ADSA Production Division Symposium: Dairy replacement Heifers: Cost effective strategies from weaning to calving

- Potential and limitations associated with manipulating dairy replacement heifer nutrition programs. Patrick
 C. Hoffman, University of Wisconsin Madison
- > Using growth monitoring for heifer management and research. Dr. Alex Bach, IRTA, Barcelona, Spain
- Strategies for reproductive success in replacement heifers. Dr. Ray Nebel, Select Sires.
- Raising healthy dairy replacements: How we get the job done. Greg Goodell, Colorado State Univ. and The Dairy Authority, LLC.

ADSA Southern Section Symposium: Responding to Hot Topics in Dairy Management

- > Defending against mycoplasma mastitis. Mike Overton, University of Georgia College of Veterinary Medicine
- > Biosecurity: Dealing with problem diseases. Kenneth E. Olson, KEO Consulting
- > The use of distillers grains in dairy cattle diets. David Schingoethe, South Dakota State University
- Challenges of improving dairy cow fertility during summer heat stress: An ovum's perspective.. J. Lannett Edwards, The University of Tennessee

ALPHARMA Beef Cattle Nutrition Symposium: Joint Beef Species / ALPHARMA Beef Cattle Nutrition Symposium - Diversion of corn to fuel

- > Development and current issues of a corn-based beef industry. Larry Corah, Certified Angus Beef
- > Environmental considerations of feeding bio-fuel co-products. N. Andy Cole, USDA ARS
- > Using grain and biomass for feed versus fuel. John Lawrence, Iowa Beef Center, Iowa State University
- > Feeding strategies to reduce corn use. Robbi Prichard, South Dakota State University
- > Precursors to enhance marbling. Stephen Smith, Texas A&M University
- > Post-Harvest strategies to enhance beef quality. James "Bo" Reagan, National Cattlemen's Beef Association

Animal Behavior and Well-Being: Animal Welfare Standards--Who Decides and How?

- Animal welfare assurance programs in food production: a framework for assessing the options. David Fraser, PhD, Animal Welfare Program, Faculty of Land and Food Systems and W. Maurice Young Centre for Applied Ethics, University of British Columbia, Vancouver, Canada
- Animal welfare legislation in the European Union. David Wilkins, MRCVS, MBE, Chief Veterinary Advisor, World Society for the Protection of Animals, and Member of OIE's permanent working group on animal welfare
- Pressures to regulate animal welfare and food production in the USA. Kay Johnson, Animal Agriculture Alliance

Animal Health: Invited Speakers (these speakers will start Animal Health sessions)

- Stress and Immunity: Implications on animal health and production. Jeff Carroll, USDA- ARS, Lubbock TX
- Advances in respiratory disease research. Gary Snowder, USDA-ARS, Clay Center, NE
- Metabolic disorders and immune response in farm animals. Nicola Lacetera, Dipartimento di Produzioni Animali, Viterbo, Italy
- > Obesity in horses: An equine metabolic syndrome? Phil Johnson, University of Missouri
- Wildlife Threat for Disease Transmission to Domestic Livestock. Steven Olsen, USDA-ARS, Ames, IA
- Contributions in the Journal of Animal Science to understanding cattle metabolic and digestive disorders. Mike Galyean, Texas Tech
- > The Promise of Proteomics in Animal Science. John Lippolis, USDA, ARS, NADC, Ames, IA

ARPAS Symposium: Livestock Pharmaceuticals: The Past, The Present, The...

- How are we making bacteria more resistant to antibiotics? Darwinian impacts. Todd R. Callaway, USDA-ARS, Southern Plains ARC, Food & Feed Safety Research Unit
- Does ionophore resistance risk human health? James B. Russell, USDA-ARS, Plant Soil, Nutrition Laboratory, Ithaca, NY
- Antibiotic resistance gene transfer in the intestinal tract possible implications for agriculture? Abigail Salyers, University of Illinois
- 50 Years of Pharmaceutical Technology and Its Impact on the Livestock We Produce. Rodney Preston, Not stated
- ARCAS ARPAS: Then and Now. Bill Price, DAF/OSC/CVM/FDA, Smithburg, MD

ASAS Graduate Student Symposium: Academia, Industry, Government, or None of the Above: Graduation is coming, what next?

- > Applying for an Academic Position. Dr. Terry Etherton, Penn State University
- Careers in government. Dr. Ronnie Green, USDA-ARS/National Program Staff
- ➢ How a career in animal science can help save endangered wildlife species. Dr. Janine Brown, Smithsonian National Zoological Park; Conservation & Research Center
- Graduate student career opportunities in the animal science industry. Dr. John F. Stika, Certified Angus Beef LLC
- Opportunities for graduate students in American Society of Animal Science. Amy E. Radunz, The Ohio State University, Graduate Student Director, ASAS

Beef Species: The Evolution of Beef Cattle Genetic Evaluation

- Milestones in Beef Cattle Genetic Evaluation. Larry Benyshek, Benyshek and Hough Consulting
- > Producing and Using Genetic Evaluations in Today's Beef Industry. Dorian Garrick, Iowa State University
- DNA Technology: Estimation of Genetic Merit from Large DNA Marker Panels. Rohan Fernando, Iowa State University
- Integrating Genetic Evaluations with DNA Technologies for the Ultimate Selection Tool. Robert Tempelman, Michigan State University
- > Panel Discussion Industry Applications of Beef Genetic Evaluation. John Pollak, Cornell University

Bioethics: Value of Bioethics Leadership for Food Animal Agriculture

- Bioethics across the disciplines: Leadership and mutual respect. Gary Varner, Texas A & M University
- The need for leadership and how the societies should respond. In-coming Presidents of FASS, ASAS, ADSA, PSA
- > Role of industry leaders in addressing bioethical issues. James Lauderdale, Lauderdale Enterprises
- Summary and perspective from within. Debbie Cherney, Cornell University

Bioethics: How do we integrate bioethics into our food animal system?

- History and Future Perspectives of Bioethics in Food Animal Agriculture. W. Ray Stricklin, University of Maryland
- Bioethics from 1995-2008: How far have we come? Raymond Anthony, University of Alaska Anchorage
- Bridging the D.V.M, and PhD Gap. Pamela Ruegg, University of Wisconsin
- ➢ How to talk truthfully with the public regarding bioethical and animal welfare issues. Wes Jamison, University of Florida
- Roles of Surveys and Foundation Reports in Policy Decisions. F. B. Norwood, Oklahoma State University

Breeding and Genetics: Genome Wide Selection ... Faster Genetic Progress vs. Higher Rate of Homozygosity

- Genome wide selection: Potential and pitfalls. Ben Hayes, Department of Primary Industries, Melbourne, Victoria, Australia
- Reliability of genomic predictions for North American dairy bulls. Paul VanRaden, AIPL-USDA, Beltsville, MD
- > Data optimization techniques for large phenotypic and molecular data sets. Romdhane Rekaya, University of Georgia, Athens
- > The next steps in genomic selection: An industry perspective. Jacques Chesnais, Semex Alliance, Canada

Breeding and Genetics: Training of Future Animal Breeders

- Training Graduate Students in Animal Breeding: A Historical Prospective. John Pollak, Cornell University, NY
- > Graduate education utilizing distance learning. Ron Lewis, Virginia Tech, Blacksburg
- Challenges of training quantitative graduate students. Ignacy Mistzal Romdhane Rekaya, University of Georgia, Athens
- Alternative teaching techniques for new and smaller animal breeding programs. Chad Dechow, Penn State University, University Park
- Quantitative Genetics Training to Meet the Needs of the Breeding Industry. Mike Lohuis, Monsanto, St. Louis, MO

Cell Biology: The Role of MicroRNA on Cell Function

- MicroRNA: Mechanism of gene regulation. T.G. McDaneld, USDA/ARS U.S. Meat Animal Research Center
- > MicroRNA in Hepatocytes. Kalpana Ghoshal, Ohio State University
- MicroRNA in muscle development. Michel Georges, University of Liege, Belgium
- Role of MicroRNA in granulosa cell function and follicle development. Lane Christenson, University of Kansas Medical Center

Companion Animals: Perceptions and Implications of Companion Animals in Research and Teaching – Domestically and Globally

- Evolution of companion animals A perception shift. Dr Linda Case, University of Illinois
- Past-Present Perceptions and Research in Companion Animals A Domestic Viewpoint. Dr Gail Czarnecki-Mauldin, Nestle Purina Pet Care
- Past-Present Perceptions and Research in Companion Animals An International Viewpoint. Professor Patrick Nguven, Unité de nutrition et endocrinologie
- > Evolution of Regulatory Issues in Companion Animals. Dr Steve Traylor, Alltech, Inc
- > Trends in pet food safety. Dr. Randy Johnson, Consultant
- Alternatives to live animal models in companion animals: research location shift. Dr Mark Tetrick, P&G Pet Care
- Alternative systems for evaluating digestion in companion animals. Dr. Dave Harmon, University of Kentucky
- Computer modeling: An alternative to live companion animal testing. Dr. Ryan Yamka, Hill's Pet Nutrition, Inc
- The future of teaching and research in companion animal biology in departments of animal sciences. Dr. John P. McNamara Past Corbin Award Winner, Washington State University

Companion Animals: Exotic Animal Nutrition

- > Zoo nutrition: In the beginning... Duane Ullrey, Michigan State University
- Forty-plus years of exotic animal management a director's perspective. Lee G. Simmons, Omaha's Henry Doorly Zoo
- Amphibians and reptiles trials and tribulations. Cheryl Dikeman, Omaha's Henry Doorly Zoo
- Carnivores: From Mouse to Moose. Ellen Dierenfeld, St. Louis Zoo
- Comparative Avian Nutrition Lessons learned from domesticated poultry. Elizabeth Koutsos, Mazuri Exotic Animal Nutrition
- > Ungulates: Are they cows with long necks? Mark Edwards, California Polytechnic State University
- > Omnivores-Models of Metabolism. Jason Williams
- What is the Future in Exotic Animal Nutrition? Nancy Irlbeck, Colorado State University

Contemporary and Emerging Issues: Healthfulness of Dairy and Meat Products

- The Current Nutrition Environment: Beef Lipids in Perspective. Shalene McNeill, Nat. Cattlemen's Beef Assoc.
- Milk Fat and Risk of Cardiovascular Disease. Dale Bauman (with Adam Lock, U. VT), Cornell Univ.
- Milk fat globule membrane components and their interactions with lactic acid bacteria. Rafael Jimenez-Flores, Calif. Poly. State Univ.
- > Role of animal protein in optimal health. Nancy Rodriguez, University of Connecticut

Dairy Foods: Changes and Challenges of Probiotics in Dairy Products

- Probiotics from Metchnikoff to bioactives. Nagendra Shah, Victoria University, School of Molecular Sciences, Australia
- > Probiotics in natural cheese. Benjamin Dias, Kraft Foods, Inc.
- Development of yoghurt and specialty milks containing probiotics. Claude Champagne, Food Research and Development Centre, Agri-Food Canada
- Recent trends in the microencapsulation and delivery of probiotics in dairy foods. Kasipathy Kailasapathy, University of Western Sydney, Australia
- Identification of probiotic features in Lactobacillus acidophilus affected by dairy delivery. M. Andrea Azcarate -Peril, North Carolina State University, Dept of Food Science

Dairy Foods: Emerging Non-Thermal Food Processing Technologies - Their Potential in Dairy Systems

- Introduction to non-thermal processing technologies and dairy systems. Geoffrey Smithers, Food Science Australia
- Dairy proteins under pressure: Static high pressure processing to modulate the functionality of dairy proteins. Sandani Udabage, Monash University, Australia
- > High pressure treatment of bovine milk proteins. Alan Kelly, University College Cork, Ireland
- Microstructural effects in thermo-sonicated yogurt and other dairy products: Understanding & exploiting the science. Gustavo Barbosa-Canovas, Washington State University
- Membrane and other processing technologies for dairy fluids: Effectiveness of ultrasound in enhancing productivity.. Raymond Mawson, University of Melbourne, Australia
- Microbial safety and bioactive efficacy: Effectiveness of pulsed electric field processing on dairy fluids. Jason Wan, Food Science Australia
- > High pressure processing of colostrum. Tim Carroll, Fonterra Cooperative Group Ltd, New Zealand
- Enhancing the quality of whey protein functionality using high pressure. Stephanie Clark, Washington State University

Dairy Foods: Advances in Low fat Cheese Research

- Low Fat Cheese Opportunities. Jim Montel, Dairy Management Inc.
- > The Impact of Fat Content on Flavor of Cheddar Cheese. MaryAnne Drake, North Carolina State University
- > Effect of Composition on the Microbial Ecology of Low Fat Cheese. Jeffrey Broadbent, Utah State University
- Effect of Composition on the Microbial Metabolism of Low Fat Cheese. James Steele, University of Wisconsin-Madison
- > Impact of Fat Content on Cheese Texture. E. Allen Foegeding, North Carolina State University
- Effect of fat reduction on the functional properties of slice on slice process cheese. Lloyd Metzger, South Dakota State University
- Advances in Nonfat/Lowfat Process Cheese for Melting and Ingredient Use. John Lucey, University of Wisconsin - Madison
- A Novel Technology for Making Lowfat Cheese. Nana Farkye, California Polytechnic State University
- Alternative manufacturing protocols for Low Fat cheese. Mark Johnson, University of Wisconsin Madison

ESS Program: Horse Genome Toolbox for Animal Science Applications

- > Exploiting the Public Genome databases for Equine Science. Dr. Loren Skow, Texas A & M University
- Identification of Genes for Health and Performance Traits in Horses through Whole Genome Analysis. Dr. James Mickelson, University of Minnesota
- Transcriptional Profiling for Gene Expression Analyses of Equine Samples. Dr. James MacLeod, University of Kentucky
- Let the Genome Give Your Project a Leg-Up: Real-Time qPCR strategies in equine research. Dr. Samantha Brooks, University of Kentucky

Extension Education: From 40 Acres and a Mule to Today: Historical Perspective of Extension Programming

- > History of Extension. John Paterson, Montana State University
- > Evolution of delivery methods. Mike Hutjens, University of Illinois
- > Beef Cattle Clearinghouse: An eXtension Website. Rick Rasby, University of Nebraska
- ➢ From 40 acres and a mule to today: historical perspective of extension programming: HorseQuest. Betsy Greene, University of Vermont
- DAIReXNET Method of delivering extension programming for the dairy industry which transcends traditional methods of information delivery and state/regional borders. Donna Amaral-Phillips, University of Kentucky
- > Pork Information Gateway in eXtension. David Meisinger, US Pork Center of Excellence

Extension Education: Has the Land Grant College Left the Farm?

- ➢ Why there is less applied agricultural research conducted at Land Grant colleges. Ron Plain, University of Missouri
- ➢ What I did when I had an Extension/research appointment and what I do now: how times have changed. Ray Nebel, Select Sires, Inc.
- Serving the Beef Industry by re-defining your comfort zone. Mike Siemens, Cargill.
- A transition from extension-research to industry swine genetics. William Herring, Smithfield Premium Genetics
- ➢ Why our farm is supporting MS research programs for the University of Illinois. Bradley Wolter, The Maschoff's

Food Safety: Assuring Food Safety in a Globalized Market

- FDA's Food Protection Plan and Import Safety Plan. Sharon Benz, FDA -CVM
- > Quality and safety concerns of outsourced foods. Mansel Griffiths, University of Guelph
- Melamine contaminated animal feed recalls. Michaela (Mika) G. Alewynse, FDA-CVM
- > The global threat of foreign animal diseases. Alfonso Torres, Cornell University
- > BSE: Risk communication lessons Learned in North America. Rob Ulmer, University of Arkansas

Forages and Pastures: Forage-Based Systems for Beef and Dairy Cattle Production: Regional Challenges and Opportunities

- Northeast Opportunities and Challenges for Forage-based Beef and Dairy Production. Kathy Soder, USA-ARS-Pastur Systems & Watershed Management Research Unit
- ➢ Opportunities and obstacles for forage-based dairy and beef production in the Southeastern U.S. John Andrae, Clemson University
- > Forage-based systems for the Upper Midwest. Wayne Coblentz, US Dairy Forage Research Center
- ➢ Forage-based systems for beef and dairy cattle production: Challenges and opportunities in the South Central region. William (Bill) Phillips, USDA-ARS Grazinglands Research Laboratory
- Forage-based systems for beef production: Western regional challenges and opportunities. Ken Olsen, SDSU West River Agricultural Research and Extension Center

Forages and Pastures: Fiber fermentation: Influence of Supplemental Nonstructural Carbohydrates

- Factors affecting activity of cellulolytic microbes in the rumen. Paul Weimer, US Dairy Forage Research Center
- Manipulation of rumen microflora to improve ruminant production. Robert Forster, Agriculture and Agri-Food Canada
- > The Source and Degradability of Dietary Starch Influences Forage and Fiber Utilization by Lactating Dairy Cows. David Casper, AgriKing, Inc.

Growth and Development: The Molecular Basis for Feed Efficiency

- Associations between mitochondrial function and feed efficiency in poultry and livestock species. W. Bottje, University of Arkansas
- > The Molecular Basis for Feed Efficiency in Beef Cattle. Steve Moore, University of Alberta, Agricultural, Food and Nutritional Science
- Physiological basis for residual feed intake. Robert Herd, NSW Agriculture Beef Industry Centre, Armidale, NSW.
- > Physiological basis for residual feed intake in pigs. Cees De Lange, University of Guelph.
- Mitochondrial efficiency in lines of mice divergently selected for heat loss. Merlyn Nielsen, University of Nebraska.

Horse Species: Celebrating a Century of Progress in Equine Science (these speakers will start Animal Health sessions)

- Historical Review and Future Outlook of Equine Reproductive Technology. Dr. Dan Sharp, University of Florida
- > Historical Review and Future Outlook of Equine Nutrition. Dr. Harold Hintz, Cornell University--Retired
- > History and Future Outlook of Equine Science Teaching Programs. Dr. Craig Wood, University of Kentucky

International Animal Agriculture: Welfare in Animal Production: From Science to Practice

- > The Impact of Current Global Challenges in the Animal Agricultural Industry. Assefaw Tewolde, IICA/WAAP
- Farm animal welfare: the science behind the standards. David Fraser, University of British Columbia
- Strategies to Improve Animal Welfare in Poultry Production: From Science to Practice. Joy Mench, University of California at Davis
- Strategies to improve animal welfare in farm animals: from science to practice. Xavier Manteca, Universitat Autonoma de Barcelona, Spain
- > On farm assessment of animal welfare: the 'Welfare Quality' experience in the EU. Linda Keeling, University of Skara, Sweden

Meat Science and Muscle Biology: Meat Quality: Regulation of Intramuscular Fat Deposition

- > The Value of Marbling in Consumer Acceptance of Beef. Larry Corah, Certified Angus Beef
- > Renewing the emphasis on marbling in pork products. Collette Kastner, Farmland Foods Inc
- Cellular regulation of intramuscular adipose tissue deposition and composition. Steve Smith, Texas A&M University
- > Nutritional regulation of intramuscular fat deposition. Jim Drouillard, Kansas State University
- Senetic regulation of intramuscular fat deposition. Dan Moser, Kansas State University

Meat Science and Muscle Biology: Postmortem Changes in Myofibrillar Protein and the Associated Contribution to Meat Quality

- Historical perspective of postmortem changes in myofibrillar proteins and their relationship to meat quality. Fred Parrish, Iowa State
- Calpain biology and postmortem meat tenderization. Darrel Goll, University of Arizona
- Relationship of postmortem changes in myofibrillar protein to meat quality. Elisabeth Huff-Lonergan, Iowa State University
- > New methods to investigate changes in meat and myofibrillar proteins. Eva Veseith, Matforsk in Norway
- Post harvest processes that influence myofibrillar protein degradation and meat quality. Marianne Lund, Denmark

Mixed Models: Mixed Model Workshop

- Description: A professional development opportunity in the use of mixed models for the analysis of common experimental designs in the animal sciences. Topic areas include repeated measures analysis, mixed model analysis of categorical data, growth curve modeling using random coefficient, nonlinear, and spline models, and power and sample size determinations for comparing alternative designs for continuous and categorical responses. All presented applications will be based on the new SAS software procedure PROC GLIMMIX.
- Presenters include: Robert J. Tempelman, Michigan State University; Professor. Bruce A. Craig, Purdue University; Professor Emeritus. Larry Douglass, University of Maryland

Nonruminant Nutrition: Oxidative Stress and the Use of Antioxidants for nonruminant animals

- > The important role of antioxidants in animal production systems. Don Mahan, Ohio State University
- Roles in animals of the antioxidant micronutrients vitamin E, vitamin C, and selenium. Raymond F. Burk, Vanderbilt University
- Bioavailability of natural and synthetic vitamin E in sows and their progeny. Charlotte Lauridsen, Danish Institute of Agricultural Science
- Synthetic antioxidant application in nonruminants. Robert J. Harrell, Novus International

Nonruminant Nutrition: Energy Systems and Alternative Energy Ingredients for Swine

- Recent Developments in Net Energy Research for Pigs. Jean Noblet, INRA-UMR SENAH.
- > Practical application of the net energy system in swine nutrition. Ruurd Zijlstra, University of Alberta.
- Impact of biofuels industry on alternative ingredients available to swine. Brian Kerr, USDA-ARS-SOMMRU National Swine Research and Information Center

Nonruminant Nutrition: Mineral Absorption: What is known?

- > Absorption and metabolism of iron and manganese. Jerry Spears, North Carolina State University.
- > Transporters in the absorption and utilization of Zn and Cu. Gretchen Hill, Michigan State University
- Intestinal Calcium Absorption: Mechanisms Learned from Transgenic and Knockout Mice. James Fleet, Purdue University
- > Active phosphate absorption: What do we know and is it important? Scott Radcliffe, Purdue University
- Identification of organic trace minerals: What does this tell us about potential routes of absorption? Alexandros Yiannikouris, Alltech

Physiology and Endocrinology: Emerging Concepts on Dietary Components that Influence the Physiology and Endocrinology of Domestic Farm Animals

- Reproductive consequences of nutritionally-induced changes in the pH of the bovine reproductive tract. G.A. Perry, South Dakota State University
- Effectiveness of supplemental antioxidants for enhancing reproductive function in cattle. P.J. Hansen, University of Florida
- > Phytase: Not just for environmental protection- Novel roles in system physiology. X. Lei, Cornell University
- Performance, metabolism and immunity in domestic animals fed diets contaminated with fusarium mycotoxins. T.K. Smith, University of Guelph

Production, Management and the Environment and Ruminant Nutrition: Designing field studies to evaluate nutrition effects on production, reproduction and health of dairy cows.

- Utilizing Appropriate Statistical Designs on Data Collected from Commercial Dairies. Robert J. Tempelman, Michigan State University
- Examples of experimental designs to study production responses. Normand St-Pierre, The Ohio State University
- > Field Studies to Study Reproduction in Dairy Cows. James Ferguson, University of Pennsylvania
- Examples of designs to study health responses and the role of meta-analysis. Ian Lean, Strategic Bovine Services, Australia
- Collecting research data with dairy management software. Larry Jones, F.A.R.M.E. Institute

Ruminant Nutrition: Glycerin as a feed for ruminants

- > Glycerin as a feed ingredient, official definition(s) and approvals. Richard Sellers, AFIA
- Ruminal and physiological metabolism of glycerin. Clint Krehbiel, Oklahoma State University
- > Glycerin as a feed for ruminants: Using glycerin in high-concentrate diets. Jim Drouillard, Kansas State
- > Using glycerin as a supplement for forage–fed ruminants. Bret Hess, University of Wyoming
- > Use of glycerin in dairy diets. Shawn Donkin, Purdue University

Small Ruminant: The US Goat Meat Industry and Recent Sheep and Goat Activities at the National Research Council of The National Academies

- Goat Meat Production, Processing, and Marketing in the U.S. Kenneth McMillin, Louisianan State University Agricultural Center
- Backgrounds on the Committee on the Nutrient Requirements of Small Ruminants and the Committee on the Economic Development and Current Status of the Sheep Industry in the United States. Austin J. Lewis, National Research Council, The National Academies
- New NRC recommendations for energy and protein requirements of goats and sheep. Bret W. Hess, University of Wyoming
- The Small Ruminant Nutrition System (SRNS) Model for Prediction of Energy and Protein Requirements of Goats and Sheep. Antonello Cannas, Università di Sassari, Sardinia, Italy
- Historic Trends in U.S. Sheep Production and Prospects for the Future. Hudson A. Glimp, University of Nevada-Reno (Emeritus)
- Marketing of Sheep Products: Situation, Challenges, and Opportunities. Gary W. Williams, Texas A&M University

Swine Species: Intestinal Barrier Function

- Stress-induced intestinal barrier dysfunction and its effects. Dr. G. Patrick Lambert, Dept of Exercise Physiology, Creighton University
- Dietary plasma proteins and the barrier functions of the intestinal mucosa. Dr. M. Moreto, Department of Fisiologia, University de Barcelona
- Strategies to minimize inflammatory taxation on animal performance. Dr. Mark Cook from the University of Wisconsin

Teaching/Undergraduate and Graduate Education: The Changing Student and Influence of Technology on Learning

- Animal Science Teaching: A Century of Excellence. David Buchanan, North Dakota State University.
- How Current Students Differ and What Impact this Makes on Learning in the Classroom. Linda C. Martin, Oklahoma State University
- Changes That Have Occurred in Animal Science Teaching. Jodi A. Sterle, Texas A&M University and John Parrish, University of Wisconsin
- > The Use of Podcasts in the Classroom. John Parrish, University of Wisconsin
- The Use of Multimedia in the Classroom. Hasan Khatib, University of Wisconsin, Department of Dairy Science
- > Teaching and Learning with an Instructional Website. Michel Wattiaux, University of Wisconsin, Department of Dairy Science

Joint Lactation Biology and Triennial Lactation Symposium: 8th International Workshop on the Biology of Lactation in Farm Animals and Lactation Biology Symposium

- Immune components of colostrum and milk. K. Stelwagen, AgResearch, Ruakura Research Centre, Hamilton, New Zealand
- Mammary Immunology and Protection of The Neonate. H. Salmon, IASP, Lymphocyte et Immunité des Muquesuses, Nouzilly, France
- Neonatal protection by an innate immune system of human milk consisting of oligosaccharides and glycans.
 D. S. Newburg, Massachusetts General Hospital and Harvard Medical School, Boston, MA
- Immune signaling during mammary development and involution. C. J. Watson, University of Cambridge, Cambridge, UK
- Pathogen-dependent variations in the innate immune response to intramammary infection. DD Bannerman, USDA-ARS, Beltsville Agricultural Research Center, Beltsville, MD
- Nutritional, hormonal and environmental effects on colostrum in sows. C. Farmer, Agriculture and Agri-Food Canada, Dairy and Swine R & D Centre, Sherbrooke, QC, Canada.
- Mastitis Control on Organic and Traditional Dairies. P.L. Ruegg, University of Wisconsin, Madison, Madison
- Management effects on colostrogenesis in small ruminants. N. Castro, Las Palmas de Gran Canaria University, Arucas, Spain