

Invited Presenter Biographies

Jim Avery

Owner, Savannah Agri- Air; President, National Agricultural Aviation Association, Savannah, NY, USA, agriair@tds.net

Jim Avery has been employed in the aerial application business for more than 30 years. While in college he was introduced to the aerial application industry as a mixer/loader. He received an Associate of Science degree from SUNY Cobleskill in 1972 and attended the University of Georgia. His commercial pilot's license was obtained after receiving specialized training for aerial application at the Ayers Flight School in Albany, Georgia in 1977. Jim has been an aerial applicator since 1978 and currently operates his own company, Savannah Agri- Air. The business, located in the Finger Lakes region of Central New York, cares for mostly vegetable crops, the predominant ones being potatoes and sweet corn. Jim is currently the President of the National Agricultural Aviation Association. He held the office of Secretary as well from July 2000 to December 2002. He has served on the NAAA Board of Directors since 1998, and also on the Board of the Northeast Agricultural Aviation Association since 1980 where he also held several leadership positions.

Paolo Balsari

Director of the Department of Agricultural, Forest and Environmental Economics and Engineering (DEIAFA) at the University of Turin, Italy, paolo.balsari@unito.it

Paolo was born in Milan (Italy) in 1951, has a degree in Agriculture Sciences (University of Milan, 1976). Researcher since 1981, associate professor since 1987, full professor since 2000, he's actually Director of the DEIAFA at the University of Turin, Italy. His main areas of interest are: equipment for crop protection, management of animal wastes, precision agriculture, and forest machinery. In the ambit of the equipment for crop protection he's involved in the following activities: certification of new sprayers, inspection and calibration of sprayers in use, assessment of the quality of pesticide spray applications in field crops, vineyards, orchards and greenhouses, innovation and development of new sprayer prototypes, study of drift incidence during pesticide application, and operator and environmental safety. He is a member of the Italian delegation in the ISO TC 6 and CEN TC 144, of the ASAE and of the AIIA (Italian Society of Agricultural Engineering) and he has authored more than 350 publications.

Jane A.S. Barber

Assistant Professor, Florida A&M University, United States, jane.barber@famuedu

Integrated Pest Manager, specializing in Pesticide Application Technology; Masters from Imperial College of Science Technology and Medicine PhD Cranfield University PostDoc Cornell University. Research interests optimization of the pesticide application methods used in adult mosquito control. Although our department specializes in adult mosquito control we work primarily with pesticide application equipment therefore focus on larviciding when required. Our research agenda is to develop techniques and protocols which promote the safe and efficient use of pesticide. Maximisation of on target deposits leading to effective control and minimization of off target deposits which leads to waste and environmental contamination. Achievement of the above leads to reduced doses saving both money and the environment. Target specific pesticide application is our goal.

Terri Barry

Senior Environmental Research Scientist, California Dept. of Pesticide Regulation, tbarry@cdpr.ca.gov

Dr. Barry received her B.S. (Wildlife Biology, 1979), M.S. (Range Management, 1987), and Ph.D. (Ecology, 1992) degrees at the University of California, Davis (UCD). Her research interests include regulatory statistics, ecological risk assessment, air dispersion modeling, and chemical methods and validation. She has taught statistics at the upper division and graduate levels in the Department of Agronomy and Range Science at UCD. Currently, Dr. Barry is a Senior Environmental Research Scientist with the Environmental Monitoring Branch of the California Department of Pesticide Regulation (California Environmental Protection Agency) where she works primarily in the areas of statistics and air dispersion modeling. In addition to working on various technical aspects of pesticide environmental hazard assessments and research projects, she provides scientific review of pesticide

Invited Presenter Biographies

studies from other agencies, and participates on a number of multi-agency committees. Dr. Barry is currently on the Editorial Board of the Journal Environmental Toxicology and Chemistry.

Norman Birchfield

Senior Biologist in the Office of Pesticide Programs, U.S. Environmental Protection Agency, Washington DC, USA, norman.birchfield@epa.gov

Norm has been with the Agency since 1997 after completing doctoral and postdoctoral research on pesticide toxicology in the Environmental Chemistry and Toxicology Laboratory at the University of California Berkeley. Norman develops ecological risk assessments and human drinking water exposure assessments for pesticides undergoing registration or reregistration in the U.S.. He is also working to develop and implement novel exposure assessment methods into EPA's risk assessment process.

Steven Lee Edburg

Graduate Student, School of Mechanical and Materials Engineering, Washington State University, Pullman, Washington, USA, sedburg@mail.wsu.edu

Steve Edburg is a Graduate Student in the School of Mechanical and Materials Engineering at Washington State University. Steve is using Computational Fluid Dynamics (CFD) to study atmospheric dispersion in forest canopies. Steve is working with Harold Thistle, U.S.D.A. Forest Service, to investigate the use of CFD to simulate tracer gas dispersion within forest canopies. During the summer of 2004 Steve participated in a tracer gas field experiment in Winnfield LA, data from this experiment will be used to evaluate the dispersion model. Steve has been a Graduate and Professional Student Association (GPSA) Senator and is currently a member of the American Society of Mechanical Engineers (ASME), and the American Meteorological Society (AMS). Steve received his Bachelors degree in Mechanical Engineering at Washington State University in 2003.

Kai Elgethun

Research Scientist, Texas A&M University, College Station, USA, elgethun@u.washington.edu

Kai Elgethun earned his Ph.D. in Environmental Health at University of Washington in 2004. He is currently a research scientist in Geography and Epidemiology & Biostatistics at Texas A&M University. His current research interests focus on pathways by which children are exposed to agricultural pesticides and to prevent and reduce such exposures, including specific measurements of pesticide exposures in children and an analysis of risks associated with such exposures. New exposure assessment methods for evaluating exposure and risk in these populations are being evaluated. Kai has a paper in press with Atmospheric Environment that assess atmospheric loading of pesticides via surface volatilization associated during a Washington aerial spray-drift study.

Jay Ellenberger

Associate Director, Field and External Affairs Division, Office of Pesticide Programs, U.S. Environmental Protection Agency, Washington DC, ellenberger.jay@epa.gov

Mr. Ellenberger's professional experience covers more than 25 years with EPA's pesticide regulatory programs. As the Associate Director of the Office of Pesticide Program's Field and External Affairs Division, Mr. Ellenberger helps provide leadership and direction to division staff responsible for a diverse range of national and international pesticide programs, including communications, regulation and policy development, and working with the EPA's regional offices and state, tribal, and foreign governments and organizations on diverse pesticide and other environmental issues. He is also the Agency's lead for spray drift policy and homeland security for protecting food and agriculture. In addition to these current responsibilities, Mr. Ellenberger has many years of experience with pesticide registration, reregistration, and tolerance programs. Mr. Ellenberger holds undergraduate and graduate degrees in animal science and entomology from Penn State University.

Invited Presenter Biographies

Allan S. Felsot

Professor & Extension Specialist, Entomology & Environmental Toxicology, Washington State University, Richland, WA 99352, afelsot@tricity.wsu.edu

Dr. Allan Felsot is one of four faculty members assigned to the state-mandated Food and Environmental Quality Lab (FEQL) that is located at the WSU TriCities campus. His research, extension, and teaching interests range from environmental chemistry and toxicology to agricultural biotechnology. His current research is focusing on spraying practices for reducing application rates of pesticides in orchards and development of toxicologically relevant no-spray buffer zones. Allan is past Program Chair and current Chair of the American Chemical Society's Division of Agrochemicals. He is a member of the Crop Protection Advisory Committee for the International Union of Pure & Applied Chemistry (IUPAC). He is a member of the Washington State Pesticide Incident, Reporting & Tracking Panel (PIRT) and holds the "toxicologist in public service" position on the Washington State Department of Agriculture Pesticide Advisory Board. He is also a member of the editorial board for the Journal of Environmental Science & Health Part B.

Reinhard Frießleben

Bayer CropScience, Agronomic Development / Application Technology, Germany, reinhard.friessleben@bayercropscience.com

Reinhard Frießleben completed his education at University of Halle/Saale Diploma Agriculture and Akademie der Landwirtschaftswissenschaften Berlin for his Ph.D. (A) and (B). He spent 12 years working with the Institute of potato research Groß Lüsewitz working in potato production research. This was followed by 4 years working in marketing for Hoechst and AgrEvo. Reinhard has been with Bayer CropScience since 1996 working in Global Development for application technology as the team manager.

Ken Giles

Professor of Biological and Agricultural Engineering, University of California, Davis, USA, dkgiles@ucdavis.edu

Ken has been with University California, Davis since 1987. He received his Ph.D. from Clemson University and M.S. / B.S. from the University of Georgia. Ken conducts research on spray atomization, instrumentation, materials handling, automation and mitigation of environmental effects from agricultural operations including crop protection, fertilization and harvesting. Additionally, he conducts research into industrial coating and drying operations. Ken teaches engineering design in the College of Engineering and pest management operations in the College of Agricultural and Environmental Sciences at UC Davis. He has received six Outstanding Paper Awards from ASAE, the ASAE Engineering Design Concept of the Year Award, the CA/NV ASAE Engineering of the Year Award, two AE50 Awards for product design. Ken holds 12 U.S. and international patents and patents pending.

Frank Hall

Professor Emeritus, LPCAT, The Ohio State University, USA, hall.1@osu.edu

Dr. Hall has a Ph.D from Purdue University, Entomology: Toxicology/Ecology. He came to OSU following 7 years in the Ag Chem industry, focused on Tree Fruit Entomology, and was developer of The OSU CASH program and Pesticide Benefits Models, while founding and leading the Laboratory for Pest Control Application Technology (LPCAT). His research activity included pesticide capture efficiency modeling, pesticide dose-transfer, formulation development, pesticide policy and technology adoption issues and pesticide drift assessment including mitigation technologies via windbreak/buffer zones. Following completion of 30+ years at OSU in 2001, he is currently undertaking some grants with USDA-NRCS and EPA on drift mitigation via veg barriers, and some consulting. Dr. Hall has published ca 250 research papers, 10 book chapters and received or participated in grants approaching \$8 million. Dr. Hall was recipient of the ESA Award for Outstanding Contributions to Ag, OSU Distinguished Senior Researcher of the Year and Past President for the Wooster Rotary Club and North Central Branch, ESA.

Invited Presenter Biographies

Vince Hebert

Assistant Professor, Food and Environmental Quality Laboratory, Washington State University Tricities Campus, Richland, WA, USA, vhebert@tricity.wsu.edu

Vince Hebert is a former agricultural industry researcher and current faculty member from the Department of Entomology at Washington State University. In his roles as an industry and academic researcher, Vince has had a long-standing interest in understanding the movement and environmental fate of agrochemicals in air, water and in soils. Vince's current areas of research involve characterizing the atmospheric release of synthetic pheromone devices for codling moth mating disruption as well as developing specific biomarker techniques for estimating airborne pesticide exposures to farm families in agricultural communities. Dr. Hebert also administers over an analytical research facility that performs GLP regulatory science in support of major and minor crop production in the Pacific Northwest. Today, Vince will discuss the implications of regional off-target movement of certain classes of highly active broad spectrum herbicides to non-target crops.

Andrew J. Hewitt

Senior Research Officer, Centre for Pesticide Application and Safety, University of Queensland, Australia, a.hewitt@uq.edu.au

As co-Chair of the International Conference on Pesticide Application for Drift Management, Dr Andrew Hewitt would like to welcome you to Hawaii for this international event on research, education, regulation and modeling of spray applications.

Dr Andrew Hewitt was educated in pesticide application and droplet size fields through B.S., M.S. and PhD degrees in the U.K., including working on vector control programs in Africa for the government. He then worked at New Mexico State University on various spray research projects before joining Stewart Agricultural Research Services in Missouri for over 10 years, including serving as Project Manager for the Spray Drift Task Force and working on numerous drift and application projects for industry and government around the world. He recently joined the research team at the Centre for Pesticide Application and Safety at the University of Queensland in Australia, where he continues his research into spray application, pesticide chemistry, modeling and pest control in agriculture, forestry and vector control. Dr Hewitt chairs the ASTM committees on droplet size measurement and drift management. He also chairs the ILASS Biological and Agricultural Sprays Committee, and serves as Head of Delegation to ISO meetings on spray drift standards. An active member of the Editorial board of several journals, he has also written many research papers, Guest Editorials and book chapters on spray application and drift management. With a passion for hiking and the great outdoors, Andrew will no doubt be found on the trails of Hawaii after the conference.

Clint Hoffmann

USDA-ARS, 2771 F&B Road, College Station, TX 77845, choffmann@tamu.edu

Clint Hoffmann is an Agricultural Engineer with the USDA-ARS-Areawide Pest Management Research Unit and serves as Lead Scientist of the Aerial Application Technology Research group. Dr. Hoffmann's research over the past seven years has focused on spray atomization, influence of crop canopies on spray deposition and movement, and spray modeling. He is a member of NAAA, ASAE, and several other professional societies and serves on numerous committees.

William Jany

Director of Research and Development, Clarke Mosquito Control, bill@clarkemosquito.com

Bill Jany is the Director of Research and Development for Clarke Mosquito Control and also serves as the Director of the Clarke Institute of Technology and Mosquito University. Mr. Jany possesses twenty-five years experience working with public health and crop protection products. Most of this service has been spent helping customers use pesticides safely and effectively. Before joining Clarke Mosquito Control, Mr. Jany was employed by American Cyanamid. During his tenure with Cyanamid, Mr. Jany worked with both microbial and traditional insecticides. His expertise includes Ultra Low Volume

Invited Presenter Biographies

application of traditional chemical and microbial insecticides including *Bti*, Malathion, Abate, synthetic pyrethroids and MVP virus for forest insect pest control. Mr. Jany has also worked extensively with aerial and ground application systems including projects in West Africa supporting USAID Locust control and in Latin America supporting emergency *Aedes aegypti* control programs. Mr. Jany holds a B.S. in Plant Pathology and a M.S. in Entomology from the University of Arizona.

Peter Kaul

Federal Biological Research Centre for Agriculture and Forestry, Biologische Bundesanstalt für Land und Forstwirtschaft, Germany, p.kaul@bba.de

Peter Kaul was born in 1947 in Berlin. He attended the Technical University in Dresden as well as the Technical College in Berlin and graduated in machinery and automatic control engineering. From 1970 to 1977, he worked in the Institute for Mechanization of Agriculture in Potsdam. His special field was the air conditioning of modern livestock buildings. During that time he obtained his doctorate about "The Reaction of Air Temperature in Hog Houses Depending on the Outside Temperature". In 1978, he changed to the Central Biological Research Centre for Agriculture and Forestry in Kleinmachnow. There, his special subjects had been the movement of sprayer booms; the use of aircrafts in plant protection; and the development and introduction of spraying computers. With the German Unification in 1990, the institutes in Kleinmachnow and Berlin/Brunswick were unified as well. Since then, Peter Kaul's special fields have been the modeling of drift sediment in plant protection and the improvement of application in orchards.

Andrew Landers

Professor, Cornell University, Barton Laboratory, Geneva, N.Y. 14456, ajl31@cornell.edu

Dr Andrew Landers studied and taught agricultural engineering in England. He is currently a faculty member at Cornell University, based at the New York State Agricultural Experiment Station in Geneva. He directs the pesticide application technology program and his extension/research appointment involves the use of engineering solutions to provide safer spraying. He works with pesticide application systems in grapes, apples, vegetables and turfgrass and believes in a multi-disciplinary approach to pesticide application; working with biologists to ensure engineering techniques are biologically effective.

Mark Latham

Director, Manatee County Mosquito Control District, Florida, USA, manateemcd@aol.com

Mark Latham was born in Chatham, England and educated at Cambridge University, with a BA in 1979 and an MA in 1985. He led the Cambridge Medical Expedition to Brazil in 1979 to study Chagas disease and then worked at the Mosquito Research and Control Unit in the Cayman Islands from 1980-1984 as a Graduate Research Assistant. Mark started his employment track in Florida as a Supervisor/Entomologist at Miami-Dade Mosquito Control from 1985-1994 and for the past ten years serves as the Director of the Manatee County Mosquito Control District. Mark's professional service includes: Past President of the Florida Mosquito Control Association (2001-2002) and Chairman of the FMCA Aerial Training Subcommittee (1997-present) responsible for educating mosquito control aerial applicators through annual symposia ("Fly-Ins") held each January in Fort Myers, Florida. His current professional interest includes measurement of drift and deposition from operational mosquito adulticide aerosol applications by helicopters in an attempt to maximize effectiveness and efficiency while minimizing deposition and non-target impacts. He is married to Charlotte and they have 3 children, Caroline (15), Peter (12), Alexandra (8).

Paul Liemandt

Manager, Environmental Response & Enforcement Section, Agronomy & Plant Protection Division, Minnesota Dept. of Agriculture, St. Paul, MN, USA, paul.liemandt@state.ms.us

Paul Liemandt has the following program responsibilities for Minnesota: enforcement for pesticides and fertilizers including worker protection and endangered species, legislation and regulatory interpretation / law, rule, and policies, incident site response and emergency response, licensing & certification of pesticide applicators & dealers, and waste pesticide collection and pesticide container

Invited Presenter Biographies

recycling programs. Paul Liemandt served for ten years as the first Executive Director to the MN Agricultural Chemicals Response Compensation Board (ACRRA Board), funding cleanups of sites contaminated with agricultural chemicals. He is current President, Association of American Pesticide Control Officials (AAPCO) and has served as chair of SFIREG (States FIFRA Issues, Research and Evaluation Group). He also chaired the AAPCO Off Target Movement of Pesticides Committee for several years. Paul was AAPCO's representative on the National Coalition to Minimize Drift. Mr. Liemandt was born, raised and educated in Minnesota.

David Loschke

Principal Scientist for Agricultural Chemicals, Australian Pesticides and Veterinary Medicines Authority, Australia, david.loschke@apvma.gov.au

David Loschke's academic qualifications are in molecular genetics and biochemistry. David pursued a twenty year research and teaching career first at the University of Florida and later at the Australian National University in Canberra before moving to the Australian Pesticides and Veterinary Medicines Authority (APVMA). His main academic research interest was aimed at improving the genetics of crop plants by using the tools of molecular biology. His interest in spray drift risk assessment developed while he managed a lengthy reconsideration of endosulfan at the APVMA. He has also dealt with numerous other issues of pesticide regulation and was appointed the APVMA's Principal Scientist for Agricultural Chemicals in 2002.

Andrew Moore

Executive Director, National Agricultural Aviation Association, Washington DC, USA, admoore@agaviation.org

In April of this year Andrew Moore celebrated his seventh year with the National Agricultural Aviation Association (NAAA). Five of those years his title was Director of Government Relations. Currently, Andrew serves as the Association's executive director and continues to manage the government relations' issues, in addition to overseeing all of NAAA's functions. Prior to joining the NAAA he served as legislative director for former Congresswoman Andrea Seastrand who represented a part of California's Central Coast, where he handled transportation, agricultural and environmental issues. Preceding his work on Capitol Hill, Andrew was manager of congressional affairs for the United Fresh Fruit and Vegetable Association. Andrew received his undergraduate degree in Public Administration from the University of Southern California. He also recently earned his Masters in Business Administration from the George Washington University in Washington, DC. Andrew is originally from the Central Valley of California—Bakersfield, California to be exact. He grew up in agriculture and his family farms potatoes, carrots, almonds, pistachios, and navel oranges just outside of Bakersfield in Arvin, California.

Barbara Morrissey

Toxicologist, Washington Department of Health, Olympia, Washington, USA, barbara.morrissey@doh.wa.gov

Barbara Morrissey has a Masters degree in Toxicology from the University of Washington, School of Public Health and Community Medicine in Seattle, WA. She has worked in public health for the last 12 years conducting pesticide-illness surveillance for the Washington Department of Health (WDOH). During this time the WDOH has investigated and documented over 5000 reports of possible pesticide-related illness in Washington State. Barbara also participates in safety training for pesticide applicators, outreach to home user of pesticides, and education of health care providers.

Erdal Ozkan

Professor and Extension Specialist at Food Agricultural and Biological Engineering Department, Ohio State University, Columbus, Ohio, USA, ozkan.2@osu.edu

He was at Iowa State University for nearly 6 years before joining the Ohio State University in 1985. He received his Masters and Doctorate degrees in Agricultural Engineering at University of Missouri. Dr. Ozkan has been teaching and conducting research related to pesticide application technology and pesticide waste management over 20 years. In Ohio, he provides leadership in development and

Invited Presenter Biographies

implementation of Extension educational programs related to new developments in pesticide application technology. Dr. Ozkan has produced a variety of educational materials. He has authored or co-authored 5 book chapters, 46 refereed journal publications, 60 extension publications and has presented technical papers at 75 conferences in the US and in other countries. He has developed numerous microcomputer software and audio-visuals related to pesticide application technology.

Stephen L. Pearson

Sales Director, Spraying Systems Company, Wheaton, Illinois, USA, stephen.pearson@teejet.com
Steve received his Ph.D. in 1986 from University of Illinois, where he worked closely with Dr. Loren Bode on a number of application projects and taught 300 level Chemical Application course for several years. Additionally while at UofI, he taught Pesticide Applicator Training programs throughout Illinois, as well as other Cooperative Extension activities. Steve joined Spraying Systems Co. in 1988 as Technical Services Manager and held this position for about 5 years, he was promoted to Technical Director in 1993, and in 2000 became the International Sales Director. In 2003, he assumed the position of Sales Director and oversees sales, marketing, product development and design as well as divisional administration activities. During his tenure at Spraying Systems Co., Steve has been the liaison between the company and agricultural research and educational organizations world wide. He has visited and worked with hundreds of sprayer manufacturers in over 30 countries. He is active in ASAE, ASTM, and ISO for technical meetings and standards.

Carol Ramsay

Extension Pesticide Education Specialist, Washington State University, Pullman, Washington, USA, ramsay@wsu.edu

Carol Ramsay has worked in Washington State's Pesticide Safety Education since 1987. Carol is responsible for the Pesticide Education Program in Washington, serving both pre-license and recertification aspects. Her professional accomplishments include 34 extension publications, 9 notebooks, 14 videos, 2 CD-ROMs, 11 web courses, 14 newsletter articles, 5 surveys, 44 professional presentations, and over 800 extension presentations. Carol is a founding member of the American Association of Pesticide Safety Educators, the PNW Integrated Vegetation Management Association and the national pesticide Certification and Training Assessment Group. Carol served on the National Coalition on Drift Minimization for several years and has co-chaired three other pesticide drift-related national conferences. Carol is an avid bird hunter and fisherman preferring to spend money on toys to harvest meat for the freezer than spending it on meat in the store. She attempts to keep her dogs in shape by competing in hunting dogs trials when no hunting seasons are open.

Brian Richardson

Manager, Forest Biosecurity and Protection Unit, Forest Research, Rotorua, New Zealand, brian.richardson@forestresearch.co.nz

Brian Richardson has worked at Forest Research since 1983. Brian is responsible for the Forest Biosecurity and Protection Unit which covers research on all aspects of forest health (pathology, entomology), forest weeds, wind, and fire. His professional accomplishments include over 40 refereed science publications, 35 conference presentations, and many other less formal presentations and commercial reports. He is a member of the American Society of Agricultural Engineers, the New Zealand Plant Protection Society, and the New Zealand Farm Forestry Association. Much of Brian's professional career has focused on the science of aerial herbicide application in forestry and in pest eradication operations. He has also worked closely with the USDA Forest Service for 15 years on the development of models and decision support software for the improved management of aerial pesticide application operations. Brian is a keen runner, rock climber/mountaineer and caver.

Gregory D. Sayles

*Acting Assistant Laboratory Director, U.S. EPA, Office of Research and Development
National Risk Management Research Laboratory, Ohio, USA, sayles.gregory@epa.gov*

Gregory Sayles is currently the Acting Assistant Laboratory Director for Pesticides and Toxics in U.S. EPA's Office Research and Development at the National Risk Management Research Laboratory in Cincinnati. His responsibilities include planning and implementing research on managing the risk of

Invited Presenter Biographies

pesticides and toxic substances. Dr. Sayles earned his B.S., M.S. and Ph.D. in chemical engineering from California Institute of Technology, University of California at Davis, and North Carolina State University, respectively. Greg has conducted research for the U.S. EPA for 14 years in the development of bioremediation processes for contaminated soils and sediments and in risk management of endocrine disrupting chemicals, yielding over 30 published papers. Currently, Dr. Sayles is developing a research program to support the use of spray drift-reducing technologies.

David E. Scott

Pesticide Administrator, Office of Indiana State Chemist, West Lafayette, Indiana, USA,
scottde@purdue.edu

Dave has been with the Office of Indiana State Chemist 26 years. He has served many roles in the Association of American Pesticide Control Officials (AAPCO: President, Board of Directors) and Association of Structural Pest Control Regulatory Officials (ASPCRO: President, Secretary Treasurer). He served on the U.S. EPA/ Industry/ State Spray Drift Label Language Task Force and is currently serving on the Wood Destroying Insect Infestation Inspection Report (NPCA-1) Development Committee, the SFIREG Pesticide Operations Management (POM) Working Committee, and he chairs of AAPCO's Committee on Off-Target Movement of Pesticides.

Dennie Stokes

Owner, Stokes Flying Service, Parkin, AR, USA, dstokesagpilot@yahoo.com

Dennie Stokes is an ag-aviation operator and pilot from eastern Arkansas. Dennie has amassed over 20,000 total hours of flight time with 18,000+ hours of ag flying in a 32 year career in aerial application. Stokes Flying Service is a part of Mid-Continent Aircraft Corporation, a company that sells agricultural aircraft, GPS guidance systems, and application equipment. Stokes Flying Service has served as a beta test site for Satloc GPS systems currently working with new variable rate technology, and has worked very closely with CP Products in nozzle development. Dennie served as President of the National Agricultural Research and Educational Foundation in 2001 and 2002 and as National Agricultural Aviation Association in 2003. Dennie and his company have hosted many spray clinics run by the University of Arkansas Extension Service constantly looking at new application equipment or techniques.

Jackie Strager

Research Coordinator, Natural Resource Analysis Center, West Virginia University, Morgantown, West Virginia, USA, jmstrager@mail.wvu.edu

Jackie Strager has worked as a Research Coordinator and GIS Analyst for the Natural Resource Analysis Center (NRAC) at West Virginia University since the mid-1990s. At NRAC, she has worked on various natural resource-based Geographic Information Systems (GIS) research efforts, including the West Virginia Gap Analysis project with the US Geological Survey and the Spray Advisor project with the USDA Forest Service. The Spray Advisor project is a multi-cooperator effort to better incorporate the use of GIS in spray drift assessment and management. Jackie also has extensive experience in designing and leading GIS training courses and workshops. She is currently assisting the West Virginia University Extension Service in expanding their outreach efforts through the use of GIS. Jackie holds degrees in natural resources and wildlife and fisheries management and enjoys traveling, hiking, and skiing.

Kevin J. Sweeney

Senior Entomologist, U.S. Environmental Protection Agency, Office of Pesticide Programs, Washington, DC, USA, sweeney.kevin@epa.gov

Kevin Sweeney is a senior entomologist with the Insecticides Branch of the Registration Division in the U.S. EPA Office of Pesticide Programs.

He provides authoritative analyses, guidance, and advice to EPA management on pesticide regulatory decisions and issues related to entomology, public health, vector-borne diseases, pesticide application patterns, and urban and structural pest management. Kevin serves as a consultant/liaison to the USDA-ARS, Department of Defense, National Pest Management Association, American Mosquito Control Association and industry on pesticide testing and development, FIFRA issues, GLP, and

Invited Presenter Biographies

registration. Before coming to EPA in 1997, Kevin was a medical entomologist with the Maryland Department of Agriculture for 13 years. His duties included insecticide testing and evaluation, vector biology and control, disease surveillance, and rearing of insects/biological control agents. He received his graduate degree from the University of Delaware and undergraduate degree from SUNY - University of Buffalo.

Milton E. Teske

Senior Associate, Continuum Dynamics, Inc., Ewing, New Jersey, USA, milt@continuum-dynamics.com

After receiving his Ph.D. and completing two years of post-graduate work in magnetohydrodynamics, Milton Teske worked for eight years at a research firm in Princeton, New Jersey, called Aeronautical Research Associates of Princeton, Inc. There he developed models for complicated atmospheric processes (diurnal variations, tall stack releases, tornadoes, thunderstorm gust fronts, roll vortices) with a second-order closure turbulence modeling approach, and applied a 3-D Navier-Stokes model to both aircraft and submarine wake evolution. In 1979 Milt began working for an even smaller research firm, called Continuum Dynamics, Inc. Almost immediately, he began working in the area of nuclear safety, involving the flow of steam and water in pipes. Milt developed the model used to re-qualify the types of valves that failed at Three Mile Island, and has been continuously involved in further nuclear safety issues that require the development of acoustic and fluid dynamic models for their analyses. In this same period Milt developed the AGDISP, FSCBG, AgDRIFT, Spray Advisor, and SpraySafe Manager computer models for the aerial application of pesticides, applied the same Lagrangian technique to the dispersal of multi-component jet fuels (FJSIM for the U.S. Air Force) and chemical/biological agents on helicopters (LDTRAN for the U.S. Army), and reduced and interpreted more data sets than he can remember.

J.C. van de Zande, Ir.

Wageningen University and Research Centre, Agrotechnology and Food Innovations B.V. (WUR-A&F), Wageningen, The Netherlands, Jan.vandezande@wur.nl

Jan van de Zande is involved in crop protection research since 1989. In the period 1989-1993 he worked at the Institute for Applied Research for Vegetables and arable crops and emphasis was on mechanical weed control and spray technology. Main subjects were the effect of spray techniques (nozzle types and air assistance) on the biological efficacy in fungicide application for disease control and herbicide application for weed control in different crops. From 1993 onwards he worked at the Institute for Agricultural and Environmental Research (IMAG), which merged, to WUR Agrotechnology & Food Innovations in 2003. Main subjects of research are the quantification of spray drift from different spray techniques through field measurements, modelling spray drift and scenario research for environmental risk assessments. Variability of spray distribution at field scale as well as on drop scale are subjects of research, especially related to biological efficacy. Recently he coordinated part of an EU-project (PeciSpray) which led to the development of a precision orchard sprayer making use of canopy density information of individual trees detected from stereoscopic aerial photogrammetry. He is a project leader of numerous projects funded as well as by governmental departments, institutions as industry.

Gary VanEe

Professor, Michigan State University, East Lansing, MI, USA, vane@egr.msu.edu

Gary VanEe has been with Michigan State University since 1980. He earned his BS, MS, and PhD from Iowa State University in Agricultural Engineering. His research interests include machine design, fruit and vegetable mechanization, chemical application systems, and agricultural production systems. Gary teaches the following upper level courses: Fluid Power and Control Hydraulics, Agricultural Engineering Design Fundamentals, and Senior Design. He has been recognized for his achievements by the Leelanau Horticultural Society, Michigan State University, and American Society of Agricultural Engineering.

Invited Presenter Biographies

Peter Walklate

Research Leader, Silsoe Research Institute, Bedford, United Kingdom, peter.walklate@bbsrc.ac.uk

Peter Walklate joined (SRI) in 1988 and has continued to develop his interest in atmospheric particle dispersion. A key theme of his research at SRI has been the study of interactions between crops and airborne particles. This research has been applied successfully to solve a wide range of problems associated with the use of plant protection products. His research papers on the subject of crop spraying have been published widely. More recent applications of this research have diversified to address issues related to the regulation of airborne gene flow from GM crops.

Robert E. Wolf

Assistant Professor and Extension Specialist Application Technology, Kansas State University Biological and Agricultural Engineering Department, Manhattan, Kansas, USA, rewolf@ksu.edu

Bob is an Assistant Professor/Extension Specialist in Application Technology at Kansas State University (6 years) in the Biological and Agricultural Engineering Department. Prior to coming to Kansas he was in a similar position at the University of Illinois for 10½ years. Bob's main responsibility is to conduct an extension and research program in all areas of chemical application with a particular emphasis on technology. He has a special interest in weed control and drift management. Bob's current research involves using scanning software, 'DropletScan™', to analyze field collected spray droplets to gain more information on how to more efficiently apply pesticide products to achieve maximum efficacy and minimize drift. Bob is currently serving as secretary to the American Association of Pesticide Safety Educators (AAPSE). Bob received his BS, MS, and PhD from University of Illinois. For relaxation Bob likes to play golf, softball, basketball, and work at home in his landscape.

Thomas M. Wolf

Research Scientist, Agriculture & Agri-Food Canada, Saskatoon, Saskatchewan, Canada, wolft@agr.gc.ca

Tom Wolf is a Research Scientist Agriculture & Agri-Food Canada at the Saskatoon Research Centre. He was raised on a grain farm in the Red River Valley of Manitoba, was actively involved in farming for most of his life, and still maintains close ties to the family farm. Tom obtained BSA (1987) and M.Sc. (1991) degrees in Plant Science at the University of Manitoba, Ph.D. (1996) in Agronomy at the Ohio State University. He has focused his research on spray drift and pesticide efficacy from ground and aerial sprayers with new spraying technologies. In 1999, Tom started working with the Pest Management Regulatory Agency (PMRA) as an advisor on spray drift issues relating to regulatory activities, with an emphasis on buffer zones. Tom speaks to audiences across Canada on topics relating to sprayer technology.

Alvin Womac

Professor, University of Tennessee, Knoxville, Tennessee, USA, awomac@utk.edu

Dr. Alvin R. Womac, P.E. is professor of biosystems engineering and environmental science at The University of Tennessee. He has 16 years of experience in addressing spray application concerns and developing new spray equipment technologies, spray test and validation protocols, and standards. His current sprayer interests are in developing improved drift reduction technologies.

Nicholas Woods

Director, CPAS, Univeristy of Queensland Gatton, Queensland,, Australia, nicholas.woods@uq.edu.au

Nicholas Woods has worked for over twenty years as an application technologist. He has developed an internationally recognized research centre (CPAS) at the University of Queensland Gatton, establishing a core group of leading researchers in pesticide application. He has led innovative research into spray technology that has contributed significantly to the development of systems that can reduce the impact of spray drift, and led the design and establishment of one of the world's most advanced pesticide wind tunnel research laboratories. Comprehensive wind tunnel studies led to the development of models that predict the droplet size generated by different nozzle systems. In addition, an extensive series of field trials has led to the establishment of down wind spray drift

Invited Presenter Biographies

deposit profiles and the verification of mathematical models that predict deposition levels. These tools can be used to help pre-determine buffer distances between different crops and reduce the impact of spray drift.