

Awards Program of the American Dairy Science Association®

The annual Awards Program of the American Dairy Science Association and installation of new officers was held on July 12, 2011, at the Marriott New Orleans, New Orleans, Louisiana. Past President James Linn read the citations, and representatives of the donors presented the awards. The association greatly appreciates the continued generosity and support of the donors in presenting the annual awards to ADSA® members.

Citation for Daryl Maulfair Recipient of the 2011 Alltech Inc. Graduate Student Paper Publication Award

The recipient of the 2011 Alltech Inc. Graduate Student Publication Award is Daryl D. Maulfair. Maulfair is recognized for his paper “Effect of feed sorting on chewing behavior, rumen fermentation in lactating dairy cows,” published in the October 2010 issue of the *Journal of Dairy Science*. Maulfair’s publication is representative of a well-designed systematic experimental approach to a very practical question: how does feed sorting affect chewing behavior, rumen fermentation, and milk production? The four experimental total mixed rations studied varied from 1.5 to 11.7% of particles >26.9 mm in length. Grass hay (11.8% of ration dry matter) was chopped using different choppers and frequency of chopping to achieve desired particle lengths. Replicated 4 × 4 Latin squares included data from 8 cows to evaluate chewing, rumen characteristics, and yield measures. The study documented that sorting of the ration did occur, particularly for rations with higher percentages of longer hay particles. Rations having higher percentages of long particles resulted in greater refusal of the longer particles by 24 hours, such that the geometric means of particle sizes actually consumed were similar across diets. Eating time and ruminating time per kilogram of dry matter intake increased linearly with increasing particle length, whereas



daily dry matter intakes decreased linearly. However, rumen production of volatile fatty acids and ammonia were similar across diets with only slight differences in pH. Moreover, milk production and milk composition measures were not different across diets. Although the cows were offered rations varying in particle size, the diets actually consumed and animal performance were similar across treatments. Maulfair postulated an optimal geometric mean particle size that could result in minimal ration sorting. Maulfair’s approach to scientific inquiry reflects the influence of his practical dairy farm experience. Maulfair was raised on a Holstein/Ayrshire dairy farm in Jonestown, Pennsylvania, and received his BS degree with distinction in animal sciences, with a business/management option at The Pennsylvania State University in 2006. Maulfair was active in the Dairy Science Club and ADSA-Student Affiliate Division, and was a member of the first place platinum North American Intercollegiate Dairy Challenge team in 2006. Maulfair is scheduled to receive his PhD degree in animal sciences from The Pennsylvania State University in 2011 under the guidance of Jud Heinrichs. The title of his dissertation is “Forage particle size and ration sorting in lactating cows.”

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Daryl Maulfair (right) receives the 2011 Alltech Inc. Graduate Student Paper Publication Award from Alan Harrison, donor representative (left).

**Citation for Arnold Hippen
Recipient of the 2011 American Feed
Industry Association Award**

Arnold Hippen, professor of dairy science at South Dakota State University, served 15 years as a dairy producer and seven years in the feed industry before



obtaining his degrees at Iowa State University. Hippen's research contributions covered basic as well as applied aspects of dairy cattle nutrition and management. He had the unique ability to conduct and understand very basic metabolic research and yet was able to relate applied nutritional and management information to dairy producers. He was very well respected by dairy producers and by academic and industry colleagues for his ability to solve practical on-farm problems as well as complex research issues. His major research contributions are in the areas of transition cow nutritional management and its relationship to preventing ketosis, applied nutritional management that also includes the use of byproduct feeds, and immunity in young calves and older animals.

Hippen's research demonstrated that feeding glucose precursors such as propionate and propylene glycol in combination with lipids during the transition period helped avoid the usual prepartum feed intake depression. Other research on transition dairy cows involved the use of byproduct feeds such as lactose and glycerol and feeding ruminally protected fructose as a preventative for fatty liver. Hippen tested the limits of wet or dried distillers grains with solubles (DGS) that can be fed to lactating dairy cows. One of his graduate students conducted the only research that evaluated long-term feeding of DGS, feeding 15% of diet dry matter as wet DGS for an entire lactation, during the dry period, and into the next lactation. Hippen conducted some of the first research with feeding DGS to young calves, feeding as much as 56% of diet DM as dried DGS. Hippen conducted several experiments providing insight on milk fat depression occurring with diets containing polyunsaturated fats from dried DGS. Evaluation of corn germ from the fractionation processes in dry milling fed to dairy cows was one of Hippen's more recent research areas. Hippen's group also demonstrated that one could feed lactating cows quite large amounts of lactose (as much as 14% of diet DM).

Hippen published 49 refereed articles, over 160 abstracts and other articles, and two book chapters, and holds two patents for prevention of fatty liver and ketosis. He has been an invited speaker at 20 conferences across the United States. Hippen served on a number of committees of ADSA and the American Society of Animal Science, both nationally and in the Midwest Branch. In support of preserving the quality and integrity of animal research at South Dakota State University, he chaired the university's Institutional Animal Care and Use Committee for the past seven years. He was the major professor for five MS and seven PhD students. Two of his students, Jeffrey DeFrain (2005) and Malek Abdelqader (2009), have received the National Milk Producers Federation Richard M. Hoyt Award. Arnold Hippen passed away shortly before the Joint Annual Meeting this year.



Kevin Herrick (right) receives the 2011 American Feed Industry Association Award on behalf of Arnold Hippen from Mike DuBois, donor representative (left).

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**Citation for Adam Lock
Recipient of the 2011 Cargill Animal
Nutrition Young Scientist Award**

Adam L. Lock has a strong record of accomplishments throughout his early career in dairy nutrition. He is currently an assistant professor in the Department of Animal Science at Michigan State University. Previously, he was assistant professor in the Department of Animal Science at the University of Vermont and held research associate positions at Cornell University and at the University of Nottingham, England. Lock earned both his PhD and BS (honors) degrees at the University of Nottingham, and he has authored or co-

authored 29 peer-reviewed journal articles, 21 invited reviews and book chapters, 39 conference proceedings, and 79 abstracts. His research program involves both



dairy production and human nutrition and health and the interface between these two disciplines. The central theme of his program is fatty acid digestion and metabolism in the dairy cow, and branching from this are specific research efforts related to applications in dairy production and implications of milk fat in human health. In the area of dairy production, he has investigated ruminant

lipid digestion and milk fat synthesis. He was among the first to show that the major conjugated linoleic acid (CLA) isomer (rumenic acid) originated mainly by endogenous synthesis from vaccenic acid. He has also coauthored several seminal publications examining the role of bioactive fatty acids in the regulation of milk fat synthesis. These efforts have identified novel fatty acids that inhibit milk fat synthesis; these bioactive fatty acids originate as intermediates in the ruminal biohydrogenation of dietary unsaturated fatty acids, and this work has greatly aided our understanding of milk fat depression. Through conference and extension presentations and work with nutritional consultants and producers, he has been effective in applying this

knowledge to troubleshooting milk fat issues on dairy farms. Lock's research relating to human nutrition and health has focused on the role of milk fat-derived bioactive fatty acids on human health, in particular *trans* fatty acids. Previous investigations have ranged from biomedical studies involving the use of animal models of cancer and atherosclerosis to human clinical studies. They include the demonstration that vaccenic acid derived from milk fat was a potent anticarcinogen in a rat model of breast cancer and that this was due to its conversion to rumenic acid via the enzyme Δ^9 -desaturase. Lock and colleagues also demonstrated that dietary rumenic acid was able to lower total plasma cholesterol and improve the plasma profile of lipoprotein cholesterol when supplied in milk fat. Over the last few years, Lock has been invited to present his research in the United States, the United Kingdom, Ireland, Belgium, Holland, China, Malaysia, Mexico, Brazil, and Canada. He was co-chair of the highly successful 14th ADSA Discover Conference and of the ADSA Discover Conference on milk components this year. Overall, Lock has an inherent enthusiasm for science and agriculture and a skill in communicating research findings to other scientists, industry consultants, policy makers, and the public.

Citation for Nana Farkye Recipient of the 2011 Cargill Flavor Systems Food Specialties Award

Nana Farkye is a professor in the Dairy Science Department at California Polytechnic State University. He earned a BS in biochemistry and nutrition from

the University of Ghana and MS and PhD degrees in nutrition and food sciences from Utah State University. His decision to pursue dairy research was influenced largely by the late Anthon Ernstrom, his advisor and mentor. He spent two years as a research scientist at the National Food Biotechnology Centre at University College Cork in Ireland. For more than 20 years, Farkye has conducted research



in the areas of cheese ripening, reduced- and low-fat cheeses, cheese quality, and cheese manufacturing technology. Farkye holds 3 US and 3 international cheese technology patents in addition to numerous research papers and book chapters. He has supervised



Adam Lock (left) receives the 2011 Cargill Animal Nutrition Young Scientist Award from Guillermo Schroeder, donor representative (right).



Nana Farkye (right) receives the 2011 Cargill Flavor Systems Food Specialties Award from Sanjay Gummalla, donor representative (left).

eight postdoctoral researchers and 16 graduate students. Farkye's strong ability to collaborate reverberates throughout his research.

His research in the biochemistry of cheese flavor began with investigations using different milk coagulants. He later worked with starter and adjunct cultures and indigenous enzymes that provided a basis for technological solutions for the cheese industry. Farkye's contribution to the manufacture of Hispanic-style cheeses is highlighted by his work incorporating starter bacteria and metabolites that extend the shelf life, increase the safety, and improve quality.

For the past several years, Farkye has been part of multidisciplinary teams conducting studies on the factors that influence flavor development in low-fat and reduced-sodium cheeses. He has contributed approaches that could easily be adopted by manufacturers to produce an immediate effect on cheese texture and flavor. He has investigated novel approaches such as using low-fat cheese manufactured by combining highly flavored cheese with fresh no-fat cheese curd to minimize typical defects of flavor and texture associated with low-fat cheeses.

Milk powder provides flexibility for cheese and dairy product manufacturers. Farkye has worked to improve the shelf life of packaged powder and to decrease loss due to packaging deficiencies. Large and small cheese manufacturers are challenged in different ways. The scale of operation and access to different technologies can influence the flavor, texture, and safety of cheeses. Small and large cheese manufacturers in California and throughout the world have benefited from his work using concentrated milks and dairy powders in cheese

manufacture. Farkye's research and publications on topics pertinent to the flavor and texture of cheeses made with powders provide an alternative for those manufacturers choosing not to use filtration technologies to concentrate milk or for those lacking access to enough fresh fluid milk. Moreover, he has demonstrated that modifications of manufacturing protocols are often necessary when concentrated protein liquids and powders are used in cheese manufacture.

Citation for Sylvie Lortal Recipient of the 2011 Danisco International Dairy Science Award

The 2011 Danisco International Dairy Science Award is presented to Sylvie Lortal, laboratory director of UMR 1253, National Institute for Agricultural Research (INRA)-Agrocampus



West, Science and Technology of Milk and Egg Products, for outstanding advancements in the science of cheese microbiology. Her laboratory has 75 permanent scientists, 20 PhD students, and 135 employees in total. She has been accredited by the University of Rennes to supervise PhD students. Lortal was a pioneer in the area of autolysis of cheese bacteria and the impor-

tance to flavor development. This was a little-understood area of cheese ripening in the mid-1980s when she started to work on this phenomenon. She characterized the mechanisms of cell autolysis for several important cheese-ripening cultures, both in the laboratory and in situ using immunological species-specific markers. The characterization of the enzymes responsible for cell lysis led to a rapid phenotypic tool to distinguish *Lactobacillus* species. This also led to some work on the use of attenuated cultures in cheese. Lortal and her colleagues have contributed some breakthrough research leading to an understanding of the difficulty in developing flavor in cheese made from ultrafiltered milk. She discovered that certain lactobacilli contain a paracrystalline surface layer (S-layer) on their cell wall. It has subsequently been discovered that certain probiotic lactobacilli also have this S-layer and it plays an important role in the interaction with the host immune response. Lortal's laboratory has been studying propionibacteria, an important culture used for Swiss-type cheese manufacture. Her laboratory has completed



Sylvie Lortal (left) receives the 2011 Danisco International Dairy Science Award from Dennis Romero, donor representative (right).

the sequencing of the complete genome of one strain and is working on sequencing 20 other strains. She also led efforts to understand the microbial ecology of cheese in situ. This includes the detection, expression, and distribution of bacteria in cheese. She was awarded a large project by the French national research agency for this study. It led to the development of a number of new methodologies for detecting dominant microbial species in cheese at varying times during ripening. This project has resulted in 15 publications (six from the INRA/Lortal group). Recently, she has been using confocal microscopy to determine the spatial distribution of bacterial colonies in cheese. Her recent work has been in the area of the biodiversity of microbes involved in food fermentation. She promoted the creation of the first Biological Resource Center (ISO9001) dedicated to food-related bacteria (4,000 strains, 100 species). She is also an active collaborator, having worked with laboratories in eight countries. She is the author of approximately 60 publications in peer-reviewed journals and the holder of two patents.

**Citation for Jeffrey Keown
Recipient of the 2011 DeLaval
Dairy Extension Award**

Jeffrey F. Keown is professor of animal science and extension dairy specialist in the Department of Animal Science at the University of Nebraska–Lincoln (UNL). A 1967 graduate of the University of Delaware with

a BS in animal and poultry science, he obtained a PhD with a major in animal breeding and minors in biometrics and genetics from Cornell University in



1972. After graduating from Cornell, he worked at the USDA in Beltsville for two years and then in industry in Ithaca for nine years before joining UNL in 1985. Along with teaching, research, and extension programs, Keown is responsible for managing the 150-cow research milking herd located at the University's Agricultural Research and Development Center at Mead, Nebraska. Since 1995,

Keown has served as coordinator of the University's program with the Autonomous University of Mexico and the University of Chapingo. Keown has also served as chair of the UNL Grievance, Commencement, and Academic Planning Committees. He has established an outstanding extension program for dairy producers in Nebraska and the Upper Midwest. Keown served as the UNL representative on the Midwest Dairy Consortium through 2006 to integrate dairy education and research in Midwest universities. His *Nebraskadairy.unl* website is used by dairymen throughout the nation. While most of his research efforts are focused on genetic improvement of dairy cattle, he also addresses reproductive



Jeffrey Keown (right) receives the 2011 DeLaval Dairy Extension Award from Mario Lopez-Benavides, donor representative (left).

management, use of new technology, and the application of records and computerization in making dairy management decisions. Keown provided the leadership to start the Midwest Branch of ADSA. He subsequently served on the ADSA Dairy Cattle Improvement Committee and the Manuscript Review Group. Over the years, Keown has played an active role interacting with the Nebraska Department of Agriculture, the Nebraska Department of Economic Development, the corn processing industry, and the dairy processing industry. His Nebraskadairy.unl website is a highly used source of data on public utility rates, land values, labor rates, and other production cost items in Nebraska and other dairy states. Keown created and implemented a very successful Dairy Technician Certification Program in collaboration with the Northeast Community College in Norfolk, Nebraska, and developed new international dairy internships and extension programs. Much of Keown's extension program has been conducted through his educational contact with the Dairy Herd Improvement Association (DHIA). He is credited with being the catalyst to convince 20 Nebraska DHIA boards to develop a centralized state management/accounting system. A recent development has been his advisory role in the formation of the Heart of America DHIA, which includes six states. He also played a major role in merging the Dairy Records Processing Center at Ames, Iowa, and the center at Raleigh, North Carolina, to create the largest dairy records processing center in the United States. He is chair of the USDA Dairy Extension Group and recently completed the first interactive UNL Extension NebGuide on dairy farm income cash-flow calculations. The recipient of more than \$739,000 in grants, Keown is working on a \$227,000 Nebraska Research Initiative to develop an innovative, self-powered smart wireless identification and tracking device for animal agriculture. He is the author or co-author of more than 70 UNL NebGuides, numerous NebFacts, and other extension publications, 61 journal articles, 47 journal abstracts, and 125 invited talks and radio/television programs. He has served as advisor for 15 MS and PhD graduates. Keown married Gail McConachy in 1971; they have two children, Jonathan and Catherine.

**Citation for Dale Bauman
Recipient of the 2011 Elanco Award
for Excellence in Dairy Science**

Dale E. Bauman received his BS and MS degrees from Michigan State University and a PhD from the University of Illinois. In 1979, he joined Cornell University where he is Liberty Hyde Bailey professor in the Department of Animal Science. Bauman is internationally recognized for research on the regulation of nutrient use

and his work has delineated regulatory systems that allow for efficient performance while preserving animal health and well-being. Bauman is co-author of over



500 scientific abstracts, articles, and reviews, and his concepts of metabolic regulation are widely applied. This research has also resulted in new technologies, one being the use of bovine somatotropin as a management tool by dairy producers. Bauman has many seminal contributions in lipid metabolism, including the biohydrogenation theory as a unifying basis for diet-induced milk fat depression and identification of rumen biohydrogenation intermediates that regulate fat synthesis. Bauman's focus has included the regulation of metabolism to produce foods with health benefits, including his seminal research that established the biosynthesis and biological effects of conjugated linoleic acid (CLA), and the identification of CLA and vaccenic acid as naturally occurring anticarcinogens present in ruminant fat.

Bauman has served on the Board of Agriculture for the National Research Council/National Academy of Sciences (NRC/NAS), the Federation of Animal Science Societies Committee on Biotechnology, and the USDA Agricultural Biotechnology Advisory Committee. In 1988, he was elected to the National Academy of Sciences.



Dale Bauman (left) receives the 2011 Elanco Award for Excellence in Dairy Science from Roger Cady, donor representative (right).

**Citation for Brinton Hopkins
Recipient of the 2011 Hoard's Dairyman
Youth Development Award**



Brinton Hopkins has had a profound effect on dairy youth at local, state, and national levels. He is widely recognized by his peers as a leader in dairy youth development and exemplifies the characteristics of a valuable dairy mentor. The true impact of Hopkins' youth work is difficult to measure through documentable achievements because the most important effect is through the way he has personally affected the lives and career paths of many dairy youth.

Hopkins has experienced all facets of a dairy youth program in his career path and life work. He grew up on a dairy farm in Delaware and was very active and involved in the 4-H program. When he returned to the family farm following college, he gave back to the 4-H program by serving as a dairy volunteer leader. While serving as an agricultural extension agent in North Carolina, he worked closely with the 4-H dairy program in addition to his primary responsibilities in dairy technical subject matter. Now as a professor and state extension dairy specialist, Hopkins provides leadership for the 4-H Dairy Youth Program in North Carolina as well as for dairy youth events at the regional and national level.

Hopkins has developed and expanded statewide 4-H dairy educational activities and events including dairy cattle judging, dairy quiz bowl contests, dairy skillathon contests, dairy poster contests, demonstrations, presentations, cumulative records projects, dairy cattle fitting and showmanship contests, junior dairy shows, and multi-state dairy youth educational retreats. Hopkins coordinates the training and coaching of the North Carolina state 4-H dairy judging teams and develops question sets for the state 4-H dairy quiz bowl contest each year. He coordinates many educational activities in which youth learn important life skills as they increase their knowledge of dairy farming and the dairy industry. Many outstanding youth in North Carolina have entered college and are pursuing careers in agriculture and related disciplines because of their involvement in this program. Total participation in the North Carolina 4-H Dairy Youth Program has increased about 147% in the past 10 years compared with the 10 years be-



Todd See (left) receives the 2011 Hoard's Dairyman Youth Development Award on behalf of Brinton Hopkins from Corey Geiger, donor representative (right).

fore Hopkins assumed leadership of the program, even though dairy farm numbers have decreased in North Carolina. With the changing demographics, many of the youth who participate in the North Carolina 4-H Dairy Youth Program do not live on a farm. To help meet the needs of a growing 4-H Dairy Youth Program, Hopkins provided leadership for the formation of the North Carolina Dairy Youth Foundation (NCDYF).

On a national level, Hopkins serves as a member of the planning committee for the National 4-H Dairy Conference that is held each year at the University of Wisconsin-Madison. On a regional level, Hopkins provides leadership for the annual Southeastern US regional dairy youth retreat. These achievements and his commitment to youth across the country make Brinton Hopkins a very deserving recipient of the Hoard's Dairyman Youth Development Award.

**Citation for Kathryn Boor
Recipient of the 2011 International Dairy Foods
Association Research Award
in Dairy Foods Processing**

The recipient of the 2011 International Dairy Foods Association Dairy Foods Research Award is Kathryn J. Boor, Ronald P. Lynch dean of the College of Agriculture and Life Sciences at Cornell University. This award recognizes individuals whose research findings have allowed dairy foods processors to make a significant improvement in the quality of dairy foods. Boor has made outstanding contributions through her integrated extension and research programs in dairy microbiology quality and safety, dedicated to improving dairy product shelf life, wholesomeness, and safety through reduction of spoilage and pathogenic bacteria. Her research

program focuses on determining factors that affect the presence and persistence of spoilage and pathogenic organisms in food products. Her research group inte-



grates the tools of molecular biology and phenotypic microbiology to rapidly identify and track spoilage and pathogenic bacteria in food systems. These objectives directly link her research efforts with her extension program, in that research projects are driven by current and future food industry needs and, therefore, directly contribute to an overall improvement in the quality of dairy products.

Boor's research group has used molecular approaches to characterize and track the sources of spoilage organisms in dairy systems, which are associated with post-pasteurization contamination and milk spoilage. Through the implementation of molecular tracking, her laboratory has identified key post-pasteurization contamination points, helping to identify foci for quality improvement. In her more recent work, she has focused on characterizing spore-performing spoilage microorganisms. This work has shown the presence of cold-tolerant *Paenibacillus* spp. in milk across the United States, and has identified *Paenibacillus* spp. as the current biological barrier to the extension of fluid milk shelf life. Her research has also contributed to a better understanding of how processing parameters

affect the shelf life of high-temperature-short-time pasteurized fluid milk. Boor has provided industry a direct recommendation to improve shelf life: process at temperatures between 161 and 167°F to reduce the consequences of psychrotolerant spore formers in milk.

Research in Boor's laboratory is currently being conducted to understand how farm practices contribute to spore loads in raw milk and to develop a molecular assay to detect *Paenibacillus* spp. in raw milk samples. Boor's research group is internationally known for its work on stress response systems in the foodborne pathogen *Listeria monocytogenes*. This work specifically has identified mechanisms by which growth in different food matrices can affect virulence of this important foodborne pathogen.

The core of Boor's dairy extension program is the Milk Quality Improvement Program, which gives her research the unique advantage of working closely with industry, so that research can be translated into appropriate changes, which improve the quality of fluid milk and other dairy products. The major impacts from Boor's program are (1) discovery and application of new information for production of high-quality dairy products, (2) an improved understanding of the cellular mechanisms contributing to bacterial survival, and (3) training of highly qualified students for employment in dairy-related sectors. Boor's research is providing dairy processors with the means to advance the quality of their products.

Citation for José Luiz Moraes Vasconcelos Recipient of the 2011 International Dairy Production Award

José Luiz Moraes Vasconcelos, associate professor in the Department of Animal Sciences in the School of Veterinary Medicine at São Paulo State University, Brazil, is recognized for his extensive contributions to research, teaching, and extension in dairy production

in Brazil over the past 22 years. He has authored or co-authored 55 peer-reviewed journal articles, with major emphasis on development of technologies to expand the use of artificial insemination in dairy and beef cattle in Brazil.

Among his greatest impacts in Brazil and throughout South America has been the development of a student



Kathryn Boor (right) receives the 2011 International Dairy Foods Association Research Award in Dairy Foods Processing from Randy Brandsma, donor representative (left).





José Luiz Moraes Vasconcelos (left) receives the 2011 International Dairy Production Award from Roger Cady, donor representative (right).

enterprise known as CONAPEC Jr. This group was formed in partnership with funding he acquired from the private industry with the initial goal of offering undergraduate and graduate students in veterinary medicine, animal sciences, and agronomy opportunities for hands-on learning experiences on dairy farms, and extending knowledge developed at the university. Because of his dedication to the program and continual mentoring of students, he has been pivotal in placing students in contact with faculty members at US universities and research institutions for their graduate programs.

Fifty-seven of Vasconcelos' students have come to US universities for internships or graduate work. Of those, 27 have completed or have their graduate studies ongoing at either the MS or PhD levels. Three became faculty members at universities in the United States. Almost 40 now are working in Brazil in food animal production, in the private sector or in their own consulting firms. This has established an impressive network between the universities in Brazil and in the United States.

In the process of developing CONAPEC Jr., Vasconcelos initiated a conference called New Concepts on Bovine Production and Reproduction. This year, 2011, marked the 15th conference, which now attracts approximately 1,500 professionals every year. In the previous 14 years of this conference, a total of 11,058 people have attended, including producers, veterinarians, nutritionists, academicians, allied industry professionals, and students from Brazil and other South American countries.

Vasconcelos is responsible for teaching courses in the undergraduate and graduate curricula for veterinary and animal science students. He has been the major professor for 19 MS and two PhD students and has been the advisor for 17 students who conducted research projects during their undergraduate programs.

Vasconcelos' research endeavors include basic investigations to understand some of the physiological mechanisms affecting pregnancy in dairy cows and a complementary applied approach to validate technologies on commercial farms with extensive numbers of cows. His initial effect on dairy reproduction came from studies during his PhD program when he spent 18 months in the laboratory of Milo Wiltbank at the University of Wisconsin.

In experiments conducted by his graduate students in Brazil, Vasconcelos demonstrated the importance of the diameter of the ovulatory follicle on pregnancy. He has also studied the effect of feed intake and type of diet on progesterone clearance in dairy cows and their possible implications to embryo development and survival.

Citation for Dorian Garrick Recipient of the 2011 J. L. Lush Award in Animal Breeding

The winner of the J. L. Lush Award in Animal Breeding and Genetics is Dorian J. Garrick. Garrick's early scholarly achievements include a First-Class Honors degree from Massey



University, New Zealand, in 1982 and a PhD from Cornell University in 1988. Since 2007, Garrick has held the Lush Chair in Animal Breeding and Genetics at Iowa State University following five years at Colorado State University and 15 years at Massey University. An exceptionally productive scientist, Garrick has achieved a high profile as a writer, invited speaker,

and contributor to 119 scientific and industry conferences in the last five years. Topics of his research in dairy cattle breeding include (1) logical development or enhancement of breeding programs, (2) alternative selection criteria and novel phenotypes, (3) analytical approaches for genetic evaluation, (4) crossbreeding, (5) economic analysis, and (6) design of breeding programs. For dairy breeding companies and breeders of dairy



Dorian Garrick (right) receives the 2011 J. L. Lush Award in Animal Breeding from Ryan Starkenburg, donor representative (left).

cattle, Garrick's early research in the mid 1990s led to the development of a prototype across-breed model for genetic evaluation of dairy cattle. Today the full effect of this early developmental effort is just becoming recognized because it directly stimulated a number of ongoing research interests that led to research publications and graduate student projects that have provided considerable impact to the dairy industry over the last decade.

Garrick and co-workers demonstrated how the relative emphasis on milk volume in relation to fat and protein volume greatly affected industry profit over a 25-year planning horizon. The marketing and processing consequences of combined within- and across-breed selection varied markedly according to breed utilization. Later, by using mating plans developed to exploit heterosis and breed average effects in an economic analysis of the whole farm system and the entire industry, Garrick found economic heterosis, even in the absence of heterosis for any contributing traits, due to the multiplicative nature of dairy farm profit.

Garrick has been an active participant in research using marker and genomic selection to improve accuracy of selecting young animals. He led a quantitative trait loci (QTL) search for conformation traits. Later he designed a unique major experiment for QTL detection using F_2 animals produced from crosses among elite Holstein-Friesian and Jersey crosses. This experimental design has since been implemented and led to the discovery of many QTL. More recent contributions have focused on genomic prediction using high-density single nucleotide polymorphism (SNP) arrays. Within the context of this research, he has published and spoken to

stakeholders about computational issues, data issues, and across-breed prediction. Garrick has the novel ability to integrate science-based knowledge, business goals and attributes of a production system, processing and marketing principles, and quantitative and molecular genetics technologies into a comprehensive systems approach for decision support. Garrick has successfully developed and implemented web-based decision support software suitable for estimating milk payment, economic values in a grazing system, and customized bull catalogues. His research has affected genetic improvement programs for beef cattle, dairy cattle, sheep, elk, pigs, chickens, and trees. Livestock industries in the continents of Africa, Australia, Europe, and North and South America have benefited from his forward thinking, vision, and skill at communicating integrated knowledge of new molecular technologies for complex livestock systems.

Citation for Cathleen Williams Recipient of the 2011 Land O'Lakes, Purina Feed LLC Teaching Award in Dairy Production

Cathleen C. Williams, Gerald A. Simmons professor of dairy science and associate professor in the School of Animal Sciences at Louisiana State University (LSU), is the recipient of the 2011 Land O'Lakes Purina Feed LLC Teaching Award in Dairy Production. Williams consistently receives excellent course evaluations and her students comment on her knowledge, enthusiasm for teaching, and her ability to motivate them for the subjects that she teaches. They also mention her friendly, caring attitude



and availability outside of the classroom.

A native of Bogalusa, Louisiana, Williams earned her BS degree in dairy production science from LSU. She earned her secondary science teacher certification and taught high school science before accepting a position as dairy calf manager at Cabaniss Dairy Farm in Georgia. She earned an MS degree in dairy nutrition from the University of Georgia, and subsequently managed the nutrition laboratory. Williams later earned a PhD in animal nutrition from Auburn University. As a graduate student at Auburn, she was awarded a Purina Mills Inc. Research Fellowship.



Cathleen Williams (right) receives the 2011 Land O'Lakes Award from Christie Stanley, donor representative (left).

In 1998, Williams accepted a research and teaching position as assistant professor at LSU, where she has taught domestic animal endocrinology, animal science pro-seminar, applied animal feed formulation, and dairy farm management. She has co-instructed a graduate-level rumen metabolism and physiology course and has lectured annually on calf nutrition in the clinical veterinary nutrition class at the LSU Veterinary School. In addition, she has served as curriculum coordinator of the Dairy Division in the School of Animal Sciences, where she has advised all students in the dairy production concentrations and students in pre-veterinary medicine and animal science programs. She has mentored many students in undergraduate research and has coached the North American Intercollegiate Dairy Challenge team of LSU dairy science students, both at the regional and national levels, since 2006.

While she is very accomplished in teaching, Williams has maintained an active research program in dairy cattle nutrition and physiology, with emphasis on neonatal calf and replacement heifer nutrition and management. She has mentored two PhD students and 10 MS students, and served as a graduate committee member to more than 50 students in animal, dairy, and poultry sciences.

Furthermore, Williams has acted as advisor to the LSU Dairy Science Club and to the ADSA Student Affiliate Division, both of which have accomplished much under her leadership. As a testament of her ability to guide students in their professional development, Williams was selected as the first rector of the newly formed Agricultural Residential College. Williams has received 10 teaching and advising awards, including

the 2010 Carnegie Foundation for the Advancement of Teaching—Council for the Advancement and Support of Education Louisiana Professor of the Year Award.

Cathleen C. Williams is an outstanding teacher, mentor, and advisor who is dedicated to the academic and professional development of her students. Her genuine approach and passion for helping all students succeed are evident, and it is fitting that she has been selected as the recipient of the 2011 Land O'Lakes, Purina Feed LLC Teaching Award in Dairy Production.

Citation for Karen Schmidt Recipient of the 2011 Milk Industry Foundation Teaching Award in Dairy Science

Karen Schmidt earned her BS in food science from The Pennsylvania State University in 1979. After working in the food industry as quality assurance supervisor and food technologist for several years, Schmidt continued her education at the University of Minnesota, where she earned her MS and PhD degrees in food science in 1986 and 1989, respectively.



Schmidt joined the faculty at the University of Georgia as an assistant professor in 1990, where she remained until 1994 when she joined the faculty of Kansas State University (KSU) at the rank of associate professor. Schmidt

was promoted to full professor in 1999 and has served in that capacity at Kansas State University to the present.

Schmidt is recognized for consistently carrying very heavy teaching loads and doing so with unparalleled dedication and passion. She has developed and taught a wide variety of undergraduate dairy foods manufacturing courses over the past 18 years, first at the University of Georgia and then at Kansas State University, including dairy foods processing, dairy foods evaluation, food plant management, and quality assurance of food products. During that period, she has trained over 600 students in her courses. For most of her years at Kansas State University, Schmidt also coordinated the KSU Dairy Processing Plant and Dairy Bar. Under her management, the operation was not only profitable and known for quality products and service, but also a valuable hands-on research and educational tool for both graduate and undergraduate students. Schmidt's



Karen Schmidt (left) receives the 2011 Milk Industry Foundation Teaching Award in Dairy Science from Randy Brandsma, donor representative (right).

combination of didactic and experiential approaches to teaching has provided a solid foundation for students entering the workplace or returning for graduate studies.

Schmidt stresses teamwork and teaches her students to value and leverage the varied contributions by individuals to the team. She is extremely knowledgeable in dairy technology and food science, drawing heavily from her wealth of personal experiences in the food industry, and infuses into her classes an invaluable sense of relevance and real world applicability.

Schmidt is also recognized as a tremendous undergraduate academic advisor to the 20 to 30 students that she advises annually. She is a dedicated teacher outside of the classroom, maintaining involvement over the years with state Future Farmers of America groups, coaching food science quiz bowl teams and dairy products judging teams, and serving as faculty advisor to the food science club and the dairy science club.

Schmidt is an active member of the Institute of Food Technologists, the International Association of Food Protection, and ADSA, where she has served in many service and leadership roles, including editorial board member for the *Journal of Food Protection* and the *Journal of Dairy Science*, secretary and chair of the ADSA Dairy Foods Division, and member of the ADSA Foundation Board. Schmidt has also served as editorial board member of the *International Dairy Journal*.

Citation for Kamal Mjoun Recipient of the 2011 National Milk Producers Federation Richard M. Hoyt Award

Kamal Mjoun was born in Oujda, Morocco. Mjoun received graduate degrees in animal nutrition from universities in Morocco, France, and the United States. In 2010, he received a PhD in dairy science from South Dakota State University under the direction of Kenneth Kalscheur. Mjoun conducted comprehensive research in the use of distillers grains as a source of amino acids for dairy cows at different stages of lactation. His work is a valuable update to feed library protein fractions and amino acid digestibility of different distillers grains byproducts. He also provided further understanding of amino acid utilization and apparent deficiencies from diets based on distillers grains using arteriovenous techniques. The main conclusion from his research is that distillers grain is



Kamal Mjoun (left) receives the 2011 National Milk Producers Federation Richard M. Hoyt Award from Beth Briczinski, donor representative (right).

a viable source of protein at lower cost compared to soy-based protein for dairy cattle.

Mjoun received the Midwest ADSA Foundation Young Scholar Award in Dairy Production in 2010. Mjoun has co-authored six peer-reviewed journal papers, six conference abstracts, and two extension publications. Currently, Mjoun is a postdoctoral research scientist with the USDA-Agricultural Research Service in Brookings, South Dakota. Mjoun aspires to pursue a research career in the animal industry. He and his wife, Stacy, have three daughters, Matalyn, Manara, and Kamelia.

**Citation for Tom Jenkins
Recipient of the 2011 Nutrition Professionals Inc.
Applied Dairy Nutrition Award**

Thomas C. Jenkins is recognized nationally and internationally for his contributions to our understanding of lipid metabolism in dairy cattle. His research has stood the test of time and results are being used by other scientists and applied in the dairy industry throughout the world. He has been sought after by numerous industries for development and testing of new fat products, many of which are now commercialized in the dairy industry. He is regularly contacted by nutrition consultants, veterinarians, and other university faculty to assist with fat feeding programs and



lipid testing of feed and milk. He also gives numerous invited talks each year at national and international nutrition conferences, consultant meetings, and scientific symposia related to the benefits and limitations of fat-feeding to dairy cattle. His publications number well over 100 in scientific journals, patents, and book chapters. Jenkins received the American Feed Industry Award from ADSA for outstanding research in dairy cattle nutrition in 1999 and was awarded the Godley-Snell Award for excellence in Agricultural Research by Clemson University in 2005.

Jenkins has made monumental contributions in the area of lipid analysis. Most researchers in ruminant nutrition and progressive companies in the feed industry are following the methods of lipid analyses elaborated by Jenkins. Most recently, Jenkins, along with colleagues in this area, has initiated discussions with the American



Tom Jenkins (left) receives the 2011 Nutrition Professionals Inc. Applied Dairy Nutrition Award from Steve Woodford, donor representative (right).

Oil Chemists Society (AOCS) to establish and validate an approved fatty acid (FA) analysis method for feedstuffs. Jenkins' work with AOCS to establish standards for lipid analysis of feedstuffs represents an important step that would allow standardization and simplification across the entire animal agriculture industry.

Overall, the use of fat supplements and Ca salts of FA has become routine throughout the dairy industry and this is another area where seminal discoveries and research contributions by Jenkins and collaborators have made it possible. The area of lipid metabolism in the rumen is arguably where the fundamental research of Jenkins has had the greatest impact. The research by Jenkins in the area of understanding rumen biohydrogenation has been a game changer. Many of the specific developments contributed by Jenkins and colleagues are featured in his invited reviews in 2006 (*Journal of Dairy Science* 89:1302–1310) and 2008 (*Journal of Animal Science* 86:397–412). His discoveries have pushed back the boundaries of our understanding of rumen biohydrogenation and its effect on milk fat composition.

Thomas C. Jenkins has made significant contributions to applied dairy cattle nutrition and the animal industry as a whole. His outstanding achievements in research have spanned basic and applied aspects of ruminant lipid digestion and metabolism, and his original research has led to important gains in our knowledge base and innovative applications in the dairy industry.

The committee is proud to present the 2011 Nutritional Professionals Inc. Applied Dairy Nutrition award to our distinguished colleague, Tom Jenkins.

**Citation for W. Ron Butler
Recipient of the 2011 Pfizer Animal
Health Physiology Award**

W. R. (Ron) Butler was born into a dairy farm family, the oldest of five children and son of a progressive, forward-looking father whose goal was to improve the



dairy industry through innovation. Duane Butler, Ron's father, was one of the first to adopt artificial insemination for dairy cattle in Trumbull County, Ohio, some 70 years ago. Duane was instrumental in organizing Select Sires Inc. and served as its director for four years. Ron Butler has continued the quest for dairy industry innovation.

Butler is now professor and chair of the Department of Animal Science at Cornell University. He received a BS degree in dairy science and MS degree in reproductive physiology from The Ohio State University and a PhD in reproductive physiology from Purdue University. His research and teaching career of 36 years has been directed at the regulation of ovarian follicle development, ovulation, and fertility in dairy cattle and other species.

Butler has an impressive record of original research and has authored more than 120 journal and review publications. He is known nationally and internation-



Ron Butler (right) receives the 2011 Pfizer Animal Health Physiology Award from Ed Stanisiewski, donor representative (left).

ally for his research in bovine reproductive biology. Many of his discoveries have shaped current thought in this area, affecting the current extension recommendations not only for New York dairy producers, but also worldwide, and influencing dairy nutrition and health research.

With the increased genetic capability for milk production, a critical problem has developed for dairy producers at home and abroad, signified by a marked decrease in fertility rates. Nutritional requirements shift abruptly at parturition, as milk production rapidly increases and cows enter negative energy balance. Butler's initial, seminal observations demonstrated that the negative energy balance during the first three to four weeks postpartum affects later reproductive events and is highly correlated with the days to first ovulation. Because a shorter interval to first ovulation is associated with higher conception rates during the breeding period, the length of postpartum interval to first ovulation represents a key interaction of energy status on reproductive performance. Butler's original research proved pivotal to workers in this area. Of equal importance, his findings have led to an understanding of the interrelatedness of nutrition and reproduction and, in particular, to how negative energy balance in postpartum dairy cows affects metabolic hormones and gonadotropin secretion, which then determines subsequent reproductive performance. The challenge of his current research is to explore molecular, genetic, and hormonal mechanisms in ovarian and liver tissues, those most affected by changes in metabolic activity during transition and early lactation. The overall goal of his research is to combine dietary strategies and technology to enhance reproductive efficiency, health, and profitability in dairy cattle.

Butler collaborates with researchers here and abroad and recognizes the critical importance of communicating his research findings to other scientists, industry consultants, and producers. He is a frequent speaker at national and international conferences and symposiums. His most noteworthy contribution to science and the dairy industry has been the synthesis of his research results into broad, practical concepts that will help to keep that industry productive and strong.

**Citation for John Bernard
Recipient of the 2011 Pioneer Hi-Bred
Forage Award**

John K. Bernard is the recipient of the 2011 Pioneer Hi-Bred Forage Award. He received his BS degree in animal science from The University of Tennessee and MS and PhD degrees from The University of Georgia (UGA). From 1987 to 1998, Bernard served as a faculty

member in the Department of Animal Science at The University of Tennessee. Since 1998, he has served as a faculty member in the Department of Animal and Dairy



Science at The University of Georgia where he serves as professor and research, extension, and instruction coordinator for the UGA Tifton Campus. Bernard's interest in forages began early in life while working on the family farm and has continued throughout his professional career. During his career, Bernard's research has focused on improving forage quality through variety or cultivar selection, harvesting deci-

sions and technology, and interactions between various forages and animal nutrition. His joint research and extension appointment provides him with the opportunity to share the results of his research directly with dairy producers and those who have a direct influence on producer decisions.

Since joining The University of Georgia, Bernard has developed an applied research program to improve quality and utilization of forages grown in the southeastern United States. Bernard's research in using annual ryegrass resulted in greater utilization of this crop in rotation with summer annual forages. His early research demonstrated that the source of dietary starch in rations based on ryegrass affects nitrogen utilization and performance. Additional research demonstrated

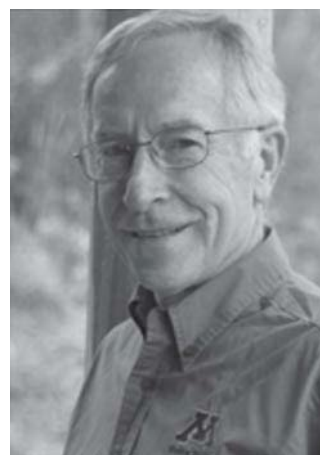
that proper kernel processing of corn silage decreased the need for supplemental starch in diets based on corn silage and ryegrass silage. Bernard's current research is focused on incorporating improved bermudagrass cultivars into rations based on corn silage to increase the utilization of locally produced forages, which are well adapted to the hot, humid climate common to the southeastern United States.

In his extension role, Bernard provides information and training to county extension agents, private consultants, producers, and agribusiness representatives on forage production, storage, and animal nutrition. He also works with faculty from the University of Florida to plan and host a Corn Silage and Forage Field Day each year and is frequently asked to talk at local, state, and regional field days.

Bernard has authored or co-authored numerous articles for peer-reviewed journals, conference proceedings, and the popular press. Bernard has supervised or served on the advisory committee of 28 graduate students during his career at Tennessee and Georgia. In addition to research and extension, Bernard has served ADSA as chair of the Journal Management Committee, on the editorial board of the *Journal of Dairy Science*, president of the Southern Branch of ADSA, and director of the Production Division of ADSA.

Citation for Jeffrey Reneau Recipient of the 2011 West Agro Inc. Award

Jeffery K. Reneau is a professor of dairy management in the Department of Animal Science at the University of Minnesota with responsibilities in extension, teaching,



and research. Jeff received his BS degree in dairy science from the University of New Hampshire in 1965, and an MS degree in dairy nutrition and a DVM degree from the University of Minnesota in 1974 and 1976, respectively. Reneau practiced veterinary medicine in Parkers Prairie and Buffalo, Minnesota, specializing in large animal care, and joined the faculty at the University of Minnesota in 1979.

Reneau's research interests have been focused on several areas. One major thrust is the application of the statistical process control system (SPC) for capturing, analyzing, and providing sound, valid, and statistically based mastitis and milk quality management decisions.



John Bernard (right) receives the 2011 Pioneer Hi-Bred Forage Award from Bill Segler, donor representative (left).

This program is now being used by several thousand dairy farms in Minnesota and other states across the nation, and has become an effective tool to monitor subclinical mastitis and milk quality, as well as to predict potential future outcomes and progress. Reneau has also been a team leader in the research and educational programs developed around compost-bedded pack dairy barns, a new housing method that is rapidly gaining adoption, and in the same vein, he developed a systematic and quantifiable approach to animal cleanliness scoring in compost barns that is now used industry wide. Last, Reneau was instrumental in the development of the Quality Counts Program, a statewide cooperative campaign to improve milk quality in Minnesota. The materials and success of this program have been shared with many other colleagues in the United States and abroad, and have been the foundation for milk quality success in many other states and countries.

In addition to his extension and research efforts, Reneau teaches the courses Animal Production Systems, Dairy Information Systems, Dairy Production Systems, Tools for Dairy Consultants in the 21st Century, and Advanced Dairy Production Systems.

In the last five years, Reneau has authored or co-authored 13 refereed publications, one book chapter, 11 abstracts, 25 popular press articles, plus over 40 invited presentations, conference proceedings, and extension publications. Internationally, Reneau has been invited to speak and participate in dairy conferences in Morocco, Chile, and Russia. Reneau has been a very

active member and contributor of milk quality, mastitis control, and dairy information to ADSA, National Mastitis Council, and American Association of Bovine Practitioners (AABP), and he has served in several leadership roles, including National Mastitis Council president. As a veterinarian, he has been active in the AABP and conducted workshops at their annual meetings on milk quality and methodologies to measure and monitor milk quality in dairies.

Awards for his past research and extension efforts include the ADSA DeLaval Extension Award (2009), Distinguished Service Award, Upper Midwest Dairy Industry Association (2006), College of Agricultural Food and Environmental Sciences (COAFES) Distinguished Faculty Award (2004), Distinguished Service Award, Minnesota Dairy Herd Improvement Association (2003), Distinguished Service Award, National Mastitis Council (1995), and AABP American Cyanamid Award of Excellence (1993).

**Citation for Nicole Schreiber
Recipient of the 2011 National Milk Producers
Federation Graduate Student Paper Presentation
Contest in Dairy Production, MS division**

Nicole Schreiber was the recipient of the National Milk Producers Federation Graduate Student Paper Presentation Contest in Dairy Production, MS Division. Nicole obtained her BS degree in animal science from Oklahoma State University, graduating summa cum laude. As an undergraduate, she completed a re-



Jeffrey Reneau (left) receives the 2011 West Agro Inc. Award from Mario Lopez-Benavides, donor representative (right).



Nicole Schreiber (left) receives the 2011 National Milk Producers Federation Graduate Student Paper Presentation Contest in Dairy Production (MS division) from Beth Briczinski, donor representative (right).

search project that led her to pursue her MS degree in animal science at Oklahoma State. Her research is in reproductive physiology, specifically the regulation of ovarian cell function by fibroblast growth factor 9

The second-place winner was Jason Watts, University of Idaho, and the third-place winner was Jackie Ploetz, University of Illinois.

**Citation for Ratan Choudhary
Recipient of the 2011 National Milk Producers
Federation Graduate Student Paper Presentation
Contest in Dairy Production, PhD division**

Ratan Choudhary was the recipient of the National Milk Producers Federation Graduate Student Paper Presentation Contest in Dairy Production, PhD Division. Ratan is a PhD student at the University of Maryland completing his research at the Functional Bovine Genomics Lab, part of the Animal and Natural Resources Institute at the Beltsville Agricultural Research Center. Ratan received his Bachelor of Veterinary Science from Madars Veterinary College in Chennai, India and his Master of Veterinary Science from Indian Veterinary Research Institute, Animal Genetics and Breeding in Bareilly, India. Ratan is working to identify molecular markers for mammary stem cells and to study the characteristics and regulation of mammary stem cells. To date, he has 5 peer-reviewed journal publications and 3 in preparation.

The second-place winner was Laurie Winkelman, Cornell University, and the third-place winner was Nathalie Newby, University of Guelph.



Ratan Choudhary (left) receives the 2011 National Milk Producers Federation Graduate Student Paper Presentation Contest in Dairy Production (MS division) from Beth Briczinski, donor representative (right).

Ratan Choudhary was also the recipient of the ADSA/EAAP Student Travel award sponsored by Novus International, and given to the winner of the National Milk Producers Federation Graduate Student Paper Presentation Contest in Dairy Production, PhD Division.

**Citation for Michael Adams
Recipient of the 2011 Dairy Research Institute
Graduate Student Paper Presentation
Contest in Dairy Foods**

Michael Adams, MS candidate in food science at Cornell University, under the guidance of David Barbano, was the 2011 Dairy Foods Division Graduate Oral Paper Competition winner. In Michael's presentation, titled "Serum protein removal from skim milk with a 3-stage, 3X ceramic Isoflux membrane process at 50 degrees C," he showed us that the system is not efficient at removing serum proteins from skim milk. He helped us understand why differences in serum protein removal may occur with various membranes, specifically based upon membrane design. Prior to joining Cornell, Michael earned a BS in food science and technology, magna cum laude, from the University of Tennessee and an Associate of Applied Science in baking and pastry arts, summa cum laude, from Johnson and Wales University.

The second-place winner was Irma Amelia, Cornell University, and the third-place winner was Joseph Loquasto, Pennsylvania State University.



Michael Adams (left) receives the 2011 Dairy Research Institute Graduate Student Paper Presentation Contest in Dairy Foods Research from Dave McCoy, donor representative (right).



Aaron Fox (left) receives the 2011 Schreiber Foods Graduate Student Poster Presentation Contest in Dairy Foods Research from Randy Brandsma, donor representative (right).

**Citation for Aaron Fox
Recipient of the 2011 Schreiber Foods
Graduate Student Poster Presentation
Contest in Dairy Foods Research**

Aaron Fox was the recipient of the Schreiber Foods Graduate Student Poster Presentation Contest in Dairy Foods Research. Aaron is an MS student in North Carolina State University. He is working in the group lead by the very busy MaryAnne Drake. Aaron just completed his first year as an MS student. The judges were impressed by his ability to relate his research's relevance in industrial applications. His poster was very well organized, structured logically, and conveyed concepts efficiently. He was poised, confident, excited, and enthusiastic about explaining his research. His bow tie helped.

The second-place winner was Rachel Cambell, North Carolina State University, and the third-place winner was Anne Sauer, Cornell University.

**Citation for Robin White
Recipient of the 2011 Land O'Lakes,
Purina Feed LLC Graduate Student Poster
Contest in Dairy Production, MS division**

Robin White was the recipient of the Land O'Lakes, Purina Feed LLC Graduate Student Poster Contest, MS Division. Robin is from Seattle Washington and attended Washington State University for both her BS and MS degrees. The title of her abstract was "A



Robin White (right) receives the 2011 Land O'Lakes, Purina Feed LLC Graduate Student Poster Contest in Dairy Production (MS division) from Christie Stanley, donor representative (left).

simulation assessment of long-term nitrogen runoff reduction from dairy pastures." Robin carried out this work with Jude Capper, with whom she will continue to work for her PhD studies. Robin is a member of ADSA and ASAS. She has particular interests in the areas of environmentally oriented animal agriculture and rangeland management.

The second-place winner was Kayla Machado, Virginia Tech, and the third-place winner was Robb Bender, University of Wisconsin.

**Citation for Kevin Herrick
Recipient of the 2011 Land O'Lakes,
Purina Feed LLC Graduate Student Poster
Contest in Dairy Production, PhD division**

Kevin Herrick was the recipient of the Land O'Lakes, Purina Feed LLC Graduate Student Poster Contest, PhD Division. Kevin previously completed both his BS and MS degrees at South Dakota State University. After completing these degrees, Kevin worked for Land O' Lakes Purina Feed for 8 years as a dairy production consultant and 2 years as a herdsman at Cederberg Dairy in South Dakota. Kevin is currently enrolled in a PhD program at South Dakota State University where his area of research is butyrate metabolism in dairy cattle. The title of his abstract was "Metabolism of ruminally dosed butyrate and lactose in lactating dairy cows". Kevin is a member of ADSA and ARPAS.

The second-place winner was Claudia Arndt, University of Wisconsin, and the third-place winner was Santiago Bas, The Ohio State University.



Kevin Herrick (right) receives the 2011 Land O'Lakes, Purina Feed LLC Graduate Student Poster Contest in Dairy Production (PhD division) from Christie Stanley, donor representative (left).

Citation for Jake Anderson Recipient of the 2011 Genevieve Christen Undergraduate Student Award

The 2011 Genevieve Christen Undergraduate Student Award is presented to Jake Anderson of Louisiana State University (LSU). He was selected for this prestigious award based on his excellent combination of academics, leadership, and involvement.



Anderson completed his BS degree in animal, dairy, and poultry sciences with a dairy production concentration in May 2011. Beginning in the fall of 2011, he is continuing his studies at LSU, where he is pursuing an MS degree in ruminant nutrition. Upon completion of his MS degree, Anderson is interested in

a career as either a consulting nutritionist or extension specialist.

Anderson's interest in the dairy industry began while he was involved in 4-H youth programs in middle and high school. He became actively involved in dairy science as a resident student employee at the LSU dairy farm, where he was responsible for overseeing the farm in the evenings and on weekends. Anderson's interest in dairy science flourished during his undergraduate program, and during his senior year he was selected as the LSU

Dairy Alumni Association Dairy Scholar. During this time he became actively involved in all aspects of dairy nutrition research. This experience in research greatly enhanced his education in dairy production during his undergraduate program and cultivated his interest in pursuing graduate studies in ruminant nutrition.

Anderson has proven to be an outstanding student at LSU. While maintaining excellent grades, he also participated in extracurricular events to supplement his classroom education. He participated in the regional and national North American Intercollegiate Dairy Challenge contests. His presentation on dairy foods in the prevention of childhood obesity placed first in the Southern region and second in the national ADSA student division paper competitions.

While Anderson is an excellent student, he also excels in leadership. He served as the 2010–2011 president of the ADSA Student Affiliate Division and is an ex officio member of the ADSA Board of Directors and ADSA Program Planning Committee. Prior to his term as president, he served as the 2009–2010 secretary-treasurer. Anderson was awarded the ADSA Student Affiliate Division Outstanding Student Award for 2009–2010. At the regional level, Anderson's interest and involvement were equally outstanding. His participation and enthusiasm for the Southern Branch were apparent as he was awarded the 2010 Outstanding Southern Regional ADSA Student Award. As a dairy science club member at LSU, Anderson was actively involved all four years of his undergraduate program. He served as the 2010–2011 president, 2009–2010 social chair, and 2008–2009 second vice-president. Under his



Jake Anderson (right) receives the 2011 Genevieve Christen Undergraduate Student Award from Cindie Luhman, ADSA Foundation Chair (left).

leadership as chair of the fall ice cream sales, the club netted several thousand dollars in revenue. Anderson also secured over \$3,000 in student government funding for the club to attend national ADSA meetings. He was instrumental in the success of the dairy science club for the past four years. As a testament of his club leadership, his peers selected him as the Outstanding Senior for 2010–2011. In addition to his work with the dairy science club, Anderson's leadership skills flourished as assistant coach of the LSU dairy challenge team. His unselfishness and willingness to help others are two of Anderson's most impressive qualities, and these qualities have helped him develop as a leader in the dairy industry.

Anderson's passion for the dairy industry, academic accomplishments, and leadership skills are clearly evident. Therefore, it is fitting that he is the recipient of the 2011 Genevieve Christen Undergraduate Student Award.

**Citation for Marie Yeung
Recipient of the 2011 ADSA Foundation
Scholar Award in Dairy Foods**

After completing her BS in biology from the Chinese University of Hong Kong, Marie Yeung was drawn to the dairy science graduate program at California



Polytechnic State University, San Luis Obispo (Cal Poly) for the research opportunities and professional prospects. At the Dairy Products Technology Center and Biological Sciences Department, she applied the latest technologies to identify and subtype probiotic bacteria commonly found in fermented products, under the guidance and support of Phil Tong, Rafael Jimenez, Raul Cano, Chris Kitts,

and Mary Ellen Sanders. She later completed her PhD in food science at Cornell University under the guidance of Kathryn Boor and Martin Wiedmann. After working as a postdoctoral associate for H el ene Marquis at the Department of Microbiology and Immunology, she served as an assistant professor in the Department of Dairy Science at South Dakota State University. She is now an assistant professor in the Biological Sciences Department at Cal Poly, teaching primarily microbiology and conducting research on microorganisms associated with dairy and other food products. She also has



Marie Yeung (right) receives the 2011 ADSA Foundation Scholar Award in Dairy Foods from Cindie Luhman, ADSA Foundation Chair (left).

experience in teaching dairy and meat science, biology, nutrition, and food safety and quality to undergraduates in China.

Yeung's research program encompasses food quality and safety. She and her colleagues recently investigated the survival behavior of *Lactobacillus acidophilus* in yogurt. *Lactobacillus acidophilus* is commonly regarded as a probiotic microorganism, which by definition, has the capability to confer health benefits to human hosts. Nonetheless, an adequate number of viable cells must be delivered at the time of consumption to realize most of the purported health benefits. Her research showed that low pH was not a critical factor dictating the survival of multiple *L. acidophilus* strains, whereas the presence of viable starter culture, especially *Lactobacillus delbrueckii* ssp. *bulgaricus*, had significant antagonistic effects. Molecular understanding of the strain-to-strain variation in their viabilities is underway. This study has implications for the selection of compatible starter culture and probiotic strains in functional food formulations. Yeung and her colleagues are currently using terminal restriction fragment analysis and other metagenomic approaches to probe the microbial communities in milk in response to a more contemporary definition of milk quality. Coupling bioinformatic tools with molecular methods in Yeung's research is showing promise in evaluating milk quality and safety. The ability to produce excellent dairy products can be enhanced with new or additional information (such as the quantitative role of nonculturable organisms and spore formers in milk quality) provided by using these "omics" approaches.

Yeung's diverse research interest is evidenced by her 16 peer-reviewed journal papers and professional reports, 21 conference presentations, six invited talks, and a pending book chapter, with topics ranging from identification of probiotics, detection of waterborne pathogens, and molecular and virulence characterization of *Listeria monocytogenes* and *Vibrio parahaemolyticus*. She is planning to use her background in probiotics and pathogens to study the host innate immune response upon colonization of these bacteria, thereby better understanding the functional role of probiotics in human health.

**Citation for Victor Cabrera
Recipient of the 2011 ADSA Foundation
Scholar Award in Production**

Victor E. Cabrera is an assistant professor and extension dairy specialist in dairy management at the University of Wisconsin–Madison with a 70% extension and 30% research appointment. Cabrera received his BS degree (1993) from the Agrarian University in Peru and a postgraduate certificate (1995) for studies in Spain and France. Cabrera received his MS (1999) and PhD (2004) degrees from the University of Florida. After earning his PhD, he was a postdoctoral research associate (2004–2006) at the University of Miami and an assistant professor and an extension dairy specialist (2006–2008) at the New Mexico State University.

Cabrera combines applied research with interdisciplinary approaches and participatory methods to deliver practical, user-friendly, and timely decision support tools for dairy farm management. These scientific tools are aimed at improving dairy farm profitability and environmental stewardship, and enhancing the resilience and long-term sustainability of the US dairy farm industry. Cabrera uses simulation and modeling techniques to parameterize dairy farm production functions, to optimize the use of resources and farm profitability, and to study the effect of farm management decisions on farm sustainability. While working on his doctoral dissertation, Cabrera studied the economic and environmental impacts of dairy farm management strategies with respect to herd, crops, facilities, and manure disposal. This study led to the development of



Victor Cabrera (right) receives the 2011 ADSA Foundation Scholar Award in Dairy Production from Cindie Luhman, ADSA Foundation Chair (left).

the Dynamic North Florida Dairy Farm Model (DyNoFlo), a user-friendly decision support tool intended to maximize (minimize) profits (environmental impacts), which is being extensively used, has been presented in multiple national and international scientific meetings, and has been published in six journal articles.

**Citation for Don Beitz
Recipient of the 2011 ADSA Award of Honor**

Donald C. Beitz was raised on a Guernsey dairy farm in Illinois, where he developed an intense interest in dairy science. He earned BS and MS degrees in agricultural science in 1962 and dairy science in 1963 from the University of Illinois and a PhD degree from Michigan State University in 1967, with majors in dairy nutrition and biochemistry. Beitz began his professional career at Iowa State University with an appointment in the Departments of Animal Science and of Biochemistry, Biophysics, and Molecular Biology. He is a Charles F. Curtiss distinguished professor of agriculture. Teaching responsibilities include biochemistry courses for veterinary, undergraduate, and graduate students. Beitz gains much satisfaction from advising undergraduate students with majors in





Don Beitz (left) receives the 2011 ADSA Award of Honor from Jim Linn, ADSA President (right).

agricultural biochemistry and graduate students (101 graduate degrees awarded) with majors in nutritional physiology and biochemistry. In his 44 years, he has taught more than 11,000 students! Beitz's research activities relate to practical problems of animal agriculture and human nutrition and are focused on milk fever, ketosis, cholesterol regulation by diet, dietary and genetic control of milk and meat composition, mitochondrial DNA and milk production, and beef tenderness as influenced by vitamin D. He has maintained long-term collaborations with colleagues at the USDA/National Animal Disease Center. Beitz has published more than 245 peer-reviewed manuscripts, 305 abstracts, and 9 patents and made about 250 off-campus presentations. Honors included local and national awards for teaching, research, and advising excellence. He received the American Feed Industry Association Nutrition Research Award and American Cyanamid Award of ADSA. Moreover, he is a Fellow of ADSA, the American Society of Animal Science (ASAS), the American Society for Nutrition, the Iowa Academy of Science, and the American Association for the Advancement of Science. He has served on a variety of committees of ASAS, American Meat Science Association, and Council for Agricultural Science and Technology (CAST; also president). He served as chair of the Committee of Animal Nutrition of the National Academy of Sciences, Board of Life Sciences Research Office, and Committee on NRC Nutrient Requirements of Dogs and Cats. Beitz has attended every annual meeting of ADSA since joining in 1964. Within ADSA, he served as chair of the Production Division, Representative to CAST, and member of Committees for Initiation of Discover Con-

ferences and Centennial Celebration. He initiated the Pioneers program and wrote a history of the ADSA for the Centennial celebration. More recently, he served as director of ADSA and then as its president. In addition, Beitz has organized the Iowa State University Social at the annual meeting for 30+ years. Beitz has had a fulfilling career as a researcher and teacher at Iowa State University and in serving relevant professional societies.

Citation for H. Duane Norman Recipient of the 2011 ADSA Distinguished Service Award

H. Duane Norman is the recipient of the 2011 ADSA Distinguished Service Award. Norman grew up on a Jersey farm in Liberty, Pennsylvania, and was active in 4-H and FFA. After receiving a BS in dairy production from Pennsylvania State University, he began his research apprenticeship during his graduate programs at Penn State (MS, dairy breeding) and Cornell University (PhD, animal breeding). He was hired by the Agricultural Research Service (ARS) as a geneticist in 1970.



For the last 23 years, Norman has been research leader of the Animal Improvement Programs Laboratory, ARS, USDA, in Beltsville, Maryland, where he oversees a genetics research program that includes calculation of genetic evaluations for US dairy animals. He has developed methods that have led to genetic improvement of yield and fitness traits, thereby increasing efficiency of milk production worldwide. Through his leadership, the research charge of his laboratory has moved from simple evaluation of yield traits to complex evaluation of performance and genomic data for yield, fitness, and health traits of economic importance. Norman's impact on industry programs has contributed to a rate of genetic improvement for milk yield of 1.5% per year over the past 25 years for US dairy cattle.

Norman has received numerous awards for his contributions to increasing production efficiency of dairy cattle through genetic improvement. His laboratory received the USDA Distinguished Service Unit Award, a National Dairy Herd Improvement Association (DHIA) Award of Special Recognition, and *Government Executive* magazine's Government Technology

Leadership Award. Personal recognition includes the Polish Ministry of Agriculture's Decoration of Order of Merit in Agriculture, American Jersey Cattle Association's Distinguished Service Award, National Association of Animal Breeders' Research Award, National DHIA Outstanding Service Award, and ADSA's J. L. Lush Animal Breeding and Genetics, Fellow, and Land O'Lakes awards. He was recognized as World Dairy Expo's Industry Person of the Year this fall.

Norman has (co)authored 146 peer-reviewed scientific journal papers and 183 abstracts as well as 29 articles in proceedings, 67 articles in USDA and extension reports, 61 articles in trade publications, and 10 book chapters. He has made over 330 presentations at international, national, state, district, and university meetings and served on 77 industry committees. His laboratory's research activities have received grants that total over \$1.5 million.

Norman served as a director of National Dairy Shrine for nine years and was president in 2003; he received its Guest of Honor award in 2007. He has been a 4-H volunteer for 27 years.



Duane Norman (left) receives the 2011 ADSA Distinguished Service Award from Jim Linn, ADSA President (right).