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Posters
[Presentation Times: Odd-Numbered Poster Boards - 9:30 to 10:30; Even-Numbered Poster Boards - 2:30 to 3:30]

THURSDAY, JULY 26, 2001 (TECH FORUM DAY)

AM Symposia:

AM Oral Sessions:

PM Symposia:

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FRIDAY, JULY 27, 2001

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SATURDAY, JULY 28, 2001

Scientific Program for the 2001 International Animal Agriculture and Food Science Conference

July 24—28, 2001

Indianapolis, IN

(The Joint Annual Meeting of ADSA, ASAS, and PSA and the Reciprocal Meat Conference of AMSA)

TUESDAY, JULY 24, 2001

Dairy Foods Workshop: Strategies to Control and Improve Cheese Yield

Chair(s):Dave Barbano, Cornell University

Room: 138-139

Time	Abstract Number	
8:00 AM		Sign-in and distribution of course materials
8:15 AM		Welcome and overview. D. Barbano*, Cornell University.
		FACTORS THAT INFLUENCE CHEESE YIELD
8:30 AM		Measures of yield performance and their use in pilot scale studies. D. Barbano*, Cornell University.
9:15 AM		Milk composition and quality impacts on cheese yield. C. Hicks*, University of Kentucky.
10:00 AM		Break
10:30 AM		Manufacturing factors influencing Cheddar, Mozzarella, and Cottage cheese yield. D. Barbano, Cornell University and C. Hicks, University of Kentucky.
12:00 PM		Lunch

STRATEGIES TO IMPROVE YIELD AND ECONOMIC PERFORMANCE IN CHEESE MAKING

DEFENSIVE STRATEGIES

1:00 PM	Measurement and tracking of protein and fat loses. D. Barbano*, Cornell University.

OFFENSIVE STRATEGIES

1:30 PM	Milk standardization and fortification control. D. McKenna*.
2:15 PM	Yield impact and production efficiency impact of membrane filtration retentates, condensed, and dry milk products. D. Barbano*, Cornell University.
3:00 PM	Break
3:30 PM	Dairy based ingredient selection and standardized milk composition targets to maximize net financial return using linear and nonlinear optimization models. D. Barbano, Cornell University; A. Papadatos; and J. Pratt.
4:15 PM	Questions and open discussion

National Extension Education Workshop: Current and Future Impact of Issues Facing Animal Agriculture

Chair(s):Richard Reynnells, USDA/CSREES/PAS

Sponsor(s):Monsanto Company, Optimum Quality Grains, and PSA

Room: 116-117

Time	Abstract Number	
		MARKETING AND ECONOMICS
		MODERATOR: Mike Brumm, University of Nebraska
8:00 AM	1	Introduction. Richard Reynnells*[1], [1]USDA/CSREES/PAS.
8:25 AM	2	A rational discussion of GMOs in the animal food chain. S.K. Harlander*, BIOrational Consultants, Inc.
9:10 AM	3	The economics of the animal protein chain. A Barkema*[1], M Drabenstott[1], and N Novack[1], [1]Federal Reserve Bank of Kansas City.
9:40 AM		Break
		INDUSTRY CONCERNS REGARDING THE ECONOMICS OF THE FOOD CHAIN
		PANEL DISCUSSION
10:10 AM	4	Pork value chain economic concerns. Steve Meyer*, National Pork Producers Council, Des Moines, IA USA.
10:25 AM		Beef. C. Lambert*, Chief Economist, National Cattleman's Beef Association
10:40 AM	5	Current and future challenges in the dairy food marketing chain. R. D. Yonkers*, International Dairy Foods Association.
10:55 AM		Poultry. D. Dalton*, President, US Poultry & Egg Association
11:10 AM		Discussion
11:30 AM	6	The ADDS program: Facilitating cooperation and national leadership for agricultural knowledge delivery. J.M. Mattison*[1], M.B. Opperman[1], B.R. Eastwood[2], R.M. Kattnig[3], and M.J. Joyce[4], [1]ADDS Center, [2]USDA-CSREES, [3]University of Arizona, [4]Wisconsin Milk Marketing Board.
11:45 AM		Lunch

PRODUCTION SESSION

MODERATOR: Tom Carr, University of Illinois

1:00 PM		Prescriptive production issues (Pro). S. Milman*, Director of Scientific Programs, Farm Animals and Sustainable Agriculture, Humane Society of the United States.
1:20 PM		Prescriptive production issues (Con). S. Kopperud*, Senior Vice President, Poultry Directions, Inc.
1:40 PM	7	Prescriptive production issues - a UK / European perspective. Malcolm Mitchell*[1], [1]Roslin Institute.
2:00 PM	8	Government perspective on animal production food safety. Alice Thaler*, USDA/FSIS, Washington, DC/USA.
2:20 PM		Discussion
2:40 PM		Farm level HACCP and food safety aspects. M. Otremba Senne*, Director of Pork Safety, National Pork Producers Council.
3:00 PM		Break

ENVIRONMENTAL PROTECTION SESSION

MODERATOR: Gerald Higginbotham, University of California Cooperative Extension

3:30 PM	9	Overview of environmental protection concerns and potential solutions. H. F. Tyrrell*, U. S. Department of Agriculture, CSREES, PAS.
3:50 PM	10	EPA's vision—the next steps. Roberta Parry*, U.S. Environmental Protection Agency, Washington, D.C.
4:10 PM	11	Industry view of environmental issues. C Itle*[1], [1]National Milk Producers Federation.
4:30 PM		Discussion

Triennial Growth Symposium: Current Concepts of Animal Growth X: Metabolic and Cellular Regulation of Protein Deposition

Chair(s):David Gerrard, Purdue University

Sponsor(s):Elanco Animal Health, Iams, PIC, VetLife, Monsanto Company, and NPPC

Room: 500 Ballroom

Time	Abstract Number	
9:00 AM		Welcome
9:05 AM	12	Amino acids: Regulators of global and specific mRNA translation. S.R. Kimball*[1], [1]Pennsylvania State University.
9:40 AM		Questions
9:50 AM	13	Cellular control of protein degradation. Didier Attaix*[1], Lydie Combaret[1], M-Noelle Pouch[1], and Daniel Taillandier[1], [1]Human Nutrition Research Center of Clermont-Ferrand and INRA.
10:25 AM		Questions
10:35 AM	14	Stress and muscle cachexia. P.O. Hasselgren*[1], [1]University of Cincinnati.
11:10 AM		Questions
11:20 AM	15	Developmental regulation of protein metabolism. T.A. Davis*[1], M.L. Fiorotto[1], and A. Suryawan[1], [1]USDA/ARS Children's Nutrition Research Center.
11:55 AM		Questions
12:05 PM		Lunch

2:00 PM	16	Muscle wasting and protein metabolism. C. Castaneda-Sceppa[1], [1]Jean Mayer USDA Human Nutrition Research Center on Aging.
2:35 PM		Questions
2:45 PM	17	Hormonal regulation of regional and tissue protein turnover. S. Nair*[1], [1]Endocrinology Unit, Mayo Clinic.
3:20 PM		Questions
3:30 PM	18	Exercise and protein metabolism. R.R. Wolfe[1], [1]University of Texas Medical Branch and Shriners Burns Hospital.
4:05 PM		Questions
4:15 PM	19	Nutritional regulation of protein metabolism. P.J. Garlick*[1], [1]State University of New York at Stony Brook.
4:50 PM		Questions

Informal Nutrition Workshop: Connecting Animal Agriculture Disciplines

Chair(s):Mamduh Sifri, ADM

Room: 101-106

Time	Abstract Number	
1:00 PM		The art of connecting disciplines. M. Sifri*, ADM Animal Nutrition.
1:15 PM		Genetic diversity of food producing animals: Where has it gone? L. Hansen*, University of Minnesota.
1:50 PM		Understanding basic biology to achieve precision nutrition and future improvements in animal agriculture: Old and new lessons. R. Campbell*, United Feeds, USA.
2:25 PM		Management and genetics research to improve the quality of animal products: A beef perspective. M. Dikeman*, Kansas State University.
3:00 PM		Break
3:15 PM		California dairy industry approach to food safety, nutrient management and animal welfare: Is there any application for the other species? J. O'Donnell*, California Dairy Research Foundation.
3:45 PM		Contributions of basic research to applied poultry nutrition: What is in it for livestock species? K. Klasing*, University of California.
4:15 PM		Discussions, conclusions, and recommendations. D. Baker, University of Illinois and M. Rothschild, Iowa State University.

WEDNESDAY, JULY 25, 2001

ADSA Dairy Foods Graduate Student Paper Competition

Chair(s):S.L. Wright, Rhodia Foods

Room: 106

Time	Abstract Number	
8:00 AM	20	Temperature effect on structure-opacity relationships of nonfat Mozzarella cheese. A.J. Pastorino*[1], R.I. Dave[2], C.J. Oberg[3], and D.J. McMahon[1], [1]Utah State University, [2]South Dakota State University, [3]Weber State University.

8:15 AM	21	Rheological properties of rennet-induced gels made from coagulants of vegetable origin and chymosin. C. L. C. Esteves*[1,2], J. A. Lucey[1], and E. M. V. Pires[2], [1]University of Wisconsin-Madison, Madison, [2]University of Coimbra, Coimbra, Portugal.
8:30 AM	22	Evaluation of quality properties of butter and ice cream with a high content of linoleic and oleic acid. S Gonzalez*, S.S. Duncan, S.S. Sumner, S.F. O'Keefe, and J. Herbein, Virginia Tech, Blacksburg, VA/USA.
8:45 AM	23	Effect of high-pressure on two strains of *Lactococcus lactis* subsp. *cremoris* in a phosphate buffered saline (PBS) cell suspension. A. S. Malone*, T.H. Shellhammer, and P. D. Courtney, Food Science and Technology, Ohio State University.
9:00 AM	24	Alpha-galactosidase as a novel molecular tool for the genetic modification of *Lactococcus lactis*. I. Boucher*[1], M. Parrot[1], C. Vadeboncoeur[1], and S. Moineau[1], [1]Universite Laval, Quebec, Quebec, Canada.
9:15 AM	25	Influence of proteolytic enzymes from thermophillic lactic acid bacteria on the functional properties of Mozzarella cheese. B. S. Oommen*[1], D. J. McMahon[1], J. R. Broadbent[1], and C. J. Oberg[2], [1]Utah State University, [2]Weber State University.
9:30 AM	26	Fluorescence microscopy and recrystallization rate of model ice cream solutions as influenced by stabilizer type. A. Regand* and H.D. Goff, University of Guelph, Guelph, Ontario, Canada.
9:45 AM	27	Monoclonal antibodies raised against native structural proteins of *Streptococcus thermophilus* bacteriophage DT1. C. Bart*[1], A. Darveau[1], C. Vadeboncoeur[1], and S. Moineau[1], [1]Universite Laval, Quebec, Quebec, Canada.
10:00 AM		Break
10:30 AM	28	Effect of linoleic and conjugated linoleic acids on *Lactobacillus* species in broth and milk. J. K. Jenkins* and P. D. Courtney, The Ohio State University Columbus, Ohio.
10:45 AM	29	Development of two analytical methods to quantify the concentrations of insoluble and soluble Calcium in Cheddar cheese. A. V. Hassan* and J. A. Lucey, University of Wisconsin-Madison.
11:00 AM	30	The effects of NaCl, $CaCl_2$, lactose and pH on the interfacial behavior of ß-lactoglobulin. J P Davis* and E A Foegeding, North Carolina State University, Raleigh NC/USA.
11:15 AM	31	Isolation and analysis of glycomacropeptide from goat sweet whey. Eryck Silva*, Takuo Nakano, and Lech Ozimek, University of Alberta, Edmonton, Alberta, Canada.

ADSA Production Division Graduate Student Paper Competition

Chair(s):J.K. Drackley, University of Illinois

Room: 105

Time	Abstract Number	
8:00 AM	32	Effects of NutriDense™ and waxy corn hybrids on site and extent of starch and protein disappearance and efficiency of microbial N production in sheep. V. Akay*, J. A. Jackson, and D. L. Harmon, University of Kentucky, Lexington.
8:15 AM	33	Synthetic conjugated linoleic acid may cause mammary involution in dairy cows. J.A. Bell* and J.J. Kennelly, University of Alberta, Edmonton, Canada.
8:30 AM	34	The biohydrogenation of oleic acid to *trans* monoenes by ruminal microbes in vitro. E. E. Mosley*, T. C. Jenkins, and G. L. Powell, Clemson University, Clemson, SC.
8:45 AM	35	Effects of long chain unsaturated fatty acids on palmitic acid metabolism by ruminant hepatocytes. D.G. Mashek*, S.J. Bertics, and R.R. Grummer, University of Wisconsin, Madison.
9:00 AM	36	Programmed exercise altered carbohydrate and lipid metabolism of dairy cows. J. A. Davidson* and D. K. Beede, Michigan State University, East Lansing.
9:15 AM	37	Bovine lymphocytes express prolactin receptor (PRL-R) mRNA: a potential mechanism for PRL effects on immune function. T. L. Auchtung*, P. E. Kendall, and G. E. Dahl, University of Illinois, Urbana-Champaign.

9:30 AM		Break
9:45 AM	38	Trends in milk production and composition in dairy herds in Saskatchewan: August, 1997 to July, 2000. C.R. Richardson* and D.A. Christensen, University of Saskatchewan.
10:00 AM	39	The effects of dietary protein fractions and levels on performance and nitrogen utilization and excretion in early lactation dairy cows. S. Davidson*, B.A. Hopkins, D.E. Diaz, S.M. Bolt, C. Brownie, and L.W. Whitlow, North Carolina State University.
10:15 AM	40	The effect of increasing alfalfa haylage particle size on physically effective NDF values. P.J Kononoff*[1], A.J Heinrichs[1], H.A Lehman[1], and M.R Long[1], [1]Pennsylvania State University.
10:30 AM	41	Rumen inert lipids and glucose precursors lessen prepartum feed intake depression and improve carbohydrate status in periparturient dairy cows. C. E. Sorenson*[1], A. R. Hippen[1], D. J. Schingoethe[1], and R. S. Patton[2], [1]South Dakota State University, Brookings, [2]Galisteo, NM.
10:45 AM	42	Differences in resistance to heat shock between 2-4 cell Brahman and Holstein embryos produced in vivo. C.E. Krininger III*[1], J. Block[1], Y.M. Al-Katanani[1], R.M. Rivera[1], C.C. Chase Jr.[2], and P.J. Hansen[1], [1]University of Florida, Gainesville, [2]USDA, ARS, Brooksville, FL.

ADSA Foundation Scholar Award Lecture—Dairy Production Division

Chair(s):James K. Drackley, University of Illinois

Room: 105

Time	Abstract Number	
11:00 AM		Full circle dairy management: The integration of relevant research, teaching, and outreach in a case-based format. L. Holden, Penn State University.

On-Farm Certification Programs

Chair(s):David Meisinger, NPPC

Sponsors(s):ARPAS

Room: 101-102

Time	Abstract Number	
8:00 AM	43	Auditing procedures. David Meisinger*[1], [1]National Pork Producers Council.
8:15 AM	44	Certification programs on farm animal care issues. John McGlone*, Texas Tech Univeristy.
8:45 AM	45	Certification of nutrition professionals. L. E. Chase*[1], [1]Cornell University.
9:05 AM		A quality assurance scheme—The Egg 5-Star System. G. Gregory*, United Egg Producers.
9:35 AM		Break
9:50 AM	46	Verfication of good production practices which reduce the risk of exposure of pigs to Trichinella. D.G. Pyburn*[1], H.R. Gamble[2], L.A. Anderson[1], and L.E. Miller[1], [1]USDA, APHIS, VS, [2]National Research Council.
10:20 AM		Environmental assurance. E. Dotson*, Environmental Management Service.
10:50 AM		Discussion

Conservation and Management of Animal Genetic Resources

Chair(s):Harvey Blackburn, USDA, ARS

Sponsor(s):Accelerated Genetics, Cobb Vantress, Cotswold, Hybrid Turkeys, Hyline International, and Semex Alliance

Room: Sagamore 5

Time	Abstract Number	
8:00 AM	47	Managing genetic diversity, selection and inbreeding in livestock. P Bijma*, Wageningen Institute of Animal Sciences (WIAS).
8:35 AM	48	Identification of germplasm for preservation from pedigreed populations. M. D. MacNeil*[1], W. R. Lamberson[2], and B. L. Golden[3], [1]USDA-ARS, Fort Keogh LARRL, Miles City, MT, [2]University of Missouri, Columbia, [3]Colorado State University, Fort Collins.
9:05 AM	49	DNA sequence diversity and haplotype relationships at gene loci in U.S. beef cattle populations. M. P. Heaton*, USDA, ARS, U.S. Meat Animal Research Center.
9:30 AM		Break
9:45 AM	50	Cryopreservation of rooster sperm. S.P. Gill*[1] and Guy Barbato[2], [1]BioPore Inc, State College, PA., [2]The Pennsylvania State University, University Park, PA.
10:10 AM	51	Preserving/conserving germplasm by incorporating embryo-related technologies. R.S. Prather*, University of Missouri-Columbia, Columbia, MO.
10:35 AM		The National Animal Germplasm Program:
		Overview. H. Blackburn*, USDA/ARS.
		Beef cattle genetic resources. L. Cundiff*, USDA-ARS MARC.
		Conservation of swine genetic resources. T. Stewart*, Purdue University.
		Conservation of aquatic species. J. Cloud*, University of Idaho.
	52	Conservation and preservation of poultry genetic resources: a review of issues and progress. Mary Delany*, University of California, Davis CA 95616.
		Conservation of small ruminant genetic resources. M. Brown*, USDA-ARS.
	53	Dairy cattle contributions to the National Animal Germplasm Program. L. B. Hansen*, University of Minnesota, St. Paul.
11:30 AM		Discussion

Energy Nutrition of Ruminants

Chair(s):Kristen Johnson, Washington State University

Sponsor(s):Intervet, Schering Plough Animal Health, and Purina Mills, Inc.

Room: Sagamore 3

Time	Abstract Number	
8:10 AM	54	Energy nutrition of ruminants: Keeping books. C.L. Ferrell*, USDA, ARS, Roman L. Hruska U.S. Meat Animal Research Center, Clay Center, NE.
8:45 AM	55	Economics of visceral nutrient metabolism in ruminants - toll keeping or internal revenue service? C. K. Reynolds*, The University of Reading, UK.
9:40 AM		Break
10:00 AM	56	Endocrine and gene expression profiles in relation to energy metabolism. G. Murdoch[1], W.D. Dixon[1], V.E. Baracos[1], E.K. Okine[1], D. Balcezak[1], J.A. Moibi[1], B.T Li[1], R.J. Christopherson*[1], and R.J. Christopherson[1], [1]University of Alberta, Edmonton, Canada, T6G 2P5.

10:55 AM	57	Cellular energy expenditure and the importance of uncoupling. M-E. Harper*[1], A. Antoniou[1], V. Bezaire[1], and S. Monemdjou[1], [1]University of Ottawa.
11:50 AM		Summary and discussion

Meat Science in an International Marketplace

Chair(s):Morse Solomon, USDA Agriculture Research Service

Room: Sagamore 4

Time	Abstract Number	
8:15 AM		Presentation of 2001 International Meat Science Award
8:30 AM	58	Global meat research initiatives. R.B. Sleeth*[1], [1]Consultant.
9:30 AM		Beef products in the international market. P. Clayton*, U.S. Meat Export Federation.
10:00 AM		Break
10:15 AM	59	U.S. pork products in the international marketplace. J.W. Cravens*, National Pork Producers Council, Des Moines, Iowa.
11:00 AM	60	Poultry products and processing in the international marketplace. S.F. Bilgili*[1], [1]Auburn University.

ASAS/ADSA Animal Behavior and Well Being

Chair(s):Don Lay, Livestock Behavior Research Unit, ARS-USDA

Room: 208

Time	Abstract Number	
8:00 AM	61	Effect of genetic selection for loin-eye area on belly-nosing and plasma cortisol in weanling Landrace pigs. S. Torrey*[1], E. Pajor[1], S. Weaver[2], D. Kuhlers[3], and T. Stewart[1], [1]Purdue University, [2]USDA-ARS Livestock Behavior Research Unit, [3]Auburn University.
8:15 AM	62	Savaging in gilts and second parity sows: A study of seven commercial farms. M.J. Harris*[1,2,3], Y. Li[1], and H.W. Gonyou[1], [1]Prairie Swine Centre Inc., Saskatoon, Saskatchewan, Canada, [2]University of Saskatchewan, Saskatoon, Saskatchewan, Canada, [3]Present address: Purdue University, West Lafayette, Indiana, USA.
8:30 AM	63	Behavior of outdoor sows 72 h after parturition: Relation to piglet mortality. A. K. Johnson*[1], J. L. Morrow[2], J. W. Dailey[2], and J. J. McGlone[1], [1]Pork Industry Institute, Texas Tech University, Lubbock, TX, 79409-2141, [2]USDA-ARS, TTU, Lubbock, TX, 79409-2141.
8:45 AM	64	The lying behavior of pigs: A basic study. E.D. Ekkel[1], H.A.M. Spoolder[2], and B. Hulsegge[3], [1]Wageningen University, Wageningen, The Netherlands, [2]Research Institute for Animal Husbandry, Lelystad, The Netherlands, [3]ID-Lelystad, Lelystad, The Netherlands.
9:00 AM	65	Effects of transportation and relocation on plasma glucose, triglyceride and cortisol concentrations in Brahman and Hereford steers. R. Browning, Jr., T. Payton, N. Whittingham, and C. Bradley, Tennessee State University.
9:15 AM	66	Shade effects on performance, carcass traits, and behavior of heat-stressed feedlot cattle. F. M. Mitlöhner*, M. L. Galyean, and J. J. McGlone, Texas Tech University.
9:30 AM	67	Behavioral and adrenal response of cows tail docked with a rubber ring with or without local anesthesia. D. S. Schreiner* and P. L. Ruegg, University of Wisconsin, Madison.

9:45 AM	68	Development of a bovine lameness index that correlates visual lameness scores to measurable limb movement variables - A pilot study. P. G. Rajkondawar*[1], N. Neerchal[1], M. A. Varner[2], B. Erez[2], A. M. Lefcourt[3], R. M. Dyer[4], and U. Tasch[1], [1]UMBC, [2]UM, [3]Biomedical Engineer, [4]Univ of Delaware.
10:00 AM		Break
10:30 AM	69	Utilization of a small animal model of fescue toxicosis to evaluate the potential benefit of *Ascophyllum nodosum*. P. A. Eichen*[1], D. E. Spiers[1], G. Rottinghaus[1], and D. P. Colling[2], [1]University of Missouri, Columbia, MO , [2]Land O'Lakes Farmland Feed, Kansas City, MO.
10:45 AM	70	Use of *Ascophyllum nodosum* to reduce problems associated with fescue toxicosis in cattle during heat challenge. M. J. Leonard*[1], D. E. Spiers[1], G. Rottinghaus[1], and D. P. Colling[2], [1]University of Missouri, Columbia, MO, [2]Land O'Lakes Farmland Feed, Kansas City, MO.
11:00 AM	71	Effects of an intermittent altrenogest regimen on behavioral, hormonal, and testicular parameters of three-year-old stallions. H.A. Vartorella*[1], H.A. Brady[1], A.D. Herring[1], S.D. Prien[1], N.L. Heninger[1], and A.L. Neumann[1], [1]Texas Tech University, Dept. of Animal Science and Food Technology.
11:15 AM	72	Social structure and behavior of laying hens in large groups. R. Freire*, F. Short, and C.J. Nicol, Bristol University, Bristol, United Kingdom.
11:30 AM	73	Survey of auction and slaughter horses. K. McGee[1], J. L. Lanier[1], and T. Grandin*[1], [1]Colorado State University.

AMSA/ASAS Meat Science and Muscle Biology: Pork Quality

Chair(s):Tommy Wheeler, USDA-ARS, Meat Animal Research Center

Room: 103-104

Time	Abstract Number	
8:00 AM	74	Myofibrils isolated from red and white porcine muscles respond differently to pH. B. C. Bowker*[1], D. R. Swartz[2], A. L. Grant[1], and D. E. Gerrard[1], [1]Purdue University, West Lafayette, IN, [2]Indiana University Medical School, Indianapolis, IN.
8:15 AM	75	Relationship between muscle fiber type and pork quality traits of pigs selected for leanness and growth efficiency. C.R. Kerth*, A.A. Helm, D.L. Kuhlers, L.B. Cagle, L.K. Blair-Kerth, and W.R. Jones, Auburn University, Auburn AL.
8:30 AM	76	Variation in color and pH measurements throughout boneless pork loins. C. L. Lorenzen*[1], J. L. Norman[1], G. K. Rentfrow[2], C. A. Stahl[2], E. P. Berg[2], and M. R. Ellersieck[3], [1]Food Science and Engineering Unit, [2]Animal Sciences Unit, [3]Department of Statistics, University of Missouri - Columbia.
8:45 AM	77	In-home consumer acceptance of boneless pork loins varying in color. J. L. Norman*[1], C. L. Lorenzen[1], C. A. Stahl[2], G. K. Rentfrow[2], E. P. Berg[2], and H. Heymann[1], [1]Food Science and Engineering Unit, [2]Animal Sciences Unit, University of Missouri - Columbia.
9:00 AM	78	Muscle glycogen and lactate content and pork quality traits as affected by available dietary carbohydrate in pigs. G. Bee*, [1]Swiss Federal Research Station for Animal Production.
9:15 AM	79	Influences of nutritional levels on porcine muscle development and meat quality. Daiwen Chen*[1], Keying Zhang[1], Zhuyu Hu[1], Feiyun Yang[2], and Zuohua Liu[2], [1]Institute of Animal Nutrition, Sichuan Agricultural University,PR.China, [2]Academy of Swine Research of Chongqing, PR.China.
9:30 AM	80	Effects of dietary supplementation of copper and Vitamin E on pigmeat quality. Daiwen Chen*, Keying Zhang, Yongyi Li, Fangqun Li, Zhuyu Hu, and Xuewei Li, Institute of Animal Nutrition, Sichuan Agricultural University, Yaan,Sichuan 625014,PR.China.
9:45 AM		Break
10:15 AM	81	Effects of dietary levels of ideal protein on pig meat quality. Keying Zhang*, Daiwen Chen, Xianmei Luo, Xuewei Li, Fangqun Li, and Zhuyu Hu, Institute of Animal Nutrition, Sichuan Agricultural University,Yaan,Sichuan,PR.China.

10:30 AM	82	Validation of three cookery methods to eliminate Listeria monocytogenes on short versus long term aged country ham slices. J.S. Kotrola*, W.B. Mikel, and M. C. Newman, University of Kentucky, Lexington, KY.
10:45 AM	83	Analysis of postmortem tenderization in porcine *longissimus dorsi* muscle. C.P. Allison*, R.J. Tempelman, and M.E. Doumit, Michigan State University, East Lansing, MI.
11:00 AM	84	Desmin degradation influences water-holding capacity and tenderness of fresh pork. L.J. Rowe*[1], E. Huff-Lonergan[1], and S.M. Lonergan[1], Iowa State University Ames, Iowa.
11:15 AM	85	Dietary conjugated linoleic acid and IGF-I transgene effects on pork quality. J. S. Eastridge*[1], M. B. Solomon[1], V. G. Pursel[1], A. D. Mitchell[1], and A. Arguello[2], [1]USDA-ARS, BARC, [2]Univ. de las Palmas de Gran Canaria, Spain.
11:30 AM	86	Enhanced rates of postmortem muscle glycolysis differ across porcine genotypes. M. D. Spires*, B. C. Bowker, J. E. Hammelman, A. P. Schinckel, A. L. Grant, and D. E. Gerrard, Purdue University, West Lafayette,IN.
11:45 AM	87	Effect of processing plant on pork quality. E. Hambrecht*[1] and M.W.A. Verstegen[2], [1]Nutreco, [2]Wageningen University.

ASAS Nonruminant Nutrition: Health, Nutrition Interactions

Chair(s):Lauren Kats, Hill's Pet Nutrition

Room: 150-152

Time	Abstract Number	
8:00 AM	88	Use of menhaden oil to alter n-6:n-3 fatty acid ratios in nursery pig diets. T. A. Meyer*, M. D. Lindemann, G. L. Cromwell, and H. J. Monegue, University of Kentucky, Lexington, KY.
8:15 AM	89	Response of early-weaned pigs to pea protein isolate-based diets supplemented with chicken egg-yolk anti-E. coli (K88) antibody:. A. Owusu-Asiedu*[1], R. R. Marquardt[1], C. M. Nyachoti[1], and S. K. Baidoo[2], [1]University of Manitoba, Winnipeg, Manitoba/Canada, [2]University of Minnesota, Minneapolis, Minnesota/USA.
8:30 AM	90	High levels of dietary ascorbic acid on liver gulonolactone oxidase activity, serum and liver ascorbic acid concentration, and growth performance of postweaning pigs. S. Ching*[1] and D.C. Mahan, [1]The Ohio State University.
8:45 AM	91	High levels of dietary ascorbic acid on liver gulonolactone oxidase activity, serum and liver ascorbic acid concentration, and growth performance of postweaning pigs. S. Ching* and D.C. Mahan, Ohio State University.
9:00 AM	92	Effects of brewers dried yeast as a source of mannanoligosaccharides and of carbadox on total, *Escherichia coli* K88, and carbadox-resistant coliform populations in early-weaned pigs. L. A. White*, M. C. Newman, G. L. Cromwell, and M. D. Lindemann, University of Kentucky, Lexington, KY.
9:15 AM	93	The effect of feeding spray-dried porcine plasma and egg immunoglobulins with anti-bacterial or anti-somatostatin specificities on the performance of weaned pigs. M. D. Drew* and A. E. Estrada, University of Saskatchewan, Saskatoon SK Canada.
9:30 AM		Break
10:00 AM	94	Pre- and postweaning performance of piglets fed pre-weaning diets containing either spray-dried porcine plasma, whey protein concentrate or whey powder. A.J. Van Dijk*[1], M. Ubbink-Blanksma[1], J.G.P. Van der Palen[1], and A.C. Beynen[2], [1]Co-operative Central Laboratory Nutricontrol Cehave, P.O. Box 107, 5460 AC Veghel, The Netherlands, [2]Dept. Nutrition, Utrecht University, Veterinary Faculty , P.O. Box 80152, Utrecht, The Netherlands.
10:15 AM	95	Evaluation of Termin-8® addition to spray-dried animal plasma or base mix on growth performance of nursery pigs. J.M. DeRouchey*[1], R.E. Musser[2], W.N. Cannon[3], M.D. Tokach[1], J.N. Nelssen[1], R.D. Goodband[1], and S.S. Dritz[1], [1]Kansas State University, Manhattan, [2]The Pork Group, Rogers, AR, [3]NutraBlend, Neosho, MO.

10:30 AM	96	Dietary supplementation of different organic acids as an alternative to the use of antibiotics in the diets of early-weaned piglets. M. Borysenko*, M.Z. Fan, T. Archbold, J.L. Atkinson, C. Dewey, and H. Engelhardt, University of Guelph, Guelph, Ontario, Canada.
10:45 AM	97	Effects of ractopamine on pigs fed diets with and without vitamin and trace mineral premixes in late finishing (90 kg to slaughter). C. W. Starkey*, J. D. Hancock, G. A. Kennedy, C. L. Jones, D. J. Lee, C. M. Dodd, and J. D. Dunn, Kansas State University, Manhattan.
11:00 AM	98	Effects of ractopamine on pigs fed diets with and without vitamin and trace mineral premixes in the finishing phase (70 kg to slaughter). C. W. Starkey, J. D. Hancock*, G. A. Kennedy, C. L. Jones, D. J. Lee, C. M. Dodd, and J. D. Dunn, Kansas State University, Manhattan.

ASAS/ADSA Breeding and Genetics: Breeding Strategies for Dairy Cattle

Chair(s):H.D. Norman, USDA-ARS

Room: 138-139

Time	Abstract Number	
8:00 AM	99	Evaluation of corrective mating programs for dairy cattle in the U.S. E.N. Sonnek*, L.B. Hansen, and A.J. Seykora, University of Minnesota, St. Paul, MN.
8:15 AM	100	Analysis of the relationship between linear type traits, inbreeding, and survival in US Jersey cows. Daniel Z. Caraviello*, Kent A. Weigel, and Daniel Gianola, University of Wisconsin, Madison WI/USA.
8:30 AM	101	Effects of information in pedigrees on estimates of inbreeding depression for days to first service and summit milk yield.. B. G. Cassell* and V. Adamec, Virginia Polytechnic Institute and State University.
8:45 AM	102	Minimization of rate of inbreeding for populations with overlapping generations combining live and frozen genetics. A.K. Sonesson* and T.H.E. Meuwissen, Institute of Animal Science and Health, Lelystad, The Netherlands.
9:00 AM	103	Non-random mating schemes for selection with restricted rates of inbreeding. A.K. Sonesson* and T.H.E. Meuwissen, Institute of Animal Science and Health, Lelystad, The Netherlands.
9:15 AM	104	Implementation of an approximate multitrait BLUP evaluation to combine production traits and functional traits into a total merit index. V. Ducrocq*, D. Boichard, A. Barbat, and H. Larroque, Station de Génétique Quantitative et Appliquée, INRA, Jouy-en-Josas, France.
9:30 AM		Break
10:00 AM	105	Is crossbreeding the answer to questions of dairy breed utilization? A J McAllister*[1], [1]University of Kentucky.
10:30 AM	106	Heterosis and breed differences for yield and somatic cell scores of US dairy cattle in the 1990s. P.M. VanRaden*, Agricultural Research Service, USDA, Beltsville, MD.
11:00 AM	107	Strategies for continual application of MAS in an open nucleus population. a. stella*[1], g. jansen[2], g. pagnacco[3], and p. boettcher[4], [1]CERSA-FPTP, Italy, [2]CGIL, University of Guelph, Canada, [3]University of Milan, Italy, [4]ANAFI, Italy.
11:15 AM	108	Superiority of QTL-assisted selection in different dairy cattle breeding schemes. Gamal Abdel-Azim* and A. E. Freeman, Iowa State University.
11:30 AM	109	Optimal selection on two quantitative trait loci with linkage. J. C. M. Dekkers*[1], R. Chakraborty[1], and L. Moreau[2], [1]Iowa State University, Ames, IA, [2]INRA, Gif-sur-Yvette, France.
11:45 AM	110	Real options analysis applied to dairy cow breeding and replacement decisions. H Groenendaal* and D.T. Galligan, University of Pennsylvania, School of Veterinary Medicine, Kennett Square, PA, USA.

ASAS/ADSA Food Safety: Bacteria Detection

Chair(s):James Marsden, Kansas State University

Room: Sagamore 2

Time	Abstract Number	
8:00 AM	111	Ionizing radiation effectively destroys Mycobacterium paratuberculosis in milk. Judith Stabel*[1], Charles Waldren[2], and Frank Garry[2], [1]USDA-ARS, National Animal Disease Center, Ames, IA, [2]Colorado State University, Fort Collins, CO.
8:15 AM	112	Microbiological and rheological characteristics and their association with shelf-life of fresh soft goat milk cheese. Young W. Park*[1], Aref Kalantari[1], Diane L. Van Hekken[2], and M. H. Tunick[2], [1]Agricultural Research Station, Fort Valley State University, Fort Valley, GA, [2]Eastern Regional Research Center, USDA/ARS, Wyndmoor, PA.
8:30 AM	113	Real-time assessment of the microbial quality of fluid milk using a simple noninstrumental microrespirometer. Y-H.P. Hsieh*[1], Z. Ren[1], and Y.P. Hsieh[2], [1]Auburn University, Auburn, AL, USA, [2]Florida A & M University, Tallahassee, FL, USA.
8:45 AM	114	Comparisons of meat carcass surface bacterial collection efficiencies utilizing a novel wet-vacuum Microbial Sampler and the Sponge method. Bruce Bradley* J. and Filomena Saddler S., Rocky Mountain Resource Labs, Inc., Jerome, Idaho/USA.
9:00 AM	115	Novel biosensors for the rapid detection of campylobacter in various food matrices. Richard Obiso* and Jill White, IGEN International, Inc., Gaithersburg, MD.
9:15 AM	116	Novel biosensors for the rapid detection of Salmonella species in various food matrices. Eddie Jefferies*, Shelia Rowe, and Jill White, IGEN International, Inc., Gaithersburg, MD.
9:30 AM	117	Comparison of cultivation to PCR-hybridization for detection of *Salmonella* in porcine fecal and water samples. Ingrid Feder[1], Jerome C. Nietfeld[2], John Galland[3], Teresa Yeary[2], Jan M. Sargeant[3], Richard Oberst[3], Mark L. Tamplin[1], and John B. Luchansky[1], [1]U. S. Department of Agriculture, Wyndmoor, PA/U.S.A., [2]College of Veterinary Medicine, KSU, Manhattan, KS/U.S.A., [3]Food Animal Health and Management Center, KSU, Manhattan, KS/U.S.A.

ASAS/ADSA Growth and Development: Muscle Growth and Development

Chair(s):Ted Huiatt, Iowa State University and Deana Hancock, Elanco Animal Health

Room: 201-204

Time	Abstract Number	
8:00 AM	118	Cyclic stretch influences $p21^{WAF1}$ promoter activity in myoblasts and myotubes. M.K. Webster*[1] and J.M. Reecy[1], [1]Iowa State University, Ames, IA.
8:15 AM	119	Effect of intramuscular plasmid delivery and electroporation on circulating concentration of the plasmid-encoded reporter gene in the pig. A.G. Van Kessel*[1], B.G. Goldade[1], B.R. Krishnan[2], M.A. Morsey[2], L.D. Nelson[2], and P.J. Gaynor[3], [1]University of Saskatchewan, Saskatoon, SK, Canada, [2]Pfizer Global Research and Development, Groton, CT , [3]Pfizer Global Research and Development, Terre Haute, IN.
8:30 AM	120	Muscle-derived insulin-like growth factor-I alters postnatal growth. J. K. Armstrong*, P. V. Malven, A. L. Grant, and D. E. Gerrard, Purdue University, 1151 Smith Hall, West Lafayette, IN 47907.
8:45 AM	121	Effect of an IGF-I transgene on tissue accretion rates in pigs. VG Pursel*[1], AD Mitchell[1], RJ Wall[1], ME Coleman[2], and RJ Schwartz[3], [1]USDA-ARS, Beltsville, Maryland, [2]Valentis, Inc., The Woodlands, Texas, [3]Baylor College of Medicine, Houston, Texas.
9:00 AM	122	IGF-I and analogues can increase growth in artificially-reared neonatal pigs. F. R. Dunshea*[1], C. S. Chung[2], P. C. Owens[3], F. J. Ballard[3], and P. E. Walton[3], [1]Agriculture Victoria, Victorian Institute of Animal Science, Werribee, Australia, [2]Department of Animal Science, Chungbuk National University, Republic of Korea, [3]Cooperative Research Centre for Tissue Growth and Repair, Adelaide, Australia.

9:15 AM	123	A GnRF vaccine (Improvac®) and porcine somatotropin have synergistic and additive effects on growth performance in group-housed boars and gilts, respectively. W. T. Oliver*[1], I. McCauley[2], R. J. Harrell[1], D. Suster[2], and F. R. Dunshea[2], [1]North Carolina State University, Raleigh, NC, [2]Agriculture Victoria, Victorian Institute of Animal Science, Werribee, Australia.
9:30 AM	124	Regulation of selection-induced growth hormone expression in porcine single trait selection lines. M.F.W. te Pas*, J.W.M. Freriksen, A.J.H.M. van Bijnen, C.L.M. Gerritsen, T.J. van den Bosch, F.J. Verburg, A.H. Visscher, and K.H. de Greef, Institute for Animal Science and Health, ID-Lelystad.
9:45 AM	125	Cloning, mapping, and functional analysis of porcine pituitary homeodomain transcription factor genes. S.J. Rhodes*[1], K.W. Sloop[1], G.E. Parker[1], T.P.L. Smith[2], A.D. Showalter[1], A.L. McCutchan Schiller[1], J.R. Blanton Jr[1], and G.A. Rohrer[2], [1]Indiana University Purdue University Indianapolis, [2]US MARC Nebraska.
10:00 AM	126	Purification of porcine ß-casein from milk by liquid chromatography, N-terminal sequencing, and antisera development. Adam C.W. Kauf* and Ronald S. Kensinger, Pennsylvania State University, University Park, Pennsylvania.
10:15 AM		Break
10:45 AM	127	Effect of dexamethasone treatment on growth in neonatal swine. J. S. Seaman*[1], E. P. Berg[1], T. J. Safranski[1], and J. A. Carroll[2], [1]University of Missouri, Department of Animal Sciences, [2]Animal Physiology Research Unit, ARS-USDA, Columbia, MO.
11:00 AM	128	Involvement of the type I and type II glucocorticoid receptors (GR) in growth hormone (GH) cell differentiation (GHDIFF) during chicken embryonic development. I. Bossis* and T.E. Porter, University of Maryland, College Park MD USA.
11:15 AM	129	Gene expression in sexually dimorphic muscles in sheep. R.G. Mateescu* and M.L. Thonney, Cornell University, Ithaca, NY.
11:30 AM	130	The effect of stage of growth and implant exposure on carcass composition and quality in steers. K.W. Bruns*, R.H. Pritchard, and T.A. Wittig, South Dakota State University, Brookings, SD.
11:45 AM	131	Lipogenic activity and adipose tissue cellularity in steers fed casein-formaldehyde-protected starch and(or) canola lipid. C. D. Gilbert*, D. K. Lunt, and S. B. Smith, Texas A&M University, College Station, TX.

ASAS/ADSA Physiology: Nutritional Regulation of Ovarian Function/Ovarian Biology

Chair(s):Matthew Lucy, University of Missouri

Sponsor(s):Monsanto Company

Room: 143-144

Time	Abstract Number	
8:00 AM	132	Novel effects of nutrition on reproduction in lactating dairy cows. M. C. Wiltbank*, R. Sartori, S. Sangsritavong, H. Lopez, J. M. Haughian, P. M. Fricke, and A. Gumen, Department of Dairy Science, University of Wisconsin-Madison.
8:30 AM	133	The influence of nutrient intake on ovarian form and function in meat-type chickens. F. E. Robinson*[1], R. A. Renema[1], and M. J. Zuidhof[2], [1]University of Alberta, [2]Alberta Agriculture, Food and Rural Development.
9:15 AM	134	Relationships between Bovine follicular steroids and components of the extracellular matrix. C.M. Field*[1], A.R. Williams[1], A.B. Moore[1], J.N. Oyarzo[2], M.E. Bellin[2], and R.L. Ax[2], [1]Mississippi State University, Starkville, MS, [2]University of Arizona, Tuscon, AZ.
9:30 AM	135	Relationship between preovulatory follicle growth and postovulatory luteal function in the cow. GE Mann*[1], ECL Bleach[2], GR Starbuck[1], and MD Fray[3], [1]University of Nottingham, Sutton Bonington, Loughborough, UK, [2]University of Reading, Whiteknights, Reading, UK, [3]Institute for Animal Health, Compton, Newbury, UK.

10:00 AM		Break
10:15 AM	136	Effects of acute nutritional restriction of beef heifers on LH in serum and anovulation. C. A. Lents*, F. J. White, L. N. Floyd, N. H. Ciccioli, I. Rubio, and R. P. Wettemann, Deptartment of Animal Science, Oklahoma Agricultural Experiment Station.
10:30 AM	137	Estradiol benzoate (EB) inhibits secretion of LH and induces atresia of dominant follicles within 36 hours in cyclic heifers. C.R. Burke*[1,2], S. Morgan[2], M.L. Mussard[1], D.E. Grum[1], and M.L. Day[1], [1]The Ohio State University, Columbus OH, [2]Dexcel Ltd, Hamilton, New Zealand.
10:45 AM	138	Effect of heat stress in follicular development of dairy cows in intensive production in North-Central Mexico. R.R. Lozano-Dominguez[1], C.F. Arechiga[2], and E. Gonzalez-Padilla*[1], [1]Universidad Nacional Autonoma de Mexico, Mexico., [2]Universidad Autonoma de Zacatecas, Zacatecas, Mexico.
11:00 AM	139	Expression of insulin-like growth factor-binding protein-2, -3, -4, and -5 messenger RNA in fresh versus cultured bovine granulosa and theca cells. J.L. Voge*, D.T. Allen, J.R. Malayer, and L.J. Spicer, Oklahoma State University.
11:15 AM	140	Insulin plays a key role in re-coupling the IGF-somatotropin axis in the early postpartum dairy cow. S.T. Butler* and W.R. Butler, Cornell University, Ithaca, NY.
11:30 AM	141	Postpartum nutrition influences concentrations of leptin, IGF-I, and pregnancy rate of primiparous beef cows. N. H. Ciccioli*[1], R. P. Wettemann[1], L. J. Spicer[1], D. H. Keisler[2], C. A. Lents[1], and F. J. White[1], [1]Oklahoma Agricultural Experiment Station, Stillwater, [2]University of Missouri-Columbia.
11:45 AM	142	Concentrations of leptin and insulin like growth factor-I (IGF-I) during acute nutritionally induced anovulation and realimentation. F.J. White*[1], C.A. Lents[1], N.H. Ciccioli[1], R.P. Wettemann[1], L.J. Spicer[1], and D.H. Keisler[2], [1]Oklahoma Agricultural Experiment Station, Stillwater, [2]University of Missouri, Columbia.

ASAS/ADSA Ruminant Nutrition: Feed Additives

Chair(s):K.A. Beauchemin, Agriculture & Agri-Food Canada Research Center and

M.J. Cecava, Consolidated Nutrition

Room: Sagamore 6&7

Time	Abstract Number	
8:00 AM	143	Influence of length and ramification of the alcohol radical of esters of methionine and of 2-hydroxy-4 (methylthio) butanoic acid on methionine bioavailability. J.C. Robert*[1], B.K. Sloan[2], G. Etave[1], and B. Bouza[1], [1]Aventis Animal Nutrition, Antony, France, [2]Aventis Animal Nutrition, Alpharetta, USA.
8:15 AM	144	Investigation of the site of absorption and metabolism of a novel source of metabolisable methionine : 2 hydroxy 4 (methyl thio) butanoic acid isopropyl ester (HMBi). J.C. Robert*, C. Richard, T. D'Alfonso, N. Ballet, and E. Depres, Aventis Animal Nutrition, Antony, France.
8:30 AM	145	Feeding 2-hydroxy-4-(methylthio)-butanoic acid to transition dairy cows improves milk production but not hepatic lipid metabolism. M. S. Piepenbrink*[1], A. L. Bork[1], M. R. Waldron[1], T. R. Overton[1], M. Vazquez-Anon[2], and M. D. Holt[2], [1]Cornell University, Ithaca, NY, [2]Novus International, Inc., St. Louis, MO.
8:45 AM	146	Use of milk protein concentrations to estimate the ''methionine bioavailability'' of two forms of 2-hydroxy-4-methylthio butanoic acid (HMB) for lactating cows.. C. G. Schwab*[1], N. L. Whitehouse[1], A. M. McLaughlin[1], R. K. Kadariya[1], N. R. St-Pierre[2], B. K. Sloan[3], R. M. Gill[3], and J. C. Robert[4], [1]University of New Hampshire, Durham, [2]The Ohio State University, Columbus, [3]Aventis Animal Nutrition, Alpharetta, GA, [4]Aventis Animal Nutrition, Antony, France.
9:00 AM	147	Performance of high producing dairy cows fed methionine hydroxy analog or D, L-methionine in a total mixed ration during early lactation. K. Uchida[1], P. Mandebvu[2], C. J. Sniffen*[2], C. S. Ballard[2], and M. P. Carter[2], [1]Zen-Noh National Federation of Agricultural Co-operative Associations, Tokyo, Japan, [2]W. H. Miner Agricultural Research Institute, Chazy, NY.

9:15 AM	148	Effect of two levels of crude protein and supplementation of methionine on performance of dairy cows. C. Leonardi*[1], L.E. Armentano[1], and M. Stevenson[2], [1]University of Wisconsin-Madison, [2]Degussa Canada Ltd., Ontario, Canada.
9:30 AM	149	Effects of rumen undegradable protein digestibility and supplemental methionine on production parameters and nitrogen efficiency of Holstein cows in early lactation. S. Noftsger* and N. St-Pierre, The Ohio State University.
9:45 AM		Break
10:00 AM	150	Ruminal escape and response of serum methionine to 25 and 50 grams of methionine hydroxy analog in dairy cows. K. M. Koenig*[1], M. Vazquez-Anon[2], C. D. Knight[2], and L. M. Rode[1], [1]Agriculture and Agri-Food Canada, Research Centre, Lethbridge, AB, Canada, [2]Novus International, Inc., St. Louis, MO, US.
10:15 AM	151	Carbohydrate fermentation and nitrogen metabolism of a finishing diet by ruminal microbes in continuous cultures as affected by ethoxyquin and(or) supplementation of monensin and tylosin. H. Han*[1], H. S. Hussein[1], H. A. Glimp[1], D. H. Saylor[2], and L. W. Greene[3], [1]University of Nevada - Reno, [2]Solutia Inc., [3]Texas A&M University.
10:30 AM	152	Comparison of different methods of administration on the effect of fibrolytic enzymes on digestive processes in lactating cows. J.D. Sutton*[1], R.H. Phipps[1], D.E. Beever[1], D.J. Humphries[1], G.F. Hartnell[2], and J.L. Vicini[2], [1]University of Reading, UK, [2]Monsanto Co, St Louis, MO.
10:45 AM	153	Effects of liquid feed supplementation and (or) celluloytic enzymes on dry matter disappearance of either legume or grass hay. G. V. Pollard*[1], W. T. Wright[1], T. C. Bramble [1], C. R. Richardson[1], and C. W. Cobb[2], [1]Texas Tech University, Lubbock, [2]Loveland Ind., Inc., Greeley, CO.
11:00 AM	154	Effects of ruminant feed enzyme additives on digestibility evaluated in vitro. G. R. Bowman*[1], K. A. Beauchemin[2], and J. A. Shelford[1], [1]University of British Columbia, Vancouver, Canada, [2]Agriculture and Agri-Food Canada, Lethbridge, Canada.
11:15 AM	155	The effect of different levels of yeast culture inclusion in the concentrate diet on calf performance. R.J. Fallon*[1] and B. Earley[1], [1]Teagasc.
11:30 AM	156	The effect of different levels of YeaSacc {1026 inclusion on the lifetime performance of cattle offered an ad libitum concentrate ration. R.J. Fallon*[1] and B. Earley[1], [1]Teagasc.
11:45 AM	157	The effects of feeding a fungal extract (Amaferm) to ewes 60 days prepartum through weaning on milk protein, fat, lactose and yield. S. L. Campbell*, S. P. Jackson, A. D. Herring, M. L. Galyean, and D. R. Niemann, Texas Tech University Lubbock,TX/US.

PSA Environment and Management: Broilers

Chair(s):Audrey McElroy, Virginia Tech University

Room: Sagamore 1

Time	Abstract Number	
8:00 AM	158	Impact of aflatoxin in the feed on coccidial infection in broiler chicks. V.G. Stanley[1], D. Spiller*[1], W. Kruger[2], and A. Sefton[3], [1]Prairie view A&M University, [2]Texas A&M University, [3]Alltech, Guelph Canada.
8:15 AM	159	The impact of methionine source on poultry fecal matter odor volatiles. C. Chavez*[1], T. P. Niemeyer[1], P. L. Reynolds[1], R. A. Russo[1], R. E. Lacey[2], and J. B. Carey[1], [1]Department of Poultry Science, Texas A&M University, College Station, TX, [2]Department of Agricultural Engineering, Texas A&M University, College Station, TX.
8:30 AM	160	Impact of farm management practices on the microbial profile of processed broilers. Marcos Sánchez*[1], Wade Fluckey, Mindy Brashears, Eva Wallner-Pendleton, Marcela Tamayo, Adriana Aguilar, and Shelly Mckee, [1]University of Nebraska-Lincoln, Lincoln, NE.
8:45 AM	161	Estimation of the growth potential of six commercial strains of broiler chickens. M. J. Zuidhof*[1], D. Eisenbart[1], Z. Wang[1], and G. Hinse[2], [1]Alberta Agriculture, Food and Rural Development, [2]University of Alberta.

9:00 AM	162	Temperature gradients in trailers transporting broilers under Canadian winter conditions. T.D. Knezacek*, G.P. Audren, H.L. Classen, E.M. Barber, T.G. Crowe, and S. Stephens, University of Saskatchewan, Saskatoon, SK, Canada.
9:15 AM	163	Effect of cyclic heat stress on voluntary water consumption, efficiency of feed utilization and thyroid activity of broiler chicks. Miriam ELDeeb*[1] and A. Abou-Elmagd[2], [1]College of Agriclture, [2]College of Vet. Medicine.
9:30 AM	164	Sources of Salmonellae in typical Delmarva broiler operations. J. deGraft-Hanson*, E. LaBreque, A. Dorsey, A. Evangelista, R. Porreca, and L. Baker, University of Maryland, Princess Anne, Md. USA.
9:45 AM		Break
10:15 AM	165	The effect of adding ozone into an intensive broiler production unit on performance, mortality, ammonia levels, and bacterial levels as compared to a non-ozone treated environment. K. Schwean*, H. L. Classen, A. A. Olkowski, E. M. Barber, and C. Riddell, University of Saskatchewan, Saskatoon, SK Canada.
10:30 AM	166	A demonstration of sand as an alternative bedding in commerical poultry houses. G.W. Malone*[1], M. Salem[1], D.J. Hansen[1], and M.K. Eckman[2], [1]University of Delaware, Georgetown, DE/USA, [2]Auburn University, Auburn, AL/USA.
10:45 AM	167	Effects of density and perch availability on aggressive behavior in broilers. Inma Estevez*, Rosemary Pettit-Riley, and Estelle Russek-Cohen, University of Maryland.
11:00 AM	168	Effectiveness of a terpene-based product as a broad-spectrum antimicrobial. Julio L. Pimentel*[1] and W. Douglas Waltman[2], [1]G.V.D. Corporation, [2]Georgia Poultry Laboratory.
11:15 AM	169	Strain and age effects on skeletal growth in two commercial broiler strains. I. Toure*, J. Nixon, and M. Lilburn, The Ohio State University/OARDC.
11:30 AM	170	Artificial neural network prediction of the weight gain and feed conversion of broilers raised under a range of environmental temperatures. T. L. Cravener*[1], W. B. Roush[1], J. D. May[2], and B. D. Lott[2], [1]The Pennsylvania State University, Department of Poultry Science, University Park, PA 16802-3501, [2]USDA, ARS, South Central Poultry Research Laboratory, Mississippi State, MS 39762-5367.

PSA Genetics

Chair(s):Terry Wing, Cobb-Vantress, Inc.

Room: 211

Time	Abstract Number	
8:00 AM	171	Genetic characterization of commercial broiler lines experimentally infected with Subgroup J Avian Leukosis Virus (ALV-J). M Karaca*, J. K. Rosenberger, and S. S. Cloud, University of Delaware, Newark,DE.
8:15 AM	172	Relationships between skeletal growth and body weight in Japanese quail selected for 4 week body weight. J. M. Reddish*, A. El-Keredy, K. E. Nestor, and M. S. Lilburn, Dept of Animal Science, The Ohio State University, Ohio Agricultural Research and Development Center.
8:30 AM	173	The effect of selection for increased egg production in turkeys on incubation characteristics of embryos. A. L. Antonelli*, K. E. Nestor, and M. S. Lilburn, Department of Animal Sciences, Ohio State University/OARDC, Wooster, OH.
8:45 AM	174	Germ-line transmission of a *lacZ* gene in chickens using an avian Spleen Necrosis Virus-based vector. S. Borwornpinyo*, D.W. McCoy, P.E. Mozdziak, and J.N. Petitte, [1]North Carolina State University.
9:00 AM	175	Molecular characterization of the genomic chicken prolactin receptor (cPRLR) gene from a native Chinese chicken (Wai Chow strain). Angela Hui* and Frederick Leung, University of Hong Kong.
9:15 AM	176	Molecular characterization of the chicken prolactin (PRL) gene:genomic gene structure, its polymorphism and promoter analysis. Florence Au* and Frederick Leung, University of Hong Kong.
9:30 AM	177	Detection of a single nucleotide polymorphism in exon 10 of the chicken growth hormone receptor gene. Joanna Lau* and Frederick Leung, University of Hong Kong.

9:45 AM		Break
10:00 AM	178	Candidate genes and reproductive traits in a commercial broiler breeder population, an association study. I C Dunn*[1], Y-W Miao[1], A Morris[2], M N Romanov[1], D Waddington[1], P W Wilson[1], and P J Sharp[1], [1]Roslin Institute, Roslin, Midlothian EH25 9PS, Scotland, [2]The Cobb Breeding Company, East Hanningfield, Essex, CM3 8BY, England.
10:15 AM	179	Mapping QTL loci affecting growth and disease resistance to avian coccidiosis. J Zhu*[1], H Lillehoj[1], C Van Tassell[2], M Emara[3], P Allen[1], H Cheng[4], D Pollock[5], M Sadjadi[5], and T Sonstegard[2], [1,2]U.S.Department of Agriculture, BARC, Beltsville, MD, [3]University of Delaware, Newark, DE, [4]U.S.Department of Agriculture, ADOL, East Lansing, MI, [5]Perdue Farms, Inc., Salisbury, MD.
10:30 AM	180	The use of molecular markers to associate feather color alleles with tissue pigmentation in broiler chickens. R Okimoto*, University of Arkansas.
10:45 AM	181	Effect of dietary protein, photoperiod, and genetic background on growth and sexual maturity in Japanese quail. A. El-Karedy, K. Nestor, and M. Lilburn*, The Ohio State University/OARDC, Wooster, OH.
11:00 AM	182	Is improved feed conversion associated with increased lethargy and docility in broiler chickens? D. O. Skinner-Noble*[1], R. B. Jones[2], and R. G. Teeter[1], [1]Oklahoma State University, Stillwater, OK 74078, [2]Roslin Institute (Edinburgh), Midlothian EH25 9PS.
11:15 AM	183	Level and pattern of DNA sequence variation in the chicken genome. Edward Smith*, Virginia Tech.
11:30 AM	184	Novel randomly amplified polymorphic DNA markers for the turkey genome. Amy Spellerberg* and Edward Smith, Virginia Polytechnic Institute and State University, Blacksburg Virginia/USA.
11:45 AM	185	Use of AFLP DNA markers to evaluate genomic diversity and genetic distances in Japanese quail lines divergently selected for stress responsiveness. F. M. Odeh*[1] and G. G. Cadd[1], [1]Department of Poultry Science, Louisiana State University Agricultural Center, Baton Rouge, LA 70803.

PSA Nutrition: Amino Acids

Chair(s):Adam Davis, University of Georgia

Room: 500 Ballroom

Time	Abstract Number	
8:00 AM	186	Impact of phase-feeding on growth performance of broilers fed diets adjusted every other day for decreased amino acid content. H.R. Pope*, J.A. Townsend, and J.L. Emmert, University of Arkansas.
8:15 AM	187	Evaluation of lysine and arginine needs in broiler finisher diets. E. A. Oviedo-Rondon*, C. A. Fritts, and P. W. Waldroup, University of Arkansas.
8:30 AM	188	The influence of dietary labile methyl donors on arginine requirement of young broiler chicks using growth and muscle creatine as parameters. M. Chamruspollert*, G.M. Pesti, and R.I. Bakalli, Department of Poultry Science, The University of Georgia, Athens, GA 30602-2772.
8:45 AM	189	Influence of maillard reaction products on *Escherichia coli* amino acid lysine auxotroph growth-based assay response. X. Li* and S. C. Ricke, Texas A&M University, College Station, Texas/USA.
9:00 AM	190	Development of a rapid whole cell biosensor for assessing methionine availability by insertion of genes encoding for green fluorescent protein into an *Escherichia coli* methionine auxotroph. C. A. Froelich*, I. B. Zabala Díaz, and S. C. Ricke, Texas A&M University, College Station, TX/USA.
9:15 AM	191	Sulfur amino acids requirement of slow- and fast-feathering male broilers from 0-21 days of age. A. Kalinowski* and E.T. Moran, Auburn University, Auburn, AL.
9:30 AM	192	Influence of dietary sodium level on response to source and level of methionine in broiler diets. M. A. Motl*, C. A. Fritts, and P. W. Waldroup, University of Arkansas.
9:45 AM		Break

10:15 AM	193	Lysine need of broiler males from 42 to 56 days of age under terms of an ideal amino acid pattern. A. Corzo*[1], E. T. Moran, Jr.[1], and M. E. Jackson[2], [1]Auburn University, Auburn, AL, [2]Degussa-Huls, Kennesaw, GA.
10:30 AM	194	Lysine, threonine, and arginine supplementation and effects on performance of young tom turkeys raised in a summer environment. J. Kalbfleisch*[1], V. Stangeland[2], J. Brannon[1], and S. Noll[1], [1]University of Minnesota, St. Paul, MN, USA, [2]Stangeland Feed Consulting, Willmar, MN, USA.
10:45 AM	195	Lysine needs of starting chicks and subsequent effects during the growing period. M. T. Kidd*[1], J. B. Yeatman[1], and B. I. Fancher[2], [1]Department of Poultry Science, Mississippi State University, Mississippi State, MS 39762, [2]Aviagen North America, Inc., Huntsville, AL 35805.
11:00 AM	196	Broiler growth and carcass responses to diets containing L-threonine versus diets containing threonine from intact protein sources. M. T. Kidd*[1], C. D. Zumwalt[1], D. W. Chamblee[2], M. L. Carden[2], and D. J. Burnham[3], [1]Department of Poultry Science, Mississippi State University, Mississippi State, MS 39762, [2]South Central Poultry Research Unit, USDA-ARS, Mississippi State, MS 39762, [3]Ajinomoto Heartland, Inc., Chicago, IL 60631.
11:15 AM	197	Male and female broiler responses to low and adequate dietary threonine on nitrogen and energy balance. W. A. Dozier, III*[1], E. T. Moran, Jr.[1], and M. T. Kidd[2], [1]Auburn University, AL , [2]Mississipi State University, MS.
11:30 AM	198	Ideal ratio (relative to lysine) of tryptophan and threonine for chicks during the second and third week of life. A.B. Batal*, T.M. Parr, N.R. Augspurger, C.M. Parsons, and D.H. Baker, University of Illinois, Urbana, IL USA.
11:45 AM	199	Ideal ratio (relative to lysine) of isoleucine and valine for chicks during the second and third week of life. T.M. Parr*[1], A.B. Batal[1], N.R. Augspurger[1], and D.H. Baker[1], [1]University of Illinois.

PSA Nutrition: Feed Ingredients I

Chair(s):Joe Hess, Auburn University

Room: 116-117

Time	Abstract Number	
8:00 AM	200	Bioavailability of zinc and copper lignosulfate complexes in broiler chicks. J.L. Grimes, J.W. Spears, and J.L. Godwin*, North Carolina State University, Raleigh, NC, USA.
8:15 AM	201	Evaluation of tetrabasic zinc chloride and tribasic copper chloride for growth promotion and toxicity in chicks. M.E. Persia*, C.M. Parsons, and D.H. Baker, University of Illinois, Urbana, IL USA.
8:30 AM	202	The application of egg by-products as valuable protein supplements in broiler chicken diets. L.D. Schmidt*, B.A. Slominski, D. Boros, L.D. Campbell, and W. Guenter, University of Manitoba, Winnipeg, MB, Canada.
8:45 AM	203	Nutritional value of hydrolyzed whole swine for turkey poults. S. D. Crow*[1], P. R. Ferket, and T. F. Middleton[2], [1]NC State University, Raleigh, NC USA, [2]Ag ProVision, Kenansville, NC USA.
9:00 AM	204	Canola meal toasting can be eliminated as it has no positive effects on broiler performance. R.W. Newkirk*[1] and H.L. Classen, [1]University of Saskatchewan, Saskatoon, SK, Canada.
9:15 AM	205	Nutritional, physiological, and metabolic significance of canola meal sinapine in broiler chickens. H. Y. Qiao*[1] and H. L. Classen[1], University of Saskatchewan, Saskatoon, Saskatchewan, Canada.
9:30 AM	206	Nutrient characterization of guar meal fractions. S.R. Conner, J.T. Lee*, J. Carey, and C.A. Bailey, Texas Agricultural Experiment Station.
9:45 AM		Break
10:00 AM	207	Evaluation of the feeding value of a non-GMO high-protein soybean meal in broiler diets. B. Lenfestey*, R. Wilson, J. Burton, and J. Brake, North Carolina State University, Raleigh, NC USA.
10:15 AM	208	Genetically modified rice containing lactoferrin and lysozyme as an antibiotic substitute in broiler diets. Brooke Humphrey*[1], Ning Huang[2], and Kirk Klasing[1], [1]University of California, Davis, [2]Applied Phytologics, Inc.

10:30 AM	209	Evaluation of high available phosphorus corn with and without phytase in diets for growing turkeys. C. A. Fritts*[1], F. Yan[1], H. L. Stilborn[2], and P. W. Waldroup[1], [1]University of Arkansas, [2]DuPont Specialty Grains.
10:45 AM	210	Effect of dietary conjugated linoleic acid (CLA) on the growth and fat accumulation of broilers. M. Du*, K. C. Nam, S. J. Hur, H. Ismail, D. U. Ahn, and J. L. Sell, Iowa State University.
11:00 AM	211	Conjugated linoleic acid alters egg yolk fatty acid composition and hepatic histopathology of laying hens. Gita Cherian*[1], Troy B. Holsonbake[1], Mary P. Goeger[1], and Rob Bildfell[2], [1]Department of Animal Sciences, Oregon State University, [2]College of Veterinary Medicine, Oregon State University.
11:15 AM	212	Feeding various dietary levels of high oleic high oil corn and typical yellow dent corn to laying hens. 1. Live performance and egg production. H. L. Stilborn*, M. Araba, D. W. Rice, M. Hinds, and B. L. Smith, DuPont Specialty Grains, Des Moines, Iowa. USA.
11:30 AM	213	Feeding various dietary levels of high oleic high oil corn and typical yellow dent corn to laying hens. 2. Egg quality parameters. H. L. Stilborn*, M. Araba, D. W. Rice, M. Hinds, and B. L. Smith, DuPont Specialty Grains, Des Moines, IA USA.
11:45 AM	214	Nutritional evaluation of Bt (MON810) and Roundup Ready® corn compared with commercial hybrids in broilers. A.M. Gaines*, G.L. Allee, and B.W. Ratliff, University of Missouri-Columbia.

PSA Processing and Products: Poultry Meat Safety and Eggs

Chair(s):Scott Russell, University of Georgia and Don Conner, Auburn University

Room: 205

Time	Abstract Number	
8:00 AM	215	Application of lactic-acid-producing bacterial cultures to skin of live broilers. J. A. Cason*, R. J. Buhr, A. Hinton, Jr., M. E. Berrang, and N. A. Cox, Russell Research Center, Athens, GA USA.
8:15 AM	216	Microbiological consequences of skin removal prior to evisceration of broiler carcasses. M. E. Berrang*, R. J. Buhr, and J. A. Cason, USDA-ARS-Russell Research Center.
8:30 AM	217	In plant microbial profile of air chilled chickens. W. M. Fluckey*, M. X. Sanchez, M. M. Brashears, E. Wallner-Pendelton, A. Aguilar, M. Tamayo, and S. R. McKee, University of Nebraska, Lincoln, NE.
8:45 AM	218	Development of time/temperature indicator tags for tracking poultry product quality throughout the cold chain. C.M. Moore*[1] and B.W. Sheldon[1], [1]North Carolina State University, Raleigh, NC/USA.
9:00 AM	219	Effects of three packaging systems on the natural microflora and acceptability of fresh broiler breast meat. Nadege Charles and Sally K. Williams*, University of Florida, Gainesville, FL/U.S.A.
9:15 AM	220	Effect of packaging systems on bacteria survival on processed poultry. J. A. Byrd*[1], A.R. Sams[2], D.J. Caldwell[2,3], L.F. Kubena[1], and B.M. Hargis[2,3], [1]USDA-ARS, Southern Plains Agricultural Research Center, College Station, TX, 77845, [2]Texas A&M University, Department of Poultry Science, [3]Texas A&M University, Department of Veterinary Pathobiology, Texas Agricultural Experiment Station.
9:30 AM	221	Application of active packaging films to inhibit *Salmonella typhimurium* on broiler drumstick skin. B.W. Sheldon*[1] and P.L. Dawson[2], [1]North Carolina State University, Raleigh, NC/USA, [2]Clemson University, Clemson, SC/USA.
9:45 AM	222	Effect of electron beam irradiation on poultry meat safety and quality. S. J. Lewis*, A. Velásquez, S. L. Cuppett, and S. R. McKee, University of Nebraska-Lincoln Lincoln, NE.
10:00 AM		Break
10:15 AM	223	Consumer poultry preparation habits and opinions concerning food safety, irradiation, and hormones in El Paso, TX and Las Cruces, NM. K. G. Maciorowski*[1], S. G. Birkhold[2], and S. C. Ricke[2], [1]Delaware State University, [2]Texas A&M University.

10:30 AM	224	Egg production and quality response of commercial laying hens molted with alfalfa diets. K Medvedev*[1], C Woodward[1], X Li[1], L Kubena[2], D Nisbet[2], and S Ricke[1], [1]Texas A&M University, Department of Poultry Science, [2]USDA-ARS, Food and Feed Safety Unit.
10:45 AM	225	Effect of electrostatic application of MaxSpray on *Salmonella* Enteritidis attached to the surface of eggs. S. M. Russell*[1], [1]The University of Georgia.
11:00 AM	226	Why the Haugh Unit is wrong. F. G. Silversides*[1] and T. A. Scott[2], [1]Agriculture and Agri-Food Canada, Charlottetown, Canada, [2]Agriculture and Agri-Food Canada, Agassiz, Canada.
11:15 AM	227	The effect of cryogenic cooling with carbon dioxide on the USDA grade and microbial load of shell eggs in the commercial setting. L.A. Hughes*[1], K.E. Anderson[1], and P.A. Curtis[1], [1]North Carolina State University.
11:30 AM	228	Comparison of quality and functionality of traditionally and cryogenically cooled shell eggs. K.C. McAvoy*[1], P.A. Curtis[1], K.M. Keener[1], K.E. Anderson[2], and D.E. Conner[3], [1]Department of Food Science, North Carolina State University, [2]Department of Poultry Science, North Carolina State University, [3]Department of Poultry Science, Auburn Universtiy.
11:45 AM	229	Conjugated linoleic acid alters egg yolk fatty acid composition and volatile compounds in raw, cooked and irradiated eggs. Gita Cherian*[1], Troy B. Holsonbake[1], Mary P. Goeger[1], and Dong U. Ahn[2], [1]Department of Animal Sciences, Oregon State University, [2]Department of Animal Science, Iowa State University.

Advancements in Analytical and Reporting Software I

Chair(s):John LaBore

Room: 145-146

Time	Abstract Number	
12:00 PM		New features in JMP version 4. T. R. Bohannon*, Baylor University.
12:30 PM		Integrating JMP version 4 with other desktop applications. R. D. Muller*, Elanco Animal Health.

ADSA Foundation Scholar Award Lecture—Dairy Foods

Chair(s):James K. Drackley, University of Illinois

Room: 201-204

Time	Abstract Number	
1:00 PM		Formation and physical properties of milk protein gels. J. Lucey*, University of Wisconsin, Madison.

FASS Committee on Food Safety, Animal Drugs, and Animal Health; Agricultural Commodity Coalition; and Agricultural Biotechnology Stewardship Technical Committee: Biotechnology, Animal Products, and the Food Industry

Chair(s):Gary Cromwell, University of Kentucky

Sponsor(s):Agricultural Biotechnology Stewardship Technical Committee and Animal Ag Coalition

Room: 500 Ballroom

Time	Abstract Number	
1:00 PM		Introduction
1:05 PM	230	Is DNA or protein from feed detected in livestock products? Kevin Glenn*, Chair, ABSTC Subcommittee on DNA Detection.
1:35 PM	231	The impact of biotechnology on preventing food allergies. James D. Astwood*, Monsanto Company, St. Louis, MO.
2:05 PM		Discussion
2:20 PM		Break
2:35 PM	232	The risks of going non-biotech. Thomas P. Redick*, Law Offices of Thomas P. Redick, Del Mar, CA.
3:05 PM	233	Economic and practical considerations of using non-biotech grain in U.S. livestock and poultry feed. Scott Richman*, Sparks Companies, Inc., Memphis, TN.
3:35 PM		Discussion
3:50 PM	234	Effects on global trade: Setting international food standards via Codex Alimentarius. Mark Mansour*, Attorney and Partner, Keller and Heckman LLP, Washington, DC.
4:20 PM		Consumer expectation and perspective. D. Schmidt*, International Food Information Council, Washington, D.C.
4:50 PM		Discussion

Genetics of Disease Resistance

Chair(s):Larry Fox, Washington State University

Sponsor(s):Select Sires and Monsanto Company

Room: Sagamore 5

Time	Abstract Number	
1:00 PM	235	Transgenic approaches to prevent bovine mastitis. D. E. Kerr*[1], K. D. Wells[2], and R. J. Wall[2], [1]University of Vermont, Burlington, VT, [2]USDA-ARS, Beltsville, MD.
2:00 PM	236	Immunogenomics and the periparturient dairy cow: letting leukocytes tell us their own story about disease susceptibility. J.L. Burton*[1], [1]Michigan State University.
3:00 PM	237	Genetics and genomics of susceptibility to mycobacterial infection in cattle. P.M. Coussens*[1], B. Tooker[1], W. Nobis[1], and M.J. Coussens[1], Michigan State University, East Lansing, MI 48824.

Latest Development in On-Farm Ultrafiltration

Chair(s):Joseph Schlesser, National Center for Food Safety and Technology and John Bruhn, University of California-Davis

Sponsor(s):California Dairy Research Foundation

Room: 201-204

Time	Abstract Number	
2:15 PM	238	Latest development in on-farm ultrafiltration 1. History of on-farm ultrafiltration of milk. John Bruhn*[1], [1]University of California, Davis.
2:30 PM		Production of high quality raw milk for ultrafiltration and uses of permeate on the farm. M. McCloskey*, DVM, Fair Oaks Dairy, Fair Oaks, IN.
3:00 PM		Membrane processing on the farm. D. Hibbard*, Membrane Specialist Systems, Inc.
3:30 PM	239	Regulatory issues: Processing and quality. Alfred Reeb, New Mexico Department of Agriculture.
4:00 PM	240	Applications of membrane filtered cold milk as an ingredient. P. Tong*[1] and H. Vyas[1], [1]Dairy Products Technology Center, California Polytechnic State University, San Luis Obispo.
4:30 PM		Questions

Hot Topics in Meat Processing

Chair(s):Wes Osburn, Michigan State University

Room: 103-104

Time	Abstract Number	
1:00 PM	241	Developing validation models for E. Coli 0157 inactivation in dry fermented sausages. Shai Barbut* and Mansel Griffiths, [1]University of Guelph.
1:30 PM	242	Use of carbon monoxide in retail meat packaging. O. Sorheim*[1], H. Nissen[1], T. Aune[2], and T. Nesbakken[3], [1]MATFORSK - Norwegian Food Research Institute, Aas, Norway, [2]Norwegian School of Veterinary Science, Oslo, Norway, [3]Norwegian Meat Research Centre, Oslo, Norway.
2:00 PM		Listeria control update. R. Huffman*, American Meat Institute.
2:30 PM	243	Use of the AMI process lethality spreadsheet to validate the safety of cooking procedures. T. A. Freier*, Cargill.
3:00 PM		Break
3:30 PM		Irradiation update for fresh and processed meats. K. Nanke*, SureBeam.
4:00 PM	244	Predictive models for growth of foodborne pathogenic spore-formers at temperatures applicable to cooling of cooked meat. Vijay Juneja*[1], [1]USDA-ARS-ERRC.
4:30 PM	245	Case ready red meat—Demand and technology. Scott Eilert*[1], [1]Excel Corporation.

Workshop: Developing and Sustaining International Agriculture Experiences in Animal Science Curricula

Chair(s):Doug Kenealy, Iowa State University

Room: 138-139

Time	Abstract Number	
1:00 PM		Opening remarks. D. Kenealy, Iowa State University.
1:05 PM		Why is internationalization of curricula important? D. Topel*, Dean Emeritus, Iowa State University.
1:45 PM	246	The nuts and bolts of student exchange programs. John C. Forrest*, Terry S. Stewart, Bud G. Harmon, and Michael H. Stitsworth, Purdue University.
2:30 PM	247	The Linkage Project: a partnership in international educational development. M. D. Kenealy*, Iowa State University, Ames.
3:15 PM		Break
3:30 PM	248	Developing/funding of exchanges of faculty and other international symposia related to teaching and research. J. F. Keown*[1], [1]University of Nebraska, Lincoln, NE.
4:15 PM		Questions and answers
4:35 PM		Visioning the future of internationalizing education. D. Topel*, Dean Emeritus, Iowa State University.
4:55 PM		Closing remarks. D. Kenealy, Iowa State University.

ADSA Dairy Foods: Dairy Products—Chemistry and Physical Properties

Chair(s):C.S. Fortner, USDA

Room: 205

Time	Abstract Number	
2:15 PM	249	Methods to prepare glycomacropeptide from cheese whey. Takuo Nakano* and Lech Ozimek, University of Alberta.
2:30 PM	250	Scale up and mass balance of affinity purification of native ß-lactoglobulin. Harit K. Vyas*, J. M. Izco, and R. Jimenez-Flores, Dairy Products Technology Center, Cal Poly.
2:45 PM	251	Separation of proteins from acid whey using clay minerals. J. Su and D. W. Everett*, University of Otago, Dunedin, New Zealand.
3:00 PM	252	Effect of ß-casein addition on MFGM-stabilized soy oil emulsions. K. Hutchby and Everett D. W.*, University of Otago, Dunedin, New Zealand.
3:15 PM		Break
3:45 PM	253	Characterization of dephosphorylated ß-Casein. F. Haidari*, L.E. Metzger, and D.E. Smith, University of Minnesota, St. Paul, MN.
4:00 PM	254	Effects of added plasmin on the rheological properties of rennet-induced skim milk gels. M Srinivasan* and J.A. Lucey, University of Wisconsin-Madison.
4:15 PM	255	Effect of homogenization pressure and selected additives on particle size properties of retort sterilized dairy beverages during storage. C. Lin* and R. Richter, Texas A&M University, College Station, TX.
4:30 PM	256	The effect of stabilizers and emulsifiers on the rheological properies of ice cream model systems. J.V. Patmore* and H.D. Goff, University of Guelph, Guelph, Canada.

4:45 PM	257	Measurement of temperature dependent changes in process cheese viscosity. L. E. Metzger* and M. L. Leman, University of Minnesota, St. Paul, MN.

AMSA/ASAS Meat Science and Muscle Biology: Beef Quality

Chair(s):Dean Pringle, The University of Georgia

Room: Sagamore 4

Time	Abstract Number	
1:00 PM	258	On-farm factors influencing the tenderness of pasture-fed beef raised commercially in New Zealand. B.C. Thomson*, K.V. Gilbert, and N.J. Simmons, AgResearch Limited, Hamilton, New Zealand.
1:15 PM	259	National Beef Quality Audit-2000: Survey of producers, packers, and end-users. D. L. Roeber*[1], D. R. McKenna[2], P. K. Bates[3], T. B. Schmidt[4], K. E. Belk[1], J. W. Savell[2], J. B. Morgan[3], T. H. Montgomery[4], and G. C. Smith[1], [1]Colorado State University, Fort Collins, CO, [2]Texas A & M University, College Station, TX, [3]Oklahoma State University, Stillwater, OK, [4]West Texas A & M University, Canyon, TX.
1:30 PM	260	National Beef Quality Audit-2000: Results of slaughter floor assessments. P.K. Bates*[1], D.R. McKenna[2], D.L. Roeber[3], T.B. Schmidt[4], J.B. Morgan[1], J.W. Savell[2], T.H. Montgomery[4], D.B. Griffin[2], D.S. Hale[2], and G.C. Smith[3], [1]Oklahoma State University, [2]Texas A&M University, [3]Colorado State University, [4]West Texas A&M University.
1:45 PM	261	National Beef Quality Audit-2000: Results of carcass assessments. D.R. McKenna*[1], P.K. Bates[2], D.L. Roeber[3], T.B. Schmidt[4], D.S. Hale[1], D.B. Griffin[1], J.W. Savell[1], J.B. Morgan[2], T.H. Montgomery[4], and G.C. Smith[3], [1]Texas A&M University, College Station, TX, [2]Oklahoma State University, Stillwater, OK, [3]Colorado State University, Ft. Collins, CO, [4]West Texas A&M University, Canyon, TX.
2:00 PM	262	National Beef Quality Audit-2000: Consensus of the beef industry. T. B. Schmidt*[1], D. L. Roeber[2], P. K. Bates[3], D. R. McKenna[4], T. G. Field[2], T. H. Montgomery[1], J. B. Morgan[3], J. W. Savell[4], and G. C. Smith[2], [1]West Texas A & M University, Canyon, TX, [2]Colorado State University, Fort Collins, CO, [3]Oklahoma State University, Stillwater, OK, [4]Texas A & M University, College State, TX.
2:15 PM	263	Incidence of injection-site lesions in top sirloin butts of fed steers and heifers. D. L. Roeber*[1], R. C. Cannell[2], K. E. Belk[1], J. N. Sofos[1], J. A. Scanga[1], G. L. Cowman[3], and G. C. Smith[1], [1]Colorado State University, Fort Collins, CO, [2]ConAgra Beef Company, Omaha, NE, [3]National Cattlemen's Beef Association, Englewood, CO.
2:30 PM	264	Incidence of injection-site lesions in beef and dairy cow rounds. D. L. Roeber*[1], R. C. Cannell[2], K. E. Belk[1], J. A. Scanga[1], J. N. Sofos[1], G. L. Cowman[3], and G. C. Smith[1], [1]Colorado State University, Fort Collins, Co, [2]ConAgra Beef Company, Omaha, NE, [3]National Cattlemen's Beef Association, Englewood, CO.
2:45 PM		Break
3:15 PM	265	Bison grain fed and grass fed top loin taste test. J. L. Lanier*[1], C. D. Smith[1], P. Chapman[2], and T. Grandin[3], [1]Lanier Animal Systems, [2]Dept. of Statistics, Colorado State University, [3]Grandin Livestock Handling Systems, Ltd.
3:30 PM	266	Influence of feeding malting industry byproducts to feedlot cattle on longissimus muscle sensory traits and tenderness. C. R. Dahlen[a], K. Hachmeister[d], C. M. Zehnder[a], M. Dikeman[d], G. C. Lamb[c], L. R. Miller[a], H. Chester-Jones[b], and A. DiCostanzo[a], [a]University of Minnesota, St. Paul, [b]Southern Research and Outreach Center, Waseca, [c]North Central Research and Outreach Center, Grand Rapids, [d]Kansas State University, Manhattan.
3:45 PM	267	Tenderness improvement through prerigor muscle stretching of Holstein cow carcasses. J.R. Claus[1], H. Wang[2], and N.G. Marriott*[2], [1]University of Wisconsin-Madison, [2]Virginia Polytechnic Institute and State University.
4:00 PM	268	Composition and consumer perception of fresh beef bonded with Activa™ TG-RM. D.S. Kolle*, B.L. Kolle, and J.W. Savell, Texas A&M University, College Station, TX.

4:15 PM	269	The effects of calcium loading on tenderness of beef *Longissimus*, *Supraspinatus* and *Semitendinosus* muscles. D.J. Hanson*[1], C. R. Calkins[1], and J.M. Horton[2], [1]University of Nebraska-Lincoln, [2]Kemin Industries, Inc., Des Moines, IA.
4:30 PM	270	Inhibition of lipid oxidation with encapsulated phosphates in muscle foods. J.R. Claus*[1], H. Wang[2], N.G. Marriott [2], and W.N. Eigel[2], [1]University of Wisconsin-Madison, [2]Virginia Polytechnic Institute and State University.
4:45 PM	271	Future for red meat consumption cannot be accurately evaluated by using per capita: A different approach, per adult human unit versus per capita. S. Hasimoglu*[1], [1]Continental Analytical Cervices Inc. Salina, KS.

ASAS Nonruminant Nutrition: Amino Acids, Vitamins, and Minerals in Finishing Pigs

Chair(s):Mike Johnston, PIC USA and Jason Apple, University of Arkansas

Room: 150-152

Time	Abstract Number	
1:00 PM	272	Evaluation of synthetic L-Lysine use in finishing pigs. D.C. Kendall*[1], G.L. Allee[1], and J.L. Usry[2], [1]University of Missouri-Columbia, [2]Ajinomoto Heartland Inc.
1:15 PM	273	Heat-damaged protein has reduced ileal true digestibility of cystine and aspartic acid in chicks. E.L. Miller*[1], Y.X. Huang[1], S. Kasinathan[1], B. Rayner[1], U. Luzzana[2], V.M. Moretti[2], F. Valfrè[2], K. R. Torrissen[3], H.B. Jensen[4], and J. Opstvedt[5], [1]University of Cambridge, [2]Università degli Studi di Milano, Italy., [3]Institute of Marine Research, Norway., [4]University of Bergen, Norway., [5]Norwegian Herring Oil and Meal Industry Research Institute, Norway.
1:30 PM	274	Effect of increased levels of crystalline essential amino acids on growth performance and nitrogen retention of broiler chicks fed low-CP diets. K. Bregendahl* and D.R. Zimmerman, Iowa State University, Ames.
1:45 PM	275	Supplemental fat and/or reduced dietary crude protein effects on growth performance, carcass characteristics, and meat quality of late finishing barrows reared in a controlled hot environment. J.D. Spencer*[1], A.M. Gaines[1], G. Rentfrow[1], W. Cast[2], J. Usry[3], and G.L. Allee[1], [1]University of Missouri-Columbia, [2]Premium Standard Farms, [3]Ajinomoto Heartland Inc.
2:00 PM	276	A rapid method to determine ''true metabolic availability'' of amino acids in feedstuffs for pigs. R.O. Ball*, R.F.P. Bertolo, P.B. Pencharz, and S. Möhn, University of Alberta.
2:15 PM	277	A method to measure the amino acid requirement of individual pigs. S. Möhn*, R.F.P. Bertolo, and R.O. Ball, University of Alberta.
2:30 PM	278	Protein requirement re-evaluated for juvenile rainbow trout (Oncorhynchus mykiss). Zongjia Cheng*, R.W. Hardy, E.L Brannon, and M. Casten, University of Idaho, Hagerman, ID.
2:45 PM		Break
3:15 PM	279	Effect of genotype and dietary lysine content during the grower phase on growth performance, serum urea N, and carcass and meat quality. J. Fabian*, L. I. Chiba, D. L. Kuhlers, L. T. Frobish, C. R. Kerth, K. Nadarajah, W. H. McElhenney, and B. L. Anderson , Auburn University, Auburn, AL.
3:30 PM	280	Lysine level required to optimize the growth response of Paylean™ in PIC pigs. R. D. Boyd*[1], M. E. Johnston[1], J. L. Usry[2], C. E. Fralick[3], A. A. Sosnicki[1], and B. Fields[1], [1]PIC USA, Franklin, KY, [2]Heartland Lysine Inc, Chicago, IL, [3]Swine Tek, Van Wert, OH.
3:45 PM	281	Effects of supplemental trace mineral levels on carcass characteristics and carcass value. E. van Heugten*[1], P. R. O'Quinn[2], D. W. Funderburke[2], W. L. Flowers[1], and J. W. Spears[1], [1]North Carolina State University, Raleigh, [2]Cape Fear Consulting LLC, Warsaw, NC.
4:00 PM	282	Differential response from feeding high levels of vitamin E on quality of stored pork from two genotypes. J. L. Hasty*, E. van Heugten, and M. T. See, North Carolina State University, Raleigh.
4:15 PM	283	The effects of niacin on growth performance and meat quality in grow-finish pigs. D. E. Real*[1], J. L. Nelssen[1], M. D. Tokach[1], R. D. Goodband[1], S. S. Dritz[1], J. A. Unruh[1], and E. Alonso[2], [1]Kansas State University, Manhattan, [2]Lonza Inc., Fair Lawn, NJ.

4:30 PM	284	Role of pantothenic acid as a modifier of body composition in pigs. T. S. Stahly and T. R. Lutz*, Iowa State University, Ames, IA.
4:45 PM	285	Impact of a targeted B-vitamin regimen on rate and efficiency of growth on lean growth genotype pigs from 6 to 110 kilograms of body weight. M. Coelho, B. Cousins*, and W. McKnight, BASF Corporation.

ASAS/ADSA Breeding and Genetics: Genetic Parameters of Swine and Sheep

Chair(s):M.E. Davis, The Ohio State University

Room: 101-102

Time	Abstract Number	
1:00 PM	286	Relationship between post-weaning performance and reproductive performance in first parity Landrace females. D. Newcom*, P. Chen, J Mabry, and T.J. Baas, Iowa State University, Ames, Iowa.
1:15 PM	287	Effects of inbreeding of sow on reproduction and litter performance in a closed population of Landrace pigs. K. Nadarajah*[1], D.L. Kuhlers[1], S.B. Jungst[2], and B.L. Anderson[1], [1]Auburn University, AL., [2]PIC, Franklin, KY.
1:30 PM	288	Correlated responses in sow productivity in a line of Landrace pigs selected for increased ultrasound loineye area. D. L. Kuhlers*[1], K. Nadarajah[1], S. B. Jungst[2], and B. L. Anderson[1], [1]Auburn University, AL, [2]PIC USA, 3033 Nashville Road, Franklin, KY.
1:45 PM	289	Models for predicting the market weight of finishing pigs based on current age and weight. H. I. Sellers* and R. N. Goodwin, National Pork Producers Council, Des Moines, IA.
2:00 PM	290	Genetic correlations among piglet survival, birth weight and performance traits. E.F. Knol[1], R. Bergsma[1], J.W.M. Merks*[1], J.A.M. van Arendonk[2], and T. van der Lende[2], [2]Animal Breeding and Genetics group, Wageningen, [1]IPG, Institute for Pig Genetics, Beuningen, the Netherlands.
2:15 PM	291	The association between the estrogen receptor locus and growth, carcass, and developmental traits in pigs. T. D. Leeds*, K. M. Irvin, and S. J. Moeller, The Ohio State University, Columbus, OH.
2:30 PM		Break
3:00 PM	292	Estimation of genetic parameters for lactation yields of milk, fat and protein of New Zealand dairy goats. N. Lopez-Villalobos* and D. J. Garrick, Massey University, Palmerston North, New Zealand.
3:15 PM	293	Models for birth, weaning and fleece weights, and litter size for a population of Targhee sheep. L. D. Van Vleck*[1], G. S. Snowder[2], and K. J. Hanford[3], [1]USDA, ARS, USMARC, Lincoln, NE, [2]USDA, ARS, USSES, Dubois, ID, [3]University of Nebraska, Lincoln, NE.
3:30 PM	294	Estimation of genetic parameters of lamb mortality using survival analysis. B. R. Southey*[1], S. L. Rodriguez-Zas[1], and K. A. Leymaster[2], [1]University of Illinois, Urbana, IL, [2]USDA-ARS, U. S. Meat Animal Research Center, Clay Center, NE.
3:45 PM	295	Effect of duration of feeding on variance component estimation for ADG of lambs. G. D. Snowder*[1] and L. D. Van Vleck[2], [1]USDA, ARS, USSES, Dubois, ID, [2]USDA, ARS, USMARC, Lincoln, NE.
4:00 PM	296	Genetic parameter estimates for prolificacy, growth and wool characteristics of Rambouillet sheep. K. J. Hanford*[1], G. D. Snowder[2], and L. D. Van Vleck[3], [1]University of Nebraska, Lincoln, NE, [2]USDA, ARS, USSES, Dubois, ID, [3]USDA, ARS, USMARC, Lincoln, NE.

ASAS/ADSA Extension Education and PSA Extension and Instruction: Dairy, Swine, and Poultry

Chair(s):Gerald Higginbotham, University of California Cooperative Extension

Room: 209

Time	Abstract Number	
1:00 PM	297	BASECOW # An Excel add-in specific for the dairy production consultant. DT Galligan*, H Groenendaal, R Munson, JD Ferguson, and H Aceto, University of Pennsylvania, School of Veterinary Medicine.
1:15 PM	298	Helping the dairy producer make decisions 1: evaluating dairy herd production records. L. O. Ely*[1], J. W. Smith[1], W. D. Gilson[1], A. M. Chapa[2], C. Ramakrishnan[1], S. Chellapilla[1], and W. D. Potter[1], [1]University of Georgia, Athens, [2]Mississippi State University, Starkville.
1:30 PM	299	Helping the dairy producer make decisions 2: an expert system makes recommendations. L. O. Ely*[1], J. W. Smith[1], W. D. Gilson[1], A. M. Chapa[2], C. Ramakrishnan[1], S. Chellapilla[1], and W. D. Potter[1], [1]University of Georgia, Athens, [2]Mississippi State University, Starkville.
1:45 PM	300	Dairy Farm Sustainability Check Sheet. C. A. Wells[1], J. A. Pennington*[2], D. W. Kellogg[2], D. E. Daniel[2], R. E. Morrow[1], W. K. Coblentz[2], D. Onks[3], T. A. James[4], C. Whiteside[4], and R. Crawford[5], [1]National Center for Appropriate Technology/Appropriate Technology Transfer for Rural Areas, [2]University of Arkansas, Little Rock and Fayetteville, AR, [3]Middle Tennessee Experiment Station, Franklin, TN, [4]USDA-NRCS, Fayetteville and Harrison, AR, [5]University of Missouri Southwest Research Center, Mt. Vernon, MO.
2:00 PM	301	The economic benefits of reducing age at first calving in dairy heifers. Barry Steevens*, R.L. Randle, Roger Bennett, D.K. Hardin, V.L. Pierce, and Joe Horner, University of Missouri.
2:15 PM	302	The dairy employee education program of the Michigan State University extension dairy team. D. J. Bolinger*, C. S. Mooney, D. K. Beede, and H. F. Bucholtz, Michigan State University, East Lansing, MI.
2:30 PM	303	The importance of best management practices and quality assurance programs in development of animal production food safety training/teaching modules. G.M. Jones*[1], B.R. Eastwood[2], M. Opperman[3], and J.M. Mattison[3], [1]Virginia Tech, Blacksburg, VA, [2]USDA/CSREES, Washington, DC, [3]The ADDS Center, Verona, WI.
2:45 PM		Break
3:15 PM	304	Frequency of the porcine stress gene in show pigs and its effects on meat quality. J.A. Sterle*, C.L. Skaggs, and D.B. Griffin, Texas A&M University, College Station, Texas.
3:30 PM	305	Outreach video - Avian influenza: Preventing the spread of disease. P. H. Patterson*[1], D. C. Kradel[1], R. M. Hulet[1], and J. H. Schwartz[2], [1]Penn State University, University Park, PA, [2]York County Cooperative Extension, York PA.
3:45 PM	306	Urban peafowl: the Rancho Palos Verdes Peninsula pattern. F.A. Bradley* and C.V. Gallagher, University of California, Davis.
4:00 PM	307	Women's participation in livestock production in Bangladesh: Proshika Experience. Md. Nuru Miah and Md. Nuru Miah, Proshika Manobik Unnayan Kendra.

ASAS/ADSA Production, Management, and Environment: Temperature Effects, Production Schemes, and Housing Influence

Chair(s):James Spain, University of Missouri

Room: Sagamore 2

Time	Abstract Number	
1:00 PM	308	Effect of summer water application on mound microclimate, performance, and body temperature of feedlot steers. M. S. Davis*[1] and T. L. Mader[1], [1]University of Nebraska, Northeast Research and Extension Center, Concord.
1:15 PM	309	An evaluation of different types of commercial fans with or without misters in cooling high producing cows in the summer months in the sub-tropics. CN Lee*[1] and KS Baek[1,2], [1]University of Hawaii-Manoa, Honolulu, HI 96822, [2]National Livestock Research Institute, Namwon, S.Korea.
1:30 PM	310	Impact of fan location upon milk production, feed intake and respiration rates of lactating dairy cattle housed in a 4-row freestall barn. M.J. Brouk*, J.F. Smith, and J.P Harner,III, Kansas State University.
1:45 PM	311	Evaluation of heat stress in 4- and 6-row freestall buildings located in Northwest Iowa. J.F. Smith*, M.J. Brouk, and J.P Harner,III, Kansas State University.
2:00 PM	312	Influence of freestall barn orientation upon summer heat stress in lactating dairy cattle. J.F. Smith*, M.J. Brouk, and J.P Harner,III, Kansas State University.
2:15 PM	313	Influence of headlocks upon summertime milk production and feed intake of lactating dairy cattle housed in 2-row freestall barns. M.J. Brouk*, J.F. Smith, and J.P Harner,III, Kansas State University.
2:30 PM	314	Influence of ambient temperature, humidity and bovine somatotropin (bST) on reproductive performance of postpartum Holstein cows. R. Flores*[1], M. L. Looper[1], J. J. DeRuyter[2], D. M. Hallford[1], and M. G. Thomas[1], [1]New Mexico State University, Las Cruces, New Mexico, [2]Mountain View Dairy, Mesquite, New Mexico.
2:45 PM		Break
3:15 PM	315	Getting a handle on costs of production: a quick and easy method for dairy producers. D. Shoemaker* and J. Polson, The Ohio State University, Wooster, Ohio.
3:30 PM	316	Comparing dairy herd information with a dynamic web-based tool called DairyMetrics.. C.N. Vierhout*[1] and J.S. Clay[1], [1]Dairy Records Management Systems, North Carolina State University, Raleigh.
3:45 PM	317	Developing six sigma quality management programs for dairy farms. T.P. Tylutki* and D.G. Fox, Cornell University, Ithaca NY.
4:00 PM	318	Programmed exercise improved physical fitness of non-lactating, pregnant and non-pregnant dairy cows. J. A. Davidson*, R. R. Devins, and D. K. Beede, Michigan State University, East Lansing.
4:15 PM	319	Profit maximizing calving interval with limited labor resources. C. C. Risch* and C. A. Wolf, Michigan State University.
4:30 PM	320	Dry matter intake of lactating dairy cows housed in freestall barns. D.M. Allen[1,4], J.G. Linn[1,4], K.A. Janni[2,4], and S.C. Stewart[3,4], [1]Department of Animal Science, [2]Department of Biosystems and Agricultural Engineering, [3]Department of Clinical and Population Sciences, College of Veterinary Medicine, [4]University of Minnesota.
4:45 PM	321	Performance, health, and management of calves housed in a greenhouse barn (GHB) versus traditional wooden hutch (WH) during a Mississippi winter. M. L. Scott* and W. B. Tucker, Mississippi State University, Mississippi State.

ASAS/ADSA Ruminant Nutrition: Ruminal Fermentation

Chair(s):K.C. Olson, Utah State University and J.S. Caton, North Dakota State University

Room: Sagamore 6&7

Time	Abstract Number	
1:00 PM	322	The effects of pH on acid resistance of cattle fecal *Escherichia coli* and O157:H7 in continuous culture or pure culture. C. J. Fu*, J. Porter, J. W. Lehmkuhler, E.E.D. Felton, D. Schmidt, M. Huck, and M.S. Kerley, University of Missouri-Columbia, Columbia, MO 65211.
1:15 PM	323	Effect of sampling frequency and schedule when determining dietary effects on ruminal pH. K. M. Krause* and D. K. Combs, University of Wisconsin-Madison.
1:30 PM	324	Effects of propionate supply on plasma vitamin B12 in growing lambs. CL Girard*[1], L Majdoub[2], and I Ortigues[2], [1]Dairy and Swine R&D Centre,Agriculture and Agri-Food Canada,Lennoxville,Canada, [2]INRA,Unite de Recherches sur les Herbivores,Nutriments et Metabolismes,Theix,France.
1:45 PM	325	Assessment of phosphorus availability from different sources for ruminal fermentation. V. Fellner*, J. W. Spears, and S. J. McLeod, North Carolina State University, Raleigh, NC.
2:00 PM	326	Effects of natural plant extracts on nitrogen metabolism and fermentation profile in continuous culture. P. W. Cardozo, S. Calsamiglia*, and A. Ferret, Universidad Autonoma de Barcelona, Spain.
2:15 PM	327	Comparison between Holstein and Jersey Cows in post-prandial rumen pH and VFA concentrations. C.W. Cruywagen*, N. Strickland, and S.J. Schoeman, University of Stellenbosch.
2:30 PM	328	Meta analysis of the acidogenicity of ingredients. S. Giger-Reverdin and D. Sauvant, UMR INRA - INAPG Physiologie de la Nutrition et Alimentation.
2:45 PM		Break
3:15 PM	329	Rates of production of the major rumen volatile fatty acids in lactating cows given normal and milk fat depressing diets. J.D. Sutton*[1,3], M.S. Dhanoa[2], S.V. Morant[3], D.J. Napper[3], and E. Schuller[3], [1]University of Reading, UK, [2]IGER, Aberystwyth, UK, [3]formerly NIRD, Shinfield, UK.
3:30 PM	330	Gas and VFA production during the in vitro fermentation of selected organic acids and sugars. D.O. Molina*, A.N. Pell, and P. Schofield, Cornell University. Ithaca, New York.
3:45 PM	331	Interaction between Fermenten™ or soybean meal and fermentability of carbohydrate source on microbial yield and efficiency in continuous culture. W.H. Hoover*[1], T.M. Miller[1], J.E. Nocek[2], and W.E. Julien[2], [1]West Virginia University, [2]Biovance Technologies Inc.
4:00 PM	332	Selection of *Propionibacterium* strains capable of utilizing lactic acid from *in vitro* models. T.D. Parrott*[1], T.G. Rehberger[1], and F.N. Owens[2], [1]Agtech Products, Inc., Waukesha, WI, [2]Oklahoma State University, Stillwater, OK.
4:15 PM	333	Quantitative analysis of *in situ* starch degradation in the rumen. A. Offner*[1], D. Sauvant[1], P. Chapoutot[1], J. Van Eys[2], and A. Bach[2], [1]INRA - INA PG, Paris, [2]Agribrands International, St. Louis.
4:30 PM	334	Influence of post-ruminal partially hydrolyzed starch and casein on pancreatic a-amylase expression in calves. K. C. Swanson*, J. C. Matthews, C. A. Woods, and D. L. Harmon, University of Kentucky, Lexington.
4:45 PM	335	Abomasal infusion of casein enhances abundance and activity of Na+/glucose cotransporter along the small intestine of lambs. S. J. Mabjeesh*, D. Guy, and D. Sklan, The Hebrew University.

ASAS/ADSA Ruminant Nutrition: Transition Cow

Chair(s):S.R. Stokes, Texas A&M University and G.M. Goodall, Texas A&M University

Room: Sagamore 1

Time	Abstract Number	
1:00 PM	336	An overview of dietary factors influencing dry matter intake and milk protein yield in early lactation dairy cows. A. N. Hristov*[1], W. J. Price[2], and B. Shafii[2], [1]Department of Animal and Veterinary Sci., [2]Statistical Programs, College of Agriculture, University of Idaho, Moscow, ID 83844.
1:15 PM	337	Dry period protein nutrition and glucose and protein metabolism in transition cows. W.S. Burhans*[1], R.M. Slepetis[1], P.J. Reeds[2], and A.W. Bell[1], [1]Cornell University, Ithaca, NY, [2]USDA-ARS CNRC, Houston, TX.
1:30 PM	338	Production responses of dairy cows to dietary supplementation with conjugated linoleic acid (CLA) during the transition period and early lactation. G. Bernal-Santos*, J. W. Perfield II, T. R. Overton, and D. E. Bauman, Cornell University, Ithaca NY.
1:45 PM	339	Changes in rumen capacity during the periparturient period in dairy cows. A.F. Park*, J.E. Shirley, J.M. DeFrain, E.C. Titgemeyer, E.E. Ferdinand, R.C. Cochran, D.G. Schmidt, S.E. Ives, and T.G. Nagaraja, Kansas State University, Manhattan.
2:00 PM	340	Effects of fermentable carbohydrate sources on dry matter intake, milk production, and blood metabolites of transition dairy cows. R.S. Ordway*, V.A. Ishler, and G.A. Varga, The Pennsylvania State University, University Park, PA.
2:15 PM	341	Effect of liquid flavor supplementation on performance of dairy cows in the transition period. M. A. Shah*, E. J. Friedman, B. A. Fadl-alla, and M. R. Murphy, University of Illinois at Urbana-Champaign.
2:30 PM	342	Effects of day relative to parturition and dietary crude protein levels on rumen fermentation in prefresh transition cows. M. E. Dorshorst*, S. J. Bertics, and R. R. Grummer, University of Wisconsin, Madison.
2:45 PM		Break
3:15 PM	343	Metabolic measures around parturition for late gestation cows supplemented with moderate and high dietary calcium during hot weather. P. S. Chan*, J. W. West, and J. K. Bernard, University of Georgia, Tifton, GA/USA.
3:30 PM	344	Peripartum responses of Holstein cows and heifers fed graded concentrations of calcium (calcium carbonate) and anion (chloride) 3 weeks before calving. D. K. Beede*, T. E. Pilbeam, S. M. Puffenbarger, and R. J. Tempelman, Michigan State University, East Lansing, Michigan, USA.
3:45 PM	345	Subacute ruminal acidosis in dairy cows, an experimental model. S.E. Ives*, T.G. Nagaraja, A.F. Park, and J.E. Shirley, Kansas State University.
4:00 PM	346	The effect of Tasco™ inclusion in the prepartum diet on the proportion among bovine leukocyte populations in blood and mammary gland secretions. T. J. Wistuba*, E. B. Kegley, T. K. Bersi, and G. F. Erf, University of Arkansas, Fayetteville AR/USA.
4:15 PM	347	Forage alone pre-calving is sufficient for forage-fed cows post-calving. J.R. Roche, M.J. de Veth, and E.S. Kolver, Dexcel (formerly Dairying Research Corporation), Hamilton, New Zealand.
4:30 PM	348	All forage diet pre-calving improves calcium status. J.R. Roche* and E.S. Kolver, Dexcel Ltd. (formerly Dairying Research Corporation), Hamilton, New Zealand.

ASAS/ADSA Ruminant Nutrition: Water Quality and Minerals

Chair(s):R.L. Kincaid, Washington State University and T.E. Engle, Colorado State University

Room: Sagamore 3

Time	Abstract Number	
1:00 PM	349	The effect of water quality on the performance of feedlot cattle. J. J. Wagner*[1], G. H. Loneragan[2], and D. H. Gould[2], [1]Continental Beef Research, Lamar, CO/USA, [2]Colorado State University, Ft. Collins, CO/USA.
1:30 PM	350	Impact of variations in chemical composition of water on potential palatability and mineral intake of dairy cattle. M. T. Socha*[1], J. G. Linn[2], D. J. Tomlinson[1], and A. B. Johnson[1], [1]Zinpro Corporation, Eden Prairie, MN, USA, [2]University of Minnesota, St. Paul, MN, USA.
2:00 PM	351	Dairy manure quantification and characterization in grazing systems. J.J. Rediske*, W.J. Powers, D.R. Thoreson, and M.A. Faust, Iowa State University, Ames, IA.
2:15 PM	352	Effect of calcium intake on phosphorus excretion in feces of lactating cows. Z. Wu*[1], A.G. Rius[2], and L.D. Satter[1,2], [1]University of Wisconsin, [2]U.S. Dairy Forage Research Center, USDA-ARS, Madison.
2:30 PM	353	Effect of supplemental vitamin D on phosphorus excretion in dairy cattle. K.M. Dooley*, J.A. Bertrand, R.J. Thurston, A.B. Bodine, and T. Gimenez, Clemson University, Clemson, SC.
2:45 PM		Break
3:15 PM	354	Effects of zinc source and dietary level on zinc metabolism in Holstein bull calves. C. L. Wright* and J. W. Spears, North Carolina State University.
3:30 PM	355	Uptake and transport of zinc from zinc sulfate and zinc proteinate by Caco-2 cells. C. L. Wright*[1], M. L. Failla[2], and J. W. Spears[1], [1]North Carolina State University, [2]University of North Carolina at Greensboro.
3:45 PM	356	Insulin responsiveness of adipose tissue metabolism from steers supplemented with varying concentrations of zinc sulfate. S. L. Archibeque*, G. S. Martin, G. E. Carstens, D. K. Lunt, and S. B. Smith, Texas A&M University, College Station, TX.
4:00 PM	357	Summary of eight trials evaluating the effect of feeding a combination of complexed zinc methionine, manganese methionine, copper lysine and cobalt glucoheptonate on lactation and reproductive performance of dairy cattle. D. J. Tomlinson*, M. T. Socha, and A. B. Johnson, ZINPRO Corporation, Eden Prairie, MN.
4:15 PM	358	Source of dietary selenium on tissue retention and mobilization of selenium in growing heifers. R. L. Kincaid* and J. D. Cronrath, Washington State University.
4:30 PM	359	Influence of supplemental cobalt source and concentration on performance, and ruminal plasma metabolites in growing and finishing steers. M. E. Tiffany*[1], J. W. Spears[1], and J. Horton[2], [1]North Carolina State University, Raleigh, [2]Kemin Industries, Des Moines, IA.
4:45 PM	360	Lactational and reproductive responses of early lactation Holstein cows to varied levels of dietary supplementation of organic cobalt, copper, manganese and zinc. S. L. Sneed*[1], J. E. Tomlinson[1], B. L. Clark[1], E. J. Murphy, III[1], M. E. Boyd[1], and D. J. Tomlinson[2], [1]Mississippi State University, Mississippi State, [2]Eden Prairie, MN.

PSA Environment and Management: Pullets, Hens, and Eggs

Chair(s): Richard Ballander, Michican State University

Room: 116-117

Time	Abstract Number	
1:00 PM	361	Microwave toe trimming Leghorn pullets and its effect on rearing performance. P.H. Patterson*, E.S. Lorenz, and R.M. Hulet, Penn State University, University Park, PA.

1:15 PM	362	Drinking water treatment and dietary treatment effects on *Salmonella enteritidis* in Leghorn hens during forced molt. L.F. Kubena*[1], Y.M. Kwon[1], J.A. Byrd[1], C.L. Woodward[2], R.W. Moore[1], R.L. Ziprin[1], R.C. Anderson[1], D.J. Nisbet[1], and S.C. Ricke[2], [1]USDA-ARS,SPARC, College Station, Texas/USA, [2]Texas A&M University, College Station, Texas/USA.
1:30 PM	363	Effect of dietary chitosan on production characteristics and egg proportions and quality from commercial white egg laying strains. K. E. Anderson*, G. S. Davis, and S. Hudson, North Carolina State University.
1:45 PM	364	Effect of Termin-8® anti-microbial preservative on the growth of commercial white and brown egg type pullets and environmental microbial population. K. E. Anderson*[1], B. W. Sheldon[1], and K. E. Richardson[2], [1]North Carolina State University, [2]Anitox Corp., Lawrenceville, GA 30043.
2:00 PM	365	Effect of a feed additive or manure treatment application on the mass generation rate of ammonia produced from laying hen manure. K.W. Koelkebeck*, P.C. Harrison, and G.L. Riskowski, University of Illinois, Urbana, IL USA.
2:15 PM	366	Interaction of increased Ca and P regimens on commercial strains of layers housed at various densities. M.H. Fosnaught* and K.E. Anderson, North Carolina State University.
2:30 PM		Break
3:00 PM	367	The effects of dietary protein and available phosphorus on production measures and nutrient excretion by egg-type hens from 21 to 36 weeks of age. R Reed*, J. Nixon, and M. Lilburn, The Ohio State University/OARDC.
3:15 PM	368	The effect of claw and beak reduction on growth parameters and fearfulness of two Leghorn strains. C. N. Ferst* and P. L. Ruszler. C. N. Ferst*[1] and P. L. Ruszler[1], [1]Virginia Tech.
3:30 PM	369	Growth response of a *Salmonella typhimurium* poultry isolate to zinc addition. S. Y. Park*[1], C. L. Woodward[1], S. G. Birkhold[1], L. F. Kubena[2], D. J. Nisbet[2], and S. C. Ricke[1], [1] Texas A & M University, College Station, Texas, USA, [2]USDA-ARS, Food and Food Safety Research Unit, College Station, Texas, USA.
3:45 PM	370	Use of an alfalfa diet for molting in Leghorn hens to reduce *Salmonella enteritidis* colonization and invasion. Y.M. Kwon*[1], L.F. Kubena[1], C.L. Woodward[2], J.A. Byrd[1], R.W. Moore[1], D.J. Nisbet[1], and S.C. Ricke[2], [1]USDA-ARS, SPARC, College Station, Texas/USA, [2]Texas A&M University, College Station, Texas/USA.

PSA Nutrition: Feed Regimens

Chair(s):Michael Elliot, Wenger Feeds

Room: White River

Time	Abstract Number	
1:00 PM	371	Minimal available phosphorus requirement of molted laying hens. J.L. Snow*, M.W. Douglas, A.B. Batal, M.E. Persia, P.E. Biggs, and C.M. Parsons, University of Illinois, Urbana, IL USA.
1:15 PM	372	The effect of various levels of vitamin E supplementation in the diets of laying hens on egg yolk alpha-tocopherol content and hen performance. R. C. Johnson*[1], J. C. Hermes[1], R. Kampen[2], and A. M. Craig[1], [1]Oregon State University, Corvallis, OR, [2]BASF, Abbotsfort, BC, Canada.
1:30 PM	373	Nutrient requirements of Hy Line W-36, Bovans White and a new strain of Bovans White hens for optimum profits during phase I. A. Bateman*[1], M. Bryant, and D. A. Roland, Sr., [1]Auburn University.
1:45 PM	374	Feeding and management of Bovans White hens for optimum egg size and profits during phase I using warm temperatures. A. Bateman*[1], S. Yadalam, M. Bryant, and D. A. Roland, [1]Auburn University.
2:00 PM	375	Evaluation of non-feed removal versus feed removal methods for molting programs. P.E. Biggs*, M.W. Douglas, K.W. Koelkebeck, and C.M. Parsons, University of Illinois, Urbana, IL USA.
2:15 PM	376	The effect of midnight feeding on feed consumption and eggshell quality in commercial laying hens. A. Petruk*[1], D.R. Korver[1], R.A. Renema[1], and M.J. Zuidhof[2], [1]University of Alberta, [2]Alberta Agriculture, Food, and Rural Development, Edmonton, AB, Canada.

2:30 PM	377	Effects of commercial strain, dietary sodium bicarbonate level, or animal fat versus vegetable oil addition to feed on performance of caged White Leghorn laying hens from 36 to 48 weeks old in summer. L. R. Minear*[1], D. M. Hooge[2], and K. R. Cummings, [1]Southern States Cooperative, Richmond, VA, [2]Hooge Consulting Service, Inc., Eagle Mountain, UT, [3]Church & Dwight Company, Inc., Princeton, NJ.
2:45 PM		Break
3:15 PM	378	Evaluation of phytase release factors in broiler diets containing different levels of amino acids. W. Pan*, F. Yan, C. A. Fritts, and P. W. Waldroup, University of Arkansas.
3:30 PM	379	Effects of glycine and threonine supplementation on performance of broiler chicks fed diets low in crude protein. Qi Jiang*, C. A. Fritts, and P. W. Waldroup, University of Arkansas, Fayetteville, AR.
3:45 PM	380	Efficacy of Ronozyme P™ liquid phytase and Natuphos® liquid phytase in broiler starter diets. J. Broz[1], A. Kluenter[1], N.E. Ward*[2], and J.W. Wilson[2], [1]Roche Vitamins, Basel, Switzerland, [2]Roche Vitamins Inc., Parsippany NJ.
4:00 PM	381	An evaluation of Ronozyme P™ CT in broiler diets in a 36-day floorpen study. J. Broz[1], A. Kluenter[1], N.E. Ward*[2], and J.W. Wilson[2], [1]Roche Vitamins, Basel, Swizterland, [2]Roche Vitamins Inc., Parsippany NJ.
4:15 PM	382	Reassessment of trypsin inhibitor activity in guar meal. S.R. Conner*, A.L. Cartwright, and C.A. Bailey, Texas Agricultural Experiment Station.
4:30 PM	383	Immobilization of keratinase-streptavidin fusion protein for keratinolysis. J.C.H. Shih* and J.-J. Wang, North Carolina State University, Raleigh, NC USA.

PSA Physiology

Chair(s):Lee Cartwright, Texas A&M University

Room: 143-144

Time	Abstract Number	
1:00 PM	384	Performance and thermo tolerance of broilers as affected by genotype and ambient temperature. H. A. Al-Batshan* and E. O. Hussein, King Saud University, Riyadh, Saudi Arabia.
1:15 PM	385	Changes in growth and function of chick small intestine epithelium due to heat exposure conditioning. Zehava Uni*[1], Orit Gal-Garber[1], Assaf Geyra[1], David Sklan[1], and Shlomo Yahav[2], [1]Faculty of Agriculture, Department of Animal Science, The Hebrew University of Jerusalem, Israel, [2]Institute of Animal Sciences, ARO, The Vulcani Center, Bet-Dagan, Israel.
1:30 PM	386	Origin of thermal-load induced adaptations in intestinal hexose absorption: heat stress or reduced food intake ?. M.A. Mitchell*[1], R.R. Hunter[1], M. Moreto[2], C. Garriga[2], M. Mitjans[2], C. Amat[2], and J.M. Planas[2], [1]Roslin Institute, Roslin, Midlothian, UK, [2]University of Barcelona, Barcelona, Spain.
1:45 PM	387	Assessment of densitometry to measure bone mineral content and density in live birds as a tool for monitoring osteoporosis in laying hens. M.A. Schreiweis*[1], J.I. Orban[2], M.C. Ledur[3], and P.Y. Hester[1], [1]Purdue University, W. Lafayette, IN, [2]Southern University, Shreveport, LA, [3]Embrapa Swine and Poultry Research Center, Concordia, SC, Brazil.
2:00 PM	388	Matrix metalloproteases in turkey bile. N. C. Rath*, G. R. Huff, W. E. Huff, and J. M. Balog, PPPSR/ARS/USDA, Fayetteville, AR.
2:15 PM	389	Development of the indicator amino acid oxidation technique for measuring amino acid requirements in chickens. H. Y. Tabiri*, R. O. Ball, R. Bertolo, and D. R. Korver, University Of Alberta, Edmonton, AB, Canada.
2:30 PM	390	Dietary protein regulates in vitro lipogenesis and lipogenic gene expression in broilers. R. W. Rosebrough*, S. M. Poch, B. A. Russell, and M. P. Richards, ARS, Beltsville, MD.
2:45 PM		Break

3:15 PM	391	Metformin decreases feed intake and induces hypoglycemia in broiler chicken. C.M. Ashwell*[1] and J.P. McMurtry[1], [1]Growth Biology Laboratory, USDA-ARS, Beltsville, MD.
3:30 PM	392	*In ovo* and post-hatch administration of peptide YY (PYY) does not affect growth and feed conversion in Cobb X Cobb broiler chickens. B.A. Coles, J. Croom*, J. Brake, and L.R. Daniel, North Carolina State University, Raleigh, NC USA.
3:45 PM	393	Mitochondrial function and feed efficiency in broilers. W. Bottje*[1], Z. Tang[2], M. Iqbal[1], D. Cawthon[1], T. Wing[3], and M. Cooper[3], [1]Dept. of Poultry Science, University of Arkansas, Fayetteville, AR 72701, [2]Dept. of Veterinary Pathophysiology, South China Agricultural University, Guangzhou 510642, PRC, [3]Cobb-Vantress Inc., Siloam Springs AR 72761.
4:00 PM	394	Cardiac energy metabolism slow and fast growing chickens. A.A. Olkowski* and H.L. Classen, University of Saskatchewan, Saskatoon, SK, Canada.
4:15 PM	395	Investigation of proton conductance in liver mitochondria of broilers with pulmonary hypertension syndrome (PHS). D. Cawthon*, M. Iqbal, J. Brand, and W. Bottje, Department of Poultry Science, Univ. of Arkansas, Fayetteville AR 72701.
4:30 PM	396	Tissue and mitochondrial antioxidant enzyme activites in broilers with pulmonary hypertension syndrome (PHS). M. Iqbal*, D. Cawthon, R. Wideman, Jr., and W. Bottje, Department of Poultry Science, Univ. of Arkansas, Fayetteville, AR 72701.
4:45 PM	397	Effects of dietary sodium chloride, sodium sesquicarbonate, or ammonium chloride, in various combinations and levels, on ascites susceptibility of young broiler chickens in a cool environment at simulated high altitude (17% oxygen). R. G. Teeter*[1], J. H. Swartzlander[1], A. Beker[1], D. M. Hooge[2], and K. R. Cummings, [1]Oklahoma State University, Stillwater, OK, [2]Hooge Consulting Service, Inc., Eagle Mountain, UT, [3]Church & Dwight Company, Inc., Princeton, NJ.

THURSDAY, JULY 26, 2001
TECH FORUM DAY

Nitrogen, Phosphorus, and Sulfur Interfaces Between Beef Cattle Production and the Environment

Chair(s):Daniel Schaefer, University of Wisconsin-Madison

Sponsor(s):Alpharma Inc.

Room: White River

Time	Abstract Number	
8:00 AM		Introduction. D. Schaefer, University of Wisconsin-Madison.
8:05 AM	398	Federal environmental policy directions for animal agriculture. J.S. Jonker*, AAAS Environmental Fellow - US EPA, Washington, DC USA.
8:55 AM	399	Phosphorus recommendations for beef cattle and factors related to their development and use. J.F. Karn*[1], [1]USDA-ARS, Northern Great Plains Research Lab, Mandan, ND, USA.
9:45 AM		Break
10:15 AM	400	Effects of manipulating protein and phosphorus nutrition of feedlot cattle on nutrient management and the environment. T. J. Klopfenstein* and G. E. Erickson, University of Nebraska, Lincoln, NE.
11:05 AM	401	Livestock odor abatement with plant-derived oils and urease inhibitors. Vince Varel*, USDA/ARS, U.S. Meat Animal Research Center, Clay Center, NE.

Companion Animal Biology as a Focal Point in the Animal Sciences

Chair(s):George Fahey, University of Illinois

Sponsor(s):Alltech Inc., DuCoa, Hills Pet Nutrition, Inc., Iams, Kemin Industries, Nestle (Friskies), and Roche Vitamins Inc.

Room: 106

Time	Abstract Number	
8:00 AM		Symposium introduction and background. G. C. Fahey, Jr., University of Illinois.
8:15 AM	402	Issues surrounding the teaching of companion animal biology in an animal science department. Neal R. Merchen* and Linda P. Case, University of Illinois, Urbana, IL.
8:55 AM	403	Research in companion animal biology: Topics of importance, current controversies, and opportunities. Gail Czarnecki-Maulden[1] and John Bauer*[2], [1]Friskies, [2]Texas A&M University.
9:35 AM		Break
9:50 AM	404	Outreach efforts in companion animal science: Issues, controversies, and opportunities. Steven Zawistowski[1] and Tim Phillips*[2], [1]American Society for Prevention of Cruelty to Animals, [2]Watt Publishing Co.
10:30 AM	405	Role of animal science departments and the American Society of Animal Science (ASAS) in fostering companion animal programs. Maynard Hogberg*[1] and Ellen Bergfeld[2], [1]Michigan State University, [2]American Society of Animal Science.
11:10 AM		General discussion

Future U.S. Swine Industry

Chair(s):Tim Safranski, University of Missouri

Sponsor(s):Danbred USA, Land O'Lakes/Farmland Feed LLC, Pharmacia Animal Health, PIC, and United Feeds, Inc.

Room: Sagamore 4

Time	Abstract Number	
8:00 AM		Introduction.
8:10 AM	406	The U. S. swine industry: Where we are & how we got here. R. L. Plain*, University of Missouri-Columbia.
9:00 AM		Where the EU is and how they got there. T. Andersen*, Steff-Houlberg Pig Slaughterhouse, Ringsted, Denmark.
9:50 AM		Break
10:05 AM	407	The view from an integrated system. J.D. Lehenbauer*, America's Best Pork#, Farmland Foods, Inc., Kansas City, MO.
10:55 AM		Let's look at another industry. G. Cobb*, Past President, Indiana Association of Convenience Stores.
11:45 AM		Discussion

Genetics of Carcass Merit and Meat Quality

Chair(s):Denny Crews, Agriculture & Agri-Food Canada

Sponsor(s):Monsanto Company

Room: Sagamore 3

Time	Abstract Number	
9:00 AM		Introductions. D. H. Crews, Jr.*, Agriculture & Agri-Food Canada Research Centre, Lethbridge, Alberta.
9:15 AM	408	Genetic prediction for time to finish end points in beef cattle. B. L. Golden*[1], [1]Colorado State University.
10:00 AM		Break
10:30 AM	409	Genetic influences on carcass merit of sheep. N. E. Cockett*[1] and G. D. Snowder[2], [1]Utah State University, Logan, UT, [2]USDA, ARS U.S. Sheep Experiment Station, Dubois, ID.
11:15 AM	410	First generation of QTL searches for carcass traits in beef cattle. R. T. Stone*, USDA, ARS, U.S. Meat Animal Research Center, Clay Center, NE.
12:00 PM		Lunch
1:30 PM	411	Dissecting the genetic control of carcass merit and meat quality in the pig. Max Rothschild*, Iowa State University.
2:15 PM	412	Validation of carcass merit quantitative trait loci (QTL's) and integration of QTL information into genetic programs for improvement of carcass merit. E. J. Pollak*[1], M. E. Dikeman[2], C. Gill[3], and D. W. Moser[2], [1]Cornell University, [2]Kansas State University, [3]Texas A&M University.
3:00 PM		Break
3:30 PM	413	Impact of breeding and genetics on poultry carcass and meat quality. D. L. Fletcher*, University of Georgia, Athens, GA USA.
4:15 PM		Panel roundtable

Meat Thermoprocessing: Products and Processes

Chair(s):Casey Frye, Burke Corporation

Room: Sagamore 2

Time	Abstract Number	
8:00 AM	414	Thermoprocessing, products and processes: Introduction. S. M. Lonergan*, Iowa State University.
8:15 AM	415	Thermodynamic cooking methods. J Gaydos*, Stein Inc.
8:45 AM	2005	Thermal processing of meat products. R. Toledo*, The University of Georgia.
9:15 AM	416	Thermal processing and microbial stability. B.P. Marks*, Michigan State University.
9:45 AM		Break
10:15 AM		Safety and quality concerns—Ingredients. D. Seman*, Oscar Mayer Foods.
10:45 AM	417	Enhancement of cooked meat quality and safety via packaging. Tom Rourke*, Emmpak Foods, Milwaukee, WI.
11:15 AM		Session wrap-up. S. Lonergan*, Iowa State University.

Molecular Manipulation to Influence Mammary Development and Function

Chair(s):Mike Akers, Virginia Tech

Sponsor(s):Pharmacia Animal Health, Monsanto, and Purina Mills, Inc.

Room: 207

Time	Abstract Number	
8:00 AM	418	Physiological phenotypes of estrogen receptor knock-out mice. K.S. Korach*[1], [1]NIEHS/NIH, Research Triangle Park, NC.
8:45 AM	419	Genetic manipulation of the IGF-I axis to regulate mammary development and function. D.L. Hadsell*, S.G. Bonnette, and A.V. Lee, Baylor College of Medicine, Houston, TX..
9:30 AM	420	Regulation of IGF signaling by IGF binding protein-3 in the mammary gland. Wendie Cohick* and Constance Grill, Rutgers, The State University of NJ, New Brunswick, NJ/USA.
10:15 AM	421	Regulation of apoptosis during mammary involution by the p53 tumor suppressor gene. D. Joseph Jerry*[1], Ellen S. Dickinson[1], and Amy L. Roberts[1], [1]University of Massachusetts.
11:00 AM	422	The production and regulation of leptin in bovine mammary epithelial cells. J.L. Smith* and L.G. Sheffield, University of Wisconsin-Madison, Madison, WI, USA.
11:15 AM	423	Mammogenic effects of estrogen and growth hormone are mediated by local changes in mammary IGF-1 and IGFBP-3. S. D. Berry[1,2], T. B. McFadden[1,3], R. E. Pearson[2], and R. M. Akers[2], [1]AgResearch, Hamilton, New Zealand, [2]Virginia Polytechnic and State University, Blacksburg, VA, [3]University of Vermont, Burlington, VT.
11:30 AM	424	Influence of feeding level and bovine somatotropin (bST) on transforming growth factor-beta (TGF-ß)and its receptor in mammary tissue of growing heifers. K. Plaut*[1], R. Maple[1], X. Cui[1], and S. Purup[2], [1]University of Vermont, Burlington, VT/USA, [2]Danish Institute of Agricultural Sciences,Foulum/DK.
11:45 AM	425	The role of insulin in the modulation of milk fatty acid composition. B. A. Corl*[1], S. T. Butler[1], W. R. Butler[1], and D. E. Bauman[1], [1]Cornell University, Ithaca, NY.

Packaging Food and Dairy Products for Extended Shelf-Life

Chair(s):Johnny McGregor, Clemson University and Susan Duncan, Virginia Tech

Sponsor(s):Dairy Management, Inc. and Eastman Chemical

Room: 101-102

Time	Abstract Number	
8:00 AM		Introduction. J. McGregor*, Clemson University and S. Duncan, Virginia Tech.
8:05 AM	426	Active packaging: Films and coatings for extended shelf life. Paul Dawson*, Clemson University.
8:25 AM	427	Mold migration in paperboard materials for extended shelf-life milk. J. E. Marcy*[1], L.D. Sammons[2], S.S. Sumner[1], and C.R. Hackney[3], [1]Virginia Tech, [2]International Dairy Foods Assoc., [3]West Virginia University.
8:45 AM	428	The use of polymeric materials for extended shelf life products. Susan Nielsen*[1], [1]Eastman Chemical Company.
9:05 AM	429	Exploring product-package research in an interactive session. J. C. Acton*, Clemson University.
9:40 AM	430	Potential of biobased materials for food and dairy packaging. Grete Bertelsen*[1], V.K. Haugaard[1], and T.H. Hansen[1], [1]Department of Dairy and Food Science, The Royal Veterinary and Agricultural University.
10:20 AM		Roundtable/panel discussion

ADSA Dairy Foods: Dairy Products

Chair(s):P.S. Kindstedt, University of Vermont

Room: 208

Time	Abstract Number	
8:15 AM	431	Quality attributes of strawberry swiss style yogurt in the North Carolina marketplace. A. Hansen* and M. Keziah, North Carolina State University Raleigh, N.C. USA.
8:30 AM	432	Consumer acceptability of lucuma and cherimoya ice cream. A. Hansen*[1], M. Keziah[1], and T. Salas[2], [1]North Carolina State University Raleigh, N.C. USA, [2]Gen Peru Lima, Peru.
8:45 AM	433	Effect of CO_2 addition to raw milk on protein and fat degradation at 4°C. Y Ma* and David Barbano, Northeast Dairy Foods Research Center, Department of Food Science, Cornell University.
9:00 AM	434	Effect of storage time and temperature on the serum phase of cultured cream cheese. L Acosta and P.S. Kindstedt*, University of Vermont, Burlington, VT/USA.
9:15 AM	435	Effect of storage time, storage temperature and pH on the viscosity of aqueous solutions of locust bean gum. M.L. Gigante*[1], M. Almena-Aliste[2], and P.S. Kindstedt[2], [1]State University of Campinas, Campinas, SP/Brazil, [2]University of Vermont, Burlington, VT/USA.
9:30 AM		Break
10:00 AM	436	Application of a model system to study the effect of pH on the serum phase of cultured cream cheese during storage. M.L. Gigante*[1], M. Almena-Aliste[2], and P.S. Kindstedt[2], [1]State University of Campinas, Campinas, SP/Brazil, [2]University of Vermont, Burlington, VT/USA.
10:15 AM	437	Effect of centrifugation conditions on expressible serum obtained from cultured cream cheese. M. Almena-Aliste*[1], M.L. Gigante [2], and P.S. Kindstedt[1], [1]University of Vermont, Burlington, VT/USA, [2]State University of Campinas, Campinas, SP/Brazil.
10:30 AM	438	Isolation and characterization of gitty prticles in cream cheese. Mihir R. Sainani*, Harit K. Vyas, and Phillip S. Tong, California Polytechnic State University, San Luis Obispo, CA.
10:45 AM	439	Fortification of fluid skim milk with conjugated linoleic acid (CLA). W.S. Campbell*, J. Parker, M.A. Drake, and D.K. Larick, [1]North Carolina State University.

ASAS Nonruminant Nutrition: Alternative Ingredients (Nursery & Specialty Grain)

Chair(s):Gary Fitzner, Aventis Animal Nutrition and Dan Jones, DuPont Specialty Grains

Room: Sagamore 5

Time	Abstract Number	
8:00 AM	440	Supplementation of a-1,6-galactosidase and ß-1,4-mannanase to improve soybean meal utilization by nursery pig. S. W. Kim*[1], I. Mavromchalis[2], and R. A. Easter[2], [1]Texas Tech University, [2]University of Illinois.
8:15 AM	441	Performance of weaned piglets fed insect-protected (MON 810) or near isogenic corn. G. Piva*[1], M. Morlacchini[2], A. Pietri[1], A. Piva[3], and G. Casadei[1], [1]Istituto di Scienze degli Alimenti e della Nutrizione, U.C.S.C., Facoltà di Agraria, Italy, [2]CERZOO, [3]DIMORFIPA, Facoltá Medicina Veterinaria, Bologna, Italy.
8:30 AM	442	Effects of feeding blends of grains naturally-contaminated with *Fusarium* mycotoxins on growth and brain regional neurochemistry of starter pigs and the efficacy of supplemental yeast cell wall polymer in detoxification. H.V.L.N. Swamy[1], T.K. Smith[1], E.J. MacDonald[2], and A.E. Sefton[3], [1]University of Guelph, Guelph, Ontario, Canada, [2]University of Kuopio, Kuopio, Finland, [3]Alltech Biotechnology Center, Nicholasville, Kentucky, USA.

8:45 AM	443	Influence of type of cereal and level of fiber on performance of early-weaned piglets. G. G. Mateos*[1], A. Alcantarilla[1], M. A. Latorre[1], R. Lazaro[1], E. Gomez[2], and N. Laso[2], [1]Universidad Politecnica de Madrid. Spain, [2]Centro de Pruebas de Porcino. Junta Castilla y Leon. Spain.
9:00 AM	444	Singular and combined efficacy of two new microbial phytases in corn-soy or corn-soy-wheat diets for young pigs. C.H. Stahl*, J.M. Porres, K.R. Roneker, and X.G. Lei, Cornell University, Ithaca, NY.
9:15 AM	445	Effect of photoperiod on performance and energy metabolism of weanling pigs. E.M.A.M. Bruininx[1], C.M.C. van der Peet[1], W.J.J. Gerrits*[2], and J.W. Schrama[2], [1]Research Institute for Animal Husbandry, [2]Wageningen Institute of Animal Sciences.
9:30 AM	446	Diets containing high quality animal proteins increase growth of early-weaned pigs. F. R. Dunshea*, P. J. Eason, D. J. Kerton, and T. Moyes, Agriculture Victoria, Victorian Institute of Animal Science, Werribee, Australia.
9:45 AM		Break
10:15 AM	447	Potential for egg protein as a protein source for phase 1 nursery diets. J. F. Jaen*[1], C. V. Maxwell[1], Z. B. Johnson[1], D. C. Brown[1], S. Singh[1], M. E. Davis[1], K. J. Touchette[2], J. A. Coalson[2], and R. E. Musser[3], [1]University of Arkansas, Fayetteville, [2]Merrick's, Inc., Middleton, WI, [3]The Pork Group, Inc., Rogers, AR.
10:30 AM	448	Performance of growing pigs fed wheat-based diets added with low levels of inorganic phosphorus. M. Cervantes*, A.B. Araiza, N. Torrentera, S. Espinoza, and M. Cervantes, Universidad Autónoma de Baja California, Mexicali, México.
10:45 AM	449	Growth performance and carcass characteristics of grow-finish pigs fed increasing levels of distiller's dried grains with solubles. M. H. Whitney*[1], G. C. Shurson[1], L. J. Johnston[2], D. Wulf[3], and B. Shanks[3], [1]University of Minnesota, St. Paul, MN, [2]University of Minnesota, Morris, MN, [3]South Dakota State University, Brookings, SD.
11:00 AM	450	Availability of phosphorus in distiller's dried grains with solubles for growing swine. M. H. Whitney* and G. C. Shurson, University of Minnesota, St. Paul, MN.
11:15 AM	451	Feeding value of hulless and hulled barley in grower pig diets. A.N. Fenton*, J.S. Radcliffe, A.F. Harper, M.J. Estienne, D.E. Brann, and C.A. Griffey, Virginia Polytechnic Institute and State University.
11:30 AM	452	Energy and nitrogen balance of pigs fed four corn grains. R.W. Fent*, S.D. Carter, M.J. Rincker, and B.W. Senne, Oklahoma State University, Stillwater.
11:45 AM	453	Swine digestible energy evaluations of Bt (MON810) and Roundup Ready® corn compared with commercial varieties. A.M. Gaines*, G.L. Allee, and B.W. Ratliff, University of Missouri-Columbia.

ASAS/ADSA Breeding and Genetics: Quantitative Methods

Chair(s):R. Tempelman, Michigan State University

Room: 143-144

Time	Abstract Number	
8:00 AM	454	Use of matrix exponentials to enforce the positive definite constraint of covaraince matrices. S.D. Kachman*, University of Nebraska.
8:15 AM	455	Use of partial augmentation to improve the Monte Carlo sampling of variance components. R.A.A. Torres Jr and Richard L. Quaas, Animal Science Department - Cornell University.
8:30 AM	456	Least squares Lehmann-Scheffe superior to other methods for estimating variance components and heritability. W.D. Slanger* and J.W. Carlson, North Dakota State University.
8:45 AM	457	Correlations between clinical mastitis at different stages of lactation in Norwegian Cattle using a multivariate threshold model. Y. M. Chang*[1], R. Rekaya[2], D. Gianola[1], B. Heringstad[3], and G. Klemetsdal[3], [1]Department of Animal Sciences, University of Wisconsin, Madison, [2]Department of Dairy Science, University of Wisconsin, Madison, [3]Department of Animal Science, Agricultural University of Norway.

9:00 AM	458	An assessment of threshold models with Student *t* distributed liabilities for the analysis of calving ease. K. Kizilkaya*[1], P. Carnier[2], G. Bittante[2], A. Albera[3], and R. Tempelman[1], [1]Michigan State University, East Lansing, MI, USA, [2]University of Padova, Legnaro, Italy, [3]Associazione Nazionale Allevatori Bovini di Razza Piemontese, Carru, Italy.
9:15 AM	459	Bayesian inference in linear mixed model using Dirichlet process prior. Romdhane Rekaya*, Dept. of Dairy Science, University of Wisconsin.
9:30 AM	460	Bayesian analysis of skewed Gaussian models: An application to reproductive traits in dairy cattle. G. J. M. Rosa*[1,2], R. Sartori[2], M. C. Wiltbank[2], and D. Gianola[2], [1]UNESP - Botucatu, SP/Brazil, [2]UW - Madison, WI.
9:45 AM		Break
10:15 AM	461	Bayesian inference on uncertain paternity for prediction of genetic merit. F. F. Cardoso* and R. J. Tempelman, Michigan State University, East Lansing, MI/US.
10:30 AM	462	Two-step and random regression analyses of weight gain of Canadian beef bulls. Flavio Schenkel*, Stephen Miller, Janusz Jamrozik, and James Wilton, University of Guelph, Guelph, ON, Canada.
10:45 AM	463	Predictions of 305-day lactation yields in cows by ARMA models. N.P.P. Macciotta*[1], D. Vicario[2], G. Pulina[1], and a. Cappio-Borlino[1], [1]Università di Sassari, Italia, [2]Italian association of Simmental cows breeders.
11:00 AM	464	Establish confidence intervals for daily milk yield measures by robust bootstrap. P. M. Saama*[1] and I. L. Mao[2], [1]Michigan State University, East Lansing, MI, [2]National Institute of Agricultural Science, Denmark.
11:15 AM	465	Determination of covariance functions for lactation traits on dairy cattle using random-coefficient regressions on B-splines. R.A.A. Torres Jr and Richard L. Quaas, Animal Science Department - Cornell University.
11:30 AM	466	Comparison of random regression test-day models using Bayes factors. Pedro Lopez-Romero*[1], Romdhane Rekaya[2], Yu-Mei Chang[2], Daniel Gianola[2], and Maria J. Carabaño[1], [1]Departamento de Mejora Genética y Biotecnología. INIA. Madrid- Spain, [2]Department of Animal Sciences. University of Wisconsin, Madison, WI- USA.

ASAS/ADSA Food Safety: Microflora Survalence

Chair(s):Melissa Newman, University of Kentucky

Room: 201-204

Time	Abstract Number	
8:00 AM	467	Effect of shipping stress in beef cattle on prevalence levels of enterohemoragic E. coli and Salmonella spp. from the feedlot to the packing plant. A.R. Barham[1], B.L. Barham*[1], A.K. Johnson[1], D.M. Allen[2], J.R. Blanton, Jr.[1], and M.F. Miller[1], [1]Texas Tech University, [2]Excel Corperation.
8:15 AM	468	Prevalence, incidence, and duration of fecal shedding of *Escherichia coli* O157:H7 by feedlot cattle throughout the feeding period. S Younts*[1], D Smith[1], R Moxley[1], J Folmer[1], J Gray[2], S Hinkley[1], L Hungerford[1], M Khaitsa[1], and T Klopfenstein[1], [1]University of Nebraska-Lincoln, Lincoln, NE, [2]USDA, ARS, ARRU,Athens, GA.
8:30 AM	469	Occurrence of verotoxin-producing *Escherichia coli* in beef and dairy heifers grazing the same pasture. B. H. Thran* and H. S. Hussein, University of Nevada - Reno.
8:45 AM	470	*Salmonella* isolation on 12 Midwest and Northeast dairy farms. L.D. Warnick*[1], J.B. Kaneene[2], P.L. Ruegg[3], S.J. Wells[4], M. Saeed[2], C. Fossler[4], and L. Halbert[2], [1]Cornell University, Ithaca, NY, [2]Michigan State University, East Lansing, MI, [3]University of Wisconsin, Madison, WI, [4]University of Minnesota, St. Paul, MN.
9:00 AM	471	Isolation of *Mycobacterium* paratuberculosis (*M.ptb*) from thin market cows at slaughter. C.A. Rossiter*[1] and W.R. Henning[2], [1]Cornell University, Ithaca, NY, [2]Pennsylvania State University, State College.
9:15 AM	472	Weekly shedding of Campylobacter jejuni on 12 Midwest and Northeast dairy farms. P.L. Ruegg*[1], J.B. Kaneene[2], L.D. Warnick[3], S.J. Wells[4], A.M. Saeed[2], C. Fossler[4], and L. Halbert[2], [1]University of Wisconsin, [2]Michigan State University, [3]Cornell University, [4]University of Minnesota.

9:30 AM	473	Multiple *Campylobacter coli* genotypes from sows and piglets in a commercial swine operation. M. E. Hume*, R. E. Droleskey, and R. B. Harvey, USDA, ARS, SPARC, FFSRU.
9:45 AM		Break
10:15 AM	474	Chlorate supplementation in drinking water reduces *E. coli* O157:H7 populations in cattle prior to harvest. T. R. Callaway*[1], R. C. Anderson[1], T. J. Anderson[1], T. L. Poole[1], and D. J. Nisbet[1], [1]Agricultural Research Service/USDA-Southern Plains Agricultural Research Center.
10:30 AM	475	Integron gene sequences within poultry farms and processing plants. M.T. Roe*[1], A. Byrd[2], D. Smith[3], and S. D. Pillai[1], [1]Texas A&M University, College Station, TX, [2]United States Dept. of Agriculture, College Station, TX, [3]Gainesville College, Gainesville, GA.
10:45 AM	476	Detection of transgenic DNA in bovine milk: Results for cows receiving a TMR containing maize grain modified for insect protection (MON810).. R.H. Phipps*[1], D.E. Beever[1], and A.P. Tingey[2], [1]The University of Reading, Reading, UK., [2]Reading Scientific Services Ltd, Reading, UK..
11:00 AM	477	Assessment of novel feeds in animal nutrition. Karen Aulrich* and Gerhard Flachowsky, Institute of Animal Nutrition, Federal Agricultural Research Centre.
11:15 AM	478	Differences in transfer of nicarbazin, meticlorpindol and ivermectin from feed to milk. C.A. Kan*[1], C.A.J. Hajee[2], J.A. van Rhijn[2], A. Klop[1], T. Zuidema[2], B.J.A. Berendsen[2], and H.J. Keukens[2], [1]ID TNO Animal Nutrition, P.O. Box 65, 8200 AB Lelystad, The Netherlands, [2]RIKILT, P.O. Box 230, 6700 AE Wageningen, The Netherlands.

ASAS/ADSA Physiology: General Physiology

Chair(s):Daniel Hagen, Pennsylvania State University

Room: 138-139

Time	Abstract Number	
8:00 AM	479	Lutalyse alters the immune response in sows after intrauterine inoculation with bacteria. M. C. Wulster-Radcliffe*[1], R. C. Seals[2], and G. S. Lewis[1], [1]USDA-ARS United States Sheep Experiment Station, [2]University of Virginia.
8:15 AM	480	Lutalyse can up-regulate the uterine immune system in the presence of progesterone. G. S. Lewis* and M. C. Wulster-Radcliffe, USDA-ARS United States Sheep Experiment Station.
8:30 AM	481	Incidence of anestrus in suckled beef and milked dairy cattle. J.S. Stevenson*, Kansas State University.
8:45 AM	482	Plasma and luteal progesterone influence *in vivo* embryo development in day 5 post-estrus Holstein Friesian cows. MP Green*[1], MG Hunter[1], and GE Mann[1], [1]University of Nottingham, Loughborough, Leicestershire, UK.
9:00 AM	483	Effects of high plasma urea nitrogen levels on bovine embryo quality and development. M. L. Bode*, R. O. Gilbert, and W. R. Butler, Cornell University, Ithaca, NY.
9:15 AM	484	Early gestational modification of conceptus development in sheep. M. E. Wilson*, B. A. Costine, and E. K. Inskeep, West Virginia University.
9:30 AM	485	Use of recombinant GnRH antigens for immunosterilization of beef heifers. T. W. Geary*[1], E. E. Grings[1], M. D. MacNeil[1], S. E. Bellows[1], K. P. Bertrand[2], D. M. de Avila[2], and J. J. Reeves[2], [1]USDA-ARS, Fort Keogh LARRL, Miles City, MT, [2]Washington State University, Pullman.
9:45 AM		Break
10:15 AM	486	Induction of the “ram-effect” and response to estrus induction procedures in Fall born ewe lambs. M. Knights*[1], Q. S. Baptiste[1], and P. E. Lewis[1], West Virginia University, Morgantown, WV.
10:30 AM	487	Uterine responses to a graded dose of genistein in postpubertal gilts. J.A. Ford, Jr.* and W.L. Hurley, University of Illinois, Urbana, Illinois.

10:45 AM	488	Pancreatic insulin response and tissue responsiveness to insulin in dry cows, lactating cows and cows suffering from fatty liver: Results of hyperglycemic and hyperinsulinemic euglycemic clamp experiments. M. Kaske*, K. Herzog, S. Kraeft, and J. Rehage, Clinic for Cattle, School of Veterinary Medicine, D - 30173 Hannover, Germany.
11:00 AM	489	Effect of feeding level on rumen papillae is mediated by IGF-1. Zan-Ming Shen[1,2], Berthold Löhrke[1], Falk Schneider[1], Hartmut Franz[1], Arthur Chudy[1], Siegfried Kuhla[1], Rudolf Zitnan[1,4], Holger Martens[3], and Hans Hagemeister[1], [1]Research Institute for Biology of Farm Animals Dummerstorf, Germany, [2]Nanjing Agriculture University, China, [3]Berlin Free University, Germany, [4]Research Institute of Animal production Nitra, Slovakia.
11:15 AM	490	Influence of solar radiation and feeding level on feed and water intake, digestibility, thermorespiratory response and some blood constituents in sheep. Mostafa Kobeisy*[1], Fisal Elhommosi[1], Galal Abdel-Hafiz[1], and Hassanain Badawy[2], [1]Animal Prod. Dept., Fac. of Agric., Assiut University, Assiut-Egypt., [2]Desert Research Center, Cairo-Egypt.
11:30 AM	491	Cortisol, insulin, triiodothyronine and weight gain in Hereford and Senepol steers on endophyte-infected tall fescue or orchardgrass. R. Browning, Jr.*, N. Whittingham, and T. Payton, Tennessee State University, Nashville.
11:45 AM	492	The effect of supplemental feed at parturition in the rainy season on hair sheep ewe performance in the tropics. R.W. Godfrey*, W. Gonzales, and R.E. Dodson, University of the Virgin Islands, AGricultural Experiment Station, St. Croix.

ASAS/ADSA Ruminant Nutrition: Fat Nutrition/Feed Intake

Chair(s):S.M. Andrews, University of Connecticut and B.W. Hess, University of Wyoming

Room: Sagamore 6&7

Time	Abstract Number	
8:00 AM	493	Effect of feeding different sources of supplemental fat on the performance of lactating buffaloes. H. Nawaz, M. Abdullah*, and G. Mohiuddin, University of Agriculture, Faisalabad, Pakistan.
8:15 AM	494	Effect of feeding different levels of supplemental tallow on the performance of lactating buffaloes. M. Abdullah*, H. Nawaz, and G. Mohiuddin, University of Agriculture, Faisalabad, Pakistan.
8:30 AM	495	A two-year study measuring the reproductive performance of dairy cows fed soybeans. A. Mowrey*, J. N. Spain, M. C. Lucy, M. R. Ellersieck, and K. L. Fritsche, University of Missouri - Columbia.
8:45 AM	496	Interactions of Rumensin premix and diet on milk fat percentage in lactating dairy cattle. T Duffield*[1], R Bagg[2], D Kelton[1], and P Dick[2], [1]Department of Population Medicine, University of Guelph, [2]Elanco Division of Eli Lilly Canada Inc.
9:00 AM	497	Effect of supplemental fat and monensin on ruminal fermentation in dual-flow continuous cultures. M. Croucher, S. J. McLeod, and V. Fellner*, North Carolina State University, Raleigh, NC.
9:15 AM	498	Formulating high fat rations for lactating dairy cattle according to a ratio of metabolizable protein to net energy. V. Pattarajinda*, M. A. Froetschel, H. E. Amos, D. Kumar, and A.A. Gautreaux, The University of Georgia, Athens.
9:30 AM	499	Effects of feeding different sources of neutral detergent-soluble carbohydrates supplemented with fat and propionate to heat stressed dairy cows. A. M. Akinyode*, M. B. Hall, J. P. Jennings, C. R. Staples, and C. J. Wilcox, Univ. of Florida, Gainesville.
9:45 AM		Break
10:15 AM	500	An alternative approach to determine the efficiency of energy utilization for milk production in lactating dairy cows. E. Kebreab*[1], J. France[1], R.E. Agnew[2], and T. Yan[2], [1]The University of Reading, Reading, United Kingdom, [2]Agricultural Research Institute of Northern Ireland, Hillsborough, United Kingdom.
10:30 AM	501	Effects of dietary supplementation of rumen-protected CLA in dairy cows during established lactation. J. W. Perfield II*, G. Bernal-Santos, T. R. Overton, and D. E. Bauman, Cornell University, Ithaca, NY.

10:45 AM	502	Effect of pretrial milk yield on feed intake, digestion, and production responses to high- and low-fiber diets by dairy cows. J.A. Voelker*[1], G.M. Burato[2], and M.S. Allen[1], [1]Michigan State University, [2]University of Padova, Italy.
11:00 AM	503	Dose-response effects of intra-ruminal infusion of propionate on feeding behavior of lactating dairy cows. M. Oba* and M. Allen, Michigan State University, East Lansing, MI.
11:15 AM	504	Effects of intra-ruminal infusion of propionate salts on feeding behavior of lactating dairy cows. M. Oba* and M. Allen, Michigan State University, East Lansing, MI.
11:30 AM	505	Characteristics of forages and TMR fed to dairy cows in Washington state dairy herds producing in excess of 12,730 kg of milk annually. L. M. Johnson*[1], J. H. Harrison[1], W. Schager[1], D. Davidson[1], S. Chen[2], C. Stockle[2], F. Hoisington[3], and C. A. Rotz[4], [1]Washington State University, Puyallup, WA, [2]Washington State University, Pullman, WA, [3]Dari-Tech Services, Kent, WA, [4]USDA-ARS, University Park, PA.
11:45 AM	506	Nutrient intake and body characteristics of dairy cows in Washington state dairy herds producing in excess of 12,730 kg of milk annually. L. M. Johnson*[1], J. H. Harrison[1], W. Schager[1], D. Davidson[1], S. Chen[2], C. Stockle[2], F. Hoisington[3], and C. A. Rotz[4], [1]Washington State University, Puyallup, WA, [2]Washington State University, Pullman, WA, [3]Dari-Tech Services, Kent, WA, [4]USDA-ARS, University Park, PA.

ASAS/ADSA Teaching Undergraduate and Graduate Education and PSA Extension and Instruction: Teaching I

Chair(s):Ed Jaster, California Polytechnic University

Room: 150-152

Time	Abstract Number	
8:00 AM	507	Poultry science student recruitment through teacher and counselor education. R.J. Lien, J.B. Hess*, R.A. Voitle, J.P. Blake, D.E. Conner, and W.D. Berry, Auburn University, Auburn, AL 36849-5416.
8:15 AM	508	A paradigm to increase student enrollment in animal science courses and fulfill educational expectations. Darrel J. Kesler*[1], [1]Department of Animal Sciences, University of Illinois.
8:30 AM	509	A model for choosing instructional strategies to support distance education students. A.M. Shortridge and J.L. Emmert*, University of Arkansas.
8:45 AM	510	Technology enhanced instruction: Incorporating Internet activities into a poultry products course. T. J. Buttles*[1] and B. S. Walters[2], [1]University of Minnesota, St. Paul, MN, [2]University of Wisconsin - River Falls, River Falls, WI.
9:00 AM	511	Assessment of students' access of world wide web course material posting in small class size. M. A. Wattiaux* and K. Kanwar, University of Wisconsin, Madison.
9:15 AM	512	Use of Trans Texas Video Network for graduate education between Texas A&M University System and Texas Tech University. L. W. Greene*[1] and C. R. Richardson[2], [1]Texas A&M University System, Amarillo, [2]Texas Tech University, Lubbock.
9:30	513	Teaching animal nutrition online. P.A. Schoknecht*[1] and H.D. Hafs[2], [1]University of Richmond, [2]Rutgers, The State University of New Jersey.
9:45 AM		Break
10:15 AM	514	Development of a capstone course in dairy herd management. D. K. Combs*, G. E. Shook, and M. C. Wiltbank, University of Wisconsin-Madison.
10:30 AM	515	Practical broiler production - A hands-on approach to student learning. J. C. Hermes*[1], [1]Oregon State University, Corvallis, OR.
10:45 AM	516	Oregon State University's Steer-A-Year program: Integrating classroom learning and hands on experience. C. J. Ackerman*, D.W. Weber, and R. L. Dickson, Oregon State University, Corvallis, OR.
11:00 AM	517	Quantification of learning in animal nutrition: An assessment of teaching. R. S. Kensinger*, Penn State University.

11:15 AM	518	An integrative approach to teaching advanced undergraduate non-ruminant animal nutrition. N. L. Trottier* and J. Perez-Laspiur, Michigan State University.
11:30 AM	519	Utilization of small-group special species projects to facilitate undergraduate applied animal nutrition learning experiences. J.R. Carpenter*, University of Hawaii at Manoa, Honolulu, HI USA.

PSA Environment and Management: Composite Group

Chair(s):Michael Hulet, The Pennsylvania State University

Room: Sagamore 1

Time	Abstract Number	
8:00 AM	520	Interaction of feeding program and space on broiler breeder egg production. J. Brake*, North Carolina State University, Raleigh, NC USA.
8:15 AM	521	Early protein intake influences long term egg production by broiler breeder hens. R.J. Lien*, J.B. Hess, and W.D. Berry, Auburn University, Auburn, AL.
8:30 AM	522	Body weight management and performance of broiler breeder males. Wallace Berry*[1], Pingbo Liu[1], Haitao Li[1], and Alex Peterson[1], [1]Auburn University Department of Poultry Science.
8:45 AM	523	The effects of feeding different levels of protein with and without the DFM, Primalac, on production parameters of bobwhite quail. G. S. Davis*[1] and L R. Minear[2], [1]NC State University, Raleigh, NC USA, [2]Southern States Cooperative, Providence Forge, VA USA.
9:00 AM	524	Effect of acute heat stress on some productive and physiological traits of bronze turkey. Talat, M. El-Sheikh*[1] and Mordy, A. Kalamah[2], [1]South Valley University, Faculty of Agriculture, Sohag, Egypt, [2]Menofia University, Faculty of Agriculture, Menofia, Egypt.
9:15 AM	525	Effect of dietary diacetoxyscirpenol and fusaric acid on turkey poult performance. A.S. Fairchild*[1], J.L. Grimes[1], J.K. Porter[2], W.J. Croom[1], L.R. Daniel[1], and W.M. Hagler, Jr.[1], [1]North Carolina State University, Raleigh, NC USA, [2]R.B. Russell Agricultural Research Center, USDA/ARS, Athens, GA USA.
9:30 AM	526	The effect of a biological litter treatment on microbiological litter quality in turkey breeder flocks. T. Wiard*[1], M. Gockley[1], G. Troyer[2], and T. Rehberger[1], [1]Agtech Products, Inc., Waukesha, WI, [2]Willmar Poultry Co., Willmar, MN.
9:45 AM		Break
10:15 AM	527	Sex differences in some hatching parameters. Akrum Hamdy*, Animal Prod. Dept., Fac. of Agric., Minia Univ., Egypt.
10:30 AM	528	Real time incubation temperature control and heat production of broiler eggs. R. M. Hulet*[1] and R. Meijerhof[2], [1]Pennsylvania State University, University Park, PA, [2]Hybro BV, Boxmeer, NL.
10:45 AM	529	Reduction of turkey hatching egg shell contamination with ultraviolet irradiation. R. A. Russo*, C. Chavez, T. P. Niemeyer, P. L. Reynolds, and J. B. Carey, Texas A&M University, College Station, TX.
11:00 AM	530	The effects of age at photostimulation on reproductive efficiency in three strains of broiler breeders varying in breast yield. N. S. Joseph*[1], F. E. Robinson[1], R. A. Renema[1], and M. J. Zuidhof[2], [1]University of Alberta, Edmonton, AB, Canada, [2]Alberta Agriculture, Food and Rural Development, Edmonton, AB, Canada.
11:15 AM	531	The effect of administering Oasis™ hatching supplement prior to chick placement on growth and body weight uniformity of female broiler breeders. S. I. Boersma*, F. E. Robinson, G. M. Fasenko, and R. A. Renema, University of Alberta, Edmonton, AB, Canada.
11:30 AM	532	Physical traits and reproductive success in male primary broiler breeders. S. McGary*[1], I. Estevez[1], M. R. Bakst[2], and D. L. Pollock[3], [1]Univ of MD, College Park, MD 20742, [2]USDA-ARS, Beltsville, MD 20705, [3]Perdue Inc, Salisbury, MD 21802.
11:45 AM	533	Effects of rearing feed intake on carcass characteristics of male broiler Breeders to 26 wk of age. R. H. McGovern*[1], J. L. Wilson[1], F. E. Robinson[2], and L. F. Bouvier[2], [1]The University of Georgia, [2]University of Alberta.

PSA Immunology

Chair(s):Paul Cotter, Farmingham State College, Arlington, MA

Room: 205

Time	Abstract Number	
8:00 AM	534	Major histocompatibility (*B*) complex gene dose effects on Rous sarcoma virus tumor growth.. T. A. Tupick[1] and R. L. Taylor, Jr.*[1], [1]Dept. of Animal and Nutritional Sciences, University of New Hampshire, Durham, NH 03824.
8:15 AM	535	Wattle swelling and antibody titers in BSA hypersensitive and naive hens. Paul Cotter*[1] and Swami Halidi[2], [1]Framingham State College, [2]Department of Animal and Poultry Sciences, University of Guelph, Canada.
8:30 AM	536	High-throughput gene expression profiling to study host-parasite interactions in avian coccidiosis. H Lillehoj*[1], W Min[1], J Zhu[1], C Ashwell[2], C Van Tassel[3], T Sonstegard[3], J Burnside[4], and B Matthew[5], [1,2,3]U.S.Department of Agriculture-ARS, Beltsville, MD, [5]U.S.Department of Agriculture-ARS, Beltsville, MD, [4]University of Delaware, Newark, DE.
8:45 AM	537	Seroepidemiology of Newcastle disease virus in wild pigeons in Shahre-Kord in Iran. Majid Bouzari*[1] and Khodarahm Argang[2], [1]Department of Biological Sciences, Faculty of Sciences, Isfahan University, Isfahan, Iran, [2]Private Veterinary Practioner, Shahre-Kord.
9:00 AM	538	Comparison of PEMS-associated and classical astroviruses-mediated effects on performance and immune functions of turkey poults. M. A. Qureshi*[1], Y. M. Saif[2], R. A. Ali[1], F. W. Edens[1], C. L. Heggen-Peay[1], and G. B. Havenstein[1], [1]NC State University, Raleigh, NC, [2]The Ohio State University, Wooster, OH.
9:15 AM	539	PEMS-associated reovirus: viral replication, effects on avian cell liviability, and cytokine expression. M. A. Qureshi*[1], C. L. Heggen-Peay[1], K. A. Schat[2], B. Sherry[1], M. A. Cheema[1], R. A. Ali[1], and P. H. O'Connell[2], [1]NC State University, Raleigh, NC, [2]Cornell University, Ithaca, NY.
9:30 AM		Break
10:00 AM	540	Non-covalent modification of protein antigens can direct them to scavenger receptors and induce inflammatory immune responses. S.S. Vandaveer*, G.F. Erf, and J.M. Durdik, University of Arkansas.
10:15 AM	541	Hypo and hyper responsiveness to bacterial LPS may be due to differential expression of Toll-like receptor-4 in chicken macrophages from different genetic backgrounds. N. Dil* and M. A. Qureshi, NC State University, Raleigh, NC.
10:30 AM	542	Effect of a *Lactobacillus*-based dietary probiotic on oocyst shedding and interferon-γ production following *Eimeria acervulina* infection in broilers. R. A. Dalloul*[1], H. S. Lillehoj[2], and J. A. Doerr[1], [1]Dept. of Animal & Avian Sciences, Univ. of Maryland, College Park, MD/USA, [2]Parasite Biology, Epidemiology and Systematics Laboratory, USDA-ARS, Beltsville, MD/USA.
10:45 AM	543	Antigen-induced ion secretion in the chicken intestine following oral or intraperitoneal immunization against bovine serum albumin (BSA). J.L. McReynolds*[1], A.P. McElroy[2], H.D. Danforth[3], and D.J. Caldwell[1], [1]Texas A&M University, College Station, TX, [2]Virginia Tech, Blacksburg, VA, [3]USDA/ARS/LPSI/PBEL, Beltsville, MD.

PSA Nutrition: Phytase

Chair(s):Pat Welch, Sanderson Farms Inc., Laurel, MS

Room: 116-117

Time	Abstract Number	
8:00 AM	544	Utilizing solanum glaucophyllum and phytase to improve phosphorus utilization in broilers. Y-H Cheng*[1], J.P. Goff[2], J.L. Sell[3], S Gill[4], E. Pawlak[4], M. Elena[4], and R.L. Horst[2], [1]Iowa State University/Biomedical Science, [2]National Animal Disease Center, [3]Iowa State University/Animal Science, [4]CAE, Buenos Aires, Argentina.

8:15 AM	545	Effect of wheat bran phytase subjected to different conditioning temperatures on phosphorus utilization by broiler chicks based on body weight and toe ash measurements. W. B. Cavalcanti*, K. C. Behnke, R. S. Beyer, and M. Okot-Kotber, Kansas State University, Manhattan, KS.
8:30 AM	546	Evaluation of the available phosphorus requirement & optimal phytase level of 21-42 day old male broilers. J. R. Timmons*[1], J. M. Harter-Dennis[1], and A. E. Sefton[2], [1]University of Maryland Eastern Shore, Princess Anne, MD, [2]Alltech, Inc., Guelph, Ontario, Canada.
8:45 AM	547	Reduction in dietary phosphorus concentration does not change brush border phytase activity along the small intestinal axis in broiler chicks. E. M. Onyango*[1], E. K. Asem[2], and O. Adeola[1], [1]Department of Animal Sciences, [2]Department of Basic Medical Sciences, Purdue University.
9:00 AM	548	Power of two methods for the estimation of bone ash of broilers. L. E. Hall*, R. B. Shirley, R. I. Bakalli, S. E. Aggrey, G. M. Pesti, and H. M. Edwards, Jr., University of Georgia.
9:15 AM	549	Effect of dietary iron overload on plasma total antioxidant capacity and hepatic lipid peroxides in chickens. Jennifer Cosgrove*, Denzil Maurice, and Stephen Lightsey, Clemson University, Clemson, SC 29634.
9:30 AM	550	Cloning and sequence analysis of manganese-containing superoxide dismutase(MnSOD) cDNA in chickens. X. G. Luo*[1], Y. Q. Bu[1], S. F. Li[1], C. Lu[2], Y. W. Li[2], T. D. Crenshaw[3], X. Kuang[1], B. Liu[1], J. F. Li[1], and S. X. Yu[1], [1]Institute of Animal Science, Chinese Academy of Agricultural Sciences, Beijing, P. R. China, [2]Southwest Agricultural University, Chongqing, P. R. China, [3]University of Wisconsin, Madison, U. S. A.
9:45 AM		Break
10:15 AM	551	Comparative bioefficacy of Natuphos phytase versus peniophora lysii phytase. M.B. Coelho, B.W. Cousins*, J Braun, and W.F. McKnight, BASF Corporation, New Jersey.
10:30 AM	552	Phosphorus sparing effect of phytase, 25-hydroxycholecalciferol, and citric acid when fed to broiler chicks. R. Angel*[1], A. S. Dhandu[1], T. J. Applegate[2], and M. Christman[1], [1]University of Maryland, [2]Purdue University.
10:45 AM	553	Non-phytate phosphorus sparing effect of phytase and citric acid when fed to poults. R. Angel*[1], T. J. Applegate[2], M. Christman[1], and A. S. Dhandu[1], [1]University of Marlyand, College Park, [2]Purdue University.
11:00 AM	554	The effects of supplemental phytase on egg shell quality in broiler breeder hens. M. Lilburn* and J. Nixon, The Ohio State University/OARDC.
11:15 AM	555	Effect of dietary calcium and phosphorus levels on response of broiler chicks to phytase supplementation. F. Yan, J. H. Kersey, C. A. Fritts, and P. W. Waldroup*, University of Arkansas.
11:30 AM	556	Evaluation of dietary chlorine for turkey poults. K.D. Roberson*[1], [1]Michigan State University.
11:45 AM	557	Influence of supplemental citric acid and sodium and potassium citrate on phytate-phosphorus utilization in broiler chicks fed phosphorus-deficient diets from one to 42 days of age. Ahmed Metwally*, Animal Prod. Dept., Fac. of Agric., Assiut University, Assiut-Egypt.

PSA Pathology: Session I

Chair(s):Audrey McElroy, Virginia Tech University

Room: 209

Time	Abstract Number	
8:00 AM	558	Influence of IBDV on the immune system and incidence of proventriculitis in SPF leghorns. T.V. Dormitorio*[1], J.J. Giambrone[1], and K. Cookson[2], [1]Auburn University, Auburn, Alabama, [2]Ft. Dodge Animal Health, Lawrenceville, Georgia.
8:15 AM	559	*In ovo* administration of experimental reovirus vaccines[b]. Z.Y. Guo* and J.J. Giambrone, Auburn University, Auburn AL.
8:30 AM	560	Changes in serum levels of ovotransferrin during experimental inflammation and diseases in chickens. H. Xie*[1,2], N. Rath[1], F. Clark[2], L. Newberry[2], W. Huff[1], G. Huff[1], and J. Balog[1], [1]PPPSRU, ARS, USDA, [2]Department of Poultry Science, University of Arkansas.

8:45 AM	561	Differential intestinal response to *Eimeria acervulina* challenge in broiler chickens. B.C. Morris*[1], H.D. Danforth[2], D.J. Caldwell[3], and A.P. McElroy[1], [1]Virginia Tech, Blacksburg, VA, [2]USDA/ARS/LPSI/PBEL, Beltsville, MD, [3]Texas A&M University, College Station, TX.
9:00 AM	562	Digesitve and reproductive organ characteristics in commercial laying hens as affected by F-strain *Mycoplasma gallisepticum*. M. R. Burnham*[2], S. L. Branton[1], E. D. Peebles[2], M. S. Jones[2], B. D. Lott[1], J. B. Yeatman[2], S. K. Whitmarsh[2], and P. D. Gerard[3], [1]USDA, ARS, South Central Poultry Research Laboratory, [2]Department of Poultry Science, Mississippi State University, Mississippi State, MS 39762, [3]Agricultural Information Science, Mississippi State University, Mississippi State, MS 39762.
9:15 AM	563	Virulence response of a *Salmonella typhimurium hilA:lacZY* fusion strain to spent media from a *Salmonella typhimurium* poultry isolate and non-Salmonella bacteria. J. D. Nutt*[1], L. F. Kubena[2], D. J. Nisbet[2], and S. C. Ricke[1], [1]Texas A&M University, College Station, TX USA, [2]USDA-ARS Food and Feed Safety Research Unit, College Station, TX USA.
9:30 AM	564	Viral disinfectant efficacy assay for duck hepatitis B virus using PCR. Chi-Young Wang*[1] and Joseph Giambrone[1], [1]Auburn University.
9:45 AM	565	Water-soluble tylosin tartrate (Tylan Soluble Powder) for treatment of necrotic enteritis in broiler chickens. J.J. Brennan*[1], R.B. Bagg[2], G. Vessie[2], J. Wilson[3], D.A. Barnum[3], G. Moore[4], A. Zimmermann[4], P. Dick[2], and S. Poe[4], [1]Shur-Gain Agresearch, RR#3, Burford, ON N0E 1A0, [2]Elanco Animal Health, Eli Lilly Canada Inc., Research Park Centre, 150 Research Lane, Guelph, ON N1G, [3]Ontario Veterinary College, University of Guelph, Guelph, ON N1G 2W1, [4] Elanco Animal Health, 2001 West Main Street, POB 708,Greenfield, Indiana 46140.

PSA Processing and Products: Poultry Meat Quality

Chair(s):Alan Sams, Texas A&M University

Room: 103-104

Time	Abstract Number	
8:00 AM	566	The effect of stunning and decapitation on broiler activity during bleeding, blood loss and carcass quality. W. D. McNeal* and D. L. Fletcher, University of Georgia, Athens, GA USA.
8:15 AM	567	Different attributes of breast meat quality in broiler great-grandparent lines. N. A. Gonet*, D. A. Sandercock, R. R. Hunter, and M. A. Mitchell, Roslin Intitute, Roslin, Midlothian, UK.
8:30 AM	568	Effect of dietary sorghum cultivars on the storage stability of cooked broiler breast and thigh meats. D. U. Ahn*[1], M. Du[1], K. C. Nam[1], and G. Cherian[2], [1]Iowa State University, [2]Oregon State University.
8:45 AM	569	Antemortem holding temperature effects on broiler processing shrink, yield and breast meat quality. M. Petracci[2], D. L. Fletcher*[1], and J. K. Northcutt[1], [1]University of Georgia, Athens, GA USA, [2]University of Bologna, Bologna, Italy.
9:00 AM	570	Marination of PSE broiler meat using non-meat binders. L. C. Cavitt* and C. M. Owens, University of Arkansas, Fayetteville, AR, USA.
9:15 AM	571	Tenderness of chicken breast fillets processed in a commercial air-chill facility. L. J. Bauermeister*, S. J. Lewis, A. Velásquez, M. Tamayo, A. Aguilar, and S. R. McKee, [1]University of Nebraska-Lincoln Lincoln, NE.
9:30 AM	572	Rigor development and meat quality of large and small broilers and the use of Allo Kramer shear, needle puncture, and razor blade shear to measure texture. L. C. Cavitt*, C. M. Owens, J. F. Meullenet, R. K. Gandhapuneni, and G. W. Youm, University of Arkansas, Fayetteville, AR, USA.
9:45 AM		Break
10:15 AM	573	The effects of raw broiler breast meat color variation on marination and cooked meat quality. M. Qiao[1], J. K. Northcutt*[1], D. L. Fletcher[1], and D. P. Smith[2], [1]The University of Georgia, [2]USDA-ARS, Russell Research Center.
10:30 AM	574	The relationship of chilling time and temperature on quality of turkey pectoralis. C. Z. Alvarado*[1] and A. R. Sams[2], [1]Virginia Tech, [2]Texas A&M University.

10:45 AM	575	Skin color evaluation in broilers fed natural and synthetic pigments. S. M. P. Castañeda*, E. M. Hirschler, and A. R. Sams, Texas A&M University, College Station, TX.
11:00 AM	576	Mechanisms of pink color formation in irradiated precooked turkey breast. K. C. Nam*, M. Du, H. Ahmed, S. J. Hur, Y. H. Kim, and D. U. Ahn, Iowa State University.
11:15 AM	577	Effects of selected chemicals on red discoloration in fully cooked broiler breast meat. D. P. Smith*[1], J. K. Northcutt[2], and J. R. Claus[3], [1]USDA Agricultural Research Service, Athens, GA 30604, [2]University of Georgia Department of Poultry Science, Athens, GA 30602, [3]University of Wisconsin-Madison, Madison, WI 53706.

Advancements in Analytical and Reporting Software II

Chair(s):John LaBore

Room: 145-146

Time	Abstract Number	
12:00 PM		New features in SAS version 8. M. S. Rodgers*, Eli Lilly and Company
12:30 PM		Creating innovative e-business applications using SAS/IntrNet. T. J. Beaulieu, Jr.*, Elanco Animal Health.

Animal Products in Today's Diet

Chair(s):Casey Frye, Burke Corporation

Sponsor(s):Burke Corporation, Heller Seasoning & Ingredients, and Johnsonville Foods

Room: Sagamore 4

Time	Abstract Number	
1:00 PM	578	The nutritional contributions of animal products to the US diet - The USDA food pyramid and dietary guidelines. Donald. J. McNamara, Ph.D.*[1], [1]Egg Nutrition Center.
1:30 PM	579	Modified protein diets. E. Hentges*, National Pork Producers Council.
2:15 PM	580	Designer foods. D.C. Beitz* and T.J. Knight, Iowa State University.
2:45 PM		Break
3:15 PM	581	Designer foods: Egg products. Hilary Shallo*, Egg Nutrition Center.
3:30 PM	582	Dairy foods and ingredients - Nutritious and functional products for the food industry and the consumer. P. Tong*[1] and C. Podgurski[1], [1]Dairy Products Technology Center, California Polytechnic State University.
3:45 PM	583	Product overview: Meat products. D. H. Beermann*, University of Nebraska, Lincoln.
4:00 PM		Roundtable discussion. D. Beitz, Iowa State University.

Contemporary Issues in Sheep Production and Research

Chair(s):Mike Brown, USDA-ARS, GRL

Sponsor(s):USDA

Room: 207

Time	Abstract Number	
1:00 PM		Introduction. M. Brown*, USDA-ARS, GRL
1:05 PM		Potential impact of new scrapies regulations/Section 201Lamb Industry Adjustment Plan: Status, plans, needs. P. Rogers*, Director of Lamb Marketing, Director of Animal Health, Product Safety, and Technical Services, American Sheep Industry Association.
1:50 PM		Use of sheep in vegetation management. H. Glimp*, University of Nevada.
2:35 PM	584	Outlook for wool markets in the 21st century. C. J. Lupton*, Texas Agricultural Experiment Station, San Angelo.
3:05 PM		Break
3:25 PM	585	Current status of genomic tools for genetic improvement in sheep. B. A. Freking*, USDA, ARS, U.S. Meat Animal Research Center, Clay Center, NE.
4:10 PM	586	Nutrient recommendations for sheep: Gaps in information and future approaches. H.C. Freetly*, USDA, ARS, Roman L. Hruska U.S. Meat Animal Research Center, Clay Center, NE.
4:45 PM		Discussion

FASS Committee on Environment, Waste Management, and Ecosystems: Animal Production and the Environment: Challenges and Solutions

Chair(s):Gerald Havenstein, North Carolina State University

Sponsor(s):Elanco Animal Health, Purina Mills Inc., and Dow AgroSciences, LLC

Room: 500 Ballroom

Time	Abstract Number	
1:00 PM	587	CNMPs, TMDLs, CAFOs/AFOs, effluent guidelines, and other issues.. T. Hebert*[1], [1]Capitolink, LLC.
1:30 PM	588	Challenges and opportunities facing animal agriculture: Optimizing nutrient management in the atmosphere and biosphere of the earth. E. B. Cowling*[1], [1]North Carolina State University.
2:00 PM	589	Animal production impacts on nitrogen emissions to air and ground water: A Dutch case with a European perspective. Wim de Vries*[1], Hans Kros[1], Oene Oenema[1], Gert Jan Reinds [1], and Max Posch[2], [1]Alterra Green World Research, Wageningen, the Netherlands, [2]National Institute of Public health and the Environment, Bilthoven, the Netherlands.
2:30 PM		Discussion
2:50 PM		Break
3:05 PM	590	The role of nutrition in reducing nutrient output from ruminants. L.D. Satter*[1], T.J. Klopfenstein[2], and G.E. Erickson[2], [1]U.S. Dairy Forage Research Center, Madison,WI, [2]University of Nebraska, Lincoln.
3:25 PM	591	Nutritional strategies to reduce environmental emissions from non-ruminants. P.R. Ferket*[1], R.C. Angel[2], E. van Heugten[1], and T.A. van Kempen[1], [1]College of Agriculture and Life Sciences, North Carolina State University, Raleigh, NC 27695, [2]Department of Animal Science, University of Maryland, College Park, MD 20742-2311.

3:45 PM	592	Development of comprehensive nutrient management plans: Practical aspects of getting nutrient management plans implemented. Mary Combs*[1], [1]USDA-Natural Resources Conservation Service, Raleigh, NC.
4:05 PM		Animal producer's viewpoints on managing the environment: What the producer can do. M. Legan*, swine producer, Coatesville, IN.
4:25 PM		Discussion

Novel Genes and Gene Products

Chair(s):James Sartin, Auburn University

Sponsor(s):Monsanto Company

Room: 208

Time	Abstract Number	
1:00 PM	593	Differential display as a tool to identify a steroid-induced gene. Robert Kemppainen*, Auburn University, Auburn, Alabama.
1:35 PM	594	Genes, chips and animal biology. Nagappan Mathialagan*[1], Charles Bolten[1], Steven Wagner[1], John Byatt[1], and Frances Buonomo[1], [1]Monsanto Animal Agricultural Group.
2:10 PM	595	Proteomics in the animal sciences. Lawrence Dangott*, Texas A&M Universtiy, College Station, TX.
2:45 PM		Discussion

Preharvest and Postharvest Approaches to Modification of Milkfat

Chair(s):Kerry Kaylegian, Wisconsin Center for Dairy Research and Joe O'Donnell, California Dairy Research Foundation, Inc.

Sponsor(s):California Dairy Research Foundation and Wisconsin Center for Dairy Research

Room: 138-139

Time	Abstract Number	
1:00 PM		The bovine genome and potential for milkfat modification. J. B. German*, University of California, Davis.
1:45 PM		Influence of animal genetics and nutrition on milkfat modification. J. Medrano and E. DePeters, University of California-Davis.
2:30 PM		Break
3:00 PM	596	The milk fat globule membrane of buttermilk: A unique ingredient. M. Corredig*, Department of Food Science and Technology, University of Georgia.
3:45 PM		The industry perspective on milkfat modification. B. Aimutus*, Land O'Lakes, Inc.
4:30 PM		Discussion

Role of Extracellular Matrix (ECM) in Growth and Development

Chair(s):Mike VandeHaar and Michael Orth, Michigan State University

Sponsor(s):Monsanto Company and Merck Research Laboratories

Room: 101-102

Time	Abstract Number	
1:00 PM	597	The role of the extracellular matrix in growth and development: An introduction. M.W. Orth*, Michigan State University.
1:10 PM	598	Role of the extracellular matrix in muscle growth and development. Sandra G. Velleman*[1], [1]The Ohio State University/OARDC.
2:00 PM	599	Role of the extracellular matrix in skeletal growth, development and health. T. M. Schmid*, Rush Medical College, Chicago, IL.
2:50 PM		Break
3:00 PM	600	Role of the stroma and extracellular matrix during mammary gland growth and development. R.C. Hovey*, [1]National Cancer Institute, NIH.
3:50 PM	601	Regulation of extracellular matrix remodeling during the ovarian cycle: Implications for the control of growth, differentiation and resorption of specific ovarian structures. George W. Smith*[1,2], Mark P.D. Dow[1,2], Leanne J. Bakke[2], Will A. Ricke[3], Carolyn A. Cassar[1], Michael W. Peters[1], J. Richard Pursley[1], and Michael F. Smith[3], [1]Department of Animal Science, Michigan State University, [2]Department of Physiology, Michigan State University, [3]Department of Animal Science, University of Missouri-Columbia.
4:40 PM		Final discussion

ADSA Dairy Foods: Cheese

Chair(s):N.Y. Farkye, California Polytechnic State University

Room: 205

Time	Abstract Number	
1:15 PM	602	Quality attributes of Cheddar cheese in the North Carolina marketplace. A. Hansen* and M. Keziah, North Carolina State University Raleigh, N.C. USA.
1:30 PM	603	Salt and calcium distribution in injected cheese. A.J. Pastorino*[1], N.P. Ricks[2], C.L. Hansen[1], and D.J. McMahon[1], [1]Utah State University, [2]Ohio State University.
1:45 PM	604	Characterization of the melt properties of Cheddar cheese during ageing using dynamic low amplitude oscillatory rheology and melt profile analysis. Achyuth Hassan* and John Lucey, University of Wisconsin-Madison.
2:00 PM	605	Reduced fat Cheddar cheese from a mixture of cream and liquid milk protein concentrate. Shakeel Rehman* and Nana Farkye, Dairy Products Technology Center, Calpoly State University.
2:15 PM	606	Effects of standardization of whole milk with milk protein concentrate on the yield and ripening of reduced fat Cheddar cheese. Shakeel Rehman[1], Nana Farkye[1], and Andrew Schaffner[2], [1]Dairy Products technology Center, Calpoly State University,San Luis Obispo, CA, [2]Department of Statistics.
2:30 PM	607	Controlling the coagulation properties of high solids cheesemilks that are standardized with cold ultrafiltration retentates. S. Govindasamy-Lucey*[1], J.J. Jaeggi[1], M.E. Johnson[1], and J.A. Lucey[2], [1]Wisconsin Center for Dairy Research, University of Wisconsin, Madison, Wisconsin/USA, [2]Department of Food Science, University of Wisconsin, Madison, Wisconsin/USA.
2:45 PM		Break
3:15 PM	608	Withdrawn.

3:30 PM	609	Headspace analysis of volatile compounds in Monterey Jack goat milk cheese. R Attaie *[1], Prairie View A&M University, Prairie View, TX.
3:45 PM	610	Effect of microbial exopolysaccharide on functionality in high moisture cheese. T. J. Singleton*[1], D. J. McMahon[1], J. R. Broadbent[1], and C. J. Oberg[2], [1]Western Dairy Center, Utah State University, [2]Weber State University.
4:00 PM	611	Relationship between chemical, physical and sensory properties for pasta filata and stirred curd LMPS Mozzarella cheeses. C. M. Chen*, A. L. Dikkeboom, M. E. Johnson, and M. G. Zimbric, Wisconsin Center for Dairy Research.
4:15 PM	612	Reversibility of pH-induced changes in the melting characteristics and calcium distribution of Mozzarella cheese. Q. Ge, M. Almena-Aliste, and P.S. Kindstedt*, University of Vermont, Burlington, VT/USA.

ASAS Nonruminant Nutrition: Weaning Pig Nutrient Requirements

Chair(s):Kevin Owen, Lonza Group

Room: Sagamore 5

Time	Abstract Number	
1:00 PM	613	Effect of threonine supply on the true ileal digestibility of amino acids and on performance in weaned piglets†. L. Babinszky*, J. Tossenberger, P. Horn, and R. Kovács, University of Kaposvar, Kaposvar, Hungary.
1:15 PM	614	The optimum threonine:lysine ratio in nursery diets to maximize growth performance of weanling pigs. B. W. James*, R. D. Goodband, M. D. Tokach, J. L. Nelssen, J. M. DeRouchey, and J. C. Woodworth, Kansas State University, Manhattan.
1:30 PM	615	Effects of diet and crystalline glutamine supplementation on growth performance and small intestine morphology of weanling pigs. S. J. Kitt*, P. S. Miller, A. J. Lewis, and R. L. Fischer, University of Nebraska, Lincoln.
1:45 PM	616	Responses of pigs and chicks to phosphorus supplementation in casein- vs soybean meal-based diets. E. G. Xavier*, G. L. Cromwell, and M. D. Lindemann, University of Kentucky, Lexington.
2:00 PM	617	Ideal dietary tryptophan regimen for pigs as influenced by antigen exposure. C. P. Machado*[1], T. S. Stahly[1], and T. J. Stabel[2], [1]Iowa State University, Ames, [2]National Animal Disease Center, Ames, IA.
2:15 PM	618	Pyridoxine (B6) metabolism and requirement in weaned piglets. J. J. Matte*, A. Giguere, and C. L. Girard, Dairy and Swine R & D Centre, AAC, Lennoxville, QC, Canada.
2:30 PM		Break
3:00 PM	619	Effect of desiccated bile salts on fat digestibility in early-weaned pigs. J. Orban*[1] and B Harmon[2], [1]Southern University, [2]Purdue University.
3:15 PM	620	The efficacy of zinc methionine and zinc oxide in promoting nursery pig performance. G. A. Hollis*, D. C. Mahan, S. D. Carter, T. D. Crenshaw, G. L. Cromwell, G. M. Hill, A. J. Lewis, and T. L. Veum, NCR-42 Swine Nutrition Committee.
3:30 PM	621	Effects of iron administration on complete blood counts of nursing pigs. S.D. Carter, S.L. Mandali, and J.S. Park*, Oklahoma State University, Stillwater.
3:45 PM	622	Effects of L-carnitine and soybean oil on growth performance in weanling pigs. M. J. Rincker*[1], S. D. Carter[1], R. W. Fent[1], B. W. Senne[1], and K. Q. Owen[2], [1]Oklahoma State University, Stillwater, [2]Lonza, Inc., Fairlawn, NJ.
4:00 PM	623	Effects of L-carnitine on carcass composition and tissue accretion in weanling pigs. M. J. Rincker*[1], S. D. Carter[1], R. W. Fent[1], B. W. Senne[1], and K. Q. Owen, [1]Oklahoma State University, Stillwater, [2]Lonza, Inc., Fairlawn, NJ.

ASAS/ADSA Animal Health: Dairy

Chair(s):Ronald J. Erskine, Michigan State University

Room: 143-144

Time	Abstract Number	
1:00 PM	624	Prevalence of bovine mastitis increases with average linear score and has possible implications for genetic selection. David Wilson*[1], Ruben Gonzalez[1], George Shook[2], Linda Garrison-Tikofsky[1], and Ynte Schukken[1], [1]Cornell University, Ithaca, NY, USA, [2]University of Wisconsin, Madison, WI, USA.
1:15 PM	625	Dairy farmers and veterinarians: Partners in profit. A.W. Jalvingh*, CR Delta, Arnhem, The Netherlands.
1:30 PM	626	Evaluation of early detection of induced *Staphylococcus aureus* mastitis using infrared thermography. M. M. Schutz*[1], S. D. Eicher[2], J. M. Townsend[1], G. Shaw[3], and D. M. Kocak[3], [1]Purdue University, [2]USDA-ARS, [3]eMerge Interactive.
1:45 PM	627	Effects of acidosis inducing diets on memory responses to viruses in Holstein steers. D. C. Donovan*[1], A. R. Hippen[1], and D.J. Hurley[1], [1]South Dakota State University, Brookings.
2:00 PM	628	Association between retained placenta and blood interleukin-8 concentration and lack of association of retained placenta with energy and calcium metabolic profiles. Kayoko Kimura*[1], Jesse Goff[1], Timothy Reinhardt[1], and Shigeru Sato[2], [1]National Animal Disease Center, USDA-ARS, [2]NOSAI Miyagi, Japan.
2:15 PM	629	Impact of leptin on in vitro cytokine production during early and mid lactation. Gina M Pighetti*, University of Tennessee, Knoxville, TN USA.
2:30 PM	630	Serum antibody responses in Holstein cows immunized five times with J5 Bacterin. K. Smith*, C. Phipps, J.L. Burton, and R.J. Erskine, Michigan State University, East Lansing, MI.
2:45 PM		Break
3:15 PM	631	Changes in the amino acid ratio and ammonia concentration in plasma and cerebrospinal fluid of dairy cows suffering from hepatosteatosis and liver failure. J. Rehage*, C. Meier, M. Kaske, and H. Scholz, Veterinary School of Hannover, Hannover, Germany.
3:30 PM	632	Growth Responses of *Escherichia coli* to purified immunoglobulin G from cows immunized with ferric citrate receptor FecA. K. Takemura*, J. S. Hogan, and K. L. Smith, Ohio Agricultural Research and Development Center, The Ohio State University.
3:45 PM	633	Opsonic activity of serum and whey from cows immunized with the *Escherichia coli* ferric citrate receptor. A.J. Wise*[1], J.S. Hogan[1], and K.L. Smith[1], [1]Ohio State University, OARDC-Wooster.
4:00 PM	634	Opsonization of *Escherichia coli* cultured in iron-replete and iron-delete media. A.J. Wise*[1], J.S. Hogan[1], and K.L. Smith[1], [1]The Ohio State University, OARDC-Wooster.
4:15 PM	635	Oral glycerol as an aid in the treatment of ketosis/fatty liver complex. J.P. Goff* and R.L. Horst, USDA-ARS, National Animal Disease Center, Ames, IA.
4:30 PM	636	Economic consequences of Johne's disease control programs on dairy herds in Pennsylvania. H. Groenendaal* and D.T. Galligan, University of Pennsylvania, School of Veterinary Medicine, Kennett Square, PA, USA.
4:45 PM	637	Using *Solanum glaucophyllum* as a source of 1,25-dihydroxyvitamin D to prevent hypocalcemia in dairy cows. R.L. Horst*[1], J.P. Goff[1], S. Gill[2], E. Pawlak[2], and M.E. Dallorso[3], [1]National Animal Disease Center, USDA-ARS, Ames, Ia, [2]CAE, Buenos Aires, Argentina , [3]Universidad Nacional de Lomas de Zamora, Buenos Aires, Argentina.

ASAS/ADSA Forages and Pastures: Silages

Chair(s):T.R. Dhiman, Utah State University

Room: Sagamore 6&7

Time	Abstract Number	
1:00 PM	638	Corn plant and silage nutritive value in different stages of maturity. Jorgelina Ferrero*[1], Oscar DiMarco[2], Enrique Rossi[2], and Daniel Valle[2], [1]Fac. Cs. Agrarias U.N.L., [2]Fac. Cs. Agrarias UNMdP-INTA Balcarce.
1:15 PM	639	Evaluation of the nutritive value of low moisture corn silage stored in Ag Bag® vs bunker silos. J. H. Harrison*[1], D. Davidson[1], and D. Linder[2], [1]Washington State University, Puyallup, [2]Ag Bag®, Warrenton, OR.
1:30 PM	640	Evaluation of the nutritive value of processed corn silage harvested at three chop lengths. J.H. Harrison*, D. Davidson, and L. Johnson, Washington State University, Puyallup, WA/U.S.A.
1:45 PM	641	Production response of Holstein cows fed diets containing annual ryegrass and corn silage with either ground or steam-flaked corn. J. K. Bernard*, J. W. West, and D. S. Trammell, The University of Georgia, Tifton, GA USA.
2:00 PM	642	The effect of *Lactobacillus buchneri* 40788 and enzymes on the fermentation and aerobic stability of barley silage fed to lactating cows. C. C. Taylor*, J. A. Mills, J. M. Neylon, and L. Kung, Jr., University of Delaware, Newark, DE.
2:15 PM	643	Adding *Lactobacillus buchneri* 40788 to alfalfa silage increases the production of acetic acid in laboratory and farm-scale silos and has no effect on the dry matter intake of high producing dairy cows.. C. C. Taylor, M. P. Lynch, J. M. Neylon, T. L. Ebling*, and L. Kung, Jr., University of Delaware, Newark, DE.
2:30 PM	644	Evaluation of nutrient composition and IVDMD of alfalfa and/or tropical grasses grown in Hawaii and harvested as round bale silage. D.T. Harauchi, J.R. Carpenter, R.J. Early, and C.N. Lee. CTAHR, University of Hawaii at Manoa, Honolulu. D.T. Harauchi*, J.R. Carpenter, R.J. Early, and C.N. Lee, University of Hawaii-Manoa.
2:45 PM		Break
3:15 PM	645	The effect of inoculation with *Lactobacillus plantarum* MTD1 and packing density on the fermentation of high DM alfalfa silage. M. P. Lynch*, J. A. Lazartic, J. M. Neylon, C. C. Taylor, M. A. Reddish, and L. Kung, Jr., University of Delaware, Newark, DE.
3:30 PM	646	Why digestibility of alfalfa stems declines with maturity. H. G. Jung*[1] and F. M. Engels[2], [1]USDA-ARS, St. Paul, MN, [2]Wageningen University, The Netherlands.
3:45 PM	647	Nutrient composition of several brown midrib and non-brown midrib sorghum varieties. J. B. Banta*, F. T. McCollum, B. Bean, D. Pietsch, and M. Rowland, Texas A & M University System.
4:00 PM	648	Performance of lactating dairy cows fed red clover based diets augmented with normal or brown mid-rib corn silge. P.C. Hoffman*[1] and L.M. Bauman[1], [1]University of Wisconsin-Madison.
4:15 PM	649	The effect of applying a buffered propionic acid-based preservative (Ki-112) alone or in combination with a mixture of homolactic acid bacteria (HAB) on the fermentation and aerobic stability of high moisture corn.. J. M. Neylon*[1], C. L. Myers[2], C. C. Taylor[1], J. A. Lazartic[1], and L. Kung, Jr.[1], [1]University of Delaware, Newark, DE, [2]Kemin Industries, Des Moines, IA.
4:30 PM	650	Evaluation of the replacement value of HMEC for steam rolled corn grain. J. H. Harrison*[1], D. Davidson[1], D. Linder[2], and F. Hosington[3], [1]Washington State University, Puyallup, [2]Ag Bag® Int., Warrenton, OR, [3]Dari-Tech Services, Kent, WA.

ASAS/ADSA Ruminant Nutrition: Feedlot

Chair(s):D.D. Buskirk, Michigan State University and M.S. Brown, West Texas A&M University

Room: Sagamore 2

Time	Abstract Number	
1:00 PM	651	Effects of supplemental phosphorus concentrations on inorganic phosphorus serum concentrations, growth performance, carcass characteristics, and cost of gain of finishing cattle. Wendy R. Flatt*[1], Tim Stanton[1], Jessica Davis[1], and Dave Schutz[2], [1]Colorado State University, [2]CSU-Eastern Colorado Research Center.
1:15 PM	652	Effects of wet corn gluten feed and intake level on diet digestibility and rumen passage rate in steers. S. P. Montgomery*, J. S. Drouillard, E. C. Titgemeyer, J. J. Sindt, T. B. Farran, J. N. Pike, C. M. Coetzer, A. M. Trater, and J. J. Higgins, Kansas State University, Manhattan.
1:30 PM	653	Performance of beef heifers limit-fed growing diets containing alfalfa hay and wet corn gluten feed. S. P. Montgomery*, J. S. Drouillard, J. J. Sindt, T. B. Farran, J. N. Pike, C. M. Coetzer, H. J. LaBrune, A. M. Trater, and R. D. Hunter, Kansas State University, Manhattan.
1:45 PM	654	Wet corn gluten feed and alfalfa hay combinations in steam-flaked corn finishing diets. J. J. Sindt*[1], J. S. Drouillard[1], S. P. Montgomery[1], J. N. Pike[1], T. B. Farran[1], C. M. Coetzer[1], T. J. Kessen[1], and R. T. Ethington[2], [1]Kansas State University, Manhattan, [2]Minnesota Corn Processors, Marshall, Minnesota.
2:00 PM	655	Wet corn gluten feed and alfalfa hay combinations in steam-flaked corn finishing diets: effects on ruminal characteristics and diet digestibility. J. J. Sindt*, J. S. Drouillard, E. C. Titgemeyer, S. P. Montgomery, J. N. Pike, C. M. Coetzer, and T. B. Farran, Kansas State University, Manhattan.
2:15 PM	656	Feedlot performance of growing cattle fed four silages with a silage inoculant. M. H. O'Connor*[1], G. M. Hill[1], S. A. Martin[2], R. N. Gates[3], and J. K. Bernard[1], [1]University of Georgia, Tifton, GA/USA, [2]University of Georgia, Athens, GA/USA, [3]USDA-ARS, Tifton, GA/USA.
2:30 PM	657	Are bacterial direct-fed microbials effective against sub-clinical acidosis in feedlot cattle?. G. R. Ghorbani*[1,2], D. P. Morgavi[1], K. A. Beauchemin[1], and J. A. Leedle[3], [1]Agriculture and Agri-Food Canada, Lethbridge, AB, T1J 4B1, Canada, [2]Isfahan University of Technology, Isfahan, Iran, [3]Chr. Hansen BioSystems, Milwaukee, WI, 53214.
2:45 PM		Break
3:15 PM	658	Effect of corn processing on ruminal starch digestion, microbial protein flow, and degradable intake protein requirements of finishing cattle. R. J. Cooper*, C. T. Milton, T. J. Klopfenstein, T. L. Scott, and D. J. Jordon, University of Nebraska, Lincoln.
3:30 PM	659	Factors affecting conjugated linoleic acid production by mixed ruminal bacteria. S. A. Martin*[1] and T. C. Jenkins[2], [1]University of Georgia, Athens, GA, [2]Clemson University, Clemson, SC.
3:45 PM	660	Influence of diet on conjugated linoleic acid content of beef. C. S. Poulson*, T. R. Dhiman, D. Cornforth, K. C. Olson, and J. Walters, Department of Animal, Dairy and Veterinary Sciences, Utah State University, Logan, UT 84322-4815.
4:00 PM	661	Effect of corn silage and soybean oil on *in vitro* production of conjugated linoleic acid (CLA) and 18:1 fatty acids by beef finishing diets. K. E. Griswold*, G. A. Apgar, B. N. Jacobson, E. D. Frantz, R. A. Robinson, and J. S. Ely, Southern Illinois University, Carbondale, IL.
4:15 PM	662	Effects of flake density of high oil corn and typical corn on performance and carcass characteristics of feedlot steers. T. C. Bramble[1], K. F. Wilson*[1], C. R. Richardson[1], C. P. Bridge[1], and F. N. Owens[2], [1]Texas Tech University, Lubbock, [2]Du Pont Specialty Grains, Des Moines, IA.
4:30 PM	663	Effect of dry-rolled high-oil corn or added corn oil on ruminal and total tract digestibility of beef cattle finishing diets. L.R. Kennington*[1], C.W. Hunt[1], J.G. Andrae[1], G.T. Pritchard[1], and F.N. Owens[2], [1]University of Idaho, Moscow, [2]Dupont Specialty Grains, Des Moines, IA.
4:45 PM	664	Effects of high oil corn and shade on performance of Angus and Bonsmara x Beefmaster feedlot steers. T. C. Bramble*[1], C. R. Richardson[1], K. F. Wilson[1], G. V. Pollard[1], C. P. Bridge[1], F. N. Owens[2], and G. R. Chapman[3], [1]Texas Tech University, Lubbock, [2]Du Pont Specialty Grains, Des Moines, IA, [3]Amarillo, TX.

ASAS/ADSA Ruminant Nutrition: Protein Nutrition

Chair(s):J.P. McNamara, Washington State University and Glen Broderick, U.S. Dairy Forage Research Center

Room: White River

Time	Abstract Number	
1:00 PM	665	An evaluation of feeding practices associated with milk production and milk composition. C.R. Richardson* and D.A. Christensen, University of Saskatchewan.
1:15 PM	666	Effect of different levels of dietary protein on nitrogen metabolism of heifers. J.C. Marini* and M. E. Van Amburgh, Cornell University, Ithaca NY 14853.
1:30 PM	667	Effect of increasing level of dietary protein on serum concentrations of metabolic hormones and mammary development in Holstein heifers consuming a moderate-energy diet.. R. Lopez*[1], C.R. Krehbiel[2], M.G. Thomas[1], D.M. Hallford[1], D.H. Keisler[3], B.S. Obeidat[1], J.A. Hernandez[1], W.D. Bryant[1], M. Garcia[1], and R. Flores[1], [1]New Mexico State University, 2Oklahoma State University, [3]University of Missouri.
1:45 PM	668	Increased crude protein to energy ratios on in situ dry matter disappearance, rumen ammonia, nitrogen balance, and urinary excretion of purine derivatives of prepubertal Holstein heifers. M.T. Gabler*, A.J. Heinrichs, and L.C. Griel, The Pennsylvania State University.
2:00 PM	669	Degradation of soluble crude protein in the rumen. M. Melin[1], M. Gierus*[1], A.M. van Vuuren[1], and G.A.L. Meijer[1], [1]ID TNO Animal Nutrition.
2:15 PM	670	Effects of varying dietary protein and fiber levels on the production of lactating dairy cows. G. A. Broderick*, U.S. Dairy Forage Research Center, Madison, WI.
2:30 PM	671	The effect on milk production of a ruminal nitrogen (N) deficiency in dairy cows: evaluation of the Cornell Net Carbohydrate and Protein System (CNCPS) ruminal N deficiency adjustment. R. Ruiz*, L. O. Tedeschi, and D. G. Fox, Cornell University, Ithaca, NY.
2:45 PM		Break
3:15 PM	672	Effect of dietary carbohydrate composition on utilization of ruminal ammonia nitrogen for milk protein synthesis in dairy cows. A. N. Hristov* and J. K. Ropp, Department of Animal and Veterinary Sci., University of Idaho, Moscow, ID 83844-2330.
3:30 PM	673	Evaluation of models to predict urinary excretion and milk urea nitrogen. R.A. Kohn*[1], K.F. Kalscheur[2], and E. Russek-Cohen[1], [1]University of Maryland, College Park, [2]South Dakota State University, Brookings.
3:45 PM	674	Effect of diet and sampling technique on milk allantoin. W.M. Schager*, J.H. Harrison, and D. Davidson, Washington State University, Puyallup, WA USA.
4:00 PM	675	Protein quantity and quality for dairy cows exposed to hot, humid weather. J. W. West*[1], J. K. Bernard[1], D. S. Trammell[1], P. S. Chan[1], and J. M. Fernandez[2], [1]University of Georgia, Tifton, GA/USA, [2]LSU Agricultural Center, Baton Rouge, LA/USA.
4:15 PM	676	Effect of condensed tannins on proteolytic bacterial populations in the rumen and on nitrogen flow to the abomasum of sheep. B.R. Min*[1], G.T. Attwood[2], W.C. McNabb[2], and T.N. Barry[3], [1]E (Kika) de la Garza Institute for Goat Research, Langston, [2]AgResearch, Grassland Research Center, Palm/North, NZ, [3]Massey university, Palm/North, NZ.
4:30 PM	677	Multiple regression analysis of data collected across many trials: a meta-analytic approach. N.R. St-Pierre*, The Ohio State University.

ASAS/ADSA Teaching Undergraduate and Graduate Education and PSA Extension and Instruction: Teaching II

Chair(s):Brian Reiling, University of Nebraska

Room: 150-152

Time	Abstract Number	
1:00 PM	678	NASA's reduced gravity student flight opportunities program enhances undergraduate experiences and promotes team-building skills. S.T. Willard*[1], [1]Department of Animal and Dairy Sciences, Mississippi State University, Mississippi State, MS.
1:15 PM	679	Engaging students in the learning process in an undergraduate animal breeding course. G. E. Shook* and D. L. Thomas, University of Wisconsin-Madison.
1:30 PM	680	Research proposal writing and student peer panel evaluation as an instructional component for a microbiology graduate course in poultry science. I.B. Zabala Diaz*, X. Li, and S.C. Ricke, Texas A&M University, College Station, Texas/USA.
1:45 PM	681	Evaluation of student performance in an introductory animal science course by pre-test and post-test scores.. T. L. Perkins* and R. J. Andreasen, Southwest Missouri State University, Springfield, Missouri.
2:00 PM	682	Assessment of student learning in animal science programs: how do we know that they know?. R. C. Rhodes III*, University of Rhode Island.
2:15 PM	683	Utilizing a group project to teach principles of reproductive management. G. A. Perry* and M. F. Smith, University of Missouri, Columbia, MO.
2:30 PM	684	Dairy Challenge: A competitive and educational experience in evaluation of dairy herd management. L.E. Davis*[1], F.M. Martsolf[2], J.J. Domecq[1], and M.S. Weber[1], [1]Michigan State University, East Lansing, [2]Cargill Animal Nutrition, Mentone, IN.

PSA Nutrition: Amino Acids and ME Enzymes

Chair(s):Michael Kidd, Mississippi State University

Room: 116-117

Time	Abstract Number	
1:00 PM	685	Extended supplementation of limiting amino acids to increase effective dietary protein and improve production of heat stressed broilers. A. J. Zarate*[1], E. T. Moran, Jr.[1], and D. J. Burnham[2], [1]Poultry Science Department, Auburn University. Auburn, AL 36849, [2]Heartland Lysine Inc. Chicago, IL 60631.
1:15 PM	686	Reduced lysine and threonine levels in a phase-feeding regimen can support maximum growth performance during the grower phase. J.A. Townsend*, H.R. Pope, and J.L. Emmert, University of Arkansas.
1:30 PM	687	Evaluation of amino acid dose-response data and implications for commercial formulation of broiler diets. D. Hoehler*, S. Mack, and M. Pack, Degussa-Huels Corporation, Kennesaw, GA.
1:45 PM	688	Growth and carcass response of male broilers to two commercial sources of supplemental L-lysine. ME Jackson*[1], A Lemme[1], JL Emmert[2], and HR Pope[2], [1]Degussa Huls Corporation, Kennesaw GA, [2]University of Arkansas, Fayetteville, AR.
2:00 PM	689	Interaction of methionine and lysine in broiler diets changed at NRC or industry time intervals. M. B. Cafe*, C. A. Fritts, and P. W. Waldroup, University of Arkansas.
2:15 PM	690	Ileal true digestibility of protein does not increase with age in broiler chicks. E.L. Miller*, Y.X. Huang, O.C. Fabb, B. Rayner, and S. Kasinathan, Department of Clinical Veterinary Medicine, University of Cambridge.

2:30 PM	691	Effects of supplemental antibiotics in a diet containing sub-optimal protein, methionine and lysine on the performance, carcass characteristics and organ measurements of finishing broilers reared under hot-humid climate. A. A. Onifade*[1], A. A. Odunsi[2], S.G. Ademola[1,2], and B.R. Olorede[3], [1]Department of Animal Science, University of Ibadan, [2]Department of Animal Production and Health, Ladoke Akintola University of Technology, Ogbomoso, [3]Department of Animal Production and Health, Usmanu Danfodiyo University, Sokoto, Nigeria.
2:45 PM		Break
3:15 PM	692	Influence of heat processing of corn and barley and enzyme supplementation on nutrient digestibility of broiler chicks. M. I. Gracia*, M. J. Aranibar, and G. G. Mateos, Universidad Politecnica de Madrid. Spain.
3:30 PM	693	Age and dietary influences on size and fermentation patterns in the gastrointestinal tract (GIT) of broilers fed wheat and corn diets. E. N. Fischer*[1], H. L. Classen[1], and M. Choct[2], [1]University of Saskatchewan, Saskatoon, SK Canada, [2]University of New England, Armidale, NSW, Australia.
3:45 PM	694	Live performance, caloric efficiency, carcass characteristics, and cost/gain of broiler chickens fed corn-soy-poultry byproduct diets with or without the enzyme Rovabio Excel™. M.D. Sims*[1], M. Blair[2], and D. M. Hooge[3], [1]Virginia Scientific Research, Inc., Harrisonburg, VA, [2]Aventis Animal Nutrition, Alpharetta, GA, [3]Hooge Consulting Service, Inc., Eagle Mountain, UT.
4:00 PM	695	The effect of barley concentration, Natugrain blend 66%L and Natugrain 33%L on performance of broilers fed wheat-based diets. M.B. Coelho[1], B.W. Cousins[1], W.F. McKnight*[1], P. Blanchard[1], A. Knox[2], and J. McNab[2], [1]BASF, [2]Roslin Nutrition Ltd.
4:15 PM	696	Improved utilization of wheat screening by enzyme supplementation. B.A. Slominski*[1], D. Boros[1], W. Guenter[1], L.D. Campbell[1], and O. Jones[2], [1]University of Manitoba, Winnipeg, MB, Canada, [2]Canadian Bio-Systems Inc., Calgary, AB, Canada.
4:30 PM	697	Apparent metabolizable energy of drought tolerant barley cultivars as affected by enzyme supplementation. G. W. Barbour*[1], A. H. Darwish[1], M. T. Farran[2], N.N. Usayran[3], M. M. Beck[4], H. H. Machlab[1], M. G. Uwayjan[2], and V. M. Ashkarian[2], [1]Agriculture Research Institute, Tel Amara, Beqa'a, Lebanon, [2]American University of Beirut, Beirut, Lebanon, [3]Lebanese University, Beirut, Lebanon, [4]University of Nebraska, Lincoln, Nebraska.
4:45 PM	698	ME-equivalent value of feed enzymes varies with dietary nutrient concentrations for broilers. Keying Zhang*, Shaoqun Zuo, Zhiyong Ni, and Daiwen Chen, Institute of Animal Nutrition, Sichuan Agricultural University,Yaan,Sichuan 625014,PR.China.

PSA Nutrition: Early Nutrition, Immunology, and G. I. Function

Chair(s):Doug Korver, University of Alberta

Room: Sagamore 1

Time	Abstract Number	
1:00 PM	699	Effect of fasting versus feeding Oasis# after hatching on nutrient utilization in chicks. A.B. Batal* and C.M. Parsons, University of Illinois, Urbana, IL USA.
1:15 PM	700	The effect of mannanoligosaccharides, bambermycins, and virginiamycin on the physical and microbial characteristics of the gastrointestinal tract of large white male turkeys. C. W. Parks*, J. L. Grimes, and P. R. Ferket, NC State University, Raleigh, NC USA.
1:30 PM	701	Effects of ratios of dietary linoleic to linolenic acid on hen performance, mitogenic response, and antibody production of White Leghorn hens against Newcastle disease vaccine. U. Puthpongsiriporn*[1] and S. Scheideler[1], [1]University of Nebraska-Lincoln.
1:45 PM	702	Effect of dietary xanthophylls on carotenoid content of lymphoid tissues of layer chicks. E.A. Koutsos*, C.C. Calvert, and K.C. Klasing, University of California, Davis; Davis, CA.
2:00 PM	703	Fluid therapy of poults infected with turkey corona virus (TCV) and *E. coli*. L. El-Hadri*, M. A. Qureshi, J. D. Garlich, P. R. Ferket, and J. S. Guy, NC State University, Raleigh, NC USA.
2:15 PM	704	Effect of dietary betaine on intestinal leukocyte numbers, osmolality, and morphology during an Eimeria acervulina challenge. K. C. Klasing*[1], K. L. Adler[1], C. C. Calvert[1], and J, C. Remus[2], [1]University of California, Davis, CA, [2]Finnfeeds, St. Louis, MO.

2:30 PM	705	Utilization of metabolizable energy in broilers. J. van Milgen*[1], J. Noblet[1], S. Dubois[1], B. Carré[2], and H Juin[3], [1]INRA, St-Gilles, France, [2]INRA, Nouzilly, France, [3]INRA, Le Magneraud, France.
2:45 PM		Break
3:15 PM	706	Broiler bone metabolism changes significantly during acute stress. Alfonso Jr Mireles*, Sun Kim, Russell Thompson, and William R. Amundsen, Foster Farms, Modesto, CA.
3:30 PM	707	Growth promoters in broiler feed (coccidiostat + antibiotics) may play a crucial role during acute stress. Alfonso Jr Mireles* and Sun Kim, Foster Farms, Modesto, CA.
3:45 PM	708	Impact of galactose on growth performance, toxicity and metabolizable energy when fed to broiler chicks. M.W. Douglas* and C.M. Parsons, University of Illinois, Urbana, IL USA.
4:00 PM	709	The effect of fasting at different ages on growth and tissue dynamics in the small intestine of the young chick. David Sklan*, Assaf Geyra, and Zehava Uni, Faculty of Agriculture, Hebrew University of Jerusalem, Israel.
4:15 PM	710	Influence of source of energy of the pre-starter diet on performance and nutrient digestibility of broiler. M. J. Aranibar, M. I. Gracia, R. Lazaro*, and G. G. Mateos, Universidad Politecnica de Madrid. Spain.
4:30 PM	711	Starch digestion rate in the small intestine of broilers differs among feedstuffs. R.E. Weurding*[1], A. Veldman[1], W.A.G. Veen[1], M.W.A. Verstegen[2], and P.J. Van der Aar[1], [1]Institute for Animal Nutrition 'De Schothorst', Lelystad, The Netherlands, [2]Wageningen University and Research Center, Wageningen, The Netherlands.
4:45 PM	712	Effect of colistin and aureomycin on intestinal microorganism and their relationship with the riboflavin metabolism of broilers. H. Y. Cai*[1], L. Wang[1], and G. H. Liu[1], [1]Feed Research Institute, Chinese Academy of Agricultural Sciences, Beijing, P. R. China.

PSA Physiology: Reproduction

Chair(s):Yupaporn Chaiseha, Scuranaree University of Technology

Room: 209

Time	Abstract Number	
1:00 PM	713	Use of the OptiBreed sperm quality analyzer® for evaluating semen quality of turkey breeders. S. L. Neuman*[1], C. D. McDaniel[2], J. Radu[3], L. Frank[3], and P. Y. Hester[1], [1]Purdue University, [2]Mississippi State University, [3]Alpharma, Inc.
1:15 PM	714	Effects of feeding regimen and strain on fertility of broiler breeder hens as indicated by the perivitelline layer sperm penetration assay. R. A. Renema*, F. E. Robinson, and G. M. Fasenko, University of Alberta, Edmonton, AB., Canada.
1:30 PM	715	Differences in in vitro sperm hydrolysis of the perivitelline layer between two commercial lines of turkeys. B. D. Fairchild* and V. L. Christensen, North Carolina State Univeristy, Raleigh, NC USA.
1:45 PM	716	Production of germline chimera by transferring gonadal germ cells (GGCs) collected from 7 or 9 day-old chick embryos. A. Tajima*[1], M. Ohara[2], T. Minematsu[1], T. Kuwana[3], and Y. Kanai[1], [1]Institute of Agriculture and Forestry, University of Tsukuba , [2]Poultry Division, Takikawa Agricultural Experiment Station, [3]Pathology Section, National Institute for Minamata Disease.
2:00 PM	717	Luteinizing hormone, progesterone, and estradiol-17ß concentrations, and distribution of hierarchical follicles in normal and arrested-laying turkey hens. H.-K. Liu, D.W. Long, and W.L. Bacon*, [1]The Ohio State University, Wooster OH.
2:15 PM	718	Profile of plasma hydroxyproline in laying hens during an ovulatory cycle. J. I. Orban*[1] and P. Y. Hester[2], [1]Southern University at Shreveport, LA , [2]Purdue University, IN.
2:30 PM	719	Development of an ELISPOT assay for monitoring chicken follicle-stimulating hormone (cFSH) release from individual dispersed pituitary cells. N. Puebla-Osorio*[1], J.A. Proudman[2], H.H.M. Gerets[3], F. Vandesande[3], and L.R. Berghman[1], [1]Texas A&M University, College Station TX, [2]USDA-ARS Beltsville, MD, [3]University of Leuven, Belgium.
2:45 PM		Break

3:15 PM	720	Dopaminergic neurotransmission controlling PRL/VIP secretion in the turkey. O.M. Youngren[1], Y. Chaiseha[2], S.E. Whiting[1], and M.E. El Halawani*[1], [1]University of Minnesota, St. Paul, MN, [2]School of Biology, Institute of Science, Suranaree University of Technology, Thailand.
3:30 PM	721	Expression of D_1 and D_2 dopamine receptors in the hypothalamus and pituitary during the turkey reproductive cycle. Y. Chaiseha*[1], O.M. Youngren[2], S.A. Schnell[3], and M.E. El Halawani[2], [1]School of Biology, Institute of Science, Suranaree University of Technology, Thailand, [2]University of Minnesota, St. Paul, MN, [3]University of Minnesota, Minneapolis, MN.
3:45 PM	722	Regulation of prolactin gene expression by vasoactive intestinal peptide and dopamine: Role of Ca^{2+} signaling. A. A. Al-Kahtane*[1], D. Deepak[2], M Kannan[2], and M El Halawane[1], [1]University of minnesota - Department of Animal Sciences, [2]University of minnesota - Department of Veterinary Pathobiology.
4:00 PM	723	Characterization of the VIP response element (VRE) in turkey prolactin promoter. S.W. Kang*[1], S. You[2], E.A. Wong[3], T. Bakken[1], and M.E. El Halawani[1], [1]Dept. of Animal Science, Univ. of Minnesota, [2]Dept. of Animal Scinece and Technology, Seoul National University, [3]Virginia Polytechnic Institute and State University.
4:15 PM	724	Met-enkephalin directly regulates the GnRH-I system in Japanese quail. MA Ottinger*[1], N Thompson[1], and P Micevych[2], [1]University of Maryland, [2]UCLA Center of Health Sciences.
4:30 PM	725	Localization of neurons projecting to the infundibular nuclear complex and the median eminence in the turkey hypothalamus. K Al-Zailaie, O Youngren, and M EL Halawani, Dept. of Animal Science, University of Minnesota.
4:45 PM	726	A potential neural tract-tracing method for use in avian species. W.J. Kuenzel*[1], R. Ramesh[2], J.A. Proudman[3], and R.R. Miselis[4], [1]University of Arkansas, Fayetteville, AR, [2]National Institutes of Health, Bethesda, MD, [3]United States Department of Agriculture, Beltsville, MD, [4]University of Pennsylvania, Philadelphia, PA.

PSA Business Meeting

Room:500 Ballroom

6:15 PM - 9 PM

FRIDAY, JULY 27, 2001

AMSA Business Meeting

Room:Regency Ballroom A & B, Hyatt

6:15 AM - 8 AM

Reciprocation Sessions on Meat Science

Time	Abstract Number	
		Room:101–102
		Moderator: Brad Morgan, Oklahoma State University
9:00 AM and 11:00 AM		Branded meat programs. C. Gerken*, USDA Agricultural Marketing Service.
		Moderator: Dennis Burson, University of Nebraska
10:00 AM and 1:00 PM	727	The MARC beef carcass image analysis system. S. D. Shackelford*, T. L. Wheeler, and M. Koohmaraie, U.S. Meat Animal Research Center.

Time	Abstract Number	
		Room: 103-104
		Moderator: Morse Solomon, USDA ARS
9:00 AM and 11:00 AM	728	Development of instructional materials for CD-rom and the Internet, the beef myology and muscle profiling project. S.J. Jones* and R.L. Roeber, University of Nebraska-Lincoln.
		Moderator: Floyd McKeith, University of Illinois
10:00 AM and 12:00 PM	729	Bacon quality evaluation methods. Roger Mandigo*, University of Nebraska-Lincoln.
		Moderator: Dennis Buege, University of Wisconsin
1:00 PM		Phosphates/marination and enhanced poultry products. C. Bacon*, Tyson Foods, Inc.
		Room 105-106
		Moderator: Tom Carr, University of Illinois
9:00 AM and 10:00 AM	730	"Meal Solutions": Value added processing for a changing industry. J.W. Rocke*[1], [1]RMH Foods, Inc.
		Moderator: Mohammad Koohamaraie, USDA Agricultural Research Service
11:00 AM and 1:00 PM		Microbiological testing: Science or politically based? R. Mucklow*, National Meat Association.
		Room 116-117
		Moderator: Michael Dikeman, Kansas State University
9:00 AM and 1:00 PM		Use of imaging analysis in meat research. T. Ringkob*, University of Nevada.
10:00 AM and 12:00 PM		Traceback and BSE. L. Detwiler*, USDA.
		Moderator: Dennis Buege, University of Wisconsin
11:00 AM		Phosphates/marination and enhanced poultry products. C. Bacon*, Tyson Foods, Inc.

Applications of Ultrasound in Livestock Production Systems

Chair(s):Mike Brumm, University of Nebraska

Sponsor(s):American Angus Association

Room: 206-207

Time	Abstract Number	
8:00 AM	731	Scanning the future - Ultrasonography as a reproductive management tool for dairy cattle. P. M. Fricke*, University of Wisconsin, Madison, Wisconsin.
8:40 AM	732	Ultrasound applications in beef cattle research and management. A.R. Williams*, Mississippi State University, Starkville, MS.
9:15 AM		Break
9:30 AM	733	Evolution and use of ultrasonic technology in the swine industry. S.J. Moeller*, The Ohio State University, Columbus OH.
10:10 AM	734	Ultrasound as a tool to assess reproductive status in poultry. J.D. Kirby*, R.W. Rorie, V. Melnychuk, and N.B. Anthony, University of Arkansas, Fayetteville, AR 72701.
10:40 AM		Discussion

Bioethics in Animal Science

Chair(s):S. L. Davis, Oregon State University

Sponsor(s): Elanco Animal Health

Room: Sagamore 1

Time	Abstract Number	
8:00 AM		Introduction. S. L. Davis*, Oregon State University
8:05 AM	735	Applied ethics and animal science. W.R. Stricklin*[1] and Lars Vikinge[2], [1]University of Maryland, [2]Center for Applied Ethics, Linkoing University, Linkoing, Sweden.
8:45 AM	736	Postmodernism for animal scientists. K.K. Schillo*[1] and P.B. Thompson[2], [1]University of Kentucky, Lexington, KY, [2]Purdue University, West Lafayette, IN.
9:30 AM		Discussion. S. L. Davis, Oregon State University and D. Cherney, Cornell University.

Mechanisms of Hormonal Signal Transduction

Chair(s):Fred Stormshak, Oregon State University

Room: Sagamore 1

Time	Abstract Number	
10:00 AM	737	Progesterone regulates reproductive function through two functionally distinct receptor isoforms. OM Conneely*[1], B Mulac-Jericevic[1], and F DeMayo[1], [1]Baylor College of Medicine.
10:35 AM	738	Role of neurotrophic factors in ovarian development. S.R. Ojeda*, G.A. Dissen, C. Romero, and A. Paredes, Oregon Regional Primate Research Center/Oregon Health Sciences University, Beaverton, OR.
11:10 AM	739	Growth hormone signaling to the nucleus. Jessica Schwartz* and Graciela Piwien-Pilipuk, Dept. Physiology, University of Michigan.
11:45 AM		Discussion

Dairy Case Study: Decision-Making Process on a Wisconsin Heifer Ranch

Chair(s):Brian Perkins, Monsanto Dairy Business

Sponsor(s):DeLaval and AFIA

Room: 108

Time	
8:00 AM	Description of the case study process and introductions. R. Cady*, Monsanto.
8:05 AM	Description of the farm. B. Drewry-Zimmerman*, Onion River Heifers.
8:45 AM	Statement of the situation to be considered. B. James, Virginia Tech.
9:00 AM	Break-out to small group brainstorming discussions
9:15 AM	Groups report brainstorming ideas. R. Cady*, Monsanto.
9:30 AM	Break
9:45 AM	Farm analysis and recommendations. R. Cady, Monsanto and B. James, Virginia Tech.

9:50 AM	Animal housing, feed handling, and manure storage review. B. Holmes, University of Wisconsin.
10:20 AM	Financial evaluation of Onion River heifer raising. B. Jones, University of Wisconsin.
10:50 AM	Break-out into recommendation discussion groups
11:05 AM	Groups report recommendations
11:20 AM	Onion River heifer raising plan and implementation. B. Drewry-Zimmerman*, Onion River Heifers
11:30 AM	Overview and open discussion. B. Drewry-Zimmerman, Onion River Heifers; R. Cady, Monsanto; and B. James, Virginia Tech

Profitable Meat Goat Production: The Interaction of Genotype and Management

Chair(s):Jackson Dzakuma, Prairie View A&M University

Sponsor(s):ASAS Foundation

Room: 211

Time	Abstract Number	
8:00 AM	740	Rheological characteristics of uncooked goat meat. Eric Risch* and Jackson M. Dzakuma, Prairie View A&M University, Prairie View, TX. USA.
8:45 AM	741	The impact of breed and management on market and carcass value. Louis Nuti*[1], Frank Pinkerton[2], and Ken McMillin[3], [1]Prairie View A&M University, [2]The Goat Works, [3]Louisiana State University Agricultural Center.
9:30 AM	742	The economic implications of genotype by nutrition interactions in goats raised for meat. Will R. Getz*, Georgia Small Ruminant Research & Extension Center, Fort Valley State University, GA.
10:15 AM		Break
10:30 AM	743	Goat growth in relation to feed intake. H. Blackburn*[1], J. Dzakuma[2], and A. Goetsch[3], [1]USDA-ARS, [2]Prairie View A&M University, [3]Langston University.
11:15 AM		Panel discussion

Marschall Rhodia International Dairy Science Award Lecture

2001 Award Chair: Karen Schmidt, Kansas State University

Room: 500 Ballroom

Time	Abstract Number	
10:00 AM		Changes in the structures and properties of milk proteins during processing. H. Singh*, Massey University, Palmerston North, New Zealand.

Writing, Presenting, and Publishing Scientific Papers: A Course They Don't Teach in Graduate School

Chair(s):Debra K. Aaron, University of Kentucky

Room: 150-152

Time	Abstract Number	
8:00 AM		Welcome and introductions. D. K. Aaron, University of Kentucky.
8:10 AM		Planning. D. K. Aaron, University of Kentucky.
8:50 AM		Discussion
9:00 AM		Presenting. D. G. Ely, University of Kentucky.
9:45 AM		Discussion
10:00 AM		Writing. G. S. Lewis, USDA-ARS, U. S. Sheep Experiment Station.
10:45 AM		Discussion
11:00 AM		Editing and revising. A. J. Lewis, University of Nebraska.
11:45 AM		Discussion

ADSA Dairy Foods: Microbiology

Chair(s):H. Wyckoff, Dean Foods Company

Room: 500 Ballroom

Time	Abstract Number	
8:30 AM	744	Isolation and identification of proteolytic psychrotrophic bacteria from raw milk. Ahmed S. Zahran*[1] and Bruce F. Ward[2], [1]Minia University , [2]University of Edinburgh.
8:45 AM	745	Survival of a five strain cocktail of *E. coli* O157:H7 during the 60 Days Aging Period of Hard Cheese Made from Unpasteurized Milk. Joseph Schlesser *[1], Kevin Madsen [2], and Robert Gerdes[2], [1]Food and Drug Administration, NCFST, Summit-Argo, IL, [2]Illinois Institute of Technology, NCFST, Summit-Argo, IL.
9:00 AM	746	Production of an exopolysaccharide-containing whey protein concentrate by fermentation of whey with *L. delbrueckii* ssp. bulgaricus RR. E. M. Panko* and R. F. Roberts, Pennsylvania State University.
9:15 AM	747	Continuous production of antimicrobial compound(s) and organic acids by bifidobacteria cells entrapped in sodium alginate beads. Z. Morrison, S.A. Ibrahim, M.M. Salameh, A. Shahbazi, and C.W. Seo, North Carolina Agricultural and Technical State University.

ASAS Nonruminant Nutrition: Enzymes, Feed Additives, and Environment Management in Finishing Pigs

Chair(s):Charles Maxwell, University of Arkansas and Brian Kerr, USDA-ARS-SOMMRU

Room: Sagamore 4

Time	Abstract Number	
8:00 AM	748	Effect of xylanase inclusion level on nutrient digestibility of diets containing different corn varieties and wheat middlings in finishing pigs. Young Hyun*[1], Mike Ellis[1], and Howard Simmins[2], [1]University of Illinois, Urbana, [2]Finnfeeds International Ltd., UK.
8:15 AM	749	Effects of feed processing technologies and diet formulation strategies on growth performance and carcass characteristics in finishing pigs. D. J. Lee, J. D. Hancock, G. A. Kennedy*, C. L. Jones, and C. W. Starkey, Kansas State University, Manhattan.
8:30 AM	750	Improving ileal and total tract digestion of corn and soybean meal-based diets by growing pigs using feed enzymes, steeping, and particle size reduction. M. R. Smiricky*, K. L. Saddoris, D. M. Albin, V. M. Gabert, and G. C. Fahey, Jr., University of Illinois, Urbana.
8:45 AM	751	Use of toe ash regression analysis to compare bioefficacy of phytase enzymes. *M. Coelho, B. Cousins, and W. McKnight, BASF Corporation.
9:00 AM	752	In vitro and in vivo hydrolysis of phytate in feed ingredients and complete feeds by phytase. J. S. Sands*[1], P. H. Simmins[2], and O. Adeola[1], [1]Purdue University, West Lafayette, IN USA, [2]Finnfeeds International Ltd., Marlborough, UK.
9:15 AM	753	Enhanced phosphorus digestion and reduced pollution potential by transgenic pigs with salivary phytase. Serguei Golovan, Roy Meidinger, Ayodele Ajakaiye, Michael Cottrill, Claire Plante, Ming Fan, Anthony Hayes, Roger Hacker, John Phillips, and Cecil Forsberg*, University of Guelph, Guelph, Ontario, Canada.
9:30 AM	754	The effects of phytase on calcium, phosphorus, and dry matter digestibility in pigs fitted with steered ileo-cecal valve cannulas. J.P. Rice*, J.S. Radcliffe, and R.S. Pleasant, Virginia Polytechnic Institute and State University.
9:45 AM		Break
10:15 AM	755	Xylanase improves the ileal energy and nitrogen digestibility of high wheat finisher diets containing increasing levels of wheat shorts in swine. S. C. Wolford[1], P. H. Simmins[2], and T.A.T.G. van Kempen*[1], [1]North Carolina State University, [2]Finnfeeds International.
10:30 AM	756	Use of feed processing technologies and diet formulation strategies to maximize digestibility and minimize excretion of nutrients in finishing pigs. D. J. Lee*, J. D. Hancock, J. M. DeRouchey, C. A. Maloney, and D. W. Dean, Kansas State University, Manhattan.
10:45 AM	757	Dietary factors are additive in reducing in vitro ammonia emission from pig manure. G.C.M. Bakker*[1] and M.C.J. Smits[2], [1]ID TNO Animal Nutrition, Lelystad, [2]IMAG, Wageningen.
11:00 AM	758	Effect of dietary crude protein level and fiber sources on nitrogen excretion patterns of grower pigs. S. Zervas[1,2] and R.T. Zijlstra*[1], [1]Prairie Swine Centre Inc., [2]University of Saskatchewan, Saskatoon, Canada.
11:15 AM	759	Efficacy of betaine as a carcass modifier in finishing pigs fed normal and low protein diets supplemented with amino acids. L. A. Pettey*, G. L. Cromwell, M. D. Lindemann, J. H. Randolph, H. J. Monegue, K. M. Laurent, G. R. Parker, and R. D. Coffey, University of Kentucky, Lexington.
11:30 AM	760	Descriptive flavor analysis of bacon and pork loin from lean-genotype gilts fed conjugated linoleic acid. L. Averette Gatlin*, D.K. Larick, M.T. See, and J. Odle, North Carolina State University Raleigh.
11:45 AM	761	Effect of dietary betaine supplementation on energy partitioning in pigs. J.W. Schrama[1], P.H. Simmins[2], and W.J.J. Gerrits*[1], [1]Wageningen Institute of Animal Science, Wageningen University, Wageningen, The Netherlands, [2]Finnfeeds International Ltd, Malborough, UK.

ASAS Swine Species

Chair(s):Michael Ezekwe, Alcorn State

Room: 138-139

Time	Abstract Number	
8:00 AM	762	ECG-gated dynamic MR examination of pig heart. Robert Romvari[1], Imre Repa[1], Zsolt Petrasi[1], Gabor Bajzik[1], Bela Fenyves[2], and Peter Horn*[1], [1]Kaposvar University, Faculty of Animal Science, Diagnostic Institute , [2]Szent Istvan University, Faculty of Veterinary Science, Department and Clinic of Surgery.
8:15 AM	763	A comparison of methods of editing and adjusting feed intake data from electronic swine feeders. D.S. Casey* and J.C.M. Dekkers, Iowa State University,Ames,Iowa.
8:30 AM	764	Effects of piglet birth weight and liquid milk replacer feeding during lactation on pig performance to slaughter weight. B. F. Wolter*, M. Ellis, B. P. Corrigan, and J. M. DeDecker, University of Illinois, Urbana, IL.
8:45 AM	765	Effect of initial stocking rate and weighing frequency on pig performance in wean-to-finish pens. B.F. Wolter*[1], M. Ellis[1], S.E. Curtis[1], G.R. Hollis[1], R.D. Shanks[1], E.N. Parr[2], and D.M. Webel[2], [1]University of Illinois, Urbana, IL/USA, [2]United Feeds, Inc., Sheridan, IN/USA.
9:00 AM	766	Effect of feeder-trough space on pig growth performance in double-stocked wean-to-finish pens. B.F. Wolter*[1], M. Ellis[1], S.E. Curtis[1], E.N. Parr[2], and D.M. Webel[2], [1]University of Illinois, Urbana, IL/USA, [2]United Feeds, Inc., Sheridan, IN/USA.
9:15 AM	767	Carcass and meat quality of halothane gene carriers and negative pigs. Jorge Galindo-Garcia*, Daniel A. Villagomez, and David R. Sanchez-Chipres, Centro Universitario de Ciencias Biologicas y Agropecuarias, Universidad de Guadalajara, Mexico.
9:30 AM	768	Test performance of halothane gene homozygous and heterozygous pigs under no controlled climate. D. R. Sanchez-Chipres, D.A.F. Villagomez*, and J. Galindo-Garcia, Centro Universitario de Ciencias Biologicas y Agropecuarias, Universidad de Guadalajara.
9:45 AM	769	Performance levels, genetic parameters and genotype-health interactions for production traits in pigs. R. Bergsma*[1], E.F. Knol[1], J.W.M. Merks[1], and G.J. Van Groenland[2], [1]IPG, Institute for Pig Genetics, Beuningen, [2]TOPIGS, Vught, The Netherlands.
10:00 AM	770	Sustainable outdoor pork production. W. P. Tynan*, J. G. Gentry, A. K. Johnson, H. A. Rachuonyo, J. F. Smith, and J. J. McGlone, Texas Tech University, Lubbock, Texas/USA.
10:15 AM	771	Evaluation of three genetic populations of pigs for response to four levels of ractopamine. A. P. Schinckel*[1], C. T. Herr[1], B. T. Richert[1], and M. E. Einstein[1], Purdue University.

ASAS/ADSA Animal Health: Dairy, Beef Cattle, and Other Species

Chair(s):Richard Browning, Jr., Tennessee State University

Room: Sagamore 2

Time	Abstract Number	
8:00 AM	772	Parenteral vitamin E for prevention of retained placenta in dairy cows. S. LeBlanc, K. Leslie*, T. Duffield, K. Bateman, J. Ten Hag, and J. Wallace, University of Guelph, Guelph, Ontario, Canada.
8:15 AM	773	The incidence and impact of clinical endometritis in dairy cows. S. LeBlanc[1], K. Leslie*[1], T. Duffield[1], K. Bateman[1], and G. Keefe[2], [1]University of Guelph, Ontario Veterinary College, [2]University of Prince Edward Island, Atlantic Veterinary College.
8:30 AM	774	The influence of negative energy balance on udder health. K. Leslie*, T. Duffield, S. LeBlanc, and J. Ten Hag, University of Guelph, Ontario Veterinary College.

8:45 AM	775	The effects of metaphylactic treatment with tilmicosin on the incidence of bovine respiratory disease in growing dairy replacement heifers. D.G. Schmidt*[1], J.E. Shirley[1], E.C. Titgemeyer[1], M.V. Scheffel[1], and D.G. McClary[2], [1]Kansas State University, Manhattan, [2]Elanco Animal Health, Greenfield, IN.
9:00 AM	776	On-farm batch pasteurization destroys Mycobacterium paratuberculosis in waste milk. J. Stabel*[1], USDA-ARS, National Animal Disease Center, Ames, IA.
9:15 AM	777	Effect of environmental stressors on ADG, serum retinol and a-tocopherol concentrations, and incidence of bovine respiratory disease of feeder steers. N. K. Chirase*[1,3], L. W. Greene[1,3], C. W. Purdy[2], R. W. Loan[3], R. E. Briggs[4], and L. R. McDowell[5], [1]Texas Agricultural Experiment Station, Amarillo and West Texas A&M University, Canyon, [2]USDA/ARS, Bushland, TX, [3]Texas A&M University, College Station, [4]USDA/ARS, Ames, IA, [5]University of Florida, Gainesville.
9:30 AM	778	Influence of dietary antioxidant vitamins on performance of feeder steers exposed to simulated feedyard dust. N. K. Chirase*[1,3], L. W. Greene[1,3], C. W. Purdy[2], R. W. Loan[3], D. R. George[1], and J. Avampato[1], [1]Texas Agricultural Experiment Station, Amarillo and West Texas A&M University, Canyon, [2]USDA/ARS Bushland, TX, [3]Texas A&M University, College Station.
9:45 AM		Break
10:15 AM	779	Relative contribution of nitric oxide (NO)- synthase (NOS) isoforms to hepatic NO production following low-level in vivo endotoxin (LPS)-challenge in cattle. T. Elsasser*, S. Kahl, E. E. Connor, and D. Carbaugh, USDA, Agricultural Research Service, Beltsville, MD.
10:30 AM	780	Influence of estrus on somatic cell count in dairy goats. S McDougall* and M Voermans, Animal Health Centre, Morinsville, New Zealand.
10:45 AM	781	Associations between porcine leptin and leptin-receptor marker genotypes and immune parameters. M.F.W. te Pas*[1], A.H. Visscher[1], E.J. van Steenbergen[2], E.F. Knol[2], K.H. de Greef[1], T.A. Niewold[1], and L.L.G. Janss[1], [1]ID-Lelystad, [2]Institute for Pig Genetics.
11:00 AM	782	Profiling intestinal microbial populations with the *cpn60* molecular diagnostic. J.E. Hill[1], A.G. Van Kessel*[2], R.P. Seipp[1], L. Hawkins[1], M. Betts[1], J. Marshall[2], and S.M. Hemmingsen[1], [1]National Research Council Plant Biotechnolgy Institute, Saskatoon, SK, [2]University of Saskatchewan, Saskatoon, SK.
11:15 AM	783	Evidence for transfer of tylosin and tylosin-resistant bacteria in air from swine production facilities using sub-therapeutic concentrations of tylan in feed. J. A. Zahn*, J. Anhalt, and E. Boyd, National Swine Research and Information Center, USDA-ARS, Ames, IA.
11:30 AM	784	Evaluation of mannan oligosaccharide on the microflora and immunoglobulin status of sows and piglet performance. K. E. Newman*[1] and M. C. Newman[2], [1]Venture Laboratories, Inc., Lexington, KY, [2]University of Kentucky, Lexington, KY.
11:45 AM	785	Biosecurity measures of spray-dried plasma protein in weanling pigs. J.M. Campbell*[1], B.S. Borg[1], L.E. Russell[1], J. Polo[1], and J. Pujols[2], [1]APC, Inc., Ames, IA, [2]CRESA, Barcelona, Spain.

ASAS/ADSA Breeding and Genetics: QTL Detection and Mapping

Chair(s):George Shook, University of Wisconsin

Room: 143-144

Time	Abstract Number	
8:00 AM	786	Fine scale mapping of QTL using of linkage and linkage disequilibrium. T.H.E. Meuwissen*[1] and M.E. Goddard[2,3], [1]Institute fo Animal Science & Health, Lelystad, The Netherlands, [2]University of Melbourne, Melbourne, Australia, [3]Victoria Institute of Animal Science, Melbourne, Australia.
8:30 AM	787	Evaluation of statistical models and permutation tests for detecting gametic imprinting in QTL scans. H. K. Lee[1], J. C. M. Dekkers*[2], R. L. Fernando[2], and M. F. Rothschild[2], [1]National Livestock Research Institute, Korea, [2]Iowa State University, Ames, IA.
8:45 AM	788	A Bayesian approach for constructing genetic maps when genotypes are miscoded. G. J. M. Rosa*[1,2], B. S. Yandell[2], and D. Gianola[2], [1]UNESP - Botucatu, SP/Brazil, [2]UW - Madison, WI.
9:00 AM	789	The extention of mixed model equations to finite normal mixture models for marker assisted analysis of quantitative traits. Yuefu Liu*, University of Guelph, Guelph, Canada.

9:15 AM	790	Parameter estimation of epistasis effects using orthogonal marker contrasts. Yang Da*, Department of Animal Science, University of Minnesota.
9:30 AM	791	The effect of the number of loci on genetic evaluations in finite locus models. L.R. Totir*, R.L. Fernando, and S.A. Fernandez, Iowa State University,Ames,IA.
9:45 AM		Break
10:15 AM	792	Accuracy of marker assisted selection using a mixed model method. Mathew A Chrystal*, Yang Da, Leslie B Hansen, and Antony J Seykora, Department of Animal Science, University of Minnesota.
10:30 AM	793	Improved resolution of the porcine-human comparative genetic map. G. A. Rohrer*, S. C. Fahrenkrug, E. M. Campbell, J. W. Keele, and B. A. Freking, USDA, ARS, U.S. Meat Animal Research Center, Clay Center, NE, USA.
10:45 AM	794	Effects of the Porcine Melanocortin 4 Receptor gene on growth rate, feed conversion and carcass composition of pigs sired by PIC337 or PIC408 boars. S. Jungst*[1], E. Wilson[1], M. Rothschild[2], C. Booher[1], T. Pastor[1], B. Fields[1], and G. Plastow[1], [1]PIC USA Franklin, KY, [2]Iowa State University, Ames.
11:00 AM	795	Genetic relationships between insulin-like growth factor-I and performance traits in two lines of purebred swine. K.G. Lahti*[1], K. Bunter[2], J. Mercer[1], and S. Clearkin[3], [1]Bell Farms, Wahpeton, North Dakota, [2]University of New England, Armidale, NSW, [3]PrimeGRO Pty. Ltd., Thebarton, South Australia.
11:15 AM	796	Interval mapping detection of QTL influencing lactation patterns in Holstein cattle. S. L. Rodriguez-Zas*, B. R. Southey, H. A. Lewin, and D. W. Heyen, University of Illinois, Urbana, IL.
11:30 AM	797	A genome scan to identify quantitative trait loci affecting economically important traits in an elite US Holstein population. M.S. Ashwell*, C.P. Van Tassell, and T.S. Sonstegard, USDA, ARS Gene Evaluation and Mapping Laboratory.
11:45 AM	798	Detection of quantitative trait loci for functional and conformation traits in a whole genome scan in dairy cattle. H Thomsen*[1], N Reinsch[2], M Schwerin[3], G Erhardt[4], and E Kalm[2], [1]Department of Animal Science, Iowa State University, Ames, [2]Institut fuer Tierzucht und Tierhaltung, D-24098 Kiel, [3]Forschungsinstitut fuer die Biologie landwirtschaftlicher Nutztiere, D-18196 Dummerstorf, [4]Institut fuer Tierzucht und Haustiergenetik, D-35390 Giessen.

ASAS/ADSA Growth and Development: Conjugated Linoleic Acid (CLA) in Milk Production, Growth, and Health

Chair(s):Michael VandeHaar, Michigan State University and Lee Cartwright, Texas A&M University

Room: Sagamore 5

Time	Abstract Number	
8:00 AM	799	Conjugated linoleic acid (CLA) and lipid metabolism in lactating cows. D. E. Bauman*[1], L. H. Baumgard, B. A. Corl, E. Matitashvili, D. G. Peterson, J. W. Perfield II, and M. A. Madron, [1]Cornell University.
8:45 AM	800	The use of rumen-protected conjugated linoleic acid to reduce milk fat percentage in lactating dairy cattle. M.A. Sippel*[1], J.P. Cant[1], and R. Spratt[2], [1]University of Guelph, Guelph, Ontario, [2]Agribrands Purina Canada, Woodstock, Ontario.
9:00 AM	801	Milk fat synthesis in dairy cows is progressively reduced by increasing amounts of *trans*-10, *cis*-12 congugated linoleic acid (CLA). Lance H. Baumgard*, Jodi K. Sangster, and Dale E. Bauman, Cornell University.
9:15 AM	802	Mechanisms for conjugated linoleic acid-mediated reduction in fat deposition. Harry Mersmann*, USDA/ARS Children's Nutrition Research Center, Department of Pediatrics, Baylor College of Medicine.
9:45 AM		Break

10:15 AM	803	Dietary conjugated linoleic acid (CLA) influence the lipogenic enzyme activities in adipose tissue and liver of rabbit. C. Corino[1], J. Mourot[2], G. Pastorelli[1], and V. Bontempo*[3], [1]University of Milan/Italy, [2]INRA, Saint-Gilles/France, [3]University of Molise, Campobasso/Italy.
10:30 AM	804	Performance and lipid deposition in broilers fed conjugated linoleic acid. L. Badinga*, K. T. Selberg, C. W. Comer, and R. D. Miles, University of Florida, Gainesville Florida.
10:45 AM	805	Conjugated linoleic acid (CLA) in growth and development:Mechanisms involving immunity and prostanoids. Mark Cook*[1], [1]University of Wisconsin-Madison.
11:15 AM	806	Dietary conjugated linoleic acid (CLA) influence the immune response in weanling piglets. V. Bontempo*[1], C. Corino[2], D. Sciannimanico[2], and S. Magni[1], [1]University of Molise, Campobasso/Italy, [2]University of Milan/Italy.
11:30 AM	807	Effects of dietary conjugated linoleic acid (CLA) on growth, carcass characteristics and meat quality of heavy pigs. C. Corino[1], V. Bontempo*[2], S. Magni[1], G. Pastorelli[1], R. Rossi[1], D. Sciannimanico[1], and J. Mourot[3], [1]University of Milan/Italy, [2]University of Molise/Italy, [3]INRA, Saint-Gilles/France.

ASAS/ADSA Ruminant Nutrition: By-Products

Chair(s):M.L. Nelson, Washington State University and J.A. Barmore, Monsanto Dairy

Room: Sagamore 3

Time	Abstract Number	
8:00 AM	808	Solid-state fermentation of rice straw. J. Vadiveloo*, Universiti Teknologi MARA.
8:15 AM	809	The effect of improving the agronomic characteristics of rice on the nutritional value of rice straw. J. Vadiveloo*, Universiti Teknologi MARA.
8:30 AM	810	Effect of feeding a raw soybean hull-corn steep liquor pellet on the metabolism and performance of lactating dairy cows. J. M. DeFrain*[1], J. E. Shirley[1], E. C. Titgemeyer[1], A. F. Park[1], and R. T. Ethington[2], [1]Kansas State University, Manhattan, [2]Minnesota Corn Processors, Inc.
8:45 AM	811	The impact of feeding a raw soybean hull-corn steep liquor pellet on induced subacute ruminal acidosis in lactating cows. J. M. DeFrain*[1], J. E. Shirley[1], E. C. Titgemeyer[1], A. F. Park[1], and R. T. Ethington[2], [1]Kansas State University, Manhattan, [2]Minnesota Corn Processors, Inc.
9:00 AM	812	Relative nutritive value of dried versus wet brewers' grain for dairy cows. T. R. Dhiman[1], M. S. Zaman*[1], I. S. MacQueen[1], and H. D. Radloff[2], [1]Department of Animal, Dairy and Veterinary Sciences, Utah State University, Logan, UT 84322-4815, [2]A-L Gilbert Company, Oakdale, CA.
9:15 AM	813	Effects of mechanical treatment of high-moisture rye and wheat grains on ruminal fermentation and nutrient digestibilities in steers. K.-H. Südekum[1], A. Schröder[1], C. Idler[2], T. Hoffmann[2], M. Klein[1], and C. Fürll[2], [1]University of Kiel, Germany, [2]ATB, Potsdam, Germany.
9:30 AM	814	Dehydrated bermudagrass pellets (DBP) produced with swine lagoon effluent as a substitute for cottonseed hulls (CSH) in diets for backgrounding steers. M.H. Poore*, B.A. Hopkins, and G.A. Benson, North Carolina State University, Raleigh.
9:45 AM		Break
10:15 AM	815	Effects of replacing dietary high moisture corn with dried molasses on production of dairy cows. G. A. Broderick* and W. J. Smith, U.S. Dairy Forage Research Center, Madison, WI.
10:30 AM	816	Effects of pea silage as a forage source in high concentrate diets on ruminal metabolism and total tract nutrient utilization of steers. S. G. Wielgosz*, A. F. Mustafa, D. A. Christensen, and J. J. McKinnon, University of Saskatchewan, Saskatoon, Saskatchewan, Canada.
10:45 AM	817	Prediction of the in vivo digestibility of grass silage from gas production kinetics. P. Huhtanen*[1], M. Ots[2], S. Ahvenjärvi[1], and M. Rinne[1], [1]MTT Agrifood Research Finland, [2]Estonian Agricultural University.
11:00 AM	818	Comparison of Novartis corn silage hybrids for yield, nutrient traits, and lactational performance by high producing dairy cows.. E. D. Thomas[1], C. S. Ballard*[1], P. Mandebvu[1], C. J. Sniffen[1], M. P. Carter[1], and J. Beck[2], [1]W. H. Miner Agricultural Research Institute, Chazy, NY, [2]Novartis Seeds, Inc., Golden Valley, MN.

11:15 AM	819	Crop processing and chop length effects in brown midrib corn silage on dry matter intake and lactation performance by dairy cows. E. C. Schwab* and R. D. Shaver, University of Wisconsin, Madison, WI.
11:30 AM	820	Neutral detergent fiber concentration in corn silage influences dry matter intake, diet digestibility, and performance of growing British and Holstein steers. K.E. Tjardes*, D.D. Buskirk, M.S. Allen, and R.J. Tempelman, Michigan State University, East Lansing, MI.

ASAS/ADSA Ruminant Nutrition: Fiber

Chair(s):K.F. Knowlton, Virginia Tech and K.E. Tjardes, South Dakota State University

Room: Sagamore 6&7

Time	Abstract Number	
8:00 AM	821	Measuring neutral detergent fiber in feeds and forages. D. R. Mertens*[1] and D. Sauvant[2], [1]US Dairy Forage Research Center, Madison, WI, [2]INRA-Institut National Agronomique, Paris-Grignon.
8:30 AM	822	Fiber requirements for finishing beef cattle - A commercial feedlot perspective. R.S. Swingle*, M.E. Branine, and K.K. Karr, Cactus Feeders and Cactus Research, Ltd., Amarillo, TX.
9:00 AM	823	Digestible fiber from forages for lactating cows. M. S. Allen*, M. Oba, and J. A. Voelker, Michigan State University, East Lansing.
9:30 AM	824	Empirical modeling of ruminal pH from dietary NDF and mean particle size. D. Sauvant*[1] and D. Mertens[2], [1]Institut National Agronomique Paris-Grignon - INRA, [2]US Dairy Forage Research Center.
10:00 AM		Break
10:15 AM	825	Effect of different particle size distribution of oat silage on feeding behavior and productive performance of dairy cattle. C. Leonardi*, L.E. Armentano, and K.J. Shinners, University of Wisconsin-Madison.
10:30 AM	826	Partitioning in vitro digestibility of corn silages of different particle sizes. D.R. Mertens*[1] and G. Ferreira[2], [1]US Dairy Forage Research Center, Madison, WI, [2]Universidad Catolica Argentina, Buenos Aires.
10:45 AM	827	Effects of pretrial milk yield on feed intake, production, and feeding behavior responses to forage particle size by lactating cows. G. M. Burato*[1], J. A. Voelker[2], and M. S. Allen[2], [1]University of Padova, Italy, [2]Michigan State University, East Lansing, MI.
11:00 AM	828	In situ digestibility and ruminal retention time of feed particles with functional specific gravity higher or lower than 1.02. A. N. Hristov*[1], S. Ahvenjarvi[2], P. Huhtanen [2], and T. A. McAllister[3], [1]Department of Animal and Veterinary Sci., University of Idaho, Moscow, ID 83844-2330, [2]MTT Agrifood Research Finland, FIN31600 Jokioinen, [3]Agriculture and Agri-Food Canada, Lethbridge Research Centre, Lethbridge, AB T1J 4B1.
11:15 AM	829	Differences among carbohydrates in yields of crude protein from in vitro fermentation with mixed ruminal microbes. M. B. Hall*[1] and C. Herejk[1], [1]Dept. of Animal Sciences, University of Florida.
11:30 AM	830	Endogenous N-losses in the digestive tract of dairy cows: Influence of low digestible fiber. W.J.H. Van Gestel*[1], G. Hof[1], J. Dijkstra[1], and S. Tamminga[1], [1]Wageningen Institute of Animal Sciences, Wageningen, The Netherlands.
11:45 AM	831	An investigation of feeding level effects on digestibility for diets based on grass silage and high fiber concentrates at two forage : concentrate ratios. F.J. Mulligan*, P.J. Caffrey, M. Rath, J.J. Callan, and F.P. O'Mara, University College Dublin.

PSA Nutrition: Feed Ingredients II

Chair(s):Heather Stillborn, DuPont Specialty Grains

Room: White River

Time	Abstract Number	
8:00 AM	832	Effect of a targeted B-vitamin regimen on rate and efficiency of fast growing broilers from 0 to 49 days. M Coelho, W McKnight*, and B Cousins, BASF Corporation.
8:15 AM	833	Impact of glutamine, Menhaden fish meal and spray-dried plasma on the growth performance and intestinal morphology of broilers. G.F. Yi*[1], G.L. Allee[1], J.W. Frank[1], J.D. Spencer[1], and K.J. Touchette[1], [1]University of Missouri-Columbia.
8:30 AM	834	Impact of glutamine, Menhaden fish meal and spray-dried plasma on the growth performance and intestinal morphology of turkey poults. G.F. Yi*[1], G.L. Allee[1], J.D. Spencer[1], J.W. Frank[1], and A.M. Gaines[1], [1]University of Missouri-Columbia.
8:45 AM	835	Apparent ileal digestibility of amino acids in soybean meal, Menhaden fish meal, catfish meal and spray-dried plasma in young broilers. G.F. Yi*[1], G.L. Allee[1], H.J. Liu[1], J.W. Frank[1], and J.D. Spencer[1], [1]University of Missouri-Columbia.
9:00 AM	836	Evaluating potential value-added sorghums for the poultry industry. A Johnson*, J Fulton, J Akridge, and M Latour, Purdue University, West Lafayette, Indiana, USA.
9:15 AM	837	Effects of seed coat and plant color in sorghum on growth of broiler chicks. C. L. Jones*[1], J. D. Hancock[1], J. F. Pederson[2], C. W. Starkey[1], and D. J. Lee[1], [1]Kansas State University, Manhattan, KS, [2]USDA-ARS, Lincoln, NE.
9:30 AM	838	The effect of using different levels of tilapia by-product meal in broiler diets. L. E. Ponce and A. G. Gernat*, Escuela Agricola Panamericana/Zamorano, Tegucgalpa, Honduras.
9:45 AM		Break
10:15 AM	839	Nutritional value of wheat screenings for broiler chickens. G Audren*, H Classen, and K Schwean, University of Saskatchewan, Saskatoon, SK, Canada.
10:30 AM	840	Use of cottonseed meal for broiler breeder pullets. N. M. Dale*, J. L. Wilson, and A. J. Davis, University of Georgia.
10:45 AM	841	Comparison of broiler performance and carcass characteristics when fed B.t., parental control or commercial varieties of dehulled soybean meal. C.A. Kan*[1], H.A.J. Versteegh[1], T.G. Uijttenboogaart[1], H.G.M. Reimert[1], and G.F. Hartnell[2], [1]ID-Lelystad, P.O. Box 65, 8200 AB Lelystad, The Netherlands, [2]Monsanto Company, 800 N Lindbergh Blvd, St. Louis MO 63617.
11:00 AM	842	Evaluation of identity preserved soybean meal and amino acid density in broilers. R A. Swick*[1] and K. Huang[2], [1]American Soybean Association, Singapore, [2]Gold Coin Services, Singapore.
11:15 AM	843	Chemical analysis and feeding value of heat damaged soybean meal. Budi Tangendjaja*[1] and Robert A. Swick[2], [1]Research Institute for Animal Production, Bogor, Indonesia, [2]American Soybean Association, Singapore.
11:30 AM	844	Effect of storage time on the quality of different sources of soybean meal. B. Tangendjaja*[1], E. Wina[1], and R. A. Swick[2], [1]Research Institute for Animal Production, Bogor, Indonesia, [2]American Soybean Association, Singapore.
11:45 AM	845	Effect of heating solvent extracted soybean in the presence of cysteine or sulfite on ileal true digestibility of protein in broiler chicks. E.L. Miller*, Y.X. Huang, O.C. Fabb, B. Rayner, and S. Kasinathan, Department of Clinical Veterinary Medicine, University of Cambridge.

ADSA Business Meeting

Chair(s):David J. Schingoethe, South Dakota State University

Room:500 Ballroom

11 AM - 12 PM

ASAS Business Meeting

Chair(s):Jeffrey D. Armstrong, Michigan State University

Room:206 - 207

11 AM - 12 PM

Advancements in Analytical and Reporting Software III

Chair(s):John LaBore

Room: 145-146

Time	Abstract Number	
12:00 PM		An overview of data mining in the agricultural science. T. H. Burger*, Eli Lilly
12:30 PM		The use of data mining techniques for analysis of data from an agricultural clinical trial. J. T. Symanowski*, Elanco Animal Health.

AMSA Updates Session

Chair(s):Steven Shackelford, US Meat Animal Research Center

Room: 150-152

Time	Abstract Number	
2:00 PM		Meat Evaluation Handbook update. K. Johnson*, Chicago, IL.
2:20 PM		Foot and Mouth Disease. To be announced.
3:00 PM		Carcass merit project: Development of EPD's and genetic marker validation. J. Pollak*, Cornell University.
3:20 PM	846	Korean Pork 101. D.E. Burson*[1], D.B. Griffin[2], and W.N. Osburn[3], [1]University of Nebraska, [2]Texas A&M University, [3]Michigan State University.
3:40 PM		AMIF research. R. Huffman*, AMI Foundation.
4:00 PM	847	Advanced HACCP course update. N.G. Marriott*[1], [1]Virginia Polytechnic Institute & State University.
4:20 PM		Status and approval of irradiation of packaging materials/RTE products. C. R. Barmore, Cryovac North America.

FASS Committee on Animal Care, Use, and Standards (joint with ASAS/ADSA Animal Behavior and Well Being Committee): Symposium on Concentrated Animal Feeding Operations Regarding Animal Behavior, Care, and Well Being

Chair(s):Jeff Carroll, Animal Physiology Research Unit, ARS-USDA and Dave Zartman, The Ohio State University

Sponsor(s):Elanco Animal Health and USDA

Room: 500 Ballroom

Time	Abstract Number	
1:00 PM	848	Physiological indicators of stress in domestic livestock. Donald C. Lay Jr.*, Livestock Behavior Research Unit, Agricultural Research Service-USDA, West Lafayette, IN.
1:40 PM	849	Influence of stress on composition and quality of meat, poultry, and meat products. E. P. Berg*, University of Missouri.
2:20 PM	850	The Free Farmed Program in the US and the Freedom Food Program in the U.K. Adele Douglass*, Farm Animal Services, 236 Mass Ave., NE, #203, Washington, D.C. 20002.
3:00 PM		Break
3:10 PM	851	Impact of public perception on current and future livestock and poultry production. G. J. Coleman*[1] and P. H. H. Hemsworth[2], [1]Monash University, [2]University of Melbourne.
4:00 PM	852	The effect of management practices on the stress response in livestock. J.L. Morrow-Tesch*[1], [1]USDA-ARS Livestock Issues Research Unit, Lubbock, TX.
4:40 PM	853	The FASS initiative to develop training materials on farm animal care. John McGlone*, Texas Tech University.

Mixed Models Workshop

Chair(s):Rob Templeman, Michigan State University and L. D. Douglass, University of Maryland

Room: 108

Presenters: R. J. Templeman, Michigan State University, East Lansing and L. D. Douglass, University of Maryland, College Park

Workshop presented in two sessions (registrants should attend both sessions).

Friday, 1:00 PM – 5:00 PM

Saturday, 8:00 AM – 12:00 PM

A professional development opportunity in the use of mixed models for the analyses of common experimental designs in animal and dairy science. Emphasis on SAS® PROC MIXED. All professional and graduate student members are invited to register.

Pre-registration required: $60/person

Safety of Our Meat Supply: Assessing the Risks and Methods of Control

Chair(s):Christi Calhoun, MPCA, Inc.

Sponsor(s):Stork RMS-Protecon Inc., Alcide Corporation, and World Technology Ingredients, Inc.

Room: White River

Time	Abstract Number	
1:00 PM		Welcome/introduction of topic; introduction of first speaker.
1:05 PM	854	Risk assessment of pre-harvest food safety: a quantitative approach. S.A. McEwen*[1], [1]Department of Population Medicine, Ontario Veterinary College, University of Guelph.
1:55 PM	855	Pre-harvest food safety. J.E. Marion*, National Chicken Council, Stuart, VA.
2:45 PM		Break
3:15 PM		Down-stream food safety interventions: Beyond the carcass. D. Allen*, Excel Corporation
4:05 PM	856	Future directions for FSIS and food safety. K. Hulebak*, USDA Food Safety and Inspection Service, Washington, DC.

Soybeans in Monogastric Nutrition

Chair(s):Bob Easter, University of Illinois

Sponsor(s):ADM and DuPont

Room: Sagamore 5

Time	Abstract Number	
1:00 PM	857	Nutrient composition and processing of soybeans impact the nutritional value of resultant soybean meals. C. M. Grieshop* and G. C. Fahey, Jr., University of Illinois, Urbana, IL/USA.
1:30 PM	858	Digestibility of amino acids in feedstuffs for poultry. C.M. Parsons*, University of Illinois, Urbana, IL USA.
2:00 PM		Amino acid digestibility of soy in swine. D. Mahan, The Ohio State University.
2:30 PM		Break
3:00 PM		Isoflavones in monogastric nutrition. T. Stahly*, Iowa State University.
3:30 PM		Broiler industry perspective. R. Brister*, Tyson Foods Incorporated.
4:00 PM	859	Soybean meal quality:swine industry perspective. Keith Haydon*[1], [1]Heartland Pork Enterprises, Inc.
4:30 PM		Panel discussion. B. Easter*, University of Illinois.

Twinning Beef Cows

Chair(s):Michael Thonney, Cornell University

Sponsor(s):USDA

Room: 138-139

Time	Abstract Number	
1:00 PM		Welcome. M. Thonney*, Cornell University.

1:15 PM	860	Experiences and management of twinner cattle. D. O'Kief*, O'Kief Ranch, Wood Lake, NE.
1:45 PM	861	Summary of the MARC genetics program to produce twinner cows. R. M. Thallman* and K. E. Gregory, USDA/ARS, U.S. Meat Animal Research Center, Clay Center, NE.
2:15 PM	862	Reproductive, growth, feedlot, and carcass traits of twin versus single births in cattle. S. E. Echternkamp* and K. E. Gregory, USDA, ARS, RLH US Meat Animal Research Center.
2:45 PM		Break
3:00 PM	863	Management of twinning cow herds. B.W. Kirkpatrick*, University of Wisconsin-Madison.
3:30 PM	864	Comparison of the profitability of single-calf with twinning cow herds. M. L. Thonney*, Cornell University, Ithaca, NY.
4:00 PM		Panel discussion

ASAS Horse Species: Historical Aspects of Equine Research—How We Got Here and Where Are We Going?

Chair(s):Kathy Anderson, University of Nebraska

Sponsor(s):Bayer Animal Health

Room: 201-204

Time	Abstract Number	
1:00 PM	865	Historical aspects of equine nutrition. H.F. Hintz*[1], [1]Cornell University.
2:15 PM	866	Effect of fasting on blood lipid concentrations in horses. N Frank*, J Sojka, and M Latour, Purdue University, West Lafayette, Indiana.
2:30 PM	867	Plasma glucose responses of growing horses to different concentrate feeds. A. C. St. Lawrence*[1], L. M. Lawrence[1], S. H. Hayes[1], and M. Adams[2], [1]University of Kentucky, Lexington, KY, [2]Cooperative Research Farms, Guelph, ON.
2:45 PM	868	Fecal phosphorus excretion in yearling horses fed typical diets with and without exogenous phytase. M.T.M. Hainze*, K. A. Condon, J. A. Rush, R.B. Muntifering, and C.A. McCall, Auburn University, Auburn, AL 36849.
3:00 PM	869	Passage rate of ingesta in Standardbred race horses. J. VandenBrink and J. H. Burton*, University of Guelph, Guelph, Ontario, Canada.
3:15 PM		Break
3:30 PM	870	Effects of melatonin implants on plasma concentrations of leptin and body weight in obese pony mares. P.R. Buff*, C.D. Morrison, E.L. McFadin-Buff, and D.H. Keisler, University of Missouri-Columbia.
3:45 PM	871	Determination of pregnancy outcome of mares grazed on a non-toxic endophyte-infected tall fescue. B. J. Rude*, B. A. Warren, D. J. Lang, and P. L. Ryan, Mississippi State University.
4:00 PM	872	Manipulation of the dopaminergic system affects prolactin but not LH secretion in anestrous and cycling mares. K. Bennett-Wimbush*[1], B. Musolf[2], and D. Keisler[3], [1]Ohio State University Agricultural Technical Institute, Wooster, Ohio, [2]Cuyahoga Community College, Parma, Ohio, [3]University of Missouri, Columbia, Missouri.
4:15 PM	873	Temporal variables of the park walk and park trot of the Morgan Horse. M.C. Nicodemus*[1], K.M. Holt[1], and H.M. Clayton[2], [1]Mississippi State University, Mississippi State, MS/USA, [2]McPhail Equine Performance Center, East Lansing, MI/USA.

ASAS Nonruminant Nutrition: Growth Management and Sow Nutrition; Aquaculture

Chair(s):Dennis Jewell, Hill's Pet Nutrition

Room: Sagamore 4

Time	Abstract Number	
1:00 PM	874	Effects of feed deprivation prior to slaughter on changes in body weight and stomach morphology of finishing pigs. C. M. Dodd*, D. L. Rader, J. D. Hancock, G. A. Kennedy, C. W. Starkey, C. L. Jones, and D. J. Lee, Kansas State University, Manhattan.
1:15 PM	875	Effects of induced stresses on productive performance and serum concentration of acute phase proteins in growing-finishing pig. C. Pineiro*[1], E. Lorenzo[2], M. A. Alva[3], F. Lampreave[3], M. Piñeiro[3], and G. G. Mateos[4], [1]PigCHAMP Pro Europa, Spain, [2]Proinserga S. A., Spain, [3]Universidad de Zaragoza, Spain, [4]Universidad Politecnica de Madrid, Spain.
1:30 PM	876	Influence of slaughter weight on performance and carcass quality of fattening pigs. M. A. Latorre*[1], A. Fuentetaja[2], P. Medel[1], and G. G. Mateos[1], [1]Universidad Politecnica de Madrid, Spain, [2]COPESE S.A. Segovia, Spain.
1:45 PM	877	Impact of daily energy intake on rate and composition of gain in pigs with high lean growth potential. J.F. Patience*[1], C.M. Nyachoti[2], R.T. Zijlstra[1], R.D. Boyd[3], and J.L. Usry[4], [1]Prairie Swine Centre, Inc., Saskatoon, SK, [2]University of Manitoba, Winnipeg, MB, [3]PIC USA, Franklin, KY, [4]Heartland Lysine Inc, Chicago, IL.
2:00 PM	878	Effect of high temperature and energy intake on energy utilization in growing pigs. L. Le Bellego*, J. van Milgen, and J. Noblet, INRA, St Gilles, France.
2:15 PM	879	Compensatory feed intake and growth in pigs. J. van Milgen*[1] and J. Noblet[1], [1]INRA, St-Gilles, France.
2:30 PM	880	Effects of soybean meal from different sources on sow and litter performance during gestation and lactation. H. K. Kim*[1], H. S. Kim[1], Y. H. Park[1], I. S. Shin[2], H. S. Lee[2], and K. Y. Whang[1], [1]Korea University, [2]American Soybean Association/Korea.
2:45 PM		Break
3:15 PM	881	Effects of dietary supplementation with mannan oligosaccharides on sow and litter performance in a commercial production system. P. R. O'Quinn*[1], D. W. Funderburke[1], and G. W. Tibbetts[2], [1]Cape Fear Consulting, LLC, Warsaw, NC, [2]Alltech, Inc., Nicholasville, KY.
3:30 PM	882	Effect of dietary levels of soluble and insoluble fiber on energy digestibility and nitrogen balance in gestating sows. J.A. Renteria*, L.J. Johnston, and G.C. Shurson, University of Minnesota, St Paul MN.
3:45 PM	883	Reproduction, conceptus growth and plasma reduced folates in sows in response to dietary supplementation with oxidized and reduced sources of folic acid. A. F. Harper*[1], J. W. Knight[1], E. Kokue[2], Y. Toride[3], and J. L. Usry[4], [1]Virginia Polytechnic Institute & State University, [2]Tokyo University of Agriculture & Technology, [3]Ajinomoto Company Incorporated, [4]Ajinomoto Heartland Incorporated.
4:00 PM	884	Evaluation of pea ingredients for rainbow trout (*Oncorhynchus mykiss*) diets. D.L. Thiessen*[1], G.L. Campbell[1], and P.D. Adelizi[2], [1]University of Saskatchewan, Saskatoon, SK, Canada, [2]Whitewater Trout Co., Whitewater, CA, USA.
4:15 PM	885	Apparent nutrient digestibility of fishmeal and feather meal diets for juvenile Pacific white shrimp (Litopenaeus vannamei). Zongjia Cheng*[1], K.C. Behnke[2], and W.G. Dominy[3], [1]University of Idaho, Hagerman, ID, [2]Kansas State University, Manhattan, KS, [3]The Oceanic Institute, Waimanalo, HI.
4:30 PM	886	Apparent nutrient digestibility of fishmeal and poultry by-product meal diets for juvenile Pacific white shrimp (Litopenaeus vannamei). Zongjia Cheng*[1], K.C. Behnke[2], and W.G. Dominy[3], [1]University of Idaho, Hagerman, ID, [2]Kansas State University, Manhattan, KS, [3]The Oceanic Institute, Waimanalo, HI.

ASAS/ADSA Breeding and Genetics: Genetic Evaluation and G-E Interactions: Dairy Cattle

Chair(s):I. Misztal, University of Georgia

Room: 143-144

Time	Abstract Number	
1:00 PM	887	Identification of factors that cause genotype by environment interactions between dairy production systems. N.R. Zwald* and K.A. Weigel, University of Wisconsin - Madison.
1:15 PM	888	Genotype by environment interaction for milk production traits in Guernsey cattle. W.F. Fikse*[1], R. Rekaya[2], and K.A. Weigel[2], [1]Interbull Centre, Uppsala, Sweden, [2]University of Wisconsin, Madison.
1:30 PM	889	Evidence for genotype by environment interacton in production traits of US Holsteins under grazing versus confinement. J. F. Kearney*[1], M. M. Schutz[1], P. J. Boettcher[2], and K. A. Weigel[3], [1]Purdue University, [2]University of Guelph, [3]University of Wisconsin.
1:45 PM	890	Effects of genotype-by-environment interactions in conventional versus pasture-based dairies. P. J. Boettcher[1,2], J. Fatehi[1], and M. M. Schutz[3], [1]University of Guelph, Canada, [2]ANAFI, Cremona, Italy, [3]Purdue University, West Lafayette, IN.
2:00 PM	891	Method to establish average relationships among Holstein bull populations over time. B. Auvray*[1], G.R. Wiggans[2], F. Miglior[3], and N. Gengler[1,4], [1]Gembloux Agricultural University, Belgium, [2]Agricultural Research Service, USDA, Beltsville, MD, [3]Canadian Dairy Network, Guelph, Canada, [4]National Fund for Scientific Research, Brussels, Belgium.
2:15 PM	892	Possible global scale for ranking dairy bulls by blending national rankings. R.L. Powell* and P.M. VanRaden, Animal Improvement Programs Laboratory, Agricultural Research Service, USDA, Beltsville, MD.
2:30 PM		Break
3:00 PM	893	Estimation of genetic correlations between countries and prediction of sire breeding values using individual animal performance records. K. A. Weigel*[1], R. Rekaya[1], N. R. Zwald[1], and W. F. Fikse[2], [1]University of Wisconsin, Madison, [2]Interbull Centre, Uppsala, Sweden.
3:15 PM	894	Simultaneous estimation of genetic correlations for milk yield among a large number of Holstein populations. H Jorjani*, Interbull, Department of Animal Breeding and Genetics, Swedish University of Agricultural Sciences.
3:30 PM	895	Alternative strategies for estimation of country sire variance in international evaluations of dairy bulls. F. Miglior*[1], P. G. Sullivan[2], and B. J. VanDoormaal[1], [1]Canadian Dairy Network, [2]CGIL, University of Guelph, Guelph, ON, Canada.
3:45 PM	896	Variance of effects of lactation stage within herd by herd yield. N. Gengler*[1,2] and G.R. Wiggans[3], [1]Gembloux Agricultural University, Belgium, [2]National Fund for Scientific Research, Brussels, Belgium, [3]Agricultural Research Service, USDA, Beltsville, MD.
4:00 PM	897	Lactation curves of milk production traits of Italian Water Buffaloes estimated by a mixed linear model. N.P.P. Macciotta*[1], G. Catillo[2], G. Pulina[1], A. Carretta[2], and A. Cappio-Borlino[1], [1]Dipartimento di Scienze Zootecniche, università di Sassari, Italia, [2]Istituto Sperimentale per la Zootecnia, Roma.
4:15 PM	898	Heritability estimates for birth weight of exotic dairy breeds in Nigeria. O.T.F. Abanikannda*[1], O. Olutogun[2], A.O. Leigh[1], M. Orunmuyi[3], and O.Y. Apena[1], [1]Department of Zoology, Lagos State University, Nigeria, [2]Department of Animal Science, University of Ibadan, Nigeria, [3]Department of Animal Science, Ahmadu Bello University, Zaria, Nigeria.

ASAS/ADSA Extension Education: Beef

Chair(s):Allan Williams, Mississippi Sate University

Room: 208

Time	Abstract Number	
1:00 PM	899	Performance comparisons between mature cows categorized by weight and frame score combinations that are enrolled in a cow herd performance testing program. S.R. McPeake*, W.T. Wallace, and L. Keaton, University of Arkansas Cooperative Extension Service.
1:15 PM	900	Designing and implementing a quality assured, source-verified feeder calf sale program. T. Nennich[a], C. R. Dahlen[b], C. M. Zehnder[b], L. R. Miller[b], G. C. Lamb[c], D. Kampmeier[d], and A. DiCostanzo*[b], [a]Clearwater County Extension, Bagley, MN, [b]University of Minnesota, St. Paul, [c]North Central Research and Outreach Center, Grand Rapids, [d]Central Livestock Association, South St. Paul.
1:30 PM	901	Mississippi farm to feedlot program: Carcass performance. W.B. McKinley, A.R. Williams*, J.N. Myers, A.G. Gardner, and E. Ward, Mississippi State University, Starkville, MS.
1:45 PM	902	On farm/ranch HACCP - Is it time? W.J. Means*, University of Wyoming, Laramie, WY/USA.
2:00 PM	903	A bioeconomic model of the broiler chicken supply chain - Simulation for extension. M. J. Zuidhof*[1], R. J. Hudson[2], T. Joro[2], and J. J. R. Feddes[2], [1]Alberta Agriculture, Food and Rural Development, [2]University of Alberta.
2:15 PM	904	Profitability analysis model for assessing the relationship between feeder frame scores, feed efficiency and carcass merit. K.C. Olson*, V.L. Pierce, R.L. Larson, E.P. Berg, and C.L. Loenzen, University of Missouri.
2:30 PM	905	The use of early post weaning performance and quality data of feeder calves in determining the best marketing method for cow calf producers. R.L. Larson, V.L. Pierce*, and K.C. Olson, University of Missouri.
2:45 PM		Break
3:15 PM	906	The A.I.M. Program (Allied Inputs and Marketing): A producer cooperative that reduces production costs and increases market value of calves. L. H. Anderson*, J. T. Johns, K. D. Bullock, and W. R. Burris, University of Kentucky.
3:30 PM	907	Cow College: Implementation of an intense, 9-day educational opportunity for beef producers in Kentucky. L. H. Anderson*, W. R. Buriss, K. D. Bullock, J. C. Henning, P. B. Scharko, D. W. Shepherd, J. D. Anderson, and C. W. Absher, University of Kentucky.
3:45 PM	908	Mississippi farm to feedlot: Feedlot performance. W.B. McKinley, A.R. Williams*, J.N. Myers, A.G. Gardner, and E. Ward, Mississippi State University, Starkville, MS.
4:00 PM	909	Establishing a catfish off-flavor control program in Georgia. G. J. Burtle*[1], G. W. Lewis[2], M. Fowler[3], and T. Cummings[3], [1]Animal & Dairy Science, University of Georgia, Tifton, GA 31793, [2]Warnell School of Forest Resources, University of Georgia, Athens, GA 30602, [3]Cooperative Extension Service, University of Georgia, Louisville, GA 30434.
4:15 PM	910	Effectiveness of a volunteer association in conducting 4-H/youth extension activities. M.J. Wylie*, M.J. Miller, R.B. Housel, L.H. Pribek, and R.J. Antoniewicz, University of Wisconsin, Madison, WI.

ASAS/ADSA Forages and Pastures: Grazing

Chair(s):Dan A. Benz, USDA

Room: Sagamore 3

Time	Abstract Number	
1:00 PM	911	Evaluation of calf and forage production in rotational stocking systems for spring- and fall-calving beef cows. N. A. Janovick*[1] and J. R. Russell[1], [1]Iowa State University.

1:15 PM	912	Liveweight and growth rate of cow-calf pairs grazing tall fescue pastures infected with either non-toxic (MaxQ™) or toxic endophyte strains. R.H. Watson*, M.A. McCann, J.A. Bondurant, J.H. Bouton, C.S. Hoveland, and F.N. Thompson, The university of Georgia, Athens, GA.
1:30 PM	913	Non-toxic endophyte (MaxQ™) use for alleviating tall fescue toxicosis in stocker cattle. J.A. Bondurant*, M.A. McCann, J.H. Bouton, C.S. Hoveland, R.H. Watson, and J.G. Andrae, The University of Georgia, Athens, GA.
1:45 PM	914	Performance of beef cattle grazing endophyte-infected tall fescue or sod-seeded ryegrass. D.W. Sanson*[1] and D.F. Coombs[2], [1]Rosepine Research Station, [2]Dean Lee Research Station, LSU Ag. Center.
2:00 PM	915	Effect of grazing tall fescue endophyte types on subsequent feedlot performance and carcass quality. S. K. Duckett*[1], J. A. Bondurant[1], J. G. Andrae[1], J. N. Carter[2], M. A. McCann[1], T. D. Pringle[2], and D. R. Gill[2], [1]University of Georgia, Athens, [2]Oklahoma State University, Stillwater.
2:15 PM	916	The effect of yeast (*Saccharomyces cerevisiae*) mineral on organic matter digestibility in beef cattle on native and fescue-based pasture grazing systems. Dean Kobs* and Stephen Boyles, The Ohio State University.
2:30 PM	917	Effect of method of storage on protein and fiber fractions, and *in situ* digestibility of kikuyu grass (*Pennisetum clandestinum*) and guinea grass (*Panicum maximu*m). J.R. Carpenter*[1], S.E. Ellis[2], and R.Y. Niino-DuPonte[1], [1]University of Hawaii at Manoa, Honolulu, HI USA, [2]University of South Carolina, Columbia, SC USA.
2:45 PM		Break
3:15 PM	918	Characterization of season and sampling method effects on forage quality in fescue-based pastures. T.M. Dubbs*, E.S. Vanzant, S.E. Kitts, R.F. Bapst, B.G. Fieser, and C.M. Howlett, University of Kentucky, Lexington.
3:30 PM	919	Performance of high producing dairy cows with three feeding systems combining pasture and total mixed rations.. F. Bargo*, L. D. Muller, J. E. Delahoy, T. W. Cassidy, and J. L. Amick, The Pennsylvania State University, University Park.
3:45 PM	920	Application of a pasture intake model in an educational package to enhance farmer uptake of pasture quality management technologies. S.J.R. Woodward* and M.G. Lambert, AgResearch Limited, Hamilton, New Zealand.
4:00 PM	921	Using *in sacco* and *in vitro* incubations to determine the digestion and fermentation kinetics of fresh forages. J.L Burke*[1,2], G.C Waghorn[1], L. G Barrell[1,2], I. M Brookes[2], G.T Attwood[1], and E. S Kolver[3], [1]Agresearch, [2]Massey University, [3]Dexcel Ltd, New Zealand.
4:15 PM	922	Condensed tannins in legumes increase milk production of dairy cows. S.L. Woodward*, E.B.L. Jansen, and P.J. Laboyrie, Dexcel Ltd, Hamilton, New Zealand.
4:30 PM	923	Nutrient composition of forages in Arkansas, 1985-1999. G. V. Davis*, M. S. Gadberry, and T. R. Troxel, University of Arkansas Cooperative Extension Service, Little Rock, AR.
4:45 PM	924	Frontal grazing for cattle management on annual ryegrass pasture. H. Lippke*[1], T. D. A. Forbes[1], R. V. Machen[2], and B. G. Warrington[1], [1]Texas Agricultural Experiment Station, Uvalde, TX, [2]Texas Agricultural Extension Service, Uvalde, TX.

ASAS/ADSA Growth and Development: Ruminant Growth and Mammary Development

Chair(s):Tom Earleywine, T.C. Products Co. and Geoff Dahl, University of Illinois

Room: 109-110

Time	Abstract Number	
1:00 PM	925	Effects of a dairy calf starter containing yeast culture on daily grain intake, weight gain, structural growth, and rumen development in dairy calves.. K. E. Lesmeister* and A. J. Heinrichs, The Pennsylvania State University, University Park, Pennsylvania.

1:15 PM	926	Calf serum IgG concentrations affects weaning performance. R. C. Vann* and J. F. Baker, University of Georgia, Tifton, GA/USA.
1:30 PM	927	Plasma IgG concentration in neonatal calves in response to a colostrum supplement or colostrum replacer and addition of deoxycholic acid. J. D. Quigley*, C. A. Kost, and T. M. Anspach, APC Company, Inc., Ames, IA.
1:45 PM	928	Intake, growth and efficiency of calves fed milk replacers containing whey protein concentrate or alternative animal proteins. J. D. Quigley*, C. J. Kost, and M. L. Miller, APC Company, Inc., Ames, IA.
2:00 PM	929	Economics of dairy heifer growth programs. C.A. Wolf* and M.J. VandeHaar, Michigan State Univerisity, East Lansing, MI/USA.
2:30 PM	930	Effects of added rumen undegraded protein (RUP) and bovine somatotropin (bST) administration on mammary gland growth in prepubertal dairy heifers. A. V. Capuco*[1], G. E. Dahl[2], D. L. Wood[1], and R. A. Erdman[2], [1]USDA-ARS, Beltsville, MD, [2]University of Maryland, College Park, MD.
2:45 PM	931	Physiological responses and growth rates of dairy heifers when raised from birth to weaning during hot weather.. Tomas Belloso*[1], R.A. Bucklin[1], H.H. Head[1], M.J. Hayen[1], A.N. Garcia[1], M.S. Gulay[1], and F. Baccari[2], [1]University of Florida, Gainesville, Florida, [2]Universidade Estadual de Londrina, Londrina-PR, Brasil.
3:00 PM		Break
3:30 PM	932	Analysis of cell proliferation in the prepubertal bovine mammary gland. S. Ellis*[1] and A.V. Capuco[1], [1]USDA-ARS-GEML Beltsville, MD 20907.
3:45 PM	933	Leptin receptor expression in the bovine mammary gland and other tissues. L.F.P. Silva*, M.J. VandeHaar, M.S. Weber, and G.W. Smith, Michigan State University, East Lansing, MI.
4:00 PM	934	Postnatal nutrition and fatness affect plasma leptin concentration in neonatal sheep. R.A. Ehrhardt[1], P.L. Greenwood*[2], R.M. Slepetis[1], A.W. Bell[1], and Y.R. Boisclair[1], [1]Cornell University, Ithaca, NY, [2]NSW Agriculture Beef Industry Centre, Armidale, NSW, Australia.
4:15 PM	935	Effects of dietary protein and weaning age on hormone and metabolite concentrations in neonatal dairy calves. C. C. Williams*[1], D. L. Thompson, Jr.[1], H. G. Bateman, II[1], B. F. Jenny[1], D. T. Gantt[1], L. R. Gentry[1], G. E. Goodier[1], and C. M. Cheatham[1], [1]LSU Agricultural Center.
4:30 PM	936	Thyrotropin releasing hormone (TRH) mediates serotonin-induced release of growth hormone. R. P. Radcliff*, L. T. Chapin, K. J. Lookingland, and H. A. Tucker, Michigan State University, East Lansing, MI.
4:45 PM	937	The effect of photoperiod on hepatic growth hormone receptor (GHR) expression in steer calves. P. E. Kendall*[1], T. L. Auchtung[1], K. S. Swanson[1], M. L. Bode[2], M. C. Lucy[2], J. K. Drackley[1], and G. E. Dahl[1], [1]University of Illinois, Urbana, IL, [2]University of Missouri, Columbia, MO.

ASAS/ADSA International Animal Agriculture

Chair(s):Erasmo Gutierrez-Ornelas, Univ. Autonoma De Nuevo Leon, San Nicolas, Nuevo Leon, Mexico

Room: 205

Time	Abstract Number	
1:00 PM	938	Constraints on reproductive performance of indigenous cows under small holder village farming system in Bangladesh. M. Samad Khan*, Bangladesh Agricultural University, Mymensingh.
1:15 PM	939	True estrus determination through evaluation of serum-progesterone levels at the time of insemination of dairy cows from semi-intensive dairies in north-central Mexico. EF Ricoy[1], C Acuña, RM Rincon, DF Cortes, R Bañuelos-Valenzuela, and CF Arechiga*, [1]Universidad Autonoma de Zacatecas. Zacatecas, Mexico.
1:30 PM	940	Effect of a reduced dose of GnRH (50 µg) in a timed AI protocol used for Holstein cows from an intensive dairy at north-central Mexico. OI Gutierrez[1], RD Gonzalez[1], RR Lozano[2], F de la Colina[1], R Bañuelos[1], E Gonzalez-Padilla[2], and CF Arechiga*[1], [1]Universidad Autonoma de Zacatecas. Zacatecas, Mexico, [2]Universidad Nacional Autonoma de Mexico. Mexico.

1:45 PM	941	Serum-progesterone measurements to determine age at puberty and luteal function in hair sheep from a semi-arid region in north-central Mexico. A Gutierrez, W Gonzalez, RM Rincon, O Perez-Veyna, R Bañuelos-Valenzuela, and CF Arechiga*, [1]Universidad Autonoma de Zacatecas. Zacatecas, Mexico.
2:00 PM		Break
2:30 PM	942	Nutrient digestibility and nitrogen balance of growing Zimbabwean Mukota, Large White and their F1 crosses fed on diets containing graded levels of maize cobs. A.T. Kanengoni, K. Dzama*, M. Chimonyo, J. Kusina, and E. Bhebhe, University of Zimbabwe, Harare, Zimbabwe.
2:45 PM	943	Present status of the heifer project international-Cameroon rabbit program. S. D. Lukefahr*[1], H. I. Nkwocha[2], H. Njakoi[2], E. Tawah[2], J. M. Akob[2], F. A. Kongyu[2], and D. Gudahl[3], [1]Texas A&M Univ.-Kingsville, [2]Heifer Project International, Bamenda, Cameroon, [3]Heifer Project International, Little Rock, AR.
3:00 PM	944	Effects of World Bank prescribed economic structural adjustment on poultry production in Nigeria and policy suggestions for the improvement of the sector. A. A. Onifade*[1], F. A. Nasiru[2], O.T.F. Abanikannda[1], and F. Kudayah[2], [1]Department of Animal Science, University of Ibadan, [2]Michael Stevens & Associates, 1 Tokan Street, Western Avenue, Surulere, P. O. Box 528, Apapa, Lagos.
3:15 PM	945	Comparing the economic power of the populations of European Community (EC) and North American Treaty Countries (NAT)-1999-2010, using per adult human unit (PAHU) versus per capita (PC). S. Hasimoglu*[1], [1]Continental Analytical Services Inc., Salina, KS.

ASAS/ADSA Physiology: Male Physiology/Conceptus Development and Survival

Chair(s):Michael O'Connor, Pennsylvania State University and William Flowers, North Carolina State University

Room: 120-121

Time	Abstract Number	
1:00 PM	946	The history of artificial insemination: Founders and facts. R.H. Foote*, Cornell University.
1:30 PM	947	Effect of capacitation environment of spermatozoa on fertilization of porcine oocytes in vitro. J.M. Popwell[1] and W.L. Flowers*[1], [1]North Carolina State University.
1:45 PM	948	Apoptosis as a mechanism of germ cell loss in yearling stallions. N.L. Heninger*[1], C.L. Donnelly[1], C. Staub[3], T.L. Blanchard[2], D.D. Varner[2], D.W. Forrest[1], and L. Johnson[3], [1]Texas A&M Dept. of Animal Science, [2]Texas A&M Dept of Veterinary Large Animal Medicine and Surgery, [3]Texas A&M Dept of Veterinary Anatomy and Public Health.
2:00 PM	949	Comparison of traits at sexual maturity of recently introduced breeds to Angus and Brahman bulls. S.R, Tatman*[1], C.C. Chase[2], D.A. Neuendorff[1], A.W. Lewis[1], T.W. Wilson[1], C.G. Brown[1], and R.D. Randel[1], [1]Texas Agricultural Research and Extension Center, Overton, TX 75684-0290, [2]Subtropical Research Station, ARS, USDA, Brooksville, FL 34601-4672.
2:15 PM	950	Comparison of adrenal and testis content of the steroidogenic acute regulatory (StAR) and P450 side-chain cleavage enzyme proteins in Angus, Brahman and Romosinuano bulls. J.W. Koch*[1,2], K.N. Livingston[1], S.R. Tatman[2], D. Alberts[3], D.M. Stocco[3], C.C. Chase, Jr.[4], R.D. Randel[2], and T.H. Welsh, Jr.[1], [1]Texas Agricultural Experiment Station, College Station, TX, [2]Overton, TX, [3]Texas Tech University Health Sciences Center, Lubbock, TX, [4]ARS, USDA, Brookesville, FL.
2:30 PM		Break
3:00 PM	951	Effects of castration on patterns of LH and testosterone and reproductive behavior in bulls. D.B. Imwalle and K.K. Schillo*, University of Kentucky, Lexington KY.
3:15 PM	952	Evaluation of somatotrophic axis gene expression and function in Angus, Romosinuano, and Brahman bulls. T. A. Strauch*[1,2], J. W. Koch[1,2], S. R. Tatman[1,2], C. C. Chase, Jr.[3], C. A. Abbey[1], T. M. Bryan[1], R. D. Randel[2], and T. H. Welsh, Jr.[1], [1]Texas Agricultural Experiment Station, College Station, [2]and Overton, TX, [3]Subtropical Agricultural Research Station, ARS, USDA, Brooksville, FL.
3:30 PM	953	Embryonic mortality from the embryo's perspective. PJ Hansen, University of Florida.

4:00 PM	954	The influence of uterine function on embryonic and fetal survival. J. L. Vallet*, USDA, ARS, RLH US Meat Animal Research Center, Clay Center, NE, USA.
4:30 PM	955	Role of placental function in mediating conceptus growth and survival. M. E. Wilson*, West Virginia University.

ASAS/ADSA Production, Management, and Environment: Management and Production Practices: Beef (Cow-Calf and Feedlot) and Sheep

Chair(s):Ralph Cleale, Fort Dodge Animal Health

Room: 122-123

Time	Abstract Number	
1:00 PM	956	Factors affecting profitability of the cow-calf enterprise. B.H. Dunn*, R.J. Pruitt, and E.D. Hamilton, South Dakota State University.
1:15 PM	957	Characterization of the production and financial performance of the cow-calf enterprise using Standardized Performance Analysis. B.H. Dunn*, E.D. Hamilton, and R.J. Pruitt, South Dakota State University.
1:30 PM	958	Management factors affecting selling prices of beef calves. T. R. Troxel*, M. S. Gadberry, S. Cline, J. Foley, G. Ford, D. Urell, and R. Wiedower, University of Arkansas Cooperative Extension Service, Little Rock, AR.
1:45 PM	959	Impact of the phenotypic expression of calf genetics on the selling price of beef calves. M. S. Gadberry*, T. R. Troxel, S. Cline, J. Foley, G. Ford, D. Urell, and R. Wiedower, University of Arkansas Cooperative Extension Service, Little Rock, AR.
2:00 PM	960	Evaluation of stocking rate and breed type on cattle feedlot production costs and carcass value. J. J. Cleere*[1], A. D. Herring[1], J. W. Holloway[2], H. Lippke[2], C. R. Long[3], F. M. Rouquette[3], and B. G. Warrington[2], [1]Texas Tech University, Lubbock, [2]Texas Agricultural Experiment Station, Uvalde, [3]Texas Agricultural Experiment Station, Overton.
2:15 PM	961	Phenotypic relationships between serial ultrasound measures of body composition in commercial beef feedlot animals determined with a random regression model. T.L. Fernandes*[1], S.P. Miller[1], and C.J.B. Devitt[2], [1]University of Guelph, Guelph, Ontario, Canada, [2]Beef Improvement Ontario, Guelph, Ontario, Canada.
2:30 PM	962	Effect of different implant regimes on the accuracy of ultrasound for prediction of body composition characteristics in beef cattle. T.L. Perkins and B.L. Frieden*, Southwest Missouri State University.
2:45 PM		Break
3:15 PM	963	Effects of anabolic implants on intramuscular lipid deposition. K. R. Smith*[1], J. R. Sackmann[1], S. K. Duckett[1], and T. D. Pringle[1], [1]University of Georgia, Athens, GA.
3:30 PM	964	Effects of implants on growth performance of steers wintered on dormant native tallgrass prairie, subsequent performance, and carcass merit.. G.W. Horn*, C.J. Ackerman, S.I. Paisley, and B.A. Gardner, Oklahoma Agricultural Experiment Station, Stillwater, OK/USA.
3:45 PM	965	Effect of feed intake restriction on animal performance and carcass characteristics. C.D. Drager*, M.S. Brown, M. Jeter, P. Dew, and E. Cochran, West Texas A&M University.
4:00 PM	966	Feedlot performance and carcass characteristics of Mashona-sired steers. G. C. Duff*, D. A. Walker, K. J. Malcolm-Callis, J. E. Sawyer, J. Weaver, and M. G. Thomas, Clayton Livestock Research Center, New Mexico State University, Clayton.
4:15 PM	967	Effect of two weaning systems on milk composition, storage, and ejection in dairy ewes. B. C. McKusick*[1], Y. M. Berger[1], P. G. Marnet[2], and D. L. Thomas[1], [1]University of Wisconsin-Madison, Madison, WI, [2]Institut National de la Recherche Agronomique, Rennes, France.
4:30 PM	968	Supplementing ewe diets with a microbial enzyme preparation (Fibrozyme). I. Effects on production characteristics during lactation. D. K. Aaron*[1], D. G. Ely[1], W. P. Deweese[1], E. Fink[1], B. T. Burden[1], and K. A. Dawson[2], [1]University of Kentucky, Lexington, KY, [2]Alltech Biotechnology Center, Nicholasville, KY.

4:45 PM	969	Supplementing ewe diets with a microbial enzyme preparation (Fibrozyme). II. Effects on nutrient utilization during lactation. D. G. Ely*[1], D. K. Aaron[1], W. P. Deweese[1], E. Fink[1], B. T. Burden[1], and K. A. Dawson[2], [1]University of Kentucky, Lexington, KY, [2]Alltech Biotechnology Center, Nicholasville, KY.

ASAS/ADSA Ruminant Nutrition: Growing Cattle

Chair(s):J.G. Andrae, University of Georgia

Room: Sagamore 6&7

Time	Abstract Number	
1:00 PM	970	Influence of mass of ruminal contents on voluntary intake of steers fed concentrate and forage diets. Marcela A. Schettini*, Edward C. Prigge, and Eric L. Nestor, West Virginia University.
1:15 PM	971	Intake characteristics of beef steers consuming hay ad libitum. E.E.D. Felton* and M.S. Kerley, University of Missouri, Columbia Missouri.
1:30 PM	972	Effect of rate of liveweight gain during winter grazing on blood constituents during adaptation of cattle in the feedlot. M. J. Hersom, R. P. Wettemann, G. W. Horn, and C. R. Krehbiel, Oklahoma Agricultural Experiment Station, Stillwater, OK.
1:45 PM	973	Coastal and Tifton 85 hay digestion by steers: I. Cultivar and maturity effects.. G. M. Hill*[1], R. N. Gates[2], J. W. West[1], R. S. Watson[1], and B. G. Mullinix[1], [1]University of Georgia, Tifton, GA/USA, [2]USDA-ARS, Tifton, GA/USA.
2:00 PM	974	Coastal and Tifton 85 hay digestion by steers: II. Cultivar, maturity and energy effects.. G. M. Hill*[1], R. N. Gates[2], J. W. West[1], R. S. Watson[1], and B. G. Mullinix[1], [1]University of Georgia, Tifton, GA/USA, [2]USDA-ARS, Tifton, GA/USA.
2:15 PM	975	Effect of intake level on the body composition and net energy requirement of Nellore steers and bulls for maintenance and growth. L.O. Tedeschi*[1], D.G. Fox[1], C. Boin[2], P.R. Leme[3], and G.F. Alleoni[4], [1]Cornell University, Ithaca, NY, USA, [2]ESALQ-USP, Piracicaba, SP, Brazil, [3]FZEA-USP, Pirassununga, SP, Brazil, [4]Instituto de Zootecnia, Nova Odessa, SP, Brazil.
2:30 PM	976	Monitoring energy expenditure in sheep from daily heart rate measurement. A Arieli*[1], A Kalouti[2], Y Aharoni[3], and A Brosh[3], [1]Hebrew University of Jerusalem, Israel, [2]Wageningen Agricultural University, Netherlands, [3]Agricultural Research Organization, Ramat Yishay, Israel.

PSA Pathology: Session II

Chair(s):Geraldine Huff, USDA-ARS

Room: 209

Time	Abstract Number	
1:00 PM	977	Pathogenesis of ascites syndrome in broiler chicken in relation to combined E. coli and infectious bronchitis virus (IBV) infection. M.S. Youssef*[Fac.], A.H. Bayoumi[Fac.], A.Z. Mahmoud[Fac.], S. Mousa[Fac.], and M. Mubarak[Fac.], [Fac.]Veterinary Medicine, Assiut University, Assiu, Egypt, [Fac.]Veterinary Medicine, Assiut University, Assiu, Egypt, [Fac.]Veterinary Medicine, Assiut University, Assiu, Egypt, [Fac.]Veterinary Medicine, Assiut University, Assiu, Egypt, [Fac.]Veterinary Medicine, Assiut University, Assiu, Egypt.
1:15 PM	978	Clinicopathological studies on ascites syndrome in broiler chickens with special reference to the role of hypoxia. A.Z. Mahmoud*[Fac.], A.H. Bayoumi[Fac.], S. Mousa[Fac.], M.S. Youssef[Fac.], and M. Mubarak[Fac.], [Fac.]Veterinary Medicine, Assiut Univ., Assiut, Egypt, [Fac.]Veterinary Medicine, Assiut Univ., Assiut, Egypt, [Fac.]Veterinary Medicine, Assiut Univ., Assiut, Egypt, [Fac.]Veterinary Medicine, Assiut Univ., Assiut, Egypt, [Fac.]Veterinary Medicine, Assiut Univ., Assiut, Egypt.

1:30 PM	979	Experimental study on sodium intoxication in relation to ascites syndrome in broiler chickens. M. Mubarak*[Fac.], A.H. Bayoumi[Fac.], A.Z. Mahmoud[Fac.], M.S. Youssef[Fac.], and S. Mousa[Fac.], [Fac.]Vet. Med., Assiut Univ., Assiut, Egypt, [Fac.]Vet. Med., Assiut Univ., Assiut, Egypt, [Fac.]Vet. Med., Assiut Univ., Assiut, Egypt, [Fac.]Vet. Med., Assiut Univ., Assiut, Egypt, [Fac.]Vet. Med., Assiut Univ., Assiut, Egypt.
1:45 PM	980	Influence of IBDV on the immune system and incidence of proventriculitis in SPF leghorns. T.V. Dormitorio*[1], J.J. Giambrone[1], and K. Cookson[2], 1Auburn University, Auburn, Alabama, [2]Ft. Dodge Animal Health, Lawrenceville, Georgia.
2:00 PM	981	The role of intracellular sodium in skeletal muscle damage: Effects on muscles from two broiler genotypes. D. A. Sandercock* and M. A. Mitchell, Roslin Institute, Roslin, Midlothian, UK.
2:15 PM	982	Idiopathic myopathy in commercial turkeys: A relationship with muscle fiber diameter ?. M.A. Mitchell*[1], L.J. Mills[1], M. Mahon[2], and S. Gilpin[2], [1]Roslin Institute, Roslin, Midlothian, UK, [2]Manchester University, Manchester, UK.
2:30 PM	983	Detection of experimental *Salmonella enteritidis* and *S. typhimurium* infections in laying hens by fluorescence polarization assay for egg yolk antibodies. R. K. Gast*[1], M. S. Nasir[2], M. E. Jolley[2], P. S. Holt[1], and H. D. Stone[1], [1]USDA-ARS Southeast Poultry Research Laboratory, Athens, GA, [2]Diachemix Corporation, Grayslake, IL.
2:45 PM	984	Efficacy of bacteriophage to prevent *Escherichia coli* respiratory infection in broiler chickens when administered in the drinking water prior to challenge. W. E. Huff*, G. R. Huff, N. C. Rath, J. M. Balog, H. Xie, P. A. Moore, Jr., and A. M. Donoghue, PPPSRU/ARS/USDA Fayetteville, AR.
3:00 PM	985	Effect of feed supplementation with vitamin D metabolites in a dexamethasone-*Escherichia coli* challenge model of turkey osteomyelitis complex. G. R. Huff*, W. E. Huff, N. C. Rath, and J. M. Balog, PPPSRU/ARS/USDA, Fayetteville AR.

SATURDAY, JULY 28, 2001

Scientists as Spokespersons: Presenting a Positive View of Animal Agriculture

Chair(s):Lorie R. North, McCormick Company, Kansas City, Missouri and Kori Skinner, McCormick Company, Des Moines, Iowa

Room: 150-152

8:00 AM - 10:00 AM

Presenters: Kathy Cornett and Kori Skinner, McCormick Company

Take a 360-degree look at critical consumer, activist, and regulatory communications issues surrounding animal agriculture. Food safety, animal welfare, biotechnology, environmental protection, and labor relations – everywhere you turn these issues have great potential to impact our industry. We'll focus on anti-ag activists and the effect they're having. Understand who's who, where they get their resources, and what they claim they want. Then, learn how ag is responding, where we've been successful, and how we're just throwing fuel on the fire. Finally, discover what you can do to help balance the scales and protect, even improve, the image of our industry as well as your company and products.

All professionals and graduate students are encouraged to attend. The presentation will be appropriate for product research and development scientists, product marketing managers, field sales/technical personnel, and communications professionals.

Mixed Models Workshop

Chair(s):Rob Templeman, Michigan State University and L. D. Douglass, University of Maryland

Room: 108

Presenters: R. J. Templeman, Michigan State University, East Lansing and L. D. Douglass, University of Maryland, College Park

Workshop presented in two sessions (registrants should attend both sessions).

Friday, 1:00 PM – 5:00 PM

Saturday, 8:00 AM – 12:00 PM

A professional development opportunity in the use of mixed models for the analyses of common experimental designs in animal and dairy science. Emphasis on SAS® PROC MIXED. All professional and graduate student members are invited to register.

Pre-registration required: $60/person

Ractopamine at One Year of Commercial Application

Chair(s):Matthew Doumit, Michigan State University

Room: Sagamore 3

Time	Abstract Number	
8:00 AM		Introduction
8:10 AM	986	Biological basis of the ractopamine response. S.E. Mills*, Purdue University.
8:50 AM	987	Impact of nutrition on the ractopamine response. W. C. Weldon* and T. A. Armstrong, Elanco Animal Health, Greenfield Indiana.
9:30 AM	988	Genetic variation in the response to ractopamine. A.P. Schinckel*[1], B.T. Richert[1], and C.T. Herr[1], [1]Purdue University.
10:10 AM		Break
10:25 AM	989	Effects of ractopamine on meat quality. F. K. McKeith* and M. Ellis, University of Illinois, Champaign-Urbana, IL.
11:05 AM	990	Potential impact of ractopamine on environmental stewardship. A.L. Sutton*, B.T. Richert, S.L. Hankins, S.A. DeCamp, and A.L. Carroll, Purdue University.
11:45 AM		Final discussion

Teaching Techniques for Meat Judging Coaches

Chair(s):Mark Miller, Texas Tech University

Room: 138-139

Time	Abstract Number	
	991†	Preparing animal science graduates to think critically, compare logically, decide independently, solve problems rationally, communicate effectively and lead decisively. Gary C. Smith*[CSU], Colorado State University.

8:00 AM	992	Techniques and philosophy for training students to grade carcass beef. J.W. Wise*[1] and H.G. Dolezal[2], [1]USDA, Agricultural Marketing Service, [2]Excel Corporation.
8:30 AM	993	Effectively teaching meat judging specifications. Duane Wulf*[1] and Gretchen Hilton[2], [1]South Dakota State University, [2]Texas Tech University.
9:00 AM	994	Coaching to succeed: Effective strategies for answering questions in meat evaluation. R M Harp*[1], R C Hines[1], and R D Stites[2], [1]Tarleton State University, [2]Eastern Oklahoma State College.
9:30 AM		Note-taking for reasons and reason writing strategies. D. Griffin, Texas A&M University and J. Unruh, Kansas State University.
10:00 AM		Break
10:15 AM		Recruitment and retention of team members and fundraising. B. Morgan*, Oklahoma State University.
10:45 AM	995	Team behavior; at home, on the road, in the plant, at the contest and after the contest. P.T. Berg*, North Dakota State Univ.
11:15 AM		Relationship with administrators and Department Heads. T. Carr, University of Illinois and G. Smith, Colorado State University.
11:45 AM		Workshop wrap-up. M. Miller*, Texas Tech University.

†Presented Wednesday, July 25, 11:30 AM – 1:00 PM during the AMSA Meat Coaches & Administrator's Lunch.

The Role of Forages in Enhancing Food Safety and Quality and a Clean Environment

Chair(s):Jean Bertrand, Clemson University

Sponsor(s):Mycogen Seeds; Hagsten Enterprises International, Inc.; and QualiTech Co.

Room: Sagamore 4

Time	Abstract Number	
8:00 AM	996	Forage feeding to reduce pre-harvest E. coli populations in cattle. T. R. Callaway*[1], R. O. Elder[1], J. E. Keen[2], R. C. Anderson[1], and D. J. Nisbet[1], [1]USDA/ARS-Southern Plains Agricultural Research Center, College Station, TX, [2]USDA/ARS-Meat Animal Research Center, Clay Center, NE.
8:40 AM		Questions
8:45 AM	997	Keeping *Escherichia coli* O157:H7 down on the farm. M. P. Doyle*[1], [1]University of Georgia.
9:25 AM		Questions
9:30 AM	998	Role of diet on conjugated linoleic acid content of milk and meat. T. R. Dhiman*[1], [1]Department of Animal, Dairy and Veterinary Sciences, Utah State University, UT 84322-4815.
10:10 AM		Questions
10:15 AM	999	Physiological and productive responses of dairy cows to intake and characteristics of fiber. D. Sauvant[1] and D.R. Mertens*[2], [1]INRA-Institut National Agronomique, Paris-Grignon, [2]US Dairy Forage Research Center, Madison, WI.
10:55 AM		Questions
11:00 AM	1000	Impacts of livestock forage and pasture use on carbon sequestration and greenhouse gas emissions. D.E. Johnson*, H.W. Phetteplace, A.F. Seidl, and R. Conant, Colorado State University, Ft Collins, CO.
11:45 AM		Questions

An Integrated Approach to Minimize Animal Waste Excretion by Optimizing Feed Utilization

Chair(s):C. R. Richardson, Texas Tech University

Room: 209

Time	
8:00 AM	Introduction and background information. C. R. Richardson*, Texas Tech University.
8:10 AM	Anticipated benefits of a National Animal Feed Information System. D. R. Mertens*, USDA-ARS
8:25 AM	American Feed Industry Association—Perspective. R. Sellars*, Arlington, VA.
8:40 AM	National Research Council—Perspective. C. Kirk-Baer*, Washington, DC.
8:55 AM	Center for Veterinary Medicine, FDA—Perspective. W. D. Price*, Rockville, MD.
9:10 AM	Consortium for cattle feeding and environmental sciences—Purpose and overview of projects. K. R. Pond*, Texas Tech University.
9:25 AM	Break
9:40 AM	Swine—Perspective. R. A. Easter*, University of Illinois.
9:55 AM	Beef cattle—Perspective. L. W. Greene*, Texas Agricultural Experiment Station.
10:10 AM	Dairy cattle—Perspective. R. G. Hinders*, Hinders Nutrition Consulting.
10:25 AM	Poultry—Perspective. P. W. Waldroup*, University of Arkansas.
10:40 AM	Information dissemination site. G. V. Pollard*, Center for Feed Industry Research and Education, Texas Tech University.

ASAS/ADSA Breeding and Genetics: Genetic Parameters of Beef Cattle

Chair(s):D.D. Kress, University of Montana

Room: 120-121

Time	Abstract Number	
8:00 AM	1001	Development and use of genetic markers to predict marbling and tenderness in beef cattle. F. L. Fluharty* and D. J. Jackwood, The Ohio State University, Wooster, OH.
8:30 AM	1002	Evidence for an association between a *Hind* III PCR-RFLP at the bovine insulin-like growth factor binding protein-2 (IGFBP-2) locus and growth and carcass traits in beef cattle. M. Pagan*, J. Cowley, N.E. Raney, and C.W. Ernst, Michigan State University, East Lansing.
8:45 AM	1003	Effects of selection for yearling ultrasound intramuscular fat percentage in Angus bulls on carcass traits of progeny. R. L. Sapp*, J. K. Bertrand, and T. D. Pringle, University of Georgia, Athens.
9:00 AM	1004	Estimation of heritability for serially measured ultrasound fat thickness and percentage of intramuscular fat in Angus cattle using random regression models. A. Hassen*, D. E. Wilson, and G. H. Rouse, Iowa State University, Ames, IA, USA.
9:15 AM	1005	Use of repeatedly measured ultrasound percentage of intramuscular fat data to evaluate individual animal rankings. A. Hassen*, D. E. Wilson, and G. H. Rouse, Iowa State University,Ames,Iowa, USA.
9:30 AM	1006	Heritability estimates of visceral fat weight. L. S. Gould*[1], J. A. Marchello[2], and S. K. DeNise[2], [1]Red Angus Association of America, Denton, Texas, [2]University of Arizona, Tucson, Arizona.
9:45 AM		Break

10:15 AM	1007	Simulation of economic responses to simulated selection for increased conception rate in beef cattle. Lowell Gould*[1] and Dale VanVleck[2], [1]Red Angus Association of America, Denton, Texas, [2]USDA, ARS, MARC, Lincoln, NE.
10:30 AM	1008	Genetic correlations between mature and birth or weaning weights of Hereford cattle. J. M. Rumph*[1], R. M. Koch[1], K. E. Gregory[2], L. V. Cundiff[2], and L. D. Van Vleck[2,3], [1]University of Nebraska, Lincoln, NE, [2]USDA, ARS, USMARC, [2]Clay Center, NE, [3]Lincoln, NE.
10:45 AM	1009	Effect of separating contemporary group by age of dam in Simmental genetic evaluation. Z. Zhang*, E.J. Pollak, and R.L. Quaas, Cornell University.
11:00 AM	1010	Experimental selection for reduced calving difficulty: Estimated breeding value trends. G. L. Bennett*, USDA, ARS, US Meat Animal Research Center.
11:15 AM	1011	Nonlinear relationship between birth weight and calving ease determined with ecological analysis in a multi-breed commercial beef herd. Y. Wang*, S.P. Miller, J.W. Wilton, P. Sullivan, and L.R. Banks, University of Guelph, Guelph, Ontario, Canada.
11:30 AM	1012	Genotype by country interactions for growth traits in Charolais populations across four countries. K. A. Donoghue* and J. K. Bertrand, University of Georgia, Athens GA.
11:45 AM	1013	Evaluation of milk yield and udder characteristics in beef cows sired by high or low Milk EPD bulls. K. J. Stutts* and D. S. Buchanan, Oklahoma Agricultural Experiment Station, Stillwater, OK.

ASAS/ADSA Breeding and Genetics: Genetic Parameters of Dairy Cattle

Chair(s):R.D. Shanks, University of Illinois

Room: 143-144

Time	Abstract Number	
8:00 AM	1014	Possibilities for genetic improvement of fertility in US dairy cattle. K. A. Weigel*[1] and J. S. Clay[2], [1]University of Wisconsin, Madison, [2]Dairy Records Management Systems, Raleigh, North Carolina.
8:30 AM	1015	Effect of heat stress on Non-Return rate in Holstein cattle. O Ravagnolo and I Misztal*, The University of Georgia, Athens, GA.
8:45 AM	1016	Analysing survival score and calving interval as a measure of fertility in Holstein Friesian cows in seasonal calving herds. V.E. Olori*[1], T.H.E Meuwissen[2], and R.F. Veerkamp[2], [1]Irish Cattle Breeding Federation, Bandon, Co. Cork, Ireland, [2]Institute for Animal Science and Health, ID-Lelystad, Lelystad, The Netherlands.
9:00 AM	1017	Correlations among body condition score change, body condition score, production and reproductive performance. C. D. Dechow*[1], G. W. Rogers[1], and J. S. Clay[2], [1]Pennsylvania State University, [2]Dairy Records Management Systems.
9:15 AM	1018	Calving disorders of Holstein cows selected for large versus small body size. B.J. Heins*, L.B. Hansen, A.J. Seykora, and G.D. Marx, University of Minnesota, St. Paul.
9:30 AM	1019	Genetic parameters for stillbirth in Dutch Black-and-White dairy cattle. A. Harbers*, L. Segeren, and G. De Jong, CR Delta, Arnhem, The Netherlands.
9:45 AM		Break
10:15 AM	1020	Timeliness of progeny testing through artificial insemination and percentage of bulls returned to service. H.D. Norman*[1], R.L. Powell[1], J.R. Wright[1], and C.G. Sattler[2], [1]Agricultural Research Service, USDA, Beltsville, MD, [2]National Association of Animal Breeders, Columbia, MO.
10:30 AM	1021	Adjustment for heterogeneity of genetic variance across herds in the Italian Holstein Friesian. F. Canavesi*[1], M. del P. Schneider[1], M. Cassandro[2], A. Bagnato[3], and A. B. Samore'[1], [1]ANAFI, Italy, [2]University of Padova, Italy, [3]University of Milan, Italy.
10:45 AM	1022	Simultaneous accounting for heterogeneity of (co)variance components in genetic evaluation of type traits. N. Gengler[1,2], G. R. Wiggans*[3], J. R. Wright[3], and T Druet[1,2], [1]Gembloux Agricultural University, Gembloux , [2]and National Fund for Scientific Research, Brussels, Belgium, [3]Agricultural Research Service, USDA, Beltsville, MD.

11:00 AM	1023	Evaluation of classifiers that score type traits and body condition score using common sires. R. F. Veerkamp[1], C. L. M. Gerritsen[1], E. P. C. Koenen[2], A. Hamoen[2], and G. De Jong*[2], [1]Institute of Animal Science and Health, ID-Lelystad, The Netherlands, [2]NRS, Arnhem, The Netherlands.
11:15 AM	1024	Evaluations for final score at different ages. L. Klei*[1], S. Tsuruta[2], I. Misztal[2], and T. J. Lawlor[1], [1]Holstein Association USA, Inc., Brattleboro, VT, [2]Unversity of Georgia, Athens, GA.
11:30 AM	1025	Genetic correlations of pathogen-specific clinical mastitis with milk yield and somatic cell score. Y. de Haas*[1], H.W. Barkema[2], and R.F. Veerkamp[1], [1]Institute for Animal Science and Health, ID-Lelystad, The Netherlands, [2]Animal Health Service, Drachten, The Netherlands.
11:45 AM	1026	Genetic evaluation of episodes of short and long duration of elevated somatic cell scores. X. Li, M. M. Schutz*, A. P. Schinckel, and D. L. Lofgren, Purdue University.

ASAS/ADSA Physiology: Estrous Synchronization

Chair(s):Milo Wiltbank, University of Wisconsin

Room: 206-207

Time	Abstract Number	
8:00 AM	1027	Use of ECP in a presynchronized timed artificial insemination protocol for lactating dairy cows. E. R. Jordan*[1], S. M. Pancarci[2], M. J. Schouten[3], and W. W. Thatcher[2], [1]Texas A and M University, [2]University of Florida, [3]Schouten Dairy, Hico, TX.
8:15 AM	1028	Presynchronization of estrous cycles in lactating dairy cows with Ovsynch + CIDR and resynchronization of repeat estrus using the CIDR. S.Z. El-Zarkouny*, J.A. Cartmill, A.M. Richardson, M.A. Medina-Britos, B.A. Hensley, and J.S. Stevenson, Kansas State University, Manhattan.
8:30 AM	1029	Characteristics of estrus before and after insemination and fertility after estrus. synchronization with GnRH, PGF2a, and progesterone in dairy heifers. A.M. Richardson*, B.A. Hensley, and J.S. Stevenson, Kansas State University, Manhattan.
8:45 AM	1030	Time of ovulation and follicular development in estrous synchronized Brahman females. S.R. Tatman[1], D.A. Neuendorff*[1], A.W. Lewis[1], T.W. Wilson[1], C.R. Looney[2], and R.D. Randel[1], [1]Texas A&M Research Center, Overton, TX, [2]Ovagenix, LP, Bryan, TX.
9:00 AM	1031	Ovulation synchronization using progestins, GnRH, and PGF_{2a} before timed AI (TAI) and resetting follicular waves for resynchronization of repeat inseminations of suckled beef cattle. M.A. Medina-Britos*[1], A.M. Richardson[1], G.C. Lamb[2], C.R. Dahlen[2], S.K. Johnson[1], S.Z. El-Zarkouny[1], B.A. Hensley[1], and J.S. Stevenson[1], [1]Kansas State University, [2]University of Minnesota.
9:15 AM	1032	Addition of GnRH to a melengestrol acetate (MGA)-prostaglandin F_{2a} (PG) estrus synchronization protocol in postpartum beef cows. D. J. Patterson*, J. F. Bader, K. K. Graham, F. N. Kojima, G. A. Perry, M. S. Kerley, and M. F. Smith, University of Missouri, Columbia, MO.
9:30 AM	1033	Comparison of melengestrol acetate (MGA)-based estrus synchronization protocols in yearling beef heifers. F. N. Kojima*, J. F. Bader, J. E. Stegner, B. E. Salfen, S. L. Wood, M. F. Smith, and D. J. Patterson, University of Missouri, Columbia, MO.
9:45 AM	1034	Effects of a progestin on ovulation, accessory CL formation and follicular development during GnRH and PGF_{2a} treatment in beef cattle. M.L. Mussard*, C.R. Burke, D.E. Grum, and M.L. Day, Ohio State University, Columbus, OH/USA.
10:00 AM	1035	Estradiol enhances synchrony and fertility to artificial insemination (AI) or embryo transfer (ET) in Brangus females. J.A. Meyer*[1], C.R. Looney[2], C.R. Long[2], J.A. Thompson[1], M.L. Day[3], H.D. Hafs[4], and D.W. Forrest[1], [1]Texas A&M University, College Station, TX , [2]Ovagenix, Bryan, TX , [3]The Ohio State University, Columbus, OH, [4]Rutgers University, New Brunswick, NJ.

ASAS/ADSA Production, Management, and Environment: Waste Management for Beef and Swine; Reproductive Practices and Measures

Chair(s):Bert Moore, North Dakota State University

Room: 109-110

Time	Abstract Number	
7:45 AM	1036	Decreasing nitrogen losses from open-dirt feedlot pens by manipulation of organic matter excretion. G. E. Erickson*, T. J. Klopfenstein, and C. T. Milton, [1]University of Nebraska-Lincoln.
8:00 AM	1037	Validation of the nitrogen balance in a whole system feedlot model. H. Fairweather, K. A. Beauchemin, and K. M. Koenig, Agriculture and Agri-Food Canada, Research Centre, Lethbridge, AB, Canada.
8:15 AM	1038	Digestibility of several known dietary manipulations used in combination to reduce nutrient excretion in pigs. S.L. Hankins*, D.C. Kendall, B.E. Hill, and B.T. Richert, Purdue University, West Lafayette, IN.
8:30 AM	1039	Effects of soybean hulls in a commercial diet on pig performance, manure composition, and selected air quality parameters in swine facilities. S.A. DeCamp[1], B.E. Hill*[1], S.L. Hankins[1], D.C. Kendall[1], B.T. Richert[1], A.L. Sutton[1], D.T. Kelly[1], M.L. Cobb[1], D.W. Bundy[2], and W.J. Powers[2], [1]Purdue University, Lafayette, IN , [2]Iowa State University, Ames, IA.
8:45 AM	1040	Effects of dietary phytase and aluminum chloride manure amendments on phosphorus in swine manure. D.R. Smith*[1], P.A. Moore, Jr.[2], C.V. Maxwell[1], and T.C Daniel[1], [1]University of Arkansas, Fayetteville, [2]USDA-ARS, Fayetteville.
9:00 AM	1041	Effects of monensin on microbial activity in in vitro swine manure slurries. M.A. Cotta*, R.L. Zeltwanger, and T.R. Whitehead, USDA/ARS/Natl. Cent. for Agricul. Utilizn. Res.
9:15 AM	1042	Factors influencing estrus and ovulation in weaned sows as determined by transrectal ultrasound. R. Knox*[1] and S. Rodriguez-Zas, [1]University of Illinois, Urbana IL.
9:30 AM	1043	Use of CowTemp™ temperature monitoring system for prediction of calving onset in beef cows. J. N. Nielsen*[1], S. S. Donkin[1], K. Vanzant[1], P. A. McAfee[2], and S. A. Brune[2], [1]Purdue University, West Lafayette, IN, [2]Innotek, Inc., Garrett, IN.
9:45 AM		Break
10:00 AM	1044	Optimal days in period to detect a change in estrus detection. A. de Vries* and B.J. Conlin, University of Minnesota, St. Paul, Minnesota.
10:15 AM	1045	The effect of days open on milk produced per day across sequential lactations. J.D. Ferguson*[1], D.T. Galligan[1], G. Atzaro[2], S. Ventura[2], and G. Licitra[2], [1]University of Pennsylvania, [2]Consorzio-Ricerca Filiera Lattiero-Caesaria.
10:30 AM	1046	Conception rates of sequential inseminations after batch-thawing multiple straws of semen: A professional technician case study. M. J. Sprenger[1], J. M. DeJarnette*[2], and C. E. Marshall[2], [1]Paddocks Breeding Service, Warsaw, NY, [2]Select Sires, Inc., Plain City, OH.
10:45 AM	1047	Results of breeding soundness evaluations performed on Senepol bulls in the US Virgin Islands. R.W. Godfrey* and R.E. Dodson, [1]University of the Virgin Islands, Agricultural Experiment Station, St. Croix.
11:00 AM	1048	Effects of GnRH-PGF based estrus synchronization with or without short-term progestin exposure on reproductive performance of postpartum suckled beef cows. J. M. DeJarnette, R. A. Wallace, and C. E. Marshall, Select Sires, Inc., Plain City, OH.
11:15 AM	1049	Effectiveness of a stand-alone electronic estrus detection device - MountCount. H. K. Baitis*, J. B. Hall, D. E. Eversole, and D. Cuddy, Virginia Polytechnic Institute and State University, Blacksburg, Virginia.
11:30 AM	1050	Lowering dietary P in dairy rations reduces the vulnerable P fraction in manure. Z. Dou*[1], K. Knowlton[2], G. Zhang[1], Z. Wu[3], and R. Kohn[4], [1]University of Pennsylvania, [2]Virginia Tech, [3]Penn State University, [4]University of Maryland.
11:45 AM	1051	Reducing phosphorus solubility in animal manures using chemical amendments. J. D. Toth*[1], G. Zhang[1], Z. Dou[1], and J. D. Ferguson[1], [1]University of Pennsylvania.

Beyond pH: Metabolic Factors Affecting Pork Quality

Chair(s):David Meisinger, NPPC

Sponsor(s):NPPC

Room: Regency Ballroom A & B, Hyatt

Time	Abstract Number	
8:00 AM		Welcome on behalf of NPPC and AMSA. D. Meisinger*, NPPC and AMSA.
8:05 AM		Pork quality challenges and rewards in the U.S. production system. R. Johnson*, Farmland Foods.
8:50 AM		WHC and tenderness of pork: Understanding the mechanisms. P. Purslow*, Stirling University, Scotland.
9:35 AM		Break
10:00 AM	1052	The effect of the RN^- allele on meat quality and how the gene was discovered. K. Lundstrom* and L. Andersson, Swedish University of Agricultural Sciences, Uppsala, Sweden.
10:45 AM		Effects of stress at slaughter on water-holding capacity and protein denaturation/extractability. R. Warner*, Agriculture Victoria, Australia.
11:30 AM		Roundtable discussion
12:00 PM		Lunch
1:30 PM		Recent studies: Biochemical factors and practical traits. M. Doumit*, Michigan State University.
2:00 PM		Metabolic factors influencing ultimate pH. R. van Laack*, University of Tennessee.
2:30 PM		Role of myofibrillar ATPase in modeling postmortem metabolism. B. Bowker*, Purdue University.
3:00 PM		Break
3:20 PM		The role of histidine-containing compounds on the buffering capacity of muscle. E. Decker*, University of Massachusetts.
3:50 PM		Wrap-up and results discussion. E. Huff-Lonergan, Iowa State University.