Highlights and Special Requests for Abstracts from the Program Committee
2009 Joint Meeting of ADSA®, CSAS and ASAS
Montreal, Quebec, Canada
July 12-16, 2009

The following program highlights are in the final stages of planning. As you will see in reading through the summary, many outstanding symposia, workshops, and invited talks are planned.

NOTE: Due to an increase in no shows for posters and oral sessions, the Program Committee will begin monitoring the presenters that fail to appear for their presentation.

Posters -- We will again provide a 2-hour daily time block for the posters. The time block for the posters will be 7:30 am to 9:30 am; this time block ensures that it will not conflict with symposia or oral sessions. The posters will be required to be up by 7:30 am and remain posted until 5:30 pm the day of presentation.

Call for Abstracts

To build an outstanding program, your participation through abstract submission is essential. The foundation of our annual meeting is the science that each one of us brings with the oral and poster abstracts submitted. There are a few special topics for which Program Committees are requesting abstracts from the membership to enhance symposia or oral sessions. These special calls for abstracts are denoted in ***bold italic lettering***. For additional information on the 2009 Joint ADSA CSAS ASAS meeting, please check the web site http://adsa.asas.org/meetings/2009/.

Program Areas

ADSA SOUTHERN BRANCH AND THE NORTHEAST BRANCH/SECTION OF ADSA AND ASAS -- Business meetings and normal annual meeting activities of these Branches/Sections will be incorporated into the meeting in Montreal.

GRADUATE STUDENT PAPER CONTESTS
ADSA Dairy Foods and Production Divisions (National), Northeast ADSA/ASAS Branch/Section, Southern ADSA Branch, ADSA Production Division Graduate Poster and CSAS Graduate (Oral & Poster)-- Both the Dairy Foods and Production Division of ADSA strongly encourage graduate students to submit abstracts for the national competitions. Not only do the winners receive outstanding recognition and have something to add to their resume, there is money to be made, too. Check the web site (http://adsa.asas.org/meetings/2009/) for graduate student competition rules and information. New this year, the ADSA Production Division Competitions (Oral & Poster) will each have an MS and PhD competition.

ADSA Production Division Symposium

Driving Forces in the Dairy Industry That Will Change Dairy Farm Management

Over the last few years there has been a rapid development of new technologies that are applicable to management of dairy cows. Additionally, there has been an emergence of market influences by milk processors, retailers, consumers and activists, who seek to define farm management practices. Dairy farms will need to be agile in adapting to these forces and make the best economic decisions.

ADSA Southern Section Symposium

Dairy Heifer Health Challenges in the Southeastern U.S.

Replacements represent a large cost of milk production. Calf and heifer morbidity and mortality can increase these replacement costs if heifers are not managed well. The purpose of this symposium is to address several key aspects of health management associated with calves and heifers, particularly in the Southeastern United States, such as colostrum management, vaccination programs, heat stress, and crossbreeding.

ALPHARMA Beef Cattle Nutrition Symposium

Alternative Energy Sources in High Energy Diets for Beef Cattle: Challenges, Benefits, and Management Options

Much of the dietary energy in feedlot diets for beef cattle has and continues to originate from the inclusion of corn. However, volatility and increases in cost per unit of energy is impacting the formulation of high-energy feedlot diets for finishing cattle. Changes in the price structure of traditional high-energy feedlot diets for beef cattle have compelled the industry to identify and utilize a greater array of alternative energy sources. Incorporation of alternative energy sources presents both opportunities and challenges to ration formulation, practical feed delivery and utilization, cattle performance, digestive physiology, and carcass characteristics. The 2009 Alpharma Beef Cattle Nutrition Symposium will address the increased incorporation and utilization of novel and traditional co-products in high-energy feedlot diets.

Animal Behavior and Well-Being

The Behavior*Nutrition Interaction

This committee will offer three invited speakers to lead off sessions on the behavior*nutrition interaction. These talks will complement the CSAS Symposium on ruminants as the talks will focus on other species.

Animal Health

Animal Well Being: Tackling The Issue Of Cow Longevity

The three primary reasons dairy cows leave the herd are mastitis, lameness, and fertility. The goal of this symposium is to provide the dairy community and its researchers with a look into current and future research aimed towards improving each of these aspects.

Emerging Foreign Animal and Zoonotic Diseases

Zoonotic diseases (ZD) are the most common and threatening diseases to human health. Many ZD are foreign to the US but high consequence diseases to human health

and livestock production. The risks of devastating biological agents whether intentionally or accidentally introduced to America's livestock have increased significantly.

ARPAS SYMPOSIUM

FEED MANAGEMENT: ARPAS, NRCS, AND THE NATIONAL PROJECT

The objectives of this Symposium are to: 1)share perspectives of ARPAS, NRCS, Academia and Consultants regarding the Feed Management Program and the corresponding ARPAS Certification,2) highlight outreach, translation research, and consulting success stories related to the Feed Management Program, and 3) create an opportunity for dialog to occur between NRCS and members of joint societies interested in the Feed Management Program.

ASAS CELL BIOLOGY

REDOX REGULATION OF CELL FUNCTION

This symposium will focus on cutting-edge research involving REDOX regulation of cell function.

ASAS GRADUATE STUDENT SYMPOSIUM

DECISIONS, DECISIONS, DECISIONS. MAKING INFORMED DECISIONS ON YOUR FUTURE FROM CAREER OPPORTUNITES TO DEVELOPING A SUCCESSFUL RESEARCH PROGRAM.

The symposium is designed to give tips and advice to graduate students to help them make more informed decisions on their future. The selection of topics and speakers is intended to have broad and diverse spectrum of animal science opportunities with an advanced degrees.

BEEF SPECIES

POPULATION DATA ANALYSES TO EVALUATE TRENDS IN ANIMAL PRODUCTION SYSTEMS

Population data analysis is a common application of statistical processes in non-animal science fields for determination of consumer trends, health status, response to immigration and emigration patterns, and economic growth of countries. The need for animal scientists and biologists to understand tools of population data analyses for data gathering, analyses and interpretation is increasing, as budgets shrink, and other restraints increase to conduct animal experiments at university centers. Additionally, there are definitive applications for which traditional animal experiments may not be sensitive enough, particularly low-frequency of occurrence such as morbidity and mortality events, and some carcass traits (e.g., incidence of dark cutters). The proposed symposium has two objectives:

1. To familiarize society members of techniques and procedures to gather, analyze and interpret population data
2. To demonstrate several applications of population data analyses which may be useful in various animal science disciplines

BIOETHICS

A SCIENTIST'S GUIDE TO APPROACHING BIOETHICS

This symposium will provide an overview of the ethical issues surrounding agriculture and associated products as well as conceptual frameworks and resources that

scientists can use to work through bioethical issues. The symposium aims to provide attendees with practical, useful tools that make sense to trained scientists for use in recognizing and analyzing philosophical and ethical issues that are associated with all aspects of agriculture and associated products.

Working through Bioethical Issues in Practice

This symposium will provide hands-on opportunities for animal and food-product scientists to work through ethical case studies and exercises surrounding agricultural production and products. This symposium will provide an opportunity for attendees to practice using the tools they have been presented with in the prior Bioethics Symposium "A Scientist's Guide to Approaching Bioethics". At the end of the symposium, discussion on the process of working through bioethical issues and presentation of conclusions reached by the working groups will be presented to allow for synthesis.

Breeding and Genetics

Whole Genome Selection - The New Frontier?

The 50K SNP chip is radically changing the way that animal genomics is conducted. Currently, the cattle chip is available and soon the sheep and pig chips will be available as well. By the time of the ADSA/ASAS meeting in Montreal, there will be new information derived from whole genome association studies and experience in application of this new selection technique. Bringing together individuals from each species to share information and experiences will be of benefit to the attendees of the ADSA/ASAS meeting to show them how to implement and utilize this new technology in their research programs.

Companion Animals

Dietary Supplements in Companion & Exotic Animal Nutrition - Use, Regulations & Safety

As dietary supplementation is a topic of concern for both the pet/animal owner, food manufacturer, and feed regulator, this symposium will address topics such as: If and when to use dietary supplements; Animal Food Regulations for Dietary Supplement Use; National Supplement Council – Who are they and how can they help?; Safety of Dietary Supplementation for Companion & Exotic Animals; If and When to Supplement Zoo Animals; and information regarding the newly released NRC publication on dietary supplementation.

Contemporary and Emerging Issues

Science-Based Approaches to Address Consumer Concerns with the Processing and Marketing of Animal Products

The dairy and meat industry is continually reacting to consumer misconceptions and misinformation about dairy and animal practices and products. As scientists and educators we are looking to clarify misinformation and correct the wrongs about dairy that are being promulgated on the worldwide web at an alarming rate. There is a lack of succinct, up-to-date, science-based information available that we can take directly to the consuming public, who, in general, have developed a mistrust of scientists. The intent of this symposium is to present the major issues in a forum that will address state-of-the-

art research while emphasizing ways in which we can communicate accurate information to the consuming public.

CSAS SYMPOSIUM

NUTRITION - BEHAVIOR INTERACTIONS IN RUMINANTS

This Symposium is being jointly sponsored by the **ANIMAL BEHAVIOR AND WELL-BEING COMMITTEE**. The symposium will pair welfare issues and production issues, for ruminants. we believe it is important to keep ruminants and non-ruminants in separate sessions to achieve optimal attendance. By incorporating the nutrtion aspect, the symposium would be too genral if we were to discuss both ruminants and non-ruminants.

FUNCTIONAL FOODS, PROBIOTICS AND ANIMAL HEALTH

This Symposium is being jointly sponsored by **the Canadian Society of Animal Science, the Animal Health Committee and the Nonruminant Nutrition Committee**. Restrictions and consumer fear of antibiotics in livestock are reducing their usage. Europe has already limited or banned the use of antibiotics in livestock for human consumption. Prebiotics and probiotics are potential alternatives to antibiotics. Modulation of host microbiota and immunity are the most commonly purported benefits of the consumption of probiotics and prebiotics. This symposium will present an overview of up to date knowledge and application and will improve our understanding of the well being and health in relation with pro/prebiotics intake. In the last few years, the number of abstracts related to pre and probiotics submitted to ASAS/ADSA increases annually. This topic can be well addressed in a symposium, drawing interest from researchers in animal health, nutrition, and production.

DAIRY FOODS

CHALLENGES AND OPPORTUNITIES OF MICROENCAPSULATION TECHNOLOGY IN APPLICATION TO DAIRY FOODS

Microencapsulation has recently assumed a significant technological role is protecting and delivering food-derived bioactives and live cells in the research and development of new generation of functional and therapeutic food products and nutraceuticals. The functional foods and nutraceuticals/therapeutic goods global market has attained an enormous growth and is predicted to grow significantly in the near future. The development of these products mainly utilises the micro and nano encapsulation technologies to protect and controlled release the food bioactives and live bacterial cells.However, the current practices of microencapsulation, their efficacy in protecting and controlled release of dairy bioactives, regulatory issues and challenges and potential future applications need to be discussed in a forum at a Dairy Foods Symposium.

MILK PROTEIN FRACTIONATION

The symposium will provide the latest in research in milk protein fractionation from various dairy research entities in the US and will serve to facilitate discussion of future development in dairy protein fractionation.

DISCOVER CONFERENCE FOLLOW-UP SYMPOSIUM

PHYSIOLOGICAL VALUE OF FAT AND FAT SUPPLEMENTS IN DAIRY COW PRODUCTION

Key focus areas of this symposium will include; 1) The optimum mix of metabolic fuels and endocrine responses to feeding fats; 2) The role of fats in the transition period and their impact on cow metabolism; 3) The impact of feeding fats on dry matter intake, energy balance and maintenance of body condition score; and 4) An examination of comparative lipid metabolism in other species and what we can learn from these. By focusing on lipid metabolism in the dairy cow, this symposium will provide an important step in bringing together academia and industry expertise to discuss field observations from feeding fat, propose explanations from current lipid metabolism knowledge, and identify important gaps in knowledge. It will serve to guide nutritionists in industry in their quest to develop new commercial fat products, guide modelers in their quest to quantify lipid metabolism from consumption to tissue utilization, and guide university researchers in their quest to design meaningful and pertinent research projects.

EXTENSION EDUCATION

MODELS FOR DAIRY PRODUCTION DECISION MAKING

As more information becomes available at a more rapid pace, increasingly complex deciosion must be made for producers to maintain profits. Systems modelling offers opportunity to utilize this information for decision making.

FORAGES AND PASTURES

FORAGE MANAGEMENT STRATEGIES TO OFFSET HIGH INPUT COSTS

This symposia will focus on forage and feed management strategies to counter high input costs. Strategies will include optimizing pasture and forage harvest, including variety selections, grazing strategies, fertilization rates, and stockpiling; optimal stocking densities for forage utilization and fertilization; and use of biofuel and/or digestible fiber by products. Emphasis will be focused on cost: benefit economical analysis for these strategies.

GROWTH AND DEVELOPMENT

FETAL PROGRAMMING IN ANIMAL AGRICULTURE

Fetal programming during intrauterine growth can have profound effects on postnatal growth and development. Mechanisms involved in fetal programming and measurements of these will e presented. Effects of maternal nutrition restrictions and excess (bovine and porcine) on progeny milk production, skeletal muscle, adipogenesis, and meat and carcass quality will be covered, as well as the importance of maternal care on offspring cognitive and neuroendocrine development. The symposium will culminate in an overview of large animal models of fetal programming.

MEAT SCIENCE AND MUSCLE BIOLOGY

BALANCING LIVE CATTLE PERFORMANCE AND BEEF QUALITY

As production costs continue to increase, it is crucial that animal and meat scientists continue to investigate the opportunities to improve supply chain profitability. However, we must simultaneously work jointly to protect long-term beef demand by ensuring the consumer is provided a tender, flavorful and juicy product. Thus the need to better

understand the relationship between those factors that impact both growth and beef quality traits in an effort to make positive improvements in both.

The Effects of By-product Feeding on Meat Quality Traits

High corn prices have forced animal agriculture to look for alternative feedstuffs to reduce cost of gain. As a result, the utilization of grain by-products from the ethanol industry and other regionally available starch alternatives, such as potato products, has grown dramatically. While a growing body of research exists looking at the optimal inclusion rates for many by-products related to growth performance, the impact of feeding elevated levels of these feedstuffs on meat quality, shelf-life and palatability is less understood. As additional pressure is placed on the animal protein industry to lower costs of production, it is likely that the industry will push for new solutions and search for ways to increase the use and inclusion rates of by-products. Thus the importance of building a better understanding of the impact feeding by-products has on end product acceptability.

Milk Protein and Enzymes

Milk Enzymes their impact in dairy foods and human health

Milk enzymes are an abundant group of milk proteins with biological function. Many of these enzymes are still poorly characterized due to their large number and to the complexity of milk. In the last 10 years there have been important technological and scientific advances that have advanced our understanding of many of these enzymes. The ADSA annual meeting has traditionally been a good source of information for reviewing some of these advances. The most relevant presentations are likely published for our interested scientific, academic and industrial community.

Nonruminant Nutrition

Improving the Nutritional Value of Alternative Feed Ingredients

Interest in using alternative feed ingredients has increased, because of the increasing costs of corn and soybean meal. These alternative feed ingredients can help to reduce feed costs, but they add some indigestible sources of nutrients (NSP, etc.). The use of feed additives such as NSPases and phytase can improve the value of alternative feed sources. Unfortunately, there is confusion about the use of enzymes and ingredients they target (nutrients such as NSP). This symposium will provide valuable information with characteristics of available alternative ingredients and possible ways of improving their nutritional value.

Mineral-Mineral Interactions: Implications for Nutrition

Historically, mineral requirements have been determined using the slope-ratio technique, or a variation thereof, in which increasing concentrations of the mineral of interest are fed from a concentration well below the requirement to a concentration well above the requirement. During such experiments, all other mineral concentrations are typically held constant. However, research has uncovered numerous mineral-mineral interactions, which can affect solubility, absorption, and metabolic fates of minerals. Therefore, future research may need to define mineral requirements based on the overall ionic environment.

PHYSIOLOGY AND ENDOCRINOLOGY

IMPACT OF GONADAL STEROIDS ON BRAIN DEVELOPMENT AND FUNCTION

The the topics to be presented all are cutting edge: (1) Actions of Androgens in Regulating Sexual Differentiation of the Sheep Brain and Consequent Effects on Sexual Behavior; (2)Nongenomic Actions of Estrogens Directly on the Ovine Pituitary Facilitates LH Secretion; and (3) Genomic and Nongenomic Aspects of Negative and Positive Feedback of Estrogens on the Hypothalamus.

RUMINANT NUTRITION

FORAGE DIGESTIBILITY ESTIMATES: OBTAINING AND APPLYING MEANINGFUL VALUES

The yield of nutrients from dietary forages is the primary nutritional driver for many ruminants. Therefore, quantified values for this nutrient supply -- in other words, forage digestibility estimates -- are critical to applied ruminant nutrition. Fiber digestibility values play a key role in selecting and evaluating feeds and processing methods, in predicting animal intake and performance, and in determining relative market value of roughage feedstuffs. The purpose of this seminar is to bring together speakers that can comprehensively address the importance and limitations of these values, evaluate the strengths and weaknesses of current methodologies, address issues related to use and interpretation of digestibility estimates for different classes of cattle, and generate thought and discussion about future needs in this area.

USING MOLECULAR TECHNIQUES TO ADVANCE RESEARCH IN RUMINANT NUTRITION

We are nearly a decade into the genomics era. The genomes of the major livestock species have been successfully sequenced and have significantly expanded the information available to scientists regarding individual genes. Knowledge of the genomes of microbial species has also been increased. All of this information has opened new possibilities for researchers in rumen microbiology and ruminant nutrition and physiology, in the formation of new hypotheses and in the development of new tools in molecular genetics and gene expression. The first goal of this symposium is to highlight the work of those researchers who are combining molecular approaches with biochemical and nutritional techniques to advance our knowledge of rumen function and ruminant metabolism. The second goal is to deliver the symposium with sufficient background information on molecular techniques to provide scientists not working in this area a basic understanding to enhance their appreciation of the research presented. Overall, the symposium will provide a unique opportunity for a wide audience to see the integration of rumen microbiology and ruminant nutrition.

SMALL RUMINANT

ORGANIC AND GRASS-FED SMALL RUMINANT CHALLENGES AND OPPORTUNITIES

Demand for organic and grass-fed meats continues to increase and consumer attitudes toward this production management are strong. Organic and grass-fed livestock management promotes a greater environmental stability because it is a system focusing on improvements from soil to livestock health through stewardship of soils and forages. Native or environmentally-friendly forages are chosen for the system along with

livestock genotypes that fit the environment and production system. Small and medium-sized farms can become more prosperous by integrating a more sustainable livestock production system with soil and water conservation and farm economics. Small ruminant producers rely on information from organic vegetable growers and dairy producers to change their farming system from conventional to organic because there is very little research available to provide Best Management Practices for a profitable enterprise. This Symposium will highlight researchable problems dealing with organic and grass-fed small ruminant production and underline the potential for growth of the organic small ruminant industry.

SWINE SPECIES

ENVIRONMENTAL CONCERNS BASED ON SWINE PRODUCTION

Addressing environmental concerns is critical to the viability of animal production in the future. This symposium is designed to propagate the principal issues associated with environmental effects of swine production and provide overviews of cutting edge research to examine, monitor, and reduce these concerns. Summaries of 2 recent workshops examining and prioritizing research and extension needs in air and water quality will be presented. The potential effects of swine production on human health and the environment and novel technologies to monitor chemical and sensory characteristics of swine manure will be discussed. Nutritional, manure management, and other strategies to reduce, mitigate and control these issues will be highlighted.

TEACHING/UNDERGRADUATE AND GRADUATE EDUCATION

ENHANCING THE UNDERGRADUATE WRITING EXPERIENCE

This symposium will focus on enhancing the undergraduate writing experience by demonstrating proven methods that help undergraduate students to become more effective and succinct writers as they fulfill the requirements for a BS degree.

TRIENNIAL REPRODUCTION SYMPOSIUM

CHALLENGES AND OPPORTUNITIES FACING LIVESTOCK REPRODUCTION IN THE 21ST CENTURY

The objective of the Symposium is to update persons with an animal science background in the state of the art of reproductive sciences relevant to animal agriculture. This symposium is regularly attended by about 200 scientists/graduate students. Some very excellent review papers have been published via this symposium, and excellent discussions often emanate during the meeting. This venue has been effective in providing a forum for having reproductive biologists educate each other, and this tradition is worth continuing; it likely results in improved experimentation, particularly for translational research that is vital for a health animal agriculture.