

## Awards Presented in Crop Science, 2004

### UDAI RAM BISHNOI

#### Seed Science Award

UDAI RAM BISHNOI received his B.S. and M.S. from India and Ph.D. in Seed Technology from the Mississippi State University in the USA. Dr. Bishnoi is a professor of Agronomy and Seed Technology in the Department of Plant and Soil Science at the Alabama A&M University, Huntsville, AL.

### H. ROGER BOERMA

#### Crop Science Research Award

H. ROGER BOERMA was born 26 Dec. 1946 in Logan County, Illinois, and was raised on a grain and livestock farm near Emden, IL. He received his B.S. degree in agriculture education from Illinois State Univ. in 1968. Because of the encouragement and guidance of Dr. F.W. Fuess, he entered graduate school at the Univ. of Illinois in 1968. He received his M.S. degree in 1970 and Ph.D. in 1973 in plant breeding and genetics from the Univ. of Illinois under the direction of Dr. R.L. Cooper.

Dr. Boerma began employment with the University of Georgia in 1973 as an assistant professor of agronomy. He has spent his professional career at the Univ. of Georgia where he was promoted to associate professor, professor, and distinguished research professor. He was responsible for the creation of the Univ. of Georgia Center for Soybean Improvement and currently serves as its director. Dr. Boerma also participated in the development of the Univ. of Georgia Center for Applied Genetic Technologies Initiative (CAGT). He is currently serving as Coordinator for Plant Research in CAGT.

Dr. Boerma developed and continues to teach a graduate-level course, Quantitative Aspects of Plant Improvement. He is active in training graduate students, postdoctoral fellows, and visiting scientists. He has directed 12 M.S. students, 9 Ph.D. students, and 10 postdoctoral fellows.

Throughout his career, Dr. Boerma has worked to develop, maintain, and expand the interdisciplinary nature of his research. His initial cooperative efforts with Dr. D.V. Phillips and Dr. C. Kuhn resulted in the identification and designation of genes conditioning soybean resistance to frogeye leaf spot, *Peanut mottle virus*, *Cowpea chlorotic mottle virus*, and *Tobacco ringspot virus*. He has recently employed DNA markers to identify the genomic region of several of these genes.

His cooperation with Dr. D.A. Ashley resulted in the first report of genetic variation among soybean cultivars for canopy photosynthesis and the positive association of this trait and seed yield. Results from a breeding experiment indicated that seed yield could be increased by selection among genotypes for superior canopy photosynthesis.

Dr. Boerma and Dr. R.S. Hussey were the first to report genetic variation and the heritability of tolerance to soybean cyst nematode. They also were successful in the development of a 30-d root-knot nematode screening procedure that is considered the standard by commercial breeding organizations and public soybean breeders. Their research group was the first to report DNA markers linked to resistance genes

for southern, peanut, and Javanese root-knot nematodes and to employ them in marker-assisted breeding.

Dr. J.N. All and Boerma succeeded in the development of improved selection methods for foliar feeding insects. Recently, they successfully employed DNA markers to locate resistance genes to defoliating insects in three resistant Asian accessions. In addition, these studies provided the first genetic evidence of the independence of the antibiosis and antixenosis mechanisms of soybean insect resistance.

Dr. Boerma integrated transgenic technologies with the ongoing traditional soybean improvement program. The research team of Dr. W.A. Parrott, Dr. J.N. All, and Boerma created the first *Bt* transgenic soybean and conducted its first field test in 1996. This *Bt* transgenic soybean provided almost complete resistance to some defoliating insect species but only partial resistance to others. Recent field and greenhouse assays have shown an additive effect of the *Bt* transgene when pyramided with native soybean resistance genes.

The Boerma Laboratory has successfully employed molecular pedigree analysis to confirm quantitative trait loci (QTL) conditioning resistance to root-knot nematodes, defoliating insects, and bacterial pustule and for salt tolerance. His research group was one of the first to report on the confirmation of QTL for soybean seed composition traits. This research produced the first formal approval and naming of a QTL by the Soybean Genetics Committee.

Recently, his innovative application of molecular markers for the recovery of the recurrent parent's genome was successful in the development and release of the first publicly developed glyphosate-tolerant soybean cultivar. In 2003 and 2004, these MG VII and VIII cultivars were grown on more U.S. hectares than any soybean cultivar of comparable maturity.

His research has resulted in the development of 18 soybean cultivars and the release of four improved germplasm lines. He has published four book chapters, 130 refereed journal papers, and 26 conference proceedings. Dr. Boerma has served as an associate editor and a technical editor for *Crop Science*, chair of CSSA C-1 Division, and coeditor of the third edition of the ASA monograph, *Soybeans: Improvement, Production, and Uses*.

He has received the American Soybean Association Soybean Production Research Award, the American Society of Agronomy Agronomic Achievement Award, Illinois State Univ. Alumni Achievement Award, and the National Council of Commercial Plant Breeders Genetics and Plant Breeding Award. He is a fellow of Crop Science Society of America, American Society of Agronomy, and American Association for the Advancement of Science.

### KARL DANNEBERGER

#### Fred V. Grau Turfgrass Science Award

KARL DANNEBERGER is Professor in the Department of Horticulture and Crop Science at The Ohio State University. Dr. Danneberger earned his B.S. degree from Purdue University, M.S. degree from the University of Illinois, and his Ph.D. degree from Michigan State University.

Dr. Danneberger's research program focuses mainly on the areas of turfgrass ecology and physiology. Over the last 15 yr, he has used molecular techniques, primary random amplified polymorphic DNA (RAPD), for cultivar identification and

population dynamics studies in the field. His research group was one of the first to use RAPDs as a method for cultivar identification of cool season turfgrasses. His work has also looked at gene flow among populations of *Poa annua* L. and the effectiveness of intraseeding new cultivars of creeping bentgrass into an existing stand of the same species. Dr. Danneberger has authored or coauthored 50 refereed journal articles, 185 technical articles, and one book.

Dr. Danneberger teaching responsibilities include coordinator for the undergraduate turfgrass science major. He advises over 100 undergraduate turfgrass science majors and teaches five courses.

Dr. Danneberger served as associate editor for *Crop Science* and the *International Turfgrass Society Journal*. He is active in the C5 division of CSSA and served as C5 Chair.

## LYN GETTYS

### Gerald O. Mott Scholarship

LYN GETTYS is a plant genetics doctoral candidate in the Department of Agronomy at the University of Florida and a recipient of the University of Florida's Outstanding Alumni Fellowship. Miss Gettys earned her B.S. degree with highest honors in environmental horticulture from the University of Florida and her M.S. degree in plant breeding from the Horticultural Sciences Department at North Carolina State University.

Miss Gettys' research focuses primarily on the inheritance of morphological characters in perennial plants. Her doctoral research concentrates on studying transmission of flower color, morph, albinism, and other morphological characters in pickleweed. She has also analyzed incompatibility relationships within the species and has developed novel pollination techniques to bypass some of the barriers contributing to incompatibility. While working on her M.S., Miss Gettys studied inheritance of flower color in Stokes aster and utilized RAPDs and molecular markers to examine relatedness between cultivars of Stokes aster. Other research endeavors have included determination of optimal culture and nutrition conditions for various aquatic plants, effect of glyphosate on native and invasive species, seeds germination, and vegetative propagation.

This research has been disseminated at both extension and academic functions and events. Miss Gettys has presented her research at state, regional, and national short courses, meetings, and conferences. She has authored or coauthored nine journal articles, six extension or research publications, and numerous abstracts. Miss Gettys is a member of several professional organizations and honor societies including American Society of Horticultural Science, Gamma Sigma Delta, and Pi Alpha Xi.

In addition to her graduate research appointment, Miss Gettys serves as a teaching assistant for undergraduate *Genetics* at the University of Florida. She has previously assisted in the instruction of the course Plant Propagation, Plant Identification.

## DALE R. HICKS

### Crop Science Extension Education Award

DALE R. HICKS is a professor and extension agronomist in the Agronomy and Plant Genetics Department at the University of Minnesota where he has statewide responsibility for research and extension programs on corn. Dr. Hicks earned B.S., M.S., and Ph.D. degrees from the University of Illinois and has spent his professional career working with corn producers in the upper Corn Belt.

Dr. Hicks' research on optimum and economic levels of corn production inputs has led to the development of many

agronomic recommendations that have increased productivity and profitability of growing corn. He has authored or co-authored over 300 publications dealing with management practices to increase yields or production efficiency. His research and publications on optimum corn planting dates, corn hybrid maturity management, plant density, and hybrid selection have had a major impact in increasing corn yields and profitability in Minnesota. His research on hail damage evaluation and publications on replanting recommendations have been used nationally as guidelines for replant decisions on both corn and soybean.

## ROBERT KALLENBACH

### Young Crop Scientist Award

ROBERT KALLENBACH is an associate professor of Agronomy at the University of Missouri. In addition to his research appointment, Dr. Kallenbach serves as State Forage Extension Specialist. Dr. Kallenbach earned his B.S. degree from Southwest Missouri State University, his M.S. from the University of Missouri, and his Ph.D. from Texas Tech University.

Dr. Kallenbach's research focuses on developing improved winter-feeding systems for beef and dairy cattle. Specific investigations include winter-annual forage evaluations, improving utilization of stockpiled tall fescue, use of annual forages in cropping systems, alfalfa management strategies to lower hay production costs, and preventing grass tetany in grazing livestock. From these efforts, Dr. Kallenbach has authored 21 refereed journal articles, two book chapters, one book, 31 abstracts, 32 conference proceedings, and 22 technical guides for farmers.

Much of the information developed from Dr. Kallenbach's research program is utilized in his extension education efforts. Working with regional extension and NRCS grassland specialists, he developed a winter-feeding system for beef cattle program has helped Missouri's 60 000 cow-calf producers become more profitable. Taught through a series of short courses and on-farm demonstrations, Dr. Kallenbach's program has increased use of winter annual pastures by Missouri beef producers by 30-fold and doubled the use of stockpiled tall fescue. A recent economic analysis found that by using the techniques prescribed by Dr. Kallenbach, that producers have reduced winter feeding costs by \$44 per cow annually. This effort saved the state's beef producers more than \$19 million dollars in 2003.

Dr. Kallenbach has served as a technical editor and currently is the editor of *Crop Management*. Besides his activities with ASA, CSSA, and SSSA, Dr. Kallenbach has been active in the American Forage and Grassland Council, the Missouri Forage and Grassland Council, and Gamma Sigma Delta.

## BETTY KLEPPER

### Monsanto Crop Science Distinguished Career Award

BETTY KLEPPER is Retired Research Leader of the USDA Columbia Plateau Conservation Research Center at Pendleton, OR. She earned her B.A. summa cum laude from Vanderbilt University and her M.A. and Ph.D. from Duke University in botany and physical chemistry.

Dr. Klepper developed plant-centered models to quantify shoot and root development and growth on the basis of soil water conditions. She and her colleagues described how cereal root and shoot development are related using degree-day-based systems. She assisted mathematicians in developing computer models of crop growth and development based on plant-centered principles. She has authored or coauthored 34 book chapters, 74 refereed journal articles, and 135 technical papers.

She chaired the ARS National Research Personnel Evaluation System Advisory Committee from 1991 to 1995 and served as Oral Conference Official for ARS Personnel Division, Pacific West Area from 1990 through 1996. Evaluations of international research programs took her to Ludhiana, India, for advice on root research techniques, to the Institut des Savanas in the Ivory Coast to evaluate nitrogen uptake projects for the International Atomic Energy Agency, to three Australian laboratories to consult on environmental physiology research, and to the Republic of South Africa to evaluate wheat breeding and testing programs.

Dr. Klepper has served on editorial boards of five scientific publications and was editor of *Crop Science* from 1992 through 1995. She was a member of the Agronomic Science Foundation Board of Trustees from 1993 through 1999. Dr. Klepper is a fellow of SSSA, ASA, CSSA, and the American Association for the Advancement of Science. She was President of the Crop Science Society of America from 1996 to 1997.

## DONALD LEE

### Crop Science Teaching Award

DONALD LEE is a professor in the Agronomy and Horticulture Department at the University of Nebraska-Lincoln. Dr. Lee earned his B.A. degree at Augustana College, M.S. degree from South Dakota State University, and Ph.D. degree from Montana State University.

Dr. Lee's teaching program focuses on genetics in both on and off campus teaching. He has taught introductory genetics for 30 semesters and has recently developed distance courses in plant genetics and genetic engineering. A major component of his outreach teaching centers on genetically engineered crops. He has conducted workshops on this topic across Nebraska and in other states for educators and industry professionals.

Working with teams of educators to develop education programs and materials has become a major component in Dr. Lee's work. He is a member of a grant-sponsored team that is delivering a program to teach corn breeding basics to producers. He is the science expert in a team developing resources for high school science teachers that help them teach the environmental impacts of transgenic crops. Dr. Lee works with teams of educators to develop educational resources in genetics and plant science that are shared through an on-line public database called the Library of Crop Technology (<http://croptech.unl.edu>). Dr. Lee is also contributes expertise to research teams that focus on genetic variation in crops and weeds.

Dr. Lee serves as an associate editor for the *Journal of Natural Resources and Life Sciences Education*. He has published 20 refereed journal articles and 10 peer reviewed on-line lessons.

## PK NAIR

### International Service in Crop Sciences Award

PK NAIR, a world leader in agroforestry, is Distinguished Professor and Director of the Center for Subtropical Agroforestry at the University of Florida (UF), Institute of Food and Agricultural Sciences (IFAS). He has Bachelors, Masters, and Ph.D. degrees in agronomy from universities in India, and a Dr. Sc. Agr. degree in tropical agriculture from Goettingen University, Germany. He has been a postdoctoral soil scientist at the Rothamsted Experimental Station, England, and a Senior Fellow of the Alexander von Humboldt Foundation at Goettingen University.

During the early 1970s, Dr. Nair worked as multiple-cropping agronomist at the Plantation Crops Institute in Kasaragod in southern India, where he developed the much-acclaimed multistoried cropping systems with coconuts, which laid the foundations for the subsequent developments in the shaded-perennial multistrata system of agroforestry. That led to his involvement as a founder member and then a principal scientist at of the International Centre for Research in Agroforestry (ICRAF), now the World Agroforestry Centre, Nairobi, Kenya, for about 10 yr. At ICRAF, Dr. Nair directed a global inventory of agroforestry systems and contributed enormously to developing the crop- and soil-related scientific foundations of agroforestry as well as building up ICRAF as a CGIAR institution. Dr. Nair has traveled extensively to more than 100 countries, undertaken field research, and conducted training courses in more than 25 countries in Africa, Asia, and the Latin American and Caribbean region.

At UF, he teaches courses in agroforestry, tropical forestry, and international forestry and conducts research in agroforestry. Fourteen Ph.D. and 22 M.S. students have graduated under his supervision and several are in progress; he has served on 45 other graduate student committees. He has hosted exchange visits and training for more than 100 professionals and organized short training courses in about 20 countries. His former students and associates are respected professionals in various national and international institutions. In March 2001, the Center for Subtropical Agroforestry was established at UF/IFAS under his leadership through a nearly \$4 million competitive USDA grant.

Dr. Nair has authored or edited 11 books and contributed more than 120 journal articles and 35 book chapters, including chapters on agroforestry in four encyclopedias. His single-author, college-level textbook, *An Introduction to Agroforestry* (Kluwer, 1993) has been translated into Spanish, Japanese, and Thai. Dr. Nair is the editor-in-chief of *Agroforestry Systems* since 1994, is on the editorial board of *The Journal of Rubber Research*, and has been a consulting editor of *Plant and Soil*, 1994 to 1999. He was the chair of the global organizing committee for the first World Congress of Agroforestry, Orlando, FL, 2004.

Professor Nair is a Fellow of the American Association for the Advancement of Science (AAAS); American Society of Agronomy (ASA); Soil Science Society of America (SSSA); the National Academy of Agricultural Sciences, India; and the World Innovation Foundation, UK. He has received the ASA International Agronomy Award, 2000; the SSSA International Soil Science Award, 2001; the UF/IFAS Graduate Teacher/Advisor of the Year Award, 2000-2001; an Honorary Doctorate Degree from Kyoto University, Japan, 2002; the Florida Chapter of Gamma-Sigma-Delta Honor Society of Agriculture International Award of Merit, 2002; UF Foundation Professorship Award 2004; and the Society of American Foresters (SAF) Barrington Moore Award in Forest Biology, 2004.

## SANJAY RAJARAM

### CSSA Presidential Award

SANJAY RAJARAM was born in India 59 yr ago. He comes from a very small farming family from the District of Varanasi, a remote village. He got his B.Sc. from University of Gorakhpur, India in 1962; and his M.Sc. from the Indian Agricultural Research Institute, New Delhi, India, in 1964. He had the privilege of doing his Ph.D. in 1968 at the University of Sydney, under Prof. I.A. Watson, a contemporary scientist and a colleague of Dr. N.E. Borlaug. He joined CIMMYT in 1969 and

since 1996 as Director of CIMMYT Wheat Program. Currently (since 2003) consultant to Patronato (PIEAES), Sonora, Mexico and Senior Scientific Advisor to ICARDA in Syria.

### Honors and Awards

In recognition of his contributions to world's wheat improvement and production research and distinguished professional career as wheat scientist, he has received in total 70 honors and awards.

### Research Contributions

His research leadership and commitment to improvement of bread wheat has resulted in a prodigious release of more than 450 cultivars in 51 countries during the 25-yr period, 1976 to 2001. These cultivars, that have shown an increased yield potential, wide adaptation and resistance to important diseases are currently grown on approximately 58 million hectares world wide.

CIMMYT's wheat international research network was developed under his leadership. This global network has facilitated the exchange of invaluable genetic resources among thousands of wheat researchers world wide. It has broken through ideological and parochial barriers that might otherwise have separated the work of individual scientist. This, in turn, has led to the accelerated development and worldwide spread of high-yielding wheat varieties which has kept global wheat production expanding faster than population and has made wheat ever more accessible to the poor. His research contributions are summarized as following:

**Genetic Diversity.** His approach to wheat improvement has been to combine well-adapted genotypes with diverse germplasm (including winter wheat, wheat progenitors, and wild relatives) and to employ multi-location testing to select the best performers for yield potential, disease resistance, abiotic stress tolerance, and grain quality. This breeding/selection system, known as shuttle breeding, has resulted in the development of broadly adapted cultivars with high yield potential and dependability under a range of ecological conditions. Particularly significant over the past 25 yr has been his pioneering work to probe the winter and spring-habit wheat gene pools. This work was conducted with Prof. Warren Kronstad at Oregon State University. It has led to the development of outstanding cultivars derived from spring  $\times$  winter crosses that have higher yield potential, a much broader genetic base, and increased yield dependability under a range of environmental stresses.

**Disease Resistance.** On disease resistance research, he has applied the concept of slow rusting resistance to rusts. A slow rusting variety displays a susceptible response to infection, but disease progress is slow and does not greatly affect yield. Such cultivars have demonstrated durable resistance to leaf rust that has remained effective for more than 20 yr on millions of hectares where conditions favor the disease. This achievement is one of few examples where the durable resistance concept has been put into practice. Durable resistance has eliminated the need for farmers to use fungicides and has resulted in no yield penalty.

Semidwarf cultivars developed in the 1960s and early 1970s for irrigated production were susceptible to foliar blight such as the *Septoria tritici* leaf blight that affected 8 million ha in North Africa. Initially, national scientist thought that this susceptibility was an implicit defect of semidwarf wheats. However, together with his team of breeders and pathologists he identified the problem and introduced resistance into these modern wheats. Currently, most cultivars grown in this region are semidwarf wheats carrying resistance to *Septoria tritici*.

In the early 1980s, he has foreshadowed that *Fusarium* head blight would become increasingly important. In particular, production systems in which maize is alternated with wheat seemed prone to an increased incidence of this toxin producing fungus. By the mid-1980s, he established a shuttle breeding program with Chinese colleagues in disease-affected areas. The aim of the program was to combine the high yield potential of CIMMYT wheats with the *Fusarium* resistance and local adaptation of Chinese wheats. At present, almost 30% of the wheat area in China is planted to wheats having CIMMYT parentage. The genes for head scab resistance were also introduced into wheats targeted for production in high rainfall areas elsewhere in the world. Scientists around the world (including the USA and Canada) are using CIMMYT's crosses with Chinese lines as their main sources of resistance to this dangerous disease.

**Tolerance to Abiotic Stresses.** Modern wheat has gained increased adaptation and adoption by farmers in marginal areas over the past 25 yr, following the incorporation of drought, acid soil, and invented by Dr. Norman E. Boulaug and implemented within Mexico, by using alternating locations in countries outside of Mexico. More than 25 yr ago, he initiated the collaboration with our Brazilian suitable for production in Brazil. The screening technique and the identification of genetic factors for aluminum tolerance were the result of this interaction with scientists at several US universities. Improved cultivars combining tolerance to soluble aluminum and high yield are now grown commercially in Brazil, and have made that country's acid soils highly productive. Although this was a long-term effort involving many people, he has provided the vision, commitment and leadership that were essential to achieve these results. In collaboration with colleagues in the West Asia/North Africa region, his breeding team also had developed cultivars that perform well under drought.

Increased yield stability has resulted in the protection and conservation of the natural resource base: the use of nitrogen and phosphorus efficient cultivars has prevented the application of excessive fertilizers, which may contaminate soils. In addition, small investments in fertilizers have produced large payoffs in yield for the individual farmer and have increased national food production.

### Food Production Impact

World wheat production increased by over 200 million megagrams during the period 1976 to 2001. During these two and half decades, more than 450 high-yielding spring bread wheat varieties, based on germplasm developed by his team have been released in 51 countries. In addition to improve yield dependability and grain quality, the yield potential of these newer lines has increased 20 to 25%. These varieties are grown on approximately 58 million hectares mostly in the developing countries.

Since 1977, it is estimated that 2 million hectares have been added annually to the area sown to semidwarf wheats in the developing world, with most of these wheats contributed by CIMMYT. In 1992 to 2001 alone, more than 170 new cultivars, based on germplasm developed by his wheat team, were released by national agricultural research programs in the developing world. Recent information provided from China has revealed that 140 CIMMYT-related wheat varieties have been released during the past two decades, which are currently grown on 10 million ha. In recent years, modern wheat varieties have spread mainly into the marginal production areas where water and nutrients are suboptimal, or climatic conditions are less than favorable for wheat production. The effect on wheat production of the high-yielding wheat varieties,

which sparked the Green Revolution (1963–1973), is well documented. Perhaps less well known is the significant production impacts that have continued to occur in the post-Green Revolution period. One study, using data for the period 1977 to 1990 estimates the value of increased production in the developing world excluding directly attributable to CIMMYT research. An additional, and often forgotten, benefit of these higher rather than through the expansion of the area sown. As a result, this has helped to preserve fragile natural resources which otherwise may have been brought into cultivation to meet growing food demands.

Although CIMMYT is mandated to serve developing countries, wheat germplasm developed by his breeding team has been extensively used in industrialized countries as well, especially where spring bread wheats are grown. Using conservative estimates it can be said that at least 25 million hectares of wheat are planted to varieties with CIMMYT ancestry in industrialized countries, such as Australia, Canada, Greece, New Zealand, Spain, Portugal, and the USA. For example, in Australia, 90% of all wheat grown has CIMMYT ancestry. The impact of his team's wheat improvement research in the industrialized world has been documented in several cases. By the early 1990s, 20% of the wheat area in the industrialized countries was planted to CIMMYT-derived cultivars. This generated as much as U.S. \$13.7 billion in the USA alone during the 1970 to 1993 period, representing a benefit-cost ratio of 190:1. In Australia, analyses over the past 20 yr have shown an annual gain of U.S. \$81 million from the use of CIMMYT-related wheats.

### **JAMES McD. (MAC) STEWART**

#### **Frank N. Meyer Medal for Plant Genetic Resources**

JAMES McD. (MAC) STEWART is a professor and holds the Ben J. Alzheimer Chair for Cotton Research & Development in the Dep. of Crop, Soil, & Environmental Sciences at the University of Arkansas, Fayetteville. He attended Wesley Junior College in Dover, DE, then completed his BS (1963) and PhD (1968) in botany (with emphasis in plant physiology and biochemistry) at Oklahoma State University. Following 18 yr with USDA, ARS at Knoxville, TN, where he conducted research on cotton fiber biology, he assumed his present position in 1986. He is a Fellow of both the American Society of Agronomy and the Crop Science Society of America, and he was a founding member and second program chair of Div. C-8 Plant Genetic Resources of CSSA. He is the recipient of both the Cotton Genetics Research Award (2000) and the Outstanding Research Award in Cotton Physiology (2002), the two highest awards given by the respective disciplines. Mac Stewart is noted for his research on fiber initiation, his

### **2004 SUSTAINING MEMBERS AND OFFICIAL REPRESENTATIVES**

The list of Sustaining Members and Official Representatives are available online at [www.asa-cssa-sssa.org/pdf/sustaining\\_members\\_list.pdf](http://www.asa-cssa-sssa.org/pdf/sustaining_members_list.pdf)

### **CSSA FELLOWS AND AWARD RECIPIENTS**

The list of Fellows and award recipients are available online at: <http://www.asa-cssa-sssa.org/awards/>

contributions in ovule and embryo culture, and his publications on cotton biotechnology. He coedited the Cotton Foundation's first reference book, *Cotton Physiology*, and wrote a major review of cotton biotechnology for the international audience. His is known for the breadth of his knowledge of cotton ranging from growth and development of the plant and fruit, to taxonomy and cytogenetics, to molecular genetics. He has participated in 13 germplasm collection and survey expeditions in Australia, Mexico, Brazil, Puerto Rico, Hawaii, and Florida. His expeditions have added several hundred cotton accessions for ex situ preservation, and resulted in the discovery of eight new *Gossypium* (cotton) species, and several new species of *Hibiscus*, *Glycine*, and other genera. His germplasm evaluation has identified a new genomic group within *Gossypium*, and he has developed strategies for efficient use of exotic *Gossypium* germplasm. He has conducted several field assessments concerned with the potential for gene out-flow from transgenic cotton to native species, and he serves as a member of the International Cotton Advisory Committee's Expert Panel on Cotton Biotechnology. He is also a member of the USDA Cotton Crop Germplasm Committee.

### **JOHN THORNE**

#### **NCCPB Genetics and Plant Breeding Award**

JOHN THORNE is Development Director for Soybeans at Syngenta Seeds. After growing up on a farm near Dayton in north-central Iowa, he earned his B.A. degree from Augustana College in Rock Island, IL, and his M.S. and Ph.D. degrees from Iowa State University.

Dr. Thorne began the Northrup King (now Syngenta) soybean breeding program in 1969. The program has grown from a single location at Washington, IA, to six locations in North America from Ontario to Arkansas. The current team includes 10 scientists plus support staff. Over 200 improved varieties have been released in the 35 yr since the program's inception, ranging in maturity from Group 00 to VIII.

Dr. Thorne has been involved in professional and industry activities including the formation of the Commercial Soybean Breeders group, serving as a board member and president. He has been a board member of NCCPB and was president in 1989 to 1990. He was a board member and vice chair of the Soybean Crop Germplasm Committee and served on a National Plant Genetic Resources Board. He has been a member of the AOSCA National Soybean Variety Review Board and the Industrial Advisory Board for the Iowa State University Biotechnology Program. Dr. Thorne has coauthored nine refereed journal articles and has presented 10 invited papers at various national and international meetings.

### **CSSA OFFICERS, BOARDS, AND COMMITTEES, 2005**

The lists of officers, boards, and committees are available online at [www.asa-cssa-sssa.org/committee/](http://www.asa-cssa-sssa.org/committee/)