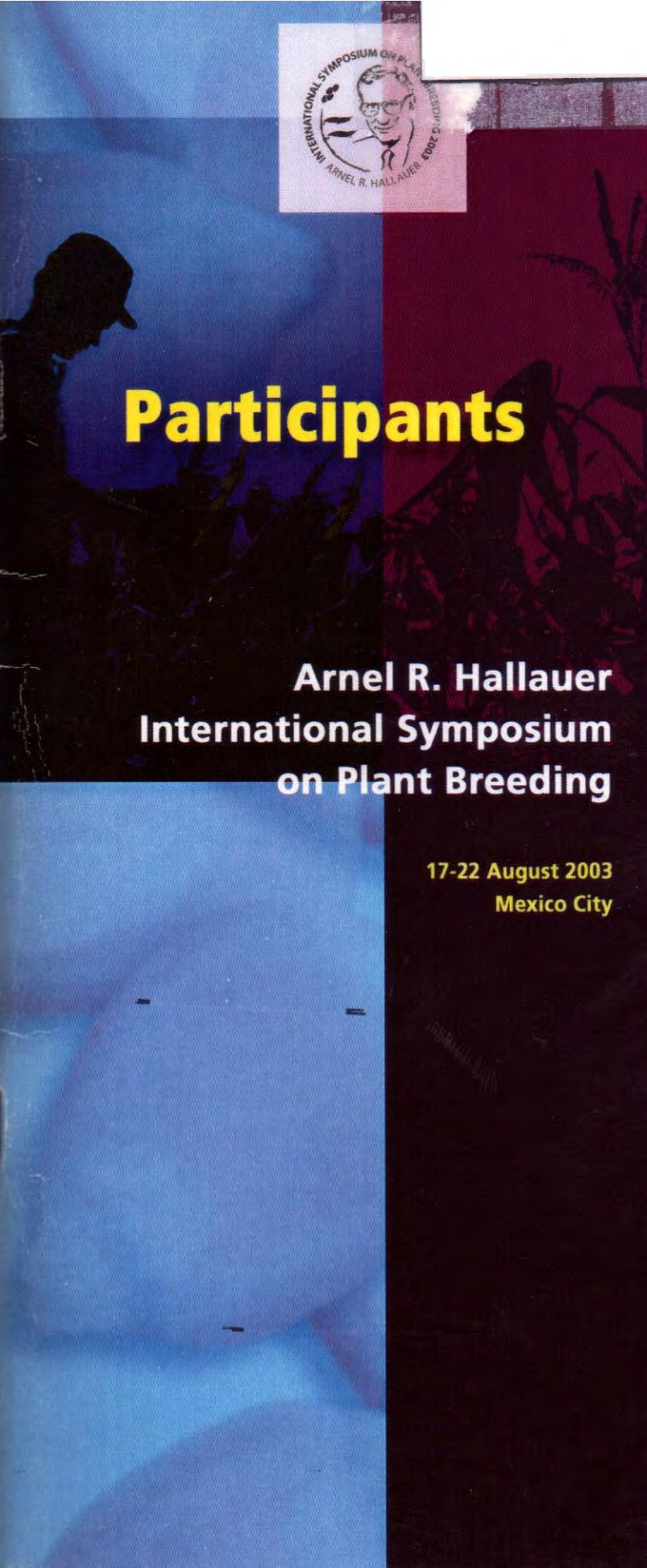

Participants

Arnel R. Hallauer International Symposium on Plant Breeding

17-22 August 2003
Mexico City

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"In plant breeding, you'll never make great leaps.
It's all about patience and time."

Arnel R. Hallauer

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Hallauer, Arnel R.

Dr. Arnel R. Hallauer is a retired distinguished professor from Iowa State University, a member of the National Academy of Science, and a member of the US Department of Agriculture Agricultural Research Service's Science Hall of Fame. Hallauer has influenced plant breeders around the world through his teachings, publications, and breeding accomplishments. His book, *Quantitative Genetics in Maize Breeding*, is considered a standard textbook for maize breeders. He also discovered the key role of additive genetic effects and established full-sib reciprocal recurrent selection as the most effective breeding method for maize.

Born in 1932, Hallauer graduated from high school in 1950 and majored in plant science at Kansas State University, where he graduated with honors four years later. He spent two years in the military and then went to Iowa State University to begin graduate work in plant breeding with George Sprague. Hallauer received his MSc in 1958 and, after Sprague was transferred to Maryland, his PhD in 1960 under the guidance of W.A. Russell.

After graduating from Iowa State, Hallauer went to North Carolina State University in 1961 as a research geneticist for the US Department of Agriculture (USDA). In 1962, he transferred back to Iowa State, where he continued to work for USDA. In 1989, having completed over 30 years of federal service, Hallauer retired from USDA and accepted a full-time faculty position at Iowa State. He was named a Charles F. Curtiss Distinguished Professor in Agriculture in 1991. One his most memorable moments was being elected to the National Academy of Sciences in April 1989.

A major product of Hallauer's research has been the free release of more than 30 inbred lines from the cooperative US Department of Agriculture-Iowa State University breeding program. In 1990, it was found that Hallauer's lines were used in most of the commercial maize produced in the North American Cornbelt. These lines produce an estimated USD 1 billion per year for the American farmer, and they are also used in all major temperate areas where maize is grown, including Europe and China.

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List of Speakers

Speakers and participants are presented in alphabetical order.
The list of speakers contains biodata and a set of selected publications which appear in reverse chronological order.

Bänziger, M.

Marianne Bänziger is senior scientist at the International Maize and Wheat Improvement Research Center (CIMMYT) and stationed in Zimbabwe. She coordinates CIMMYT's global program 'Maize for Sustainable Production in Stress Environments', and also leads a maize stress breeding network for southern Africa covering all aspects from germplasm development to seed delivery and seed policies. Her specific research focus is on improving crops for abiotic stress tolerance. She received her PhD degree from the Institute of Plant Sciences at ETH Zurich, Switzerland. Afterwards, she was a post-doctoral fellow and scientist at CIMMYT in Mexico, before moving to southern Africa in 1996.

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Betrán, F.J.

Javier Betrán was raised in Spain and completed his PhD in plant breeding at Iowa State University under Dr. Hallauer's direction. He joined CIMMYT Mexico (International Maize and Wheat Improvement Center) in 1995 where for 3 three years he worked first as post-doctoral fellow developing maize lines more tolerant to biotic and abiotic stresses, and later as scientist responsible for the application of biotechnology tools to maize improvement. In 1998 he joined Texas A&M University as Assistant Professor. He is leading the maize breeding and genetics program at College Station and supervises graduate students from around the world. Betrán's program focuses on the introgression of exotic germplasm to temperate areas, resistance to mycotoxins, tolerance to drought and heat, and grain quality for foods and feeds.

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Brummer, E.C.

E. Charles Brummer was raised on a diversified farm in central Pennsylvania. He attended Pennsylvania State University for his BSc and received his MSc and PhD from the University of Georgia. He moved to Iowa State University in 1993. After a brief post-doctoral fellowship, he became an assistant professor in the Agronomy Department as the forage breeder in 1994. He was promoted to associate professor in 2001. His research focuses on improving yield and winter hardiness of alfalfa using germplasm resources, conventional selection, genetic mapping, and genomics. In addition to alfalfa, he breeds orchardgrass, reed canarygrass, birdsfoot trefoil, and white clover among other forage crops. He also coordinates the statewide forage variety testing program. In 2002, he received the Young Crop Scientist award from the Crop Science Society of America.

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Borlaug, N.

Dr. Norman Borlaug has dedicated almost five decades to the ending of world hunger and to the acceleration of agricultural productivity in the developing world. He has talked to more peasant farmers and visited more wheat fields than any living person. Dr. Borlaug was awarded the Nobel Peace Prize in 1970 for his lifetime of work to help feed the hungry world.

Born in Iowa, Dr. Borlaug studied plant pathology at the University of Minnesota and was awarded his doctorate in 1941. Between 1944 and 1960, Dr. Borlaug served as the Rockefeller Foundation scientist in charge of wheat improvement under the Cooperative Mexican Agricultural Program. He later acted as a consultant to Mexico's Ministry of Agriculture, and was assigned to the Inter-American Food Crop Program as an associate director of the Rockefeller Foundation.

With the establishment of the International Maize and Wheat Improvement Center (CIMMYT) in Mexico in 1963, Dr. Borlaug assumed leadership of the Wheat Program, a position he held until his official retirement in 1979. He remains a senior CIMMYT consultant.

He has spent most of his working life in Mexico, where he undertook the painstaking research to develop new types of high-yielding, semi-dwarf, disease-resistant wheat varieties. These new wheat varieties and accompanying improvements in crop management practices revolutionized wheat production in Mexico since the mid-1950s.

By the mid-1960s, Dr. Borlaug was taking the technical components of the Mexican wheat technology to Asia, sparking the so-called "Green Revolution" in wheat production in India and Pakistan. Between 1964 and 2001, wheat production in India rose from 12 to 75 million tons, while wheat production in Pakistan increased from 4.5 to 22 million tons. The Green Revolution in food production made possible by Dr. Borlaug's work has touched the lives of farmers in other parts of Asia, as well as in Latin America and even many developed countries.

Since 1983, Dr. Borlaug has been a Distinguished Professor of International Agriculture at Texas A&M University. In 1988, he became President of the Sasakawa Africa Association and a Senior Consultant to Global 2000. From 1990-92, he was a member of the US President's Council of Advisors for Science and Technology.

He also serves on many advisory boards, including the international juries of the annual World Food Prize, sponsored by the John T. Ruan Foundation, and the annual Africa Prize for Leadership for the Sustainable End of Hunger, sponsored by the Hunger Project. He has been honored by governments, universities, scientific societies, and farmers' associations in more than 30 countries.

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Casler, M.D.

Michael D. Casler received the PhD in plant breeding from the University of Minnesota in 1980. Between 1980 and 2002, he taught statistics, experimental design, population genetics, and quantitative genetics at the University of Wisconsin. He conducts research on perennial grasses for forage, pasture, and biofuel uses. His primary research focus is on breeding and genetics of forage quality traits, including digestibility, lignin, phenolic-carbohydrate cross-linking, and physical characteristics of plant tissues. In 2002, he joined the US Department of Agriculture Agricultural Research Service (USDA-ARS) at the US Dairy Forage Research Center in Madison, Wisconsin.

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Cooper, M.

Mark Cooper is a research statistician at Pioneer Hi-Bred International and a former faculty member at the University of Queensland. Dr. Cooper is a quantitative geneticist and statistician with research interests in genotype by environment interactions, epistasis, and modelling plant breeding programs.

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Coors, J.G.

James G. Coors completed his PhD in plant breeding and biometry in 1984 at Cornell University. Since then he has been with the Department of Agronomy at the University of Wisconsin (UW) where his research involves maize germplasm development, including utilization of desirable exotic accessions, and evaluation of selection methods for traits such as grain and forage yield, heterosis, and nutritional quality. His applied breeding involves developing silage germplasm with improved yield and quality. His teaching includes two graduate level courses in plant breeding and he is a member of the UW Plant Breeding and Plant Genetics program.

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Crosbie, T.M.

Theodore (Ted) Crosbie is Vice President of Global Plant Breeding of the Monsanto Agricultural Sector. Dr. Crosbie is responsible for six crops worldwide and is a member of the Monsanto Leadership Team and the Technology Leadership Team. Monsanto's plant breeding organization is one of the largest breeding efforts in the world with more than 900 employees and over 100 sites worldwide in 20 countries. In January 2002, Dr. Crosbie was named a Distinguished Fellow in Science in recognition of his broad strategic impact in Monsanto through scientific leadership.

Dr. Crosbie joined Monsanto in 1996 as the director of global wheat breeding. In 1998, he joined the Seeds Business Team in the agriculture sector of Monsanto. He, along with Jim Tobin and Mike Morgan, coordinated, integrated, and managed Monsanto's seed businesses through the acquisition strategy.

Prior to joining Monsanto, Dr. Crosbie was the President and Chief Executive Officer of ICI Seeds, USA, from 1990-95 after spending most of his career in plant breeding research beginning as a Graduate Faculty member of the Agronomy Department at Iowa State University from 1979-82.

Dr. Crosbie earned a BSc in agricultural education from Iowa State University in 1973. He earned a MSc in plant breeding and cytogenetics from Iowa State University in 1976 and, in 1978, he received his PhD in the same field.

Dr. Crosbie lives in Earlham, Iowa, with his wife, Rowena on a 160-acre farm.

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Duvick, D.N.

Donald Duvick grew up on a dairy farm. Following service in the US army during World War II, he earned degrees in agriculture (BSc, University of Illinois, 1948) and botany (PhD, Washington University, St. Louis, 1951). He then worked as a plant breeder for Pioneer Hi-Bred International, Inc. from 1951 until his retirement as Senior Vice-President/Research in 1990. He now is an affiliate professor at Iowa State University. He has experience with breeding of major crop plants for the developed and developing world.

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Edmeades, G.O.

Gregory O. Edmeades was raised in New Zealand and completed his PhD in crop physiology at the University of Guelph. He joined CIMMYT (International Maize and Wheat Improvement Center) in 1976, and worked as an on-farm agronomist in Ghana for 5 years. In 1984 he returned to CIMMYT, Mexico where for the next 15 years he headed the maize crop physiology group, focusing on crop responses to the environment with special reference to drought, low N, temperature, and photoperiod. Edmeads joined Pioneer Hi-Bred International in 1999, is based in Kauai, Hawaii, and continues to lead research on improving drought tolerance in temperate maize.

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Eeuwijk, F.A. van

Fred van Eeuwijk studied biology and philosophy at Utrecht University in the Netherlands. He graduated in 1985 and then went to work as consulting statistician at the Foundation for Plant Breeding in Wageningen (the Netherlands), which was later merged with other breeding institutes to become Plant Research International. From 1990 onwards, he started to concentrate more on statistical models for genotype by environment interaction. In 1996 he finished his PhD thesis on genotype by environment interaction: *Between and beyond additivity and non-additivity.* In 1997 he became associate professor in statistics at Wageningen University, where he continued his work on interactions. In 2000 he moved to the Laboratory of Plant Breeding of Wageningen University to become responsible for the quantitative aspects of plant breeding research and teaching. His current research interests include genotype by environment interaction, but this field has been extended to the statistical modelling of QTL by environment interactions.

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Eyhérabide, G.H.

Dr. Eyhérabide was born in Buenos Aires, Argentina. He earned his degree as an agricultural engineer (Ingenerio Agronomo) from the National University of Buenos Aires, his MSc from the National University of Rosario, and his PhD from Iowa State University. Eyhérabide is now the national coordinator for the cereal program in Argentina and works as a maize breeder in the national institute for agricultural research in Pergamino.

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Hayes, P.M.

Patrick Hayes received his BSc degree from the University of Arizona, his MSc from Oregon State University, and his PhD from the University of Minnesota. His interest in plant breeding traces to a participation in the CIMMYT training program in 1976. He has been directing the Barley Project at Oregon State University since 1986. His interests in barley are many and varied, ranging from barley genomics to product quality analysis. The current principal areas of endeavor of the Oregon Barley research group are: development of winter malting varieties; characterization of the winter regulon; development of a transposon tagging system in barley; and dissection of quantitative resistance.

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Hoegemeyer, T.

Thomas (Tom) Hoegemeyer grew up in the seed industry in Nebraska, working at the family firm in breeding nurseries and production fields from his youth. He received a bachelor's degree in Agriculture (Honors) from the University of Nebraska in 1970 and a PhD from Iowa State University in 1974. He joined Hoegemeyer Hybrids, Inc. as research director, but also carried responsibility for technical areas of production. In 1988 he became president as well as research director, and remains in those capacities. He has served in various state and national seed industry positions and currently is chairman of the Corn and Sorghum Division of the American Seed Trade Association.

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Holland, J.B.

Jim Holland received his MSc degree in plant breeding from the University of Wisconsin-Madison and his PhD in crop science from North Carolina State University. He worked for five years at Iowa State University on oat breeding and genetics. Since 1999, he has worked for the US Department of Agriculture Agricultural Research Service (USDA-ARS) on maize breeding and genetics, located at North Carolina State University.

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Iwanaga, M.

Dr. Masa Iwanaga was born in Japan, and completed his PhD in plant breeding and plant genetics in 1979 at the University of Wisconsin. He joined the International Potato Center (CIP) in 1979 where he worked as a cytogeneticist for 10 years. In 1989 he went to CIAT (International Center for Tropical Agriculture) to head the genetic resources unit. He joined the International Plant Genetic Resources Institute (IPGRI) in 1993 as Deputy Director General (Programs), and after seven years, he moved to JIRCAS (Japan's International Research Center for Agricultural Services) as Director of the Biological Resources Division. On 1 July 2002, he started working in CIMMYT (International Maize and Wheat Improvement Center) as the Director General.

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Janick, J.

Jules Janick is the James Troop Distinguished Professor of Horticulture at Purdue University. He received his BSc at Cornell University (1951) and his MSc (1952) and PhD (1954) at Purdue University in plant genetics and breeding. At Purdue, he has been involved with apple and pear breeding and is presently the Director of the Center for New Crops and New Products. Janick is the founder and editor of Horticultural Reviews and Plant Breeding Reviews. He has received honorary doctorates from the University of Bologna and the Technical University of Lisbon.

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Lamkey, K.R.

Kendall R. Lamkey is the Pioneer Distinguished Chair in Maize Breeding and director of the Raymond F. Baker Center for Plant Breeding at Iowa State University. He earned his BSc and MSc degrees from the University of Illinois and his PhD degree from Iowa State University. Dr. Lamkey's research focuses on the inheritance of complex traits, quantitative genetics, breeding methodology, and selection theory.

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Lee, E.A.

Elizabeth A. Lee was raised on a seed farm in west central Minnesota. She has a BSc in agronomy from the University of Minnesota, a MSc in plant breeding and cytogenetics from Iowa State University, and a PhD in genetics from the University of Missouri-Columbia. Following two post-doctoral positions, she joined the faculty of the Department of Plant Agriculture at the University of Guelph, in Guelph, Ontario, Canada in 1998. As a maize breeder and geneticist at Guelph, Lee is involved in both undergraduate and graduate education; she directs two active inbred line development programs, and her research interests include late-season cold tolerance, understanding the genetics and physiology underlying grain yield, breeding methodology, and the genetics of food-grade maize quality.

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Lee, M.

Michael Lee was born in the US. He earned a BSc from Rutgers University and MSc and PhD from the University of Minnesota. He joined the faculty at Iowa State University in 1986 as Assistant Professor and was promoted to Professor in 1996. His research in plant breeding and genetics focuses on maize and emphasizes the integration of basic biological information and technology into plant breeding research and germplasm development. His teaching activities include graduate and professional courses in plant breeding and genetics.

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Mackill, D.J.

David J. Mackill was born and raised in San Diego, California. He earned his BSc, MSc, and PhD degrees from the University of California-Davis. He began work as a plant breeder at the International Rice Research Institute (IRRI), Philippines, in 1982. In 1991 he joined the Agricultural Research Service of the US Department of Agriculture (USDA-ARS) based in Davis, California, to work as a rice geneticist. His research has focused on resistance to rice blast disease and the application of molecular markers to the study of complex traits, including abiotic stress tolerance. He returned to IRRI in 2001 as Head of the Division of Plant Breeding, Genetics, and Biochemistry, and Program Leader for Genetic Resources Conservation, Evaluation, and Gene Discovery.

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Marquez-Sánchez, F.

Dr. Fidel Márquez-Sánchez studied at the "Escuela Nacional de Agricultura" (National School of Agriculture) in Mexico where he obtained his degree as an agronomist. His PhD in plant breeding was obtained at Iowa State University in 1969. Since then, he has worked at the Colegio de Postgraduados, at the National Institute for Agricultural, Livestock and Forestry Research, and at the Chapingo University (Mexico). Dr. Márquez-Sánchez currently works in Guadalajara, Mexico, and focuses on different technological and theoretical aspects of maize breeding.

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Ortiz, R.

Rodomiro Ortiz was born in Lima in 1958 and holds a BSc in biology (Honors), a MSc in plant breeding and statistics from UNALM (Agricultural University of Peru), and a PhD in plant breeding and genetics from the University of Wisconsin-Madison. He worked as a researcher at UNALM, the International Potato Center (CIP), Rutgers University, and the International Institute of Tropical Agriculture (IITA), and held a Nordic professorship (Plant Genetic Resources) at KVL-Oenmark. He was the Director of the Genetic Resources Enhancement Program at ICRISAT (International Crops Research Institute for the Semi-Arid Tropics) and Crop Improvement Division at IITA. He is now IITA Director of Research for Development. During his professional career he wrote in excess of 400 reports, of which 50% are international reference journal articles and approximately 40 edited book chapters. He trained about 20 students, who completed their degree theses under his advice. Together with his colleagues at IITA, KVL and ICRISAT, they wrote 33 research for development proposals, which attracted about USD 35 million. As research manager, he also facilitated the funding of many special projects through professional and personal interactions with development investors of both institutes of the Consultative Group on International Agricultural Research (CGIAR). In 1994, the CGIAR awarded IITA the prestigious King Baudouin Award for the multidisciplinary research of the team working in plantain and banana improvement, in which Ortiz was both a hands-on researcher and program leader.

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Pandey, S.

Shivaji Pandey was born in a farming family in India. After his early education in India, he moved to the US to obtain his MSc and PhD degrees at the University of Wisconsin. After graduating, he joined CIMMYT (International Maize and Wheat Improvement Center) where he has now worked for nearly 29 years. During 1974-1984, he worked in Mexico on all phases of the maize breeding, including the area of genetic resources, and headed maize improvement training activities. During 1984-1996, he was stationed at Cali, Colombia, from where he served CIMMYT's partners in South America. While there, he also led CIMMYT's maize research to develop maize germplasm tolerant to soil acidity. In 1996, he moved back to Mexico and lead tropical maize breeding activities for a year. He has been serving as Director of CIMMYT's maize program since 1998.

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Paterson, A.

Andrew Paterson was raised in Pennsylvania (US) and completed his PhD in plant genetics at Cornell University in 1988 (studying under Mark Sorrells). From 1989-1991 he was employed by the E.I. DuPont Company in agricultural biotechnology while maintaining an adjunct faculty appointment at the University of Delaware. In 1991, he joined the faculty of Texas A&M University, where he was appointed to the Christine Richardson Endowed Professorship in 1996. He moved to the University of Georgia in 1999, where he was appointed a Distinguished Research Professor in 2002. He directs the Plant Genome Mapping Laboratory, an inter-college unit that includes about 50 scientists, staff, and students conducting research in the area of plant genetics, using genomic tools and approaches to study crop improvement, molecular genetics and evolution, and plant biodiversity.

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Pixley, K.

Kevin Pixley was born in Chicago (US) and raised in Puerto Rico, Argentina, and Mexico. He obtained a MSc in crop physiology with K. Boote at the University of Florida, studying groundnut response and coping mechanisms to fungal foliar diseases. His PhD in plant breeding is from Iowa State University, where he studied inheritance of test weight in oat with K. Frey. Pixley joined CIMMYT (International Maize and Wheat Improvement Center) in 1990 and began working on quality protein maize (QPM) as a post-doctoral fellow with M. Bjarnason. In 1993 he was posted to Harare, Zimbabwe, where he currently is maize breeder and CIMMYT regional representative for southern Africa. His research program focuses on nutritional enhancement (QPM, pro-vitamin A, Fe, Zn) and post harvest insect resistance (weevil).

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Scott, M.P.

Paul Scott was raised in the US and completed his PhD in biochemistry at the Purdue University. He held post-doctoral positions at the Royal Veterinary and Agricultural University in Copenhagen, Denmark, and at the University of Nebraska. Since 1996 he has worked for the US Department of Agriculture Agicultural Research Service (USDA-ARS) in Ames, Iowa, where he studies the genetics and biochemistry of maize grain quality traits. His research focuses on starch biosynthesis and nutritional quality, especially amino acid content.

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Singh, R.

Ravi Singh joined CIMMYT (International Maize and Wheat Improvement Center) in 1983 after obtaining his PhD from the University of Sydney. Currently, he is principal scientist and coordinator of CIMMYT's global project "Wheat Resistant to Diseases and Pests". Singh's main research contribution is in understanding the genetics of minor, additive genes based resistance to rust diseases of wheat and developing high yielding, stress tolerant germplasm carrying such resistance. He has contributed to developing germplasm leading to the release of over 150 wheat cultivars in various developing countries. Singh has over 200 publications, of which 70 are refereed journal articles, and has delivered 32 seminars and 21 invited talks.

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Snape, J.W.

Dr. John Snape is Head of the Department of Crop Genetics at the John Innes Centre with a background of nearly thirty years research on cereal genetics and biotechnology. Following a PhD in quantitative genetics at the University of Birmingham (UK), Dr. Snape joined the Plant Breeding Institute (PBI) in Cambridge and developed a program to understand the inheritance of important agronomic traits in wheat, including adaptation, stress tolerance, yield and its components, and grain quality. In 1990, Dr. Snape, together with his colleagues, moved to the John Innes Centre following the privatization of the PBI, and became Head of the Department of Cereals Research in 1992 and Crop Genetics in 2001. Current research on wheat genetics includes developing an understanding of the inheritance of end-use quality, particularly grain protein content, and the genetical and physiological components underlying yield potential. Dr. Snape's group are also improving and applying transformation technologies in wheat, barley, and rice to investigate opportunities for the genetic engineering of cereals to understand transgene expression and stability, and to improve pest resistance and nutritional quality.

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Sorrells, M.

Mark Sorrells is a professor of plant breeding at Cornell University. He grew up on a farm in central Illinois. Dr. Sorrells earned his BSc and MSc degrees from Southern Illinois University and his PhD from the University of Wisconsin at Madison. He then he worked as a post-doctoral fellow for one year with Dr. Ted Bingham in the same department. His research utilizes comparative genomics, molecular genetics, physiology, and pathology to develop breeding strategies that contribute to the development of superior crop varieties. He has released or co-released three oat, two barley, and seven wheat cultivars for production in the northeastern US.

Sorrells, M.E., M. La Rota, C.E. Bermudez-Kandianis, R.A. Greene, R. Kantety, J.D. Munkvold, M. Miftahudin, A. Mahmoud, X. Ma, P.J. Gustafson, L.L. Qi, B. Echalier, B.S. Gill, D.E. Matthews, G.R. Lazo, S. Chao, O.D. Anderson, H. Edwards, A.M. Linkiewicz, J. Dubcovsky, E.D. Akhunov, J. Dvorak, D. Zhang, H.T. Nguyen, J. Peng, N.L.V. Lapitan, J.L. Gonzalez-Hernandez, J.A. Anderson, K. Hossain, V. Kalavacharla, S.F. Kianian, D.W. Choi, T.J. Close, M. Dilbirligi, K.S. Gill, C. Steber, M.K. Walker-Simmons, P.E. McGuire, and C.D. Qualset. (accepted). Comparative DNA sequence analysis of wheat and rice genomes. *Genome Research.*

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Tracy, W.F.

William F. Tracy was raised in Massachusetts and earned his PhD at Cornell University. He was a corn breeder for the International Plant Research Institute in San Carlos (CA) and Cargill Inc. at Grinnell, Iowa. In 1984 Tracy was appointed assistant professor and sweet corn breeder in the Department of Agronomy, University of Wisconsin-Madison. He is currently Professor and Associate Chairman of Agronomy. Current research includes the role of plant development in resistance to pests, novel endosperm mutants and their effects on seed and table quality, phylogenetics of sweet corn and the origin of the sugary1 allele, and the development of improved sweet corn inbreds, hybrids, and populations. Bill leads one of the few remaining public sector sweet corn breeding programs in the US.

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Virk, D.S.

Daljit S. Virk completed his PhD and DSc in genetics and plant breeding (specializing in biometrical genetics and plant breeding) at the University of Birmingham, UK. He joined the University of Birmingham to work as Research Fellow in 1976 but retuned to India in 1978. He worked as Professor and Head of Millet Improvement, and served in other teaching and research positions in the Punjab Agricultural University Ludhiana, India for more than 20 years before taking up his current assignment at the Center for Arid Zone Studies, University of Wales, Bangor (UK) in 1994. His work on millet breeding led to the release of several varieties, hybrids, and male sterile lines. Besides teaching in the university, he has been Editor of *Crop Improvement* journal for many years. He has been the International Coordinator for DFID Plant Sciences Research Program funded projects on 'participatory crop improvement' in India and Nepal. He has been a crop consultant to several projects in India, Bangladesh, Sri Lanka, and Namibia. He has coordinated a number of projects on participatory varietal selection on several crops (cereals, millet, pulses, and forage crops and forage trees) in India and Nepal. His current interests include participatory plant breeding (PPB) in rice, maize, wheat, and horse gram, and combining marker aided selection and PPB in rice for the rainfed and marginal lands cultivated by the poor farmers. Presently, he also collaborates with CIMMYT in a DFID funded project on participatory research in wheat cropping systems in South Asia (India, Bangladesh and Nepal).

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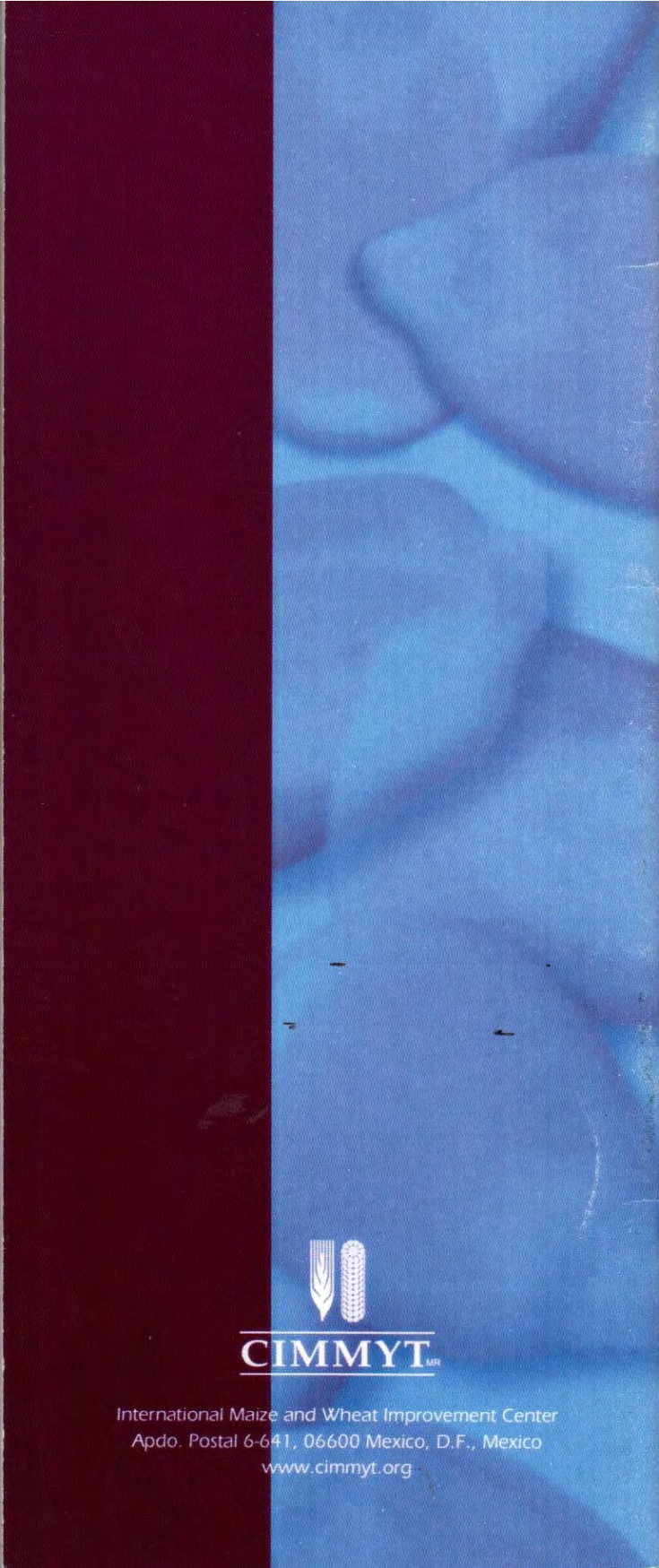

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