRENA, Salaires, Mexico*
- 4:00 pm P28 **Effect of ferulic acid supplementation on animal performance of preconditioning calves.** *J. P. Flores-Campos¹, G. Villalobos², D. Dominguez², R. A. Loya-Rodríguez¹, J. A. Ortega³, and F. Castillo²,* ¹*Universidad Autónoma de Chihuahua, Chihuahua, Mexico,* ²*Universidad Autónoma de Chihuahua, Chihuahua, Mexico,* ³*Universidad Autónoma de Chihuahua, Chihuahua, Mexico*

- 4:00 pm P29 **Dry matter intake, ruminal pH, and plasma glucose of beef heifers fed finishing feedlot diet and ferulic acid.** *L. F. Soto-Casas^{*1}, I. Garcia-Roque¹, D. Dominguez², 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*
- 4:00 pm P30 **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***

- 8:00 am 016 **Effects of intensive late-season grazing following early-season steer grazing on population dynamics of sericea lespedeza in the Kansas Flint Hills.** *J. Lemmon^{*1}, W. H. Fick¹, J. A. Alexander¹, A. G. Lemmon¹, D. C. Shaw¹, G. W. Preedy¹, C. A. Gurule¹, and K. C. Olson², ¹Kansas State University, Manhattan, ²Department of Animal Science and Industry, Kansas State University, Manhattan*

- 8:15 am 017 **Effects of growing-season prescribed burning on vigor of the noxious weed sericea lespedeza (*Lespedeza cuneata*) in the Kansas Flint Hills.** *C. A. Gurule*¹, J. A. Alexander¹, W. H. Fick¹, J. Lemmon¹, A. G. Lemmon¹, G. W. Preedy¹, and K. C. Olson², ¹Kansas State University, Manhattan, ²Department of Animal Science and Industry, Kansas State University, Manhattan*
- 8:30 am 018 **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

- 8:45 am 019 **Influence of long-term progesterone on feed efficiency and body composition in mature Rambouillet ewes.** *M. R. Herrygers*, J. M. Thomson, K. A. Perz, K. B. Herrygers, K. Metcalf, M. Knerr, P. J. Merta, and J. G. Berardinelli, Montana State University, Bozeman*

ENVIRONMENT AND LIVESTOCK MANAGEMENT

Chair: Kris Johnson, Washington State University

- 9:00 am 020 **Effects of weaning method on finishing performance and carcass characteristics of early-weaned beef steers.** *G. W. Preedy^{*1}, 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 021 **Validation of BQA Feedyard Assessment for cattle handling.** *R. Woiwode^{*1}, T. Grandin¹, B. H. Kirch¹, and J. A. Paterson², ¹Colorado State University, Fort Collins, ²National Cattlemen's Beef Association, Centennial, CO*
- 9:30 am 022 **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 023 **Effects of supplementation of acyl-homoserine lactones on in vitro digestibility of a poor quality forage diet.** *Katelin Marchetti¹, M.S.,¹New Mexico State University*
- 10:45 am 024 **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, ¹New Mexico State University*
- 11:15 am 025 **Introduction and Historical Perspectives on NM Sheep Industry.** *Tim Ross¹, Professor Emeritus, ¹New 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. Grandin^{*}, 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. Olson*¹ 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
- 3:55 pm ES07 **Stewardship and Stockmanship: Increasing Awareness of Beef Quality Assurance (BQA) in Idaho.** *J. B. Glaze, Jr.*¹, J. B. Hall², and J. Owens³*, ¹University of Idaho, Twin Falls, ²University of Idaho, Carmen, ³Beef Northwest, North Powder, OR
- 4:15 pm ES08 **Roundtable Discussion: Future Topics and Format for the WSASAS Extension Symposium.** *J. Sprinkle**, Moderator, University of Arizona

WSASAS COMMITTEE MEETINGS

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

ORAL PRESENTATIONS

Breeding and Genetics

Chair: Milt Thomas, Colorado State University

Room: Aspen

- 1:30 pm 024 **Relationship of Pulmonary Arterial Pressure and Terrain Use of Beef Cows Grazing High-Altitude Foothill Rangelands.** *D. W. Bailey^{*1}, M. G. Thomas², T. N. Holt³, M. B. Stephenson⁴, R. M. Enns⁵, and S. E. Speidel²*, 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 025 **SNP query in candidate genes that affect puberty in Bos indicus-influenced heifers.** *M. M. Dias^{*1}, A. Canovas², C. Mantilla-Rojas³, D. Riley³, P. Luna⁴, S. E. Speidel⁵, M. Enns⁶, I. D. P. S. Diaz¹, F. R. P. de Souza⁷, J. F. Medrano⁸, H. N. de Oliveira¹, and M. G. Thomas⁵*, 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 026 **Variance Components for Genetic Evaluation of Body Condition Score in Beef Cattle.** *R. J. Boldt^{*1}, 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
-

- 2:15 pm 027 **Effects of beef cow milk production levels on longevity from Colorado State University's Beef Improvement Center.** *M. M. Culbertson^{*1}, 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 028 **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. Sanchez^{*2}, 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 Agricolas, Universidad Autonoma de Baja California, Ejido Nuevo Leon, Baja California, Mexico, ³Instituto Tecnologico de Sonora, Ciudad Obregon, 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 029 **Angus Cattle at High Altitude: Relationship Between Age and Pulmonary Arterial Pressure.** *X. Zeng^{*1}, 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*

- 3:15 pm 030 **Untapped genetic variability in Herefords: Implications for climate change.** *B. C. Krehbiel^{*1,2}, S. Paiva³, C. Wilson², S. Ericsson⁴, J. Boatright⁴, M. G. Thomas¹, and H. D. Blackburn²*, ¹Department of Animal Sciences, Colorado State University, Fort Collins, ²National Animal Germplasm Program, National Center for Genetic Resources Preservation, ARS, USDA, Fort Collins, CO, ³Embrapa Labex - US Secretariat International Affairs, Brasilia, Brazil, ⁴Department of Animal Sciences, Sul Ross State University, Alpine, TX
- 3:30 pm 031 **Multivariate analysis for genetic relationships between pulmonary arterial pressure and performance traits in an Angus herd at high elevation.** *N. F. Crawford^{*1}, S. E. Speidel², X. Zeng², T. N. Holt³, M. G. Thomas², and R. M. Enns²*, ¹Colorado State University, Department of Animal Sciences, Fort Collins, ²Department of Animal Sciences, Colorado State University, Fort Collins, ³College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins
- 3:45 pm 032 **Performance losses due to selection for low birth weight versus high calving ease: A simulation study in beef cattle.** *H. M. Saad^{*1,2}, R. M. Enns², M. G. Thomas², and S. E. Speidel²*, ¹Department of Animal Production, Omar Al-Mukhtar University, Al Bayda, Libya, ²Department of Animal Sciences, Colorado State University, Fort Collins
- 4:00 pm 033 **The effect of residual feed intake status on rumen microbial profiles in ewe lambs.** *M. Ellison^{*1}, G. C. Conant², W. R. Lamberson², T. M. Taxis², H. C. Cunningham³, K. J. Austin¹, and K. M. Cammack¹*, ¹University of Wyoming, Laramie, ²University of Missouri, Columbia, ³Department 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 |

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

PAST AWARDS

Western Section / American Society of Animal Science

Distinguished Service Awards

- 2014 Timothy Ross, New Mexico State University
2013 Pat Hatfield, Montana State University
2012 Doug Hixon, University of Wyoming
2011 John Paterson, Montana State University
2010 Charles T. Gaskins, Washington State University
2009 Michael D. MacNeil, USDA-ARS, Miles City, M
2008 David R. Ames, Colorado State University
2007 Noelle E. Cockett, Utah State University
2006 Not Given
2005 Mark Petersen, New Mexico State University
2004 Martin Vavra, Oregon State University
2003 Temple Grandin, Colorado State University, Fort
Collins
2002 Dennis M Hallford, New Mexico State University,
Las Cruces
2001 Peter R. Cheeke, Oregon State University
2000 G. Eric Bradford, University of California, Davis
1999 Robert E. Short, USDA-ARS, Miles City, MT
1998 Donald E. Johnson, Colorado State University
1997 M.W. McCullough, Moorman's High Plains SMA,
Fort Collins, CO
1996 Ray A. Field, University of Wyoming
1995 Cheryl Nockels, Colorado State University
1994 Kelvin Koong, Oregon State University
1993 James S. Brinks, Colorado State University
1992 Joe Wallace, New Mexico State University
1991 C. Brent Theurer, University of Arizona
1990 Mack H. Kennington, California State Polytechnic
University, Pomona
1989 C. Walter Newman, Montana State University
1988 Conrad J. Kercher, University of Wyoming
1987 David C. England, Oregon State University
1986 William Garrett, University of California, Davis
1985 Robert L. Blackwell, Montana State University
1984 Verle R. Bohman, University of Nevada, Reno
1983 Robert A. Bellows, USDA-ARS, Fort Keogh, Larri,
MT
1982 David C. Church, Oregon State University
1981 William H. Hale, University of Arizona

- 1980 Robert J. Raleigh, Oregon State University Squaw Butte Experiment Station
- 1979 John K. Matsushima, Colorado State University
- 1978 Perry T. Cupps, University of California, Davis
- 1977 John Patterson Bowland, University of Alberta
- 1976 Glen P. Lofgreen, University of California, Davis
- 1975 Irwin A. Dyer, Washington State University
- 1974 James E. Oldfield, Oregon State University
- 1973 Howard H. Stonaker, Colorado State University
- 1972 Lorin E. Harris, Utah State University
- 1971 Ralph Bogart, Oregon State University

Young Scientist Awards

- 2014 Eric Scholljegerdes, New Mexico State University
- 2013 Kim Vonnahme, North Dakota State University
- 2012 Shanna Ivey, New Mexico State University
- 2011 Shawn Archibeque, Colorado State University
- 2010 Clint A. Loest, New Mexico State University
- 2009 Joshua Bret Taylor, USDA-ARS, Dubois, ID
- 2008 Min Du, University of Wyoming
- 2007 Lance H. Baumgard, University of Arizona
- 2006 Terry Engle, Colorado State University
- 2005 David Bohnert, Oregon State University
- 2004 Denny Crews, Agriculture Canada
- 2003 Bret W. Hess, University of Wyoming
- 2002 Thomas W. Geary, USDA ARS, Miles City, MT
- 2001 Dean E. Hawkins, New Mexico State University
- 2000 Timothy DelCurto, Oregon State University
- 1999 Keith E. Belk, Colorado State University
- 1998 Noelle E. Cockett, Utah State University
- 1997 Janice G.P. Bowman, Montana State University
- 1996 Mark A. Mirando, Washington State University
- 1995 Mark B. Judkins, University of Nevada, Reno
- 1994 Mark E. Wise, University of Arizona
- 1993 Joseph D. Tatum, Colorado State University
- 1992 Mark Peterson, New Mexico State University
- 1991 William J. Murdoch, University of Wyoming
- 1990 Don C. Adams, University of Nebraska
- 1989 Alfred R. Menino, Jr., Oregon State University
- 1988 Michael L. Galyean, New Mexico State University
- 1987 Ronald E. Allen, University of Arizona
- 1986 James R. Males, Washington State University
- 1985 Gary B. Anderson, University of California, Davis
- 1984 Edward L. Squires, Colorado State University

- 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
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- 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

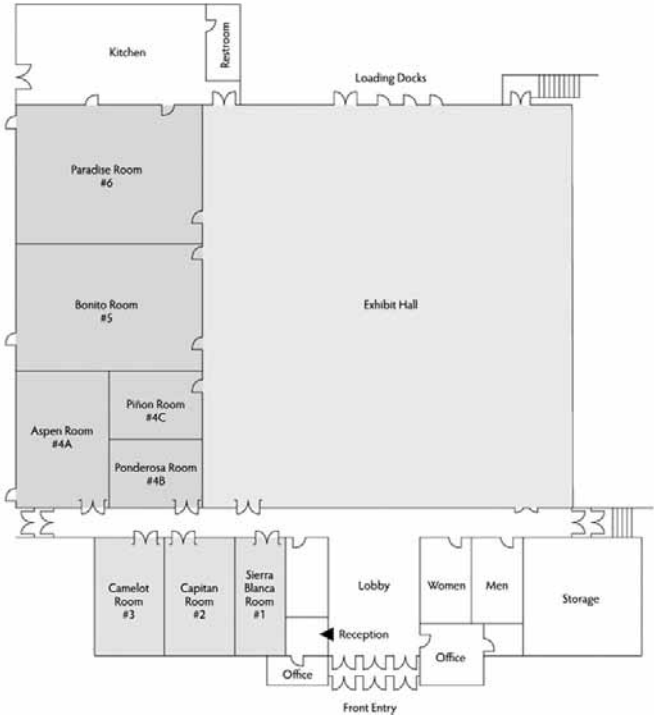
Young Scholars Recognition Awards

- 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

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| 2017 | Fargo, North Dakota |