

Friday, May 29

NRC Workshop Chair: Drs. Lori Warren and Pat Harris, University of Florida and Waltham Center for Pet Nutrition Torrey's Peak 1	
1:00 PM	The NRC review on supplement safety in horses, dogs and cats – where do we go from here?

POSTER PRESENTATIONS

Please have your poster on the boards by 1:00 pm.

Exercise Physiology - Posters Quandary and Long's Peak Foyers	
1	Temporal Variables of the Pleasure and Road Trots of the Morgan English Pleasure Horse. M Nicodemus*, <i>Mississippi State University, Mississippi State, Mississippi.</i>
2	Comparison of the Lope of the Arabian and Morgan Western Pleasure Horse. M Nicodemus* and J Williams, <i>Mississippi State University, Mississippi State, Mississippi.</i>
3	Exercise Metabolism Factors in Reined Cow Horses Competing in Boxing and Fencing Classes. K.M. Campbell, K.K. Turner*, K.J. Duberstein, and P.M. Cline, <i>University of Georgia, Athens, GA, USA.</i>
4	Plasma Amino Acid Profile in Horses following a Weighted Exercise Test. D. Powell* and K. Wimbush, <i>The Ohio State University Agriculture Technical Institute, Wooster, OH, USA.</i>

Genetics - Posters Quandary and Long's Peak Foyers	
5	Sequence Polymorphisms in MHC Class II DRB and DQB Gnes in Sarcoid-Affected Cape Mountain Zebra (<i>Equus zebra zebra</i>)hHrds in South Africa. E van Dyk*, MC Oosthuizen, and EH Venter, <i>University of Pretoria, Pretoria, South Africa.</i>
6	Mapping of Lavender Foal Syndrome Using the EquineSNP50 Chip. N Gabreski* ¹ , S Brooks ¹ , D Miller ² , and D Anczak ² , ¹ <i>Department of Animal Science, Cornell University, Ithaca, NY, USA,</i> ² <i>Baker Institute for Animal Health, College of Veterinary Medicine, Cornell University, Ithaca, NY, USA.</i>
7	Identification of SNPs within <i>MC4R</i> as a Candidate for Obesity in the Horse. C Armstrong*, C Streeter, and S Brooks, <i>Cornell University, Ithaca, NY, US.</i>
8	Skeletal Size and Shape Diversity in the Horse. E. T. Chu* ¹ , J. J. Allen ¹ , C. L. Streeter ¹ , N. B. Sutter ² , and S. A. Brooks ³ , ¹ <i>Cornell University, Ithaca, NY, USA,</i> ² <i>Department of Clinical Sciences, Cornell University, Ithaca, NY, USA,</i> ³ <i>Department of Animal Science, Cornell University, Ithaca, NY, USA.</i>
9	Initial Characterization of a Gene Abundantly Expressed in Stallion Testis. J. E. Shields*, K. J. Kochan, J. Jeong, C. A. Abbey, T. Raudsepp, and P. K. Riggs, <i>Texas A&M University, College Station, TX, USA.</i>

Nutrition - Posters
Quandary and Long's Peak Foyers

10	Continuous vs. Rotational Grazing of Cool Season Pastures by Adult Horses. G Webb*, C Duey, and S Webb, <i>Missouri State University, Springfield, MO, US.</i>
11	Development of a Method to Label Forages Used in Passage Rate Studies in the Horse. J.E. Ringler* and L.M. Lawrence, <i>University of Kentucky.</i>
12	Plasma Amino Acids in Mature Horses are Affected by Amino Acid Composition of Grass Pasture. P. M. Graham-Thiers* and L. K. Bowen, <i>Virginia Intermont College, Bristol, VA.</i>
13	Replacement of Sulfate Trace Minerals with Amino Acid Complexes in Mare Diets and its Effects on Early Postpartum Reproductive Performance. JG Vickers IV ¹ , LK Warren* ¹ , LA Silva ¹ , DC Sharp ¹ , and CK Larson ² , ¹ <i>University of Florida, Gainesville, FL USA,</i> ² <i>Zinpro Corporation, Eden Prairie, MN USA.</i>
14	Relationship Between Colostral IgG, Foal Serum IgG and Mare Vitamin E Status. P.D. Siciliano* ¹ , L.E. Dowler ¹ , S.H. Hayes ² , and L.M. Lawrence ² , ¹ <i>North Carolina State University, Raleigh, NC, USA,</i> ² <i>University of Kentucky, Lexington, KY, USA.</i>
15	Effect of Age on Plasma α-Tocopherol, β-Carotene and Retinol Concentrations in Horses. P.D. Siciliano* and L.E. Dowler, <i>North Carolina State University, Raleigh, NC, USA.</i>
16	Determination of Plasma Concentrations of Vitamin K Homologues in Thoroughbred Horses. Y Inoue* ¹ , Y Ohba ² , Y Kobayashi ² , M Komori ² , S Hayakawa ¹ , and T Matsui ² , ¹ <i>Equine Science Division, Hidaka Training and Research Center, Japan Racing Association, Urakawa-gun, Hokkaido, Japan,</i> ² <i>Division of Applied Biosciences, Graduate School of Agriculture, Kyoto University, Kyoto-city, Kyoto, Japan.</i>
17	The Ethanol- Soluble Carbohydrate Content and Composition of Some Common Horse Feeds. A C Longland* ¹ and P A Harris ² , ¹ <i>Equine and Livestock Nutrition Services, Tregaron, Ceredigion, Wales, UK,</i> ² <i>WALTHAM Centre for Pet Nutrition, Waltham-on-the-Wolds, Leicestershire, England.</i>
18	Biomarkers of Cartilage Metabolism and IGF-1 as Influenced by Dietary Starch. E.A. Nowelsky* ¹ , J.K. Morrissey ¹ , E.A. Jedrzejewski ¹ , P.A. Harris ² , and W.B. Staniar ¹ , ¹ <i>The Pennsylvania State University, University Park, PA, USA,</i> ² <i>Equine Studies Group, WALTHAM Centre For Pet Nutrition, Leics, UK.</i>
20	Body Weight Changes in Pregnant Mares. B. Cassill* ¹ , S. Jackson ² , and L. Lawrence ¹ , ¹ <i>University of Kentucky, Lexington, Kentucky, USA,</i> ² <i>Bluegrass Equine Nutrition, Nonesuch Kentucky USA.</i>
21	Ration Evaluation of Chesapeake Bay Watershed Horse Farms from a Nutrient Management Perspective. M Harper* ¹ , A Swinker ¹ , W Staniar ¹ , and A Welker ² , ¹ <i>Pennsylvania State University, Universtiy Park, PA, USA,</i> ² <i>Cumberland Valley Cooperative Association, Shippensburg, PA, USA.</i>
22	Assessment of Methodologies to Quantify Respirable Fungal Spores in Hay for Horses. R.G. Wright* ¹ , A.M. Bebbington ¹ , and G.J. Boland ² , ¹ <i>Ontario Ministry of Agriculture, Food, and Rural Affairs, Guelph, Ontario, Canada,</i> ² <i>Environmental Biology, University of Guelph, Guelph, Ontario, Canada.</i>

Production and Management - Posters
Quandary and Long's Peak Foyers

23	Relationship of Plant Grazing Tolerance to Equine Grazing Preferences. S. H. Hayes*, S. R. Smith, G. L. Olson, and L. Lawrence, <i>University of KY, Lexington, KY, USA.</i>
24	Ability to Maintain Fitness Improved during Large Pasture Turnout. P. M. Graham-Thiers* and L. K. Bowen, <i>Virginia Intermont College, Bristol, VA.</i>

25	Stage of Gestation Affects Resting Heart Rate. A.G. Parks*, S. Hayes, and L.M. Lawrence, <i>University of Kentucky, Lexington, Kentucky, USA.</i>
26	Hyperleptinemia in Horses: Does a Single Injection of Dexamethasone Enhance the Identification Process? TJ Caltabillota* and DL Thompson, Jr., <i>LSU Agricultural Center, Baton Rouge, LA, USA.</i>
27	Changes in Glutathione Peroxidase and Serum Selenium in Response to Castration. M. Brummer*, B.D. Cassill, S. Hayes, J.E. Ringler, A.G. Parks, and L.M. Lawrence, <i>University of Kentucky, Lexington, Kentucky, USA.</i>
28	Hoof Conformation and Palmar Process Fractures in Wamblood Foals. AS Bhatnagar ¹ , RS Pleasant ² , JJ Descanio ² , RM Lewis ² , A Gray ² , OE Shroeder ² , K Doyle ¹ , J Hall ² , and RK Splan ¹ , ¹ <i>Virginia Polytechnic Institute and State University, Blacksburg, Virginia, 24061</i> , ² <i>Virginia-Maryland Regional College of Veterinary Medicine, Blacksburg, Virginia, 24061.</i>
29	Horse Manure and Bedding Disposal Practices, Variations and Magnitude. A. Swinker ¹ , M. Harper ¹ , J. Weld ¹ , D. Kniffen ¹ , M. Brubaker ² , F. Schneider ³ , and C. Smith ⁴ , ¹ <i>Pennsylvania State University, University Park, PA, U.S.</i> , ² <i>Pennsylvania Conservation Commission, Harrisburg, PA, U.S.</i> , ³ <i>Pennsylvania Department of Environmental Protection, Harrisburg, PA, U.S.</i> , ⁴ <i>Virginia Polytechnic Institute, Front Royal, VA, U.S.</i>
30	Design and Initial Test Results for an Equine Distress Monitor System. R Lewis ¹ , KA Stirling ¹ , CJ Winstead ² , N Folkner ² , and M Padmawar ² , ¹ <i>Dept. of Animal, Dairy and Veterinary Science, Utah State University, Logan, Utah, USA</i> , ² <i>Department of Electrical and Computer Engineering, Utah State University, Logan, Utah, USA.</i>

Reproductive Physiology - Posters Quandary and Long's Peak Foyers

31	Sensitivity of the Pituitary Gland to Dopaminergic Input during Spring, Summer, and Fall: Mares versus Stallions. S. E. Clavier*, D. L. Thompson, Jr., T. J. Caltabillota, P. B. Mitcham, and E. A. Holloway, <i>LSU Agricultural Center, Baton Rouge, LA 70803.</i>
32	Estradiol and Domperidone Stimulation of Ovulation in Mares in Winter: Dose and Combination Studies. PB Mitcham ¹ , DL Thompson, Jr ¹ , T Thompson ² , SD Bennett ² , PJ Burns ^{3,4} , and TJ Caltabillota ¹ , ¹ <i>LSU Agricultural Center, Baton Rouge, LA, USA</i> , ² <i>Equine Reproductive Center of Equine Services Hospital, Simpsonville, KY, USA</i> , ³ <i>BioRelease Technologies, Lexington, KY, USA</i> , ⁴ <i>BET Pharm, Lexington, KY, USA.</i>
33	Recombinant Equine Luteinizing Hormone (reLH) Stimulates Production of Progesterone from Murine Leydig, Equine Granulosa, and Ovine Small Luteal Cells. RC Bott ¹ , SM Schwartzberger ² , JE Bruemmer ² , JA Arreguin Arevalo ² , and GD Niswender ² , ¹ <i>South Dakota State University, Brookings, SD, USA</i> , ² <i>Colorado State University, Fort Collins, CO, USA.</i>
34	Intrauterine Temperature of Mares Under Different Management Conditions. L Commaillie, M Vogelsang*, D Sigler, and K Hinrichs, <i>Texas A&M University, College Station, TX USA.</i>
35	A Comparison of Two Different Viability Tests in Equine Spermatozoa. LA Adams ¹ and CC Love ² , ¹ <i>University of Wisconsin-River Falls, River Falls, Wisconsin, United States</i> , ² <i>Texas A&M University, College Station, Texas, United States.</i>

Teaching and Extension - Posters Quandary and Long's Peak Foyers

36	Technical Note: Evaluation of Two Degreasing Techniques Used in Preserving an Equine Skeletal System. S.M. Malesky*, A.K. Horne, and J.S. Pendergraft, <i>Sul Ross State University, Alpine, Texas, USA.</i>
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37	Outcome Measures of Student Initiated International Horsemanship Clinics. K.R. Wilson* ¹ , R.K. Morris ¹ , and M.L. McMillan ² , ¹ <i>Texas Tech University, Lubbock, Texas, USA</i> , ² <i>Sam Houston State University, Huntsville, Texas. USA</i> .
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SYMPOSIA AND ORAL SESSIONS

Presentation Information: LCD projectors will be used for oral presentations. Presentations will be loaded at the meeting. Please bring your files containing your presentation to the Registration area 24 hours prior to the day of presentation.

The usual scheduled time for presentation of each oral paper is 12 minutes with 3 minutes for questions, discussion and speaker transition.

Opening Session and Reproductive Physiology Invited Speaker - "Squire's Lecture" Long's Peak	
6:00 PM	Welcome.
6:15 PM	"Changes in Equine Reproduction. Have they been good or bad for the Industry?" Sponsored by Animal Reproduction & Biotechnology Laboratory, Colorado State University. Dr. Ed Squires, Executive Director, Gluck Research Foundation, University of Kentucky.
7:15 PM	Welcome Reception - Sponsored by Zinpro Corporation.

Saturday, May 30

Nutrition Invited Speaker Chair: Dr. Rhonda Hoffman, Middle Tennessee State University Long's Peak	
8:00 AM	"Equine Metabolic Syndrome: Obesity, Insulin Resistance, and Laminitis in Horses" Sponsored by McCauley Brothers, Inc., Versailles, KY. Dr. Nicholas Frank, Associate Professor, College of Veterinary Medicine, University of Tennessee, School of Veterinary Medicine and Science, University of Nottingham, United Kingdom..

Exercise Physiology - Student Competition Chair: Dr. Carey Williams, Rutgers Long's Peak	
9:00 AM	38 Effect of Omega 3 Polyunsaturated Fatty Acids (PUFAs) on Markers of Inflammation in Young Horses in Training. J.L. Lucia* ¹ , J.A. Coverdale ¹ , C.E. Arnold ¹ , C.M. Honnas ¹ , B.D. Scott ¹ , and T.S. Epp ² , ¹ <i>Texas A&M University, College Station, TX, United States</i> , ² <i>JBS United, Sheridan, IN, United States</i> .
9:15 AM	39 Superoxide Dismutase Supplementation Does Not Affect Erythrocyte Superoxide Dismutase Activity or Systemic Inflammatory Cytokine Responses in an Equine Exercise Model.

E.D. Lamprecht*, C.A. Bagnell, and C.A. Williams, *Rutgers, the State University of New Jersey, New Brunswick, NJ, USA.*

9:30 AM 40 **The Effects of Endophyte-Infected Tall Fescue Consumption on Exercising Horses.**
A.G. Parks*, S. Hayes, M. Brummer, J.E. Ringler, K.M. Harvey, S. McCown, B.D. Cassill, and L.M. Lawrence, *University of Kentucky, Lexington, Kentucky, USA.*

Nutrition - Graduate Student Competition

Chair: **Drs. Amy Burk and Sarah Ralston**, University of Maryland and Rutgers
Quandary Peak 3

9:00 AM 41 **Comparison of *In Vivo* Digestibility Estimates Obtained from Weanling and Mature Horses Receiving the Same Diet.**
J.E. Ringler*, S. Hayes, M. Brummer, S.M. McCown, A.G. Parks, and L.M. Lawrence, *University of Kentucky.*

9:15 AM 42 **Differential mRNA Abundance of Amino Acid Transporters B⁰⁺, CAT-1, LAT-2, and LAT-3 in Five Segments of the Equine Intestine.**
AD Woodward*¹, SJ Holcombe¹, B Staniar², C Colvin¹, J Liesman¹, and NL Trotter¹,
¹Michigan State University, East Lansing, MI, United States, ²Pennsylvania State University, University Park, PA, United States.

9:30 AM 43 **Influence of Total Sulfur Amino Acids on Growth and Nitrogen Retention of Weanling Horses.**
K.N. Winsco*¹, J.A. Coverdale¹, T.A. Wickersham¹, and J.L. Shelton², ¹Texas A&M University, College Station, TX, United States, ²Cargill Animal Nutrition, Elk River, MN, United States.

9:45 AM 44 **Omega-3 Fatty Acid Supplementation Reduces Basal TNF α but not Toll-like Receptor-Stimulated TNF α in Full-Sized and Miniature Mares.**
J.M. Dinnetz*¹, S.R. Furtney², J.S. Pendergraft², T.S. Epp¹, and J.E. Minton¹, ¹Kansas State University, Manhattan, KS, USA, ²Sul Ross State University, Alpine, TX, USA.

10:00 AM 45 **Effect of Dietary Fat on Training-Induced Myocyte Adaptations.**
S.M. Teuschler-Stewart*, S.R. Cooper, M.S. Davis, and D.W. Freeman, *Oklahoma State University, Stillwater, Oklahoma, United States.*

10:15 AM 46 **Omega-3 Supplementation in Quarter and Miniature Horse Mares.**
S.R. Furtney*¹, B. Dominguez¹, M.K. Terry¹, T.S. Epp², M.J. Arns³, and J.S. Pendergraft¹,
¹Sul Ross State University, Alpine, Texas, USA, ²JBS, United, Sheridan, Indiana, USA,
³University of Arizona, Tucson, Arizona, USA.

10:30 AM **Break - Sponsored by Cargill Nutrena.**

10:45 AM 47 **Prediction of Hourly Pasture Dry Matter Intake in Horses.**
L. E. Dowler* and P. D. Siciliano, *North Carolina State University, Raleigh, North Carolina, United States.*

11:00 AM 48 **Glycemic/Insulemic Response to Feeding Hay with Different Water Soluble Carbohydrate Content in Healthy and Polysaccharide Storage Myopathy-affected Horses.**
L. Borgia*¹, S. Valberg¹, K. Watts², and J. Pagan³, ¹University of Minnesota College of Veterinary Medicine, St Paul, MN, USA, ²Rocky Mountain Research & Consulting, Inc., Center, CO, USA, ³Kentucky Equine Research, Inc., Versailles, KY, USA.

11:15 AM 49 **Effects of Psyllium Supplementation on Blood Glucose, Blood Insulin and Physical Characteristics in Quarter Horses.**
JL Peterson*, SJ Moreaux, JGP Bowman, PG Hatfield, J Olsen, and J Berardinelli, *Department of Animal and Range Sciences, Montana State University, Bozeman, Montana, USA.*

11:30 AM	50	The Effect of Changes in Body Condition on Insulin Sensitivity in Horses. K Owens*, S Pratt-Phillips, C Kollar, R Gray, and J Zimmerman, <i>North Carolina State University, Raleigh, NC, USA.</i>
11:45 AM		Lunch.
1:30 PM	51	Impact of Different Dietary Constituents on Phosphorus Balance in Mature Horses. T.E. Lavin*, B.D. Nielsen, N.L. Trottier, A.D. Woodward, C.I. O'Connor-Robison, and G.M. Hill, <i>Department of Animal Science, Michigan State University, East Lansing, MI.</i>
1:45 PM	52	Effect of Trace Mineral Supplementation on Gastric Ulcers in Exercising Yearling Horses. A.D. Hayes* ¹ , D.H. Sigler ¹ , N.D. Cohen ¹ , C.A. Cavinder ¹ , P.G. Gibbs ¹ , and C.K. Larson ² , ¹ Texas A&M University, College Station, TX, USA, ² Zinpro® Corporation, Eden Prairie, MN, USA.
2:00 PM	53	Selenium Status and Equine Immune Function. M. Brummer*, J.E. Ringler, A.G. Parks, S. Hayes, A.A. Adams, D.W. Horohov, and L.M. Lawrence, <i>University of Kentucky, Lexington, Kentucky, USA.</i>

Production and Management - Graduate Student Competition

Chair: **Dr. Don Henneke, Tarleton State University**

Quandary Peak 1

9:00 AM	54	Investigation of the Antimicrobial Mechanism of Caprylic Acid on <i>Dermatophilus Congolensis</i>. S Valipe*, G Choi, M Morton, and J Nadeau, <i>University of Connecticut, Storrs, Connecticut, United States.</i>
9:15 AM	55	Efficacy of Chemical Disinfectants on Inactivating <i>Parascaris equorum</i> Egg Development. J.C. Gould* and M.G. Rossano, <i>University of Kentucky, Lexington, Kentucky.</i>
9:30 AM	56	Insulin Resistance in Standard Donkeys (<i>Equus asinus</i>) of Three Body Conditions-Thin, Moderate, and Obese. A.K. McLean* ¹ , B.D. Nielsen ¹ , M. Yokoyama ¹ , C.I. O'Connor-Robison ¹ , S. Hengemuehle ¹ , W. Wang ³ , R. Geor ² , and P.A. Harris ⁴ , ¹ Department of Animal Science, Michigan State University, East Lansing, MI, USA, ² Large Animal Clinical Sciences, Michigan State University, East Lansing, MI, USA, ³ Department of Crop and Soil Sciences, Michigan State University, East Lansing, MI, USA, ⁴ Equine Studies Group, WALTHAM Centre for Pet Nutrition, Melton Mowbray, United Kingdom.
9:45 AM	57	Lipopolysaccharide-induced Insulin Resistance is Associated with Decreased Adipose Tissue GLUT4 mRNA Expression in Horses. JS Suagee* ¹ , RJ Geor ³ , LJ McCutcheon ³ , JG Wearn ² , MV Crisman ² , MW Hulver ¹ , and BA Corl ¹ , ¹ Virginia Tech, Blacksburg, VA, USA, ² Virginia-Maryland Regional College of Veterinary Medicine, Blacksburg, VA, USA, ³ Michigan State University, East Lansing, MI, USA.
10:00 AM	58	Evaluation of the Combined Intravenous Glucose and Insulin Test for Assessing Insulin Sensitivity. TJ Caltabillota*, DL Thompson, Jr., SE Clavier, PB Mitcham, and TJ Stevens, <i>LSU Agricultural Center, Baton Rouge, LA, USA.</i>
10:15 AM	59	Sampling Factors Affecting Carbohydrate Measurements in Pasture Grasses. S. McCown*, J. Ringler, K. Watson, B. Cassill, J. Stine, and L. Lawrence, <i>University of Kentucky, Lexington, KY, USA.</i>
10:30 AM		Break - Sponsored by Cargill Nutrena.
10:45 AM	60	Optimising the Siemens Coat-A-Count Radioimmunoassay to Measure Insulin in

		Equine Plasma. KD Tinworth ^{*1} , PC Wynn ¹ , PA Harris ² , MN Sillence ³ , and GK Noble ¹ , ¹ <i>Charles Sturt University, Wagga Wagga, NSW 2650, Australia</i> , ² <i>WALTHAM Centre for Pet Nutrition, Waltham-on-the-Wolds, Leicestershire, UK</i> , ³ <i>Queensland University of Technology, Brisbane, Qld 4001, Australia</i> .
11:00 AM	61	The Effects of Loose Groups vs. Individual Stalls during Transport and Group vs. Stall Housing on Glucocorticosteroids and DHEA in Naïve Yearling Horses. S. M. Garey*, T. H. Friend, D. H. Sigler, L. R. Berghman, S. C. Tutt, A. D. Hayes, D. Golden, and K. Johnson-Schroeder, <i>Texas A&M University, College Station, TX, USA</i> .
11:15 AM	62	Health Factors Associated with Microchip Insertion in Horses. MI Gerber*, AM Swinker, WB Staniar, JR Werner, EA Jedrzejewski, and AL Macrina, <i>The Pennsylvania State University, University Park, Pa 16802</i> .
11:30 AM	63	Sodium Pentobarbital Residues in Compost Piles Containing Carcasses of Euthanized Equines. L. M. Cottle*, L. A. Baker, J. L. Pipkin, and D. Parker, <i>West Texas A&M University, Canyon, TX, USA</i> .
11:45 AM	149	Science, Horsemanship and Safety: What Factors Influence Enrollment of Children by Their Guardians in Youth-Centered Equine Activities? AM Oshel-Shultz and KA Guay*, <i>Texas Tech University, Lubbock, TX 79409</i> .

Reproductive Physiology - Graduate Student Competition Chair: Dr. Gary Webb, Missouri State University Quandary Peak 2		
9:00 AM	64	Transcriptional Profile of Day 18 Pregnant and Non-pregnant Equine Endometria: Insight into Maternal Recognition of Pregnancy. A.L. Krull*, G.J. Bouma, T.R. Hansen, and J.E. Bruemmer, <i>Colorado State University, Fort Collins, Colorado, USA</i> .
9:15 AM	65	Oxytocin Stimulated PGF₂α Release from Equine Uterine Explant Cultures to a Greater Extent than Isolated Uterine Epithelial Cell Cultures. L Penrod*, SW Limesand, and MJ Arns, <i>The University of Arizona, Tucson, AZ, USA</i> .
9:30 AM	66	Is the Stimulatory Effect of Estradiol on Prolactin Secretion Mediated by a Change in Dopaminergic Input to the Pituitary? SE Clavier*, DL Thompson Jr, TJ Caltabilota, PB Mitcham, and TJ Stevens, <i>LSU Agricultural Center, Baton Rouge, LA USA</i> .
9:45 AM	67	Suppression of Cyclicity and Estrus Behavior in Mares Through Immunization Against a Recombinant GnRH Antigen. CR Spiker*, J Kouba, and DM Grieger, <i>Kansas State University, Manhattan, Kansas, USA</i> .
10:00 AM	68	Optimization of Culture Conditions for Equine Umbilical Cord Blood Derived Stem Cells. SA Reed* and SE Johnson, <i>University of Florida, Gainesville, FL, USA</i> .
10:15 AM	69	Stallion Spermatozoal Motility Parameters- an Examination of Intra and Inter-Stallion Variability Over a Breeding Season on a Commerical Texas Ranch. A.L. Garcia ^{*1} , H.A. Brady ¹ , M.A. Ballou ¹ , D.D. Varner ² , C.C. Love ² , and G. Blodgett ³ , ¹ <i>Department of Animal and Food Sciences, Texas Tech University, Lubbock, Texas USA</i> , ² <i>College of Veterinary Medicine, Texas A&M University, College Station, Texas USA</i> , ³ <i>6666 Ranch, Burnett Farms, Guthrie, Texas USA</i> .
10:30 AM		Break - Sponsored by Cargill Nutrena.
10:45 AM	70	Response to Cortisol Stimulation Tests in Old vs. Young Standardbred Mares. N.R. Liburt*, K.H. McKeever, and E.K. Wunderlich, <i>Rutgers, The State University of New</i>

Jersey, New Brunswick, NJ, USA.

Reproductive Physiology I

Chair: **Dr. Heidi Brady, Texas Tech University**

Quandary Peak 2

11:00 AM	71	Dietary Supplementation of 2 Sources of Omega-3 Fatty Acids and Subsequent Effects on Fresh, Cooled, and Frozen Seminal Characteristics of Stallions. S. T. Grady*, B. D. Scott, S. P. Brinsko, D. W. Forrest, J. E. Sawyer, and C. A. Cavinder, <i>Texas A&M University, College Station, TX USA.</i>
11:15 AM	72	The Influence of Dietary Vitamin E on Serum Vitamin E and Fatty Acids, and Spermatozoa Fatty Acids in Stallions. E.K. Gee* ^{1,2} , J.E. Bruemmer ¹ , P.D. Siciliano ³ , P.C.H. Morel ² , T.E. Engle ¹ , and E.L. Squires ¹ , ¹ <i>Colorado State University, Fort Collins, Colorado 80523-1693, USA</i> , ² <i>Massey University, Palmerston North 4442, New Zealand</i> , ³ <i>North Carolina State University, Raleigh NC 27695-7621, USA.</i>
11:30 AM	73	Effects of Egg Yolk Source on the Cryopreservation of Stallion Semen. C Burriss and G Webb*, <i>Missouri State University, Springfield, MO, US.</i>
11:45 AM	74	Exercise Lengthens the Interovulatory Interval in Mares. D. E. Kelley ¹ , J. R. Gibbons ¹ , S. E. Pratt ² , R. L. Smith ¹ , and C. J. Mortensen* ¹ , ¹ <i>Clemson University, Clemson, South Carolina, USA</i> , ² <i>North Carolina State University, Raleigh, North Carolina, USA.</i>
12:00 PM		Lunch.
1:30 PM	75	Use of Doppler Ultrasonography on Horses to Detect Vasoconstriction Caused by Endophyte Infected Tall Fescue. KJ McDowell*, ES Moore, AG Parks, and LM Lawrence, <i>University of Kentucky, Lexington, KY, USA.</i>
1:45 PM	76	Stage of Pregnancy and Foetal Loss Following Exposure of Mares to Processionary Caterpillars. A. J. Cawdell-Smith ¹ , K. H. Todhunter ^{1,2} , N. R. Perkins ^{1,3} , and W. L. Bryden* ¹ , ¹ <i>The University of Queensland, Gatton, QLD, Australia</i> , ² <i>Tails and Scales Veterinary Services, The Junction, NSW, Australia</i> , ³ <i>AusVet Animal Health Services, Toowoomba, Australia.</i>

Teaching and Extension Invited Speaker

Chair: **Dr. Shea Porr, Virginia Tech**

Long's Peak

12:00 PM		"The "Unwanted" Horse in the U.S., An Overview of the Issue" Sponsored by NAERIC, Louisville, KY. Dr. Tom Lenz, Vice President Professional Services, Fort Dodge Animal Health..
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Teaching and Extension - I

Chair: **Dr. Brett Scott, Texas A & M University**

Quandary Peak 1

1:30 PM	83	Using Web 2.0 Technology (YouTube) to Reach Extension Clientele. E. A. Greene* ¹ , J. L. Whittle ² , A. S. Griffin ² , C. H. Wood ² , K. Anderson ³ , and C. A. Williams ⁴ , ¹ <i>University of Vermont, Burlington, VT, USA</i> , ² <i>University of Kentucky, Lexington, KY, USA</i> , ³ <i>University of Nebraska, Lincoln, NE, USA</i> , ⁴ <i>Rutgers, The State University of New Jersey, New Brunswick, NJ, USA.</i>
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1:45 PM	84	Enhancing Equine Curricula Through Course Redesign: A Case Study. J Nadeau* and D McCaffrey, <i>University of Connecticut, Storrs, Connecticut, United States of America.</i>
2:00 PM	85	The Importance of Business in the Equine Curriculum. S. Conners ¹ and C. Brady* ² , ¹ <i>Purdue University Calumet, Hammond, IN, USA</i> , ² <i>Purdue University, West Lafayette, IN, USA.</i>
2:15 PM	86	Inclusion of Equine-Science Curriculum within an Experiential Learning Setting. K Guay* and A Oshel-Shultz, <i>Texas Tech University, Lubbock, TX 79409.</i>
2:30 PM	87	Applied Learning in Equine Studies: the Use of Visual Arts and Development of Non-invasive Learning Tools. J.L. Holland*, <i>Midway College, Midway, KY USA.</i>
2:45 PM	88	Teaching Strategic Parasite Control to Undergraduate Students Using a Problem-based, Wet Laboratory Approach. M. Rossano*, <i>University of Kentucky, Lexington, KY, USA.</i>
3:00 PM		Break – Sponsored by Performance Horse Nutrition in cooperation with Poulin Grain.
3:15 PM	89	Teaching a Biomechanics and Shoeing Course with a Non-Farrier Instructor. E.L. Wagner* and C.A. McCall, <i>Auburn University, Auburn, AL, USA.</i>
3:30 PM	90	The Use of MRI Data for Equine Anatomical Illustration. Rachel Monticelli* ¹ and Allison Stewart DVM ² , ¹ <i>University of Illinois, Chicago, Il. USA</i> , ² <i>University of Illinois, Urbana, Il, USA.</i>
3:45 PM	91	Equine Subject Matter In Virginia's Secondary Agricultural Education Programs. Rusty Miller*, <i>North Carolina A&T State University, BC Webb Hall, 1601 E. Market St., Greensboro, NC 27411.</i>
4:00 PM	92	An Undergraduate Study of Wild Horse Behavior. P.A. Evans*, <i>Utah State University, Logan, Utah, USA.</i>
4:15 PM	93	The Effect of Previous Experience on Performance in an Introductory-Level Undergraduate Equine Science Class. S Pratt-Phillips* and S Schmitt, <i>North Carolina State University, Raleigh, NC, USA.</i>
4:30 PM	94	University Students may be Better Prepared for Life after Working with Horses. P. A. Evans* ¹ , K. S. Jogan ² , N. E. Jack ² , A. Scott ² , and C. A. Cavinder ³ , ¹ <i>Utah State University, Logan, Utah, USA</i> , ² <i>University of Arkansas, Fayetteville, Arkansas, USA</i> , ³ <i>Texas A&M University, College Station, Texas, USA.</i>
4:45 PM	95	Development of the University of Maryland Equine Rotational Grazing and Demonstration Site: A Novel Education Tool. A. O. Burk* ¹ , M. Dwyer ¹ , L. R. Vough ¹ , and E. Dengler ² , ¹ <i>University of Maryland, College Park, MD USA</i> , ² <i>Natural Resources Conservation Service, Annapolis, MD USA.</i>

Genetics		
Chair: Dr. Bhanu Chowdhary, Texas A&M University		
Quandary Peak 2		
2:00 PM	96	Breeds of Horses Positive for the GYS1 Mutation Associated with Polysaccharide Storage Myopathy. SJ Valberg*, ME MCue, M Lucio, and JR Mickelson, <i>University of Minnesota, College of Veterinary Medicine, St Paul, MN. USA.</i>
2:15 PM	97	Light:Dark, Circadian, and Ultradian Regulation of Motor Activity and Skeletal Muscle Gene Expression in the Horse. BA Murphy* ¹ , AM Martin ¹ , and JA Elliott ² , ¹ <i>University College Dublin, School of</i>

<i>Agriculture, Food Science and Veterinary Medicine, Belfield, Dublin 4, Ireland, ²University of California, San Diego, California, USA.</i>		
2:30 PM	98	Investigation of Dwarfism Among Miniature Horses Using the Illumina Horse SNP50 Bead Chip. J. Eberth*, T. Swerczak, and E. Bailey, <i>MH Gluck Equine Research Center/ University of Kentucky, Lexington, KY, USA.</i>
2:45 PM	99	Illumina Equine SNP50 Bead Chip Investigation of Adolescent Idiopathic Lordosis Aong American Saddlebred Horses. Deborah Cook*, Patrick Gallagher, and Ernest Bailey, <i>MH Gluck Equine Research Center, University of Kentucky, Lexington, KY, USA.</i>
3:00 PM	Break – Sponsored by Performance Horse Nutrition in cooperation with Poulin Grain.	
3:15 PM	100	Assessing Chromosome Abnormalities in Horses with Infertility or Congenital Abnormalities. TL Lear*, <i>University of Kentucky.</i>
3:30 PM	101	Identifying Mutation of the SRY Gene in Horses with Sex-Reversal Syndrome. RB McGee* and TL Lear, <i>University of Kentucky, Lexington, Kentucky, USA.</i>
3:45 PM	102	Refinement of the Equine Cerebellar Abiotrophy Locus on ECA2 by Haplotype Analysis. L Brault* and MCT Penedo, <i>Veterinary Genetics Laboratory, University of CA, Davis, Davis, CA 95616.</i>
4:00 PM	103	Equine Gene Structure Annotation by RNA Sequencing. Stephen Coleman* ¹ , Kai Wang ² , Zheng Zeng ² , Michael Mienaltowski ¹ , Jinze Liu ² , and James MacLeod ¹ , ¹ <i>University of Kentucky Department of Veterinary Science, Lexington, KY, USA,</i> ² <i>University of Kentucky Department of Computer Science, Lexington, KY, USA.</i>

Nutrition - I		
Chair: Dr. Burt Staniar, Pennsylvania State University		
Long's Peak		
2:00 PM	104	Effect of Dietary Trace Mineral Amino Acid Complexes on Hoof Wall and Sole Growth and Humoral Immune Function in Lactating Mares. LK Warren* ¹ , EL Johnson ¹ , MB Porter ¹ , KR Vineyard ¹ , and CK Larson ² , ¹ <i>University of Florida, Gainesville, FL USA,</i> ² <i>Zinpro Corporation, Eden Prairie, MN USA.</i>
2:15 PM	105	Replacement of Sulfate Trace Minerals with Amino Acid Complexes in Mare Diets and its Effects on Innate and Acquired Immunity in Nursing Foals. JG Vickers IV ¹ , LK Warren* ¹ , J Kivipelto ¹ , and CK Larson ² , ¹ <i>University of Florida, Gainesville, FL USA,</i> ² <i>Zinpro Corporation, Eden Prairie, MN USA.</i>
2:30 PM	106	Effects of Potassium Free and Potassium Rich Electrolytes on Dietary Cation-anion Balance and on Plasma Electrolytes and Acid-base Balance in Eventing Horses. B G Souza ¹ , T M Hess* ^{1,2} , F Q Almeida ¹ , E B F R B Mello ¹ , G F Oliveira ¹ , J P Chaves ¹ , and C C P Veiga ¹ , ¹ <i>Universidade Federal Rural do Rio de Janeiro, Seropedica, RJ, Brazil,</i> ² <i>Colorado State University, Fort Collins, CO, USA.</i>
2:45 PM	107	Evidence for a Role of Dietary Fiber Type on Hydration Status of Horses Performing Endurance Exercise. HS Spooner* ¹ , BD Nielsen ² , HC Schott II ² , CI O'Connor-Robison ² , and PA Harris ³ , ¹ <i>West Virginia University, Morgantown, WV, USA,</i> ² <i>Michigan State University, East Lansing, MI, USA,</i> ³ <i>WALTHAM Centre for Pet Nutrition, Leics, UK.</i>
3:00 PM	Break – Sponsored by Performance Horse Nutrition in cooperation with Poulin Grain.	
3:15 PM	108	Estimation of Nitrogen Digestibility and Utilization of Alfalfa, Mixed Grass Hay and

		Oats. AD Woodward*, TE Lavin, BD Nielsen, J Liesman, and NL Trottier, <i>Michigan State University, East Lansing, MI, United States.</i>
3:30 PM	109	Muscle and Plasma Amino Acids in Pregnant/Lactating Mares and their Weanling Foals. J. A. Wilson* ¹ and P. M. Graham-Thiers ² , ¹ <i>Berry College, Mt. Berry, GA</i> , ² <i>Virginia Intermont College, Bristol, VA.</i>
3:45 PM	110	Serum Amino Acid Profiles in the Foal Pre and Post Suckling. C.I O'Connor-Robison* ¹ , M.J. Piotrow ² , C.L. Carlton ¹ , K.L. Waite ¹ , J.E. Shelle ¹ , and N. Trottier ¹ , ¹ <i>Michigan State University, East Lansing, MI, USA</i> , ² <i>Delaware Valley College, Doylestown, PA, USA.</i>
4:00 PM	111	Effect of Protein Source on Nitrogen Balance and Plasma Amino Acids in Exercising Horses. P. M. Graham-Thiers* and L. K. Bowen, <i>Virginia Intermont College, Bristol, VA.</i>
4:15 PM	112	Effect of Long-Term Endurance Conditioning on Total Tract Apparent Digestibility of Fiber in Horses. AG Goachet ¹ , C Philippeau ¹ , L Martin ¹ , C Robert ² , D Votion ³ , E Van Erck ^{4,5} , and V Julliand* ¹ , ¹ <i>ENESAD, Dijon, France</i> , ² <i>Ecole Vétérinaire d'Alfort, Paris, France</i> , ³ <i>Centre européen du cheval, Mont Le Soie, Belgique</i> , ⁴ <i>Centre de Médecine Sportive, Liège, Belgique</i> , ⁵ <i>CIRALE, Dozulé, France.</i>
4:30 PM	113	Using [¹³C]Sodium Bicarbonate to Measure Carbon Dioxide Production in Horses at Rest. K.L. Urschel* ¹ , T.L. Smith ² , R.B. Drake ² , P.A. Harris ³ , and R.J. Geor ⁴ , ¹ <i>University of Kentucky, Lexington, KY, United States</i> , ² <i>Middleburg Agricultural Research and Extension Center, Middleburg, VA, United States</i> , ³ <i>WALTHAM Centre for Pet Nutrition, Melton Mowbray, United Kingdom</i> , ⁴ <i>Michigan State University, East Lansing, MI, United States.</i>

Exercise Physiology - I Chair: Dr. Kris Wilson, Texas Tech University Quandary Peak 3		
2:15 PM	77	Microhydrin Supplementation Reduced Plasma Lactate in Exercising Standardbred Mares. CA Williams* ¹ , ED Lamprecht ¹ , H Roessner ¹ , and K Lloyd ² , ¹ <i>Rutgers, the State University of New Jersey, New Brunswick, NJ, USA</i> , ² <i>RBC Life Sciences Inc., Irving, TX, USA.</i>
2:30 PM	78	Comparison of Plasma Biochemical Parameters of Exhausted and Non Exhausted Horses Participating in 1000 to 2000 m Races. G S Seppa ¹ , T M Hess* ^{1,2} , R J Kowal ³ , and O J Santos ⁴ , ¹ <i>Universidade Federal Rural do Rio de Janeiro, Seropedica, RJ, Brazil</i> , ² <i>Colorado State University, Fort Collins, CO, USA</i> , ³ <i>Joquei Clube Brasileiro, Rio de Janeiro, RJ, Brazil</i> , ⁴ <i>Universidade Federal Fluminense, Niteroi, RJ, Brazil.</i>
2:45 PM	79	Physiological Responses and Energy Expenditure of Polocrosse Horses During Competition. A. M. Buzas, A. J. Cawdell-Smith, G. McL. Dryden, and W. L. Bryden*, <i>The University of Queensland, Gatton, QLD, Australia.</i>
3:00 PM		Break – Sponsored by Performance Horse Nutrition in cooperation with Poulin Grain.
3:00 PM	80	Exercise Metabolism Comparison of the Reining Work and the Cow Work in Reined Cow Horses. K.M. Campbell, K.K. Turner*, K.J. Duberstein, and P.M. Cline, <i>University of Georgia, Athens, GA, USA.</i>
3:15 PM	81	Forced Exercise Induces Histological Evidence of Osteoarthritis on the Distal

<p>Metacarpus of Sheep. KL Vernon*¹, L Riggs², J Coverdale³, AB Bodine¹, and J Gibbons¹, ¹<i>Clemson University, Clemson, SC, USA</i>, ²<i>Louisiana State University, Baton Rouge, LA, USA</i>, ³<i>Texas A&M University, College Station, TX, USA</i>.</p>		
3:30 PM	82	<p>Reproducibility and Repeatability of Equine Muscle Thickness Measured with Ultrasound. A Lindner*¹, R Signorini², J Vassallo², F Tomatis², FM Flores², ME Gagliano², J Curiotti², E Terragona², PB Suarez², and F Nuovo², ¹<i>ARBEITSGRUPPE PFERD, JÜLICH, GERMANY</i>, ²<i>FACULTAD DE VETERINARIA, UNIVERSIDAD DEL LITORAL, ESPERANZA, ARGENTINE</i>.</p>

OTHER EVENTS

<p>Social Event Soda Ridge Stables</p>	
5:00 PM	Barbeque - Sponsored by Triple Crown Nutrition and Chia Farms.

Sunday, May 31

SYMPOSIA AND ORAL SESSIONS

<p>Exercise Physiology Invited Speaker Chair: Dr. Brian Nielsen, Michigan State University Long's Peak</p>	
8:00 AM	<p>“Regulation of insulin action by diet and exercise” Sponsored by NutraCea, Phoenix, AZ. Dr. Matt Hickey, Professor, Department of Health and Exercise Science, Colorado State University..</p>

<p>Nutrition - II Chair: Dr. Pat Harris, Waltham Center for Pet Nutrition Long's Peak</p>	
9:00 AM	<p>114 Comparison of a Colorimetric and a High Performance Liquid Chromatography Method for the Determination of Fructan in Pasture Grasses for Horses. A C Longland*¹ and P A Harris², ¹<i>Equine and Livestock Nutrition Services, Tregaron, Ceredigion, Wales, UK</i>, ²<i>WALTHAM Centre for Pet Nutrition, Waltham-on-the-Wolds, Leicestershire, England</i>.</p>
9:15 AM	<p>115 Inter-animal Variation in Glycemic and Insulinemic Response to Different Carbohydrate Sources. W. B. Staniar*, H. S. Grube, and E. A. Jedrzejewski, <i>The Pennsylvania State University, University Park, PA, USA</i>.</p>
9:30 AM	<p>116 Nonstructural Carbohydrate and Glycemic Response of Feeds: How Low is "low" Starch?</p>

		R. M. Hoffman* ¹ , J. C. Haffner ¹ , C. A. Crawford ¹ , H. Eiler ² , and K. A. Fecteau ² , ¹ <i>of Agribusiness and Agriscience, Middle Tennessee State University, Murfreesboro, TN, USA,</i> ² <i>Department of Comparative Medicine, College of Veterinary Medicine, The University of Tennessee, Knoxville, TN, USA.</i>
9:45 AM	118	Weight Gain and Insulin Sensitivity in Horses Fed Different Calorie Sources. M Gordon*, M Jerina, R Raub, A Finzel, M Engel, and J Lindemann, <i>Land O'Lakes Purina Feed, Gray Summit, Missouri, USA.</i>
10:00 AM	119	The Loss of Water-Soluble Carbohydrate and Soluble Protein from Nine Different Hays Soaked in Water for up to 16 Hours. A C Longland* ¹ , C Barfoot ² , and P A Harris ³ , ¹ <i>Equine and Livestock Nutrition Services, Tregaron, Ceredigion, Wales, UK,</i> ² <i>Mars Horse Care UK Ltd, Old Wolverton, Buckinghamshire, UK,</i> ³ <i>WALTHAM Centre for Pet Nutrition, Waltham-on-the-Wolds, Leicestershire, UK.</i>
10:15 AM	120	Discrimination and Selection by Horses of Sucrose Solution. J Danel ¹ and K Merkies* ² , ¹ <i>Agrocampus-Ouest, Rennes, France,</i> ² <i>University of Guelph Kemptville Campus, Kemptville, ON, Canada.</i>
10:30 AM		Break – Sponsored by Performance Horse Nutrition in cooperation with LMF Feeds.
10:45 AM	121	NMR-based Metabonomic Analysis of Serum From Standardbred Yearlings With or Without Hock Osteochondrosis Desiccans Lesions: Preliminary Study. SL Ralston* ¹ , I Pelczer ² , C Shatynski ¹ , and PF Spears ³ , ¹ <i>Rutgers, the State University of New Jersey, New Brunswick, NJ, USA,</i> ² <i>Princeton University, Princeton, NJ, USA,</i> ³ <i>Hanover Shoe Farm, Hanover, PA, USA.</i>
11:00 AM	122	Growth Response of Draft Cross Weanlings Fed 90% Forage Total Mixed Ration Cubes Versus Traditional Hay/Concentrate Rations. SL Ralston* ¹ , H Anderson ² , and R Johnson ³ , ¹ <i>Rutgers, the State University of New Jersey, New Brunswick, NJ, USA,</i> ² <i>Idleacres, Cokato, MN, USA,</i> ³ <i>Nutrena, Minnetonka, MN, USA.</i>

Teaching and Extension - II		
Chair: Drs. Jenifer Nadeau and Jeff Pendergraft, University of Connecticut and Sul Ross State University		
Quandary Peak 1		
9:00 AM	134	Evaluating Equine Extension and Outreach Programs. K Martinson* and T Bartholomay, <i>University of Minnesota, St. Paul, MN, USA.</i>
9:15 AM	135	Evaluation of the Southeast Equine Conference 2008. B.J. McIntosh ¹ , P.R. Buff* ² , and S.M. Fulgham ² , ¹ <i>University of Tennessee, Knoxville, TN, USA,</i> ² <i>Mississippi State University, Mississippi State, MS, USA.</i>
9:30 AM	146	Going Global: Incorporating a Study Tour into an Equine Curriculum. J. Kouba*, <i>Kansas State University, Manhattan, KS.</i>
9:45 AM	137	Pennsylvania Equine Nutrient and Sediment Management Project. A. Swinker* ¹ , J. Malot ² , D. Foulk ¹ , S. Truax ² , and M. Harper ¹ , ¹ <i>Pennsylvania State University, University Park, PA, US,</i> ² <i>USDA Natural Resources Conservation Service, Harrisburg, PA, US.</i>
10:00 AM	138	Review of a Statewide Equine Feed Assessment Over a 5 year Period. J. R. Burk*, <i>Maryland Horse Industry Board, Maryland Department of Agriculture, Annapolis, Maryland, U.S.A.</i>
10:15 AM	139	Outcome Measurements of Arkansas Horsemen of Excellence Program. S.M. Jones*, <i>University of Arkansas Cooperative Extension, Little Rock, AR, USA.</i>
10:30 AM		Break – Sponsored by Performance Horse Nutrition in cooperation with LMF Feeds.

10:45 AM	140	Determining the Educational Needs of Non-Professional and Minority Horse Owners in North Carolina. Jessica Landreth* and Rusty Miller, <i>North Carolina A&T State University, BC Webb Hall, 1601 E Market, Greensboro, NC 27411.</i>
11:00 AM	141	Tennessee Master Horse Owner Program: Evaluation of In-Service Training. B.J. McIntosh* and F.M. Hopkins, <i>University of Tennessee, Knoxville, TN, USA.</i>
11:15 AM	142	An Economic Impact Analysis of the North Carolina Equine Industry. Inhyuck Ha* ¹ , Jessica Hollars ¹ , Mande Lancaster ² , Robert Mowrey ³ , and Michael Yoder ³ , ¹ <i>Western Carolina University, Cullowhee, NC, USA,</i> ² <i>East Carolina University, Greenville, NC, USA,</i> ³ <i>North Carolina State University, Raleigh, NC, USA.</i>
11:30 AM	143	Stock Horse of Texas Value and Effectiveness of Educational Programs. K.B. Patrick* and K.R. Wilson, <i>Texas Tech University, Lubbock, Texas, USA.</i>
11:45 AM	144	Establishing Large Animal Evacuation Shelters in Texas. B.D. Scott* and W.T. Bissett, <i>Texas A&M University, College Station, TX, USA.</i>
12:00 PM		Lunch.
1:00 PM		Invited speaker - Production and Management.
2:00 PM	145	Development of an Equine Best Management Practice Demonstration Working Horse Farm. CA Williams*, M Westendorf, C Obropta, S Ralston, W Bamka, and K Malinowski, <i>Rutgers, the State University of New Jersey, New Brunswick, NJ, USA.</i>
2:15 PM	136	Conducting State Level Equine Surveys and Economic Impact Studies: The NCSU-Mereo Method of Determining Missing Data Points. M.J. Yoder* ¹ , I.S. Ha ² , R.A. Mowrey ¹ , J. Hollars ² , and M. Foushee-Lancaster ³ , ¹ <i>North Carolina State University, Raleigh, North Carolina, United States,</i> ² <i>Western Carolina University, Cullowhee, North Carolina, United States,</i> ³ <i>East Carolina University, Greenville, North Carolina, United States.</i>
2:30 PM	147	A Satellite Horse Conference Impacts the Horse Industry and University Recruiting. K.P. Anderson*, A. Ferrell, and K. Pottoff, <i>University of Nebraska, Lincoln, NE, USA.</i>
2:45 PM	148	Understanding Equine Identification through County 4-H Horse Programs. A. Swinker ¹ , H. McKernan* ¹ , J. Werner ¹ , E. Jedrzejewski ¹ , and R. Miller ² , ¹ <i>Pennsylvania State University, University Park, PA, U.S.,</i> ² <i>Pennsylvania Department of Agriculture, Harrisburg, PA, U.S.</i>
3:00 PM		Break - Sponsored by the Equine Science Society.
3:15 PM	150	Safety Equipment: Usage Patterns after 'Hitting the Dirt'. P. A. Evans* ¹ , K. S. Jogan ² , A. Scott ² , and N. E. Jack ² , ¹ <i>Utah State University, Logan, Utah, USA,</i> ² <i>University of Arkansas, Fayetteville, AR, USA.</i>
3:30 PM	151	Evaluating Life Skill Development in the 4-H High Adventure Horse Packing Program. S.M. Jones* ¹ and C.L. Bocksnick ² , ¹ <i>University of Arkansas Cooperative Extension, Little Rock, AR, USA,</i> ² <i>University of Arkansas, Fayetteville, AR, USA.</i>
3:45 PM	152	Valuation of Equine Welfare Skills: Indiana 4-H Horse and Pony Adult Volunteers. N.M. Rappaport*, <i>Purdue University, West Lafayette, Indiana, USA.</i>

Undergraduate Student Competition		
Chair: Dr. Shannon Pratt-Phillips, North Carolina State University		
Quandary Peak 2		
9:00 AM	123	Effect of Food Extracts on Plasma Electrolytes and Strong Ion Difference During and

		After Exercise in Standardbred Mares. JL Zambito*, KH McKeever, JM Streltsova, and NR Liburt, <i>Rutgers, The State University of New Jersey, New Brunswick, NJ, USA.</i>
9:15 AM	124	Glycogen Depletion in the Reining Horse. C Mueller*, K Hiney, and G Onan, <i>University of Wisconsin-River Falls, River Falls, WI, 54022.</i>
9:30 AM	125	A Comparison of Actual and Recommended Digestible Energy Intakes Derived from Differing Feeding Standards for Miniature Horses. A.L. Scherer-Hoock* ¹ , E.A. Greene ¹ , M. Lennox ² , and C. Brown-Douglas ² , ¹ <i>University of Vermont, Burlington, Vermont, USA,</i> ² <i>Kentucky Equine Research, Versailles, Kentucky, USA.</i>
9:45 AM	126	Comparison of Biochemical Values between Miniature and Full Size Horses Fed a Marine or Animal Fat Diet. B. Dominguez* ¹ , S.R. Furtney ¹ , M.J. Arns ² , T.S. Epp ³ , and J.S. Pendergraft ¹ , ¹ <i>Sul Ross State University, Alpine, Texas, USA,</i> ² <i>University of Arizona, Tucson, Arizona, USA,</i> ³ <i>JBS, United, Sheridan, Indiana, USA.</i>
10:00 AM	127	Effects of Feed Type on Growth and Gastric Ulcer Formation in Weanling Horses. RS Flores* ¹ , CR Byron, DVM ² , and KH Kline, PhD ¹ , ¹ <i>University of Illinois dept. of Animal Science, Urbana, IL, US,</i> ² <i>University of Illinois Clinical Veterinary Medicine, Urbana, IL, US.</i>
10:15 AM	128	Colostrum, Milk and Serum Immunoglobulin G Concentrations in Quarter Horse Mares and Their Foals. A. R. Kenzig* ¹ , K. M. O'Meara ¹ , C. J. Kremer ¹ , K. S. Jogan ² , N. E. Jack ² , and K. Cole ¹ , ¹ <i>The Ohio State University, Columbus, OH, USA,</i> ² <i>University of Arkansas, Fayetteville, AR, USA.</i>
10:30 AM		Break – Sponsored by Performance Horse Nutrition in cooperation with LMF Feeds.
10:45 AM	129	Nitrogen Retention and Nutrient Digestibility in Geldings Fed Grass or Alfalfa Hay or Alfalfa Cubes. LB Potts*, JJ Hinkson, BC Graham, CA Löest, and JL Turner, <i>New Mexico State University, Las Cruces, NM, USA.</i>
11:00 AM	130	Phytase Supplementation Has Little Impact On Protein Digestibility In Maintenance Geldings. J Zingsheim* ¹ , B Nielsen ² , C O' Connor Robison ² , and T Lavin ² , ¹ <i>Kalamazoo College, Kalamazoo, MI, USA,</i> ² <i>Michigan State University, East Lansing, MI, USA.</i>
11:15 AM	131	Characterization of <i>Staphylococcus aureus</i> in Horses and Horse Personnel in Southwest Montana. M McElwee* ^{1,2} , S Griffith ¹ , J Mediavilla ³ , B Kreiswirth ³ , J Voyich ¹ , and S Moreaux ² , ¹ <i>Department of Veterinary Molecular Biology, Montana State University, Bozeman, MT, USA,</i> ² <i>Department of Animal Science, Montana State University, Bozeman, MT, USA,</i> ³ <i>Public Health Research Institute Tuberculosis Center, International Center for Public Health, Newark, NJ, USA.</i>
11:30 AM	132	Comparison of Different Management Techniques on Hay Wastage in Horses Fed Coastal Bermudagrass Square Baled Hay. A. Bricarell*, M. McMillan, K. Hall, and L. Rakowitz, <i>Sam Houston State University, Huntsville, TX USA.</i>
11:45 AM	133	Determination of Gender Differences in Trainability in Yearlings. Jenna Gilkeson* and Kylee Jo Duberstein, <i>The University of Georgia, Athens, GA, The United States.</i>

Production and Management - I
Chair: Drs. Judy Wilson and Lori Warren, Berry College and University of Florida
Long's Peak

11:30 AM	153	Body Weight Estimation: Which Measurement to Use? E.L. Wagner*, P.J. Tyler, and A.M. Bruce, <i>Auburn University, Auburn, AL, USA.</i>
11:45 AM	154	Revisiting the Henneke Body Condition Scoring System: 25 Years Later. R Mottet*, G Onan, and K Hiney, <i>University of Wisconsin-River Falls, River Falls, WI, USA.</i>
12:00 PM		Lunch.
1:00 PM		Invited Speaker - Production and Management.
2:00 PM	155	Relationship Between Body Condition and Metabolic Parameters in Sport Horses, Pony Hunters and Polo Ponies. J.D. Pagan* ¹ , O.A. Martin ² , and N.L. Crowley ¹ , ¹ <i>Kentucky Equine Research, Versailles, Kentucky, USA,</i> ² <i>Performance Feeding Inc., Croton Falls, New York, USA.</i>
2:15 PM	156	The Effect of Omega-3 Fatty Acid Supplementation on Cortisol and Prolactin Concentrations in Response to Common Stressors in Horses. S.S. King* ¹ , A. Maiero ¹ , T. Marlo ¹ , J.F. Roser ² , S.K. Webel ³ , and K.L. Jones ¹ , ¹ <i>Southern Illinois University, Carbondale, IL USA,</i> ² <i>University of California, Davis, CA USA,</i> ³ <i>JBS United Inc, Sheridan, IN USA.</i>
2:30 PM	158	Endocrine Responses to Administration of a Low Dose of Endotoxin Lipopolysaccharide in Mares and Geldings with High vs. Low Plasma Leptin Concentrations. NK Huff*, DL Thompson, Jr., PB Mitcham, and WA Storer, <i>LSU Agricultural Center, Baton Rouge, LA.</i>
2:45 PM	159	Effects of a 24-Hour Transport on Stress Response in Horses. K Guay*, H Brady, M Sutherland, K Pond, L Janecka, and V Allen, <i>Texas Tech University, Lubbock, Texas, USA.</i>
3:00 PM		Break - Sponsored by the Equine Science Society.
3:15 PM	160	Ad Libitum Concentrate Intake in Horses. D. R. Henneke* ¹ and J.W. Callahan ² , ¹ <i>Tarleton State University, Stephenville, TX USA,</i> ² <i>University of Florida, Gainesville, FL USA.</i>
3:30 PM	161	Effect of Hourly Concentrate Feed Delivery on Crib-Biting in Horses. C.A. McCall* ¹ , P.J. Tyler ¹ , W.H. McElhenney ² , and T.R. Fenn ¹ , ¹ <i>Auburn University, Auburn, Alabama, USA,</i> ² <i>Tuskegee University, Tuskegee, Alabama, USA.</i>
3:45 PM	162	The Effect of Moisture and Bale Wrapping on Grass Hay. K Martinson* and C Sheaffer, <i>University of Minnesota, St. Paul, MN, USA.</i>

Production and Management Invited Speaker

Chair: Dr. Judy Wilson, Berry College

Long's Peak

1:00 PM	“Parasite Resistance in Horses - An Emerging Global Problem” Sponsored by Intervet/Schering-Plough Animal Health. Dr. Heidi Brady, Associate Professor, Department of Animal & Food Sciences, Texas Tech University..
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OTHER EVENTS

Business Meeting

Long's Peak

4:00 PM

ESS General Business Meeting.

**ESS Banquet
Long's Peak**

7:00 PM

**ESS Awards Banquet - Sponsored by NAERIC (Grad. Student Comp. Awards) and
Kentucky Equine Research (Society Awards).**