

## 2005 Fellows of the American Dairy Science Association

The 2005 elected Fellows were recognized at the Awards Program of the American Dairy Science Association. Election to Fellow is one of the highest honors that the Association bestows. The Fellow's Award recognizes ADSA members for their distinguished service to the dairy industry for 20 years or more. Each nominee must have made exceptional contributions to the dairy industry, to a dairy-related discipline, or to ADSA; must have had professional membership in ADSA for a minimum of 20 years; and must be in good standing with the Association.

### William L. Crist

William L. Crist, Sr., has served the dairy industry in a variety of ways. He has been an employee of the Cooperative Extension Service since 1970. Bill was an area dairy industry agent in northeast Ohio for 8 years, then moved to the University of Kentucky as an extension dairy specialist. He served the Animal Sciences Department as Dairy Extension Leader and Departmental Extension Coordinator.



Bill was born and raised on a dairy farm in northeast Ohio. In 1963, he married Karen Sears; they have 3 daughters, 1 son, and 7 grandchildren.

He received his BS, MS, and PhD degrees from The Ohio State University.

Bill has been a member of the American Dairy Science Association since 1965, and has served on the Board of Directors, as chair of the Production Division, as a member of the editorial board of the *Journal of Dairy Science*, and on the planning committee for the 1989 ADSA/ASAS annual meeting in Lexington, Kentucky. He is a member of the Federation of Animal Science Societies Animal Care Committee and chair of the subcommittee that developed the dairy animal care training materials. Bill has also served as president of the Southern Branch of ADSA and of the National Mastitis Council. In 1999, Bill was recipient of the ADSA Outstanding Extension Dairy Specialist Award.

### M. Douglas Kenealy

M. Douglas Kenealy received a BS in dairy science and a PhD in animal nutrition and physiology from Iowa State University. After graduation, he served a



short time on active duty in the US Army followed by work as a nutritionist for a Midwestern feed company. Kenealy was hired by Iowa State University in the Animal Science Department to teach and advise undergraduates. He is an exceptional teacher, advisor, and leader and has made a lasting contribution to Iowa State University and to the more than 12,000 students he has taught

or advised.

Over the past 30 years, Kenealy has introduced thousands of ISU undergraduate students to animal and dairy science. His impact has been extremely positive and consistent. He has regularly taught 2 to 4 courses each semester while serving as academic advisor to 50 to 70 undergraduates. He has been sought out for co-curricular advising for numerous clubs and events, including advising the ISU Dairy Science Club for 30 years. Kenealy's primary assignment has evolved to include management of teaching and advising programs in the Animal Science Department. He has established an exceptional record in teaching and advising. Testimony to his teaching excellence are the hundreds of students who are now practicing agriculturists utilizing skills learned in Douglas Kenealy's classes.

As evidence of Kenealy's ability as a "master teacher," he has continually assumed roles with expanding responsibility, ultimately becoming professor-in-charge of dairy science and section leader for animal science teaching. Through these positions, he increasingly serves as not only teacher and advisor to students and student organizations, but also mentor and inspiration for young teaching faculty. Kenealy has extended his influence through state, national, and international teaching activities in the name of Iowa State University. He served as program chair for the ADSA/ASAS

joint teaching sections at the 2001 national meetings. He has led undergraduate agriculture courses to China, Taiwan, and the Ukraine, and taught in Ensminger Ag-Tech Schools in Russia and the Ukraine. Kenealy has completed curriculum development projects in China, Costa Rica, and the Ukraine.

During his career, Kenealy has been recognized for teaching excellence with the Gamma Sigma Delta Teaching Mission Award, AMOCO Outstanding Teacher Award, Iowa Legislative Awards for Teaching Excellence, Walnut Grove Livestock Service Award for Teaching, and the ADSA Teaching Excellence Award. Kenealy capped the current phase of his teaching career with the 2003 publication of *Animal Sciences: the Biology, Care, and Production of Domestic Animals*, co-authored with John Campbell and Karen Campbell.

### Lee R. McDowell

Lee R. McDowell was born on a livestock farm in Lyons, New York, and completed livestock projects to earn the FFA State Farmer Award in high school. A



major project was taking monthly milk weights, determining milk fat (Babcock test), and completing DHIA records for the family dairy. From 1965 to 1967, McDowell served as a Peace Corps volunteer in Bolivia and was involved with teaching and research for swine and cattle. Lee McDowell received his BS and MS degrees from the University of Georgia and Washington State University.

Since 1971, he has served in the Animal Sciences Department at the University of Florida.

At the University of Florida, McDowell has had major efforts in international programs, with an emphasis on grazing ruminants. At Florida, with an outstanding core of graduate students, McDowell has established feed analysis techniques for tropical and subtropical feeds; developed feed composition tables; located mineral and other nutrient-deficient areas; evaluated vitamin E bioavailability, studied gossypol, vitamin E, and reproduction relationships for Holstein bulls and pregnant heifers; developed mineral and other nutrient supplementation programs; studied Cu-Mo relationships; and determined P requirements using chemical and physical methods. He compared mineral milk composition among Brahman and Charolais beef cattle, water

buffalo, and sheep at different stages of lactation. He demonstrated how vitamin E supplementation to sheep would greatly increase the vitamin in colostrum and later produced milk. The Florida group has evaluated the role of biotin in hoof development and fatty liver syndrome in lactating dairy cows. They showed that biotin supplementation increased blood glucose and lowered liver fat in the early weeks of post calving. Forage concentrate ratios and the pH effect on biotin synthesis and cellulolytic bacteria have been evaluated.

McDowell is distinguished as a teacher, responsible for 1 undergraduate and 2 graduate nutrition courses. Since 1973, he has served as major advisor to 55 graduate-student programs and 4 postdoctoral programs. Since joining the University of Florida in 1971, McDowell has made 250 visits to 59 different countries. Many of these visits were the result of 2 AID programs and 1 USDA program, which have emphasized feed composition and mineral and vitamin research for grazing livestock. Since 1971, McDowell has given 452 major talks, the majority outside the United States. McDowell's emphasis has always been to assist foreign scientists in developing countries with practical research, which has the potential to greatly increase livestock productivity. Lee McDowell has written 5 textbooks dealing mostly with minerals and vitamins for livestock, and has authored or co-authored 1102 publications. In recognition of his research and teaching accomplishments, McDowell was the recipient of 7 ASAS or ADSA awards: Bohstedt, International Animal Agriculture, Distinguished Service to Agriculture (Southern Section), AFIA Ruminant Nutrition Research Fellow Award, International Dairy Production Award, and Morrison Award. In 2001, he received the Distinguished Alumnus in Science Award from Washington State University. In the area of mineral and vitamin research for grazing livestock (predominately cattle), he is one of the world's foremost authorities.

### Rex L. Powell

For more than 32 years as a research geneticist at USDA's Animal Improvement Programs Laboratory, Rex Powell has made numerous individual and team contributions to development of genetic evaluations critical to improvement of dairy cattle in the United States and around the world. His career began with BS (1964) and MS (1968) degrees in dairy production from Michigan State University, and a PhD (1972) in animal breeding from Iowa State University. He has authored over 325 publications and is senior author of more than 200 of those, including 50 articles published in the *Journal of Dairy Science*.

Powell was the primary researcher in charge of USDA-DHIA Cow Indexes and their improvement. His methodology led to inclusion of maternal ancestor information and an adjustment



for the dams of contemporaries. He was a member of the team that introduced both the Modified Contemporary Comparison and animal model methods of evaluation. He was a coauthor of lactation projection factors that were used to standardize lactation records for nearly 2 decades. His major contributions have related to conversion of foreign genetic evaluations

into a form comparable to US evaluations and directly usable by US farmers, first through conversion equations and later through the International Evaluation Bull Service (Interbull). His research has facilitated the use of the best bulls from around the world as sires of cows and of bulls for sampling.

Rex Powell is recognized as an authority on genetic yield trends, cow evaluation, and international comparison of bull evaluations. The respect afforded to him as a dairy industry spokesperson is apparent from the numerous invitations that he has received from throughout the United States and 26 foreign countries, many of which he has visited more than once. He has responded to invitations for more than 150 presentations at international, national, state, and district meetings, and at universities. Powell also is recognized as an international leader in cooperative efforts to coordinate genetic evaluations of dairy cattle and to enhance genetic improvement on a global basis. He was the US representative to Interbull for 22 years and served on its Steering Committee for almost 20 years.

In 1991, Powell was a member of the USDA team that received the National DHIA Award of Special Appreciation in recognition of continued superior research performance on genetic improvement of dairy cattle. He also was a member of the scientific teams that received a USDA Distinguished Service Award in 1991, *Government Executive* magazine's Government Technology Leadership Award in 1998, a National Partnership for Reinventing Government (Vice-Presidential Hammer) Award in 2000, and an ARS Award for Superior Technology Transfer in 2000. As an individual, Powell received the National Association of Animal Breeders Research Award in 1994, the ADSA J. L. Lush Award in Animal Breeding and Genetics in 1997, and

the Distinguished Service Award from National DHIA in 2005, in recognition of his many years of outstanding service and leadership in improving and advancing DHIA.

### George E. Shook

George E. Shook joined the faculty of the Dairy Science Department at University of Wisconsin-Madison in 1967 and has spent his entire career at Madison.



Raised on a small dairy farm in western Pennsylvania, he earned his BS degree at Penn State in 1963. His MS and PhD degrees were in dairy cattle breeding at Wisconsin, and he has been a member of ADSA since 1961. In 1981, he was senior research fellow at Wageningen University in The Netherlands.

Shook's early research developed DHI adjustment factors to more accurately estimate daily and lactation yields derived from a.m.-p.m. testing plans and for test intervals in early and late months of lactation. Shook pioneered genetic studies of somatic cell count in DHI records. He developed the somatic cell score (SCS) and demonstrated several practical and statistical advantages for SCS. His scoring approach has been adopted in many countries. Yield losses associated with increases in SCS were found to be linear, even at the lowest levels of SCS. Heritability was higher for SCS than clinical mastitis or somatic cell count, and genetic parameters for SCS were similar in herds with high and low levels of mastitis. This work led to national genetic evaluations for SCS in 1994. Shook formed and chaired the Genetics and Mastitis Task Force for the National Mastitis Council to promote the new genetic evaluations. The new emphasis on nonyield traits in selection indexes and the increasing economic importance of protein led Shook to collaborate with nutritionists to develop a bio-economic model of feed costs associated with genetic increases in yield traits; their model accounts separately for dietary protein and energy requirements for each milk component. In recent years, he has turned toward quantitative genetic studies of reproduction and infectious diseases. For the final chapter of his career, George Shook has led an interdisciplinary team to conduct genome-wide scans for major genes affecting sus-

ceptibility to mastitis.

ceptibility to paratuberculosis and bovine leukemia virus.

During the past decade, George Shook has taken a strong interest in the teaching and learning process and participated in numerous seminars and workshops on instruction. He has embraced innovations in teaching that emphasize student involvement in active learning. He enjoys collaborative teaching as co-instructor for Principles of Animal Breeding and has assisted with the team-taught Dairy Herd Management practicum. His elective senior course, Dairy Cattle Breeding, is his personal favorite, and a favorite of students. He chairs his department's undergraduate instruction committee and has served on various college and university committees related to instruction. Shook served as department chair from 1990 to 1996. During his term, he

facilitated promotion to associate professor of 6 colleagues and promotion to professor of 3. He led a strategic plan for the department and co-chaired an industry strategic plan, Dairy 2020, in Wisconsin.

George Shook has received the ADSA Purina Mills Teaching Award in Dairy Production, the ADSA J. L. Lush Award for Research in Animal Breeding, his college's Award for Teaching Excellence, National Association of Animal Breeders Research Award, and Outstanding Service Award from National DHIA. For ADSA, Shook has served on the Journal Management Committee of the *Journal of Dairy Science*, 3 terms on the Dairy Cattle Improvement Committee, and on several award committees. In addition, he served on several committees of the National Mastitis Council and National DHIA. George and his wife, Nancy, have a daughter and two sons.