Welcome

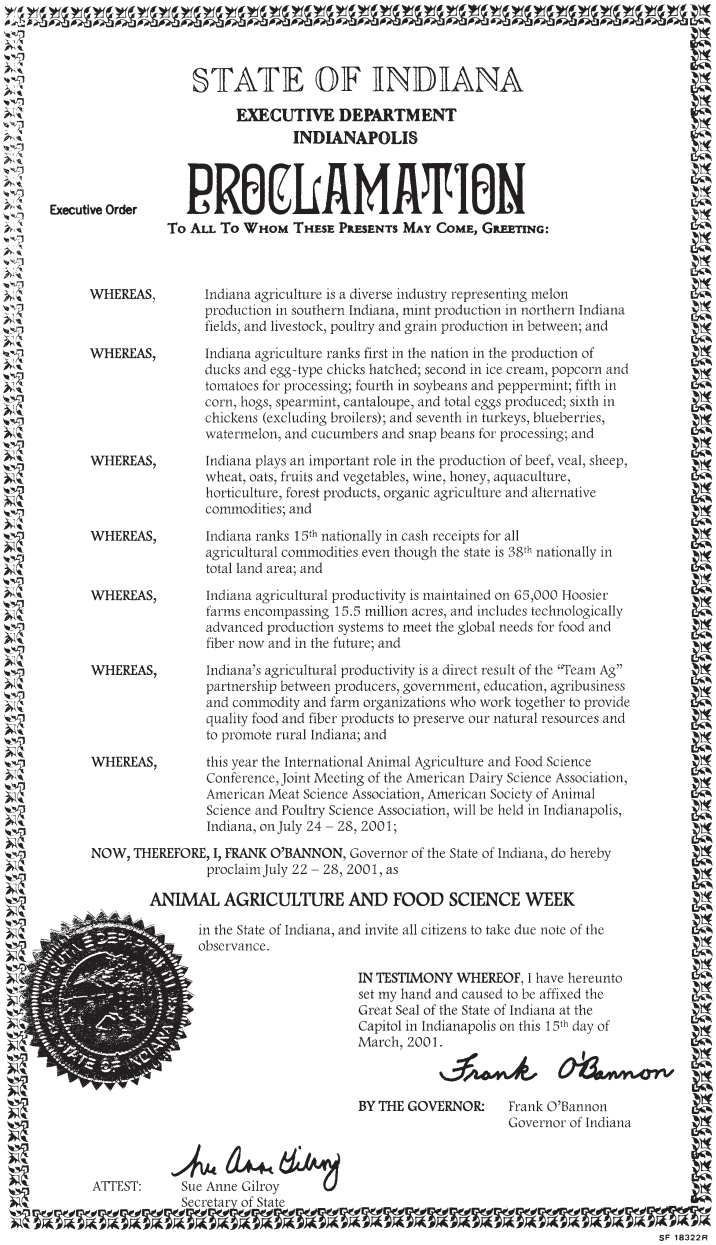
The International Animal Agriculture and Food Science Conference is a historic event. This joint meeting of ASAS, ADSA, and PSA and the Reciprocal Meat Conference of AMSA brings together scientists from around the world to discuss and address the issues and challenges facing food animal agriculture. The challenges facing agriculture are becoming increasingly complex, and no entity is immune from global influence. The IAAFSC has come at a time when our society reads or hears about some aspect of animal agriculture and food supply almost daily. Acronyms such as GMOs, CAFOs, F&M, and BSE are now routinely included in headlines and sound bites. It is fitting that we are able, at this time, to call on the expertise and resources of the four societies and the Federation of Animal Science Societies to join together to address the issues and challenges facing food animal agriculture.

The representatives to the Program Coordinating Committee, Larry Benyshek (ASAS), David Buchanan (ASAS), Dennis Burson (RMC Chair), Tom Carr (AMSA), Michael Dikeman (AMSA), Thomas Gruetzmacher (ADSA), James Linn (ADSA), and Sally Noll (PSA), have created a framework to bring together all four societies into one conference. Nearly fifty symposia and invited lectures have been organized to address issues facing food animal agriculture. In addition, over 1800 scientific abstracts will be presented during this conference. As the plan for this joint conference evolved, it became readily apparent that each society's meeting has unique characteristics that are important to the memberships. When you review this program, you will see those familiar nuances, but you will also find some new collaborative efforts that would not have been possible if this were not a joint endeavor.

This conference is the result of the combined efforts of the membership; staff of ASAS, ADSA, PSA, AMSA, and FASS; supporters; and sponsors. Enjoy your stay in Indianapolis, and congratulations on being part of a new beginning for food animal agriculture.

Anthony J. Pescatore

Program Chair



STATE OF INDIANA

EXECUTIVE DEPARTMENT
INDIANAPOLIS

Executive Order

PROCLAMATION

To All To Whom These Presents May Come, Greeting:

WHEREAS, Indiana agriculture is a diverse industry representing melon production in southern Indiana, mint production in northern Indiana fields, and livestock, poultry and grain production in between; and

WHEREAS, Indiana agriculture ranks first in the nation in the production of ducks and egg-type chicks hatched; second in ice cream, popcorn and tomatoes for processing; fourth in soybeans and peppermint; fifth in corn, hogs, spearmint, cantaloupe, and total eggs produced; sixth in chickens (excluding broilers); and seventh in turkeys, blueberries, watermelon, and cucumbers and snap beans for processing; and

WHEREAS, Indiana plays an important role in the production of beef, veal, sheep, wheat, oats, fruits and vegetables, wine, honey, aquaculture, horticulture, forest products, organic agriculture and alternative commodities; and

WHEREAS, Indiana ranks 15th nationally in cash receipts for all agricultural commodities even though the state is 38th nationally in total land area; and

WHEREAS, Indiana agricultural productivity is maintained on 65,000 Hoosier farms encompassing 15.5 million acres, and includes technologically advanced production systems to meet the global needs for food and fiber now and in the future; and

WHEREAS, Indiana's agricultural productivity is a direct result of the "Team Ag" partnership between producers, government, education, agribusiness and commodity and farm organizations who work together to provide quality food and fiber products to preserve our natural resources and to promote rural Indiana; and

WHEREAS, this year the International Animal Agriculture and Food Science Conference, Joint Meeting of the American Dairy Science Association, American Meat Science Association, American Society of Animal Science and Poultry Science Association, will be held in Indianapolis, Indiana, on July 24 – 28, 2001;

NOW, THEREFORE, I, FRANK O'BANNON, Governor of the State of Indiana, do hereby proclaim July 22 – 28, 2001, as

ANIMAL AGRICULTURE AND FOOD SCIENCE WEEK

in the State of Indiana, and invite all citizens to take due note of the observance.

IN TESTIMONY WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Indiana at the Capitol in Indianapolis on this 15th day of March, 2001.

Frank O'Bannon

BY THE GOVERNOR: Frank O'Bannon
Governor of Indiana

ATTEST: Sue Anne Gilroy
Secretary of State

SF 18322R

International Animal Agriculture and Food Science Conference Implements Precautions in Wake of Foot and Mouth Epidemic

In light of the Foot and Mouth Disease epidemic and recent meeting cancellations, the Federation of Animal Science Societies (FASS) has implemented a number of precautions for this summer's joint meeting of the American Dairy Science Association, American Meat Science Association, American Society of Animal Science, and the Poultry Science Association, July 24-28 in Indianapolis, IN.

To help prevent Foot and Mouth Disease from reaching the United States, FASS strongly recommends that all meeting attendees adhere to the recommendations and guidelines put forth by USDA Animal and Plant Health Inspection Agency (APHIS), **http://www.aphis.usda.gov/oa/fmd/index.html**. FASS will provide all pre-registered meeting attendees updated information in early July. All meeting attendees are strongly urged to review the APHIS web site and guidelines periodically and two weeks prior to travel. In addition, these guidelines will be posted on the meeting web site at **http://www.fass.org/fass01**.

This first-time meeting between the four associations will serve as a forum for 4,000 scientists, researchers and student participants to exchange new information and developments in animal agriculture. With nearly 50 symposia being presented, attendees will gather vital information for the future of the animal agriculture industry.

Unlike other meetings, the International Animal Agriculture and Food Science Conference attendees are predominantly scientists working in academia, government, and industry; very few livestock producers attend this meeting. Scientific sessions will be held at the Indiana Convention Center; live animals are not present at any time during this meeting. To that end, the meeting host committee is taking into consideration and encouraging higher attention to biosecurity. All off-site tours where live animals are housed have been cancelled. The sponsoring organizations are working with their members to raise awareness of biosecurity precautions. In addition, FASS will be working with federal and state animal health agencies to be sure that adequate safeguards are in place prior to and throughout the meeting.

Conference Information

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Flip over for the Scientific Program

PRESENTERS: YOU SHOULD RECEIVE GUIDLINE INFORMATION VIA EMAIL. YOU MAY ALSO VISIT ***WWW.FASS.ORG/FASS01*** *FOR FURTHER INFORMATION, INSTRUCTIONS, AND GUIDELINES.*

Important Message

In the event that protestors interrupt your meetings, please ignore them. Their goal is to attract attention. Any attention you give them will only help them. Please ignore them and continue your regular business. Convention staff has a plan in place to handle these situations, and they depend on your cooperation. If you are approached by the media for an interview, please politely refuse and direct them to the convention's media room where spokespersons are available. Keep your cool and walk the other way.

Thank you for your cooperation.

Registration Materials

All registration materials are included in this mailing. Registration information and forms are also available by visiting the official meeting web site at **www.fass.org/fass01**.

Registration Deadline and Payment Options

Register by May 15 and save money. Payment is easy.

- Register and pay on-line at **www.fass.org/fass01**.
- Mail the registration form to IAAFSC Headquarters, 1111 N. Dunlap Ave., Savoy, IL 61874; Phone 217/356-3182; FAX 217/398-4119; E-mail: **fass@assochq.org**.
- Fax the completed form and credit card information to 217/398-4119.
- If you have already registered and would like to add additional events, you may do so by contacting IAAFSC Headquarters at (217) 356-3182, FAX (217) 398-4119, or e-mail: **fass@assochq.org**. You may also add events on site at the registration desk (all additional events will be added as space is available).
- No telephone registrations will be accepted.

Cancellation Policy

To be eligible for a refund of meeting registration fees, requests must be received in writing at IAAFSC Headquarters, 1111 N. Dunlap Ave, Savoy, IL 61874, before these cancellation dates.

On/Before	July 1, 2001	90% registration fee refund
After	July 1, 2001	NO REFUND

- The cancellation dates apply only to the meeting registration fees.
- Ticketed events may be cancelled because of minimum attendance requirements. Refunds will be issued for CANCELLED ticketed events.
- There will be NO REFUNDS for non-cancelled ticketed events.
- All approved refunds will be issued after the IAAFSC Meeting.

Student Rate 2001

This year, undergraduate students who are members of ADSA, AMSA, ASAS, or PSA receive free registration, if registered prior to May 15, 2001; after that date, they will be charged $25. Graduate student members are being charged $60, and nonmember students are being charged the same as nonmembers: $375 prior to May 15, 2001 and $500 after May 15, 2001. Nonmember students - please see the registration form for information on how to join and save on meeting registration fees.

Receipts and Name Badges

If you register before July 1, 2001, we will mail you a registration receipt, meeting badge, and appropriate tickets. Verify the receipt and contact the Headquarters Office if you have any questions. If registration is received after July 1, 2001, you may pick up your receipt, meeting badge, and appropriate tickets at the Registration area

in the Maryland Street Lobby of the Indiana Convention Center. **Please bring your meeting badge with you to the meeting. It is your admission to the meeting events and exhibit hall.**

Program Book

This program book will be sent to all members in May. Please bring the program with you to the meeting. Additional programs beyond the copy that is mailed to you, can be purchased at the registration desk for $5.

Abstract Book

Abstract books will not be mailed prior to the meeting. Participants will receive the book of abstracts in Indianapolis.

On-Site Registration

Sponsored by Elanco Animal Health. Registration will be located in the Maryland Street lobby of the Indiana Convention Center (see map, pages 30–31). Registration hours for the IAAFSC Meeting, including special symposia and other events, will be as follows:

Monday, July 23 ..... 2:00 p.m. – 5:00 p.m.

Tuesday, July 24 ..... 7:00 a.m. – 8:30 p.m.

Wednesday, July 25 ..... 6:30 a.m. – 4:30 p.m.

Thursday, July 26 ..... 7:00 a.m. – 4:30 p.m.

Friday, July 27 ..... 7:30 a.m. – 4:00 p.m.

Saturday, July 28 ..... 8:00 a.m. – 12:00 p.m.

The telephone number for the IAAFSC registration desk is: (317) 262-1440

Reminder!

Wear your nametag! You will be directed to the registration desk if you do not have a badge. It's your admission to all meeting events, including the exhibit hall. Tickets for special events and meal functions will be collected at the door or at the table for specific events. Your tickets and name badge will be mailed to you if you register prior to July 1, 2001. Event name, location, and date will appear on the ticket – please be sure to give the ticket-taker the appropriate ticket.

Questions

All program questions will be handled by IAAFSC Headquarters. All inquiries about pre-registration for the 2001 IAAFSC should be addressed to IAAFSC Headquarters, 1111 N. Dunlap Ave., Savoy, IL 61874; (217) 356-3182, Fax: (217) 398-4119; E-mail: **fass@assochq.org**.

Special Needs

All rooms at the Convention Center are wheelchair accessible. Please indicate any special needs when sending in your registration form.

Accommodations

Rooms are blocked at seven hotels, all within walking distance of the Indiana Convention Center. ***IAAFSC encourages you to stay at one of the hotels listed below for convenience and to ensure that the room block committment is met. As is the case with most large conventions, IAAFSC will be charged for unused rooms in the hotel block.*** All housing requests are being taken care of on-line this year. Reservations can be made by choosing one of the following methods.

INTERNET: *Book your reservation on-line at* ***www.fass.org/fass01*** *or* ***www.indy.org/conventions****.*
FAX: *Fax completed form to (317) 684-2492.*
MAIL: *Send completed form to ICVA Housing Bureau, One RCA Dome, Suite 100, Indianapolis, IN 46225-1060.*
All reservation requests will be made through the Housing Bureau. Deadline: June 15, 2001.

Confirmations: Confirmations will be sent after each reservation booking, modification, and/or cancellation. Review confirmations carefully for accuracy. If you do not receive a confirmation within 14 days after any transaction, please call the Housing Bureau at (317) 684-2573.

Modifications/Cancellations: Please review carefully. A one-night (plus 11% tax) advance deposit is required for each room requested. Checks will be deposited 30 days prior to arrival date. Credit card processing will be held until checkout. **A $25 cancellation fee will be charged for reservations cancelled on or after Friday, May 25, 2001.** Reservations cancelled on or after Wednesday, July 18, 2001 or no shows will be charged by the hotel.

MULTIPLE ROOMS: For reservations of 5 rooms or more, rooming lists are due by Friday, May 25, 2001.

Hotel Information

Comfort Inn City Centre (Designated Student Hotel)
530 S. Capitol Ave.
Indianapolis, IN 46225
(317) 631-9000 (800) 228-5150
FAX (317) 631-9999

Courtyard by Marriott Downtown Indianapolis (Designated Student Hotel)
501 W. Washington St.
Indianapolis, IN 46204
(317) 635-4443 (800) 321-2211
FAX (317) 687-0029

Crowne Plaza Hotel & Conference Center at Union Station (Official Meeting Hotel)
123 W. Louisiana St.
Indianapolis, IN 46225
(317) 631-2221 (800) 2-CROWNE
FAX (317) 236-7474

Hampton Inn Downtown (Official Meeting Hotel)
105 S. Meridian St.
Indianapolis, IN 46225
(317) 261-1200 (800) HAMPTON
FAX (317) 261-1030

Hyatt Regency Indianapolis (Co PSA & AMSA Headquarter Hotel)
One S. Capitol Ave.
Indianapolis, IN 46204
(317) 632-1234 (800) 233-1234
FAX (317) 231-7569

Indianapolis Marriott Downtown (ADSA Headquarter Hotel)
350 W. Maryland Street
Indianapolis, IN 46225
(317) 822-3500
FAX (317) 951-0300

The Westin Indianapolis (ASAS Headquarter Hotel)
50 S. Capitol Ave.
Indianapolis, IN 46204
(317) 262-8100 (800) WESTIN-1
FAX (317) 231-3928

Transportation

Indianapolis International Airport

- **Largest** airport in the United States managed by a private firm: BAA, the same British firm that operates London's Heathrow and Gatwick airports
- A 12-minute drive from downtown; 10 miles
- Cab fare is approximately $15–$20. No hotel shuttles are available.
- **7.4 million** passengers in 1999
- More than **180** daily departures and **44** non-stop destinations
- **33,000** daily passenger seats

  An $8 million renovation was recently completed. This renovation included 20 new or redeveloped restaurants such as TGI Friday's and Starbucks.
- **Headquarters** of American Trans Air
- **Served by 18 Airlines:**

America West	Continental	Southwest
American	Delta	Trans World
American Eagle	Midway	United
American TransAir	Midway Express	United Express
Chicago Express	Northwest	US Airways
Comair	Skyway	US Airways Express

Indianapolis Information

Indianapolis is amazingly always new. Indianapolis has come a long way in the past 30 years. What used to be called "India No Place" is now a vibrant 24-hour place to work, live, and play.

Thousands of visitors are drawn to Indianapolis each year for its cultural entertainment and sports attractions. Given its central location, with 65% of the nation's population living within a 700-mile radius, it also figures as a popular spot for conventions and trade shows. Indianapolis takes its tourism and hospitality industries seriously and offers visitors an abundance of quality lodging in an atmosphere of professionalism and courtesy. Travelers can choose from a wide array of accommodations, ranging from four-star hotels and convention centers to quaint bed and breakfasts to campgrounds. Whatever your taste and budget, you will find a wide range of activities in Indianapolis.

"The city formerly touted as 'India-no-place' and 'Nap Town' has developed into an energetic city packed with arts and culture, internationally known sporting events, spirited nightlife, an eclectic collection of restaurants and stores, and a diversity of people who make up the heart of this flourishing city." **Home & Away, September/ October 1998.**

Tours and Other Activities Available

Tour services for the 2001 Joint Meeting are being coordinated by Lew White Tours of Indianapolis. Please find the tour registration form included in this booklet, as well as on-line at **www.fass.org/fass01.**

Other Attractions

White River State Park: Indiana's first urban state park is a wonderful educational and recreational oasis in the heart of the city, located just 3 blocks from the Convention Center. Some of the highlights of the park include the Indianapolis Zoo, White River Gardens, Eiteljorg Museum of American Indians and Western Art, IMAX Theater, the NCAA Hall of Champions, Victory Field Baseball Park, Congressional Medal of Honor Memorial, the River Promenade, and the central canal, where you can walk, jog, or skate along the waterway that runs through the park. You might even decide to rent a paddleboat. It is anticipated that a packet of tickets to all of the venues in the park will be available for purchase, which will allow you to visit any of these attractions during your stay in Indianapolis.

Downtown Indianapolis: Other features in downtown and within walking distance include Circle Center Mall, an upscale shopping mall featuring such stores as Nordstroms, Parisian, and many others plus theaters and a video arcade; the Monument Circle; a Civil War Museum; the restored theater on the circle (now home to the Indianapolis Symphony); the RCA dome, which has daily tours; Pan Am Plaza, where you can ice skate even in the middle of summer; Union Station; and many others.

Teen Activities

Teens will also find many inviting activities in or near downtown Indianapolis in addition to the organized tours. These include Stefan Johansson Indoor Kart Racing, indoor paint ball, ice skating, Circle Center video arcade, NCAA sport museum, baseball at Victory Field, and dining at Hard Rock Café or Jillians.

For more information on Indianapolis, contact the Indianapolis Convention & Visitors Association at 800-958-INDY or visit ***www.indy.org***

General Information

Restaurant and Tourist Information Kiosk

A restaurant and tourist information kiosk will be located in the Convention Center in front of Exhibit Halls C, D, & E for all meeting attendees. Hours will be Tuesday through Friday, 10:00 a.m. – 5:00 p.m.

Important Phone Numbers

Ambulance, Fire, Police	911
Amtrak	(800) 872-7245
Comfort Inn City Centre	(317) 631-9000
Courtyard by Marriott Downtown Indianapolis	(317) 635-4443
Crowne Plaza Hotel & Conference Center at Union Station	(317) 631-2221
Hampton Inn Downtown	(317) 261-1200
Hyatt Regency Indianapolis	(317) 632-1234
IAAFSC Registration Desk	(317) 262-1440
IAAFSC Media Room	(317) 262-1624
Indianapolis Airport	(317) 487-9594
Indianapolis Airport Shuttle	(317) 241-2522
Indianapolis Convention & Visitors Association	(317) 369-4282
Indianapolis City Center	(317) 237-5200
Indianapolis Chamber of Commerce	(317) 464-2200
Indiana Convention Center & RCA Dome	(317) 262-3210
Indianapolis Marriott Downtown	(317) 822-3500
Indianapolis Public Transit	(317) 614-9207
The Westin Indianapolis	(317) 262-8100

Discount Travel Information

As an ADSA, ASAS, AMSA, or PSA member, you can search for air fares, book discounted flights, and reserve your car online with Stellar Access. (**http://www.stellaraccess.com/**). Visit their site, and register using group #**708**. After registering, click on Member Access Page to get to the meeting info page & book online. You can save $10.00 off the transaction fee by booking online!

Meeting Information

Publicity/Public Relations/Media Center

Room 107 in the Indiana Convention Center will be reserved as a Publicity and Public Relations Center. Publicity, news releases, and the daily newsletter will be issued from this location.

Business Center

A Business Copy Center for your use is located on the 1st floor of the Indiana Convention Center near the Capitol Avenue entrance. You may purchase small business items and have copies made at your expense.

Speaker Ready Room

Room 113 on the first floor and rooms 253–260 will be set up for you to preview your slides and test your computer with an LCD projector before your presentation. You will need to provide your own slide carousel and laptop computer.

Poster Presentations

Poster presentations will be held in Exhibit Halls C, D, and E of the Convention Center. This is adjacent to the area designated for commercial exhibits. Poster sessions are scheduled for Wednesday, Thursday, and Friday from 8 a.m. – 5 p.m. and Saturday from 8 a.m. – 12 noon. All posters must be staffed by a presenter at the times designated in the IAAFSC program; however, posters will be available for viewing all day on the scheduled day. The poster board surface is 48" high and 96" wide. Poster presenters must supply their finished poster and push pins to display their poster. The Exhibit Hall will open at 7:00 a.m. to presenters on the day of the scheduled poster presentation. (AMSA Graduate Student Poster Competition presenters will be allowed in the Hall Tuesday from 1:00 p.m.–6:00 p.m.)

PRESENTERS: YOU SHOULD RECEIVE GUIDLINE INFORMATION VIA EMAIL. YOU MAY ALSO VISIT ***WWW.FASS.ORG/FASS01*** *FOR FURTHER INFORMATION, INSTRUCTIONS, AND GUIDELINES.*

ARPAS Continuing Education Units

The IAAFSC has been approved for up to 28 continuing education units (CEUs) for the American Registry of Professional Animal Scientists certification requirements.

Sign up to take an ARPAS Exam (page 39) and return your request with your registration. Check at the registration desk to confirm the times and location of the exam.

Placement Center

A Placement Center will be located in the Indiana Convention Center Exhibit Hall. Employers are invited to bring 20 copies of all position descriptions, and prospective employees are invited to submit 30 copies of brief (2-page) resumes at the meeting.

Job announcements and resumes will be organized into the following categories (please indicate preference) for posting and distribution:

Animal Health, Environment, and Behavior	Breeding and Genetics
Extension	Food Science
International Animal Agriculture	Growth and Development
Lactation	Meat Science and Muscle Biology
Nutrition	Nonruminant Nutrition
Pharmacology and Toxicology	Production and Management
Reproduction	Reproductive Physiology
Ruminant Nutrition	Teaching

Should you have any questions, please contact Headquarters, at (217) 356-3182.

IAAFSC will sponsor an On-Line Placement Center for the benefit of the membership. This opportunity will be in addition to the traditional Placement Center, where printed position descriptions are displayed on poster board.

The On-Line Placement Center will be a web site where prospective employees can review your job description; go directly to your company, university, or agency web site; or even respond immediately via e-mail to your ad. The cost to include your company's listing on the On-Line Placement Center will be $20, which covers a three-week listing (July 14- August 4), active links to your web site, and an active e-mail link to your contact person.

Announcements should include the name of your organization; position title; description of the position, including requirements, duties, and salary; deadline for applications; and start date, if appropriate. Please do not include logos or other artwork and try to contain the ad to a single paragraph.

The procedure for posting a job is simple and efficient. Visit the meeting web site at **www.fass.org/fass01** and click on the On-Line Placement Center. The submission form will be available beginning June 1, and job announcements will be accepted through July 10.

At the time the form is submitted electronically, please send payment ($20) to IAAFSC at 1111 N. Dunlap Ave., Savoy, IL 61874 and indicate that payment is for the placement of an ad with the On-Line Placement Center in conjunction with the 2001 Joint Meeting.

If you have any questions or comments about this service or submission process, please contact Amy Kemp at Headquarters, at (217) 356-3182.

Cyber Café

Let technology keep you caught up with work and in touch with friends and family during the IAAFSC. Meeting attendees can attend knowing they can easily keep up with business activities by visiting the Cyber Café. At the Cyber Café, meeting attendees can check e-mail and meet with colleagues to exchange information found on the Internet. The Cyber Café will be located in the Exhibit Hall so that all meeting attendees can utilize the many computer stations. Sponsored by Diamond V Mills and Markey's Audio Visual.

Hospitality Room

The Indy 500 Reception room will serve as the Hospitality room for the 2001 Joint Meeting. The room, located on the first floor of the Convention Center, offers adults a place to relax, get acquainted, or catch up with old friends. Information on meet-

ing activities, tour opportunities, and highlights of the Indianapolis area will be posted and/or available here. Sponsored by Balchem.

Childcare Options

For those attendees requiring childcare services, please contact the group listed. Although the group may be able to accommodate last-minute reservations, it is strongly recommended that you contact them in advance of the meeting to coordinate your childcare needs to ensure sitter availability. This information will also be available in the Hospitality Room of the Indiana Convention Center.

Sitters to the Rescue, Inc.
7203 N. Pennsylvania Street
Indianapolis, IN 46240
Ms. Nancy Reiter, President
Phone: 317-257-7999
FAX: 317-251-9774
E-mail: sttr24@aol.com

Offering high quality, well-screened professional babysitters available to Indianapolis residents and visitors. Services for children of all ages are available 24 hours a day, seven days a week at either a family's home or a visitor's hotel room. They are also available to entertain groups of children at a designated location or during kid-oriented guided tours of Indianapolis.

Sponsorship Opportunities

There are numerous sponsorship opportunities for companies wanting additional recognition or for those that wish to support the organizations. Some of the activities your contribution could support include the Opening Reception, Cyber Café, printing of the abstracts issue, a scientific strand, the Fun Run, or the daily newsletter. All donors receive excellent recognition, and top donors (more than $10,000) receive a complimentary exhibit booth (a $1,200 value). For more details, visit the official meeting web site at **www.fass.org/fass01**.

Exhibitors

Visit the 2001 IAAFSC Exhibitors! Commercial exhibits will be located in the Convention Center Exhibit Halls C, D, and E.

Tuesday, July 24* ..... 8:30 p.m. – 10 p.m.
Wednesday, July 25 ..... 9 a.m. – 5 p.m.
Thursday, July 26 ..... 9 a.m. – 6 p.m.
Friday, July 27 ..... 9 a.m. – 1 p.m.

*Exhibitors may choose to open their booths during the Opening Session in the Exhibit Hall.

Current List of Exhibitors (as of 4/23/01)

AAALAC International
ADDS Center
ALOKA
Animal Industry Foundation
ANKOM Technology
Alltech, Inc.
Alpharma Inc.
Alternative Design Manufacturing
American Dairy Science Association
American Meat Science Association
American Society of Animal Science
Americans for Medical Progress
APC, Inc.
ARPAS
Aventis Animal Nutrition
Bar Diamond Inc.
Bioproducts, Incorporated
Biospherics Inc.
Biovance Technologies, Inc.
CABI Publishing
Chr. Hansen BioSystems
Church & Dwight Co., Inc.
Classic Ultrasound Equipment
Cotton Incorporated
Dairy One Forage Lab
Degussa Corporation
Diagnostic Systems Laboratories, Inc.
Diamond V Mills
Elanco Animal Health
Elsevier Science/Reed Elsevier
FARME Institute, Inc.
Fats & Proteins Research Foundation
Federation of Animal Science Societies
Griffin Industries, Inc.
International Ingredient Corporation
Iowa State University Press
LignoTech USA, Inc.
Lotek Wireless Inc.
Loveland Industries, Inc.
Midland BioProducts Corporation
Milk Products Inc.
Milk Specialties Company/MS BioScience
National Institute for Animal Agriculture
National Pork Producers Council
Nottingham University Press
Novus International, Inc.
Nutra-Flo Protein Products
Omega Protein
OXIS Research
PalmLab Inc.
PetAg, Inc.
Pharmacia Animal Health
PIC USA
Positive Action Publications
Poultry Science Association
Poultry Water Quality Consortium
Professional Dairy Heifer Growers Association
Prentice Hall
PURAC America, Inc.
Purdue University Press
Quali Tech, Inc.
Quebec City 2002
RMS Research Management Systems, USA Inc.
Roche Vitamins Inc.
Saf Agri
Soy Best
Universal Ultrasound
West Central Soy

Special Events

ADSA SAD Tour of the Merrill Kelsey Dairy Farm
Tuesday, July 24
8:00 a.m. – 10:30 a.m.

CANCELLED

***ADSA SAD Quiz Bowl* – New for 2001!**
Tuesday, July 24
Convention Center, Rooms 122-124
1:00 p.m. – 5:00 p.m. Seating and Preliminary Rounds
6:30 p.m. – 7:00 p.m. Final Round

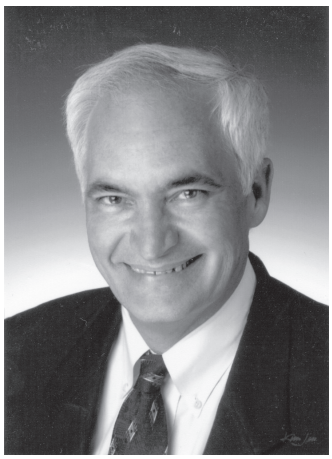
Get your team together now and brush up on your knowledge of the dairy industry! All schools are encouraged to enter a team in this new event. A seating test will be given at 1:00 p.m. Tuesday, July 24. The competition will begin immediately following the seating and continue throughout the afternoon. The final round will be held immediately prior to the Opening Session on Tuesday evening. Check the SAD web site at **www.adsa.org/sad/** for more information. Help us get this event's premier off to a great start.

AMSA Meet the Board
Tuesday, July 24
Hyatt Regency, Mount Rushmore Room
4:00 p.m. – 6:00 p.m.

Members of the American Meat Science Association are invited to bring their questions and comments to the Meet the Board session. This is an excellent opportunity to get to know your board members and to learn more about the programs and services of the Association.

Opening Session and Reception
Tuesday, July 24
Convention Center
7:00 p.m. – 8:30 p.m. – Opening Session, Sagamore Ballroom
8:30 p.m. – 10:00 p.m. – Opening Reception, Exhibit Halls C, D, and E

The week, which has been proclaimed by Indiana's Governor as "International Animal Agriculture and Food Science Week" gets off to a dynamic start with Dr. Lowell Catlett as the keynote speaker on Tuesday night! Catlett, a professor at New Mexico State University, will motivate the audience with a futuristic look at agriculture. A cash bar reception with hor d'oeurves will immediately follow in Exhibit Halls C, D, and E. Sponsored by Alpharma, Inc., Diamond V Mills, Dow Agro Sciences, Elanco Animal Health, IBP, Indiana Poultry Association, IPC, Maple Leaf Farms, Oscar Mayer/Kraft, and Perdue.



Fun Run
Wednesday, July 25
6:00 a.m.

Start your day with a Fun Run on Wednesday, July 25, at 6:30 a.m. The 5K run will take place at the IUPUI Campus near the IUPUI Track. The $15.00 participation fee will cover refreshments and the 2001 Fun Run memorabilia. The IUPUI campus is within walking distance of the Convention Center. **Meet promptly at 6:00 a.m.** at the Maryland Street Lobby to go over as a group. A map of the run can be found in the hospitality room.

Graduate Student Breakfast
Wednesday, July 25
Convention Center, Exhibit Halls C, D, and E
6:00 a.m. – 7:45 a.m.

All graduate student members of ADSA, AMSA, ASAS, and PSA are encouraged to attend the Graduate Student Breakfast. It will be a great opportunity to get to know distinguished members of your field and learn more about opportunities in animal science. Professional members will be seated according to their area of interest, and you will join them, along with other graduate students, in a discussion of topics related to your field and life in the "real world" of animal science. Take advantage of this unique opportunity to share ideas and get to know other students and professional members from the four societies. Graduate students will automatically receive a ticket to this event by registering for the meeting.

Intercollegiate Judging Team Coaches and Administrators Luncheon
Wednesday, July 25
Hyatt Regency, Mt. McKinley Room
11:30 a.m. – 1:00 p.m.

Judging activities are a key component in many departmental recruitment and alumni programs. Current coaches, judging coordinators and administrators are invited to attend. The program will focus on meeting the challenges of supporting judging programs and ideas for taking full advantage of the benefits to departments of the programs.

Softball Tournament
Wednesday, July 25
IUPUI Campus
4:00 p.m. – 6:00 p.m.

Wednesday evening, July 25, just before the picnic is tourney time. The diamonds are near the picnic area, and parking is available. Any professional or student member or meeting guest or sponsor of any age is eligible. Umpires from the Bribable Ump Association of America will be calling balls and strikes. What makes this tourney unique is that everyone will play with unlimited substitution following the rules of common sense. So dust off those old cleats and oil up that old glove. Find the appropriate place on the registration form, pick your favorite team, and join the fun. Vocal spectators are a necessity, but they are not required to register. Tickets are $5.00.

Coordinated BBQ Picnic
Wednesday, July 25
Military Park, White River State Park
6:30 p.m. – 9:00 p.m.

This fun, relaxing event will be the most highly attended event of the week! The BBQ is open to all attendees, including guests, spouses, and children, and is located at Military Park, which is within walking distance of the Convention Center. Please see the registration desk for a map. Tickets are $25 for adults, $20 for students, and $12 for children 10 and under. Sponsored by IPC.

Undergraduate Student Mixer and Dance
Wednesday, July 25
Marriott Hotel, Indiana Ballroom A-B
8:00 p.m. – 11:00 p.m.

Make plans to attend the social highlight of the student meeting! You can dance, converse, drink, and snack while meeting with old and new friends. The dance will begin at 8:00 p.m. and end at 11:00 p.m. There is no cost for this event; however, be sure to indicate whether or not you will be attending on the registration form.

Penn State Breakfast
Thursday, July 26
Marriott Hotel, Indiana Ballroom A-B
6:30 a.m. – 8:00 a.m.

Enjoy a great breakfast while catching up with old friends. The Department of Dairy and Animal Science and the Department of Poultry Science are sponsoring this year's breakfast. Tickets are $20.00.

VA Tech Breakfast
Thursday, July 26
Marriott Hotel, Florida Room
6:30 a.m. – 8:00 a.m.

Start the day off with a hearty breakfast and old friends. Dr. Doug DiRienzo of Dairy Management, Inc. and the National Dairy Council will be the guest speaker during this year's breakfast. Tickets are $20.00.

Spouses' Luncheon
Thursday, July 26
Marriott Hotel, Texas Room
11:30 a.m. – 1:00 p.m.

A spouses' luncheon will take place on Thursday, July 26, from 11:30 a.m. to 1:00 p.m. at the Indianapolis Marriott in the Texas Room. This is a great opportunity to meet and catch up with old friends while enjoying a delicious lunch. Please sign up on the registration form and provide the attendee's name to receive a name badge. Tickets are $23.00.

ADSA SAD Awards Luncheon
Thursday, July 26
Convention Center, Rooms 120-121
12:00 p.m. – 2:00 p.m.

Awards will be presented for the following categories: Outstanding Student, Chapter, Advisor, Yearbook, and Web Site. Student Paper Presentation Award winners, the Genevieve Christen Award winner, and scholarship winners will be recognized. This is the premier event of the student program. Luncheon tickets are $26.00 for adults and students.

The luncheon speaker is Dennis Erpelding, SAD alum from Iowa State University, who joined Elanco 12 years ago. He currently works in Public Affairs for Elanco and spends a lot of time in Washington, DC and Europe dealing with science and public policy. All students and advisors are encouraged to attend.

Golf Outing
Thursday, July 26
Eagle Creek Golf Club
1:00 p.m. – 5:00 p.m.

Spend the afternoon on Indianapolis' premiere public golf course designed by world-renowned golf course architect Pete Dye. Eagle Creek Golf Club hosted the prestigious USGA Public Links Championship in 1982 and is consistently recognized by Golf Digest Magazine as a "place to play" on a golfer's itinerary. Registration is limited to 256 golfers. Spouses are welcome to play. Tickets are $85.00 per person.

International Reception
Thursday, July 26
Convention Center, Maryland Street Lobby, 2nd Floor
4:30 p.m. – 5:30 p.m.

Meet colleagues from around the world Thursday evening during the 3rd Annual International Reception. Nearly 400 individuals will be in attendance to partake in conversation with new and old friends. Sponsored by Balchem and IPC.

Ice Cream Social
Thursday, July 26
Convention Center, Exhibit Halls C, D, and E
5:00 p.m. – 6:30 p.m.

The Ice Cream Socials have become one! The coordinated Ice Cream Social, held in the Exhibit Hall on Thursday afternoon, gives all attendees a chance to unwind and mingle with other meeting attendees. Sponsored by Church and Dwight Co., Inc. and Elanco Animal Health.

ADSA Awards Program and The Ninth Annual ADSA Foundation Auction
Thursday, July 26
Marriott Hotel, Indiana Ballroom E-G
7:00 p.m. to 10:00 p.m.

The ADSA Awards Ceremony will be held on Thursday, July 26, beginning at 7:00 p.m. at the Marriott. All meeting participants, families, and friends are welcome. The ADSA Foundation Auction follows the ADSA Awards Program.

Auction items will be on display beginning Tuesday, July 24 in the Exhibit Hall of the Convention Center. Bidding on silent auction items will get underway on Tuesday and continue through the close of the live auction, which will be held on Thursday evening at the Indianapolis Marriott Downtown. Proceeds are used to fund activities such as the ADSA Foundation Scholar Awards, the Genevieve Christen Distinguished Undergraduate Student Award, and high quality programs at the annual meetings. For the latest listing of items, to view color photos of many of the items, or to obtain an item donation form, visit the Foundation Auction page on the ADSA web site at **www.adsa.org/foundation**.

Retirees' Social
Friday, July 27
Convention Center, 500 Reception Room
1:30 p.m. – 3:00 p.m.

All retirees and their spouses are cordially invited to attend a social gathering to relax, reminisce, and enjoy refreshments.

PSA Awards Banquet
Friday, July 27
Hyatt Regency, Regency Ballroom
6:00 p.m. – 9:00 p.m.

Tickets are $35.00 for adults and $25.00 for students.

ASAS Awards Program
Friday, July 27
Westin Hotel, Grand Ballroom 5
7:00 p.m. – 8:30 p.m.

You are invited to the ASAS Awards Program to be held Friday, July 27, 7:00 p.m. in the Grand Ballroom 5 located on the 2nd floor of the Westin Hotel. The Awards Program is open to all meeting participants, their families, and friends. Please join in congratulating the 2001 ASAS awardees. Please indicate on the registration form if you plan to attend.

AMSA Awards Banquet
Friday, July 27
Convention Center, Sagamore Ballroom 1-2
7:00 p.m. – 10:00 p.m.

Come enjoy an evening of celebration as we catch a glimpse of the lifetime achievements of the 2001 AMSA award winners and install the 2001–2002 officers. Certified Angus Beef is the sponsor of this year's banquet. Tickets are $30.00.

2001 IAAFSC
Schedule of Events

All times and locations are subject to change without notice. Please refer to the daily newsletter and the appropriate hotel marquee for updates and changes.

Day/Date/Time	Event	Location	Room
Sunday, 7/22/01			
1 p.m. – 6 p.m.	ADSA Board of Directors Meeting	Marriott Hotel	Indiana F
9 a.m. – 5 p.m.	PSA Board of Directors Meeting	Hyatt Regency	Salon A
Monday, 7/23/01			
8 a.m. – 5 p.m.	ADSA Board of Directors Meeting	Marriott Hotel	Indiana F
8 a.m. – 5 p.m.	PSA Board of Directors Meeting	Hyatt Regency	National Parks
8 a.m. – 3 p.m.	AMSA Board of Directors Meeting	Hyatt Regency	Executive Boardroom
8 a.m. – 5 p.m.	ASAS Board of Directors Meeting	Westin Hotel	Capitol 1
2 p.m. – 5 p.m.	Registration Open	Convention Center	Maryland Street Lobby
2:30 p.m. – 5 p.m.	Hospitality Room Open	Convention Center	500 Reception Room
3 p.m. – 5 p.m.	AMSA New Board Orientation	Hyatt Regency	Salon A
7:30 p.m. – 9:30 p.m.	ARPAS Executive Committee Meeting	Westin Hotel	Boardroom
Tuesday, 7/24/01			
7 a.m. – 8:30 p.m.	Registration Open	Convention Center	Maryland Street Lobby
7:30 a.m. – 7 p.m.	Hospitality Room Open	Convention Center	500 Reception Room
8 a.m. – 10:30 a.m.	ADSA – SAD Farm Tour - **CANCELLED**	Off site	Off site
8 a.m. – 4 p.m.	ASAS Board of Directors Meeting	Westin Hotel	
8 a.m. – 2 p.m.	PSA Board of Directors Meeting	Hyatt Regency	Regency Ballroom A
8 a.m. – 5 p.m.	Commercial Exhibits Set Up	Convention Center	Exhibit Halls C, D, and E
8 a.m. – 4 p.m.	AMSA – ICoMST '05 Planning Meeting	Hyatt Regency	Mt. Rainier
8 a.m. – 5 p.m.	ARPAS Governing Board Meeting	Westin Hotel	Boardroom
8 a.m. – 5 p.m.	ADDS Board of Directors Meeting	Hyatt Regency	National Parks
9 a.m. – 5 p.m.	NAGP Coordinating Committee Meeting	Convention Center	148
11 a.m. – 12 p.m.	ADSA – SAD Officers and Advisor Meeting	Convention Center	122–124
11:30 a.m. – 1 p.m.	PSA Extension Luncheon	Convention Center	120
12 p.m. – 1 p.m.	ADSA – SAD Club Welcome and Orientation	Convention Center	121

Day/Date/Time	Event	Location	Room
12 p.m. – 1 p.m.	ADSA JDS Editors Luncheon	Marriott Hotel	Colorado
1 p.m. – 3 p.m.	ADSA Journal Management Committee Meeting	Marriott Hotel	Colorado
1 p.m. – 2 p.m.	2001 Volunteer Training Meeting	Convention Center	108
1 p.m. – 5 p.m.	ADSA – SAD Quiz Bowl – Seating & Preliminary Rounds	Convention Center	122 – 124
1 p.m. – 5 p.m.	WPSA USA Branch Board of Directors Meeting	Hyatt Regency	National Parks
1 p.m. – 6 p.m.	AMSA Graduate Poster Competition Setup	Convention Center	Exhibit Halls C, D, and E
2 p.m. – 3 p.m.	ADSA Production Division Council Meeting	Convention Center	140
2 p.m. – 3:30 p.m.	ADSA Foundation Board of Trustees Meeting	Convention Center	112
2 p.m. – 4 p.m.	ADSA Committee on Evaluation of Dairy Products	Convention Center	147
3 p.m. – 4 p.m.	ADSA Archives Committee Meeting	Convention Center	209
3 p.m. – 4 p.m.	ADSA Production Division Nominating Committee	Convention Center	205
3 p.m. – 4 p.m.	ADSA Production Division Resolutions Committee	Convention Center	208
4 p.m. – 6 p.m.	AMSA – Meet the Board of Directors	Hyatt Regency	Mt. Rushmore
5 p.m. – 6 p.m.	ADSA Dairy Foods Division Council Meeting	Convention Center	147
6:30 p.m. – 7 p.m.	ADSA – SAD Quiz Bowl Final Round	Convention Center	122–124
7 p.m. – 8:30 p.m.	2001 Opening Session	Convention Center	Sagamore Ballroom
8:30 p.m. – 10 p.m.	2001 Opening Reception	Convention Center	Exhibit Halls C, D, and E
Wednesday, 7/25/01			
6 a.m.	Fun Run	Off site	Off site
6:15 a.m. – 7:30 a.m.	2001 Program Chairs Breakfast Meeting	Convention Center	120
6 a.m. – 7:45 a.m.	Graduate Student Breakfast	Convention Center	Exhibit Halls C, D, and E
6:30 a.m. – 8 a.m.	WPSA USA Branch Breakfast	Hyatt Regency	Salon A
6:30 a.m. – 8 a.m.	University of Illinois Breakfast	Westin Hotel	State Room
6:30 a.m. – 8 a.m.	ADSA Production Division Extension Breakfast	Marriott Hotel	Indiana A-B
6:30 a.m. – 4:30 p.m.	Registration Open	Convention Center	Maryland Street Lobby
7 a.m. – 9 a.m.	ADSA Journal Editorial Board Breakfast/Meeting	Marriott Hotel	Indiana G
7:15 a.m. – 8:45 a.m.	ADSA – SAD Exhibit Set Up	Convention Center	Exhibit Halls C, D, and E
7:30 a.m. – 4 p.m.	Hospitality Room Open	Convention Center	500 Reception Room

Day/Date/Time	Event	Location	Room
8 a.m. – 12 p.m.	ASAS Foundation Trustees Meeting	Westin Hotel	House
8 a.m. – 5 p.m.	Scientific Sessions and Symposia	Convention Center	See full program
8 a.m. – 5 p.m.	Poster Sessions	Convention Center	Exhibit Halls C, D, and E
8:45 a.m. – 9:30 a.m.	ADSA – SAD Business Meeting	Convention Center	122
9 a.m. – 5 p.m.	Commercial Exhibits & ADSA SAD Exhibits Open	Convention Center	Exhibit Halls C, D, and E
9 a.m. – 5 p.m.	AMSA Graduate Poster Competition	Convention Center	Exhibit Halls C, D, and E
9 a.m. – 12 p.m.	ARPAS Exams	Convention Center	212
9:30 a.m. – 10:30 a.m.	ADSA – SAD Judging of Yearbooks, Scrapbooks,& Annual Reports	Convention Center	120
9:30 a.m. – 10:30 a.m.	ADSA – SAD Interviews for Outstanding Student Award	Convention Center	121
9:30 a.m. – 10:30 a.m.	ADSA – SAD Activities Symposium	Convention Center	123–124
9:45 a.m. – 10:45 a.m.	Refreshment Break	Convention Center	Exhibit Halls C, D, and E
11 a.m. – 12 p.m.	ADSA – SAD Dairy Foods UG Paper Presentations	Convention Center	123–124
11 a.m. – 1 p.m.	ASAS Publications Committee Luncheon	Westin Hotel	TBA
11:30 a.m. – 1 p.m.	AMSA Meat Lab Managers Luncheon	Hyatt Regency	Regency Ballroom A
11:30 a.m. – 1 p.m.	Intercollegiate Judging Team Coaches and Administrator's Luncheon	Hyatt Regency	Mt. McKinley
11:30 a.m. – 1 p.m.	PSA American Historical Society Lunch	Hyatt Regency	Mt. Ranier
11:30 a.m. – 1 p.m.	AMSA Board and Committee Chairs Meeting	Convention Center	109
11:30 a.m. – 1 p.m.	AMSA Extension Industry Meeting	Convention Center	110
12 p.m. – 1 p.m.	American College of Food Animal Science	Convention Center	112
1 p.m. – 2:15 p.m.	ADSA – SAD Production UG Paper Presentations	Convention Center	123–124
2:45 p.m. – 3:15 p.m.	SAD Original Research/Independent Study UG Paper Presentations	Convention Center	123–124
2:45 p.m. – 3:15 p.m.	Refreshment Break	Convention Center	Exhibit Halls C, D, and E
5 p.m.	USDA-ARS Meeting	Convention Center	145–146
4 p.m. – 6 p.m.	NAGP Dairy Committee Meeting	Convention Center	148
4 p.m. – 6 p.m.	2001 Softball Tournament	IUPUI Fields	Field #2 & #4
6:30 p.m. – 9 p.m.	2001 Picnic - BBQ	Military Park Area	White River State Park
7 p.m. – 9 p.m.	ASAS Collegiate Livestock Leaders Institute Dinner	Westin Hotel	House
8 p.m. – 11 p.m.	ADSA – SAD Student Mixer	Marriott Hotel	Indiana A-B

Day/Date/Time	Event	Location	Room
Thursday, 7/26/01			
6:30 a.m. – 8 a.m.	University of Kentucky Breakfast	Westin Hotel	State Room
6:30 a.m. – 8 a.m.	Penn State Breakfast	Marriott Hotel	Indiana A-B
6:30 a.m. – 8 a.m.	ADSA Dairy Foods Division Extension Breakfast	Marriott Hotel	Indiana C
6:30 a.m. – 8 a.m.	Virginia Tech Alumni Breakfast	Marriott Hotel	Florida
6:30 a.m. – 8 a.m.	AMSA Committee Member Breakfast & Meeting	Hyatt Regency	Regency Ballroom
6:30 a.m. – 8 a.m.	University of Wisconsin Breakfast	Hyatt Regency	Grand Canyon
6:30 a.m. – 8 a.m.	PSA National Poultry Waste Management Breakfast	Hyatt Regency	Bryce Canyon
7 a.m. – 9 a.m.	ADSA Journal Editorial Training Breakfast	Marriott Hotel	Indiana F
7 a.m. – 8:30 a.m.	ASAS New Board Orientation Breakfast	Westin Hotel	TBA
7 a.m. – 4:30 p.m.	Registration Open	Convention Center	Maryland Street Lobby
8 a.m. – 4 p.m.	Hospitality Room Open	Convention Center	500 Reception Room
8 a.m. – 5 p.m.	ASAS Collegiate Livestock Leaders Institute	Westin Hotel	Council
8 a.m. – 5 p.m.	Scientific Sessions and Symposia	Convention Center	See full program
8 a.m. – 5 p.m.	Poster Sessions	Convention Center	Exhibit Halls C, D, and E
8:30 a.m. – 10 a.m.	ADSA – SAD Business Meeting – Election of Officers	Convention Center	122
9 a.m. – 11 a.m.	PSA/JAPR Editorial Board Meeting	Hyatt Regency	Salon E
9 a.m. – 6 p.m.	Commercial Exhibits & ADSA SAD Exhibits Open	Convention Center	Exhibit Halls C, D, and E
9 a.m. – 12 p.m.	ARPAS Exam	Convention Center	212
9:45 a.m. – 10:45 a.m.	Refreshment Break	Convention Center	Exhibit Halls C, D, and E
11 a.m. – 12 p.m.	ARPAS Business Meeting	Convention Center	145–146
11 a.m. – 12 p.m.	ADSA Dairy Foods Division Business Meeting	Convention Center	208
11 a.m. – 12 p.m.	ASAS Resolutions Meeting	Convention Center	105
11 a.m. – 12 p.m.	ADSA Production Division Business Meeting	Convention Center	206
11:30 a.m. – 1 p.m.	PSA Editorial Board Luncheon	Hyatt Regency	Salon E
11:30 a.m. – 1 p.m.	2001 Spouses' Luncheon	Marriott Hotel	Texas
12 p.m. – 1 p.m.	ACAN Meeting	Convention Center	143–144
12 p.m. – 1:30 p.m.	ASAS Section Editors Luncheon	Westin Hotel	TBA
12 p.m. – 1 p.m.	ADSA Dairy Foods Division Program Planning Lunch	Marriott Hotel	Michigan
12 p.m. – 2 p.m.	ADSA Past President's Luncheon	Marriott Hotel	Florida
12 p.m. – 2 p.m.	ADSA – SAD Awards Luncheon	Convention Center	120–121

Day/Date/Time	Event	Location	Room
12 p.m. – 2 p.m.	ASAS Past President's Luncheon	Westin Hotel	House
1 p.m. – 5 p.m.	2001 Golf Tournament	Off site	Off site
2 p.m. – 3 p.m.	ADSA SAD Award Photos	Convention Center	122
2 p.m. – 3:30 p.m.	SAD Committee Meeting – Old and New Officers & Advisors	Convention Center	123–124
2:45 p.m. – 3:45 p.m.	Refreshment Break	Convention Center	Exhibit Halls C, D, and E
3 p.m. – 5 p.m.	ADDS Executive Committee Meeting	Hyatt Regency	Executive Boardroom
3:30 p.m. – 5:30 p.m.	ASAS New Section Editors Meeting	Westin Hotel	TBA
4 p.m. – 5 p.m.	PSA Animal Care Committee	Convention Center	112
4:30 p.m. – 5:30 p.m.	International Reception	Convention Center	Maryland St. Lobby 2nd Floor
5 p.m. – 6:30 p.m.	2001 Coordinated Ice Cream Social	Convention Center	Exhibit Halls C, D, and E
5 p.m. – 6:30 p.m.	ADSA Award Donor Dinner	Marriott Hotel	Indiana A-B
6:15 p.m. – 9:00 p.m.	PSA Business Meeting	Convention Center	500 Ballroom
6:30 p.m. – 9 p.m.	Korean Scientists & Student Dinner	Bando Restaurant	
7 p.m. – 8:30 p.m.	NAGP Poultry Committee Meeting	Convention Center	148
7 p.m. – 9 p.m.	AMSA Emeritus Dinner	TBA	TBA
7 p.m. – 10 p.m.	ADSA Awards Program and Foundation Auction	Marriott Hotel	Indiana E-G
8 p.m.	T. Klopfenstein Reception	Westin Hotel	TBA
8 p.m. – 11 p.m.	Iowa State Social	Marriott Hotel	Marriott 1-2
Friday, 7/27/01			
6:15 a.m. – 8 a.m.	AMSA Business Meeting and Breakfast	Hyatt Regency	Regency Ballroom
6:30 a.m. – 8 a.m.	Michigan State University Breakfast	Hyatt Regency	Grand Canyon
6:30 a.m. – 8 a.m.	PSA Industry Committee Breakfast	Hyatt Regency	Executive Boardroom
6:30 a.m. – 8 a.m.	Purdue University Breakfast	Westin Hotel	State Room
7 a.m. – 10:30 a.m.	ADSA Board of Directors Meeting	Marriott Hotel	Lincoln
7:30 a.m. – 4 p.m.	Registration Open	Convention Center	Maryland Street Lobby
8 a.m. – 3 p.m.	Hospitality Room Open	Convention Center	500 Reception Room
8 a.m. – 5 p.m.	Scientific Sessions and Symposia	Convention Center	See full program
8 a.m. – 5 p.m.	Poster Sessions	Convention Center	Exhibit Halls C, D, and E
9 a.m. – 1 p.m.	Commercial Exhibits	Convention Center	Exhibit Halls C, D, and E
9 a.m. – 12 p.m.	ARPAS Exams	Convention Center	212
9:45 a.m. – 10:45 a.m.	Refreshment Break	Convention Center	Exhibit Halls C, D, and E

Day/Date/Time	Event	Location	Room
11 a.m. – 12 p.m.	ADSA Business Meeting	Convention Center	500 Ballroom
11 a.m. – 12 p.m.	ASAS Business Meeting	Convention Center	206–207
11:30 a.m. – 1 p.m.	ADSA DF Division Milk Proteins & Enzyme Committee	Marriott Hotel	Florida
11:30 a.m. – 1 p.m.	University of Arkansas Lunch	Hyatt Regency	Salon E
12 p.m. – 2 p.m.	ASAS Block & Bridle Luncheon	Westin Hotel	House
12 p.m. – 1:30 p.m.	ASAS Board of Directors Meeting	Westin Hotel	TBA
1 p.m. – 5 p.m.	Commercial Exhibits Dismantling	Convention Center	Exhibit Halls C, D, and E
1:30 p.m. – 3 p.m.	2001 Retirees Social	Convention Center	500 Reception Room
1:30 p.m. – 3 p.m.	NAGP Small Ruminant Committee Meeting	Convention Center	148
2:45 p.m. – 3:45 p.m.	Refreshment Break	Convention Center	Exhibit Halls C, D, and E
4:30 p.m. – 6:30 p.m.	AMSA Award Winners Reception	Convention Center	Sagamore Ballroom 1-2 Lobby
5 p.m. – 7 p.m.	ASAS Award Winners Photo Session/Reception	Westin Hotel	Grand 1
6 p.m. – 9 p.m.	PSA Awards Banquet	Hyatt Regency	Regency A & B
7 p.m. – 10 p.m.	AMSA Awards Banquet	Convention Center	Sagamore Ballroom 1-2
7 p.m. – 8:30 p.m.	ASAS Awards Program	Westin Hotel	Grand 5
8 p.m. – 11 p.m.	Iowa State University Social	Westin Hotel	State Room
Saturday, 7/28/01			
6:30 a.m. – 8 a.m.	2002 ADSA – ASAS Joint Meeting Chairs Breakfast	Convention Center	147
8 a.m. – 11 a.m.	Hospitality Room Open	Convention Center	500 Reception Room
8 a.m. – 12 p.m.	Registration Open	Convention Center	Maryland St. Lobby
8 a.m. – 12 p.m.	Scientific Sessions and Symposia	Convention Center	See full program
8 a.m. – 12 p.m.	Poster Sessions	Convention Center	Exhibit Halls C, D, and E
9:45 a.m. – 10:45 a.m.	Refreshment Break	Convention Center	Exhibit Halls C, D, and E
12 p.m. – 2 p.m.	AMSA Intercollegiate Meat Coaches Assn. Business Meeting and Luncheon	Hyatt Regency	Mt. Rushmore

ADSA
Student Affiliate Division
Schedule of Events

Tuesday, July 24

8 a.m. – 10:30 a.m.	Student Affiliate Division Tour, Merrill Kelsey Dairy Farm **CANCELLED**
8 a.m. – 5 p.m.	Student Dairy Clubs Set Up Exhibits - Convention Center, Exhibit Halls C, D, and E
11 a.m. – 12 p.m.	SAD Officers and Advisor Meeting - Convention Center, Room 122–124
12 p.m. – 1 p.m.	SAD Club Welcome and Orientation - Convention Center, Rooms 121
1 p.m. – 5 p.m.	***new!*** Quiz Bowl Seating and Preliminary Rounds - Convention Center, Rooms 122–124
6:30 p.m. – 7 p.m.	***new!*** Quiz Bowl Final Round - Convention Center, Rooms 122–124
7 p.m. – 8:30 p.m.	Opening Session - Convention Center, Sagamore Ballroom
8:30 p.m. – 10 p.m.	Opening Reception - Convention Center, Exhibit Halls C, D, and E

Wednesday, July 25

7:15 a.m. – 8:45 a.m.	Student Dairy Clubs Set Up Exhibits - Convention Center, Exhibit Halls C, D, and E
8:45 a.m. – 9:30 a.m.	Student Affiliate Division Business Meeting - Convention Center, Room 122
9:30 a.m. – 10:30 a.m.	Student Affiliate Judging of Yearbooks, Scrapbooks, and Annual Reports - Convention Center, Room 120
9:30 a.m. – 10:30 a.m.	Interviews for Outstanding Student Award - Convention Center, Room 121
9:30 a.m. – 10:30 a.m.	Student Activities Symposium - Convention Center, Rooms 123–124
11 a.m. – 12 p.m.	SAD Dairy Foods Undergraduate Paper Presentations - Convention Center, Rooms 123–124
1 p.m. – 2:15 p.m.	SAD Production Undergraduate Paper Presentations - Convention Center, Rooms 123–124
2:45 p.m. – 3:15 p.m.	SAD Original Research/Independent Study Undergraduate Paper Presentations - Convention Center, Rooms 123–124
4 p.m. – 6 p.m.	2001 Softball Tourney - IUPUI Fields, Field #2 & #4
6:30 p.m. – 10 p.m.	2001 Picnic - Military Park Area, White River State Park
8 p.m. – 11 p.m.	Undergraduate Student Mixer and Dance, Marriott Hotel, Indiana Ballroom A–B

Thursday, July 26

8:30 a.m. – 10 a.m.	Student Affiliate Division Business Meeting - Election of Officers - Convention Center, Room 122
10 a.m. – 11:30 a.m.	Student Careers Symposium - Convention Center, Rooms 123–124
12 noon – 2 p.m.	Student Awards Luncheon - Convention Center, Rooms 120–121
2 p.m. – 3 p.m.	SAD Pictures - Convention Center, Room 122
2 p.m. – 3:30 p.m.	SAD Committee Meeting—Old & New Officers and Advisors - Convention Center, Rooms 123–124
2 p.m. – 5 p.m.	Open to attend Scientific Sessions
2:30 p.m. – 4 p.m.	Tear-down SAD Exhibits - Convention Center, Exhibit Halls C, D, and E
4 p.m. – 6 p.m.	Ice Cream Social - Convention Center, Exhibit Halls C, D, and E
7 p.m. – 10 p.m.	ADSA Awards Ceremony and Foundation Auction - Marriott Hotel, Indiana Ballroom E–G

Friday, July 27

Open to attend Scientific Sessions

Saturday, July 28

Open to attend Scientific Sessions

Student Affiliate Division Activities

Free Registration for SAD Members

This year, current undergraduate student members will receive complimentary registration. However, this complimentary offer is only valid until May 15, at which time a $25 registration fee will be required. Nonmembers of ADSA (including nonmember students) will pay $325 to $500 to register, so take a moment to ensure your membership is up to date before registering for the annual meeting!

SAD Tour of the Merrill Kelsey Dairy Farm

The SAD Tour is planned for Tuesday morning, July 24 at the Merrill Kelsey Dairy Farm. Kelsey and his son own and operate this 200 cow farm just south of Indianapolis. The owners and herd manager will address some of the key issues facing the dairy industry. The tour will return by 10:30 so students can prepare for the Quiz Bowl competition Tuesday afternoon. Ticket price is $10.00. Register early, as space is limited! The bus will depart from the Convention Center.

CANCELLED

SAD Quiz Bowl—New for 2001!

Get your team together now and brush up on your knowledge of the dairy industry! All schools are encouraged to enter a team in this new event. A seating test will be given at 1 p.m. on Tuesday. The competition will begin immediately following the seating and continue throughout the afternoon. The final round will be held immediately prior to the Opening Session on Tuesday evening. Check the SAD Web site

www.adsa.org/sad/ for more information. Help us get this first event off to a great start.

Undergraduate Paper Presentations

Please note the earlier start time and new order of presentations! Dairy Foods papers will be presented after the Activities Symposium. After lunch, the Production and Original Research papers will be presented.

Undergraduate Student Mixer and Dance
Wednesday, July 25
Marriott Hotel, Indiana Ballroom A–B
8:00 p.m. – 11:00 p.m.

Make plans to attend the social event of the student meeting! Plans are still being developed to make this year's mixer and dance memorable. You can dance, converse, drink, and snack while meeting with old and new friends. The dance will begin at 8 p.m. and end at 11 p.m. There is no cost for this event, however, be sure to indicate whether or not you will be attending on the registration form.

SAD Awards Luncheon

Awards will be presented for the following categories: Outstanding Student, Chapter, Advisor, Yearbook, and Web Site. Student Paper Presentation Award winners, the Genevieve Christen Award winner, and scholarship winners will be recognized. This is the premier event of the student program. Luncheon tickets are $26.00 for adults and students.

The luncheon speaker is Dennis Erpelding, SAD alum from Iowa State University, who joined Elanco 12 years ago. He currently works in Public Affairs for Elanco and spends a lot of time in Washington, DC and Europe dealing with science and public policy. All students and advisors are encouraged to attend.

Collegiate Livestock Leaders Institute

The Collegiate Livestock Leaders Institute (CLLI) is a unique opportunity for outstanding young people to interact with leading scientists and innovators within the beef industry. The program allows for exposure to new and different perspectives of various issues. CLLI's program initiates at the ASAS meetings. Students will be arriving on Tuesday afternoon and will be present at the opening session. Scheduled for Wednesday is participation in general meetings and a special initiation dinner on Wednesday evening. Thursday will involve primarily a special session for CLLI participants while Friday will include a meeting with the ASAS board. As part of the program, students will be traveling to Denver in early August for the purpose of participating in NCBA's Summer Conference. CLLI is sponsored by American Society of Animal Science, National Cattlemen's Beef Association and National Block and Bridle. This years participants include:

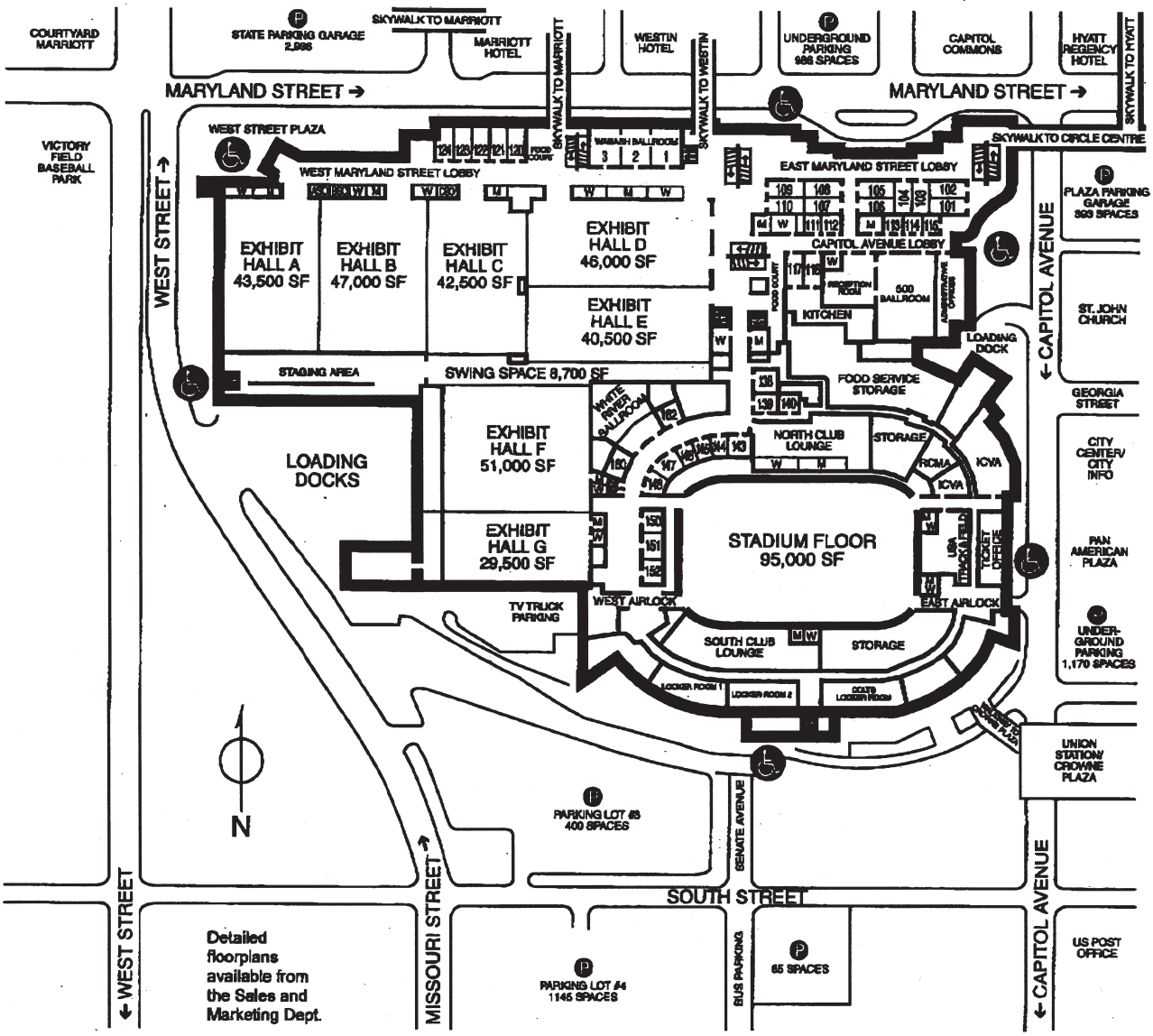
T.J. Barclay - West Texas A&M University
Rene Brewer - CalPoly: San Luis Obispo
Nicole Harris - Kansas State University
Carol Hicks - University of Georgia
Nate Jaeger - Texas A&M University
Natalie Lamneck - University of Florida
Kristina Seybold - University of Minnesota
Lori Thompson - University of Missouri
Nick Thompson - Michigan State University
Scott Updike - Virginia Tech University

AMSA Schedule of Special Events & Meetings

Time	Event	Location	Room
Monday, July 23			
8 a.m. – 3 p.m.	AMSA Board of Directors Meeting	Hyatt Regency	Executive Boardroom
3 p.m. – 5 p.m.	AMSA New Board Orientation	Hyatt Regency	Salon A
Tuesday, July 24			
8 a.m. – 4 p.m.	AMSA – ICoMST 2005 Planning Committee Meeting	Hyatt Regency	Mt. Rainer
1 p.m. – 6 p.m.	AMSA Graduate Poster Competition Setup	Convention Center	Exhibit Halls C,D, and E
4 p.m. – 6 p.m.	AMSA – Meet the Board of Directors	Hyatt Regency	Mt. Rushmore
Wednesday, July 25			
6 a.m. – 7:45 a.m.	Graduate Student Breakfast	Convention Center	Exhibit Halls C, D, and E
9 a.m. - ?	AMSA Graduate Poster Competition Judging	Convention Center	Exhibit Halls C, D, and E
11:30 a.m. – 1 p.m.	AMSA Meat Lab Managers Luncheon	Hyatt Regency	Regency Ballroom A
11:30 a.m. – 1 p.m.	AMSA Intercollegiate Meat Coaches, Coaches and Administrators Luncheon	Hyatt Regency	Mt. McKinley
11:30 a.m. – 1 p.m.	AMSA Board and Committee Chairs Meeting	Convention Center	109
11:30 a.m. – 1 p.m.	AMSA Extension Industry Meeting	Convention Center	110
1 p.m. – 8 p.m.	AMSA Hospitality Room	Hyatt Regency	
6:30 p.m. – 9 p.m.	BBQ Picnic		
Thursday, July 26			
6:30 a.m. – 8 a.m.	AMSA Committee Member Breakfast and Meeting	Hyatt Regency	Regency Ballroom
8 a.m. – 5 p.m.	AMSA Open Poster Session		
1 p.m. – 5 p.m.	Golf Tournament		
1 p.m. – 8 p.m.	AMSA Hospitality Room	Hyatt Regency	
7 p.m. – 9 p.m.	AMSA Emeritus Dinner		
Friday, July 27			
6:15 a.m. – 8 a.m.	AMSA Business Meeting and Breakfast	Hyatt Regency	Regency Ballroom
4:30 p.m. – 6:30 p.m.	AMSA Award Winners Reception	Convention Center	Sagamore Ballroom 1-2
7 p.m. – 10 p.m.	AMSA Awards Banquet	Convention Center	Sagamore Ballroom 1-2
1 p.m. – 7 p.m.	AMSA Hospitality Room	Hyatt Regency	
Saturday, July 28			
12 p.m. – 2 p.m.	AMSA Intercollegiate Meat Coaches Business Meeting & Luncheon	Hyatt Regency	Mt. Rushmore

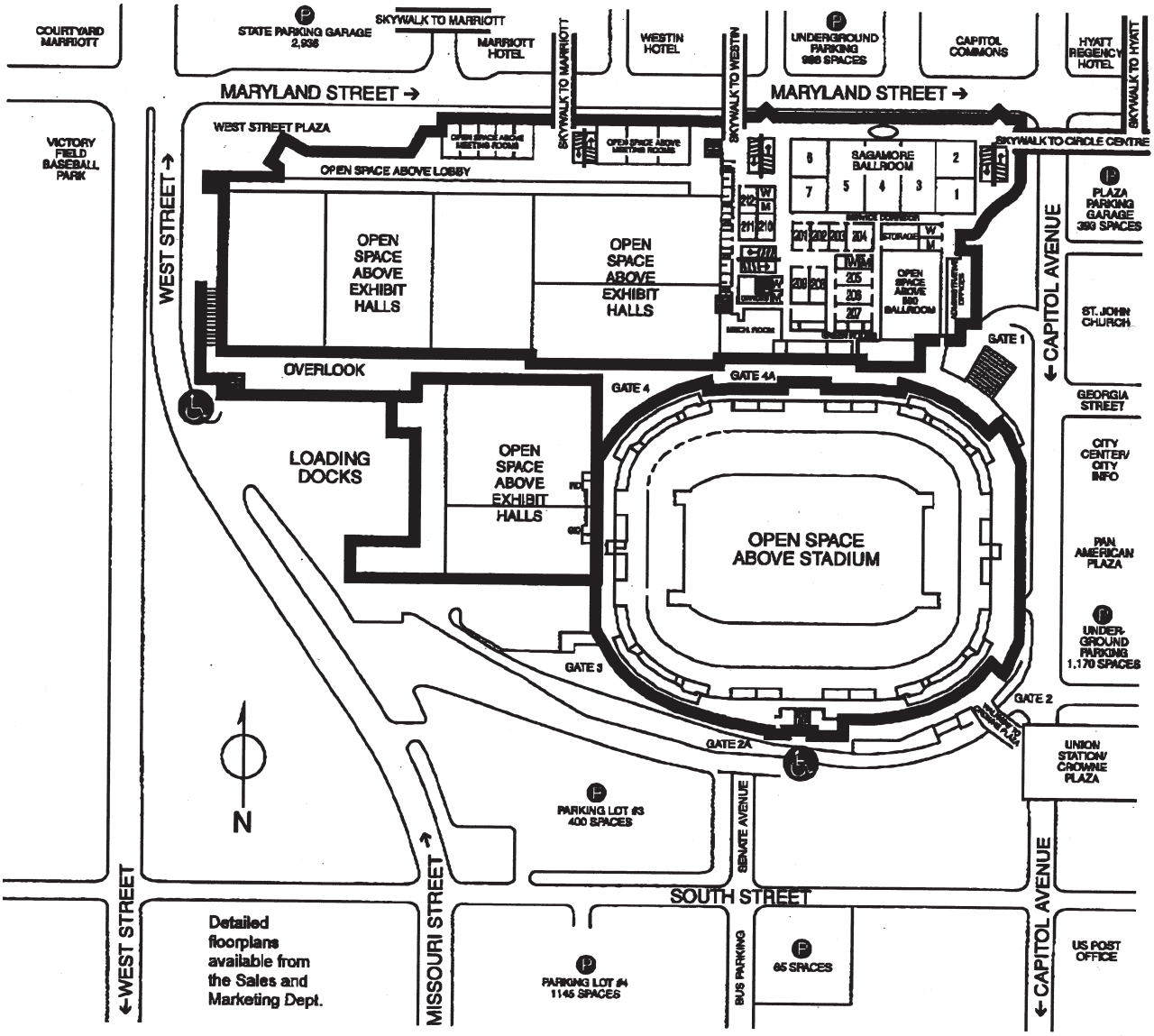
Indiana Convention Center

First Floor



Indiana Convention Center

Second Floor



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Acknowledgment of 2001 ADSA Award Donors

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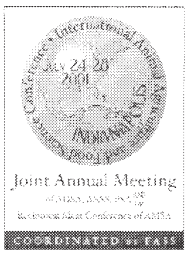

International Animal Agriculture and Food Science Conference

Joint Annual Meeting of ADSA, ASAS, and PSA and the
Reciprocal Meat Conference of the AMSA
July 24-28, 2001 ❖ Indianapolis, Indiana

Registration Form

REGISTER ONLINE AT
www.fass.org/fass01

Name _____
LAST FIRST MIDDLE INITIAL

Preferred First Name on Badge _____

Institution/Company _____

Business Address _____

City _____ State/Province _____

Country _____ Zip/Postal Code _____

Telephone (day) _____ Fax _____

E-mail Address _____

Spouses and children are not required to register. To receive a name badge(s), please provide name(s).

_____

Member of ❍ ADSA ❍ AMSA ❍ ASAS ❍ PSA ❍ First-Time Attendee

Registration Fees

	By May 15	After May 15
ADSA-ASAS-AMSA-PSA Member	❍ $250	❍ $375
Nonmember	❍ $375	❍ $500
Retiree/Fellow/Emeritus	❍ $60	❍ $85
Post Doc Member	❍ $60	❍ $85
Grad Student Member	❍ $60	❍ $85
Undergrad Student Member	❍ $0	❍ $25
Post Doc Nonmember	❍ $375	❍ $500
Grad Student Nonmember*	❍ $375	❍ $500
Undergraduate Nonmember*	❍ $375	❍ $500

Key Code # 001

Program Events

Tuesday, July 24

Dairy Foods Workshop
- Professional Member ❍ $175
- Nonmember ❍ $200
- Student ❍ $40

Triennial Growth Biology Symposium
- Professional Member ❍ $80
- Nonmember ❍ $130
- Student ❍ $35

Friday, July 27

Mixed Models Workshop ❍ $60
(2-Day Workshop - Friday Afternoon and Saturday Morning)

Saturday, July 28

AMSA "Beyond pH" Pork Program ❍ $125

*Attention Nonmember Students

Become a member of ADSA, AMSA, ASAS, or PSA and save on meeting registration fees. Simply mark the society that you would like to join. Then, in a single payment, include the "Student Membership Fee" with the appropriate "Student Member Registration Fee" for the 2001 IAAFSC. Membership will be valid thru 12/31/01.

Undergraduate Student Membership Fees

ADSA ❍ $6.25 ASAS ❍ $20
AMSA ❍ $45 PSA ❍ $30

Graduate Student Membership Fees

ADSA ❍ $6.25 ASAS ❍ $20
AMSA ❍ $45 PSA ❍ $30

Social Events

Tuesday, July 24

~~ADSA Student Division Dairy Farm Tour~~ CANCELLED

PSA Extension Luncheon ❍ $23

Wednesday, July 25

Fun Run ❍ $15

WPSA USA Branch Membership Breakfast ❍ $18

University of Illinois Breakfast ❍ $20

ADSA Production Division Extension Specialists Breakfast ❍ $18

PSA American Historical Society Luncheon ❍ $23

AMSA Meat Lab Managers Luncheon ❍ $23

Softball Tournament (select a team) ❍ $5

❍ ADSA ❍ AMSA ❍ ASAS ❍ PSA

Barbeque Picnic

- Adults ❍ $25
- Students ❍ $20
- Children (10 and under) ❍ $12

Thursday, July 26

University of Kentucky Breakfast ❍ $18

Penn State Breakfast ❍ $20

Virginia Tech Alumni Breakfast ❍ $20

ADSA Dairy Foods Division Extension Specialists Breakfast ❍ $18

AMSA Committee Member Breakfast Meeting ❍ $20

University of Wisconsin Breakfast ❍ $18

PSA National Poultry Waste Management Breakfast ❍ $18

Spouses Luncheon ❍ $23

ADSA SAD Awards Luncheon ❍ $26

Golf Tournament ❍ $85

Friday, July 27

Purdue University Breakfast ❍ $18

Michigan State University Breakfast ❍ $18

PSA Industry Committee Breakfast ❍ $18

University of Arkansas Luncheon ❍ $26

ASAS Block & Bridle Luncheon ❍ $23

PSA Awards Banquet

- Adults ❍ $35
- Students ❍ $25

AMSA Awards Banquet ❍ $30

Saturday, July 28

Intercollegiate Meat Coaches Association Luncheon and Meeting ❍ $23

No-Charge Social & Program Events

For us to plan accordingly, we need an accurate count of the following no-charge events. Please only register for the events that you plan to attend. Please note that spouses and guests are welcome, so be sure to include them in the quantity.

	# Attending
Tuesday, July 24	
Opening Program & Reception	❍_____
Wednesday, July 25	
Undergraduate Student Mixer & Dance	❍_____
Thursday, July 26	
Coordinated Ice Cream Social	❍_____
ADSA Awards Program & Auction	❍_____
Friday, July 27	
International Reception	❍_____
Iowa State University Social	❍_____
ASAS Awards Program	❍_____

Payment

Amount Enclosed $_____

❍ Check (must be drawn on US bank in US funds)

-or-

Please Charge $_____ to my Credit Card:

❍ American Express
❍ MasterCard
❍ Visa

Card Number_____

Expiration Date_____

Signature_____

Cancellation Policy

To be eligible for a refund of meeting registration fees, requests must be received in writing before these dates:

On or Before July 1, 2001	90% Refund
After July 1, 2001	NO REFUND

❍ The cancellation dates apply only to the meeting registration fees.

❍ Ticketed events may be cancelled due to minimum attendance requirements. Refunds will be issued for CANCELLED ticketed events.

❍ There will be NO REFUNDS for non-cancelled ticketed events.

❍ All approved refunds will be issued after the IAAFSC.

COMPLETE AND MAIL OR FAX THIS FORM WITH YOUR CHECK, MONEY ORDER, OR CREDIT CARD INFORMATION TO 2001 IAAFSC, 1111 N. DUNLAP AVE., SAVOY, IL 61874; PHONE: (217) 356-3182; FAX: (217) 398-4119

2001 IAAFSC TOUR REGISTRATION FORM

TOUR "A" - Wednesday, July 25, 2001 - Indianapolis Children's Museum - 9:45 am to 2:30 pm
Visit the Indianapolis Children's Museum, the largest children's museum in the world. Five floors of interactive fun in 10 major galleries plus the planetarium and CineDome theater. Snacks and family-style dining are available. Be sure to visit the Children's Museum Store. The tour cost is $28.00 for adults and $23.50 for children 2 through 17 years of age and includes round-trip motor coach transportation and admission to the Museum and CineDome theater. For more information, visit the Children's Museum on the web at ***www.childrensmuseum.org.***

TOUR "B" - Wednesday, July 25, 2001 - Zionsville Shopping - 10:30 am to 4:00 pm
Zionsville is well known for its interesting shops and boutiques all set in the early 1900s atmosphere. Several restaurants are available for lunch. The tour cost is $13.00 and includes round-trip motor coach transportation. For more information visit Zionsville on the web at ***www.bremc.com/zionsville***.

TOUR "C" - Friday, July 27, 2001 - Conner Prairie Pioneer Settlement - 9:00 am to 3:00 pm
Conner Prairie includes the 1836 Prairietown Village with its costumed interpreters, the 1816 Lenape Indian Camp & Trading Post, indoor exhibits, excellent dining facilities, and a wonderful Museum Shop. The tour cost is $25.00 for adults and $21.00 for children 2 through 12 years of age and includes round-trip motor coach transportation and admission to Conner Prairie. For more information, visit Conner Prairie on the web at ***www.connerprairie.org***.

TOUR "D" - Friday, July 27, 2001 - The Indianapolis Motor Speedway - 11:00 am to 1:00 pm
The world famous Indianapolis Motor Speedway hosts the Indy Racing League's Indianapolis 500 in May, NASCAR's Brickyard 400 in August, and Formula One's United States Grand Prix in September. The tour cost is $15.00 and includes round-trip motor coach transportation and admission to the Indianapolis Motor Speedway Museum. (An optional trip around the Track is available for $3.00. These tickets can be purchased upon arrival at the Speedway.) For more information, visit the Indianapolis Motor Speedway on the web at ***www.brickyard.com.***

TOUR "E" - Saturday, July 28, 2001 - Symphony on the Prairie - 4:30 pm to 10:30 pm
Conner Prairie is the setting for the Indianapolis Symphony Orchestra's Summer concert series. Upon arrival at Conner Prairie, you have the opportunity to visit the village. Your seats are reserved at tables in front of the orchestra shell. Also included is a catered dinner. The tour cost is $50.00 and includes round-trip motor coach transportation, admission to Conner Prairie Village, reserved seating at the tables in front of the orchestra shell, admission to the Symphony on the Prairie concert, and dinner. For more information, visit the Indianapolis Symphony Orchestra on the web at ***www.indyorch.org.***

The minimum number of participants for each tour is 20; the maximum number of participants for each tour is 54.

CUT HERE

I/We want to take the following tours:

Tour	Date	Destination	Number	Amount
A	Wed., July 25	Children's Museum	_____ Adults @ $28.00	$_____
			_____ Children @ $23.50	$_____
B	Wed., July 25	Zionsville Shopping	_____ @ $13.00	$_____
C	Fri., July 27	Conner Prairie	_____ Adults @ $25.00	$_____
			_____ Children @ $21.00	$_____
D	Fri., July 27	Indianapolis Motor Speedway	_____ @ $15.00	$_____
E	Sat., July 28	Symphony on the Prairie	_____ @ $50.00	$_____
			TOTAL	$_____

Please make your check payable to **Lew White Tours** and mail it, plus this registration form, to 1421 Cherry Tree Road, Avon, Indiana, 46123. You may contact Lew White Tours at 317-262-8687. Please mail this by June 30, 2001.

Name:_____ Telephone Number:_____

Address:_____ City, State, & ZIP:_____

Lew White Tours will mail a tour confirmation to you. Your tour tickets will be available at the "Tour Desk" in the hospitality room of the Indianapolis Convention Center.

INDY WELCOMES INTERNATIONAL ANIMAL AGRICULTURE AND FOOD SCIENCE CONFERENCE (IAAFSC) Coordinated by FASS
July 24-28, 2001
HOTEL RESERVATION FORM

GENERAL INFORMATION

Reservations can be made by choosing one of the following methods:

INTERNET: Book your reservation on-line at www.indy.org/conventions or www.fass.org/fass01

FAX: Send completed form to (317) 684-2492.

MAIL: Send completed form to ICVA Housing Bureau, One RCA Dome, Suite 100, Indianapolis, IN 46225-1060.

All reservation requests will be made through the Housing Bureau. **DEADLINE:** ***Friday, June 15, 2001.***

CONFIRMATIONS: Confirmations will be sent after each reservation booking, modification and/or cancellation. **Review confirmations carefully for accuracy.** If you do not receive a confirmation within 14 days after any transaction, please call the Housing Bureau.

MODIFICATIONS/CANCELLATIONS: Please review carefully. A one-night (plus 11% tax) advance deposit is required for each room requested. Checks will be deposited 30 days prior to arrival date. Credit card processing will be held until checkout. **A $25 cancellation fee will be charged for reservations cancelled on or after *Friday, May 25, 2001*.** Reservations cancelled on or after Wednesday, July 18, 2001 or no shows will be charged by the hotel.

MULTIPLE ROOMS: For reservations of 5 rooms or more, rooming lists are due by ***Friday, May 25, 2001.***

HOTEL INFORMATION

Type of room: 1 bed/1 person (1B/1P) _____ 1 bed/2 people (1B/2P) _____ 2 beds/2 people (2B/2P) _____

2 beds/3 people (2B/3P) _____ 2 beds/4 people (2B/4P) _____ Rollaway _____

Number of Rooms: _____ Arrival: _____ Departure: _____ Number of Nights: _____

Hotel requested: *(Number hotel preferences 1-7 under Choice)*	Choice	1B/1P	1B/2P	2B/2P	2B/3P	2B/4P
Comfort Inn City Centre (Designated Student Hotel)	_____	$99	$99	$99	$109	$109
Courtyard by Marriott Downtown Indianapolis (Designated Student Hotel)	_____	$107	$107	$107	$107	$107
Crowne Plaza Hotel & Conference Center at Union Station (Official Meeting Hotel)	_____	$117	$132	$132	$142	$152
Hampton Inn Downtown (Official Meeting Hotel)	_____	$114	$114	$114	$114	$114
Hyatt Regency Indianapolis (Co PSA & AMSA Headquarter Hotel)	_____	$140	$140	$140	$155	$170
Indianapolis Marriott Downtown (ADSA Headquarter Hotel)	_____	$140	$156	$156	$163	$173
The Westin Indianapolis (ASAS Headquarters Hotel)	_____	$140	$140	$140	$160	$180

Requests will be processed on a first-come, first-served basis. If all your choices are unavailable, you will be placed in the next available choice that meets your requirements.

Special requests: ❑ Smoking ❑ Non-Smoking ❑ Handicapped ❑ Other _____ **Requests are not guaranteed.**

DELEGATE INFORMATION

First Name: _____ Initial: _____ Last Name: _____

E-Mail Address: _____

Company: _____

Address: _____

City: _____ State: _____ Zip: _____ Country: _____

Home Phone: _____ Work Phone: _____ Fax: _____

International prefix and area code, if necessary: _____

Contact Name for Groups: _____

Additional Guests in Room: 1. _____

2. _____

3. _____

PAYMENT INFORMATION

Credit Cards: ❑ Visa ❑ Mastercard ❑ American Express ❑ Discover ❑ Other _____

Card Number: _____ Expiration Date: _____

Name of Cardholder: _____ Signature: _____

By signing, I authorize my credit card to be charged in compliance with the above referenced cancellation policies and procedures.

Checks: Check Number: _____ Amount: _____

Make checks payable to IAAFSC Housing Bureau • One RCA Dome, Suite 100 • Indianapolis, IN 46225-1060

ARPAS

American Registry of Professional Animal Scientists

Strengthening and Promoting Excellence for the Professional Animal Scientist through Certification

Sign up NOW to take the exam at the 2001 IAAFSC to become certified as a Professional Animal Scientist
(return with registration form)

Name _____

Address _____

Phone _____ Email _____

Circle which exam(s) you would like to take:

1. Aquaculture
2. Beef Cattle
3. Companion Animal
4. Dairy Cattle
5. Horses
6. Laboratory Animals
7. Poultry
8. Sheep & Goat
9. Swine
10. Meat Science
11. Dairy Product Science
12. Poultry Products

Tentative Schedule:

Wednesday, July 25	9:00 - 11:00 a.m.
Thursday, July 26	9:00 - 11:00 a.m.
Friday, July 27	9:00 - 11:00 a.m.

Exams will be in room 212 of the Convention Center. Times subject to change. You will be contacted to confirm your exam day, time, and location.

Scientific Program Table of Contents

For an Index by Section/Discipline, see pp. 156–163

For an Index by Section/Discipline, see pp. 156–163

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:

For an Index by Section/Discipline, see pp. 156–163

FRIDAY, JULY 27, 2001

For an Index by Section/Discipline, see pp. 156–163

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.

Poster Presentations

WEDNESDAY, JULY 25, 2001

ASAS/ADSA Food Safety and PSA Pathology

Board Number	Abstract Number	
1	1053	Effect of dietary fiber on enterohemorrhagic *Escherichia coli* O157:H7 shedding in lambs. M. Lema* and L. Williams, Alabama A & M University.
2	1054	Simultaneous detection of Salmonella sp. and E. coli O157:H7 using PCR on beef carcasses from a slaughterhouse in Mexico City. E Lopez, R Alonso, MS Rubio*, F Nuñez, M Nicoli, and P Miranda, Facultad de Medicina Veterinaria y Zootecnia, Universidad Nacional Autonoma de Mexico.
3	1055	Simple and rapid method for screening antimicrobial activities of *Bifidobacterium* species of human isolates. S.A. Ibrahim* and M.M. Salameh, North Carolina Agricultural and Technical State University.
4	1056	D-value Determination of *Listeria monocytogenes* and *Salmonella typhimurium* in low fat ready-to-eat processed meat. Kevin McCormick*, Inyee Y. Han, and Paul L. Dawson, Clemson University, Clemson, South Carolina/US.
5	1057	Molecular subtyping and tracking of *Listeria monocytogenes* in Hispanic cheese factories. D.Y. Kabuki[1], A.Y. Kuaye[1], M. Wiedmann[2], and K.J. Boor*[2], [1]Faculdade de Engenharia de Alimentos-UNICAMP-Brazil, [2]Food Safety Laboratory -Department of Food Science-Cornell University-USA.
6	1058	Characterization of isolated bacterial strains with antagonistic properties against food-borne pathogen *Listeria monocytogenes*. H. Roman*, E. T. Ryser, S. Rust, and M. T. Yokoyama, Michigan State University, East Lansing, MI/United States.
7	1059	The effect of environmental and substrate factors on the growth and survival of *Salmonella agona*. S.A. Ibrahim*, T.A. Lloyd, M.M. Salameh, A. Shahbazi, R. Purcell, and C.W. Seo, North Carolina Agricultural and Technical State University.
8	1060	Effects of Tasco # 14 on prevalence levels of enterohemorragic Escherichia coli and Salmonella spp. in feedlot steers. A.R. Barham[1], B.L. Barham*[1], J.R. Blanton, Jr.[1], V.G. Allen[1], K.R. Pond[1], and M.F. Miller[1], [1]Texas Tech University.
9	1061	A challenge trial testing the effects of Acid Pak 4-Way on Salmonella cecal colonization in broiler chicks. J.W. Evans* and M.S. Plunkett, Alltech Biotechnology, Inc., Nicholasville, KY.
10	1062	Effect of an essential oil blend on coccidiosis in broiler chicks. J.W. Evans*, M.S. Plunkett, and M.J. Banfield, Alltech Biotechnology, Inc., Nicholasville, KY.
11	1063	Apramycin resistance of *E. coli* isolated from cold-stressed swine. D.B. Arnett*, P. Cullen, P.D. Ebner, and A.G. Mathew, University of Tennessee, Knoxville, TN.
12	1064	The effect of antibiotics on broiler body weight, feed conversion and tibial dyschondroplasia scores. T.L. Peters*, K.D. Roberson, R.M. Fulton, and M.W. Orth, Michigan State University, East Lansing, MI/USA.
13	1065	Haematological and histological findings in experimental Newcastle disease. F Galindo[1], N Calderon[1], M Charles[1], G Tellez[1], and T Fortoul[2], [1]Departamento de Producción Animal Aves, FMVZ, UNAM , [2]Departamento de Biologia Celular y Tisular, Facultad de Medicina, UNAM.
14	1066	Pathogenesis of thrombocytopenia in Newcastle disease: ultrastructural study. F Galindo[1], N Calderon*[1], G Tellez[1], and T Fortoul[2], [1]Departamento de Producción Animal Aves, FMVZ, UNAM, [2]Departamento de Biologia Celular y Tisular, Facultad de Medicina, UNAM.
15	1067	Organochlorine pesticide residues in cow's milk from tropical region of Veracruz (Mexico). V.T. Pardio*[1], K.N. Waliszewski[2], and A. Ramirez[1], [1]Universidad Veracruzana, Veracruz, Veracruz/Mexico, [2]Instituto Tecnologico de Veracruz, Veracruz, Veracruz/Mexico.

16	1068	Detection of ochratoxin A in sorghum grain using various methods. J.H. Franco de la Torre*, W.P. Reyes, R. Nuño, and A. Taylor, Centro Univ. de Los Altos, Universidad de Guadalajara.
17	1069	Interaction between ochratoxin and aluminosilicate on the histopathologic aspect of organs and the humoral immunity against Newcastle disease virus in broilers. Elizabeth Santin*, A.C Paulillo, A.C., Alessi, E.L. Krabbe, and A. Maiorka, Faculdade de Ciencias Agrarias e Veterinarias - UNESP, Jaboticabal, SP, Brasil.
18	1070	Surveillance programme of the microbiological safety and hygiene of meat in South Africa. AE de Jesus[1], EM Buys*[1], RP Greebe[1], J Kruger[1], L Kgosana[1], and WH Giesicke[2], [1]Animal Nutrition and Animal Products Institute, Agricultural Research Council, Irene 0062, South Af, [2]Department of Agriculture North West Province, Mmabatho 2735, South Africa.
19	1071	Fermentation of whey permeate to lactic acid by *Lactobacillus helveticus* in a spiral-sheet bioreactor. M.M. Salameh*, A. Shahbazi, S.A. Ibrahim, M. Mims, and V. Shirley, North Carolina Agricultural and Technical State University.
20	1072	Molecular certification in chicken meat channel. V. Haezebroeck[1], R. Renaville*[1], I. Parmentier[1], S. Fontaine[1], S. Hetzel[1], and D. Portetelle[1], [1]Animal and microbial biology Unit, Gembloux Agricultural University, Gembloux, Belgium.
21	1073	Nutritional evaluation of Bt-corn in pigs . Tim Reuter, Karen Aulrich*, Andreas Berk, and Gerhard Flachowsky, Institute of Animal Nutrition, Federal Agricultural Research Centre.

PSA Environment and Management

Board Number	Abstract Number	
22	1074	The effect of lighting program and light intensity on the performance and the incidence of leg abnormalities of broiler chickens . A. Kamyab*[1], S. Raja-Abadi[2], K. Yousefi[3], and A. Taghipour Farshi[4], [1]University of Tehran, Animal Sci. Dept., [2]University of Mazandaran, [3]Mobark Andish, Co., [4]Telavang, Co.
23	1075	Effect of a subtherapeutic level of virginiamycin on the clearance of *E. coli* 0157:H7 from an anaerobic continuous-flow culture of chicken microflora. Toni Poole*, Kenneth Bischoff, Todd Callaway, and David Nisbet, USDA,ARS, College Station, TX 77845.
24	1076	Effect of organic acids and formaldehyde on pellet quality and pellet process efficiencies. S. Moore, M. Neill, P. Bentley, R. Odgaard, and P. A. Welch*, Kemin Americas, Inc.
25	1077	Phylogenetic analysis of cecum mucosal bacteria in broiler chickens. J. Gong[1], J.R. Chambers*[1], R.J. Forster[2], H. Yu[1], P. Sabour[1], R. Wheatcroft[1], and S. Chen[3], [1]Food Research Program, Agriculture & Agri-Food Canada, [2]Lethbridge Research Center, Agriculture & Agri-Food Canada, [3]Laboratory Service, University of Guelph, Guelph.
26	1078	Bioprocessing of poultry feather wastes using three feather-degrading microorganisms: fermentation characteristics, keratinases activities and biochemical properties. A. A. Onifade*[1] and N.A. Al-Sane[1], [1]Department of Biological Sciences, Kuwait University, P.O. Box 5969, Safat 13060, Kuwait.
27	1079	Effect of timing of hypobaric exposure on the incidence of ascites syndrome in broilers. J. M. Balog*[1], N. B. Anthony[2], M. A. Cooper[2], B. D. Kidd[1,2], G. R. Huff[1], W. E. Huff[1], N. C. Rath[1], and Y. K. Kirby[1], [1]PP&PSR/ARS/USDA, Fayetteville, AR, [2]University of Arkansas, Fayetteville, AR.
28	1080	Campylobacter jejuni isolation trends of broilers reared on different bedding materials. W Willis*, C Murray, and W Willis, North Carolina A&T State University.
29	1081	Multi-phase versus single-phase feeding during the broiler starter period: Effects on performance and nitrogen excretion. N. Nasril*, C. Zhang, A.U. Haq, J. Carey, and C.A. Bailey, Texas Agricultural Experiment Station.
30	1082	Limitation of *Salmonella enteritidis* colonization by diets containing low calcium and low zinc. S.C. Ricke*[1], Y.M. Kwon[2], C.L. Woodward[1], J.A. Byrd[2], D.J. Nisbet[2], and L.F. Kubena[2], [1]Texas A&M University, College Station, Texas/USA, [2]USDA-ARS, SPARC, College Station, Texas/USA.
31	1083	*Salmonella typhimurium* virulence response to poultry house water as measured by *hilA:lacZY* fusion. J. D. Nutt*, K. L. Medvedev, C. L. Woodward, S. D. Pillai, and S. C. Ricke, Texas A&M University, College Station, TX, USA.

32	1084	Differential response in fertility of broiler breeder males selected for the sperm quality index prior to heat exposure. A. G. Karaca*, H. M. Parker, J. B. Yeatman, and C. D. McDaniel, Mississippi State University, Mississippi State, MS.
33	1085	Employing ultrasound technology to measure testicular development in broiler breeder roosters. L. J. Richardson*[1], A. B. Caudle[1], and J. L. Wilson[1], [1]The University of Georgia.
34	1086	The effects of chlorine and hydrogen peroxide at various concentrations on total bacteria and coliform counts in poultry drinking water. J Zhang*, D McGhee, and S VanBoekel, Cold Springs Farm Ltd. Thamesford, Ontario, Canada.
35	1087	Prevalence of *Campylobacter* in a turkey production facility. A. S. Kiess* and P. B. Kenney, West Virginia University.
36	1088	Does genetic selection for contrasting adrenocortical responsiveness influence underlying sociality in Japanese quail? R. H. Marin*[1], R. B. Jones[2], D. G. Satterlee[1], and G. G. Cadd[1], [1]Dept. of Poultry Science, Louisiana State University Agricultural Center, Baton Rouge, LA 70803, US, [2]Roslin Institute (Edinburgh), Midlothian EH25 9PS, Scotland.
37	1089	Early T-maze behavior, puberty and egg production in Japanese quail selected for contrasting adrenocortical responsiveness. R. H. Marin*[1], D. G. Satterlee[1], G. G. Cadd[1], and R. B. Jones[2], [1]Dept. of Poultry Science, Louisiana State University Agricultural Center, Baton Rouge, LA 70803, [2]Roslin Institute (Edinburgh), Midlothian EH25 9PS, Scotland.
38	1090	Effect of age, body weight, and sex ratio on fertility and hatchability in the Japanese quail (*Coturnix coturnix japonica*) under subtropical conditions. Gehan Ragheb*, H. El-Hammady, and M. Abdelnabi, Assiut University, Assiut, Egypt.
39	1091	Optimum timing of amino acid injections in broiler breeder eggs. Y. Ohta*[1], T. Yoshida[2], and M. T. Kidd[1], [1]Department of Poultry Science, Mississippi State University, Mississippi State, MS 39762, [2]Nippon Veterinary and Animal Science University, Tokyo, Japan 180-8602.
40	1092	Effect of number of birds per cage on the reproductive performance of Japanese quail breeders. J.F. Obregon[1], G. Contreras[1], A. Montoya[1], M.E. Gamez[1], and R. Barajas[1], [1]FMVZ-Universidad Autonoma de Sinaloa (Mexico).

ASAS/ADSA Production, Management, and Environment

Board Number	Abstract Number	
41	1093	Multiple-objective programming to reduce ration cost and nutrient excretion. P.R. Tozer* and J.R. Stokes, The Pennsylvania State University, University Park, PA.
42	1094	Feeding neonatal calves high levels of milk replacers (MR) with different protein and fat levels. T. M. Hill*, J. M. Aldrich, A. J. Proeschel, and R. L. Schlotterbeck, Akey, Inc., Lewisburg, OH.
43	1095	Feeding neonatal calves milk replacers (MR) containing egg proteins. T. M. Hill*, J. M. Aldrich, A. J. Proeschel, and R. L. Schlotterbeck, Akey, Inc., Lewisburg, OH.
44	1096	Protein levels for neonatal calf starters. T. M. Hill*, J. M. Aldrich, A. J. Proeschel, and R. L. Schlotterbeck, Akey, Inc., Lewisburg, OH.
45	1097	Behaviour and meat quality of veal calves receiving solid feeds for welfare purpose. G. Cozzi *[1], F. Gottardo[1], S. Mattiello[2], E. Canali[2], G. M. Burato[1], S. Segato[1], and I. Andrighetto[1], [1]University of Padova, Italy , [2]University of Milano, Italy.
46	1098	Effects of milk replacer fermented with yogurt culture on performance and health of dairy calves. S.C. Chan*, Department of Animal Science, Chinese Culture University, Taiwan.
47	1099	Absorption of immunoglobulin G in calves fed colostrum or colostrum replacement and animal plasma in milk replacer. C. M. Mowrey*[1], R. E. James[1], J. D. Quigley, III[2], and M. L. McGilliard[1], [1]Virginia Tech, Blacksburg VA, [2]American Protein Corporation, Ames IA.
48	1100	Growth characteristics of replacement heifers in selected high producing Wisconsin dairy herds. N.C. Dorshorst*[1], H.A. Lonning[2], P.C. Hoffman[1], K.A. Weigel[1], and C. Dechow[1], [1]University of Wisconsin-Madison, [2]University of Wisconsin-River Falls.

49	1101	Comparison of lactational response of dairy cows in Georgia and Israel to heat load and photoperiod. Y. Aharoni*[1], O. Ravagnolo[2], and I. Misztal[2], [1]Department of Beef Cattle, Agricultural Research Organization, Newe Yaar Research Center,Israel, [2]Animal and dairy Science Departmenrt, University of georgia, Athens 30605.
50	1102	Seasonal variation in the composition of milk from New Zealand Friesian and US Holstein dairy cows: impact of nutrition. M.J. Auldist*, A.R. Napper, and E.S. Kolver, Dexcel Ltd. (formerly Dairying Research Corporation Ltd.), Hamilton, New Zealand.
51	1103	Milk and meat samples obtained in Illinois contain variable amounts of conjugated linoleic acid. A.D. Beaulieu* and J.K. Drackley, University of Illinois, Urbana .
52	1104	Relationship of milk urea nitrogen and DHIA production variables in western commercial dairy herds. R.G. Johnson*, J.L. Walters, and A.J. Young, Utah State University, Logan, Utah.
53	1105	Stochastic modeling of different approaches to dairy cattle reproductive management . M.W. Overton*, U.C. Davis- Veterinary Medicine Teaching and Research Center.
54	1106	Changes in rumen temperature, vaginal temperature and drinking behaviour throughout the estrous cycle in dairy cows. A. D. Kennedy* and S. R. Mathew, University of Manitoba.
55	1107	Follicular growth in lactating cows receiving recombinant bovine somatotropin, gonadotropin releasing hormone, and prostaglandins: contrasts between winter and summer months. Z Keister*, R Collier, and R Ax, University of Arizona, Tucson, AZ/USA.
56	1108	The relationship of indicators of thermal balance and milk production of cows on Missouri dairy farms. James Spain*[1], Julie Sampson[1], and Don Spiers[1], [1]University of Missouri.
57	1109	Effect of feeding of yeast to crossbred calves. Dilip Kumar Garikipati*[1], Sarjan Rao Kapa[1], Rajasekar K[2], and Kailash MM[3], [1]College of Veterinary Science, Tirupati, [2]College of Veterinary Science, Hyderabad, [3]Bangalore Agricultural University.
58	1110	The response of a non-medicated replacer containing a mannanoligosaccharide on growth and health parameters in neonatal dairy calves. A. J. Heinrichs*, M. R. Long, and T. S. Schriefer, The Pennsylvania State University, University Park, PA.
59	1111	Evaluation of spray dried animal plasma addition to milk replacer fed to calves at 2 feeding rates. D. R. Catherman*, Strauss Feeds, Watertown, WI.
60	1112	Effects of supplemental vitamin E and lasalocid on disease severity and immune responses of calves challenged with *Eimeria bovis*. G. E. Goodier*[1], C. C. Williams[1], K. L. O'Reilly[2], T. G. Snider[2], J. C. Williams[1], H. G. Bateman, II[1], D. T. Gantt[1], and C. M. Cheatham[1], [1]LSU Agricultural Center, Baton Rouge, LA, [2]LSU School of Veterinary Medicine, Baton Rouge, LA.
61	1113	Effect of monensin, lasalocid, and decoquinate on growth, feed intake, and feed efficiency of dairy heifers. D.G. Schmidt*[1], J.E. Shirley[1], E.C. Titgemeyer[1], M.V. Scheffel[1], and E.E. Thomas[2], [1]Kansas State University, Manhattan, [2]Elanco Animal Health, Greenfield, IN.
62	1114	Effect of rearing methods of dairy-heifers prior to weaning on growth and reproduction. Jan J.J. Broucek*[1], Clive W. Arave[2], Ted H. Friend[3], Stefan Mihina[1], Michael Uhrincat[1], Anton Hanus[1], Stefan Marencak[1], and Peter Kisac, [1]Research Institute of Animal Production, Nitra, Slovakia, [2]Utah State University, Logan, USA, [3]Texas A&M University, College Station, USA.
63	1115	Prediction and ranking of first lactation milk production using parents' predicted transmitting abilities. B. R. Radke*[1], J. W. Lloyd[2], J. B. Kaneene[2], J. R. Black[2], and S. Harsh[2], [1]Alberta Agriculture, Food and Rural Development, Edmonton, AB, [2]Michigan State University, East Lansing, MI.
64	1116	Effect of wheat variety and replacing wheat with maize grain on feed intake and milk production of Holstein dairy cows. . R.H. Phipps*, J.D. Sutton, and A.K. Jones, The University of Reading, Reading, UK.
65	1117	Evaluation of cow preference between modern and old free-stall design. R. J. Norell*[1], A. Ahmadzadeh[2], and E. P. Wagner[2], University of Idaho, [1]Idaho Falls, [2]Moscow.
66	1118	Whole-farm nitrogen efficiency and balance compared with the milk urea nitrogen test. R.A. Swain*[1], J.L. Walters[1], R.A. Kohn[2], and A.J. Young[1], [1]Utah State University, Logan, UT, [2]University of Maryland, College Park, MD.
67	1119	Determining the relationships among milk urea nitrogen and milk production, milk protein, milk fat and somatic cell count from lactating cows in Texas. G.M. Goodall*[1], M.A. Tomaszewski[1], L.W. Greene[2], R.B. Schwart[1], J.W. Stuth[1], and E.M. Sudweeks[3], [1]Texas A & M University, College Station, TX./ USA, [2]Texas A&M University Research and Extension Center, Amarillo, TX./USA, [3]Texas A&M University Research and Extension, Overton,TX./USA.

68 1120 Comparing nutrient analysis of liquid dairy waste in storage versus field application. R. J. Norell*[1], S. C. Parkinson[2], and D. E. Falk[3], University of Idaho, [1]Idaho Falls, [2]Preston, [3]Twin Falls.

69 1121 Utility of body condition score (BCS) system in relation to the physical and production parameters in crossbred cows. Dilipkumar Garikipati*[1], Sarjanrao Kapa[1], and Kailash MM[2], [1]College of veterinary science, Tirupati, ANGRAU, [2]University of Agricultural science, Bangalore.

70 1122 Solids and phosphorus removal from flushed dairy manure using organic polymers and aluminum chloride. G.G. Timby[1], T.C. Daniel[1], D.R. Smith*[1], and P.A. Moore[2], [1]University of Arkansas, Fayetteville,AR, [2]USDA-ARS.

71 1123 Manure sample processing effects on nitrogen and phosphorus. Z. Dou*[1], J. Ferguson[1], G. Zhang[1], J. Toth[1], D. Galligan[1], R. Munson[1], and C. Ramberg, Jr.[1], [1]University of Pennsylvania.

72 1124 Implementation of innovative best management practices and a nutrient monitoring system to reduce nitrogen and phosphorus loading from dairy cattle production systems. . G.M. Goodall*[1], M.A. Tomaszewski[1], E.R. Jordan[2], S.R. Stokes[3], and L.W. Greene[4], [1]Texas A & M University, College Station, TX./ USA, [2]Texas A&M University Research and Extension Center, Dallas, TX./USA, [3]Texas A&M University Research and Extension Center, Stephenville, TX./USA, [4]Texas A&M University Research and Extension Center, Amarillo, TX./USA.

73 1125 Development of a global positioning system to monitor cattle. G. P. Austin*[1], A. D. Herring[1], G. J. Creager[2], S. P. Jackson[1], and D. K. Lunt[3], [1]Texas Tech University, Lubbock, [2]Texas A&M University, College Station, [3]Texas Agricultural Experiment Station, McGregor.

74 1126 Effects of liquid supplement pH and acid source on liquid supplement intake of beef heifers and gestating beef cows. P.A. Davis*[1], W.E. Kunkle[1], and J.D. Arthington[2], [1]University of Florida, Gainesville, [2]UF-IFAS Range Cattle Research and Education Center, Ona, FL.

75 1127 Effects of plane of nutrition on milk and weight traits in lactating beef cows . M. A. Johnson*, A. D. Herring, L. J. Hughes, and P. D. Bleick, Texas Tech University, Lubbock, Texas .

76 1128 Effects of feedbunk management strategies and monensin levels on feedlot performance in cattle fed to harvest. . G.J. Vogel*[1], J.C. Parrott[1], S.B. Laudert[1], and D.R. White[1], [1]Elanco Animal Health, Indianapolis, IN.

77 1129 Serum concentrations of trenbolone acetate and estradiol benzoate in cattle implanted with coated SYNOVEX Plus long-acting implants. L. A. Kraft*[1], D. M. Henricks[2], S. Gray[2], A. N. Sinha[1], and K. L. Simkins[1], [1]Fort Dodge Animal Health, Princeton, NJ, [2]Clemson University, Clemson, SC.

78 1130 Factors affecting net value of feedlot steers. N.K. Grathwohl*[1], W.B. Epperson[1], B.J. Johnson[2], and S.W. Fausti[1], [1]South Dakota State University, [2]Kansas State University.

79 1131 A systems approach for adding value to Montana feeder calves. . D. J. Fennewald*, J. A. Paterson, R. N. Funston, and L. P. Anderson, Montana State University-Bozeman Bozeman, MT.

80 1132 Predicting nutrient balance in the feedlot. H. Fairweather, K. A. Beauchemin, and K. M. Koenig, Agriculture and Agri-Food Canada, Research Centre, Lethbridge, AB, Canada.

81 1133 Farm-level management practices of cattle: Effects on Enterohemorragic *Escherichia coli* and *Salmonella* in feedlot cattle. A.D. Herring[1], A.R. Barham*[1], S.K. Misra[1], C. Akers[1], and J.R. Blanton Jr.[1], Texas Tech University, Lubbock TX.

82 1134 The effect on economics of integrating pasturing systems into cattle finishing programs. H Koknaroglu*[1] and M.P. Hoffman[1], [1]Iowa State University.

83 1135 Repeated administration of implants to Holstein steers increases average daily gain, *longissimus* muscle area and the percentage of USDA Select carcasses. J.M. Scheffler*, D.D. Buskirk, S.R. Rust, J.D. Cowley, and M.E. Doumit, Michigan State University, East Lansing, MI.

84 1136 Effects of pre and/or postpartum fat supplementation on reproduction in mature beef cows. S.K. Johnson*, J.S. Stevenson, K.R. Harmoney, and J.R. Brethour, Kansas State University.

85 1137 Comparison of pregnancy rates in beef cows for two synchronization regimens using GnRH, PGF_{2a} and MGA. W.A. Greene and M.L. Borger*, The Ohio State University, Wooster USA.

86 1138 Predicting resistance to compression of wool fibers. F.A. Pfeiffer*, C.J. Lupton, and B.A. Kuykendall, Texas Agricultural Experiment Station, San Angelo, Texas/USA.

87 1139 Evaluation of forages for outdoor gestating sows. H. A. Rachuonyo*[1], V. G. Allen[1], J. L. Morrow-Tesch[2], J. W. Dailey[2], and J. J. McGlone[1], [1]Texas Tech University, Lubbock, [2]USDA-ARS, Lubbock.

88	1140	Improving the viability of piglets with oxygen. J Zhang, V Osborne, M Fan, and R Hacker*, Dept. of Animal & Poultry Science, University of Guelph, Guelph, Ontario Canada N1G 2W1.
89	1141	The impact of farrowing crate design on litter performance traits in swine. S.J. Moeller*, K.M. Irvin, K.R Black, and S.M. Neal, The Ohio State University, Columbus, OH.
90	1142	Supplemental feeding lactating Fallow does increased body condition score and circulating leptin but failed to improve reproductive efficiency. K. C. Candler*[1], C. G. Brown[1], D. A. Neuendorff[1], A. W. Lewis[1], J. A. Sterle[2], D.H. Keisler[3], and R. D. Randel[1], [1]Texas Agricultural Experiment Station, Overton, [2]College Station, [3]University of Missouri, Columbia.
91	1143	Angus steer performance grazing bermudagrass on degraded soils fertilized with poultry litter, ammonium nitrate, or crimson clover. D. H. Seman*[1], J. A. Stuedemann[1], and A. J. Franzluebbers[1], [1]USDA-ARS, Watkinsville, GA USA 30677.

ASAS/ADSA Animal Behavior and Well Being

Board Number	Abstract Number	
92	1144	Quiet handling of heifers reduces aversion to restraint. V. Littlefield[1], T. Grandin[1], and J. L. Lanier*[1], [1]Colorado State University.
93	1145	Genetic determination of maintenance behavior of calves . Jan J.J. Broucek*[1], Ted H. Friend[2], Clive W. Arave[3], Paul Flak[1], Stefan Mihina[1], Michael Uhrincat[1], Anton Hanus[1], and Peter Kisac[1], [1]Research Institute of Animal Production, Nitra, Slovakia , [2]Texas A&M University, College Station, USA, [3]Utah State University, Logan, USA.
94	1146	Feeding behavior of lactating dairy cows as measured by real-time control system . Zadok Shabi*[1], Michael Murphy[1], and Uzi Moallem[2], [1]University of Illinois, [2]A.R.O, The Volcani Center, Israel.
95	1147	Behavioral and physiological responses of calves to dehorning using a long acting local anesthetic. J. W. Forehand*[1], H. G. Kattesh[1], T. J. Doherty[1], M. G. Welborn[1], A. M. Saxton[1], J. L. Morrow[2], and J. W. Dailey[2], [1]University of Tennessee, Knoxville TN, [2]ARS-USDA, Lubbock, TX.
96	1148	The effects of management stressors on cortisol production in various breeds of bulls. J.W. Koch*[1,2], S.R. Tatman[1], D.A. Nueundorff[1], T.W. Wilson[1], A.W. Lewis[1], C.C. Chase[3], T.H. Welsh[2], and R.D. Randel[1], [1]Texas Agricultural Experiment Station, Overton, TX, [2]College Station, TX, [3]ARS, USDA, Brookesville, FL.
97	1149	Effects of cooling strategies on physiological responses to heat challenge. K. M. Spurlin*, D. E. Spiers, M. Ellersieck, and J. N. Spain, University of Missouri - Columbia.
98	1150	Evaluation of a model to predict internal body temperature in feedlot cattle during summer heat. L. E. McVicker*, M. J. Leonard, and D. E. Spiers, University of Missouri, Columbia, MO.
99	1151	Effects of simulated preslaughter holding and isolation on stress responses and live weight shrinkage in goats. G. Kannan*, T. H. Terrill, B. Kouakou, S. Miller, S. Gelaye, and E. A. Amoah, Agricultural Research Station, Fort Valley State University, Fort Valley, GA.
100	1152	Effect of animal handling method on the incidence of stress response in market swine in a model system. M. E. Benjamin*[1], H. W. Gonyou[2], D. J. Ivers[3], L. F. Richardson[3], D. J. Jones[3], J. R. Wagner[3], R. Seneriz[3], and D. B. Anderson[3], [1]Elanco/Provel Animal Health, Calgary, Canada, [2]Prairie Swine Centre, Saskatoon, SK, Canada, [3]Elanco Animal Health, Greenfield, Indiana.
101	1153	Variation in hen vocalizations during pre-hatch, hatch and post-hatch. M.B. Woodcock*, M.A. Latour, and E.A. Pajor, Purdue University, West Lafayette, IN 47907.
102	1154	The relationship between physiological parameters and behavioral response to social stress among three genetic lines of laying hens. R. Freire*[2], P. Singleton[1], Y. Chen[1], M.W. Muir[2], Ed. Pajor[2], and H.W. Cheng[1], [1]USDA-ARS, Livestock Behavior Research Unit, [2]Dept of Animal Science, Purdue University.
103	1155	Stress induced alterations of IgG concentrations and hematological parameters in genetically selected chicken lines. Y. Chen*[1], P. Singleton[1], M.W. Muir[2], and H.W. Cheng[1], [1]USDA-ARS, Livestock Behavior Research Unit, [2]Dept of Animal Science, Purdue University.

ASAS/ADSA Ruminant Nutrition: Feed Additives, Rumen Fermentation, Minerals, and Transition Cows

Board Number	Abstract Number	
104	1156	Use of exogenous enzymes from amylases from *Bacillus licheniformis* and *Aspergillus niger* in high-grain diets. R Rojo, G Mendoza*, S Gonzalez, R Barcena, M Crosby, and L Landois, Colegio de Postgraduados.
105	1157	Effect of direct-fed microbials supplementation on dairy cows fed nitrogen deficient diets and on *in vitro* bacterial growth. D. R. Ouellet* and J. Chiquette, Dairy and Swine R&D Centre, Agriculture and Agri-Food Canada, Lennoxville, Canada.
106	1158	Exogenous amylases from Bacillus licheniformis and Aspergillus niger improve starch digestion but not performance of sheep. G Mora, R Barcena, G Mendoza, S Gonzalez, and J Herrera, Colegio de Postgraduados.
107	1159	Influence of monomer or dimer forms of isopropyl ester of HMB, on the supply of metabolisable methionine to the blood of ruminants. J.C. Robert*, C. Richard, and B. Bouza, Aventis Animal Nutrition, Antony, France.
108	1160	A blood kinetics methodology to measure bioavailability of rumen protected methionine sources for ruminants. J.C. Robert*, G. Etave, T. D'Alfonso, and B. Bouza, Aventis Animal Nutrition, Antony, France.
109	1161	Effect of live yeast versus yeast culture on milk yield and related parameters in early lactation cows. G. Higginbotham*[1], J. Merriam[2], E. DePeters[3], and J. Sullivan[4], [1]University of California Cooperative Extension, Fresno/Madera Counties, [2]University of California Cooperative Extension, Stanislaus/Merced Counties, [3]University of California, Davis, [4]Nutrius/Bioproducts, Kingsburg, CA.
110	1162	Milk production effects of a mycotoxin binder in diets with normal levels of contamination. A. Garcia*[1], M. L. Cuevas[1], G. A. Loarca[2], C. Landetta[3], and R. A. Patton[4], [1]Instituto Tecnologico y de Estudios Superiores de Monterrey, Queretaro, Qro/Mexico, [2]Universidad Autonoma de Queretaro, Queretaro/Qro/Mexico, [3]Grupo Karluis, Queretaro,Qro/Mexico, [4]Nittany Dairy Nutrition, Mifflinburg, PA/USA.
111	1163	Milk production in Holstein cows supplemented with different levels of ruminally protected methionine. A Lara*[1], G.D. Mendoza[2], R Barcena[2], C.M. Garcia[2], and L Landois[2], [1]Universidad Autonoma Chapingo, [2]Colegio de Postgraduados.
112	1164	Enzymic release of reducing sugars from oat hulls by cellulase, as influenced by a synergistic interaction between *Aspergillus* ferulic acid esterase and *Trichoderma* xylanase. P. Yu*[1], J.J. McKinnon[1], D.D. Maenz[1], V.J. Racz[1,2], and D.A. Christensen[1], [1]Department of Animal and Poultry Science, University of Saskatchewan, Canada, [2]Prairie Feed Resource Centre Inc., Canada.
113	1165	Effects of exogenous enzymes on fiber degradation of corn stalks. G. Tirado-Estrada[1], I. Mejia-Haro[1], C.R. Cruz-Vazquez[1], G.D. Mendoza-Martinez[2], I. Tovar-Luna[3], and J. Fajardo-Peña[1], [1]CIGA ITA de Aguascalientes, Mexico, [2]Colegio de Posgraduados, Texcoco, Mexico, [3]URUZA- UACH.
114	1166	Effects of an acetyl esterase containing preparation produced by a ruminal fungal isolate on *in vitro* ruminal fermentations. J. M. Tricarico*[1] and K. A. Dawson[2], [1]University of Kentucky, Lexington, KY, [2]Alltech Biotechnology Inc., Nicholasville, KY.
115	1167	Contribution of an acetyl esterase containing enzyme preparation to the action of exogenous enzyme supplements for ruminants. J. M. Tricarico*[1] and K. A. Dawson[2], [1]University of Kentucky, Lexington, KY, [2]Alltech Biotechnology Inc., Nicholasville, KY.
116	1168	Intake and milk production of dairy cows fed lactic acid bacteria and mannanoligosaccharide. J. Gomez-Basauri*[1], M.B. de Ondarza[2], and J. Siciliano-Jones[2], [1]Alltech, Inc., Nicholasville, Kentucky, [2]F.A.R.M.E. Institute, Homer, New York.
117	1169	Effects of a commercial bacterial culture feed supplement on ruminal microorganisms. S. A. Martin*, University of Georgia.
118	1170	Effect of forage level and fibrolytic enzymes on nitrogen digestion in beef cattle diets. M. Murillo, M.S. Vazquez, H.L. Castro, J.F. Sanchez, and M.A. Cerrillo*, Universidad Juarez del Estado de Durango, Durango, Dgo. Mexico.

119	1171	The effect of monensin and bovine somatotropin on lactation performance and body condition score of dairy cows. L J Erasmus*[1], L C Coetzee[1], C H Hesse[2], and T E Spike[3], [1]Agricultural Research Council, Irene, South Africa, [2]Elanco Animal Health, Bryanston, South Africa, [3] Elanco Animal Health, Indianapolis, IN.
120	1172	Differential response of D- and L-Met free plasma in cows fed different sources of rumen protected Met. Mercedes Vazquez-Anon, David Parker*, and Julia Dibner, [1]Novus International, Inc. St. Louis, MO.
121	1173	Effect of ruminally protected methionine and inert fat on milk production in primiparous Holstein cows . J Ayala*[1], G Mendoza[2], L Landois[2], A Ramirez[3], and S Vega[3], [1]Universidad Autonoma Chapingo, [2]Colegio de Postgraduados, [3]Universidad Autonoma Metropolitana.
122	1174	Ruminal degradability of different feeds in the presence of *Saccharmoyces cervisiae*. G. Scaglia*[1], J.J. Williams[1], L.W. Greene[1], and N.A. Cole[2], [1]Texas A&M University Agricultural Research and Extension Center, Amarillo, [2]USDA-ARS at Bushland.
123	1175	The effects of ethoxyquin on performance and antioxidant status of feedlot steers. K. W. McBride*[1], L. W. Greene[1], N. K. Chirase[1], E. B. Kegley[2], and N. A. Cole[3], [1]Texas A&M University System, Amarillo, TX, [2]University of Arkansas, Fayetteville, AR, [3]USDA-ARS, Bushland, TX.
124	1176	Effect of exogenous fibrolytic enzymes on the digestion of alfalfa hay and barley straw by cellulolytic ruminal bacteria. Y. Wang*[1], T. A. McAllister[1], L. J. Yanke[1], K. A. Beauchemin[1], D. P. Morgavi[1], L. M. Rode[2], and W. Yang[1], [1]Agriculture and Agri-Food Canada Research Centre, Lethbridge, AB, [2]Rosebud Technology Development Ltd., Lethbridge, AB.
125	1177	Sources of non-protein nitrogen and the addition of Sacharomyces cerevisiae to sugar cane based diets for young bulls: Intake, digestibility, nitrogen balances and ruminal parameters. E. S. Pereira*[1], A. C. Queiroz[2], S. C. Valadares Filho[2], L. F. Miranda[3], and A. M. V. Arruda[1], [1]Universidade Estadual Oeste Parana , [2]Universidade Federal Viçosa, [3]Universidade Federal Minas Gerais, Brazil.
126	1178	Effects of live yeast concentrates on the in vitro semi-continuous culture fermentation of a high concentrate diet. J. J. Williams*, G. Scaglia, and L. W. Greene, Texas A&M University Research and Extension Center.
127	1179	Use of gas production technique to estimate the rate and extent of starch degradation from starchy feedstuffs in rumen fluid. Weizhong Chai[1], A. H. van Gelder[1], and J. W. Cone[1], [1]ID TNO Animal Nutrition, Institute for Animal Science and Health, The Netherlands.
128	1180	The effects of substrate, ammonia and pH on gas production and starch degradation from starchy feedstuffs in buffered rumen fluid . W. Z. Chai[1], J. W. Cone*[1], A. H. van Gelder[1], and A. A. Kamman[1], [1]ID TNO Animal Nutrition, The Institute for Animal Science and Health, The Netherlands.
129	1181	Splanchnic first pass sequestration of acetate absorbed from the washed reticulo-rumen of dairy cows. N. B. Kristensen*, Danish Institute of Agricultural Sciences, Tjele, Denmark.
130	1182	The effect of dietary roughage on rates of glucose, acetate and beta-hydroxybutyrate clearance from plasma in dairy calves. D.L.J. Benschop*[1], J.P Cant[1], and R. Spratt[2], [1]University of Guelph, Guelph, Canada, [2]Agribrands Purina Canada Inc., Woodstock, Canada.
131	1183	Altering ruminal microbial colonization and synthesis by manipulation of dietary factors. W. Z. Yang*[1], K. A. Beauchemin[1], and L. M. Rode[2], [1]Agriculture and Agri-Food Canada, [2]Biovance Technologies Inc.
132	1184	Metabolism of 2-13C-propionate in the rumen epithelium of sheep. N. B. Kristensen*[1], T. H. Steensen[1], S. G. Pierzynowski[2], and A. Danfær[1], [1]Danish Institute of Agricultural Sciences, Tjele, Denmark, [2]Lund University, Lund, Sweden.
133	1185	Validation of the Sulphur hexafluoride(SF_6) tracer gas technique in measuring methane and carbon dioxide production of cattle. D. A. Boadi*, K. M. Wittenberg, and A. Kennedy, University of Manitoba, Winnipeg, Manitoba Canada.
134	1186	Effect of pH and solid dilution rate on microbial fermentation and nutrient flow in a dual flow continuous culture system. M. Rodriguez, S. Calsamiglia*, and A. Ferret, Universidad Autonoma de Barcelona, Spain.
135	1187	A dynamic mechanistic model of small intestinal starch digestion and glucose absorption in the dairy cow. J A N Mills*[1], L A Crompton[1], J Dijkstra[2], J A Maas[3], C K Reynolds[1], and J France[1], [1]The University of Reading, Reading, UK, [2]Wageningen University, Wageningen, NL, [3]University of Delaware, Delaware, USA.

136 1188 Effect of rumen degradable protein and fiber quality on ruminal bacterial populations in continuous culture. D. L. Hastings*[1], K. E. Griswold[1], G. A. Apgar[1], S. A. Kocherginskaya[2], R. I. Mackie[2], and B. A. White[2], [1]Southern Illinois University, Carbondale, IL, [2]University of Illinois, Urbana, IL.

137 1189 Effects of an inhibitor of obligate amino acid fermenting bacteria upon ruminal and nutrient utilization by calves. E.L. Moody*[1], C.E. Cole[1], F.O. Carrette-Carron[1], W.C. Ellis[1], G. Wu[1], M.M. Kothmann[1], and R.J. Wallace[2], [1]Texas A&M University, [2]Rowett Research Institute.

138 1190 Colonization patterns of forage fragments by rumen microbes. C.A. Marsh*, W.C. Ellis, J.H. Matis, E. Moody, C. Lowe, and J. Johnson, Texas A&M University, College Station, TX, Brazos.

139 1191 Effect of pH and solid dilution rate on the amino acid profile of liquid and solid associated bacteria, and its impact on the estimation of the contribution of microbial amino acids to the total amino acid flow in a continuous culture system. M. Rodriguez, S. Calsamiglia, and A. Ferret, Universidad Autonoma de Barcelona, Spain.

140 1192 Methane emissions from lactating dairy cows fed diets based on conserved forage and grain or pasture. . T. R. Dhiman*, K. C. Olson, M. S. Zaman, I. S. MacQueen, and R. L. Boman, Department of Animal, Dairy and Veterinary Sciences, Utah State University, Logan, UT 84322-4815.

141 1193 A role for rumen microbial protein synthesis in regulating ruminal turnover. W.C. Ellis*[1] and J. H. Matis[1], [1]Texas A & M University.

142 1194 Effect of replacing dietary starch with sucrose on nutrient utilization by ruminal microorganisms during continuous culture fermentation. G. A. Varga[1], T. W. Cassidy[1], V. A. Ishler[1], X. Markantonatos*[1], N. D. Luchini[2], and G. A. Broderick[3], [1]Pennsylvania State University, [2]Bioproducts, Inc, [3]U.S. Dairy Forage Research Center.

143 1195 In vitro effects of lactate-utilizing rumen bacteria on ruminal fermentation. S.-W. Kim*, S. R. Rust, H. Roman-Rosario, and M. T. Yokoyama, Michigan State University, East Lansing, MI.

1196 Withdrawn.

144 1197 Ethanol absorption from the rumen. T. Veresegyhazy*[1], H. Febel[2], G. Nagy[1], and A. Rimanoczy[1], [1]Faculty of Veterinary Science, Szent Istvan University, Budapest, [2]Researche Institute of Animal Breeding and Nutrition, Herceghalom.

145 1198 Influence of drinking saline water and feeding level on feed and water intake, digestibility, thermo-respiratory response and 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.

146 1199 Influence of supplemental chromium on performance, concentrations of liver triglycerides, and blood metabolites during the transition period of dairy cows. J. A. Jackson*, V. Akay, R. Scaletti, S. T. Franklin, D. M. Amaral-Phillips, C. H. Hamilton, and R. J. Harmon, University of Kentucky, Lexington, Kentucky.

147 1200 Effect of dietary phosphorus concentration on estrous behavior of lactating dairy cows. H. Lopez*[1], Z. Wu[1], R. Cherel[2], L. D. Satter[1,2], and M. C. Wiltbank[1], [1]Dairy Science Department, University of Wisconsin, Madison, [2]US Dairy Forage Research Center, USDA-ARS, Madison.

148 1201 Mineral content of Acacia mangium Willd under defoliation conditions. T. Clavero*, E. Miquelena, and A. Rodríguez-Petit, [1]La Universidad del Zulia.

149 1202 Pasture applied biosolids as related to copper status of grazing beef steers. M. E. Tiffany, L. R. McDowell*, G. A. O'Connor, F. G. Martin, N. S. Wilkinson, and H. Q. Nguyen, University of Florida.

150 1203 Effect of shade and organic zinc supplementation on performance of Brahman bull calves fed growing diets in dry tropic weather. R. Barajas* and A. Felix, Universidad Autonoma de Sinaloa (Mexico).

151 1204 Supplementation of ascorbic acid and plasma concentration in the neonatal dairy calf. T.R. Johnson*[1], S.D. Eicher[2], C.A. McKee[1], K.L. Cutshall[3], M.L. Henry[3], and S.P. Coburn[3], [1]Purdue University, West Lafayette, IN, [2]USDA-ARS, West Lafayette, IN, [3]Indiana University Purdue University Fort Wayne, IN.

153 1205 Effect of organic (Availa-Cu) versus inorganic ($CuSO_4$) Cu on the rate and extent of copper repletion in post-partum Brangus heifers. G. P. Yost[1], L. R. McDowell[1], C. K. Swenson[3], and J. D. Arthington*[2], [1]University of Florida - IFAS, Dept. of Animal Sciences, Gainesville, [2]Range Cattle Research and Education Center, Ona, [3]Zinpro Corporation, Eden Prairie, MN.

153	1206	Supplementation effects of calcium salts of unsaturated fatty acids on ruminal environment and forage digestion in grazing dairy cows. . S. Wagner[1], G.F. Schroeder*[1,2], G.A. Gagliostro[3], I. Vidaurreta[1], and J. Couderc[1], [1]Fac.Cs. Agrarias UNMdP, [2]CONICET, [3]INTA EEA Balcarce, Argentina.
154	1207	Effects of Zinc and(or) monensin on the utilization of a barley-alfalfa diet in beef cattle. . H. M. Arelovich*[1], H. E. Laborde[1], C. J. Ackerman[2], M. I. Amela[1], and M. B. Torrea[1], [1]Universidad Nacional Del Sur, Bahia Blanca, Argentina, [2]Oregon State University, Corvallis, OR.
155	1208	Performance and conservation of phosphorus in growing cattle. L. W. Greene*[1,2], F. T. McCollum III[1], N. K. Chirase[1,2], and T. M. Montgomery[2], [1]Texas A&M University Agricultural Research and Extension Center, [2]West Texas A&M University.
156	1209	The effect of copper source and level on the rate and extent of copper repletion in Holstein heifers. G. P. Yost*[1], L. R. McDowell[1], C. K. Swenson[3], and J. D. Arthington[2], [1]University of Florida — IFAS, Gainesville , [2]University of Florida — IFAS, Ona, [3]Zinpro Corporation, Eden Prairie, MN.
157	1210	Effects of biotin on liver metabolism in lactating dairy cows. C. K. Reynolds*[1], A. J. Packington[2], and G. M. Weber[3], [1]The University or Reading, UK, [2]Roche Vitamins (UK), [3]F. Hoffmann-La Roche Ltd., Switzerland.
158	1211	Organic chromium and selenium effects on performance, digestibility and carcass characteristics of lambs. I Dominguez-Vara*[1], S Gonzalez[2], C Garcia-Bojalil[2], R Barcena[2], M Cobos[2], G Mendoza[2], and L Landois[2], [1]Universidad Autonoma del Estado de Mexico, [2]Colegio de Postgraduados.
159	1212	Effects of source of supplemental zinc on heifer performance during receiving and finishing phases. G. A. Nunnery*[1], M. L. Galyean[1], and J. Horton[2], [1]Texas Tech University, Lubbock, TX, [2]Kemin Industries, Des Moines, IA.
160	1213	Adaptations in amino acid concentrations, body fat and body protein in dairy cattle fed varying amounts of protein in the transition period. . J. P. McNamara*, J.J. Sage, T.L. Citron, and G.J. Phillips, Washington State University.
161	1214	Challenging performance of a mechanistic model of metabolism to describe nutrient flux and body pools in early lactation. J. P. McNamara*, J.J. Sage, T.L. Citron, and G.J. Phillips, Washington State University.
162	1215	Effects of prepartum intake, postpartum induction of primary ketosis, and periparturient disorders on performance and blood metabolites in dairy cows. H. M. Dann*, J. K. Drackley, and D. E. Morin, University of Illinois, Urbana.
163	1216	Rumen volume and liquid dilution rate in transition dairy cows. C. K. Reynolds*, D. J. Humphries, and J. D. Sutton, The University of Reading, UK.
164	1217	Effects of dietary energy density on performance of transition dairy cows. E. Rabelo*, R. L. Rezende, S. J. Bertics, and R. R. Grummer, University of Wisconsin, Madison.
165	1218	Effects of dietary energy density on blood parameters and liver triglyceride of transition dairy cows. E. Rabelo*, R. L. Rezende, S. J. Bertics, and R. R. Grummer, University of Wisconsin, Madison.
166	1219	Changes in hepatic methylmalonylcoenzyme A mutase (MCM, E.C. 5.4.99.2) activity during the transition period in the dairy cows. B. Graulet*[1], A. Desrochers[2], and C.L. Girard[1], [1]Dairy and Swine R&D Centre, Agriculture and Agri-Food Canada, Lennoxville, [2]Faculté de Médecine Vétérinaire, St-Hyacinthe, Canada.
167	1220	Effects of a modified stair-step compensatory growth model for gestating beef heifers. A. M. Encinias*, H. B. Encinias, T. D. Klein, G. P. Lardy, M. L . Bauer, and C. S. Park, [1]North Dakota State University, Fargo, ND USA.

PSA Processing and Products

Board Number	Abstract Number	
168	1221	Influence of CO_2 cryogenic cooling on low populations of *Salmonella* Enteritidis in inoculated table eggs. J.B. Gurtler* and D.E. Conner, Department of Poultry Science, Poultry Product Safety and Quality Program, Auburn University, AL.
169	1222	Effect of soybean soapstock on laying hen performance and egg quality parameters. V. Pardio*[1], L. Landin[1], K. Waliszewski[2], M. Avalos[1], A. Flores[1], and L. Guzman[1], [1]Universidad Veracruzana, Veracruz, Veracruz/Mexico, [2]Instituto Tecnológico de Veracruz, Veracruz, Veracruz/Mexico.
170	1223	Development of generic HACCP model plans for the egg processing industry. Mindy Brashears[1], Shelly McKee-Hensarling[1], Jason Mann*[1], and Dennis Burson[1], [1]University of Nebraska.
171	1224	Tuna oil as n-3 fatty acids source to egg yolk. C. Castillo Badillo[1], M. González Alcorta[1], E. Morales Barrera[2], S. Carrillo Domínguez*[3], and R.M. Castillo Domínguez[3], [1]Universidad Autonóma de Chapingo. Chapingo,Texcoco. México, [2]Instituto Nacional de Investigaciones Forestales, Agrícolas y Forestales. Chapingo, Texcoco. México, [3]Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán, México D.F., México.
172	1225	Effect of cooking methods and packaging conditions on the TBARS and COPs of turkey thigh meat patties during storage. S. J. Hur*, M. Du, K. C. Nam, Y. H. Kim, and D. U. Ahn, Iowa State University.
173	1226	Identification of bacteria found in broiler deboning operations. Tam Mai* and Donald Conner, Auburn University.
174	1227	Broiler skin and meat color changes during storage. M. Petracci*[2] and D. L. Fletcher[1], [1]University of Georgia, Athens, USA, [2]University of Bologna, Bologna, ITALY.
175	1228	Use of marine algae to enrich DHA content of heavy broiler breast and thigh muscle. J.E. Garrett*[1], J.R. Abril[1], and M.D. Sims[2], [1]Omega Tech, Inc., Boulder, CO, [2]Virginia Scientific Research, Harrisonburg, VA.
176	1229	Growth of *Campylobacter jejuni* under acidic conditions. Lei Zhang* and Donald Conner, Auburn University.
177	1230	Comparison of carcass damage in turkeys stunned on constant voltage and constant amperage electrical pre-slaughter stunning systems. J.D. Reiman* and J.A. Marcy, University of Arkansas.
178	1231	Survival of Campylobacter jejuni on poultry skin and meat at varying temperatures. M. A. Davis* and D. E. Conner, Auburn University, AL, USA.
179	1232	Comparison of electrolyzed oxidizing water with various antimicrobial interventions to reduce Salmonella spp. on poultry. K. A. Barstad*, R. R. Sharma, A. Demirci, and C. N. Cutter, Penn State University.
180	1233	Application of sodium citrate or sodium lactate in breast meat chicken roll processing. A. Supatanont[1] and T. C. Chen*[1], [1]Mississippi State University.
181	1234	Influence of measurement position on the color values of turkey breast meat. T. J. Buttles[1], J. Kalbfleisch[1], S. L. Noll[1], and B. S. Walters*[2], [1]University of Minnesota, St. Paul, MN, [2]University of Wisconsin - River Falls, River Falls, WI.
182	1235	Pinking in further-processed turkey due to residual nitrate reduction by *Pseudomonas fluorescens*. Chad Clem* and John Marcy, University of Arkansas, Fayetteville, AR.
183	1236	Effect of rosemary oleoresin on quality of ground thigh chicken meat packed in high oxygen modified atmosphere environment. T. Keokamnerd*, I. Y. Han, and P.L. Dawson, Clemson University, Clemson, SC.
184	1237	Imaging system for fecal and ingesta detection on poultry carcasses. K. C. Lawrence, B. Park, W. R. Windham, and D. P. Smith*, USDA, ARS.
185	1238	Effects of post-mortem deboning time and L-value classification of raw fillets on color and texture characteristics of cooked broiler breast meat. B. G. Lyon*[1], E. T. Moran[2], C. E. Lyon[1], and E. M. Savage[1], [1]USDA, ARS, Russell Research Center, Athens, GA, [2]Auburn University, Auburn, AL.
186	1239	Lipid and fatty acid composition of some specialty eggs. Gita Cherian*, Troy B. Holsonbake, and Mary P. Goeger, Oregon State University, Corvallis, Oregon, USA.

PSA Immunology

Board Number	Abstract Number	
187	1240	Enhanced macrophage function in broilers fed diets supplemented with *E. coli* bacterial cell powder. . G. F. Erf*[1], T. K. Bersi[1], and Y. Toride[2], [1]University of Arkansas, Fayetteville, AR, USA, [2]Ajinomoto Co., Inc., Tokyo, Japan.
188	1241	Enhanced macrophage function in broilers fed diets supplemented with digested bacterial cell powder prepared from *Brevibacterium lactofermentum*. T. K. Bersi*[1], B. B. Madison[1], M. K. Redhorse[1], Y. Toride[2], and G. F. Erf[1], [1]University of Arkansas, Fayetteville, AR, USA, [2]Ajinomoto Co., Inc., Tokyo, Japan.
189	1242	The effects of epigallocatechin gallate on the avian macrophage *in vitro*. Jennifer Paquette* and Fred McCorkle, PhD., Central Michigan University, Mt. Pleasant, MI.
190	1243	The *in vitro* effects of Caffeic Acid Phenethyl Ester, the active component of Bee Propolis, on the avian macrophage. Tricia Anscomb*[1] and McCorkle Fred[1], Central Michigan University, Mt. Pleasant, MI.
191	1244	Pulmonary hypertensive response to endotoxin and immune activity in primed and unprimed broiler chickens. W. Wang*, R. F. Wideman, and G. F. Erf, University of Arkansas, Fayetteville, AR, USA.
192	1245	Humoral Immunity Against Newcastle Disease Virus in broilers fed S. cerevisiae cell wall and aflatoxin. Elizabeth Santin*[1], A.C Paulillo[1], E.L. Krabbe[1], A. Maiorka[1], and M. Macari[1], [1]FCAV - Universidade Estadual Paulista.
193	1246	*In vitro* or *in vivo* effects of recombinant turkey interferon gamma (rtIFNγ) on *Eimeria* invasion or infection. R Beltran*[1], P Augustine[2], M El Halawani[3], H Danforth[2], A McElroy[4], and D Caldwell[1], [1]Texas A&M University, College Station, TX, [2]USDA/ARS/LPSI/PBEL, Beltsville, MD, [3]University of Minnesota, St. Paul, MN, [4]Virginia Tech, Blacksburg, VA.
	1247	Withdrawn.
194	1248	Cross reactivity determination for *Salmonella enteritidis* biovar issatschenko and *Salmonella gallinarum* using LT antibodies in immunoblot thecnique. O. Urquiza*[1], G. Tellez[1], L. Paasch[1], G. Ruiz-Palacios[2], and B. Diaz[2], [1]Departamento de Produccion Animal Aves, FMVZ, UNAM , [2]Departamento de Infectologia e Investigacion del instituto nacional de nutricion (INNSZ).
195	1249	The Interleukin-1ß sequence of Japanese quail (*Coturnix coturnix japonica*) and Mallard ducks (*Anas platyrhynchos*). B.D. Humphrey*, E.A. Koutsos, and K.C. Klasing, University of California, Davis, Davis, CA.
196	1250	Initiation of humoral immunity: The role of cytokines and hormones in the initiation of humoral immunity using T-independent and T-dependent antigens. A.E. Gehad[1], H.S. Lillehoj[2], G.L. Hendricks III[3], and M.M. Mashaly*[3], [1]Virginia Commonwealth University, Richmond, VA/USA, [2]USDA-ARS, Beltsville, MD/USA, [3]The Pennsylvania State University, University Park, PA/USA.
197	1251	Control of coccoidiosis in chiken by trickle immunisation. Srinivasan K[1], Dilip Kumar Garikipati*[2], and Venkaram A[2], [1]Madras Vety College, [2]College of Vety Sci, Tirupati.
198	1252	Gamma-interferon and IL-2 activities in supernatant of lymphocytes on chicken splenocytes stimulated with concanavalina A. G. Gomez*[1], G. Tellez[1], A. Isibasi[3], and V. Ortiz[2], [1]Departamento de Producción Animal Aves, FMVZ, UNAM , [2]Departamento de Biomedicina Molecular del CINVESTAV del IPN, [3]Unidad de Investigación Medica en Inmunoquimica del hosp. de especialidades del centro medico nacion.
199		No poster presentation.
200		No poster presentation.

ADSA Dairy Foods: Microbiology and Cheese Technology

Board Number	Abstract Number	
201	1253	Flavor development of cholesterol-reduced Cheddar cheese slurries. H. S. Kwak*[1], C. S. Chung[1], S. J. Lee[1], and J. Ahn[1], [1]Sejong University.
202	1254	Dynamic headspace analysis and sensory characteristics of ewes milk La Serena cheese. María Carbonell, Estrella Fernández-García*, and Manuel Nunez, Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA).
203	1255	The volatile compounds of raw milk Manchego cheese and their relationship to some sensory attributes. Estrella Fernández-García* and Manuel Nunez, Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA).
204	1256	Effect of long term frozen storage on Manchego-type cheese proteolysis. Esther Sendra*[1], Jose Pons[1], Jordi Saldo[2], Reyes Pla[2], Montserrat Mor-Mur[2], and Ventura Guamis[2], [1]Universidad Miguel Hernández, [2]Universitat Autonoma de Barcelona.
205	1257	Texture of artisan Spanish fresh goat's milk cheese. Esther Sendra*[1], Laura Alenda[1], Casilda Navarro[1], Estrella Sayas[1], Juana Fernández-López[1], and José Angel Pérez-Alvarez[1], [1]Universidad Miguel Hernández.
206	1258	Survivability of probiotic cultures in symbiotic goat's milk yogurt. Patricia Buldo*, Velitchka Gotcheva, and Mingruo Guo, University of Vermont, Burlington VT .
207	1259	Protein profiles and rheological properties of fresh goat milk cheese. D. L. Van Hekken*[1], M. H. Tunick[1], and Y. W. Park[2], [1]USDA-ARS-ERRC, [2]Fort Valley State University.
208	1260	Characterization of potential probiotic and milk fermenting properties of lactic acid bacteria strains. Velitchka Gotcheva*[2], Ely Hristozova[3], Tsonka Hristozova[4], Angel Angelov[2], Zlatka Roshkova[2], and Mingruo Guo[1], [1]University of Vermont, Burlington 05405, [2]Higher Institute of Food and Flavor Industries, Plovdiv, Bulgaria, , [3]Medical Academy, Plovdiv, [4]Institute of Microbiology, Plovdiv.
209	1261	Melt and proteolysis of Mozzarella cheese as affected by starter culture and coagulating enzymes. P. Sharma*[1], R. I. Dave[1], K. Muthukumarappan[1], D. J. McMahon[2], and J. R. Broadbent[2], [1]MN-SD Dairy Center, South Dakota State University, Brookings, SD 57007, [2]Western Dairy Center, Utah State University, Logan, UT 84322.
210	1262	Effects of refrigerated storage on proteolytic and lipolytic properties of soft goat milk cheeses manufactured in a southern U.S. state. Aref Kalantari*[1], Young W. Park[1], and Diane Van Hekken[2], [1]Agricultural Research Station, Fort Valley State University, Fort Valley, GA, [2]Eastern Regional Research Center, USDA/ARS, Wyndmoor, PA.
211	1263	Fluid milk quality: Microbiological analysis of fluid milk at the carton encoded sell by date. T.J. Pritchard*[1] and P.S. Kindstedt[1], [1]Northeast Dairy Foods Research Center, University of Vermont.
212	1264	Linoleic acid isomerase activity in *Lactobacillus acidophilus* and *Propionibacterium freudenreichii* subsp. *shermanii*. T Lin*[1], C Lin[2], and Y Wang[2], [1]Chinese Culture University, [2]National Taiwan University.
213	1265	Comparison of effect of vacuum condensed and ultrafiltered milk on Cheddar cheese quality. M. R. Acharya* and V. V. Mistry, MN-SD Dairy Foods Research Center, South Dakota State University, Brookings.
214	1266	Comparison of rennet curd formation characteristics of milk concentrated by vacuum condensing and ultrafiltration. . V. V. Mistry*, P. Upreti, and M. R. Acharya, MN-SD Dairy Foods Research Center, South Dakota State University, Brookings.
215	1267	Standardization of cheesemilks using cold ultrafiltration retentates for the manufacture of Parmesan cheese. J.J. Jaeggi*[1], S. Govindasamy-Lucey[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.
216	1268	Modulation of colonic microbiota with sweet bifidus milk. Elisa Teshima[1], Celia L. L F. Ferreira*[1], Neuza M. B. Costa[1], Ferlando L. Santos[1], and Izabele D. P. Marliere[1], [1]Federal University of Viçosa.
217	1269	Structural and functional properties of a small cryptic plasmid of *Streptococus thermophilus*. G.A. Somkuti and D.H. Steinberg, Eastern Regional Research Center, ARS-USDA.

218	1270	Production and functional properties of dairy products fermented with probiotic bacteria. Sharareh Hekmat*, Brescia College at University of Western Ontario.
219	1271	Changes in functionality of Mozzarella cheese produced from bovine and caprine milk during refrigerated storage. E. J. Oh[1], J. Y. Imm*[2], K. S. Han[1], J. S. Kim[2], S. Oh[3], and S. H. Kim[1], [1]Korea University, [2]Korea Food Research Institute, [3]Korea Yakult Co. Ltd.
220	1272	Effect of Lactococcus lactis ssp. lactis ml3 and c2 bacteriophage peptides and Lactobacillus plantarum yit0068 bacteriophage peptides on the growth of L. lactis ssp. lactis C2 and the inhibition of ml3 and c2 bacteriophage proliferation. C. Hicks*[1], I. Surjawan[1], N. Jose[1], C. Jose[2], and B. Barlow[1], [1]University of Kentucky, Lexington, Kentucky, [2]University of Riau, Pekanbaru, Indonesia.
221	1273	Effect of black pepper essential oils and orange peel terpenes on the inhibition of *Lactobacillus plantarum* and the inhibition of *L. plantarum* yit0068 bacteriophage proliferation. C. Jose[1], N. Jose[2], C. Hicks*[2], and I. Surjawan[2], [1]University of Riau, Pekanbaru, Indonesia, [2]University of Kentucky, Lexington, Kentucky.
222	1274	Estimation of vitamin D_3 content in process cheese. P. Upreti*[1], V. V. Mistry[1], and J. J. Warthesen[2], [1]MN-SD Dairy Foods Research Center, South Dakota State University, Brookings, [2]University of Minnesota, St. Paul.
223	1275	Cheese treated by high pressure in an early stage of ripening. Changes in textural attributes. J. Saldo[1], E. Sendra*[2], and B. Guamis[1], [1]Planta de Tecnologia d'Aliments, UAB. CeRTA. XiT. Bellaterra, Spain, [2]División de Tecnología de Alimentos. Universidad Miguel Hernández. Orihuela, Spain.
224	1276	Cheeses of Spain: classification and description. M. Almena Aliste*[1,2], A. Cepeda Sáez [1], and Y. Noël [2], [1]Hygiene and Food Inspection, Faculty of Veterinary Lugo-University of Santiago de Compostela, Spain, [2]INRA Dairy Technology and Analysis Research unit Poligny, France.
225	1277	Stress relaxation test: an approach to study cheese openness. C. Achilleos, M. Almena Aliste*, and Y. Noël, INRA Dairy Technology and Analysis Research unit Poligny, France.
226	1278	Evaluation of reduced fat Cheddar cheese made with attenuated and not attenuated adjunct culture of *Lactobacillus helveticus I*: Effect of make procedure and cell attenuation. S.A. Madkor[1], P.S. Tong*[1], and M. El-Soda[2], [1]California Polytechnic State University, [2]Alexandria University.
227	1279	Genetic typing of Swiss cheese starter culture strains by pulsed field gel electrophoresis and arbitrarily primed-PCR. J. K. Jenkins*, W. J. Harper, and P. D. Courtney, The Ohio State University Columbus, Ohio.
228	1280	Salt tolerance of dairy propionibacteria. O. Anggraeni, J. K. Jenkins*, and P. D. Courtney, The Ohio State University Columbus, Ohio.

ASAS/ADSA Milk Synthesis

Board Number	Abstract Number	
229	1281	Feeding dairy cattle to increase the content of conjugated linoleic acid in milk. Ying Huang, Barry Bradford*, Nicholas Heig, Jerry Young, and Donald Beitz, Iowa State University.
230	1282	Dietary fish oil plus vegetable oil maximizes trans-18:1 and rumenic acids in milk fat. D.L. Palmquist*[1] and J.M. Griinari[2], [1]OARDC/The Ohio State University, Wooster, Ohio, [2]University of Helsinki, Finland.
231	1283	Effect of dietary conjugated linoleic acids on the yield and composition of cow's milk. K.N. Simard*[1], P. Lacasse[2], L. Delbecchi[2], and P.Y. Chouinard[1], [1]Universite Laval, QC, Canada, [2]Agriculture and Agri-Food Canada.
232	1284	The effect of *trans*-10,*cis*12 conjugated linoleic acid (CLA) infusion on milk fat synthesis and expression of lipogenic enzymes in the mammary gland of lactating cows. E. Matitashvili*[1], L.H. Baumgard[1], and D.E. Bauman[1], [1]Department of Animal Science, Cornell University.
233	1285	In vitro lipid synthesis using bovine mammary homogenate. T. C. Wright*, J. P. Cant, and B. W. McBride, University of Guelph.
234	1286	Kinetics of glucose transport by isolated bovine mammary epithelial cells. Changting Xiao*, John P. Cant, Michael I. Lindinger, and Brian W. McBride, University of Guelph, Guelph, Ontario, Canada.

235 1287 Factors affecting lactose production of lactating rat mammary acini. K. H. Myung*[1] and S. R. Davis[2], [1]Chonnam National University, Kwangju, Korea, [2]AgResearch, Ruakura Research Centre, Hamilton, New Zealand.

236 1288 The expression polymorphism of kappa-casein gene affects cheese yield. G Robitaille*[1], D Petitclerc[1], J Morisset[2], and M Britten[3], [1]DSRDC, Agriculture and Agri-Food Canada, Lennoxville, Canada, [2]Sherbrooke University, Sherbrooke, Canada, [3]FRDC, Agriculture and Agri-Food Canada, St-Hyacinthe, Canada.

237 1289 Distribution of delta-9 desaturase mRNA in bovine tissues: effect of physiological state and diet. E. Matitashvili*[1], D.G. Peterson[1], D.H. Beermann[1], and D.E. Bauman[1], [1]Dept. of Animal Science, Cornell University.

238 1290 Milk fat globule size is not affected by diet restriction or soy oil supplementation. A.D. Beaulieu*[1], J.K. Drackley[1], J.M. Lynch[2], and D.M. Barbano[2], [1]University of Illinois, Urbana. , [2]Cornell University, Ithaca, NY.

239 1291 Supplementary infusion of amino acids and bovine somatotropin in atropine treated cows. P.H. Luimes*[1], J.P. Cant[2], X. Zhao[1], and D. Petitclerc[3], [1]McGill University, St.Anne-de-Bellevue, Quebec, [2]University of Guelph, Guelph, Ontario, [3]Agriculture and Agri-Food Canada, Lennoxville, Quebec.

240 1292 Correlations between specific binding of bST to desaturated hepatic membranes and various serum endocrine and nutrient components. M. Léonard[1], P.H. Luimes[1], E. Block[1], and D. Petitclerc*[2], [1]McGill University, St.Anne-de-Bellevue, Quebec, [2]Agriculture and Agri-Food Canada, Lennoxville, Quebec.

241 1293 Effect of 17ß-estradiol on milk production and mammary gland involution in Holstein cows in mid-late lactation. L. Delbecchi*, D. Petitclerc, and P. Lacasse, AAFC-Dairy and Swine R&D Centre, Lennoxville, Quebec, Canada.

242 1294 Transgenic sows overexpressing alpha-lactalbumin: Piglet growth and milk component intake early in lactation. M.S. Noble*, M.B. Wheeler, and W.L. Hurley, University of Illinois, Urbana, IL.

243 1295 A redefinition of the effects of mammary cell numbers and enzyme activities on predictions of milk yield and composition by a lactating dairy cow model. M. D. Hanigan*, F. E. Standaert, and D. C. Weakley, Purina Mills, Inc., St. Louis, MO.

244 1296 Amino peptidase gene expression in caprine mammary gland; A possible role in peptide-bound amino acid uptake. S.J. Mabjeesh*[1], M. Cohen[1], O. Gal-Garber[1], A. Shamay[2], and Z. Uni[1], [1]The Hebrew University of Jerusalem, [2]Agricultural Research Organization, The Volcani Center.

245 1297 Analysis of the sources of variation in CLA production in dairy cows. J.A. Kelsey*, D.G. Peterson, and D.E. Bauman, Cornell University, Ithaca, NY.

246 1298 Effect of postpartum changes in BCS on milk components. Dilip Kumar Garikipati*[1], Sarjan Rao Kapa[1], and Kailash MM[2], [1]College of Vety Science, Tirupati, [2]College of Vety Science , Bangalore.

247 1299 Evaluation of the antibacterial activities of lactoferricin derived peptides. P.-W. Chen, C.-L. Shyu, and F. C. Mao*, National Chung Hsing University, Taichung, Taiwan.

248 1300 Local expression of IGF-1 and IGFBP-3 mRNA in mammary tissue of prepubertal heifers after treatment with growth hormone. P.M. Jobst*[1], S.D. Berry[1], M.L. McGilliard[1], D. Ayares[2], D.A. Henderson[1], W.E. Beal[1], and R.M. Akers[1], [1]Virginia Polytechnic Institute and State University, [2]PPL Therapeutics Inc.

249 1301 MILK yield and constituents of Fleckvieh cattle in Bavaria:1-First lactation. Kamal Marzouk*[#], [#]Minia Univ.

ASAS/ADSA Extension Education and ASAS/ADSA Teaching Undergraduate and Graduate Education

Board Number	Abstract Number	
250	1302	Dairy farm HACCP: PMO bulk tank temperature and wash cycle compliance on 10 Minnesota dairies. S. Nagel and J. K. Reneau*, University of Minnesota, St. Paul, MN, USA.
251	1303	Environmental mastitis pathogens in fresh bedding material. V. Eckes, M.A. LaValle, R.F. Bey, R.J. Farnsworth, and J.K. Reneau*, University of Minnesota, St. Paul, MN, USA.
252	1304	Phosphorus adsorption implications on phosphorus management on dairies. T. Downing* and J. Hart, Oregon State University.
253	1305	Evaluation of dairy farmers' use of financial long-range planning. G. W. Robb*, S. B. Nott, and B. A. Dartt, Michigan State University.
254	1306	A training workshop for the National Dairy InfoBase. M. A. Varner*[1], [1]University of Maryland.
255	1307	Teaching pork producers breeding and gestation herd management skills via the Internet. M.T. See* and B.A. Belstra, North Carolina State University, Raleigh NC.
256	1308	Undergraduate education: exposing first- and second-year students to laboratory research. G. F. Erf*, W. G. Bottje, H. D. Chapman, M. Iqbal, R. Okimoto, and M. S. Parcells, University of Arkansas, Fayetteville, AR, USA.

ASAS/ADSA International Animal Agriculture

Board Number	Abstract Number	
257	1309	Interaction between chopping length of corn silage and long hay on chewing activity of dry cows. Paolo Berzaghi*[1,2], Giulio Cozzi[1], Flaviana Gottardo[1], and Igino Andrighetto[1], [1]University of Padova, Italy, [2]US Dairy Forage Research Center, Madison, WI.
258	1310	The peruvian dairy sector: farmers' perpectives, development strategies and policy options. Thomas Bernet[1] and Carlos Gomez*[2], [1]International Potato Center,Lima/Swiss Agency for Development and Cooperation, [2]Universidad Nacional Agraria La Molina,Lima.
259	1311	Macedonian Dairy Industry situation and outlook. Alexsandra Depinovska*[1] and Mingruo Guo[2], [1]Land O'Lakes-Macedonia, Kej 13 Noemvri bb,1000 Skopje, Macedonia, [2]University of Vermont, Burlington VT 05405.
260	1312	The suitability of the Beefmaster as a dam breed in hot and arid regions of Israel. J.E. Huston[1], Z. Holzer[2], P.V. Thompson*[1], Y. Aharoni[2], and B.S. Engdahl[1], [1]Texas A&M University System, San Angelo, TX, [2]Israeli Ministry of Agriculture, Haifa, Israel.
261	1313	Effect of seasons on milk production and calving pattern in nili ravi buffaloes . Syed Hassa Raza*[1], Arshad Iqbal[1], M.S. Khan[1], Shahid Mahboob[2], and M. Abdullah[1], [1]FAculty of Aniaml Husbandry, University of Agriculture, Faisalabad, PAKISTAN, [2]Dept.Zoology, Govt. Colleage, Faisalabad, PAKISTAN.
262	1314	Effect of high-levels of brewery supplementation on blood metabolites of Holstein cows from a semi-intensive dairy in north-central Mexico. E Guzman, RM Rincon, DF Cortes, R Bañuelos-Valenzuela*, and CF Arechiga, [1]Universidad Autonoma de Zacatecas. Zacatecas, Mexico.
263	1315	Timed-embryo transfer (Gyr/Holstein) in recipient cows exposed to a synchronized ovulation. BA Barrios, LA Guillen, JC Acuña, and CF Arechiga*, [1]Universidad Autonoma de Zacatecas. Zacatecas, Mexico.
264	1316	Meat quality characteristics of loin eye and tenderloin muscles of native Korean (Hanwoo) steers. Y.K. Lee[1], K.H. Kim*[1], Y.S. Kim[2], S.S. Sun[1], and M.G. Baik[1], [1]Chonnam National University, Kwangju, Korea, [2]University of Hawaii at Manoa, Honolulu.

265 1317 Characterization of forage trees as strategic feed sources for goats under semiarid rangeland conditions of Tamaulipas, Mexico. R. Hernandez[1], A. Tewolde[1], S. S. Gonzalez*[2], E. Gutierrez[3], H. Diaz[4], and F. Briones[1], [1]U. Autonoma de Tamaulipas, [2]Colegio de Posgraduados, [3]U. Autonoma de Nuevo Leon, [4]U. Autonoma Agraria Anotonio Narro.

ASAS Nonruminant Nutrition: Specialty Grains and Amino Acids

Board Number	Abstract Number	
266	1318	Soybean meal from Roundup Ready® or conventional soybeans in diets for growing-finishing pigs. G. L. Cromwell*[1], M. D. Lindemann[1], J. H. Randolph[1], E. P. Stanisiewski[2], and G. F. Hartnell[2], [1]University of Kentucky, Lexington, [2]Monsanto Co., St. Louis, MO.
267	1319	Comparison of apparent ileal amino acid digestibility values of high oil (HOC), high oil/high oleic acid (HOHOC), and low phytate (LP) corn diets fed to finishing pigs. J. W. Frank*[1], G. L. Allee[1], and T. E. Sauber[2], [1]University of Missouri, Columbia, MO, [2]Dupont Specialty Grains, Johnston, IA.
268	1320	Effects of low-phytic acid corn on growth performance, bone strength, and serum osteocalcin concentration in growing-finishing pigs. M. W. Klunzinger*, K. D. Roberson, G. M. Hill, D. W. Rozeboom, and J. E. Link, Michigan State University.
269	1321	Comparision of broiler performance when fed diets containing YieldGard® corn, YieldGard® and Roundup Ready® corn, parental lines, or commercial corn. M.L. Taylor*[1], G.F. Hartnell[1], M.A. Nemeth[1], B. George[2], and J.D. Astwood[1], [1]Monsanto Company, [2]Colorado Quality Research.
270	1322	Comparison of swine performance when fed diets containing Roundup Ready® corn (GA21), parental line or conventional corn. E. P. Stanisiewski*[1], G. F. Hartnell[1], and D. R. Cook[2], [1]Monsanto Company, St. Louis, MO, [2]Akey, Inc., Lewisburg, OH.
271	1323	Comparison of broiler performance when fed diets containing Roundup Ready® corn event NK603, parental line, or commercial corn . M.L. Taylor*[1], G.F. Hartnell[1], M.A. Nemeth[1], B. George[2], and J.D. Astwood[1], [1]Monsanto Company, [2]Colorado Quality Research.
272	1324	Growth performance of broilers fed insect-protected (MON 810) or near isogenic control corn. G. Piva*[1], M. Morlacchini[2], A. Pietri[1], F. Rossi[1], and A. Prandini[1], [1]Istituto di Scienze degli Alimenti e della Nutrizione, U.C.S.C., Facoltà di Agraria, Piacenza,Italy., [2]CERZOO, Piacenza, Italy.
273	1325	Evaluation of *Streptomyces lividans* and *Pichia pastoris* as extra-cellular expression systems for *Escherichia coli* phytase. C.H. Stahl* and X.G. Lei, Cornell University, Ithaca, NY.
274	1326	Apparent and true ileal digestibility of amino acids in soybean meals as affected by heat treatments and trypsin inhibitors. S. W. Kim*[1], Z. H. Zhang[1], L. A. Johnson[2], and R. A. Easter[1], [1]University of Illinois, [2]Iowa State University.
275	1327	Effect of increased levels of crystalline nonessential 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.
276	1328	Lysine to Protein ratios in growing-finishing pigs. E. O. Castaneda-Silva*[1] and J. A. Cuaron[2], [1]Nutrimentos Concentra, S.A. de C.V., [2]C. N. I. Fisiologia y Mejoramiento Animal, INIFAP. Queretaro, Mexico.
277	1329	Effect of synchronizing dietary protein and glucose supply on nitrogen retention of growing pigs. W.J.J. Gerrits*, K.P.C.M. Frijters, J.M. Linden, M.J.W. Heetkamp, T. Zandstra, and J.W. Schrama, Wageningen Institute of Animal Sciences, Wageningen, The Netherlands.
278	1330	Portal recovery of enteral supplied alpha-ketoglutaric acid in growing pigs. N. B. Kristensen*[1], S. G. Pierzynowski[2], H. Jungvid[2], and J. A. Fernandez[1], [1]Danish Institute of Agricultural Sciences, Tjele, Denmark, [2]Gramineer Int. AB, Lund, Sweden.
279	1331	The change of growth performance and carcass characteristics in finishing pigs treated with N-methyl-d,l,-aspartate(NMA). GANG XI*[1], ZIRONG XU[2], and PING XIAO[2], [1]University of Minnesota, St. Paul, MN, [2]Zhejiang University, Hangzhou, China.
280	1332	Response of weanling pigs to dietary lysine sulfate fermentation product or L-lysine•HCl supplementation. B. R. Frederick* and E. van Heugten, North Carolina State University, Raleigh.

281	1333	Effects of dietary supplementation of crystalline L-glutamine on the gastrointestinal tract and whole body growth in early-weaned piglets fed corn and soybean meal-based diets. D. Lackeyram*[1], X. Yue[1], and M.Z. Fan[1], University of Guelph, Guelph, Ontario, Canada.
282	1334	The performance and protein ,amino acid and phosphorus utilization of piglets were improved by phytase supplementation. Keying Zhang*, Daiwen Chen, Bing Yu, Xianmei Luo, and Yongyi Li, Institute of Animal Nutrition, Sichuan Agricultural University,Yaan,Sichuan 625014,PR.China.
283	1335	Metabolic adaptation to synthetic feed and different amino acid patterns. J. A. Nolles, V. V. A. M Schreurs, R. E. Koopmanschap, and M. W. A. Verstegen*, Wageningen Institute of Animal Sciences (WIAS).
284	1336	Cysteine and sulfite enhance reduction of trypsin inhibitor during heating of soybeans. Y.X. Huang and E.L. Miller*, Department of Clinical Veterinary Medicine, University of Cambridge.
285	1337	Effect of Zinc-Methionine on growth performance of Japanese quail (Coturnix coturnix japonica) fed with starting-growing diets. A. Montoya*[1], R. Barajas[1], and G. Contreras[1], [1]FMVZ-Universidad Autonoma de Sinaloa.
286	1338	Effect of chromium-methionine level in diet on hatchability of Japanese quail in dry tropic weather:II. Respone under temperature-controlled in winter season. G. Contreras*[1] and R. Barajas[1], [1]Universidad Autonoma de Sinaloa.
287	1339	Effect of chromium-methionine level in diet on hatchability of Japanese quail in dry tropic weather:I. Respone under temperature-controlled in summer season. G. Contreras*[1] and R. Barajas[1], [1]Universidad Autonoma de Sinaloa.

PSA Nutrition: Amino Acids, Feed Ingredients, and Feed Processing

Board Number	Abstract Number	
288	1340	Digestible lysine levels in the diets of broilers from 1 to 21 days of age. L. F. Araujo*[1], O. M. Junqueira[1], C. S. S. Araujo[1], and S. M. Baraldi Artoni[1], [1]Universidade Estadual Paulista - UNESP/ Jaboticabal - SP - Brazil.
289	1341	Dietary crude protein levels needed for broilers from three to six weeks of age as influenced by gender. Q. Jiang*, C. A. Fritts, and P. W. Waldroup, University of Arkansas.
290	1342	mRNA that encode for proteins capable of transporting L-methionine and/or dl-2-hydroxy-4-(methylthio) butanoic acid are present in the intestinal epithelium of broilers. Y-X. Pan*[1], E. A. Wong[1], J. J. Dibner[2], and K. E. Webb, Jr. [1], [1]Virginia Tech, Blacksburg, VA, [2]Novus International, Inc., St. Charles, MO.
291	1343	Effects of amino acids and calcium levels on radiographic density and calcium excretion in broilers from 1 to 21 days of age. C. S. S. Araujo*[1], S. M. Baraldi-Artoni[1], L. F. Araujo[1], M. J. Q. Lousada[2], and O. M. Junqueira[1], [1]Universidade Estadual Paulista - UNESP/Jaboticabal - SP - Brasil, [2]Universidade Estadual Paulista - UNESP/ Araçatuba - SP - Brasil.
292	1344	Effects of amino acids and calcium levels on radiographic density and calcium excretion in broilers from 22 to 42 days of age. C. S. S. Araujo*[1], S. M. Baraldi-Artoni[1], L. F. Araujo[1], M. J. Q. Louzada[2], and O. M. Junqueira[1], [1]Universidade Estadual Paulista - UNESP/Jaboticabal, SP - Brazil, [2]Universidade Estadual Paulista - UNESP/Araçatuba, SP - Brazil.
293	1345	Effects of amino acids and calcium levels on radiographic density and calcium excretion in broilers from 43 to 49 days of age. S. M. Baraldi-Artoni[1], C. S. S. Araujo*[1], L. F. Araujo[1], O. M. Junqueira[1], M. J. Q. Louzada[2], and N. K. Sakomura[1], [1]Universidade Estadual Paulista - UNESP/ Jaboticabal, SP - Brazil, [2]Universidade Estadual Paulista - UNESP/Araçatuba, SP - Brazil.
294	1346	Effect of diets containing cashew nut meal and an enzyme complex on broiler performance. M.F.F. Fuentes*[1], S.F. Militao[1], E.R. Freitas[1], and G.B. Espíndola[1], [1]Universidade Federal do Ceará, Fortaleza, CE, Brasil.
295	1347	Dehydrated poultry meal as a replacement for soybean meal in broiler diets. J.B. Hess*[1], J.P. Blake[1], R.A. Norton[1], K.M. Downs[2], A. Kalinowski[1], and A. Corzo[1], [1]Poultry Science Department, Auburn University, Auburn, AL, [2]Middle Tennessee State Univ., Murfreesboro, TN.

296 1348 Biological evaluation of a phosphorus source prepared with a new process on broiler chicks. H. Motallebi[1], M. Masoumi Esfahani*[2], and A. Faghihnasiri[3], [1]University of Mazandaran, [2]Telavang Co., [3]Deputy of Livestock Affairs.

297 1349 Organ and body growth in full-fed and pair-fed chickens consuming raw and heated velvet beans (*Mucuna pruriens*). L. B. Carew*[1], J. Weis[1], A. G. Gernat[2], F. A. Alster[1], and E. I. Zakrzewska[1], [1]University of Vermont, Burlington, VT/USA, [2]Escuela Agricola Panamericana, Tegucigalpa, Honduras.

298 1350 Effect of moisture, polyamines, and iron concentration on the nutritional value of biosolids harvested from poultry processing effluent. D.V. Maurice, S.F. Lightsey*, Zulfan, D. Wicker, and J.E. Toler[1], Department of Animal & Veterinary Sciences, [1]Department of Experimental Statistics, Clemson University, Clemson, SC 29634-0361.

299 1351 Utilization of spent hen meal in diets for laying hens. C. A. Fritts*, J. A. Kersey, and P. W. Waldroup, University of Arkansas.

300 1352 Nutritive and economic values of high oil corn in laying hen diets. D. J. Kim and B. D. Lee *, Chungnam National University, Daejeon, South Korea.

301 1353 Effect of treated ervil (*Vicia ervilia*) diets on the performance of laying hens. M. T. Farran*, W. S. Halaby, F. T. Sleiman, M. G. Uwayjan, and V. M. Ashkarian, American University of Beirut, Beirut, LEBANON.

302 1354 The effect of Eggshell 49™ and mussel shell on performance and eggshell quality of laying hens. Ruedi Hadorn[1], Hans Wiedmer[1], and Peter Spring*[2], [1]Swiss Poultry Husbandry School, Zollikofen, Switzerland, [2]Swiss College for Agriculture, Zollikofen, Switzerland.

303 1355 High oleic acid corn in turkey diets: carcass composition and parts yield of market tom turkeys. T. Ergul*[1], P.B. Addis[1], J. Brannon[1], M.L. Endres[2], and S.L. Noll[1], [1]University of Minnesota, St. Paul, MN/USA, [2]Mycogen Seeds, Inc., Eagan, MN/USA.

304 1356 Evaluation of chachafruto (erythrina edulis) foliage meal as a source of protein in laying diets for Japanese quails. H Collazos* and L.E. Davila, Universidad Nacional Abierta y a Distancia, UNAD, Departamento de Zootecnia.

305 1357 Cholecalciferol, 25-hydroxycholecalciferol and vitamin C for laying hens during the initial phase of the cycle of lay. Douglas Faria*[1], Daniely Salvador[1], Monica Mazalli[1], Samir Correa[1], and Diogo Ito, Faculdade de Zootecnia e Engenharia de Alimentos, Pirassununga, SP, Brasil.

306 1358 Effect of formulation density and feed moisture type additives on feed manufacturing and pellet quality. J.S. Moritz*, K.J. Wilson, K.R. Cramer, R.S. Beyer, L.J. McKinney, and W.B. Cavalcanti, Kansas State University, Manhattan, KS.

307 1359 Influence of expander conditioning and feed form on broiler performance. K. J. Wilson, K. R. Cramer*, J. S. Moritz, W. B. Cavalcanti, and R. S. Beyer, Kansas State University.

308 1360 Effect of increasing level of fines in a crumbled starter diet on broiler performance. K. J. Wilson*, J. S. Moritz, K. R. Cramer, R. S. Beyer, and W. B. Cavalcanti, Kansas State University.

309 1361 Impact of increasing levels of expander cone pressure on feed manufacturing characteristics of a broiler starter ration. K. J. Wilson*, L. J. McKinney, K. R. Cramer, J. S. Moritz, W. B. Cavalcanti, R. S. Beyer, and K. C. Behnke, Kansas State University.

310 1362 Effect of crumble quality on broiler performance. K. J. Wilson*, R. S. Beyer, J. S. Moritz, K. R. Cramer, W. B. Cavalcanti, L. J. McKinney, and K. C. Behnke, Kansas State University.

311 1363 Effect of *Aspergillus* sp and bacterial phytase containing broiler diets on body weight, gastrointestinal transit time and the crop and cecum pH of the broiler chick. G Nava*[1], N Ledesma[1], A Priego[2], C Priego[2], L Sutton[3], and G Tellez[1], [1]Departamento de Produccion Animal: Aves, Facultad de Medicina Veterinaria y Zootecnia, UNAM-México, [2]Productos Quimicos-Agropecuarios S.A. de C.V. Mexico , [3]PetAg Inc, Hampshire, IL 60140 USA.

312 1364 Effect of *Aspergillus* sp and bacterial phytase containing broiler diets on intestinal villi size and blood chemistries of the broiler chick. G Nava*[1], N Ledesma[1], A Priego[2], C Priego[2], L Sutton[3], and G Tellez[1], [1]Departamento de Produccion Animal: Aves, Facultad de Medicina Veterinaria y Zootecnia, UNAM-México, [2]Productos Quimicos-Agropecuarios S.A. de C.V. Mexico , [3]PetAg Inc, Hampshire, IL 60140 USA.

313 1365 Effect of phytase, organic trace minerals and age at photostimulation on performance of brown eggshell laying hens. T. Ao*, N. D. Paton, A. H. Cantor, A. J. Pescatore, M. J. Ford, and C. A. Smith, University of Kentucky.

314	1366	Sources and levels of total phosphorus in the diet of broilers from 2 to 28 days of age. L. F. Araujo*[1], O. M. Junqueira[1], D. Mucke[2], R. Knoop[2], and C. S. S. Araujo[1], [1]Universidade Estadual Paulista - UNESP/Jaboticabal - Brazil, [2]Burge Fertilizantes S/A - Sao Paulo - Brazil.
315	1367	Total phosphorus (TP) requirements of meat chickens from 3 to 7 weeks of age. A. Abudabos*, D. V. Maurice, S. F. Lightsey, and W. C. Bridges, Jr.[1], Animal & Veterinary Sciences, [1]Department of Experimental Statistics, Clemson University, Clemson, SC.

THURSDAY, JULY 26, 2001
TECH FORUM DAY

ASAS/ADSA Animal Health

Board Number	Abstract Number	
1	1368	*In vitro* aflatoxin binding characteristics of an esterified glucomannan product. J.W. Evans* and M. Kudupoje, Alltech Biotechnology Inc., Nicholasville, KY.
2	1369	Growth and immune function of calves fed milk replacer with added nitrate. S. T. Franklin, R. O'Carra, R. J. Harmon, D. M. Amaral-Phillips, and J. A. Jackson, University of Kentucky, Lexington, KY.
3	1370	Brain cholinesterase activity in cattle exposed to coumaphos in Mexico. V. Pardio*[1], N. Ibarra[1], A. Velasquez[2], B. Nochebuena[1], E. De la Cruz[1], and J. Alfaro[1], [1]Universidad Veracruzana, Veracruz, Veracruz/Mexico, [2]Instituto Mexicano del Seguro Social, Veracruz, Veracruz/Mexico.
4	1371	Extension needs and approaches towards livestock health improvement in Bangladesh : Proshika experience. Nuru Miah, Proshika Manobik Unnayan Kendra, Bangladesh.
5	1372	Bedding material preferences of crossbred cattle. Dilip Kumar Garikipati*[1], Kailash M. M.[2], and Sarjan Rao Kapa[1], [1]College of Veterinary Sciences,Tirupati, [2]Bangalore Agricultual University.
6	1373	Economic efficacy of treatment protocols for clinical mastitis. E.H. Shim*, R.D. Shanks, and D.E. Morin, University of Illinois, Urbana.
7	1374	Effect of left displacement of abomasum (LDA) corrected by toggle pin suture on performance of Holstein dairy cows. J.E.P. Santos[1], E. Raizman*[1], L.G. Corbelini[2], and R.A. Cerri[1], [1]University of California, Davis, [2]Universidade Federal do Rio Grande do Sul.
8	1375	Effect of disease on fertility traits in Swedish dairy cattle using survival analysis methodology. D.O. Maizon*[1,2] and P.A. Oltenacu[1], [1]Department of Animal Science, Cornell University, [2]Facultad de Ciencias Veterinarias, Universidad de Buenos Aires.
9	1376	The diagnostic value of serum cholesterol in cows and newborn calves. R. Skrzypek*, Agricultural University of Poznan, Poland.
10	1377	Development of a DNA-based vaccine for the prevention of staphylococcal mastitis. E.W. Carter* and D.E. Kerr, University of Vermont, Burlington VT.
11	1378	Immunogenicity of a putative intranasal vaccine against bovine respiratory syncytial virus (BRSV)in calves. B. Earley*[1], O. Kavanagh[2], B. Adair[2], and R. Fallon[1], [1]Teagasc, Grange Research Centre, Dunsany, Co. Meath, Ireland, [2]Veterinary Science Division, Stormont, The Queen's University of Belfast, BT4 3SD, Northern Ireland.
12	1379	Differential tyrosine phosphorylation on bovine PMN. Kynita Campbell[1], Max Paape[2], Mulumebet Worku*[1], and Yan Wang[2], [1]North Carolina Agricultural and Technical State University, [2]USDA Beltsville, Maryland.
13	1380	Bovine PMN release the COX-2 protein when stimulated with bacterial lipopolysaccharide. Jenora Waterman and Mulumebet Worku*, North Carolina Agricultural and Technical State University.
14	1381	Modulation of apoptosis in bovine blood PMN by actinomycin-D, lipopolysaccharide, and sodium butyrate. P Matterson*, S Knight, and M Worku, NC Agricultural and Technical State University.
15	1382	Techniques for RNA isolation and cDNA integrity in bovine blood PMN. S Knight*, M Worku, P Matterson, and S Dance, NC Agricultural and Technical State University Greensboro, NC USA.

16 1383 Isolation of membrane protein associated with IgM binding from bovine neutrophils. A Johnston-Ward*, S Knight, and M Worku, NC Agricultural and Technical State University Greensboro, NC USA.

17 1384 Establishing and comparing profiles of antimicrobial resistance in *Staphylococcus aureus* isolates from selected organic and conventional dairy farms in Vermont. C. Nugent*, P. Murdough, W. Panky, and J. Barlow, University of Vermont, Burlington, VT.

18 1385 Improved quantification of total lipids from liver samples. B. N. Ametaj*, Y. Lu, G. Bobe, J. W. Young, and D. C. Beitz, Iowa State University, Ames, IA.

19 1386 Effect of slow-release insulin on bovine hepatic lipidosis. A. Hayirli*, J. E. Kayhart, S. J. Bertics, and R. R. Grummer, University of Wisconsin, Madison.

20 1387 Utility of RAP-PCR to identify genes in bovine liver differentially expressed following in vivo endotoxin (LPS) challenge. E. E. Connor*, C. M. Ashwell, S. Kahl, and T. H. Elsasser, USDA-ARS, Beltsville, MD.

21 1388 Prepartum body condition score and liver glycogen concentration decrease circulating memory activity to viral antigens in periparturient dairy cows. D. C. Donovan*[1], A. R. Hippen[1], and D. J. Hurley[1], [1]South Dakota State University, Brookings.

22 1389 Impact of season and heat stress on SCC from infected and uninfected quarters. B. A. Broaddus*, R. J. Harmon, R. W. Scaletti, K. Akers, B. A. Smith, S. H. Hayes, and C. H. Hamilton, University of Kentucky, Lexington, KY.

23 1390 Relationship of somatic cell score with fertility measures. R.H. Miller[1], J.S. Clay[2], and H.D. Norman*[1], [1]Animal Improvement Programs Laboratory, Agricultural Research Service, USDA, Beltsville, MD, [2]Dairy Records Management Systems, Raleigh, NC.

24 1391 Efficacy of a concentrated equine serum product to prevent failure of passive transfer of immunity in neonatal foals. C.J. Hammer*[1], J.A. Booth[1], L. Etzel[2], and H.D. Tyler[1], [1]Iowa State University, Ames, IA USA, [2]Proliant, Ames, IA USA.

25 1392 Heritability of Ascaridia galli egg output in laying hens. Matthias Gauly*[1], Christian Bauer[2], and Georg Erhardt[1], [1]Institute of Animal Breeding and Genetics, University of Giessen, [2]Institute of Parasitology, University of Giessen, Germany.

26 1393 Antibiotic effects of Tylosin in the large intestine of swine fed sub-therapeutic concentrations of Tylan. M.D. Howard*[1], J.A Zahn[1], and D.L. Harris[2], [1]National Swine Research Information Center, USDA-ARS, [2]Iowa State University.

27 1394 Adhesion of *Actinobacillus pleuropneumoniae* to swine soluble fibronectin. R.C. Hamer*[1,2], I. Enriquez[2], D. Godinez[2], R.Z. Martinez[2], P. Talamas[2], S. Vaca[3], and M. de la Garza[2], [1]FMVZ-Universidad Autonoma de Sinaloa. Culiacan, Sinaloa Mexico., [2]CINVESTAV-IPN. Zacatenco. Mex. D.F. Mexico., [3]ENEP- Iztacala. Universidad Nacional Autonoma de Mexico. Mexico.

28 1395 Testing for the Presence of Enterotoxigenic *Escherichia coli* Infections Causing Diarrhea in Swine Using PCR and ELISA Techniques. S. Cole*[1] and R. R. Marquardt[1], [1]University of Manitoba.

29 1396 Differential effect of dexamethasone on lymphocyte proliferation and immunoglobin production *in vitro*. M.R. Rogers*[1], S.C. Lozano[1], K.M. Kammlah[1], T.H. Welsh, Jr.[2], and J.C. Laurenz[1], [1]Texas A&M University-Kingsville, [2]Texas A&M University-College Station.

30 1397 Effect of oral administration of dehydroepiandosterone-sulfate (DHEAS) on pig lymphocyte function *in vitro*. S.C. Lozano*[1], T.H. Welsh, Jr.[2], and J.C. Laurenz[1], [1]Texas A&M University-Kingsville, [2]Texas A&M University-College Station.

ASAS/ADSA Breeding and Genetics: Gene Mapping, QTL, and Statistical Methods

Board Number	Abstract Number	
31	1398	A novel and highly effective method to generate transgenic mice and chickens: linker-based sperm-mediated gene transfer. Jin Qian*[1], Yi-Hsin Liu[2], Mason Jiang[3], Tsehay Mekonnen[1], and Ken Wang[1], [1]BioAgri Corp., [2]Center for Craniofacial Molecular Biology, USC, [3]Dept. of Anesthesiology, UCLA.

32 1399 Generation of transgenic pigs by sperm-mediated gene transfer using a linker protein (mAb C). Keejong Chang[2,3], Jin Qian[1], Mason Jiang[4], Ming-Che Wu[5], Chidar Chen[2], Hin-Lung Lo[3], Meng-Chun Hu[2], Wen-Wen Lin[2], Iris Ho[2], and Ken Wang*[1], [1]BioAgri Corp., [2]BioAgri Corp., Taiwan Division, [3]Dept. of Chemistry, Soochow University, [4]Dept. of Physiology, Taiwan Livestock Research Center, [5]Dept. of Anesthesiology, UCLA.

33 1400 Macroarray analyses of differential gene expression in porcine fetal and postnatal skeletal muscle RNA. S. Zhao*[1,3], C. Fitzsimmons[1], C. Ernst[2], and C. Tuggle[1], [1]Iowa State.University, Ames, IA, [2]Michigan State Univeristy, East Lansing, MI, [3]Huanzhong Agricultural University, Wuhan, PRC.

34 1401 Production of 17 cDNA libraries and successful EST sequencing of 10,124 clones from porcine female reproductive tissues. C.K. Tuggle*[1], J.A. Green[2], C. Fitzsimmons[1], R. Woods[2], R. Prather[2], S. Malchenko[3], M.B. Soares[3], C.A. Roberts[4], K. Pedretti[4], T. Casavant[4], D. Pomp[5], G. Bertani[5], S. Olberding[5], Y. Zhang[1], M. F. Rothschild[1], C. Harger[6], and W. Beavis[6], [1]Iowa State University, Ames, IA, [2]University of Missouri-Columbia, Columbia, MO, [3]Pediatrics-University of Iowa, Iowa City, IA, [4]ECE-University of Iowa, Iowa City, IA, [5]Department of Animal Science, University of Nebraska, Lincoln, NE 68583, [6]National Center for Genomic Resources, Santa Fe, NM.

35 1402 Development of a physical map of bovine chromosome 4 that contains the gene responsible for Bovine Progressive Degenerative Myeloencephalopathy (PDME). Mheni Ben Abdallah*, Scott Speidel, Emily Oberg, and Sue DeNise, University of Arizona, Tucson, AZ, USA.

36 1403 Comparative mapping and linkage analysis to identify the genetic region responsible for Bovine Spinal Muscular Atrophy (SMA). E.A. Oberg*[1], N. Vukasinovic[2], and S.K. DeNise[1], [1]University of Arizona, [2]Utah State University.

37 1404 Genetic analysis of candidate genes for Weaver Syndrome in Brown Swiss cattle. Scott Speidel*, Emily Oberg, Mheni Ben Abdallah, and Sue DeNise, University of Arizona, Tucson, AZ/USA.

38 1405 Evaluation of genetic relativeness and diversity in five goat breeds using randomly amplified polymorphic DNA (RAPD) analysis. J. Luo*[1], Z. G. Liu[2], G. S. Yang[2], and X. M. Zhen[3], [1]E(Kika) de la Garza Institute for Goat Research, Langston University, Langston, OK, [2]Northwest Agricultural University, Yangling, Shaanxi, China, [3]Biotechnology Laboratory of Hubei Agricultural Science Academy, Wuhan, Hubei, China.

39 1406 PIT-1 gene sequencing and mutation analysis in sheep . E Bastos*[1], I Parmentier[2], I Santos[3], A Cravador[4], H Guedes-Pinto[1], and R Renaville[2], [1]University of Tras-os-Montes e Alto Douro, Vila Real, Portugal, [2]Gembloux Agricultural University, Gembloux, Belgium, [3]National Zootechnical Station, Santarem, Portugal, [4]University of Algarve, Faro, Portugal.

40 1407 The pairwise relatedness between relatives conditional on genetic markers. Yuefu Liu*[1], Gerald Jansen[1], and Ching Lin[2], [1]University of Guelph, Guelph, Canada, [2]Agriculture and Agri-Food Canada, Lennoxville, Canada.

41 1408 Marker assisted selection for first calving age at embryo level: a simulation study. A. J. M. Rosa*[1], R. B. Lobo[1], P. Bijma[2], M. Rutten[2], H. N. Oliveira[3], and J. van Arendonk[2], [1]USP - Ribeirao Preto,SP/Brazil, [2]Wageningen Institute of Animal Science, Wageningen, Holland, [3]UNESP - Botucatu,SP/Brazil.

42 1409 A heterogeneity model for estimating the number of QTL alleles in a segregating population. Jean Xu* and Yang Da, Department of Animal Science, University of Minnesota.

43 1410 Evidence of paternally imprinted QTL around *IGF2* in a Berkshire-Yorkshire cross. H. K. Lee[2], J. C. M. Dekkers*[1], R. L. Fernando[1], and M. F. Rothschild[1], [1]National Livestock Research Institute, Korea, [2]Iowa State University, Ames, IA.

44 1411 Combined interval mapping of QTL using mixed models in reference families with complex pedigrees and its application to chromosome 13 of swine . X. L. Wu and C. Lee*, Hallym University, Chuncheon, Korea.

45 1412 PIT-1, a candidate gene for mass assisted selection in dairy bulls. I. Parmentier*[1], N. Gengler[2], S. Fontaine[1], B. Auvray[2], T. Burnside[3], D. Portetelle[1], and R. Renaville[1], [1]Gembloux Agricultural University, Animal and microbial biology unit, Gembloux, Belgium, [2]Gembloux Agricultural University, Husbandry unit, Gembloux, Belgium, [3]Semex-Alliance, Guelph, Canada.

46 1413 Composite interval mapping analysis of milk production and health traits in US Holsteins. A. B. Kurtz*, S. L. Rodriguez-Zas, H. A. Lewin, and D. W. Heyen, University of Illinios at Urbana-Champaign, Urbana, IL.

47 1414 Interval mapping of quantitative trait loci affecting yield and health traits in dairy cattle . A. B. Kurtz*, S. L. Rodriguez-Zas, H. A. Lewin, and D. W. Heyen, University of Illinois at Urbana-Champaign, Urbana, IL.

48	1415	Identification of genome positions associated to monthly production and health records using a single-marker model. S. L. Rodriguez-Zas*, B. R. Southey, H. A. Lewin, and D. W. Heyen, University of Illinois, Urbana, IL.
49	1416	Random regression models to estimate genetic growth parameters of young zebu beef cattle. E. S. Sakaguti*[1], R. L. Quaas[2], M. A. Silva[3], E. N. Martins[1], P. S. Lopes[4], and L. O. C. Silva[5], [1]Universidade Estadual de Maringa, Maringa, Brazil, [2]Cornell University, Ithaca, New York, [3]Universidade Federal de Minas Gerais, Belo Horizonte, Brazil, [4]Universidade Federal de Vicosa, Vicosa, Brazil, [5]$EMBRAPA - Gado de Corte, Campo Grande, Brazil.
50	1417	Inversion-free method for variance component estimation under the animal model. Jean Xu* and Yang Da, Department of Animal Science, University of Minnesota.
51	1418	Incorporating external information in multi-breed genetic evaluation. R. L. Quaas* and Z. Zhang, Cornell University, Ithaca, NY.
52	1419	Bayesian linear mixed models employing the contaminated normal distribution: a simulation study in animal breeding. I. G. Pereira*, G. J. M. Rosa, and H. N. Oliveira, UNESP - Botucatu, SP/ Brazil.
53	1420	Effect of reducing the frequency of milk recording on accuracy of genetic evaluation using a random regression model. J.J. Tosh[1], J.A.B. Robinson*[1], G.B. Jansen[1], and C.Y. Lin[2], [1]Centre for Genetic Improvement of Livestock, University of Guelph, Ontario, Canada, [2]Dairy and Swine Research and Development Centre, Agriculture & Agri-Food Canada, Lennoxville, Quebec.
54	1421	Bayesian analysis of multiple-linear and categorical traits with varying number of categories. D.H. Lee*[1], I. Misztal[1], J.K. Bertrand[1], and R. Rekaya[2], [1]University of Georgia, Athens, Georgia, [2]University of Wisconsin, Madison, Wisconsin.
55	1422	Analyses of sequential weights of Brazilian Zebu cattle using a multiple trait model by REML and Bayesian method. P. R. C. Nobre*[1], I. Misztal[1], S. Tsuruta[1], D. Lee[1], J. K. Bertrand[1], L. O. C. Silva[2], and P. S. Lopes[3], [1]University of Georgia, [2]CNPGC/Embrapa, Brazil, [3]UFV, Brazil.

PSA Genetics

Board Number	Abstract Number	
56	1423	Influence of genetics on phytate phosphorus utilization by chickens. T. N. Smith, S. E. Aggrey*, R. I. Bakalli, and G. M. Pesti, University of Georgia.
57	1424	Inheritance of Alkaline Phosphates in Local Iraqi Chicken and its association with Production. Ali Al-HilIali[1] and Khalid Al-Soudi*[2], [1]Iraqi Atomic Energy Commission, Baghdad. Iraq, [2]Animal Production Department. Agriculture College, Baghdad University. Baghdad, Iraq.
58	1425	Multisource Multitrait Selection Indices For Genetic Improvement In Poultry Breeding Programs For Laying Hens. 2. Construction And Evaluation Of Various Indices. A. A. Enab[1], N. Kolstad[2], and F.H. Abdou[1], [1]Fac. Of Agric., Minufyia Univ., Shebin El-Kom, EGYPT, [2]Agricultural Univ. Of Norway.
59	1426	A comparative genomic approach to identifying QTL's for growth in chickens. J. Funk-Keenan and G. F. Barbato, The Pennsylvania State University, University Park, PA .
60	1427	Preliminary mapping of a gene affecting male fertility in the chicken. K Song*[1], F.G. Sizemore III[2], J.D. Kirby[1], and D.D. Rhoads[1], [1]University of Arkansas, Fayetteville, AR, [2]USDA-Avian Disease and Oncology Lab, East Lansing, MI.
61	1428	Zona pellucida 3 protein (ZP3) and gene (ZPC) expression in the turkey, *Meleagris gallopavo*. M. L. Block*[1], K. E. Nestor[2], and G. F. Barbato, [1]The Pennsylvania State University, University Park, PA , [2]The Ohio State University, Wooster, OH.
62	1429	Molecular characterization of a partial inverted repetitive (PIR) DNA family in the chicken genome. Juan Li, Xiaofei Wang, and Frederick Leung*, University of Hong Kong.
63	1430	The temporal expression of the Myogenic Regulatory Factor genes during proliferation and differentiation of satellite cells derived from chicken *Biceps femoris* and *Pectoralis major* muscles. A Sarver, J Richter*, H Kocamis, S Gahr, and J Killefer, [1]West Virginia University, Morgantown, WV 26506.

64	1431	Social stress induced different alterations of dopamine concentrations and adrenal function in genetically selected chicken lines. P. Singleton*[1], Y. Chen[1], M.W. Muir[2], and H.W. Cheng[1], [1]USDA-ARS, Livestock Behavior Research Unit, [2]Dept of Animal Science, Purdue University.
65	1432	MHC and family effects of cellulitis on lymphocyte proliferation in MHC defined broiler chickens. K. S. Macklin*, R. A. Norton, and S. J. Ewald, Auburn University, Auburn, AL.

ASAS/ADSA Forages and Pastures: Silages, Forage Quality, and Digestion

Board Number	Abstract Number	
66	1433	Effect of wilting and molasses on silage quality of Leucaena leucocephala. T. Clavero*[1] and Rosa Razz[1], [1]La Universidad del Zulia.
67	1434	Prediction of reed canarygrass quality as influenced by N fertilization and maturity. D.J.R. Cherney*, D.R. Dewing, and J.H. Cherney, Cornell University, Ithaca, NY.
68	1435	A survey of phytoestrogen activity in Kansas Flint Hills native grass pastures. D.A. Blasi*[1], S.I. Paisley[1], W.V. Welshons[2], and G.E. Rottinghaus[2], [1]Kansas State University, [2]University of Missouri, Columbia.
69	1436	Changes in nutritive value for bermudagrass hay as affected by initial concentration of moisture and sampling date. J.E. Turner*, W.K. Coblentz, D.A. Scarbrough, K.P. Coffey, D.W. Kellogg, L.J. McBeth, and R.T. Rhein, Animal Science Department, Univesity of Arkansas.
70	1437	Partitioning of nitrogen in bermudagrass forages in response to nitrogen fertilization. J.L. Gunsaulis, W.K. Coblentz*, M.B. Daniels, J.E. Turner, D.A. Scarbrough, J.B. Humphry, K.A. Teague, K.P. Coffey, and N.W. Galdamez, University of Arkansas.
71	1438	Brown midrib-3 corn silage as the major forage for transition cows. H.H.B. Santos*[1], V.R. Moreira[1], Z. Wu[2], and L.D. Satter[1,2], [1]U.S. Dairy Forage Research Center, USDA-ARS, [2]University of Wisconsin, Madison.
72	1439	Effects of the heterotrophic bacterium *Lactobacillus buchneri* on preservation of alfalfa and timothy hay. J. Baah*[1], L. Bos[2], F. H. VanHerk[1], R. C. Charley[3], and T. A. McAllister[1], [1]Agriculture and Agri-Food Canada Research Centre, Lethbridge, AB, [2]Wageningen University, Wageningen, The Netherlands, [3]Biotal Canada Ltd., Niagara-on-the-Lake, ON.
73	1440	Effects of maturity and N fertilization on in vitro biohydrogenation of timothy linolenic and linoleic acids. H. Boufaied*[1], P.Y. Chouinard[1], G.F. Tremblay[2], H.V. Petit[3], R. Michaud[2], and G. Bélanger[2], [1]Universite Laval, QC, Canada, [2]Agriculture and Agri-Food Canada, Ste-Foy, QC, Canada, [3]Agriculture and Agri-Food Canada, Lennoxville, QC, Canada.
74	1441	Effects of ensiling carbohydrates with wheat straw and 4% urea. T.V. Nguyen*, M.J. Montgomery, and C.J. Richards, University of Tennessee, Knoxville, TN.
75	1442	Production and quality of Buffel grass (*Cenchrus ciliaris*)grown and utilized under different conditions in Northern Mexico. C Lizarazo-Ortega, H Bernal-Barragan, and E Gutierrez-Ornelas*, Facultad de Agronomia, UANL. Marin N.L. Mexico.
76	1443	Effect of mott dwarf elephant grass (*Pennisetum purpureum*) silage on dry matter intake, milk production, digestibility and rumen characteristics in Nili-Ravi buffaloes. M. Q. Bilal, M. Abdullah*, and M. Lateef, University of Agriculture, Faisalabad, Pakistan 38040.
77	1444	Assessment of forage quality and DM digestion kinetics for wheat forage as affected by harvest technique and sampling date. W.K. Coblentz, K.P. Coffey, J.E. Turner, D.A. Scarbrough, J.B. Humphry, J.V. Skinner, and D.W. Kellogg, University of Arkansas.
78	1445	Physical and chemical characteristics affecting in vitro digestibility of corn silages of different particle sizes. G. Ferreira*[1] and D.R. Mertens[2], [1]Universidad Catolica Argentina, Buenos Aires, [2]US Dairy Forage Research Center, Madison, WI.
79	1446	Factors affecting the measurement of forage digestibility. W. A. Scheer*, D. M. Chatman, and J. N. Spain, University of Missouri, Columbia, MO.
80	1447	Comparison of three methods to estimate digestible NDF of forages. D. K. Combs*[1] and P. Berzaghi[2], [1]University of Wisconsin, Madison, [2]University of Padova, Italy and U.S. Dairy Forage Research Center, Madison, WI.

81	1448	Evaluation of the influence of host animal diet and forage type on the ruminal degradation of grass silage and intercropped pea-wheat silages. A.T. Adesogan*[1], M.B. Salawu[1], and R.D. Dewhurst[2], [1]IRS, University of Wales, Aberystwyth, SY23 3AL UK, [2]Institute of Grassland and Environmental Research, SY23 3EB, UK.
82	1449	Eastern gamagrass digestion kinetics and forage quality as influenced by harvest management. D.J.R. Cherney*[1], P.R. Salon[2], and J.H. Cherney[1], [1]Cornell University, Ithaca, NY, [2]USDA-NRCS, Big Flats Materials Center, Big Flats, NY.
83	1450	Nutrient digestibility and bacterial protein synthesis of a pasture diet in response to increased level of dietary brassica in continuous culture. K. J. Soder*[2], L. A. Holden[1], S. R. Hershey[1], and M. R. Long[1], [1]The Pennsylvania State University, PA, [2]USDA-ARS, University Park, PA.
84	1451	Crop processing and chop length effects in brown midrib corn silage on chewing activity and mean particle size of silage and masticates. E. C. Schwab* and R. D. Shaver, University of Wisconsin, Madison, WI.
85	1452	N-alkanes as markers for estimation of dry matter intake and diet composition in steers consuming all-forage or forage-concentrate diets. S.A. Moshtagh Nia*[1], K.M. Wittenberg[1], and W. Chen[2], [1]University of Manitoba, Winnipeg, MB, [2]Agriculture and Agri-Food Canada, Brandon, MB.
86	1453	Estimation of forage intake of lactating dairy cows on pasture using n-alkanes. H. M. Froebe*, K. M. Wittenberg, and S. A. Moshtaghi Nia, University of Manitoba, Winnipeg, Canada.
87	1454	Evaluation of cultivates of alfalfa (Medicago sativa L.) by in situ degradability technique. E. C. J. Sales, A. R. Evangelista*, R. A Santos, and J. C. Teixeira, Universidade Federal de Lavras, Minas Gerais, Brazil.

ASAS/ADSA Ruminant Nutrition: Fat, Protein, Intake, and Feedlot

Board Number	Abstract Number	
88	1455	Effect of housing and fat supplementation on reproduction and productivity of Holstein cows in early lactation. S.L. Boken*, C.R. Staples, L.E. Sollenberger, W.W. Thatcher, and P.J. Hansen, University of Florida, Gainesville, FL.
89	1456	Increasing the concentration of beneficial fatty acids in lamb muscle. K Nuernberg[1], S Grumbach[2], K Ender[1], and G Nuernberg[1], [1]Research Institute for the Biology of Farm Animals, [2]State Institute of Agriculture and Fishery M/V.
90	1457	Modification of essential fatty acids in phospholipids and triglycerides from beef cattle. S Lorenz*[1], K Nuernberg[1], and K Ender[1], [1]Research Institute for the Biology of Farm Animals.
91	1458	Effect of L-carnitine on lamb growth and metabolites. T. W. White*[1], J. M. Fernandez[1], G. D. Harding[1], R. L. Walker[1], C. C. Williams[1], H.G. Bateman[1], and M. A. Froetschel[2], [1]Louisiana State University Agricultural Center, Baton Rouge, [2]University of Georgia, Athens.
92	1459	Effect of fat source on plasma fatty acids in sheep. H. Febel[1], F. Husveth[2], and T. Veresegyhazy*[3], [1]Research Institute of Animal Breeding and Nutrition, Herceghalom, [2]University of Veszprem, Keszthely, [3]Szent Istvan University, Faculty of Veterinary Science, Budapest, Hungary.
93	1460	The feeding of fish oil as fish meal with linoleic acid sources enhances milk CLA content. A. A. Abu-Ghazaleh*, D. J. Schingoethe, A. R. Hippen, and L. A. Whitlock, [1]South Dakota State University.
94	1461	Validation of a model for the digestion of fat in dairy cows. P. J. Moate*, R. C. Boston, and W. Chalupa, University of Pennsylvania, Kennett Square, PA.
95	1462	*Trans* fatty acids in milk of Holstein cows fed soybean oil or two forms of conjugated linoleic acid. T. C. Jenkins*, S. A. Mosley, and J. A. Bertrand, Clemson University, Clemson, SC.
96	1463	Effects of prepartum intake, postpartum induction of primary ketosis, and periparturient disorders on carnitine palmitoyltransferase I activity in dairy cows. H. M. Dann*, J. K. Drackley, and D. E. Morin, University of Illinois, Urbana.

97	1464	Influence of feeding canola seed on lactation performance and conjugated linoleic acid concentration in milk fat of lactating Holstein cows. J.D. Handegard*[1], D.B. Carlson[1], M.S. Laubach[1], D.E. Schimek[1], W.L. Keller[1], J.W. Schroeder[1], C.S. Park[1], G.D. Marx[2], and J.H. Herbein[3], [1]North Dakota State University, Fargo, [2]University of Minnesota-Crookston, [3]Virginia Polytechnic and State University, Blacksburg.
98	1465	Conjugated linoleic acids in duodenal and milk lipids of lactating dairy cows fed different diets. L. S. Piperova*[1], J. Sampugna[1], B. B. Teter[1], K. F. Kalscheur[1], R. A. Erdman[1], M. P. Yurawecz[2], K. Ku[2], and K. Morehouse[2], [1]University of Maryland, College Park., [2]U.S. Food and Drug Administration, Washington, D.C.
99	1466	Metabolic fate of long chain fatty acids by ruminant hepatocytes. D.G. Mashek*, S.J. Bertics, and R.R. Grummer, University of Wisconsin, Madison.
100	1467	Effects of feeding whole linseed on milk production and composition of dairy ewes. M. V. Pol, R. Casals*, E. Albanell, and X. Such, Universitat Autonoma de Barcelona.
101	1468	Effect of supplementing Solin, a high linoleic acid oilseed, to a TMR containing fresh grass, on bovine plasma and milk conjugated linoleic acid (CLA) and fatty acid levels. A.T. Ward* and K.M. Wittenberg, University of Manitoba, Winnipeg, Canada.
102	1469	Effect of feeding frequency and dietary sunflower oil on conjugated linoleic acid (CLA) concentrations in milk from dairy cows. N.W. Lafond[1], V. Girard[2], and P.Y. Chouinard[1], [1]Universite Laval, QC, Canada, [2]Institut de recherche et de developpement en agroenvironnement, QC, Canada.
103	1470	Comparison of prilled tallow and free fatty acids from tallow as fat supplements for dairy cows. S. T. Franklin*[1], D. M. Amaral-Phillips[1], J. A. Jackson[1], K. J. Touchette[2], and J. A. Coalson[2], [1]University of Kentucky, [2]Merrick's, Inc.
104	1471	Short-term feeding strategies for altering conjugated linoleic acid (CLA) content of meat. R. A. Robinson*, K. E. Griswold, G. A. Apgar, B. N. Jacobson, D. Johnson, and H. D. Woody, Southern Illinois University, Carbondale, IL.
105	1472	Conjugated linoleic acid (CLA) must be protected from rumen hydrogenation for the greatest impact on milk composition. M.M. Hawley*[1], M.A. McGuire[1], T.W. Hanson[1], and A.F. Kertz[2], [1]University of Idaho, Moscow, [2]Agribrands International, St. Louis, MO.
106	1473	Feeding calcium salts of oleic acid on dry matter intake, milk yield, and milk fatty acid content. J.E. Delahoy*, L.D. Muller, R.F. Roberts, L.A. Kalwasinski, and F. Bargo, The Pennsylvania State University, University Park, PA.
107	1474	Effect of processing methods on the utilization of corn grain by ruminants. S.Y. Lee* and J.K. Ha, [1]Seoul National University, Suwon, Korea.
108	1475	Effect of two protein sources on ADG, reproductive performance, ruminal fermentation and digestion kinetics in beef cattle. O. Ruiz-Barrera[1], J. Mejia-Haro[2], J.A. Jimenez-Castro[1], J.A. Ramirez-Godinez[1], I. Mejia-Haro*[3], and A. Flores-Mariñelarena[1], [1]Universidad Autonoma de Chihuahua, Mexico, [2]Universidad de Guanajuato, Mexico, [3]CIGA-ITA de Aguascalientes, Mexico.
109	1476	Finishing system (feedlot or pasture) and copper supplementation affect conjugated linoleic acid in beef muscle. T.E. Engle*[1] and J.W. Spears[2], [1]Colorado State University, Fort Collins, [2]North Carolina State University, Raleigh.
110	1477	Interaction of steam reduction and tempering on the feeding value of steam-flaked corn for feedlot cattle. R. A. Ware*, S. A. Rodriguez, and R. A. Zinn, University of California, Davis.
111	1478	Alternate equation forms for heat production estimation in ruminant growth and composition models. J.W. Oltjen* and R.D. Sainz, University of California, Davis.
112	1479	Effects of moisture, roller setting and saponin-based surfactant on growth performance of feedlot steers. Y. Wang*[1], T. A. McAllister[1], and D. Greer[2], [1]Agriculture and Agri-Food Canada Research Centre, Lethbridge, AB, [2]AgriChem, Inc., Anoka, MN.
113	1480	Effects of high oil corn and shade on respiration rates and acid-base balance of Angus and Bonsmara x Beefmaster feedlot steers. T. C. Bramble[1], C. R. Richardson*[1], J. D. Thiebaud[2], F. N. Owens[3], and G. R. Chapman[4], [1]Texas Tech University, Lubbock, [2]Texas Tech Howard Hughes Medical Institute, Lubbock, [3]Du Pont Specialty Grains, Des Moines, IA, [4]Amarillo, TX.
114	1481	An evaluation of breed and diet on plasma leptin concentration in beef steers. K.A. Johnson*[1], P.S. Mir[2], P.S. Kuber[1], Z. Mir[2], D.H. Keisler[3], C.T. Gaskins[1], J.J. Michal[1], J.R. Busboom[1], and J.J. Reeves[1], [1]Washington State University, Pullman, WA, [2]Agri-Food Canada, Lethbridge, Alberta, [3]University of Missouri, Columbia, MO.

115 1482 Corn processing method in finishing diets containing wet corn gluten feed. T.L. Scott*, C.T. Milton, T.J. Klopfenstein, and R.A. Stock, University of Nebraska-Lincoln.

116 1483 Sub-clinical ruminal acidosis in feedlot cattle fed a barley-based diet. G. R. Ghorbani*[1,2], K. A. Beauchemin[1], and D. P. Morgavi[1], [1]Agriculture and Agri-Food Canada, Lehtbridge, AB, T1J 4B1, Canada, [2]Isfahan University of Technology, Isfahan, Iran.

117 1484 Adaptation of the Cornell Net Carbohydrate and Protein System to sheep: validation of feed digestibility. A. Cannas*[1], D.G. Fox[2], A.N. Pell[2], and P.J. Van Soest[2], [1]University of Sassari, Sassari, Italy, [2]Cornell University, Ithaca, NY.

118 1485 Effect of moisture heat damage on ruminal degradation of cottonseed dry matter and crude protein using nylon bag technique in sheep. A. Estrada* and R. Barajas, Universidad Autonoma de Sinaloa (Mexico).

119 1486 Effect of close-up protein supplementation on milk, fat and protein yields of late gestation primiparous Holstein dairy cows. P. H. Robinson*[1], J. M. Moorby[2], and M. Arana[3], [1]University of California, Davis, CA, [2]IGER, Aberystwyth, UK, [3]UCCE, Stockton, CA.

120 1487 Effect of close-up dry period protein supplementation on milk, fat and protein yields of multiparous Holstein dairy cows. J. M. Moorby[1], P. H. Robinson*[2], and M. Arana[3], [1]IGER, Aberystwyth, UK, [2]University of California, Davis, CA, [3]UCCE, Stockton, CA.

121 1488 Simulation of the effect of N excretion on environmental pollution arising from dairy cows using a dynamic model. E. Kebreab*[1], J. France[1], J.A.N. Mills[1], R. Allison[2], and J. Dijkstra[3], [1]The University of Reading, [2]ADAS Bridgets, [3]Wageningen Institute of Animal Sciences.

122 1489 Should residual plots use Y or Yhat?. N.R. St-Pierre*, The Ohio State University.

123 1490 Short-term mammary blood flow responses to changes in circulating metabolite concentrations. S.R.L. Cieslar*[1], D.R. Trout[1], T.G. Madsen[2], N.G. Purdie[3], and J.P. Cant[1], [1]University of Guelph, Ontario, [2]The Royal Veterinary and Agricultural University, Frederiksberg C, Denmark, [3]University of Queensland, St. Lucia, Australia.

124 1491 True intestinal digestibility of nitrogen, lysine and methionine estimated with sheep on intragastric infusion and by mobile bag technique. T. Hvelplund*[1], L. Misciattelli[1], F.D.DeB Hovell[2], and M.R. Weisbjerg[1], [1]Danish Institute of Agricultural Sciences, Denmark, [2]University of Aberdeen, UK.

125 1492 Effects of diet on milk allantoin and its relationship with milk production in dairy goats. B.R. Min*[1], R. Puchala[1], and S.P. Hart[1], [1]E (Kika) de la Garza Institute for Goat Research, Langston, OK, 73050.

126 1493 Correction for microbial contamination does not alter estimates of intestinal digestibility of rumen undegraded protein. Y. G. Goh*[1] and G. A. Broderick[2], [1]Kangwon National University, Chunchon, South Korea, [2]U.S. Dairy Forage Research Center, Madison, WI.

127 1494 In vitro effects of feed oils, ionophores, tannic acid, saponin-containing plant extracts and other bioactive agents on ruminal fermentation and protozoal activity. A. N. Hristov*[1], M. Ivan[2], and T. A. McAllister[2], [1]Department of Animal and Veterinary Sci., University of Idaho, Moscow, ID 83844-2330, [2]Agriculture and Agri-Food Canada, Lethbridge Research Centre, Lethbridge, AB T1J 4B1.

128 1495 In vitro rates of bacterial incorporation of nitrogen fractions from ^{15}N-labeled whole-crop barley ensiled at two dry matter contents. A. N. Hristov*[1] and T. A. McAllister[2], [1]Department of Animal and Veterinary Sci., University of Idaho, Moscow, ID 83844-2330, [2]Agriculture and Agri-Food Canada, Lethbridge Research Centre, Lethbridge, AB T1J 4B1.

129 1496 Effect of barley variety and amylopectin content on bacterial utilization of ammonia-N in vitro. A. N. Hristov*, J. K. Ropp, and C. W. Hunt, Department of Animal and Veterinary Sci., University of Idaho, Moscow, ID 83844-2330.

130 1497 Fractionation of ammonia nitrogen isotopes by ruminal bacteria in vitro. A. N. Hristov*, Department of Animal and Veterinary Sci., University of Idaho, Moscow, ID 83844-2330.

131 1498 Effect of Jackbean urease immunization on nitrogen recycling in mature sheep. J.C. Marini*, K.W. Simpson, A. Gerold, and M.E. Van Amburgh, Cornell University.

132 1499 Incorporation of nitrogen from ammonia, amino acids, peptides, or protein by mixed ruminal bacteria in vivo. A. N. Hristov*[1], J. K. Ropp[1], R. J. Wallace[2], and T. A. McAllister[3], [1]Department of Animal and Veterinary Sci., University of Idaho, Moscow, ID 83844-2330, [2]Rowett Research Institute, Bucksburn, Aberdeen AB21 9SB, [3]Agriculture and Agri-Food Canada, Lethbridge Research Centre, Lethbridge, AB T1J 4B1.

133 1500 Influence of methionine and/or lysine deficiencies, formulated at three different protein levels, on protein nitrogen metabolism when fed to lactating dairy cows. D. C. Weakley*[1], M. D. Hanigan[1], L. F. Reutzel[1], J. A. Besancenez[1], K. B. Cunningham[1], H. C. Puch[1], and B. K. Sloan[2], [1]Purina Mills, Inc., St. Louis, MO, [2]Aventis Animal Nutrition, Alpharetta, GA.

134 1501 Effect of level of cracked Pima cottonseed in the diet of lactating dairy cows on milk yield and plasma gossypol. J. Prieto*[1], E. DePeters[1], P. Robinson[1], J. Santos[1], J. Pareas[1], S. Taylor[1], M. Calhoun[2], B. Baldwin[2], and S. Kuhlmann[2], [1]University of California, Davis, CA, [2]Texas Agricultural Experiment Station, San Angelo, TX.

135 1502 Effects of intake and lactation on absorption and metabolism of leucine and phenylalanine by splanchnic tissues of dairy cows. C. K. Reynolds*[1], B. J. Bequette[2], J. S. Caton[3], D. J. Humphries[1], P. C. Aikman[1], B. Lupoli[1], and J. D. Sutton[1], [1]University of Reading, Reading, UK, [2]Rowett Research Institute, Aberdeen, UK, [3]North Dakota State University, Fargo, USA.

136 1503 Peptide amino acid net flux in ruminal vein of dairy cow. D. Remond*[1], C. L. Girard[2], and B. Chauveau[1], [1]INRA, Clermont Fd-Theix/France, [2]AAC , Lennoxville/Canada.

137 1504 Effects of abomasal casein or essential amino acid infusions on splanchnic leucine and phenylalanine metabolism in lactating dairy cows. J. S. Caton*[1], C. K. Reynolds[2], B. J. Bequette[3], B. Lupoli[1], P. C. Aikman[1], and D. J. Humphries[1], [1]North Dakota State University, Fargo, USA, [2]University of Reading, Reading, UK, [3]Rowett Research Institute, Aberdeen, UK.

138 1505 Effect of type of cottonseed and gossypol intake on plasma gossypol and performance of lactating Holstein dairy cows. J.E.P. Santos*[1], M. Villasenor[1], D. Ringen[1], E.J. DePeters[1], P.H. Robinson[1], M.C. Calhoun[2], B. Baldwin[2], and J.P. Reynolds[1], [1]University of California - Davis, [2]Texas A&M University.

139 1506 Use of an inhibitor *in vitro* method to determine protein degradability coefficients in the NRC (2001) protein evaluation system. J.R. Newbold*[1], B. De Wannemaeker[1], and P. Gerardy[1], [1]Provimi Research and Technology Centre.

140 1507 Intake and production by Holstein cows fed different amounts and sources of supplemental protein prepartum and postpartum. J.P. Underwood*, J.K. Drackley, and J.H. Clark, University of Illinois, Urbana, IL.

141 1508 Effect of barley and rapeseed meal supplementation on amino acid profile of microbial fractions and postruminal amino acid supply in lactating dairy cows fed grass-red clover silage. M. Korhonen*, S. Ahvenjärvi, A. Vanhatalo, and P. Huhtanen, MTT, Agrifood Research Finland.

142 1509 Effect of type of dietary protein on mRNA expression for urea cycle enzymes in lactating dairy cows. J.R. Townsend*, S.M. Crowder, J.C. Velez, and S.S. Donkin, Purdue University, West Lafayette, IN.

143 1510 Responses of dairy cows fed grass silage-cereal diet to increased supply of histidine provided either by abomasal infusion of histidine or dietary inclusion of rape seed meal. A. Vanhatalo*, P. Huhtanen, M. Korhonen, and T. Varvikko, MTT Agrifood Research Finland, Jokioinen, Finland.

144 1511 A comparison of different methods to measure milk urea nitrogen. R.A. Kohn*, K.R. French, and E. Russek-Cohen, University of Maryland, College Park.

145 1512 A role for rumen degraded protein in regulating intake rate of digested fiber. W. C. Ellis*[1], J.H. Matis[1], Dennis Herd[1], H. Lippke[1], F.M. Rouquette[1], D. P. Poppi[2], and R. J. Wallace[3], [1]Texas A & M University, [2]University of Queensland, [3]Rowett Research Institute.

146 1513 The prediction of microbial protein supply to growing lambs fed raw and dry roasted legume seeds as protein supplements from the urinary excretion of purine derivatives. P. Yu*[1], L. Boonek[2], A.R. Egan[2], and B.J. Leury[2], [1]Department of Animal and Poultry Science, University of Saskatchewan, Canada, [2]Institute of Land and Food Resources, University of Melbourne, Australia.

147 1514 A role for ruminally degraded protein in determining yield and efficiency of rumen efflux microbial protein. W.C. Ellis*[1], Dennis Herd[1], J.H. Matis[1], H. Lippke[1], F.M Rouquette[1], D.P. Poppi[2], and R. J. Wallace[3], [1]Texas A & M University, [2]University of Queensland, [3]Rowett Research Institute.

148 1515 Effect of type of cottonseed and gossypol intake on reproduction and health of lactating Holstein dairy cows. J.E.P. Santos*[1], M. Villasenor[1], C.H. Holmberg[1], D. Ringen[1], E.J. DePeters[1], P.H. Robinson[1], B. Bretz[1], and P.W. Jardon[2], [1]University of California - Davis, [2]Visalia, CA.

149 1516 Bloodmeal and fishmeal addition to receiving diets. J. W. Lehmkuhler*[1], E.E.D. Felton[1], C.J. Fu[1], and M. S. Kerley[1], [1]University of Missouri.

AMSA Graduate Student Research Posters (M.S. and Ph.D. Divisions) and AMSA General Abstracts

Board Number	Abstract Number	
150	1517	Oxymyoglobin and lipid oxidation in a-tocopherol supplemented pork liver microsomes. S Lee*, A L Phillips, and C Faustman, University of Connecticut, Storrs, CT.
151	1518	Effect of high oil corn and vitaimin E supplementation on beef steak case-life properties. M.S. Eibs*[1], B.J. Johnson[1], D.M. Wulf[1], B.C. Shanks[1], and T.A. Wittig[1], [1]South Dakota State University.
152	1519	Evaluation of growth rate, carcass composition and meat quality of Berkshire- and Yorkshire-sired progeny. M.J. Ritter*, C.P. Allison, S.R. Debar, J.M. Scheffler, R.J. Tempelman, and M.E. Doumit, Michigan State University, East Lansing, MI.
153	1520	Mechanisms of vitamin D3 on tenderness of lamb. C. T. Boleman[1], J. W. Savell*[1], W. S. Ramsey[1], and R. K. Peel[1], [1]Texas A&M University.
154	1521	Lean lamb production: Bioelectrical impedance as a lean tissue evaluation method. P. T. Berg*[1], T. C. Faller[2], and M. N. Maddux[1], [1]North Dakota State University, Main Station, Fargo, [2]North Dakota State University, Hettinger Research Extension Center.
155	1522	IMPACT of HACCP implemenation on the Kansas meat and poultry processing industry. E. Boyle*[1], D. Hoffman[1], and M. Schoenbeck[2], [1]Kansas State University, Manhattan, KS, [2]Food Brands, Hutchinson, KS.
156	1523	Development and evaluation of an advanced HACCP workshop for meat processors. Mindy Brashears[1], Dennis Burson[1], Liz Boyle[2], Fadi Aramouni[2], Jason Mann[1], and Mark Murphy[2], [1]University of Nebraksa, [2]Kansas State University.
157	1524	Development of a beef myology and muscle profiling cd-rom. S.J. Jones*[1], C.R. Calikins[1], K.S. Podany[1], D.E. Burson[1], and B.L. Gwartney[2], [1]University of Nebraska, [2]National Cattlemen's Beef Association.
158	1525	Microbial condition of aged lamb meat treated with 1% acetic acid. E.C. Vasconcelos[1], J.F.F Zapata*[1], E.A.T. Figueiredo[1], and M.A.A. Castelo-Branco[1], [1]Universidade Federal do Ceará, Fortaleza, CE, Brasil.
159	1526	Comparison of recovery methods for freeze-injured Listeria monocytogenes, Salmonella Typhimurium and Campylobacter coli associated with cell suspensions and pork surfaces. V. P. Chang*, E. W. Mills, and C. N. Cutter, Penn State University, University Park, PA 16802.
160	1527	Incorporation of nisin into a collagen film retains antimicrobial activity against *Listeria monocytogenes* and *Brochothrix thermosphacta* associated with a ready-to-eat meat product. B. J. Miller* and C. N. Cutter, Penn State University.
161	1528	Survival of Listeria spp. following bacon processing. L. J. Heffner*, S. L. Flowers, S. L. Histand, G. L. Kehres, S. Doores, E. W. Mills, and C. N. Cutter, Penn State University.
162	1529	Effects of electrolyzed oxidizing water on microbial growth, lipid oxidation and color of displayed beef during refrigerated storage. Seon-Tea Joo*[1], Kumar Venkitanarayanan[2], and Cameron Faustman[2], [1]Gyeongsang National University, Chinju, Korea, [2]University of Connecticut, Storrs, CT, USA.
163	1530	Thermal conductivity model for predicting heat penetration in non-stirred raw rendered products. A. K. Greene, C. S. Knight, W. B. Bridges, and P. L. Dawson*, Clemson University.
164	1531	Analyzing plant sanitation processes using statistical process control techniques. K.J.K Getty* and J.G. Surak, Clemson University, Clemson, SC.
165	1532	Recombinant production of chicken egg-yolk antibodies against Enterotoxigenic *Escherichia coli* by use of a DNA vaccine. S.H. Cho*, P.C. Loewen, and R.R. Marquardt, University of Manitoba, winnipeg, MB, Canada, R3T2N2.
166	1533	Decreasing cost in processed meat products with the addition of pork collagen. D.R. Doerscher*[1,2], G. Prabhu[1], and E. Schoenberg[1], [1]Proliant Inc., [2]Iowa State University.
167	1534	Evaluation of wet salting in the #Charqui# processing. M. Pinto Neto*[1], H.A. Arima[1], R.O. Villarreal, S.B. Toma, and M.L.Q. Andrade, [1]Instituto de Tecnologia de Alimentos, Campinas, Sao Paulo, Brazil.

168	1535	Effect of freezing rate and storage on the functional properties of manufacturing beef. M.M. Farouk*, K.J. Wieliczko, and I. Merts, AgResearch Ltd.
169	1536	High temperature conditioning prior to rigor onset does not affect the functional properties of beef subsequently chilled rapidly. M.M. Farouk*, A.E. Graffhuis, and K.J. Wieliczko, AgResearch Ltd.
170	1537	Influence of beef cuts and cooking time on color properties of a beef sausage model system. J.A. Pérez-Alvarez[1], J.M. Fernández-Ginés[1], J. Fernández-López[1], E. Sayas[1], C. Navarro[1], A. Aznar[2], and E. Sendra*[1], [1]Universidad Miguel Hernández, [2]Universidad Politécnica de Cartagena.
171	1538	Antioxidant effect of dried milk mineral in fresh and cooked ground pork. P. Jayasingh* and D.P. Cornforth, Utah State University, Logan, UT.
172	1539	Effect of rosemary extract, sodium lactate and film permeability on the shelf-life of vacuum packaged ground ostrich meat. A. C. Seydim, Z. B. Güzel-Seydim, I. Y. Han, and P. L. Dawson*, Clemson University.
173	1540	Functionality of prerigor meat on the chemical, physical, and textural properties of beef patties. J.R. Claus*[1], O. Sorheim[2], and H.-J. Skarpeid[2], [1]University of Wisconsin-Madison, [2]MATFORSK, [2]MATFORSK.
174	1541	Postharvest interventions to overcome the tenderness problems in meat from older animals. M.B. Solomon*[1], B.W. Berry[1], J. Stika[2], and W.G. Moody[2], [1]USDA, ARS, FTSL, Beltsville, MD, [2]Univ of Kentucky, Lexington, KY.
175	1542	Improving tenderness of beef round and sirloin muscles through pre-rigor skeletal separations. B. C. Shanks*, D. M. Wulf, B. J. Reuter, J. M. Bok, and R. J. Maddock, South Dakota State University.
176	1543	Relationship of pork quality traits to consumer acceptability. T.K. Ford*[1], R.K. Miller[1], S.J. Moeller[2], and R.N. Goodwin[3], [1]The Texas A&M University, [2]The Ohio State University, [3]National Pork Producers Council.
177	1544	Repeatability of Warner-Bratzler shear values in beef steaks using three different cooking methods. C.R. Kerth*, L.K. Blair-Kerth, and W.R. Jones, Auburn University, Auburn AL.
178	1545	Sample location within muscle affects pork quality measurments. E.W. Mills*, S.L. Flowers, and B.M. Moser, Penn State University, University Park PA.
179	1546	Heat penetration patterns of biceps femoris, longissimus lumborum and semitendinosus muscles cooked by electric broiler, electric belt grill, or forced-air convection oven. E. Obuz, E. J. Yancey, T. E. Lawrence, D. A. King, and M. E. Dikeman, Kansas State University.
180	1547	Instruments differ in estimating lightness of fresh meat. C.P. Allison*, R.O. Bates, M.E. Doumit, and A.M. Booren, Michigan State University, East Lansing, MI.
181	1548	Effects of high protein/low carbohydrate swine diets during the final finishing phase on pork muscle quality. J.B. Bok*, D.M. Wulf, B.C. Shanks, B.A. Reuter, and R.J. Maddock, South Dakota State University, Brookings, SD.
182	1549	Effect of supplemental fat on growth, quality, palatability, and fatty acid composition of beef from steers fed barley-potato product finishing diets. D. J. Marks*[1], J. R. Busboom[1], M. L. Nelson[1], J. D. Cronrath[1], L. Falen[1], A. E. Koepp[1], and P. S. Kuber[1], [1]Washington State University.
183	1550	Sensory evaluation of pork longissimus muscle from swine fed soybean meal from Roundup Ready® or conventional soybeans. C. L. Armstrong*, W. B. Mikel, and G. L. Cromwell, University of Kentucky, Lexington, KY.
184	1551	Assessing real time augmentation of USDA yield grade application to beef carcasses using video image analysis (VIA) instrumentation word. R. Steiner*[1], A.M. Wyle[2], K.E. Belk[1], J.A. Scanga[1], J.W. Wise[3], J.D. Tatum[1], and G.C. Smith[1], [1]Colorado State University, Fort Collins, CO/ USA, [2]Research Management Systems, Fort Collins, CO/ USA, [3]USDA AMS Branch, Washington, DC/ USA.
185	1552	Ozonation of animal wastewater to reduce environmental impact. J. K. Duke*, L. W. Grimes, G. C. Skelley, and A. K. Greene, Clemson University.
186	1553	Reducing airborne bacteria and molds using a germicidal air cleaning system. C.J. Cundith*, C.R. Kerth, W.R. Jones, T.A. McCaskey, and D.L. Kuhlers, Auburn University, Auburn AL.
187	1554	Development of decontamination procedures for beef trimmings. C. S. Ebeling*, R. K. Miller, and G. R. Acuff, Dept. Animal Sci., Texas A&M University, College Station, TX.

188 1555 Processing and product development of goat meat products: fermented cabrito snack stick and cabrito smoked sausage. G.H. Cosenza*, S.K. Williams, D.D. Johnson, and C. Sims, University of Florida, Gainesville, FL.

189 1556 Use of sodium citrate to enhance tenderness and palatability of pre-rigor beef muscles. C. D. Perversi*[1], C. R. Calkins[1], and J. Velazco[2], [1]University of Nebraska-Lincoln, [2]Instituto Tecnológico de Estudios Superiores de Monterrey, Monterrey, México.

190 1557 Mapping intramuscular tenderness variation in four major muscles of the beef round. B. J. Reuter*, D. M. Wulf, B. C. Shanks, J. M. Bok, and R. J. Maddock, South Dakota State University, Brookings, SD.

191 1558 Chemical characterization of beef inside and outside semimembranosus for improved color stability. LM Sammel*[1], MC Hunt[1], and DH Kropf[1], [1]Kansas State University.

192 1559 Effects of cold shortening and cooking rate on tenderness, postmortem proteolysis, and cooking traits of beef longissimus and triceps brachii muscles. D.A. King*[1], M.E. Dikeman[1], T.L. Wheeler[2], C.L. Kastner[1], and M. Koohmaraie[2], [1]Kansas State University, Manhattan, KS, [2]Roman L. Hruska U.S. Meat Animal Research Center, Clay Center, NE.

193 1560 Relationships between mechanical tenderness measurements and trained sensory panel attributes of beef Longissimus lumborum muscle. T. S. Hively*[1], R. K. Miller[1], D. S. Hale[1], D. K. Lunt[2], T. L. Wheeler[3], and M. Koohmaraie[3], [1]Dept. Animal Sci., Texas A&M University, College Station, TX, [2]Texas Agriculture Experiment Station, McGregor, TX, [3]Roman L. Hruska U. S. Meat Animal Research Center, Clay Center, NE.

194 1561 Quality evaluation of case-ready beef steaks from various USDA grades. J. M. Behrends*[1], W. B. Mikel[1], C. L. Armstrong[1], Y. L. Xiong[1], and S. Harris[2], [1]University of Kentucky, [2]Cryovac/Sealed Air Corporation.

195 1562 Diverse birth and rearing housing systems: effects on pig growth, meat quality and muscle fiber types. J. G. Gentry*, J. R. Blanton, Jr., J. J. McGlone, and M. F. Miller, Texas Tech University, Lubbock.

196 1563 Goat kids meat quality: artificial rearing and weight at slaughter effects. A. Arguello*[1], A. Marichal[1], J.F. Capote[2], and J.L. Lopez[1], [1]Animal Production Unit, Las Palmas de Gran Canaria University, Arucas, Spain., [2]ICIA, La Laguna, Spain.

197 1564 Comparison of breed and diet on factors associated with tenderness in two muscles. P. S. Kuber*[1], J. R. Busboom[1], S. K. Duckett[2], D. J. Marks[1], P. S. Mir[3], Z. Mir[3], R. G. McCormick[4], C. T. Gaskins[1], J. D. Cronrath[1], and M. V. Dodson[1], [1]Washington State University, Pullman, WA, [2]University of Idaho, Moscow, ID, [3]Agriculture and Agri-food Canada, Lethbridge, AB, [4]University of Wyoming, Laramie, WY.

198 1565 *In-vitro* oxidation of bovine oxymyoglobin as affected by 4-hydroxy-nonenal. A.L. Phillips*, S. Lee, L.K. Silbart, and C. Faustman, University of Connecticut, Storrs, CT.

199 2006 Effect of potato-processing waste in finishing diets on meat quality from yearling heifers. A. E. Radunz*, M. L. Bauer, G. P. Lardy, M. J. Marchello, and E. R. Loe, North Dakota State University, Fargo, ND.

200 No poster presentation.

ADSA Dairy Foods: Products, Processing, Chemistry, Sensory

Board Number	Abstract Number	
201	1566	Rheological Characterization of Butter Oil Obtained from Yogurt and Milk. Sevim Kaya* and Ahmet Kaya, Gaziantep University.
202	1567	Acceptance of camel milk among elementary school students in Al Ain,UAE. Isameldin Hashim*, United Arab Emirates University.
203	1568	Effect of formulation and processing on emulsion stability of recombined sterilized milk. G. Pérez-Hernández, S. Bhatia, and R. L. Richter, Texas A&M University, College Station, TX.

204	1569	Commercial whey protein concentrates: protein aggregation profile study. Samira Roufik*[1], Michel Britten[2], and Paul Paquin[1], [1]Centre de recherche en sciences et technologie du lait (STELA), Universite Laval, Quebec/Canada, [2]Centre de recherche et de developpement sur les aliments (CRDA), St-Hyacinthe, Quebec/Canada.
205	1570	Effect of drying methods on functional properties of tarhana, a wheat flour-yogurt mixture. Mehmet Hayta*[1], Mehmet Alpaslan[1], and Ahmet Baysar[2], [1]Inonu University,Department of Food Engineering, [2]Inonu University,Department of Chemical Engineering.
206	1571	Effect of freezing process on the microstructure and stability of stabilized ice cream-type systems. K. Montoya and H. D. Goff*, University of Guelph, ON, Canada.
207	1572	Effect of incubation temperature and homogenization on the rheological properties of set yogurt during gelation process. S.A. Ibrahim*[1], R.R. Shaker[2], B. Abu-Jdayil[2], and R.Y. Jumah[2], [1]North Carolina Agricultural and Technical State University, Greensboro, NC., [2]Jordan University of Science and Technology, Irbid, Jordan.
208	1573	The effect of salep and locust bean gum concentration on the rheological characteristics of a Turkish-type ice-cream mix. Sevim Kaya*[1], [1]Gaziantep University.
209	1574	Effect of double homogenization and whey protein concentrate on the texture of ice cream. P. R. Ruger*[1], R. J. Baer[1], and K. M. Kasperson[1], [1]Dairy Science Department, South Dakota State University, Brookings, SD, USA.
210	1575	Lack of effect of a specially designed yogurt for the eradication of *Helicobacter pylori* infection. L. Ozimek*[1], C. Wendakoon[1], S. Appelman[2], and A. Thomson[2], [1]Department of Agricultural, Food & Nutritional Sc., [2]Division of Gastroenterology, University of Alberta.
211	1576	Determination of B_{12}, biotin, and folic acid in infant formula by Biomolecular Interactive Assay. Thom Grace*[1], Deliang Cai[2], and Mingruo Guo[2], [1]Biacore Inc. 384 Sam Webb Rd. Fairfax, VT. 05454, [2]Dept. of Nutrition and Food Sciences, University of Vermont, Burlington, VT 05405.
212	1577	Microbial content and distribution in Turkish kefir grains. Z. B. Guzel-Seydim*, A. C. Seydim, J. T. Wyffels, and A. K. Greene, Clemson University, Clemson, SC, USA.
213	1578	Comparison of component interactions and mineral distribution in infant formulas prepared with organic or inorganic mineral salts. Casey R. Smith*[1], Mingruo Guo[1], Gregory M. Hendricks[2], and Robert S. Tyzbir[1], [1]Dept. Nutrition and Food Sciences, University of Vermont, [2]Medical School, University of Massachusetts.
214	1579	The effect of human milk pasteurization on the growth of Bifidobacteria. Luciana M. Borba[1], Celia L. L F. Ferreira*[1], Sylvia C. Franceschini[1], and Tania Toledo[1], [1]Federal University of Viçosa.
215	1580	*Lactobacillus acidophilus* translocation in rats feeding cholesterol rich diet. Dayse F. Machado[1], Celia L. L F. Ferreira*[1], Neuza M. B. Costa[1], Lorena M. Ybarra[1], Eveline M. C. Azevedo[1], and Maria R. G. Condé[1], [1]Federal University of Viçosa.
216	1581	A comparitive study of the microstructure of casiens in dried milk products. B. S. Oommen*[1], D. J. McMahon[1], and W. R. McManus[1], [1]Utah State University.
217	1582	Effect of SCC on proteolysis and lipolysis of pasteurized fluid milk during shelf-life storage. M. V. Santos*[1], Y. Ma[2], and D. M. Barbano[2], [1]Universidade de Sao Paulo, Sao Paulo, SP, Brazil, [2]Cornell University, Ithaca, NY.
218	1583	Rheological properties of primary stabilizer/milk protein/κ-carrageenan/sucrose systems simulating ice cream mix. S. Thaiudom* and H.D. Goff, University of Guelph, Guelph, ON, Canada.
219	1584	Control of acidification of yogurt by microencapsulated bacteriocin. J. Y. Imm*[1], S. J. Oh[2], J. S. Kim[1], and S. H. Kim[3], [1]Korea Food Research Institute, [2]Korea Yakult Co. Ltd., [3]Korea University.
220	1585	Consumer evaluation of "high-CLA dairy products" produced from cows fed fish oil. S. T. Franklin, L. J. Maynard, A. Pasley, and M. C. Newman, University of Kentucky, Lexington, KY.
221	1586	Sensory and analytical analysis of milk formulations with sweet cream buttermilk. J. Powell*, S.E. Duncan, S.F. O'Keefe, and S.S. Sumner, Virginia Polytechnic Institute and State University.
222	1587	Use of Capillary Electrophoresis (CE) to determine metabolic organic acids in milk. Jesus M. Izco*[1], Monica Tormo[1], and Rafael Jimenez-Flores[1], [1]Dairy Products Technology Center, Cal Poly.
223	1588	Effect of addition of whey protein concentrate in the manufacturing of set yogurt. S. C. G. Lima, A. J. Petenate, and M. L. Gigante*, State University of Campinas, Campinas, SP/Brazil.
224	1589	Texture Profiling of Skim Milk and Carrageenan Solutions. N.R. Pollen*[1] and C.R. Daubert[1], [1]North Carolina State University.

225 1590 Effect of sterilization on physical properties of recombined milk. G. Pérez-Hernández, B. Magaña-Yépez*, and R. L. Richter, Texas A&M University, College Station, TX.

226 1591 Selection of cows producing fat of low- and high-atherogenicity and the properties of butter and cheese made from their milk. She Chen[1], Shelly Zimmerman[1], Earl Hammond[1], Gene Freeman[1], David Kelley[1], Naomi Scott[2], Cindie Luhman[2], and Donald Beitz*[1], [1]Iowa State University, [2]Land O'Lakes/Farmland.

ASAS/ADSA Physiology: General Physiology

Board Number	Abstract Number	
227	1592	Influence of corticotropin-releasing hormone (CRH) on the expression of steroidogenic acute regulatory (StAR) protein in neonatal pigs derived by Caesarian section or natural birth. J.A. Carroll*[1], D. Alberts[2], D.J. Parzik[2], D.M. Stocco[2,3], and T.H. Welsh, Jr[2,3], [1]Animal Physiology Research Unit, ARS-USDA, Columbia, MO, [2]Texas Tech University Health Science Center, Lubbock, TX, [3]Texas A&M University, College Station, TX.
228	1593	Hepatic corticosteroid-binding globulin (CBG) mRNA expression and plasma CBG levels in pigs in response to social and heat stress. J. Heo*[1], H. G. Kattesh[1], M. P. Roberts[1], R. L. Matteri[2], J. L. Morrow[3], and J. W. Dailey[3], [1]University of Tennessee, Knoxville TN, [2]ARS-USDA, Columbia MO, [3]ARS-USDA, Lubbock TX.
229	1594	Cold-induced changes in brown adipose tissue (BAT) composition and iodothyronine 5'-deiodinase (5'D) activity in newborn Angus and Brahman calves. S.J. Falck*[1], G.E. Carstens[1], S. Kahl[2], S.R. Busch[1], L.J. Slay[1], C.D. Gilbert[1], and S.B. Smith[1], [1]Texas A&M University, College Station, TX, [2]USDA, Agricultural Research Service, Beltsville, MD.
230	1595	Growth rates of Holstein heifers fed diets differing in amounts of protein, energy and protein:energy ratios and treated or not with bST. M. Liboni*, T.I. Belloso, M.S. Gulay, M.L. Schairer, M.J. Hayen, L.C. Teixeira, K.C. Bachman, and H.H. Head, University of Florida.
231	1596	Hepatic oxidative metabolism in lactating dairy cows is modulated by increasing doses of intravenous lipopolysaccharide. M. R. Waldron*[1], T. Nishida[1], B. J. Nonnecke[2], and T. R. Overton[1], [1]Cornell University, Ithaca, NY, [2]National Animal Disease Center, USDA ARS, Ames, IA.
232	1597	Circulating leukocyte populations, serum cytokines and plasma vitamins A and E in mid-lactation dairy cows infused with varied doses of lipopolysaccharide (LPS). B. J. Nonnecke[1], M. R. Waldron*[2], T. Nishida[2], T. R. Overton[2], and R. L. Horst[1], [1]National Animal Disease Center (NADC), USDA ARS, Ames, IA, [2]Cornell University, Ithaca, NY.
233	1598	Metabolic responses of lactating dairy cows to intravenous infusion of increasing amounts of lipopolysaccharide. M. R. Waldron*[1], T. Nishida[1], B. J. Nonnecke[2], and T. R. Overton[1], [1]Cornell University, Ithaca, NY, [2]National Animal Disease Center, USDA ARS, Ames, IA.
234	1599	Propionibacteria as a direct fed microbial: effects on the insulin-like growth factor system and reproduction in early postpartum dairy cows. C. C. Francisco*, D. N. Waldner, C. S. Chamberlain, and L. J. Spicer, Oklahoma State University, Stillwater, OK.
235	1600	Propionibacteria as a direct fed microbial: effects on energy balance, milk production, milk components, metabolic hormones and metabolites in early postpartum dairy cows. C. C. Francisco, D. N. Waldner*, C. S. Chamberlain, R. P. Wettemann, and L. J. Spicer, Oklahoma State University, Stillwater, OK.
236	1601	Administration of bST elevates phosphoenolpyruvate carboxykinase mRNA in lactating dairy cows. J.C. Velez* and S.S. Donkin, Purdue University West Lafayette, IN.
237	1602	Pyruvate carboxylase 5' untranslated region mRNA variants are heterogeneously expressed within and among bovine tissues. C. Agca* and S.S. Donkin, Department of Animal Sciences, Purdue University, West Lafayette, IN 47907.
238	1603	Differential relationships of metabolic hormones to growth and reproductive development in performance-tested Angus, Brangus, and Brahman bulls. M.G. Thomas*[1], R.M. Enns[2], D.M. Hallford[1], D.H. Keisler[3], B.S. Obeidat[1], C.D. Morrison[3], J.A. Hernandez[1], W.D. Bryant[1], R. Flores[1], and R. Lopez-Ordaz[1], [1]New Mexico State University, [2]University of Arizona, [3]University of Missouri.

239 1604 LH and leptin pulsatile secretions are independent in ewe lambs. S.E. Recabarren, A. Lobos, C.A. Vilches*, and P. Munoz, University of Concepcion, Chillan, Chile.

240 1605 Effect of obesity and fasting on leptin secretion and message expression in ewes. J. A. Daniel*[1], B. K. Whitlock[1], J. A. Baker[1], B. Steele[1], C. D. Morrison[2], D. H. Keisler[2], T. H. Elsasser[3], and J. L. Sartin[1], [1]Auburn University, Auburn, AL, [2]University of Missouri, Columbia, MO, [3]USDA, Beltsville, MD.

241 1606 Intracerebroventricular melanin-concentrating hormone stimulates food intake in sheep. B.K. Whitlock*[1], L.A. Daniel[1], D.F. Buxton[1], F.C. Buonomo[2], C.J. Dyer[2], and J.L. Sartin[1], [1]Auburn University, [2]Monsanto Company.

242 1607 GHRH-receptor is essential to the regulation of GH by GHS in cultured rat pituitary cells. Sanggun Roh*[1], Chen Chen[2], Ki-choon Choi[1], Shin-ichi Sasaki[1], and Chang Yoon[3], [1]Lab of Animal Molecular Physiology, Faculty of Agriculture, Shinshu University, Naganoken, JAPAN , [2]Endocrine Cell Biology Group, Prince Henry's Institute of Medical Research, Melbourne, Australia, [3]Dept of Animal Science, Iksan College, Iksan, Korea.

243 1608 Effect of growth hormone releasing factor (GRF) on long form leptin receptor (Ob-Rl) expression in porcine anterior pituitary. J. Lin*[1], C. R. Barb[2], R. R. Kraeling[2], and G. B. Rampacek[1], [1]University of Georgia, Athens, [2]USDA-ARS, Athens, GA.

244 1609 Sequence and distribution of a single cDNA encoding growth hormone-releasing hormone-like peptide and pituitary adenylate cyclase activating polypeptide in channel catfish. B. Small* and D. Nonneman, USDA/ARS Catfish Genetics Research Unit, Stoneville, MS.

245 1610 Development of specific antibodies for the quantification of plasma insulin-like growth factor-binding protein-3 in cattle. R. Renaville*[1], C. Bertozzi[1], S. Hetzel[1], I. Parmentier[1], S. Fontaine[1], V. Haezebroeck[1], and D. Portetelle[1], [1]Gembloux Agricultural University, Animal and microbial biology unit, Gembloux, Belgium.

246 1611 Responses of Holstein cows to low dose of somatotropin (bST) prepartum and postpartum. M. S. Gulay*, J Hayen, and H. H. Head, University of Florida, Gainesville, FL.

247 1612 Induction of lactation during winter and summer seasons in non-pregnant reproductive cull Holstein cows. M. Chahine*[1], W. J. Weber[1], J. K. Reneau[1], B. A. Crooker[1], T. H. Klusmeyer[2], M. F. McGrath[2], E. A. Reed[2], and J. L. Vicini[2], [1]University of Minnesota, St. Paul, [2]Monsanto Animal Agriculture Group, St. Louis, MO.

248 1613 Reduced milk ejection as a consequence of chronic treatment with exogenous oxytocin in cows. R. M. Bruckmaier*, Institute of Physiology, Techn. Univ. Munich-Weihenstpehan, Freising, Germany.

249 1614 Gene expression of immunologically relevant factors in blood cells, milk cells and mammary tissue of cows. R. M. Bruckmaier*, S. L. Wittmann, H. H. D. Meyer, and M. W. Pfaffl, Institute of Physiology, Techn. Univ. Munich-Weihenstephan, Freising, Germany.

250 1615 Effect of intramammary infusion of Escherichia coli endotoxin on ovulation in lactating dairy cows. A. M. Nugent, T. B. Hatler, S. H. Hayes, S. C. Kiggins, and W. J. Silvia*, University of Kentucky, Lexington.

251 1616 Effects of N-nitro-arginine on blood flow and nutrient uptake in the mammary glands of dairy cows. T. G. Madsen*[1], D. R. Trout[2], S. Cieslar[3], N. G. Purdie[4], M. O. Nielsen[1], and J. P. Cant[3], [1]Department of Anatomy and Physiology, The Royal Veterinary and Agricultural University, Denmark, [3]Department of Animal and Poultry Science, University of Guelph, Canada, [2]Department of Clinical Studies, University of Guelph, Canada, [4]School of Land and Food Sciences, University of Queensland, Australia.

252 1617 Effects of an induced mammogenesis and lactogenesis in sheep on the mRNA expression levels of immune globulin receptors (FcRn; pIGR) and zona occludens proteins (ZO1; ZO2; ZO3). MW Pfaffl*, A Dzidic, P Rojas, RM Bruckmaier, and D Schams, Institute of Physiology, Technical University of Munich, Freising-Weihenstephan, Germany.

253 1618 Effect of chromium-methionine level supplementation on inmune response of bull calves recently arrived to feedlot. L. Almeida*[1] and R. Barajas[1], [1]FMVZ-Universidad Autonoma de Sinaloa.

254 1619 The effect of equi-molar dietary betaine and choline additions on liver, plasma and gut of pig. K. Tiihonen*[1], S. Peuranen[1], H. Siljander-Rasi[2], and H.P. Simmins[3], [1]Danisco Cultor Innovation Center, Kantvik, Finland, [2]Agricultural Research Centre of Finland, Hyvinkää, Finland, [3]Finnfeeds International Ltd., Marlborough, Wilts, UK.

PSA Physiology: Cardiopulmonary, Immune, and Other Physiology

Board Number	Abstract Number	
255	1620	Differences of autonomic nervous system activity in high and low body weight-selected chickens. A. Y. Kuo*[1], J. C. Lee[2], P. B. Siegel[1], and D. M. Denbow[1], [1]Virginia Tech, Blacksburg, [2]VA-MD Regional Veterinary College, Blacksburg.
256	1621	Hemodynamic responses of broiler pulmonary vasculature to intravenously infused serotonin. M. E. Chapman* and R. F. Wideman, University of Arkansas, Fayetteville, AR, USA.
257	1622	Pulmonary wedge pressures confirm pulmonary hypertension in broilers is initiated by an excessive pulmonary arterial resistance. M. E. Chapman* and R. F. Wideman, University of Arkansas, Fayetteville, AR, USA.
258	1623	Cardiopulmonary and blood gas responses to cold exposure in broiler chickens. T.W. Odom*[1], M.A. Thompson[1], K.P. Floren[1], G.A. Ramirez[1], N. Puebla-Osorio[1], L.A. Martinez-Lemus[2], and J.S. Thomas[3], [1]Department of Poultry Science, Texas Agricultural Experiment Station, [2]Deparments of Medical Physiology, [3]Veterinary Pathobiology, Texas A&M University, College Station, TX 77483.
259	1624	Thrombocyte aggregation does not correspond with nitric oxide and cardiovascular parameters in broiler chickens with pulmonary hypertension. A.R. Carpenter[1], L.A. Martinez-Lemus[2], J.S. Thomas[3], and T.W. Odom*[1], [1]Department of Poultry Science, Texas Agricultural Experiment Station, [2]Deparments of Medical Physiology, [3]Veterinary Pathobiology, Texas A&M University, College Station, TX 77843.
260	1625	Assessment of factor V, VII, and X activity, the key coagulant proteins of the tissue factor pathway in poultry plasma. A.E. Thomson*, E.J. Squires, and P.A. Gentry, University of Guelph, Guelph Ontario Canada.
261	1626	Establishing endocrine and behavioral indices for endocrine-disrupting chemicals in birds. M.A. Abdelnabi*, N. Thompson, and M.A. Ottinger, University of Maryland, College Park, MD USA.
262	1627	Immunological effects of genistein exposure in chicks. Alexander Peterson[1], Haitao Li[1], and Wallace Berry*[1], [1]Auburn University Department of Poultry Science.
263	1628	Partial structural characterization of Bursal Anti-Steroidogenic Peptide (BASP) with structural homology to chicken histone H1. R.W. Moore*[1,2], D.Y. Caldwell[2], T.E. Porter[3], L.R. Berghman[2], F. Vandesande[4], J.A. Byrd[1], and B.M. Hargis[5], [1]USDA-ARS-SPARC, [2]Texas A&M University, [3]University of Maryland, [4]University of Leuven, Belgium, [5]University of Arkansas.
264	1629	Influence of broiler breeders age on villous and microvillous height in the embryo intestinal mucosa. Alex Maiorka[1], A.V. Fischer da Silva[1], E. Santin[1], L.O. Nakagui[1], and M. Macari[1], [1]FCAV - UNESP.
265	1630	Effect of feed and/or water withdrawal on intestinal mucosa development in broiler chicks after hatching. Alex Maiorka*[1], Elizabeth Santin[1], Fabiano Dahlke[1], and Marcos Macari[1], [1]FCAV-UNESP.
266	1631	Expression of selected hepatic genes related to lipid metabolism in broiler breeders.. M.P. Richards*[1], S.M. Poch[1], C.N. Coon[2], Y. Kirby[2], R.W. Rosebrough[1], C.M. Ashwell[1], and J.P. McMurtry[1], [1]USDA, ARS, Beltsville, MD, [2]University of Arkansas, Fayetteville, AR.
267	1632	Identification and expression of the turkey leptin receptor gene.. M. P. Richards*, S. M. Poch, and C. M. Ashwell, USDA, ARS, Beltsville, MD.
268	1633	*Campylobacter* colonization of the crops of newly hatched chicks. R. L. Ziprin* and L. F. Kubena, FFSRU/SPARC/ARS/USDA, College Station, TX/USA.
269	1634	Heterogeneity of ryanodine receptors in turkeys. Wen Chiang* and Gale Strasburg, Michigan State University.
270	1635	Intestinal calcium uptake and reproductive hormones in three laying hen varieties after prolonged egg production. D. J. Franco*[1], K. K. Franzen[1], C. F. Toombs[1], and M. M. Beck[1], [1]University of Nebraska.
271	1636	Estrogen receptor populations in various calcium regulating tissues in laying hens at three ages. K. K. Franzen*[1], D. Clopton[1], N. Caceres[2], G. Sarath[2], and M.M. Beck[1], [1]Animal Sciences Dept., University of Nebraska, [2]Biochemistry Dept., University of Nebraska.

272	1637	Frequency of preovulatory luteinizing surges in turkey hens and egg production rate. H.-K. Liu, D.W. Long, and W.L. Bacon, The Ohio State University, Wooster OH.
273	1638	Changes in morphology of granulosa cells in heat-stressed laying hens. M. A. Alodan*[1] and M. M. Beck[1], [1]University of Nebraska.
274	1639	Active immunization against inhibin enhances reproductive measures in male broiler breeders. S. T. Pittman*, D. G. Satterlee, and G. G. Cadd, Louisiana State University, Baton Rouge, LA/USA.
275	1640	Dual labeling immunofluorescent staining demonstrates the presence of a protease-inhibiting protein (ovoinhibitor) in the chicken pituitary. C. M. Oubre*[1], K. E. Clements[1], F. Vandesande[2], and L.R. Berghman[1], [1]Texas A&M University, [2]University of Leuven, Belgium.

ASAS Nonruminant Nutrition: Vitamins, Minerals, and Energy

Board Number	Abstract Number	
276	1641	The effect of genotype, parity and folic acid supplement on the expression of leptin, and its receptors in embryonic and endometrial tissues from pigs at 15 days of gestation. F. Guay[1], A. Giguère*[2], M.-F. Palin[2], C.L. Girard[2], J.J. Matte[2], and J.P. Laforest[1], [1]Laval University, Department of Animal Science, Qc, Canada, [2]Dairy and Swine R & D Centre, Lennoxville, QC, Canada.
277	1642	The effect of genetic type and parity and folic acid supplement on homocysteine metabolism from sows on day 15 of gestation. F. Guay*[1], A. Giguere[2], M.-F. Palin[2], C.L. Girard[2], J.J. Matte[2], and J.-P. Laforest[1], [1]Laval University, Department of Animal Science, Qc Canada, [2]Dairy and Swine R & D Centre, AAC, Qc Canada.
278	1643	Phosphorus removal with and without phytase in finishing pigs. G.A. Apgar*[1], C.M. Peter[2], T.A. Guthrie[1], K.E. Griswold[1], and D.H. Baker[2], [1]Southern Illinois University, Carbondale, [2]University of Illinois, Urbana.
279	1644	Effects of dietary chromium yeast supplementation on growth performance and carcass characteristics in growing-finishing pigs. C. Y. Liu*, J. N. Hsu, and L. C. Cheng, Pig Research Institute Taiwan, ROC.
280	1645	Vitamin E and selenium improve pork stability in finishing pigs fed diets deleted of vitamin-mineral premix. S. C. Choi*[1], B. J. Chae, and In K. Han[2], [1]Division of Animal Res. Sci., Kangwon National University, [2]Dept. of Animal Sci. and Tech., Seoul National University, Suwon, Korea.
281	1646	Effect of calcium to phosphorus ratio on grower-finisher pig performance and mineral excretion. J.J. Callan*[1], S.M. Brady[1], D. Cowan[2], M. McGrane[3], and J.V. O' Doherty, [1]University College Dublin, [2]Novo Nordisk, Novo Nordisk S.A., Chesham, Bucks, UK , [3]Trouw Nutrition, Leixlip, Co. Kildare, Ireland.
282	1647	Determination of true phosphorus digestibility and the gastrointestinal endogenous phosphorus loss associated with soybean meal for growing-finishing pigs. A. Ajakaiye*, M. Z. Fan, T. Archbold, R. R. Hacker, C. W. Forsberg, and J. P. Phillips, University of Guelph, Guelph, Ontario, Canada.
283	1648	Boron supplementation to pigs increases the production of tumor necrosis factor-alpha and interferon-gamma. T.A. Armstrong* and J.W. Spears, North Carolina State University, Raleigh.
284	1649	The effects of a-lipoic acid (LA) on performance and health of weaned neonatal pigs. K. R. Maddock*[1], E. P. Berg[1], C. A. Stahl[1], M. L. Linville[1], and J. A. Carroll[2], [1]University of Missouri, Columbia, [2]ARS-USDA, Columbia, MO.
285	1650	Effects of feeding different chelated copper and zinc sources on growth performance and their excretions in feces for weaning pigs. S. H. Lee*[1], S. C. Choi, W. T. Kim, B. J. Chae, and Y. K. Han[2], [1]Division of Animal Res. Sci., Kangwon National Univ., [2]Feed Res. Inst., National Agri. Coop. Fed., Anyang, Korea.
286	1651	Dietary copper source and level increases pituitary growth hormone mRNA levels in weanling pigs. X. G. Luo*[1], X. Kuang[1], Q. H. Li[1], J. F. Li[1], T. D. Crenshaw[2], B. Liu[1], G. Z. Shao[1], and S. X. Yu[1], [1]Institute of Animal Science, Chinese Academy of Agricultural Sciences, Beijing, P. R. China, [2]University of Wisconsin, Madison, U. S. A.

287	1652	Effects of long-chain polyunsaturated fatty acids (LCPUFA) on body composition and tissue accretion rates in the neonatal pig. S. A. Mathews*[1], R. J. Harrell[1], W. T. Oliver[1], J. A. Brown[1], O. Phillips[1], X. Lin[1], J. Odle[1], and D. A. Diersen-Schade[2], [1]North Carolina State University, Raleigh, [2]Mead Johnson Nutritionals, Evansville, IN.
288	1653	Utilization of energy and performance of piglets fed low protein diets. L. Le Bellego* and J. Noblet, INRA, St Gilles, France.
289	1654	Effects of feed processing methods on growth performance and ileal digestibility in weaning pigs. S. H. Ohh*[1], J. W. Joo, S. H. Lee, S. C. Choi, Y. H. Shim, K. N. Han, B. J. Chae, and In K. Han[2], [1]Division of Animal Res. Sci., Kangwon National Univ., Chunchon, [2]Dept. of Animal Sci. and Tech., Seoul National Univ., Suwon, Korea.
290	1655	The effect of pelleting temperature on *anti-E. coli* F4 immunoglobulin activity in spray-dried egg and porcine plasma. M. D. Drew*, A. E. Estrada, and A. G. Van Kessel, University of Saskatchewan, Saskatoon SK Canada.
291	1656	Solutein enhances piglet growth post weaning. H.M. Miller*[1] and P. Toplis[2], [1]University of Leeds, Leeds, LS2 9JT, UK, [2]Primary Diets Ltd, Ripon, HG4 5HT, UK.
292	1657	Effect of weaning weight and diet on the post-weaning performance of pigs. P.G. Lawlor*[1], P.B. Lynch[1], J.V. O'Doherty[2], and P.J. Caffrey[2], [1]Teagasc, Moorepark Research Centre, Cork, Ireland, [2]University College Dublin, Ireland.
293	1658	Effect of pre-weaning management and post-weaning nutrition on the performance of weaned pigs. P.G. Lawlor[1], P.B. Lynch*[1], J.V. O'Doherty[2], and P.J. Caffrey[2], [1]Teagasc, Moorepark Research Centre, Cork, Ireland, [2]University College Dublin, Ireland.
294	1659	The effect of choice feeding complete diets on the performance of weaned pigs. P.G. Lawlor*[1], P.B. Lynch[1], J.V. O'Doherty[2], and P.J. Caffrey[2], [1]Teagasc, Moorepark Research Centre, Cork, Ireland., [2]University College Dublin, Ireland.
295	1660	Effects of microencapsulation of natural antimicrobials on the secretory, microbiological and digestive processes in the small intestine of piglets. Z. Mroz*[1] and W. Krasucki[2], [1]Institute for Animal Science and Health, ID-TNO Animal Nutrition, Lelystad, The Netherlands, [2]Agricultural University of Lublin, Poland.
296	1661	Effects of dietary conjugated linoleic acid (CLA) on carcass characteristics and serum leptin and lipid profile of rabbits. C. Corino[1], V. Bontempo*[2], S. Magni[1], and G. Pastorelli[1], [1]University of Milan/Italy, [2]University of Molise, Campobasso/Italy.
297	1662	Physiological adaptation to prolonged food restriction: a model study in growing rats. Ewa Furstenberg*[1], [1]Warsaw Agricultural University, Warsaw, Poland.

PSA Nutrition: Feed Regimens, Digestion, and Gut Morphology

Board Number	Abstract Number	
298	1663	Effects of protein levels on ostrich performance and carcass traits. I. Cormier*, M.R. Lefrancois, and R. Bergeron, Universite Laval, Quebec, Quebec, Canada.
299	1664	Feeding program for broiler breeder hens based on the prediction equations of metabolizable energy requirements. N.K. Sakomura*, E.R. Freitas, C.B.V. Rabello, A.L. Santos, and O.M. Junqueira, [UNESP]Faculdade de Ciências Agrárias e Veterinárias de Jaboticabal - Sao Paulo - Brasil.
300	1665	The effect of different energy and protein levels on the performance of W-36 Hy-Line laying hens. M. Shahnazari*[1], M. Shivazad[1], A. Kamyab[1], and A. Nikkhah[1], [1]University of Tehran, Animal Sci. Dept.
301	1666	Effect of formulation density and feed moisture type additives on broiler performance. J.S. Moritz*, K.J. Wilson, K.R. Cramer, R.S. Beyer, L.J. McKinney, and W.B. Cavalcanti, Kansas State University, Manhattan, KS.
302	1667	Whole wheat feeding and influence of initial body weight on broiler performance. A. Golian*, L.D. Campbell, and W. Guenter, University of Manitoba, Winnipeg, Manitoba, Canada R3T 2N2.

303 1668 The performance of broiler chickens during and following of different feed restriction methods at an early age. M. Houshmand[1], A. Kamyab[2], K. Yousefi[3], and A. Taghipour Farshi*[4], [1]University of Yasouj, [2]University of Tehran, [3]Mobarak Andish Co., [4]Tehran Shaltouk Research Center.

304 1669 The effects of early skip-a-day feeding regimen on the performance of Ross male broiler chicken. K. Yousefi[1], A. Kamyab[2], M. Houshmand[3], and A. Taghipour Farshi*[4], [1]Mobarak Andish, [2]University of Tehran, [3]University of Yasoudj, [4]Telavang Co.

305 1670 The effect of dietary 1,4-diaminobutane (putrescine) on the performance and gastrointestinal development of broiler chicks. F.A. Santoyo* and T.K. Smith, University of Guelph, Guelph, Ontario, Canada.

306 1671 Effects of dietary supplemental Betaglucan on performance and blood components of broiler chicks. S. H. Kim*[1], S. J. Lee[1], K. H. Jung[2], D. J. Yu[1], S. Y. Park[3], J. C. Na[1], and K. S. Ryu[3], [1]National Livestock Research Institute of Rural Development Administration, Daejeon, [2]Dawmajin biotech, Daejeon, [3]Dept. of Animal Resources and Biotech., Chonbuk National University, Chonju, Republic of Korea.

307 1672 Influence of feeding *lactobacillus*, live yeast and its combination on the performance and intestinal microflora of laying hens. S. H. Kim*[1], S. J. Lee[1], D. J. Yu[1], S. Y. Park[2], J. C. Na[1], C. H. Choi[1], and K. S. Ryu[2], [1]National Livestock Research Institute of Rural Development Administration, Daejeon, [2]Dept. of Animal Resources and Biotech., Chonbuk National University, Chonju, Republic of Korea.

308 1673 Influence of feeding various *lactobacillus* on performance and intestinal microflora of laying hens. S. J. Lee[1], S. H. Kim*[1], S. Y. Park[2], D. J. Yu[1], B. S. Kang[1], J. C. Na[1], C. H. Choi[1], and K. S. Ryu[2], [1]National Livestock Research Institute, Rural Development Administration, Daejeon, [2]Dept. of Animal Resources and Biotechnology., Chonbuk National University, Chonju, Republic of Korea.

309 1674 Influence of dietary supplemental live yeast on performance of laying hens. S. J. Lee*[1], S. H. Kim[1], S. Y. Park[2], D. J. Yu[1], J. C. Na[1], C. H. Choi[1], and K. S. Ryu[2], [1]National Livestock Research Institute, Rural Development Administration, Daejeon, [2]Dept. of Animal Resources and Biotech., Chonbuk National University, Chonju, Republic of Korea.

310 1675 Influence of dietary supplemental various *lactobacillus* on performance and fecal noxious gas of broiler chicks. S. H. Kim*, S. J. Lee, D. J. Yu, J. C. Na, S. Y. Park[1], C. H. Choi, and K. S. Ryu[1], National Livestock Research Institute, Rural Development Administration,Daejeon , [1]Dept. of Animal Resources and Biotech. Chonbuk National University Republic of Korea.

311 1676 A comparison of feeding *lactobacillus* and Virginiamycin influence on performance and intestinal microflora of broiler chicks. S. H. Kim*, S. J. Lee, S. Y. Park[1], D. J. Yu, B. S. Kang, C. H. choi, and K. S. Ryu[1], National Livestock Research Institute, Rural Development Administration, Daejeon, [1]Dept. of Animal Resources and Biotechnology. Chonbuk National University, Chonju, Republic of Korea.

312 1677 Survivability of "pelletable" strain of lactic acid producing bacteria in the new direct-fed microbial, Avi-Lution™, in broiler diets and resulting changes in intestinal and cecal microflora associated with enhanced performance. D. M. Hooge*[1], J. R. Corley[2], D. Spangler[3], P. Brown[3], M. D. Sims[4], and G. F. Mathis[5], [1]Hooge Consulting Service, Inc., Eagle Mountain, UT, [2]Prince Agri Products, Inc., Quincy, IL, [3]Agri-King, Inc., Fulton, IL, [4]Virginia Scientific Research, Inc., Harrisonburg, VA, [5]Southern Poultry Research, Inc., Athens, GA.

313 1678 Effect of *Aspergillus* sp and bacterial phytase containing broiler diets on *Salmonella enteritidis* organ invasion in the broiler chick. G Nava*[1], N Ledesma[1], A Priego[2], C Priego[2], L Sutton[3], and G Tellez[1], [1]Departamento de Produccion Animal: Aves, Facultad de Medicina Veterinaria y Zootecnia, UNAM-México, [2]Productos Quimicos-Agropecuarios S.A. de C.V. Mexico , [3]PetAg Inc, Hampshire, IL 60140 USA.

314 1679 Energy and lysine for broilers from 44 to 55 days of age. O. M. Junqueira*[1], L. F. Araujo[1], C. S. S. Araujo[1], D. E. Faria[2], and N. K. Sakomura[1], [1]Universidade Estadual Paulista - UNESP/Jaboticabal - SP - Brazil, [2]Faculdade de Zootecnia e Engenharia de Alimentos - USP/ Pirassununga - SP - Brazil.

315 1680 Dietary supplementation of a blend of galactosidase, galactomannanase and amylase(Endopower®) improves energy utilization and intestinal development in broilers. C.W. Kang*[1], S.K. Kim[1], I.H. Chang[1], S.K. Kwan[1], and B.J. Jang[2], [1]Konkuk University, Department of Animal Science , [2]College of Veterinary Medicine.

316 1681 Effect of Kemzyme® on apparent metabolizable energy and ileal digestible energy of wheat and barley samples with differing AME values in broiler chickens. R. R. Carter*[1] and V. Ravindran[2], [1]Kemin Industries (Asia) Pte Limited, Hornsby, NSW, Australia, [2]Massey University, Palmerston North, New Zealand.

317 1682 Kemzyme C/S® brand for broilers supplementation and its effects on commercial broiler performance. L. Lewis, A. Lamptey, M. Smith, J. Murphy, and P. A. Welch*, Kemin Americas, Inc.

318 1683 Release of water insoluble arabinoxylans from rye bran by ferulic acid esterase and pancreatin. Z. Zhang*, R. R. Marquardt, and W. Guenter, Department of Animal Science, University of Manitoba, Winnipeg, Manitoba, Canada R3T 2N2.

319 1684 Prediction of wheat viscosity by near infrared spectroscopy and development of AviNIR calibration. J. V. Holm[1] and M. Hruby*[2], [1]Danisco Cultor, Brabrand, Denmark, [2]Finnfeeds Int. Ltd, Marlborough, Wiltshire, United Kingdom.

320 1685 Cell wall polysaccharidase[1] and proteolytic[2] enzyme combinations may enhance the *in vitro* carbohydrate and protein hydrolysis from toasted and untoasted soybean meal. I. Ouhida, J. Galobart*, J.F. Perez, and J. Gasa, Universidad Autonoma de Barcelona.

321 1686 Effect of Kemzyme® on egg production and economics with prior adjustment of wheat and barley AME levels. R.R. Carter*[1] and R.J. Hughes[2], [1]Kemin Industries (Asia) Pte Limited, Hornsby, NSW, Australia, [2]Pig and Poultry Production Institute, University of Adelaide, Roseworthy, Australia.

322 1687 Effect of diet metabolizable energy level on performance and energy metabolism of broilers. N.K. Sakomura*, C.B.V. Rabello, F.A. Longo, O.M. Junqueira, K. Watanabe, and K. Pelícia, [UNESP]Faculdade de Ciências Agrárias e Veterinárias de Jaboticabal - Sao Paulo - Brasil.

323 1688 Effect of two sources of sodium on performance and electrolyte balance in broilers. Sultan Mahmood*, R. Ahmad, and S. Hassan Raza, Dept. of Poultry Husbandry, University of Agriculture, Faisalabad, PAKISTAN.

324 1689 The effects of homocysteine on the avian macrophage *In Vitro*. F. McCorkle* and J. Paquette, Central Michigan University.

FRIDAY, JULY 27, 2001

ASAS/ADSA Breeding and Genetics: Genetic Parameters and Breeding Strategies

Board Number	Abstract Number	
1	1690	Utilization of ultrasound data from designed progeny testing programs for calculation of carcass trait expected progeny differences. D. J. Kemp*[1], W. O. Herring[1], and C. J. Kaiser[2], [1]University of Missouri, Columbia, [2]Eli Lilly and Company, Indianapolis, IN.
2	1691	Genetic evaluations based on ultrasound of yearling beef cattle as related to carcass characteristics of commercially produced progeny. C.J.B. Devitt*[1] and J.W. Wilton[2], [1]Beef Improvement Ontario, Guelph, Canada, [2]University of Guelph, Ontario, Canada.
3	1692	Breed direct and maternal genetic effects and predicted means for cow weight. D. E. Franke*, Louisiana State University Agricultural Center.
4	1693	Genetic variation between two tropically adapted *Bos taurus* breeds, the Romosinuano and the Senepol. R. A. Brenneman*[1], C. C. Chase, Jr.[1], T. A. Olson[2], D. G. Riley[1], and S. W. Coleman[1], [1]USDA, ARS, SubTropical Agricultural Research Station (STARS), Brooksville, FL, [2]University of Florida, Gainesville.

5	1694	Estimates of genetic and phenotypic parameters of calf birth weight and calving difficulty in Limousin cattle. Adolfo Pérez Márquez[1], Francisco Ponce Medina[1], Juan Rodriguez García[1], Fulgencio Bueno Fierro[1], Héctor González García[1], Abelardo Correa Calderón[1], Juan Guerrero Cruz[2], and Jesús Trejo Castillo[3], [1]Universidad Autónoma de Baja California, [2]University of California, Davis, Holtville, [3]Universidad Autónoma de Ciudad Juárez.
6	1695	Genetic parameters estimates for lean growth rate and its components in U.S. Yorkshire, Duroc, Hampshire, and Landrace pigs. P. Chen*, T.J. Baas, and J.W. Mabry, Iowa State University, Ames, IA.
7	1696	Evaluation of Duroc vs. Pietrain sired progeny for meat quality. D. B. Edwards*, R. O. Bates, and W. N. Osburn, Michigan State University, E. Lansing, MI/USA.
8	1697	Determining inbreeding levels for the Navajo-Churro sheep breed. A. Maiwashe*[1], B. Tseveenjav[1], B. Golden[1], and H. Blackburn[2], [1]Colorado State University, [2]USDA/ARS.
9	1698	Genetic parameters for some growth traits of Local breed of goat in the United Arab Emirates. Salih Al-Shorepy *, Ghaleb Alhadrami , and Khalfan Abdulwahab, United Arab Emirates University.
10	1699	Estimation of heritability and repeatability for superovulatory responses of Japanese Holstein population. Y. Asada*[1] and Y. Terawaki[2], [1]The Graduate School of Dairy Science, Rakuno Gakuen University, [2]Rakuno Gakuen University Dairy Science Institute.
11	1700	Genetic correlation between final scores over time in Holsteins. S. Tsuruta*[1], I. Misztal[1], L. Klei[2], and T. J. Lawlor[2], [1]University of Georgia, Athens, [2]Holstein Association USA, Inc., Brattleboro, VT.
12	1701	The genetic relationships among milk yield, herd life and productive life in Holstein cows in Hokkaido, Japan. T. Obayasi*[1] and Y. Terawaki[2], [1]The Graduate School of Dairy Science, Rakuno Gakuen University, [2]Rakuno Gakuen University Dairy Science Institute.
13	1702	Suitability of physiological traits of young cattle for the evaluation of their performance stability. L. Panicke*[1], R. Staufenbiel[2], and E. Fischer[3], [1]Research Institute for the Biology of Farm Animals, Dummerstorf, Germany, [2]Free University Berlin, Institute of Veterinary Physiology, Germany, [3]University Rostock, Faculty of Agricultural and Environmental Sciences, Germany.
14	1703	Influence of the quality of reproductive event data on heritability of gestation length in DHI herds. W. Zhang* and G. E. Shook, University of Wisconsin, Madison.
15	1704	Heritabilities and genetic correlations between height, length, weight and body condition score of Holstein heifers in high producing Wisconsin dairy herds. C. D. Dechow*[1], N. C. Dorshorst[2], P. C. Hoffman[2], K. A. Weigel[2], J. Jensen[3], and G. W. Rogers[1], [1]Pennsylvania State University, [2]University of Wisconsin-Madison, [3]Danish Institute of Agricultural Research.
16	1705	Accuracy of reported birth and calving dates of dairy cattle in the United States. H.D. Norman*, J.L. Edwards, and J.R. Wright, Animal Improvement Programs Laboratory, Agricultural Research Service, USDA, Beltsville, MD.
17	1706	Expected correlated responses for conformation traits, 48 month stayability and milk yield of Mexican Holstein cattle. M Valencia-Posadas[1], F Ruiz-Lopez*[2], J Moro-Mendez[3], and H Montaldo-Valdenegro[1], [1]Instituto de Ciencias Agricolas. Universidad de Guanajuato. Guanajuato, Mexico., [2]Cent. Nal. de Invest. en Fisiologia y Mejoramiento Animal. INIFAP-SAGARPA, [3]Holstein de Mexico A.C.
18	1707	The relationship between the estrous situation of donor cows and genetic gain in Japanese Holstein MOET populations. Yoshinori Terawaki*[1] and Yohei Asada[2], [1]Rakuno Gakuen University Dairy Science Institute, [2]Rakuno Gakuen University.
19	1708	Economic weight and selection index with variance of milk yield, herd life, and depreciation cost. Y. Matsuoka*[1] and Y. Terawaki[2], [1]The Graduate School of Dairy Science, Rakuno Gakuen Univ., [2]Rakuno Gakuen Univ. Dairy Science Institute.
20	1709	Determining weights in a multiple objective programming dairy breeding problem. Peter Tozer* and Jeffrey Stokes, The Pennsylvania State University.
21	1710	Relationships and inbreeding among young dairy bulls entering AI progeny test programs. K. A. Weigel*, University of Wisconsin, Madison.

22	1711	The use of fuzzy set to reduce inbreeding in MOET breeding schemes. Atsushi Nakamura*[1], Kenji Togashi[2], Naoyuki Yamamoto[2], and Akiko Nishiura[2], [1]Japan Science and Technology Corporation, [2]Hokkaido National Agricultural Experiment Station.

ASAS/ADSA Ruminant Nutrition: By-Products, Fiber, and Silages

Board Number	Abstract Number	
23	1712	Effect of feeding dairy cows with either BollGard®, BollGard® II, Roundup Ready® or control cottonseeds on feed intake, milk yield and milk composition. A.R. Castillo*[1], M.R. Gallardo[1], M. Maciel[1], J.M. Giordano[1], G.A. Conti[1], M.C. Gaggiotti[1], O. Quaino[1], C. Gianni[2], and G.F. Hartnell[2], [1]Experimental Station Rafaela INTA. Argentina, [2]Monsanto Co., St. Louis, MO.
24	1713	Effect of feeding dairy cows with cottonseeds containing Bollgard® and Roundup Ready® genes or control non-transgenic cottonseeds on feed intake, milk yield and milk composition. A.R. Castillo*[1], M.R. Gallardo[1], M. Maciel[1], J.M. Giordano[1], G.A. Conti[1], M.C. Gaggiotti[1], O. Quaino[1], C. Giani[2], and G.F. Hartnell[2], [1]Experimental Station Rafaela, INTA. Argentina., [2]Monsanto Co., St. Louis, MO.
25	1714	Effect of chopped and ground roughage on ruminal parameters and voluntary feed intake of sheep. H. G. Gonzalez*[1,3], O. B. Ruiz[2], L. C. De la Vega[2], E. T. Rubio[1], O. R. Barrozo[1], N. E. Bujanda[1], N. A. Loya[1], E. S. Garcia[1], I. G. Ramos[1], and H. C. Hernandez[4], [1]Medicina Veterinaria y Zootecnia-ICB, Universidad Autonoma de Ciudad Juarez, [2]Universidad Autonoma de Chihuahua, [3]Universidad Autonoma de Baja California, [4]Universidad Autonoma de Baja California Sur.
26	1715	A comparison of methods used to measure eating and ruminating time in cattle. H. A. Lehman, P. J. Kononoff, and A. J. Heinrichs, The Pennsylvania State University.
27	1716	Effect of two particle sizes of forage on ruminal parameters and voluntary feed intake of steers fed a basal oat straw diet. H. G. Gonzalez*[1,3], O. B. Ruiz[2], L. C. De la Vega[2], E. T. Rubio[1], O. R. Barrozo[1], N. E. Bujanda[1], N. A. Loya[1], I. G. Ramos[1], E. S. Garcia[1], and H. C. Hernandez[4], [1]Medicina Veterinaria y Zootecnia-ICB, Universidad Autonoma de Ciudad Juarez, Mexico, [2]Universidad Autonoma de Chihuahua, [3]Universidad Autonoma de Baja California, [4]Universidad Autonoma de Baja California Sur.
28	1717	Feed intake, digestibility, and growth of Spanish goats consuming different quality diets. T. Wuliji, A.L. Goetsch, R. Puchala, S. Soto-Navarro*, R.C. Merkel, G. Detweiler, T.A. Gipson, and T. Sahlu, E (Kika) de la Garza Institute for Goat Research, Langston University, Langston, OK.
29	1718	Methane loss, nutrient digestibility, and net energy value of distiller's grains fed to steers or fermented invitro . M. J. Jarosz*[1] and D. E. Johnson[2], [1]Purina Mills, St. Louis, MO, [2]Colorado State University.
30	1719	The effect of feeding a novel silage, consisting of liquid cheese whey and wheat straw, on production and digestibility characteristics of growing dairy heifers and beef steers. D.R. ZoBell*, K.C. Olson, R.D. Wiedmeier, and C.A. Stonecipher, Utah State University, Logan, UT.
31	1720	Selected fractionate digestibility coefficients of wheat middling and soybean hull mixtures amended with human food waste. P.M. Walker*, J.M. Dust, D.M. Finnigan, and S.B. Brown, Illinois State University, Normal, IL USA.
32	1721	Effects of feeding wheat middlings on performance of dairy cows in early lactation. G.D. Marx*, University of Minnesota, Crookston, MN.
33	1722	The prediction of potential nutrient supply to dairy cows from field pea (*Pisum sativum*) seeds pressure-toasted at various conditions . P. Yu*[1] and J.O. Goelema[2], [1]Department of Animal and Poultry Science, University of Saskatchewan, Canada, [2]Department of Animal Nutrition, Wageningen Agricultural University, The Netherlands.
34	1723	Ruminal degradability of feather meal in tropical crossbred steers. J. Vergara-Lopez*[1], O. Araujo-Febres[2], Y. Troconis[2], and M. Lachmann[3], [1]Instituto Nacional de Investigaciones Agricolas, [2]Departamento de Zootecnia, Facultad de Agronomia, La Universidad del Zulia, [3]Departamento de Produccion Animal, Facultad de Ciencias Veterinarias, La Universidad del Zulia.
35	1724	Effect of cull chickpeas variety on apparent digestibility of diets for sheep. G. Quevedo[2], J. F. Obregon*[1], R. Barajas[1], and A. Estrada[1], [1]Universidad Autonoma de Sinaloa (Mexico), [2]DGETA-SEP- Sinaloa (Mexico).

36 1725 Effect of feeding dairy cows with whey permeate on ruminal environment under alfalfa grazing conditions. M.C. Gaggiotti[1], M.R. Gallardo[1], A.A. Abdala[1], C. Arakaki[2], L. Burdisso[1], and A.R. Castillo*[1], [1]INTA-EEA Rafaela, [2]INTA-CICV.

37 1726 Nutritional value of nonforage fiber sources used by feed industry in Costa Rica. M. Cruz[1], J. Ml. Sanchez*[1], and E. Vargas, [1]Universidad de Costa Rica, San Jose, Costa Rica.

38 1727 Performance and apparent digestibility of ram lambs fed safflower silage. F.T. Sleiman*[1], O.D. Sayour[1], S.K. Yau[1], M.T. Farran[1], and M.G. Uwayjan[1], [1]American University of Beirut. Beirut, Lebanon.

39 1728 Potential of apple pulp as silage for ram lambs. F.T. Sleiman*[1], R.A. Sarkis[1], M.G. Uwayjan[1], and M.T. Farran[1], [1]American University of Beirut. Beirut, Lebanon.

40 1729 Effect of substitution of common beans hay with Sudan grass hay on apparent digestibility of diets for sheep. R. Barajas*[1], J.F. Obregon[1], G. Quevedo[2], and A. Estrada[1], [1]Universidad Autonoma de Sinaloa, [2]DGETA-SEP-Sinaloa.

41 1730 Ruminal degradation of crude protein of cull chickpeas using nylon bag technique in sheep. J.F. Obregon*[1] and R. Barajas[1], [1]Universidad Autonoma de Sinaloa.

42 1731 Ruminal fermentation, digestion kinetics, and nutrient flow in steers fed diets containing poultry manure and urea or blood meal as the main source of nitrogen. J. Mejia-Haro[1], O. Ruiz-Barrera[2], I. Mejia-Haro[3], and J.A. Jimenez-Castro[2], [1]Universidad de Guanajuato, Mexico, [2]Universidad Autonoma de Chihuahua, Mexico, [3]CIGA-ITA de Aguascalientes, Mexico.

43 1732 Comparison of nutrient digestibility between Roundup Ready® beets and pulp derived from Roundup Ready® beets and conventional beets and pulps. T. Hvelplund* and M.R. Weisbjerg, Danish Institute of Agricultural Sciences, Denmark.

44 1733 Growth performance of Xizhen cattle fed either urea or microbial treated rice straw. J. Luo[1], B. Wang*[1], X. F. Zhao[2], D. H. Tian[1], H. Y. Yang[2], and Q. Liu[3], [1]Northwest Agricultural University, Yangling, Shaanxi, China, [2]Animal husbandry bureau of Xixiang county, Xixiang, Shaanxi, China, [3]Ankang Agricultural School, Ankang, Shaanxi, China.

45 1734 Correlation between texture and *in situ* degradation of corn grain. C.E.S. Correa[1], R.D. Shaver[2], M.N. Pereira*[1], J.G. Lauer[2], and K. Kohn[2], [1]Universidade Federal de Lavras, Brazil, [2]University of Wisconsin, Madison.

46 1735 Comparative dry matter degradation in rumen of cull chickpeas, soybean meal and sorghum grain using nylon bag technique in rumen of sheep . J.F. Obregon*[1] and R. Barajas[1], [1]FMVZ-Universidad Autonoma de Sinaloa. Culiacan, Sinaloa Mexico.

47 1736 Ruminal *in situ* degradation was lower for Brazilian than United States corn grains. C.E.S. Correa[1], R.D. Shaver[2], M.N. Pereira*[1], J.G. Lauer[2], and K. Kohn[2], [1]Universidade Federal de Lavras, Brazil, [2]University of Wisconsin, Madison.

48 1737 Evaluation of water powered liquid metering system to provide molasses for lactating dairy cattle on pasture. J.L. Amick*, L.D. Muller, D.R. Buckmaster, H.D. Karsten, T.W. Cassidy, and E.M. Seconi, The Pennsylvania State University, University Park, PA.

49 1738 Effect of corn grain texture and maturity on ruminal in situ degradation. G.A. Calestine, M.N. Pereira*, R.G.S. Bruno, R.G. Von Pinho, and C.E.S. Correa, Universidade Federal de Lavras, Brazil.

50 1739 Optimal inclusion level of a raw soybean hull-corn steep liquor pellet in diets for 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.

51 1740 Corn crop residue grazing effects on soil physical properties and soybean production in a corn-soybean crop rotation. J. R. Russell[1], J. T. Clark*[1], D. L. Karlen[2], W. D. Busby[1], L. J. Secor[1], B. Peterson[3], C. R Olsen[1], and S. C. Shouse[1], [1]Iowa State University, [2]National Soil Tilth Laboratory, [3]USDA Natural Resource Conservation Service.

52 1741 Dynamics of the nutrients in the gastrointestinal tract: Validation of the Cornell system for bovine fed with sugar cane based diets. E. S. Pereira*[1], A. C. Queiroz[2], S. C. Valadares Filho[2], L. F. Miranda[3], and A. M. V. Arruda[1], [1]Universidade Estadual Oeste Paraná, [2]Universidade Federal Viçosa, [3]Universidade Federal Minas Gerais, Brazil.

53 1742 Determination of the protein and carbohydrates fractions, and in vitro degradation rates of the sugar cane, poultry litter and cottonseed meal . E. S. Pereira*[1], A. C. Queiroz[2], S. C. Valadares Filho[2], L. F. Miranda[3], and A. M. V. Arruda[1], [1]Universidade Estadual Oeste Parana , [2]Universidade Federal Viçosa, [3]Universidade Federal Minas Gerais, Brazil.

54 1743 Effect of whole or ground cottonseed on apparent digestibility of finishing diets for sheep. A. Estrada*[1], J.F. Obregon[1], R. Barajas[1], and B. Valenzuela[1], [1]FMVZ-Universidad Autonoma de Sinaloa (Mexico).

55 1744 Effect of feeding foliage of a multipurpose tree (*Enterolobium cyclocarpum*) on ciliate protozoa and ruminal fermentation in sheep. K. M. Koenig*[1], M. Ivan[1], B. Teferedenge[2], L. M. Rode[1], M. Ibrahim[3], D. P. Morgavi[1], and C. J. Newbold[2], [1]Agriculture and Agri-Food Canada, Research Centre, Lethbridge, AB Canada, [2]Rowett Research Institute, Aberdeen, Scotland, [3]CATIE, Turrialba, Costa Rica.

56 1745 Effect of subacute ruminal acidosis on in situ digestion of mixed hay in lactating dairy cows. J.C. Plaizier*[1], J.E. Keunen[2], J-P. Walton[2], T.F. Duffield[3], and B.W. McBride[2], [1]Department of Animal Science, University of Manitoba, [2]Department of Animal and Poultry Science, University of Guelph, [3]Ontario Veterinary College.

57 1746 Diets with high non-fiber carbohydrate and different solubilities for Llamas (Lama glama): effects on digestive activity in compartment 1 of the digestive system. M. Sol Morales*[1], R. Cabrera[1], A. Lopez[1], C. Carvajal[1], J. Gutierrez[1], and M. Goic[1], [1]Facultad Ciencias Veterinarias y Pecuarias, Universidad de Chile, Santiago, Chile.

58 1747 Improving the nutritional value of oat hulls for ruminant animals: Study of synergistic interaction between *Aspergillus* ferulic acid esterase and *Trichoderma* xylanase on release of hydroxycinnamic acids from oat hulls . P. Yu*[1], J.J. McKinnon[1], D.D. Maenz[1], V.J. Racz[1,2], and D.A. Christensen[1], [1]Department of Animal and Poultry Science, University of Saskatchewan, Canada, [2]Prairie Feed Resource Centre Inc., Canada.

59 1748 Effect of supplementation on rate of neutral detergent fiber degradation in forages measured *in situ* and by rumen evacuation . M.R. Weisbjerg*, P. Lund, and T. Hvelplund, Danish Institute of Agricultural Sciences, Denmark.

60 1749 Mean ruminal retention time of fiber measured using indigestible neutral detergent fiber or ytterbium-labelled feed. P. Lund*, M.R. Weisbjerg, and T. Hvelplund, Danish Institute of Agricultural Sciences.

61 1750 Effects of physically effective fiber on chewing activity and rumen fermentation of dairy cows fed barley-based diets. W. Z. Yang*[1], K. A. Beauchemin[1], and L. M. Rode[2], [1]Agriculture and Agri-Food Canada, [2]Biovance Technologies Inc.

62 1751 The effect of copper oxide bolus administration on forage fiber digestibility in growing steers. J. D. Arthington* and W. F. Brown, Range Cattle Research and Education Center, University of Florida, Ona.

63 1752 Effect of forage particle length on ruminal liquid fraction kinetics and straw degradability of steers fed an oat straw diet. H. G. Gonzalez*[1,3], O. B. Ruiz[2], M. L. De la Vega[2], A. E. Orozco[2], A. C. Correa[3], A. M. Perez[3], V. V. Gonzalez[3], H. C. Hernandez[4], E. T. Rubio[1], and L. B. Gerlach[5], [1]Medicina Veterinaria y Zootecnia-ICB, Universidad Autonoma de Ciudad Juarez, Mexico, [2]Universidad Autonoma de Chihuahua, [3]Universidad Autonoma de Baja California, [4]Universidad Autonoma de Baja California Sur, [5]Universidad de Sonora.

64 1753 Models for describing kinetics of fiber digestion in the rumen. F. O. Carrete-Carreon*, C. E. Cole, J. H. Matis, W. C. Ellis, and C. Lowe, Texas A & M University.

65 1754 Rumen fluid dilution rates in cattle grazing tropical pastures. M.K. Bowen*[1,2], S.R. McLennan[1], and D.P. Poppi[2], [1]Queensland Beef Industry Institute, Yeerongpilly Australia, [2]University of Queensland, St Lucia Australia.

66 1755 The low forage feeding program, Totalac®, increases milk production in high producing Holstein cows. P.A. Porter*, C.M. Luhman, and D.W. LaCount, Land O Lakes, Inc. and Cooperative Research Farms.

67 1756 Growth rate of buffalo female calves on urea treated low quality roughages . Syed, H. Raza*[1], Shahid Mahboob[2], M.S. Khan[1], and Arshad Iqbal[1], [1]FAculty of Aniaml Husbandry, University of Agriculture, Faisalabad, PAKISTAN, [2]Dept. Zoology, Govt. College, FAisalabad, PAKISTAN.

68 1757 Utilization of gas production manometric system to estimate the rate of degradation of the dry matter (DM), neutral detergent fiber (NDF) and neutral detergent soluble fraction (NDS) of concentrate feeds by cattle, sheep and goat. J. C. Teixeira* and R. A. Santos, Universidade Federal de Lavras, Minas Gerais, Brazil.

69 1758 Comparison of the in vitro gas production and the nylon bag degradability techniques to measure degradation rate in cattle, sheep and goat. R. A. Santos and J. C. Teixeira*, Universidade Federal de Lavras, Minas Gerais, Brazil.

70	1759	The effect of rumen pH and forage type on in situ fiber hydrolysis in dairy heifers. C. Spackman*, R.L Baldwin, E.J. DePeters, and M.L. Sweany, University of California, Davis, CA.
71	1760	Effects of dietary proportions of CP/potentially digestible NDF, PDF, upon rates of digestion, turnover and intake of PDF. C. A. Lowe*, W. C. Ellis, F. O. Carrete-Carreon, C. A. Marsh, and E. Moody, Texas A & M University.
72	1761	Effects of ensiling temperature and enzyme additives on the fermentation and in vitro rumen degradation of maize silage. D. Colombatto*[1], F. L. Mould[1], M. K. Bhat[2], R. H. Phipps[1], and E. Owen[1], [1]The University of Reading, UK, [2]Institute of Food Research, Norwich, UK.
73	1762	Evaluation of a novel psychrophilic enzyme mixture as a potential additive for maize silage. D. Colombatto*[1], F. L. Mould[1], M. K. Bhat[2], G. Black[3], and E. Owen[1], [1]The University of Reading, UK, [2]Institute of Food Research, Norwich, UK, [3]University of Sunderland, UK.
74	1763	Effect of ensiling, storage time and innoculant use on amino acid composition of alfalfa silage preserved in silage bags. S. P. Crosby*[1], J. Zmich[1], R. A. Patton[2], M. J. Stevenson[3], and R. T. Ward[4], [1]Finger Lakes Nutrition, Genoa, NY/USA, [2]Nittany Dairy Nutrition, Mifflinburg, PA/USA, [3]Degussa-Huls Canada, Burlington, Ont/Canada, [4]Cumberland Valley Analytical Services, Maugansville, MD/USA.
75	1764	Effect of added degradable intake protein on *in situ* and *in vivo* digestibility of processed and unprocessed corn silage fed to beef steers. C.W. Hunt[1], L.R. Kennington*[1], G.T. Pritchard[1], J.I. Szasz[1], and W. Mahanna[2], [1]University of Idaho, Moscow, [2]Pioneer Hybrid International, Des Moines, IA.
76	1765	Interactions of corn silage particle size and tallow supplementation on rumen fermentation and performance of dairy cows fed corn silage-based diets. S. G. Onetti*, R. D. Shaver, and R. R. Grummer, Uinversity of Wisconsin-Madison.
77	1766	The effect of ensiling whole plant corn and wet corn gluten feed simultaneously on silage fermentation.. J.A. Mills* and R.J. Grant, University of Nebraska, Lincoln NE.
78	1767	Fermentation characteristics of alfalfa hay harvested at different stages of maturity and cutting times in continuous cultures of rumen contents. H. Han*[1], H. S. Hussein[1], J. P. Tanner[1], and H. F. Mayland[2], [1]University of Nevada-Reno, Reno, NV, [2]USDA-ARS, Kimberly, ID.
79	1768	High oil corn silage versus typical corn silage for cows early in lactation. J. G. Linn[1], D. G. Johnson[1], J-M. Akayezy[1], F. N. Owens*[2], D. W. Rice[2], B. L. Smith[2], and M. A. Hinds[2], [1]University of Minnesota, St. Paul, MN 55108, [2]DuPont Specialty Grains, Des Moines, IA 50322.

ASAS/ADSA Growth and Development

Board Number	Abstract Number	
80	1769	Granular-secretory fraction of the bovine fetal cotyledons: I. Elution pattern and electrophoretic characterization. F.G. Rios[1] and F.A. Nuñez[2], [1]FMVZ- Universidad Autonoma de Sinaloa. Culiacan, Sinaloa Mexico., [2]FZ-Universidad Autonoma de Chihuahua.
81	1770	Granular-secretory fraction of the bovine fetal cotyledons: II. Effect on rate of growth of mice. F.G. Rios[1], F.A. Nuñez[2], and R. Barajas[1], [1]FMVZ- Universidad Autonoma de Sinaloa. Culiacan, Sinaloa Mexico., [2]FZ-Universidad Autonoma de Chihuahua.
82	1771	Tibial lesions in broiler chicks after feeding different dietary concentrations of calcium and ammonium chloride. I. B. Toure*, S. Weisbrode, and J. D. Latshaw, The Ohio State University.
83	1772	Relationships between a single-point mutation in the chloride channel-1 gene and phenotypic responses in the Myotonic goat. B. L. Sayre*, S. Wildeus, M. P. L. Dismann, and J. R. Collins, Virginia State University, Petersburg, VA.
84	1773	Effect of somatostatin-14 (SS-14) and passive immunization against SS-14 on circulating levels of growth hormone (GH) in rainbow trout (*Oncorhyncus mykiss*). B. C. Peterson*, P. R. Simpson, R. W. Hardy, T. L. Ott, A. Ahmadzadeh, and G. T. Schelling, [1]University of Idaho, Moscow, ID/USA.
85	1774	Graded levels of rbST (recombinant bovine somatotropin) at multiple time injections on growth performance response of Arctic charr *Salvelinus alpinus*. N.J. Hughes, B.C. Peterson, P.R. Simpson, and G.T. Schelling*, University of Idaho, Moscow, ID / USA.

86 1775 Growth and carcass quality of offspring in response to somatotropin (pST) treatment of sows during early gestation. G. Kuhn, C. Rehfeldt*, G. Nürnberg, and K. Ender, Research Institute for the Biology of Farm Animals, Dummerstorf, Germany.

87 1776 Effect of oxytocin (OT) on hourly milk secretion in gilts with mastitis. R. S. Kensinger*, D. M. Sanzotti, A. L. Magliaro, A. C. W. Kauf, and L. C. Griel, Jr. , Penn State University.

88 1777 Influence of long-term maternal nutrition on ovine fetal growth and development. SP Quigley*[1], DO Kleemann[1], SK Walker[1], JA Owens[2], PI Hynd[2], G Nattrass[1], SR Barritt[1], and PA Speck[1], [1]South Australian Research and Development Institute, South Australia, [2]University of Adelaide, South Australia.

89 1778 Stereoselectivity of porcine beta-adrenergic receptors for ractopamine isomers. J.D. Kissel*[1], D.J. Smith[2], and S.E. Mills[1], [1]Purdue University, [2]USDA-ARS Fargo, ND.

90 1779 Leptin in neonatal pigs: effects of oral versus intramuscular administration. N.C. Whitley[1], E.L. McFadin-Buff*[2], P.R. Buff[2], and D.H. Keisler[2], [1]University of Maryland-Eastern Shore, Princess Anne, MD, [2]University of Maryland, Columbia, MO.

91 1780 Endocrine response and fat metabolism change in finishing pigs treated with N-methyl-d,l,-aspartate(NMA). GANG XI*, ZIRONG XU[2], and PING XIAO[2], [1]University of Minnesota, St. Paul, MN, [2]Zhejiang University, Hangzhou, China .

92 1781 Studies on lipid metabolism in hepatocytes from growing pigs. T.J. Caperna*[1], I. Fernandez-Figares[1], A.E. Shannon[1], and D. Wray-Cahen[2], [1]USDA, ARS, Beltsville, MD, [2]FDA, Rockville, MD.

93 1782 Recruitment and differentiation of intramuscular preadipocytes in stromal-vascular (S-V) cell cultures derived from fetal pig semitendinosus muscles. G.J. Hausman, R. Gaines, and S.P. Poulos, USDA ARS, Athens, GA .

94 1783 The effect of LXRα ligands on adipocyte differentiation. T.D. Brandebourg* and C.Y. Hu, Oregon State University, Corvallis.

95 1784 Hormonal regulation of postnatal chicken preadipocyte differentiation in vitro. T. G. Ramsay* and R. W. Rosebrough, USDA-ARS, Beltsville, MD .

96 1785 Effects of dietary protein on the endogenous calpain/calpastatin proteolytic system in canine skeletal muscle. E. E. Helman*[1], E. H. Lonergan[1], S. M. Lonergan[1], and G. M. Davenport[2], [1]Iowa State University, Ames, IA, [2]The Iams Company, Lewisburg, OH.

97 1786 Growth of myoblasts derived from genetically different mice, pigs, and cattle. C. Rehfeldt*[1], G. Nürnberg[1], U.K. Zettl[2], E. Mix[2], M. Wittstock[2], U. Renne[1], H.J. Papstein[1], and K. Ender[1], [1]Research Institute for the Biology of Farm Animals, Dummerstorf, Germany, [2]Rostock University, Rostock, Germany.

98 1787 Solubilization and purification of a recombinant chicken myostatin expressed as inclusion bodies in *E. coli*. Y. S. Kim*[1], K. S. Baek[2], and M. A. Dunn[1], [1]University of Hawaii, Honolulu, HI, [2]National Livestock Research Institute, Namwon, Korea.

99 1788 Stair-step compensatory growth regimen in dairy heifers and its effects on transition health. M.S. Laubach*[1], D.E. Schimek[1], D.B. Carlson[1], A.M. Encinias[1], J.L. Burton[2], J.W. Schroeder[1], W.L. Keller[1], and C.S. Park[1], [1]North Dakota State University, [2]Michigan State University.

100 1789 Effects of added rumen undegraded protein and bovine somatotropin administration on skeletal growth rates in prepubertal dairy heifers. U. Moallem*[1], G. E. Dahl[1], E. K. Duffey-Tower[1], A. V. Capuco[2], and R. A. Erdman[1], [1]University of Maryland, College Park., [2]USDA-ARS, Beltsville, MD.

101 1790 Effects of added rumen undegraded protein and bovine somatotropin administration on organ and tissue weights in prepubertal dairy heifers. U. Moallem[1], G. E. Dahl*[1], A. V. Capuco[2], R. L. Baldwin[2], and R. A. Erdman[1], [1]University of Maryland, College Park, [2]USDA-ARS, Beltsville, MD.

102 1791 Effects of added rumen undegraded protein and bovine somatotropin administration on body composition in prepubertal dairy heifers. U. Moallem[1], K. R. McLeod[2], A. V. Capuco[2], K. E. Duffey-Tower[1], G. E. Dahl[1], and R. A. Erdman*[1], [1]University of Maryland, College Park, [2]USDA-ARS, Beltsville, MD.

103 1792 Relationships between concentration of serum immunoglobulins and growth rate of dairy heifers. W. Jarmuz[1], I. Szelag[2], and R. Skrzypek*[2], [1]IGiHZ PAN Jastrzebiec, [2]Agricultural University of Poznan, Poland.

104	1793	Growth performance, metabolic and endocrine traits in calves pair-fed by automate or by bucket during the first month of life. H.M. Hammon*, A. Nussbaum, G. Schiessler, and J.W. Blum, University of Berne, Switzerland.
105	1794	Age-related changes of the somatotropic axis in cloned Holstein calves. K.E. Govoni*, X.C. Tian, G.W. Kazmer, M. Taneja, B. Enright, A.L. Rivard, X. Yang, and S.A. Zinn, University of Connecticut, Storrs, CT.
106	1795	Feed intake patterns, metabolic and endocrine traits, and growth performance during the first month of life of calves provided restricted or unlimited amounts of colostrum and milk with an automate. J.W. Blum*, A. Nussbaum, G. Schiessler, and H.M. Hammon, University of Berne, Switzerland.
107	1796	Glucose metabolism in Holstein and Jersey calves fed milk replacer once versus twice daily. C. M. Cheatham*[1], C. C. Williams[1], J. M. Fernandez[1], W. A. Nipper[1], H. G. Bateman, II[1], J. C. Lovejoy[2], D. T. Gantt[1], L. R. Gentry[1], and G.E. Goodier[1], [1]Louisiana State Unuversity Agricultural Center, Baton Rouge, LA, [2]Pennington Biomedical Research Center, Louisiana State University, Baton Rouge, LA.
108	1797	Evaluation of bovine or porcine plasma in calf milk replacers on mortality, morbidity, intake and growth of young dairy calves . J. D. Quigley, C. J. Kost, and T. M. Anspach*, APC Company, Inc., Ames, IA.
109	1798	Body composition of Piedmontese x Hereford and Wagyu x Hereford newborn calves. P.L. Greenwood*[1,2], H. Hearnshaw[1,3], D.W. Hennessy[1,3], J.M. Thompson[1,4], and G.S. Harper[1,5], [1]Cooperative Research Centre for Cattle and Beef Quality, Armidale, Australia, [2]NSW Agriculture Beef Industry Centre, Armidale, Australia, [3]NSW Agriculture Research and Advisory Station, Grafton, Australia, [4]University of New England, Armidale, Australia, [5]CSIRO Livestock Industries, Brisbane, Australia.
110	1799	Post-weaning growth of cattle destined for Japanese and Korean markets: Relationships between growth during backgrounding and intramuscular fat percentage (IMF%) at slaughter. M.J. McPhee[1,2], S. Harden[1,3], P.L. Greenwood*[1,2], and V.H. Oddy[1,4], [1]Cooperative Research Centre for Cattle and Beef Quality, Armidale, Australia, [2]NSW Agriculture, Beef Industry Centre, University of New England, Armidale, NSW 2351, Australia, [3]NSW Agriculture, Tamworth Centre for Crop Improvement, Tamworth, NSW 2340, Australia, [4]Meat and Livestock Australia, 165 Walker Street, North Sydney, NSW 2060, Australia.
111	1800	Effect of Synovex-S® on pituitary-thyroid axis response to challenge with a combination of thyrotropin releasing hormone (TRH) and growth hormone releasing hormone (GHRH) in beef steers. S. Kahl*, T.S. Rumsey, and T.H. Elsasser, USDA, Agricultural Research Service, Beltsville, MD.
112	1801	Performance, carcass characteristics and plasma levels of thyroid hormones and insulin like growth factor-I in feedlot intact crossbred (*Bos taurus* × *Bos indicus*) Brazilian Superyoung System. L. A. L. Chardulo*[1], J. A. Ferro[2], A. C. Silveira[1], L. R. Furlan[1], M. D. B. Arrigoni[1], H. N. Oliveira[1], M. I. T. Ferro[2], and M. Macari[2], [1]UNESP - Botucatu, SP/Brazil, [2]UNESP - Jaboticabal, SP/Brazil.
113	1802	Effects of estradiol administration and level of protein intake on nitrogen metabolism and insulin-like growth factor-1 (IGF-1) gene expression in muscle in growing steers. O Cheng*[1], W Knaus[1], M Boehm[1], and D Beermann[1,2], [1]Cornell University, [2]University of Nebraska at Lincoln.
114	1803	Temporal effects of daily estradiol administration on nitrogen metabolism and insulin-like growth factor-1 (IGF-1) gene expression in liver and skeletal muscle in growing lambs. O Cheng*[1], M Boehm[1], and D Beermann[1,2], [1]Cornell University, [2]University of Nebraska at Linclon.
115	1804	Effects of immunization aganist LHRH on growth performance, sex characteristics, and meat quality of intact male pigs. C. Y. Liu*[1], L. C. Cheng[1], P. C. Yang[1], T. Y. Chang[2,3], M. Shen[3], C. L. Finstad[3], and C. Y. Wang[2,3], [1]Pig Research Institute Taiwan, ROC, [2]United Biochemical, Inc., Asia, ROC, [3]United Biochemical, Inc., USA.
116	1805	The effects of zinc and thyroid hormone on the expression of growth hormone and thyroid stimulating hormone in primary rat anterior pituitary cells. A.L. Rivard*, M.A. Shaller, H.C. Freake, and S.A Zinn, University of Connecticut.
117	1806	Effects of dietary conjugated linoleic acid (CLA) on the composition and function of peripheral blood mononuclear leukocyte populations in heifer calves. J.M. Smith*[1], B.J. Nonnecke[2], M.E. Van Amburgh[1], B.A. Pesch[2], and J.A. Harp[2], [1]Cornell University, Ithaca, NY, [2]National Animal Disease Center (NADC), USDA, ARS, Ames, IA.

118	1807	Feeding conjugated linoleic acid to reduce the impact of an infectious disease challenge in growing swine. J.A. Brown*, G.W. Almond, S.A. Mathews, W.T. Oliver, and R.J. Harrell, North Carolina State University, Raleigh, NC.

AMSA/ASAS Meat Science and Muscle Biology

Board Number	Abstract Number	
119	1808	Prediction of the fat content of pork carcasses based on cross-sectional region analysis of dual energy X-ray absorptiometry scans. A. D. Mitchell*[1], A. M. Scholz[2], and V. G. Pursel[1], [1]USDA, Agricultural Research Service, Beltsville, MD , [2]Ludwig Maximillians University-Munich, Oberschleissheim, Germany.
120	1809	Effect of supplemental fat on growth performance and quality of beef from steers fed barley-potato product finishing diets I. Feedlot performance, carcass characteristics, and appearance. M. L. Nelson*, J. R. Busboom, D.J. Marks, L.F. Falen, and J.D. Cronrath, Washington State University, Pullman, WA/USA.
121	1810	Catalysis of meat tenderization during postmortem aging by calpain 3 (p94). M. A. Ilian*, A. E. Bekhit, and R. Bickerstaffe, Lincoln University.
122	1811	Effect of transport temperature and post-slaughter chilling on channel catfish fillet quality. B. G. Bosworth*[1], W. R. Wolters[1], J. Silva[2], and R. Chamul[2], [1]USDA-ARS, Stoneville, MS, [2]Mississippi State University, Starkville, MS.
123	1812	Effects of pre-slaughter holding time on dressing-out percent and meat quality for bulls and steers. R. W. Purchas*, D. L. Burnham, and S. T. Morris, Massey University, Palmerston North, New Zealand.
124	1813	Instrumental and chemical characteristics, calpastatin mRNA genic expression and myofibrilar protein concentration in chilled meat of feedlot Brazilian Superyoung cattle *Bos taurus* × *Bos indicus* 24h postmortem. L. A. L. Chardulo*[1], J. A. Ferro[2], A. C. Silveira[1], L. R. Furlan[1], M. D. B. Arrigoni[1], H. N. Oliveira[1], M. I. T. Ferro[2], and C. Ludovico[1], [1]UNESP - Botucatu, SP/Brazil, [2]UNESP - Jaboticabal, SP/Brazil.
125	1814	Abundance and cellular distribution of the calpain proteolytic system proteins in the Longissimus of the ovine . R. Bickerstaffe*[1], M. Ilian[1], and H. Sorimachi[2], [1]Lincoln University, [2]The University of Tokyo.
126	1815	Effects of marination on the processing parameters and palatability of bison top round. J.S. Dhanda*[1], R.B. Pegg[1], J.A.M. Janz[2], J.L. Aalhus[3], and P.J. Shand[1], [1]University of Saskatchewan, Saskatoon, SK, Canada, [2]University of Alberta, Edmonton, AB, Canada, [3]Agriculture and Agri-Food Canada Research Centre, Lacombe, AB, Canada.
127	1816	Antihypertensive activities of enzymatic hydrolysates of porcine skeletal muscle proteins. Y Nakashima*, K Arihara, S Ishikawa, and M Itoh, Kitasato University, Towada-shi, Japan.
128	1817	Oxidative differentiation in muscle of small and large pig fetuses in late gestation. C. Ashton* and N. Stickland, The Royal Veterinary College, London, UK, NW1 0TU.
129	1818	Omega-3 fatty acids and meat lamb quality. F Nicastro*[1], L Zezza[1], and R Gallo, Department of Animal production, University of Bari, Bari, Italy.
130	1819	*In ovo* manipulation of posthatch growth in the turkey. A. R. Somaiya* and N. C. Stickland, Royal Veterinary College, London, UK.
131	1820	Effect of supplemental fat on growth performance and quality of beef from steers fed barley-potato product finishing diets II. Beef appearance, shelf-life, and palatability. D. J. Marks, J. R. Busboom*, M. L. Nelson, J. D. Cronrath, L. Falen, and P. S. Kuber, Washington State University.
132	1821	Effect of supplemental fat on growth performance and quality of beef from steers fed barley-potato product finishing diets III. Fatty acid composition of muscle and subcutaneous fat. D. J. Marks*, M. L. Nelson, J. R. Busboom, J. D. Cronrath, A. E. Koepp, and L. Falen, Washington State University.
133	1822	Market orientation: A possibility to improve consumers' acceptability of pork products. Charlotte Prestat* and M. Susan Brewer, University of Illinois, Urbana-Champaign, IL.

134	1823	Combined effects of pH and temperature on myoglobin in a model system. Liugen Zhu* and Susan Brewer, University of Illinois at Urbana-Champaign.
135	1824	Development of photographing equipment for the cross section of carcass and prediction of Beef Color Standard number by using obtained image from that equipment. K. Kuchida*, M. Hasegawa, M. Suzuki, and S. Miyoshi, Obihiro University of AVM, Obihiro-shi Japan.
136	1825	Effect of high oil corn and vitamin E supplementation on ground beef case-life properties. M.S. Eibs*, B.J. Johnson, D.M. Wulf, B.C. Shanks, and T.A. Wittig, South Dakota State University.
137	1826	Increased calcineurin activity is associated with muscle hypertrophy in callypyge sheep . C. E. Carpenter* and N. E. Cockett, Utah State University.
138	1827	Diets containing conventional corn, conventional corn and choice white grease, high oil corn, or high oleic, high oil corn will influence the fatty acid profile of fresh pork adipose tissue. C. A. Stahl*[1], M. L. Linville[1], K. R. Maddock[1], T. E. Sauber[2], G.L. Allee[1], and E. P. Berg[1], [1]University of Missouri, Columbia, MO, [2]DuPont Specialty Grains, Des Moines, IA.
139	1828	Genetic line effects on palatability, color and physical characteristics of fresh pork loin chops. J. M. Schlickau*[1], M. S. Brewer[1], A. Sosnicki[2], B. Field[2], and F.K. McKeith[1], [1]University of Illinois, [2]PIC.
140	1829	Effect of enhancement of beef rounds on sensory and retail display characteristics. K.L. Robbins* and M.S. Brewer, University of Illinois, Urbana-Champaign, IL.
141	1830	Effect of breed-type on the performance and carcass traits of hair-sheep. J. K. Apple[1], J. M. Burke[2], W. J. Roberts[1], J. S. Stephenson[1], and L. K. Rakes[1], [1]University of Arkansas, [2]USDA-ARS Small Farms Research Center, Booneville, AR.
142	1831	Relationship between porcine longissimus dorsi pH decline and µ-calpain activity/autolysis and protein degradation. L.J. Rowe, S.M. Lonergan, M.F. Rothschild, and E. Huff-Lonergan*, Iowa State University, Ames, IA.
143	1832	Potassium lactate and sodium diacetate affects on the microbial, sensory, color and chemical characteristics of vacuum-packaged beef top loin steaks. T. A. Williams*, R. K. Miller, N. Anwar, L. M. Lucia, and G. R. Acuff, Texas A&M University, College Station, TX.
144	1833	The influence of diets containing conventional corn, conventional corn and choice white grease, high oil corn, or high oleic, high oil corn on belly/bacon quality. G. Rentfrow*[1], K.R. Maddock[1], C.A. Stahl[1], M.L. Linville[1], T.E. Sauber[2], G.L. Allee[1], and E.P. Berg[1], [1]University of Missouri, [2]Dupont Specialty Grains.
145	1834	The effect of early weaning and intensive feeding on meat quality of beef cattle. PE Strydom* and EM Buys, Animal Nutrition and Products Institute of the Agricultural Research Council.
146	1835	The effect of dietary supplemental vitamin E and C on odors and color changes in irradiated pork. S. Ohene-Adjei*, T. Bertol, Y. Hyun, M. Ellis, S. Brewer, and F. K. McKeith, University of Illinois at Urbana-Champaign.
147	1836	Effect of the addition of electrolytes in drinking water and the chilling temperature on technological, physicochemical, and microbiological characteristics of pork. A. Alarcon-Rojo, S. Mendoza*, and A. Grado, Universidad Autonoma de Chihuahua. Chihuahua, Chih. Mexico.
148	1837	Relationship between a measure of troponin-T degradation and beef tenderness. L. J. Rowe, E. Huff-Lonergan, G. H. Rouse, D. E. Wilson, and S. M. Lonergan*, Iowa State University.
149	1838	Use of color and near-infrared reflectance analysis to predict Warner-Bratzler beef longissimus tenderness. C.E. Realini*[1], T.D. Pringle[1], W.R. Windham[2], B.G. Lyon[2], S.K. Duckett[1], and K.R. Smith[1], [1]The University of Georgia, Athens, [2]USDA-ARS, Russell Research Center, Athens.
150	1839	Effect of conjugated linoleic acid supplementation on pork quality and fatty acid profiles. M.W. Greene*[1], T.D. Pringle[1], M.J. Azain[1], M.H. Gillis[1], S.K. Duckett[1], G.J. Hausman[2], and C.R. Barb[2], [1]The University of Georgia, Athens, [2]USDA-ARS, Russell Research Center, Athens.
151	1840	Perimysium structure and collagen content change with muscle type and myostatin inheritance. R Taylor*[1], R Labas[1], P Berge[1], and J Culioli[1], Meat Research Station, INRA.

ASAS Beef Species

Board Number	Abstract Number	
152	1841	Pre-slaughter condition scoring of Zebu Cattle. O.T.F. Abanikannda*[1], A.O. Leigh[1], O.Y. Apena[1], and O. Olutogun[2], [1]Department of Zoology, Lagos State University, Ojo - Lagos, Nigeria, [2]Department of Animal Science, University of Ibadan, Nigeria.
153	1842	Safety of moxidectin 1% nonaqueous injectable solution for cattle. K.L. Simkins*, R.L. DeLay, and T.W.J. Olchowy, Fort Dodge Animal Health, Princeton, NJ.
154	1843	Effect of supplemental energy source on growth and reproductive performance of virgin heifers consuming corn silage diets. C.M. Howlett*, E.S. Vanzant, L.H. Anderson, W.R. Burris, J. Randolph, and R.F. Bapst, University of Kentucky.
155	1844	Influence of estrus synchronization on reproductive performance of cows exposed to natural service. J. D. Rhinehart*, J. W. Wyles, and L. H. Anderson, University of Kentucky.
156	1845	Influence of calving on body condition score in crossbred cows. Sarjan rao Kapa*[1], Dilipkumar Garikipati[1], and Kailash MM[2], [1]College of veterinary science, Tirupati, ANGRAU, [2]University of Agricultural science, Bangalore.
157	1846	Maternal performance of four biological types of Red Poll cows. B.A. Sandelin*[1], A.H. Brown, Jr.[1], Z.B. Johnson[1], A.M. Stelzleni[1], and C.F. Rosenkrans, Jr.[1], [1]University of Arkansas.

ASAS Goat Species and ASAS Companion Animal Species

Board Number	Abstract Number	
158	1847	Evaluation of corn gluten meal as a protein source in canine diets. R.M. Yamka*[1], S.E. Kitts[1], A.D. True[1], D.L. Harmon[1], and W.D. Schoenherr[2], [1]Dept. of Animal Sciences, University of Kentucky, Lexington, 40546, [2]Hill's Pet Nutrition, Topeka, KS 66617.
159	1848	The effects of an antioxidant system based on tocopherols and novel extracts from Rosemary on petfood shelf-life and acceptability by dogs and cats. C. G. Aldrich* and J. O. Mann, Kemin Americas, Inc., Des Moines, IA.
160	1849	The effect of hay and /or concentrate on performance, organ mass, blood metabolites and hormones in weaned kids. B. Kouakou*, S. Gelaye, G. Kannan, T. H. Terrill, E. A. Amoah, and S. Miller, Agricultural Research Station, Fort Valley State University.
161	1850	Weight Gain In Beetal Goats Under Two Different Rearing Systems. S. H. Raza*, A. Iqbal, and M. Abdullah, University of Agriculture, Faisalabad, PAKISTAN.
162	1851	Preslaughter stress effects on physiological responses and meat quality characteristics in goats. G. Kannan*, B. Kouakou, T. H. Terrill, S. Gelaye, and E. A. Amoah, Agricultural Research Station, Fort Valley State University, Fort Valley, GA.
163	1852	Live weight changes in grazing goats supplemented with protein during the dry season. A.S. Juarez-Reyes, M.A. Cerrillo*, and G. Nevarez-Carrasco, Universidad Juarez del Estado de Durango, Durango,Dgo. Mexico.
164	1853	Determination of supplementation requirements of grazing goats utilizing two protein systems. A.S. Juarez-Reyes*, M.A. Cerrillo, and G. Nevarez-Carrasco, Universidad Juarez del Estado de Durango. Durango, Dgo. Mexico.
165	1854	Effects of urea treatment of straw and dietary broiler litter on feed intake and digestion in Spanish wethers. G. Abebe[1], R. C. Merkel*[2], G. Animut[3], A. L. Goetsch[2], and T. Sahlu[2], [1]Awassa College of Agriculture, Debub University, Awassa, Ethiopia, [2]E (Kika) de la Garza Institute for Goat Research, Langston University, Langston, OK , [3]Alemaya University, Dire Dawa, Ethiopia.
166	1855	Feed intake and growth by Spanish and Boer x Spanish doelings consuming diets with different levels of broiler litter. T. Negesse[1], R. C. Merkel[2], A. Tolera[1], A. L. Goetsch[2], T. Sahlu[2], R. Puchala[2], T. A. Gipson[2], and L. J. Dawson*[2], [1]Awassa College of Agriculture, Debub University, Awassa, Ethiopia, [2]E (Kika) de la Garza Institute for Goat Research, Langston University, Langston, OK.

167	1856	Comparison of goats raised intensively versus pasture raised. N.C. Beckford*, J.M. Dzakuma, E. Risch, C.O. Smith, P.M. Johnson, and L.C. Nuti, Prairie View A&M University, Prairie View, TX. USA.
168	1857	Survey of goat meat sales in New Jersey. James Lechner*, James Wohlt, Ramu Govindasamy, and Patricia Schoknecht, Rutgers, The State University of New Jersey, New Brunswick, NJ.
169	1858	Extension of the cashmere growth period in Spanish goats with melatonin. T. Wuliji*[1], A. Litherland[2], A.L. Goetsch[1], T. Sahlu[1], R. Puchala[1], T.A. Gipson, and L.J. Dawson[1], [1]E (Kika) de la Garza Institute for Goat Research, Langston University, Langston, OK, [2]AgResearch, Grasslands Research Centre, Palmerston, New Zealand.
170	1859	Milk yield, body weight and some physiological traits of Baladi goats and their crosses with Damascus and Anglo-Nubian breeds in Egypt. A. Hassan, M. Samak, A. Elkomy*, and M. Anwar, Fac.Of Agric.Alex.ElShatby,Egypt.
171	1860	Differences in growth and carcass characteristics in young goats of different genotypes. R. Kraig Peel*[1] and W. Shawn Ramsey[2], [1]Sam Houston State University, [2]Texas A\&M University.
172	1861	Effects of insulin administered to a perfused area of skin in Angora goats. R. Puchala*[1], S.G. Pierzynowski[2], T. Wuliji[1], A.L. Goetsch[1], and T. Sahlu[1], [1]E (Kika) de la Garza Institute for Goat Research, Langston University, Langston, OK 73050, [2]Department of Zoophysiology, Lund University, Lund, Sweden.
173	1862	Effects of preweaning concentrate supplementation on performance of meat goats. A. L. Goetsch*, G. Detweiler, and T. Sahlu, E (Kika) de la Garza Institute for Goat Research, Langston University, Langston, OK.
174	1863	Optimum herd size of small goat holders in Qinba Mountain district in China. J. Luo[1], H. Yao*[1], X. F. Zhao[2], and H. Y. Yang[2], [1]Northwest Agricultural University, Yangling, Shaanxi, China, [2]Animal husbandry bureau of Xixiang county, Xixiang, Shaanxi, China.
175	1864	Growth and survival of kids of three goat breeds during different seasons. S. Wildeus* and T. A. Gipson, Virginia State University, Petersburg, VA.
176	1865	Differences in intake, growth rate and carcass characteristics in young males of three hair sheep and meat goat breeds. S. Wildeus*[1], M. B. Solomon[2], A. D. Mitchell[2], J. S. Eastridge[2], and J. R. Collins[1], [1]Virginia State University, Petersburg, VA, [2]Beltsville Agricultural Research Center, USDA, Beltsville, MD.
177	1866	Modeling extended lactation curves in dairy goats using grafted polynomials. T.A. Gipson*[1] and G.R. Wiggans[2], [1]E (Kika) de la Garza Institute for Goat Research, Langston University, Langston, OK , [2]Agricultural Research Service, USDA, Beltsville, MD.

ASAS Sheep Species

Board Number	Abstract Number	
178	1867	Evaluation of resistance to H. contortus in Pelibuey sheep. Antonio Figueroa, Danilo Mendez*, Manuel Berruecos, Rogelio Alonso, and Hugo Perez, Facultad de Medicina Veterinaria y Zootecnia. Universidad Nacional Autonoma de Mexico.
179	1868	Pre-mating nutrition affects the onset and synchrony of oestrus in Merino ewes treated with progesterone CIDR dispensers. SP Quigley*[1], SK Walker[1], PA Speck[1], SR Barritt[1], and DO Kleemann[1], [1]South Australian Research and Development Institute, South Australia.
180	1869	The effects of offering grass or maize silages with a flat rate of concentrate supplementation to pregnant ewes on ewe and lamb performance. T.F. Crosby*, J.V. O'Doherty, P.J. Quinn, J.J. Callan, B. Flynn, D. Cunningham, P. Reilly, and E Massey, University College Dublin, Belfield, Dublin 4, Ireland.
181	1870	An evaluation of production systems for early season lamb production. T.F. Crosby, J.V. O'Doherty, P.J. Quinn, J.J. Callan, B. Flynn, and D. O'Shea, University College Dublin, Belfield, Dublin 4, Ireland.
182	1871	Feedlot performance, wool production, and carcass characteristics of Merino/Rambouillet wether lambs as affected by breed and dietary forage to concentrate ratios . S. L. Lake*, H. S. Hussein, H. A. Glimp, B. D. Kindred, T. P. Ringkob, and D. W. Holcombe, University of Nevada - Reno.

183	1872	Comparison of carcass data and ultrasound measures using both cattle and swine standoffs for loin eye area, loin eye depth and external fat in lambs. B.D. Banks*, M.E. Benson, J.D. Cowley, G.C. Good, M.T. Shane, and T.M. Villumsen, Michigan State University, East Lansing, MI/USA.

ASAS Swine Species

Board Number	Abstract Number	
184	1873	Lysine requirement of growing (35.1 to 60.5 kg) pigs, when formulated on ideal protein basis. I. Moreira*, M. Kutschenko, A.C. Furlan, A.E. Murakami, E.N. Martins, and C. Scapinello, Universidade Estadual de Maringa, Maringa-PR, BRAZIL.
185	1874	Substituition of corn to cofee hulls in a isoenergetic diets for growing and finishing pigs. E. T. Fialho*[UFLA], V. Oliveira[UFLA], J. A. F. Lima[UFLA], and R.T. Freitas[UFLA], [1]Universidade Federal de Lavras - UFLA/Brazil.
186	1875	Effect of deletion of vitamin and trace mineral premixes from diets on daily gain, feed:gain ratio, backfat thickness, red blood cell count in finishing pigs. S. C. Lee*[1], C. E. Lee[2], and K. I. Kim[1], [1]Cheju National University, Cheju, Rep. of Korea, [2]Cheju Agr. Exp. Station, RDA, Cheju, Rep. of Korea.
187	1876	Fatty acid polyunsaturation of boar semen: Positive effects on gilt reproduction . P.C Penny*[1], R.C Noble[1], and A. Maldjian[1], [1]JSR Healthbred Ltd, Southburn, Driffield, YO25 9ED, UK.
188	1877	Effect of docosahexaenoic acid (DHA) and cryopreservation on boar spermatozoa. A Maldjian[1], P.C Penny*[1], S Cerolini[2], and R.C Noble[1], [1]JSR Healthbred Ltd, Southburn, Driffield, YO25 9ED, UK, [2]Istituto Zootecnico, Via Celoria 10, 20133 Milano, Italy.
189	1878	Response of weaned pigs housed in large groups to alternative feeding strategies. P.C Penny*[1] and S Tibble[2], [1]JSR Healthbred Ltd, Southburn, Driffield, YO25 9ED, UK, [2]SCA Iberica S.A., Mequinenza, Spain.
190	1879	Increased progeny performance by elevating nutrient intake to sows during gestation. P.C Penny*[1], M.A Varley[2], and S Tibble[3], [1]JSR Healthbred Ltd, Southburn, Driffield, YO25 9ED, UK, [2]SCA Nutrition Ltd, Thirsk, UK, [3]SCA Iberica S.A., Mequinenza, Spain.
191	1880	Effect of storage and pelleting temperature on the activity of bacterial alkaline endoprotease (E.C. 3.4.21.14), Alpha D-(1,4) amylase (E.C. 3.2.1.1) and combination of both enzymes. I Pérez-Portabella[1], J Solá, and E Roura*, [1]Lucta, s.a.
192	1881	*Saccharomyces cerevisiae* for breeding sows in a Parvoviral challenge. V. G. Perez*[1], M. L. Angeles[2], A. M. Anaya[2], and J. A. Cuaron[2], [1]FES-C, UNAM, [2]C. N. I. Fisiologia y Mejoramiento Animal, INIFAP. Queretaro, Mexico.
193	1882	*Saccharomyces cerevisiae* for lactating sows in a septic environment. V. G. Perez*[1], S. Solorio[2], A. Juarez[3], J. Becerril[3], E. O. Castaneda-Silva[4], and J. A. Cuaron[5], [1]FES-C, UNAM, [2]PAIEPEME, A.C., [3]Grupo Delta, S.A., [4]Nutrimentos Concentra, S.A. de C.V., [5]C. N. I. Fisiologia y Mejoramiento Animal, INIFAP. Queretaro, Mexico.
194	1883	*Saccharomyces cerevisiae* for growing-finishing pigs in a septic environment. V. G. Perez[1], S. Solorio[2], A. M. M. Martinez[3], E. O. Castaneda-Silva[4], and J. A. Cuaron*[5], [1]FES-C, UNAM, [2]PAIEPEME, A.C., [3]CNID-Microbiologia, INIFAP, [4]Nutrimentos Concentra, S.A. de C.V., [5]C. N. I. Fisiologia y Mejoramiento Animal, INIFAP. Queretaro, Mexico.
195	1884	Molecular typing of hemolytic *Escherichia coli* isolated from swine. D. Parrott*[1], T. Rehberger[1], and M. Holt[2], [1]Agtech Products, Inc., Waukesha, WI, [2]Varied Industries Corporation, Mason City, IA.
196	1885	Effect of three dietary growth promoting additives on performance of nursery pigs. B. P. Corrigan*[1], B. F. Wolter[1], M. Ellis[1], and S. Moreland[2], [1]University of Illinois, Urbana, IL/USA, [2]Braes Feed Ingredients, Wheeling, IL/USA.
197	1886	Effect of iron supplementation and dietary iron source and level on bioavailability of iron in weanling pigs. B. K. Anderson*[1], N. R. Augspurger[1], M Ellis[1], and D. E. Nuzback[2], [1]University of Illinois at Urbana-Champaign, [2]Albion Laboratories, Inc.

198	1887	The response of starting pigs to increasing levels of dietary lysine, when formulated on ideal protein basis. I. Moreira*, A.L. Fraga, A.C. Furlan, A.O. Bastos, R.P. Oliveira, and D. Paiano, Universidade Estadual de Maringa, Maringa-PR BRAZIL.
199	1888	Effect of a GnRH-analogue at estrus on reproductive performance of gilts. J.A. Romo*[1], R. Barajas[1], and M.A. Luque[1], [1]FMVZ-Universidad Autonoma de Sinaloa (Mexico).
200		No poster presentation.

ASAS Horse Species

Board Number	Abstract Number	
201	1889	Temporal variables of the flat walk of the Tennessee Walking Horse weanling. K.M. Holt*[1] and M.C. Nicodemus[1], [1]Mississippi State University, Mississippi State, MS/USA.
202	1890	In vitro fermentation characteristics of vegetative and mature grasses by equine fecal inoculum. H. S. Hussein*, H. Han, J. P. Tanner, and A. A. Cirelli, University of Nevada - Reno.
203	1891	Environmental factors affecting racing time in Brazilian Thoroughbred horses in Cristal hippodrome. Rodrigo Taveira* and Marcilio Mota, [Unesp]Universidade Estadual Paulista.
204	1892	Environmental factors affecting the racing time of Quarter Horses in Brazil. Marcilio Mota and Rodrigo Taveira*, [Unesp]Universidade Estadual Paulista.

ASAS/ADSA Forages and Pastures: Grazing and Alternative Forages

Board Number	Abstract Number	
205	1893	Growth performance of stocker calves backgrounded on sod-seeded winter annuals or hay and grain. K. P. Coffey*[1], W. K. Coblentz[1], T. G. Montgomery[2], J. D. Shockey[2], K. J. Bryant[2], P. B. Francis[2], and C. F. Rosenkrans, Jr.[1], [1]University of Arkansas, Fayetteville, AR, USA, [2]Univ. of Ar. SE Research and Extension Center, Monticello, AR, USA.
206	1894	Steer grazing behavior on endophyte-free, toxic endophyte-infected, and non-toxic endophyte-infected (Max Q™) tall fescue. J. A. Bondurant*, M. A. McCann, J. S. McCann, J. H. Bouton, C. S. Hoveland, R. H. Watson, and J. G. Andrae, The University of Georgia, Athens, GA.
207	1895	Use of *Ascophyllum nodosum* for alleviation of fescue toxicosis in cattle. J.E. Williams*[1], A. Rodriquez[2], E. Navarro[1], and D.P. Colling[3], [1]University of Missouri, Columbia, MO, [2]University of Puerto Rico, Mayaguez, PR, [3]Land O'Lakes Farmland Feed, Kansas City, MO.
208	1896	The effects of grazing a brown midrib vs a conventional sorghum x sudan hybrid on animal performance and gain/ha. J. B. Banta*, F. T. McCollum, III, and L. W. Greene, Texas A & M University System, Amarillo.
209	1897	Use of temperature data loggers to measure body temperature in cows grazing toxic or non-toxic tall fescue. R.H. Watson*, M.A. McCann, J.A. Bondurant, J.G. Andrae, and L.L. Hawkins, The University of Georgia, Athens, GA.
210	1898	Effects on forage quality and animal performance of steers grazing smooth brome pastures interseeded with legumes. M. D. Ullerich*, B. E. Anderson, T. J. Klopfenstein, and M. A. Trammell, [1]University of Nebraska-Lincoln.
211	1899	Tall fescue based forage systems for developing beef replacement heifers. J.C. Waller*[1], F.N. Schrick[1], M.C. Dixon[3], A.E. Fisher[1], A.M. Saxton[1], and H.A. Fribourg[2], [1]Department of Animal Science, University of Tennessee, [2]Department of Plant and Soil Sciences, University of Tennessee, [3]Ames Plantation, Grand Junction, TN.
212	1900	Effect of grain supplementation on methane production of grazing steers. D. A. Boadi*[1], K. M. Wittenberg[1], and W. P. McCaughey[2], [1]University of Manitoba, Winnipeg, Manitoba Canada, [2]Agriculture and Agri-Food Canada, Brandon, Manitoba Canada.

213	1901	Effect of infusing protein postruminally and graded levels of ruminally available protein on the utilization of low-quality prairie hay by beef steers. T. A. Wickersham*, R. C. Cochran, E. C. Titgemeyer, C. G. Farmer, E. A. Klevesahl, and J. I. Arroquy, Kansas State University, Manhattan.
214	1902	Soybean genotypes for grain and stover in smallholder crop-livestock systems in West Africa. Asamoah Larbi*[1], Baffour Asafo-Adjei[2], Olayinka Yusuf[3], and Adekunle Isiaka[4], [1,3]International Livestock Research Institute (ILRI), West Africa, Ibadan, Nigeria, [2]International Institute of Tropical Agriculture (IITA), Ibadan, Nigeria, [4]Federal University of Agriculture, Abeokuta, Nigeria.
215	1903	Yield and fodder quality of dual-purpose groundnut genotypes fed to West African Dwarf sheep. I. Etela[1], A. Larbi*[2], P.E. Olorunju[3], D.D. Dung[4], and U.I. Oji[5], [1]Department of Animal Science, University of Benin, Benin City, Nigeria, [2]International Livestock Research Institute (ILRI), Ibadan, Nigeria, [3]Institute of Agricultural Research, Samaru, Nigeria, [4]National Animal Production Research Institute, Shika, Nigeria, [5]Department of Animal Science, University of Science and Technology, Port Harcourt, Nigeria.
216	1904	Grazing method effects on growth rate of St. Croix White hair sheep lambs on a tropical grass-shrub legume over-story. E. Valencia* and R.W. Godfrey, University of the Virgin Islands, Agricultural Experiment Station, St. Croix VI USA.

ASAS/ADSA Physiology: Reproductive Physiology

Board Number	Abstract Number	
217	1905	Use of ECP in a timed insemination program. S. M. Pancarci*[1], C. A. Risco[1], F. L. Lopes[1], F. Moreira[1], E. R. Jordan[2], and W. W. Thatcher[1], [1]University of Florida, Gainesville, FL, [2]Texas A&M University, College Station, TX.
218	1906	Determining the effect of gonadotropin releasing hormone to synchronize returns to estrus in dairy heifer. K.S. Rosenkrans*[1], D.K . Hardin[1], M.C. Lucy[1], J.W. Tyler[1], and R.L. Larson[1], [1]University of Missouri, Columbia, MO/USA.
219	1907	Efficacy of using Ovsynch to initiate artificial insemination at the onset of the breeding season in lactating dairy cows managed for seasonal calving in a grazing based dairy system. M.C Cordoba* and P.M Fricke, University of Wisconsin-Madison, Department of Dairy Science.
220	1908	Ovulation synchronization protocols affect early postpartum reproductive efficiency in cross-bred dairy cows. J.L.M. Vasconcelos*, R.L. Valarelli, R.L.A. Cerri, A.H. Souza, and M. Meneghetti, FMVZ-UNESP, Botucatu, SP/Brazil.
221	1909	Administration of hCG during estrus and its effect on corpus luteum size and progesterone production. J.A. Bartolome, S.M. Pancarci*, T. Dickerson, L.F. Archbald, and W.W. Thatcher, University of Florida, Gainesville, FL.
222	1910	Follicular dynamics in postpartum cows after treatment with either GnRH or Estradiol benzoate (EB) at the intiation of a 7 d controlled intravaginal progesterone-releasing device (CIDR). MK. V. Dahms*, C. R. Barthle, E. A. Hiers, G. E. Portillo, and J. V. Yelich, University of Florida, Gianesville.
223	1911	Resynchonization of ovulation and timed insemination in beef cattle. S Lares*[1], G Dominguez[1], N Formia[2], C Scena[3], O Rambeaud[4], and R.L. de la Sota[1], [1]Instituto de Teriogenologia, Fac. Cs. Veterinarias-UNLP, [2]Escuela M.C. y M. Inchausti-UNLP, [3]Intervet Argentina SA, [4]INTA-Brandsen.
224	1912	Luteolysis after PGF_{2a} on day 6 or 7 of the estrous cycle in Angus and Angus x Brahman heifers. G. E. Portillo*, E. A. Hiers, C. R. Barthle, MK. V. Dahms, W. W. Thatcher, and J.V. Yelich, University of Florida, Gainesville, Florida.
225	1913	Reproductive performance of beef heifers following administration of an oral progestogen or GnRH. H. E. Blackmon*[1], M. E. Hockett[1], T. M. Towns[1], N. R. Rohrbach[1], R. B. Simpson[1], A. M. Saxton[1], and F. N. Schrick[1], [1]Department of Animal Science, University of Tennessee, Knoxville.
226	1914	A comparison of three progestin-GnRH-prostaglandin F_{2a} (PG) based protocols for estrus synchronization of beef cows. J. E. Stegner*, J. F. Bader, F. N. Kojima, M. F. Smith, and D. J. Patterson, University of Missouri, Columbia, MO.
227	1915	Evaluation of a fixed-time AI protocol for postpartum beef cows. G. A. Perry*, J. F. Bader, M. F. Smith, and D. J. Patterson, University of Missouri, Columbia, MO.

228 1916 Stage of cycle effects on response to different GnRH + prostaglandin F_{2a} (PG)treatments in *Bos indicus* x *Bos taurus* cows. E. A. Hiers*, C. R. Barthle, J. K. Fullenwider, G. E. Portillo, MK. V. Dahms, J. M. Kramer, and J. V. Yelich, University of Florida.

229 1917 Effects of exogenous GnRH infusion and steroid replacement on gonadotropins in ovariectomized nutritionally anovulatory cows. J.A. Vizcarra*[1] and R.P. Wettemann[1], [1]Animal Science Department, Oklahoma Agricultural Experiment Station.

230 1918 Vaginal electrical conductance for determining the timing of ovulation is also effective for monitoring rates of uterine involution in the postpartum dairy cow. S.D. Bowers*[1], B.S. Gandy[1], J. Spencer[1], K.B. Graves[1], A.B. Moore[1], and S.T. Willard[1], [1]Department of Animal and Dairy Sciences, Mississippi State University, Mississippi State, MS.

231 1919 Pregnancy rates of lactating beef cows losing body weight during the breeding season. T. M. Towns*[1], M. D. Davis[1], M. E. Hockett[1], N. R. Rohrbach[1], and F. N. Schrick[1], [1]Department of Animal Science, University of Tennessee, Knoxville.

232 1920 Use of doppler ultrasonography to estimate fetal age and monitor fetal heart rate and uterine artery pulse rate in dairy cattle. S. Willard[1], A. Webb*[1], S. Bowers[1], and B. Gandy[1], [1]Department of Animal and Dairy Sciences, Mississippi State University, Mississippi State, MS 39762.

233 1921 Factors affecting temporal relationships between estrus, ovulation and insemination in a commercial sow herd. B. A. Belstra*, W. L. Flowers, K. J. Rozeboom, and M. T. See, North Carolina State University, Raleigh, NC.

234 1922 Hormonal changes after manual rupture of follicular cysts. Ahmet Gumen* and Milo C. Wiltbank, Department of Dairy Science, University of Wisconsin-Madison.

235 1923 Pregnancy rates in lactating dairy cows following timed embryo transfer under heat stress conditions. Y.M. Al-Katanani*[1], M. Drost[1], R.L. Monson[2], J.J. Rutledge[2], C.E. Krininger III[1], J. Block[1], and P.J. Hansen, [1]University of Florida, Gainesville, FL/USA, [2]University of Wisconsin, Madison, WI/USA.

236 1924 Factors affecting the time intervals between estrus, LH surge and ovulation in high-yield dairy cows. A. Bloch*[1], D. Wolfenson[1], M. Kaim[2], Z. Roth[1], R. Braw-Tal[2], and Y. Folman[2], [1]Faculty of Agriculture, Hebrew University, Rehovot, Israel, [2]Agricultural Research Organization, Bet-Dagan, Israel.

237 1925 Hormonal induction of enhanced removal of impaired follicles improved oocyte quality in the autumn in previously heat-stressed cows. Z. Roth*[1], A. Arav[2], A. Bor[2], R. Braw-Tal[2], and D. Wolfenson[1], [1]Faculty of Agriculture, Hebrew University, Rehovot, Israel, [2]Agricultural Research Organization, Bet Dagan, Israel.

238 1926 Follicular dynamics and concentrations of steroids and gonadotropins in lactating cows and nulliparous heifers. G. Inbar[1], D. Wolfenson*[1], Z. Roth[1], M. Kaim[2], A. Bloch[1], and R. Braw-Tal[2], [1]Faculty of Agriculture, Hebrew University, Rehovot, Israel, [2]Agricultural Research Organization, Bet Dagan, Israel.

239 1927 Effects of fertilizing bovine oocytes with sperm aged post-thaw. J.A. Miller*, F.N. Schrick, A.M. Saxton, and J.L. Edwards, The University of Tennessee, Knoxville, TN, USA.

240 1928 Evaluation of the fertility potential of extended cooled equine spermatozoa using the resazurin reduction test and $NADH_2$. W. T. Campbell*, S. A. Ericsson, J. S. Pendergraft, K. K. Korth, and J. A. Pitchford, Sul Ross State University, Alpine, Texas.

241 1929 Motility of frozen-thawed bovine sperm after aging for extended time periods. M.N. Malone*, J.A. Miller, A.M. Saxton, and J.L. Edwards, The University of Tennessee, Knoxville, TN, USA.

242 1930 Effects of growth hormone (GH) and IGF-I on development of in vitro derived bovine embryos. F. Moreira, F. F. Paula-Lopes, P. J. Hansen, L. Badinga, and W. W. Thatcher, University of Florida.

243 1931 Nuclear progression of bovine oocytes maintained at germinal vesicle stage up to 66 hours using roscovitine. A.M. Clarke*, L.M. McCann, and J.L. Edwards, The University of Tennessee, Knoxville, TN, USA.

244 1932 Postweaning growth and puberty of Angus and Romosinuano bulls in Florida. C. C. Chase, Jr.*[1], R. E. Larsen[2], P. C. Sheerin[2], M. J. Williams[1], A. C. Hammond[3], T. A. Olson[2], and S. W. Coleman[1], [1]USDA, ARS, Brooksville, FL, [2]University of Florida, Gainesville, [3]USDA, ARS, Athens, GA.

245 1933 Concentrations of LH and testosterone in serum of sexually mature boars treated with naloxone. M.J. Estienne*[1], A.F. Harper[1], J.W. Knight[1], G.B. Rampacek[2], and C.R. Barb[3], [1]Virginia Polytechnic Institute and State University, Blacksburg, [2]University of Georgia, Athens, [3]USDA-ARS, Athens, GA.

246	1934	Early postnatal concentrations of plasma testicular steroid hormones as indicators of boar taint in market weight pigs. P.A. Sinclair*, E.J. Squires, and J.I. Raeside, University of Guelph, Guelph, Ontario, Canada.
247	1935	Vitamin supplements and reproductive performance in boars. I. Audet*[1], J. -P. Laforest[2], G. -P. Martineau[3], and J. J. Matte[1], [1]Agriculture and Agri-Food Canada, Lennoxville, QC, Canada, [2]Laval University, QC, Canada, [3]École Vétérinaire de Toulouse, France.

PSA Physiology: Reproduction and Endocrinology

Board Number	Abstract Number	
248	1936	Laying hen response to molt induction by either pelleted alfalfa or alfalfa meal. K Medvedev*[1], C Woodward[1], X Li[1], L Berghman[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.
249	1937	Interleukin-1ß (IL-1ß) reduces the activity of 3ß-hydroxysteroid dehydrogenase (3ß-HSD) in granulosa cells of laying hens. M. A. Alodan*[1] and M. M. Beck[1], [1]University of Nebraska.
250	1938	Expression of the activin type II receptors and the inhibin/activin subunits during follicular development in broiler breeder hens. A. J. Davis* and S. N. Slappey, University of Georgia.
251	1939	Immunization of male broiler breeders against mammalian Gonadotropin Releasing Hormone . J.A. Vizcarra*[1], M.L. Rhoads[1], C.C. Hsu[1], J. Washington[1], J.L.M. Morgan[1], J. Yang[1], H. Tang[1], K. Shaffer[1], and J.D. Kirby[1], [1]Department of Poultry Science, University of Arkansas, Fayetteville, AR 72701.
252	1940	Thyroid hormone and prolactin profiles in male and female turkeys following photostimulation: Validation of an ELISA for turkey prolactin. J. A. Proudman*[1], T. D. Siopes[2], F. Vandesande[3], and L. R. Berghman[4], [1]Germplasm & Gamete Physiology Lab, ARS, USDA, Beltsville, MD 20705, [2]Department of Poultry Science, North Carolina State University, Raleigh, NC 27695, [3]Lab of Neuroendocrinology and Immunological Biotechnology, Catholic University of Leuven, Belgium, [4]Poultry Science Department, Texas A&M University, College Station, TX 77843.
253	1941	Dietary manipulation of rooster sperm. Denise C. Bongalhardo*[1] and Mary M. Buhr[1], [1]University of Guelph.
254	1942	Sperm mobility phenotype influences duration of fertility in turkeys after insemination at 0 or 24 hour *in vitro* storage of sperm. A. M. Donoghue[1], D. P. Froman[2], Y. K. Kirby*[1], D. J. Donoghue[3], and J. D. Kirby[3], [1]PPPSR, ARS, USDA, Fayetteville, AR, [2]Oregon State University, Corvallis, OR, [3]University of Arkansas, Fayetteville, AR.
255	1943	Demonstration of ovoinhibitor, a serine-protease inhibiting protein, in the chicken brain. L.R. Berghman*[1], E. D'Hondt[2], R.W. Moore[3], B.M. Hargis[4], C.M. Oubre[1], and F. Vandesande[2], [1]Texas A&M University, College Station TX, [2]University of Leuven, Belgium, [3]USDA-ARS, College Station TX, [4]University of Arkansas, Fayetteville AR.
256	1944	Vasotocin receptor mRNA expression in the brain and pituitary of broiler breeder hens. K. Shaffer*[1], J.A. Vizcarra[1], C.C. Hsu[1], J.Y. Yang[1], M.L. Rhoads[1], L.E. Cornett[2], D. Baeyens[3], N. Ali[3], and J.D. Kirby[1], [1]Department of Poultry Science, University of Arkansas, Fayetteville, AR, [2]Department of Physiology, University of Arkansas for Medical Sciences, [3]Department of Biology, University of Arkansas Little Rock, Little Rock, AR.

ASAS Nonruminant Nutrition: Feed Ingredients and Enzymes

Board Number	Abstract Number	
257	1945	Effect of lactic acid and lactosucrose supplementation in diets for nursery pigs. Acie Murry*[1], Susan Sanchez[1], and Parshall Bush[1], [1]The University of Georgia, Athens.

258 1946 The potential for egg by-products to replace spray-dried porcine plasma in early-weaned piglet diets. L.D. Schmidt*, C.M. Nyachoti, D. Boros, and B.A. Slominski, University of Manitoba Winnipeg, MB, Canada.

259 1947 Comparison of edible grade whey, granular whey, and Dairylac 80O as lactose sources for nursery pig diets. J.M. DeRouchey*, M.D. Tokach, J.L. Nelssen, R.D. Goodband, S.S. Dritz, J.C. Woodworth, and B.W. James, Kansas State Univesity, Manhattan, KS.

260 1948 Productive performance and carcass characteristics of growing and finishing pigs fed different level of oat groats with and without enzymatic compound. F. Salvador, C. Rodriguez*, F. Nunez, J. Jimenez, O. Ruiz, and A. Alarcon, Universidad Autonoma de Chihuahua, Chihuahua, Chih. Mexico.

261 1949 The effects of pretreating soybean meal with fiber-degrading enzymes on ileal and total tract digestibility by growing pigs. K. L. Saddoris*, M. R. Smiricky, D. M. Albin, V. M. Gabert, and M. R. Murphy, University of Illinois, Urbana.

262 1950 Evaluation of a carbohydrase combination on performance in growing-finishing pigs. M. D. Lindemann[1], G. A. Apgar[2], T. Guthrie*[2], G. L. Cromwell[1], H. J. Monegue[1], K. E. Griswold[2], and N. Inocencio[1], [1]University of Kentucky, Lexington, [2]Southern Illinois University, Carbondale.

263 1951 Amino acids ileal digestibility of hulless barley, barley and sorghum grains in growing pigs . G. Mariscal-Landin*[1] and J. E. Rodriguez[2], [1]C. N. I. Fisiologia y Mejoramiento Animal, INIFAP., [2]Nutrientes Basicos de Monterrey, S.A. de C.V. NL, Mexico.

264 1952 Effects of Fibrozyme® supplementation on ileal and total tract digestion of nitrogen and energy by finishing pigs fed diets containing a fibrous soy co-product. M. R. Smiricky*[1], D. M. Albin[1], V. M. Gabert[1], H. Yang[2], and R. Dvorak[3], [1]University of Illinois, Urbana, IL, [2]ADM Feed Products Group, Quincy, IL, [3]Alltech, Inc., Nicholasville, KY.

265 1953 Effects of dietary supplementation of crude inulin extract on the emission of volatile sulfides from manure slurry of growing-finishing pigs fed corn and soybean meal-based diets. T.C. Rideout[1], M.Z. Fan[1], Y. Gao[1], C. Wagner-Riddle[1], J.P. Cant[1], P. Stonehouse[1], G. Sheffrin[2], R. Cook[2], B. Raines[2], and R.R. Hacker[1], [1]University of Guelph, [2]Qtf Foods, Inc.

266 1954 Efficacy of mannan oligosaccharide (Bio-Mos®) addition with two levels of copper sulfate in the diets of growing-finishing pigs. M. E. Davis*[1], C. V. Maxwell[1], B. Z. de Rodas[2], D. C. Brown[1], Z. B. Johnson[1], and R. A. Dvorak[3], [1]University of Arkansas, Fayetteville, [2]Land O'Lakes Inc., Fort Dodge, IA, [3]Alltech, Nicholasville, KY.

267 1955 Dietary fiber level and xylanase affects nutrient digestibility and waste production in grower pigs . A.J. Moeser* and T.A.T.G. van Kempen, North Carolina State University.

268 1956 Wheat specific weight or added enzyme did not affect weaner performance. H.M. Miller[1], P. Toplis*[2], and P. Blanchard[3], [1]University of Leeds, School of Biology, Leeds, LS2 9JT, [2]Primary Diets Ltd., Melmerby, HG4 5HP, UK, [3]Frank Wright Ltd., Ashbourne, DE6 1HA, UK.

269 1957 Efficacy of Allzyme Vegpro in swine diets. L. J. Johnston*[1], H. G. Jung[2], J. A. Wilson[1], and J. E. Pettigrew[3], [1]University of Minnesota, Morris, [2]USDA-ARS, St. Paul, [3]Pettigrew Consulting International, Lousiana, MO.

270 1958 Beneficial effect of using a blend of flavoring substances in promoting appetite and growth performance in weaned piglets. A. Piva*[1], M. Morlacchini[2], F. Galvano[3], and A. Prandini[4], [1]University of Bologna, Ozzano Emilia, Italy, [2]CERZOO, Piacenza, Italy, [3]University of Reggio Calabria, Reggio Calabria, Italy, [4]Universita' Cattolica del S.Cuore, Piacenza, Italy.

271 1959 Effect of plant extracts on the performance and lower gut microflora of early weaned piglets. E.G. Manzanilla[1], F. Baucells[1], C. Kamel[2], J. Morales*[1], J.F. Perez[1], and J. Gasa[1], [1]Universidad Autonoma de Barcelona, [2]AXISS France, S.A.S. Archamps, France.

272 1960 Limiting amino acids in wheat for growing pigs. M. Cervantes*[1], A. Pichardo[2], M. Cuca[2], M. Cervantes[1], A.B. Araiza[1], and N. Torrentera[1], [1]Universidad Autónoma de Baja California, Mexicali, México, [2]Colegio de Postgraduados, Montecillos, México.

273 1961 Comparative nutritional value of wheat, grain sorghum and corn in diets for finishing pigs. A.B. Araiza, M. Cervantes*, S. Espinoza, N. Torrentera, and M. Cervantes, Universidad Autónoma de Baja California, Mexicali, México.

274 1962 Time response effects of cornstarch and raw potatoe starch on the whole-tract digestibility and digestive tract adaptation in growing (20-60 kg) pigs. D. Martinez-Puig[1], J. Morales*[1], J.F. Perez[1], S.M. Martin-Orue[1], and M.D. Baucells[1], [1]Universidad Autonoma de Barcelona.

275	1963	Performance and caecal microbial activity of growing rabbits fed different starch levels. A. M. V. Arruda*[1], R. D. Carregal[2], R. G. Ferreira[2], and E. S. Pereira[1], [1]Universidade Estadual Oeste Parana, [2]Universidade Estadual de Sao Paulo, Brazil.
276	1964	Apparent digestibility of diets with differents starch levels to growing rabbits . A. M. V. Arruda*[1], R. D. Carregal[2], R. G. Ferreira[2], and E. S. Pereira[1], [1]Universidade Estadual Oeste Parana, [2]Universidade Estadual de Sao Paulo, Brazil.
277	1965	Studying the effect of protein sources on meat quality of pigs using discriminant analyses. Cs. Szabo[1], A.J.M. Jansman[2], L. Babinszky*[1], E. Kanis[3], and M.W.A. Verstegen[3], [1]University of Kaposvár, Department of Animal Nutrition, Kaposvar, Hungary, [2]ID-TNO Animal Nutrition, Lelystad, The Netherlands, [3]Wageningen Institute of Animal Sciences (WIAS), Wageningen, The Netherlands.
278	1966	Feeding value in broiler chicken diets of a potato expressing a ß-glucanase from *Fibrobacter succinogenes*. J. Baah*[1], T. A. McAllister[1], T. A. Scott[2], L. M. Kawchuk[1], J. D. Armstrong[3], L. B. Selinger[4], and K.-J. Cheng[5], [1]Agriculture and Agri-Food Canada Research Centre, Lethbridge, AB, [2]Pacific Agri-Food Research Centre, Agassiz, BC, [3]Pacific Agri-Food Research Centre, Summerland, BC, [4]University of Lethbridge, Lethbridge, AB, [5]Academia Sinica, Taipei, Taiwan.
279	1967	Effect of protein fluctuations and space allocation on performance of growing-finishing pigs. M. S. Edmonds*[1] and D. H. Baker[2], [1]Kent Feeds, Inc., Muscatine, IA, [2]University of Illinois, Urbana, IL.

PSA Nutrition: Phytase and General Nutrition

Board Number	Abstract Number	
280	1968	Pelleting stability of Ronozyme™ P CT phytase in commercial feedmills. N.E. Ward* and J.W. Wilson, Roche Vitamins Inc.
281	1969	Comparison of Ronozyme P™ CT, Ronozyme P™ Liquid and Natuphos® Liquid in a commercial broiler pelleted feed. N.E. Ward*[1], J.W. Wilson[1], and J. McNaughton[2], [1]Roche Vitamins Inc., Parsippany NJ, [2]Solutions BioSciences Inc., Salisbury MD.
282	1970	Comparison of a solid-state fermentation produced phytase with a traditional liquid-fermented phytase in broiler chicks. J Pierce*[1], J Driver[2], and J Harter-Dennis[3], [1]Alltech, Nicholasville, KY, [2]University of Pretoria, South Africa, [3]University of Maryland Eastern Shore, Princess Anne.
283	1971	Efficacy of Allzyme Phytase® produced by solid-state fermentation in improving the phosphorus availability of wheat-soybean meal diets for broilers. Y.B. Wu[1], V Ravindran[1], D.T. Thomas[1], B.J. Camden[1], P.C.H. Morel[1], W.H. Hendriks[1], and J. Pierce*[2], [1]Massey University, Palmerston North, New Zealand, [2]Alltech, Nicholasville, KY.
284	1972	Effect of phytase on reduced available phosphorous levels in broiler diets. S. Parhizcar*, A. Kamyab, M. Shivazad, and R. Ashtiani, University of Tehran, Animal Science Dept.
285	1973	Effects of microbial phytase on apparent ileal digestibility of amino acids in broiler chicks fed a corn-soybean meal diet formulated on an ideal protein basis. D. R. Ledoux*, J. N. Broomhead, and J. D. Firman, University of Missouri Columbia, MO USA.
286	1974	The effect of a non-GMO phytase on the performance of broilers fed diets containing different concentrations of phosphorus . Ruedi Hadorn[1], Hans Wiedmer[1], Samuel Nydegger[2], and Peter Spring*[2], [1]Swiss Poultry Husbandry School, Zollikofen, Switzerland, [2]Swiss College for Agriculture, Zollikofen, Switzerland.
287	1975	Evaluation of a high coefficient of variation (CV) of phytase consumption on the performance of broilers from 21-42 days of age. J. M. Harter-Dennis*[1], J. Timmons[1], and A. E. Sefton[2], [1]University of Maryland Eastern Shore, Princess Anne, MD, [2]Alltech, Inc., Guelph, Canada.
288	1976	Influence of Allzyme (Phytase) supplementation on Bovans hens. H. Anwar Ahmad*[1], S. S. Yadalam[2], and David A Roland, Sr.[2], [1]Tuskegee University, [2]Auburn University.

289 1977 Effects of dietary supplemental microbial phytase and nonphytate phosphorus on performance, nutrient digestibility and egg quality of laying hens. S. H. Kim*[1], W. J. Lee[2], S. J. Lee[1], D. J. Yu[1], S. Y. Park[3], B.S. Kang[1], J. C. Na[1], and K. S. Ryu[3], [1]National Livestock Research Institute of Rural Development Administration, Daejeon, [2]Daesung Microbiology Co., LTD, [3]Department of Animal Resources and Biotechnology, Chonbuk National University.

290 1978 The response of laying hens to phytase added to corn-soybean meal-based diets containing two levels of available phosphorus. 2. Phytate phosphorus utilization. M.A Kamberi[1], H.M. Edwards[2], G.M. Pesti*[2], S. Muratovic[3], S. Muji[1], and R.I. Bakalli[2], [1]University of Prishtina, Prishtina, Kosova, [2]The University of Georgia, Athens, GA 30602-2772, [3]University of Sarajevo, Sarajevo, Bosnia and Herzegovina.

291 1979 Effects of Roche Ronozyme CT on Hy-Line W-98 laying hen performance when fed low phosphorus diets. S. E. Scheideler*[1], N. Ward[2], and M. Jalal[1], [1]University of Nebraska, [2]Roche Vitamins.

292 1980 The evaluation of Ronozyme™ P CT in layer diets. R.D. Miles[1], N.E. Ward*[2], J.W. Wilson[2], and D. Ledoux[3], [1]University of Florida, Gainesville FL, [2]Roche Vitamins Inc., Parsippany NJ, [3]University of Missouri, Columbia MO.

293 1981 Effects of 25-Hydroxyvitamin D_3, vitamin D_3, low phytic acid corn, and phytase on phosphorus utilization by turkey poults fed dietary treatments from hatch to six weeks of age. G. M. Owens and D. R. Ledoux*, University of Missouri Columbia, MO USA.

294 1982 Effect of dietary tea polyphenols or daidzein and copper on cholesterol oxide formation in egg yolk powders. Guang-Hai Qi*, Jing-Dong Yin, Qi-Yu Diao, Jun-Jie Zheng, and Qi-Guang Huo, Feed Research Institute, Chinese Academy of Agricultural Sciences, Beijing, China.

295 1983 Influence of atorvastatin on select indices of lipid metabolism in normolipidemic and hereditary hyperlipidemic chickens. R. G. Elkin*[1], Y. Zhong[2], S. S. Donkin[2], C. R. Thomas[2], E. Hengstschlager-Ottnad[3], and W. J. Schneider[3], [1]The Pennsylvania State University, University Park, PA, [2]Purdue University, West Lafayette, IN, [3]Biocenter and University of Vienna, Vienna, Austria.

296 1984 Modification of the lipid profile of eggs yolks by feeding laying hens different sources of fatty acids. Douglas Faria*[1], Monica Mazalli[1], Daniely Salvador[1], Samir Correa[1], and Diogo Ito[1], Faculdade de Zootecnia e Engenharia de Alimentos, Pirassununga, SP, Brasil.

297 1985 Relationship between objective and subjective measurement of egg yolk colour. X. Rincon-Carruyo[1], R. Sala[1], B. Vila[2], J. Galobart*[1], and J. Gasa[1], [1]Universidad Autonoma de Barcelona, [2]Industrial Tecnica Pecuaria S.A. (ITPSA), R&D Dep., Barcelona Spain.

298 1986 Comparison of inert markers in poultry digestibility studies. P. R. Ferket*, A. D. Israel, and E. B. Morris, NC State University, Raleigh, NC USA.

299 1987 Additivity of amino acid and energy digestibility in barley and canola meal for ducks. D Hong*[1], D Ragland[2], and O Adeola[1], [1]Department of Animal Sciences, [2]Department of Veterinary Clinical Sciences, Purdue University.

300 1988 Utilization of various starch sources as affected by age in the chick. A.B. Batal* and C.M. Parsons, University of Illinois, Urbana, IL USA.

301 1989 Dietary protein and thyroid interactions broiler chickens. R. W. Rosebrough, ARS, Beltsville, MD, USA.

302 1990 Dietary protein level and stage of development affect expression of the intestinal peptide transporter (cPepT1) in chickens. H. Chen*, Y-X. Pan, E. A. Wong, and K. E. Webb, Jr. , Virginia Tech, Blacksburg, VA, USA.

303 1991 The effect of early nutrition and refeeding on satellite cell mitotic activity. P. E. Mozdziak*[1], T. J. Walsh[2], and D. W. McCoy[1], [1]North Carolina State University, [2]Novus International, Inc.

304 1992 Incorporation of n-6 and n-3 fatty acids into selected meat portions from male and female broilers fed sardine oil. Rosa Ma. Castillo Domínguez[1], Silvia Carrillo Domínguez*[1], Ernesto Avila Gonzalez[2], Benjamin Fuente Martínez[2], and Fernando Pérez-Gil Romo[1], [1]Instituto Nacional de Ciencias Medicas y Nutricion Salvador Zubiran, [2]Fac de Medicina Veterinaria y Zootecnia. Universidad Nacional Autonoma de Mexico.

305 1993 Changes of magnesium and calcium contents and adenosine triphosphatase activity of shell gland mucosa during eggshell formation in Brown Tsaiya ducks and White Leghorn hens. W. L. Chen and T. F. Shen*, National Taiwan University, Taipei, Taiwan.

ADSA Student Affiliate Division

Dairy Foods Undergraduate Paper Presentations

Wednesday, July 25, 2001

Chair: S. C. Kelm, University of Wisconsin–River Falls

Room: 123-124

Time	Abstract Number	
11:00 AM	1994	Drinking reduced-fat milk may reduce heart disease risk. C.M. Opsahl[1], [1]University of Minnesota-St. Paul.
11:15 AM	1995	Improving calcium availability with dairy foods and inulin. R. L. Blades[1], [1]Louisiana State University.
11:30 AM	1996	Conjugated linoleic acid: Cancer prevention from dairy products. B. E. Dixon*, University of Kentucky, Lexington, KY.
11:45 AM	1997	Biotechnology as a means of modifying milk composition. A.E. Iager*[1], [1]Virginia Polytechnic Institute.

Dairy Production Undergraduate Paper Presentations

Wednesday, July 25, 2001

Chair: S. C. Kelm, University of Wisconsin–River Falls

Room: 123-124

Time	Abstract Number	
1:00 PM	1998	The importance of biosecurity measures in dairy herds. D.D. Leuty*[1], Washington State Univerity, Pullman, WA.
1:15 PM	1999	Increasing cow milkability. Jana Edwards*[1], [1]Virginia Tech.
1:30 PM	2000	The effects of heat stress on conception rates and early embryonic development. I. A. Norris*[1], [1]Louisiana State University.
1:45 PM	2001	Agroterrorism: Is it a possibility? J.L. Flinchbaugh*[1], [1]Pennsylvania State University.
2:00 PM	2002	The advantages and disadvantages of accelerated heifer growth. M.H. London*, University of Kentucky Dairy Club.

Original Research/Independent Study Undergraduate Paper Presentations

Wednesday, July 25, 2001

Chair: S. C. Kelm, University of Wisconsin–River Falls

Room: 123-124

Time	Abstract Number	
2:45 PM	2003	Genetic relationships among electrical conductivity of milk, somatic cell scores and mastitis. R.C. Goodling*[1], G.W. Rogers[1], J.B. Cooper[1], and B. Rune[2], [1]Pennsylvania State University, [2]SAE Afikim, Kibbutz Afikim, Israel.

3:00 PM 2004 Effects of propylene glycol or fat drench on plasma metabolites and liver composition of transition dairy cows. M. M. Pickett*, M. S. Piepenbrink, and T. R. Overton, Cornell University, Ithaca, NY.

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AMERICAN SOCIETY OF ANIMAL SCIENCE (ASAS)

Alpharma Beef Cattle

Beef Species

Companion Animals

Goat Species

Horse Species

Meat Science and Muscle Biology

Mixed Models

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Sheep Species

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Triennial Growth

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Animal Health

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Breeding and Genetics

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Oral Sessions:

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Production, Management, and Environment

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Ruminant Nutrition

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FASS Committee on Environment, Waste Management, and Ecosystems

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Extension and Instruction

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