

APPENDICES

ACRONYMS AND ABBREVIATIONS

AB	Appellate Body, World Trade Organization
ACS	Automated Commercial System (database)
AIP	Integrated Planning Team
AMS	Automated Manifest System (database)
APA	Administrative Procedure Act
APHIS	Animal and Plant Health Inspection Service, United States Department of Agriculture (USDA)
APS	American Pathological Society
AQI	Agricultural Quarantine Inspection
AQIS	Australian Quarantine Inspection Service
AQIM	Agricultural Quarantine Inspection Monitoring
ARS	Agricultural Research Service, USDA
BIOTA	Biosystematic Information on Terrestrial Arthropods
CAPS	Cooperative Agricultural Pest Survey
CCC	Commodity Credit Corp, USDA
CDC	Centers for Disease Control and Prevention, U.S. Department of Health and Human Services
CDFA	California Department of Food and Agriculture
CEO	Chief Executive Officer
CFIA	Canadian Food Inspection Agency
CFR	Code of Federal Regulations
CGIAR	Consultative Group on International Agricultural Research
CIO	Chief Information Officer
CICP	Consortium for Integrated Pest Management
CIPPS	Cooperative Invasive Plant Pest Survey Program
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CLAMP	Closing the Los Angeles Area Marketplace Pathway
CPHST	Center for Plant Health Science & Technology, USDA-APHIS

CPPC	Caribbean Plant Protection Commission
CSREES	Cooperative State Research, Education and Extension Service, USDA
CTT	Commuted Travel Time
ELISA	Enzyme-Linked Immuno-Sorbent Assay
DNA	Deoxyribonucleic Acid
EPA	U.S. Environmental Protection Agency
ESA	Entomological Society of America
FAS	Foreign Agricultural Service, USDA
FAO	Food and Agriculture Organization, United Nations
FGDC	Federal Geographic Data Committee
FIS	Federal Inspection Services
FIST	Florida Interdiction Smuggling Team
FQPA	Food Quality Protection Act of 1996
FR	Federal Register
FS	Forest Service, USDA
FSIS	Food Safety and Inspection Service
FY	Fiscal Year (Government)
GAO	U.S. General Accounting Office
GATT/WTO	General Agreement on Tariffs and Trade/World Trade Organization (usually referring to the Uruguay Round)
GILS	Government (or Global) Information Locator
GIS	Geographic Information System
GMO	Genetically Modified Organism
GPS	Global Positioning System
GS	Government Service, for grade level
HACCP	Hazard Analysis at Critical Control Points
IAEA	International Atomic Energy Agency of the United Nations
IES	Investigative and Enforcement Services, USDA-APHIS

INS	Immigration and Naturalization Service, U.S. Department of Justice
IPCC	Interstate Pest Control Compact
IPPC	International Plant Protection Convention
IS	International Services, USDA-APHIS
ISP	Internet Service Provider
ISPM	International Standards for Phytosanitary Measures
IT	Information Technology
MIM	Membrane Incorporated Molecules
MOSCAMED	Mediterranean Fruit Fly Control Program
MOU	Memorandum of Understanding
NAFTA	North American Free Trade Agreement
NAPIS	National Agricultural Pest Information System
NAPPO	North American Plant Protection Organization
NBCI	National Biological Control Institute
NCPHST	See CPHST
NEOC	National Exotic Organism Center
NEOD	National Exotic Organism Database
NEOL	National Exotic Organism Laboratory
NGO	Non-Governmental Organization
NIH	National Institutes of Health, U.S. Department of Health and Human Services
NIPP	National Invasive Plant Pest
NIPP BASE	National Invasive Plant Pest Database
NIPPC	National Invasive Plant Pest Coordinator
NIPPCEN	National Invasive Plant Pest Center
NIPP LAB	National Invasive Plant Pest Laboratory
NIS	Non-indigenous species

NPAG	New Pest Advisory Group
NPB	National Plant Board
NPPO	National Plant Protection Organization (generically)
NPRG	New Pest Response Guidelines
NZ	New Zealand
OBPA	Office of Budget & Program Analysis, USDA
OGC	Office of General Counsel, USDA
OMB	U.S. Office of Management and Budget
OPM	U.S. Office of Personnel Management
OTA	U.S. Office of Technology Assessment (formerly)
PD&R	Pest Detection & Response
PHM	Pink Hibiscus Mealybug
PHLIS	Public Health Laboratory Information System
PIIMCC	Plant Industries Incursion Management Consultative Committee
PIN	Pest Interception Network
POE	Port of Entry
PPD	Policy and Program Development, USDA-APHIS
PPQ	Plant Protection and Quarantine, USDA-APHIS
PRA	Pest Risk Analysis (also Pest Risk Assessment)
PRP	Preventative Release Program
QMI	Quarantine Material Interception
R&D	Research and Development
RPPO	Regional Plant Protection Organization
RC	Residue Cargo (permit)
SES	Senior Executive Service
SIT	Sterile Insect Technique
SPS	Sanitary/Phytosanitary Agreement, under the WTO

T&E	Transportation and Exportation (permit)
TEU	Twenty-foot cargo container units
T/E	Transportation and Exportation
UNEP	United Nations Environment Programme
UNPD	United Nations Development Programme
USC	United States Code
USDA	United States Department of Agriculture
USGS	U.S. Geological Service
USOMB	U.S. Office of Management and Budget
WADS	Work Accomplishment Data System
WTO	World Trade Organization
XML	Extensible Markup Language

*Additional acronyms are defined in Appendix titled
 “Description of Computer-Related Systems Used by APHIS/PPQ”*

Glossary of Terms

Alien species - With respect to a particular ecosystem, any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem.² (Synonymous with nonindigenous species).

Control- As appropriate, eradicating, suppressing, reducing, or managing invasive species populations, preventing spread of invasive species from areas where they are present, and taking steps such as restoration of native species and habitats to reduce the effects of invasive species and to prevent further invasions.²

Ecosystem - The complex of a community of organisms and its environment.²

Entry (of a pest) - Movement of a pest into an area where it is not yet present, or present but not widely distributed and being officially controlled.³

Equivalence - Situation of phytosanitary measures which are not identical but have the same effect.³

Eradication - Application of phytosanitary measures to eliminate a pest from an area.³

Establishment - Perpetuation, for the foreseeable future, of a pest within an area after entry.³

Harmonization - Establishment, recognition and application by different countries of phytosanitary measures based on common standards.³

Introduction - The intentional or unintentional escape, release, dissemination, or placement of a species into an ecosystem as a result of human activity.²

Invasive species - An alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health.²

Native species - With respect to a particular ecosystem, a species that, other than as a result of an introduction, historically occurred or currently occurs in that ecosystem.²

Pest - Any species, strain or biotype of plant, animal or pathogenic agent injurious to plants or plant products.¹

Pest-free area - An area in which a specific pest does not occur as demonstrated by scientific evidence and in which, where appropriate, this condition is being officially maintained.¹

Pest risk analysis - The process of evaluating biological or other scientific and economic evidence to determine whether a pest should be regulated and the strength of any phytosanitary measures to be taken against it.¹

Phytosanitary - Pertaining to regulated pests or plant quarantine.³

Phytosanitary measure - Any legislation, regulation or official procedure having the purpose to prevent the introduction and/or spread of pests.¹

Plant products - Unmanufactured material of plant origin (including grain) and those manufactured products that, by their nature or that of their processing, may create a risk for the introduction and spread of pests.¹

Plants - Living plants and parts thereof, including seeds and germplasm.¹

Preclearance - Phytosanitary certification and/or clearance in the country of origin, performed by or under the regular supervision of the National Plant Protection Organization of the country of destination.³

Quarantine pest - A pest of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed and being officially controlled. ¹

Regional standards - Standards established by a regional plant protection organization for the guidance of the members of that organization. ¹

Regulated nonquarantine pest - A non-quarantine pest whose presence in plants for planting affects the intended use of those plants with an economically unacceptable impact and which is therefore regulated within the territory of the importing contracting party. ¹

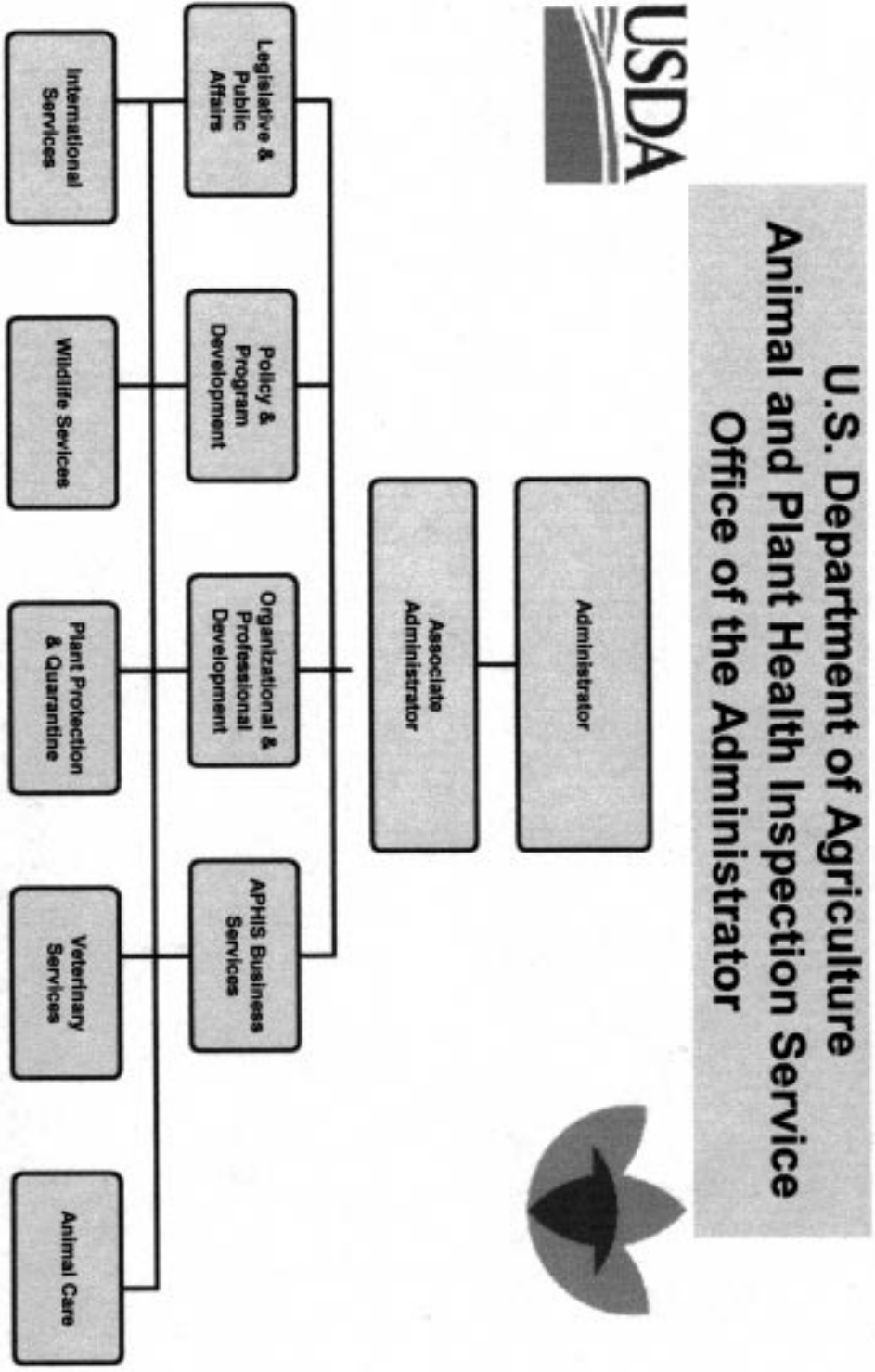
Species - A group of organisms all of which have a high degree of physical and genetic similarity, generally interbreed only among themselves, and show persistent differences from members of allied groups of organisms. ²

1/ From **INTERNATIONAL PLANT PROTECTION CONVENTION (IPPC)**. New Revised Text approved by the FAO Conference at its 29th Session - November 1997

2/ From **EXECUTIVE ORDER ON INVASIVE SPECIES**, 6183 Federal Register / Vol. 64, No. 25 / Monday, February 8, 1999 / Presidential Documents. Executive Order 13112 of February 3, 1999

3/ From **FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO)**.

APHIS Organizational Charts



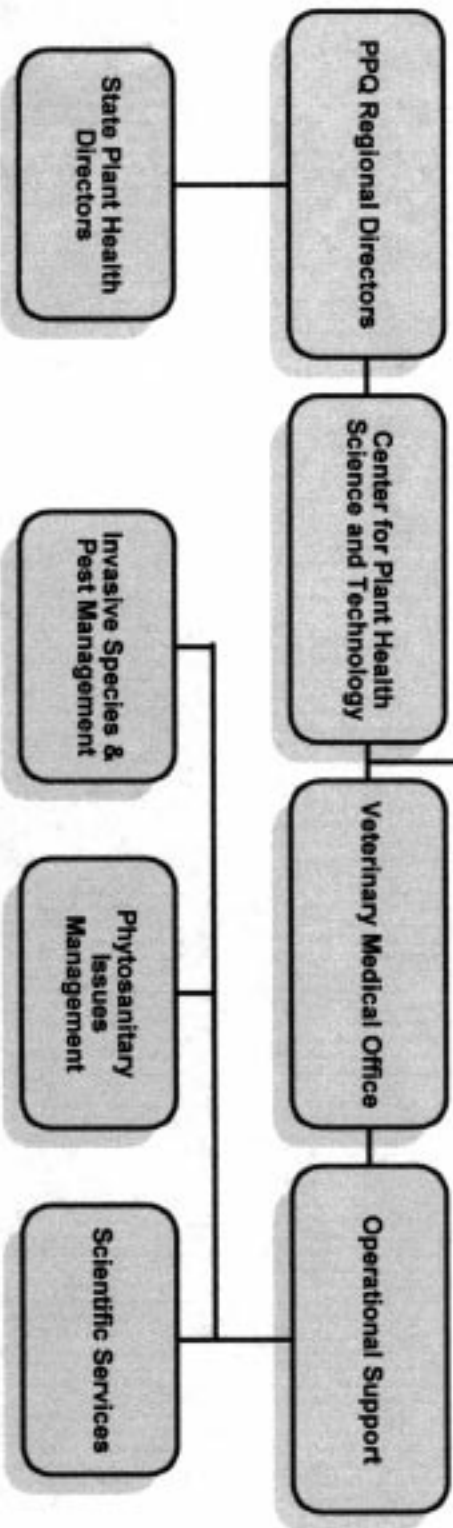


**Animal and Plant Health Inspection Service
Office of the Deputy Administrator
Plant Protection and Quarantine**



Dr. Richard Dunkle
Deputy Administrator

Dr. Chuck Schwalbe
Associate Deputy Administrator



Review Team Biographies

National Plant Board—Contractor

Stephen V. Johnson, Contracting Officer

Steve Johnson is President of the National Plant Board (NPB), which is being contracted by USDA-APHIS to conduct the Pest Safeguarding Review. Steve held the post of Vice-Chairman and Secretary-Treasurer of NPB and currently serves on the NPB Council and Executive Committee. He was President, Vice-President, and Secretary-Treasurer of the Central Plant Board. He chaired the National Plant Board, Quarantine and Nursery Standards Committee, whose major accomplishment was the development of “Plant Quarantine and Nursery Inspection Guidelines,” which describes the respective roles of plant quarantine and nursery inspection programs and the role of risk assessment and guidelines for state programs. The goal of the effort has been to foster greater uniformity and consistency among state pest prevention programs, in order to provide for equitable commerce in plants and plant products while meeting pest prevention goals.

Since 1980, Steve has worked as a State Entomologist with the Nebraska Department of Agriculture, Lincoln, Nebraska, where he is responsible for plant pest survey detection and management, plant quarantine programs, nursery certification programs, and the export certification of plants and plant products from Nebraska. He began working for the department as an entomologist in 1973.

Steve is very active in professional societies and is on the Board of Directors of the USDA Center for Plant Health Science and Technology in Raleigh, North Carolina. He served on the USDA/APHIS-Purdue University Export Certification Project (EXCERPT) Committee. He is a member of the Entomological Society of America and the Horticultural Inspection Society and has authored several articles on plant pests and was senior editor and co-author of the Nebraska Insects book. Steve earned his BS in Entomology from the University of Nebraska, Lincoln in 1973.

Robert J. Balaam, Vice President, NPB

For 29 years, Bob Balaam has worked with the New Jersey Department of Agriculture, Division of Plant Industry, as Entomologist, Supervisor, Executive Assistant, and, since 1992, as Director. He is responsible for the development, direction, management, and evaluation of the annual program for the Division of Plant Industry and the annual appropriation. The annual program includes inspection and certification of agricultural plants, plant products, and plant pollinators; development and implementation of environmentally safe plant pest control strategies using biological control agents; detection and survey of pests not indigenous to New Jersey; a survey of forested residential communities for economic populations of Gypsy Moth; a cooperative Gypsy Moth suppression program utilizing aerial application of environmentally acceptable pesticides; as well as the development of laboratory technologies.

Bob is currently the Vice-President of the National Plant Board (NPB), where he also served as Secretary-Treasurer. At NPB, he Chaired the 1997-98 Working Group to revise the U.S. domestic Japanese Beetle Harmonization Plan; coordinated efforts with USDA and Canadian Food Inspection Agency on behalf of the blueberry industry in the United States to revise Canadian requirements for shipment of fresh blueberries from blueberry maggot infested areas of United States into non-infested areas of Canada; led an effort to improve communications among State plant regulatory officials; and coordinated the initial establishment of an Internet Web site. He was also President of the Eastern Plant Board.

The Review Panel

Ted Batkin, Co-chair

Ted Batkin, a fourth generation California grower with extensive experience in association management as well as production agriculture, was appointed Board Manager of the California Citrus Research Program in 1993 and President in 1996. The Citrus Research Program is the grower-funded, grower-directed, state marketing order program that enables the citrus producers of California to sponsor and support research essential for the current and future well being of the industry. The program operates under the authority of the California Department of Food and Agriculture and is administered by a 12-member Citrus Research Board (CRB) comprised of eleven grower members and one public member appointed by the Secretary. The CRB office is in Visalia.

Prior to becoming CRB President, Ted was President of Adobe Ranch Management, Dinuba, whose clients have included the California Christmas Tree Growers and the Biomass Processors Association. From 1982 to 1989, he was Vice President of Monfort Management, Inc. of Dinuba, managing the affairs of the Fresh Market Tomato Advisory Board, Celery Research Board, Melon Research Board, Potato Research Board, and Cantaloupe Advisory Board. Ted received his Bachelors Degree from Cal State Fresno and holds a Masters Degree in Physics from the University of South Carolina.

In addition to his responsibilities as Citrus Research Board President, Ted is Chairman of the California Commodities Committee, Statewide Medfly Action Coordinator for the California Ag Issues Forum, Vice President of the National Exotic Fruit Fly Coalition, Vice Chairman of the National Citrus Research Coalition, and a founding member of the Governors Exotic Pest Eradication Task Force.

Craig J. Regelbrugge, Co-chair

Craig Regelbrugge became Director of Regulatory Affairs and Grower Services for the American Nursery and Landscape Association (ANLA, formerly American Association of Nurserymen) in December 1989. As Director of Regulatory Affairs, Craig is responsible for advocating industry's interests before government with emphasis on environmental, trade, and intellectual property issues.

Headquartered in Washington, DC, ANLA has a research arm, the Horticultural Research Institute, which manages an endowment fund of nearly \$7 million. Investment income increasingly supports annual research grants in the area of pest safeguarding. Craig serves as Technical Advisor in HRI's grant review process.

Craig represents the entire nursery industry on the National Plant Board's Quarantine and Nursery Standards Committee and as the Nursery/Greenhouse Commodity Chair for the North American Plant Protection Organization's (NAPPO) US Industry Advisory Group (IAG). Craig is Chair of the US IAG. In that capacity, he recently participated in the development of NAPPO's first strategic plan.

Craig has served on a number of quarantine and pesticide committees and working groups associated with pest issues such as the Japanese beetle and pine shoot beetle. He represents the industry on the IR-4 Project's Commodity Liaison Committee. IR-4 supports the registration of pesticides for minor use food crops and nursery crops.

Before working with ANLA, Craig was an Agricultural Extension Agent for the Commonwealth of Virginia, based in Fairfax County. Immediately after college, he was a Horticulturist with Merrifield Garden Center in Merrifield, Virginia. In 1986, Craig received a BS in Horticulture (cum laude) from Virginia Polytechnic Institute and State University, in Blacksburg, Virginia. He is Virginia Certified Nurserymen, and a member of the American Society of Horticultural Science, and the American Society of Association Executives.

B. Glen Lee, Project Advisor

Glen Lee is President of BG Lee Enterprises, which advises clients on phytosanitary issues relating to the import/export of agricultural commodities. Since he left USDA in 1995, he has consulted with organizations and governments on plant quarantine systems, standards relating to international trade, and operational efficiencies. He also manages a family farm.

From 1990 to 1995, Glen served as Deputy Administrator of Plant Protection and Quarantine, APHIS. Providing leadership to staff dispersed throughout the nation, he was responsible for the protection of plant resources from destructive pests and disease. He had overall responsibility for 2,850 employees and an annual operating budget of \$206,902,000 (US). From 1962-1990, Glen held other Technical and Managerial Positions in USDA in the area of formulating and implementing plant protection programs to protect plant resources and facilitating the movement of agricultural products in national/international commerce.

Glen received the US Government Executive Achievement Award and the Presidential Distinguished Executive Award. He was appointed to Executive Status in the USDA and received Distinguished Service and Special Service Awards. Glen received his BS in Agricultural Technology from North Carolina State University in 1962.

Mary Megan Quinlan, Project Specialist

Megan Quinlan brings practical business experience grounded in technical training to her work in the regulatory aspects of plant protection, food safety, and environmental projects. Her five years of service with USDA began in the Office of the Agricultural Attaché in Guatemala, which covered Guatemala, Honduras, El Salvador and Belize. She later worked in the Office of International Cooperation and Development (USDA-OICD) as a member of the six-person Secretariat for the Agribusiness Promotion Council, which was a body of corporate CEOs appointed to advise the Secretary of Agriculture on Caribbean Basin programs. In 1990, she left USDA to work in the private sector and expand her geographic experience to over 40 countries.

Megan has worked with industry directly and through foreign aide projects (funded by the US Agency for International Development, the InterAmerican Institute for Cooperation in Agriculture, and the Food and Agriculture Organization in Rome) to expand the admissibles list, and to develop "pest free" zones, operational plans based on maturity or variety of the product, transshipment corridors and handling arrangements, payment methods for preclearance programs and other inspection support. She prepared protocols and coordinated with researchers throughout Latin America on the mango hot water treatment and has continued to work on the regulatory approval process for emerging commodity treatments. She has been involved in host status research, review of taxonomy, and numerous other quarantine-related initiatives, often as a coordinator between the government and private sector. She is a frequent participant in quarantine and plant protection working groups, meetings and training seminars including those sponsored by US Government agencies (USDA, FDA, EPA, NIH) and international organizations such as EPPO, NAPPO, and the working group on fruit flies of economic importance.

Megan received her MSc in Tropical Crop Production from CATIE in Turrialba, Costa Rica, as one of three North American graduates since the accredited program was established in the 1940s by the Organization of American States. Her Bachelors Degree is a double major in Botany and Zoology from Duke University.

Pest Exclusion Committee

Dorthea Zadig, Chair, Pest Exclusion Committee

Dorthea Zadig is a Senior Agricultural Biologist in the Pest Exclusion Branch of the Plant Health and Pest Prevention Services of California Department of Food and Agriculture (CDFA). Serving in this capacity since 1991, Dorthea has developed a plant quarantine strategy and policy for the department and often represents CDFA on plant quarantine issues to other states, the USDA, and ad hoc representation.

Of particular interest to this national Pest Safeguarding Review is the fact that Dorthea participated in some capacity in all of California's similar review efforts which include the: Secretary's Blue Ribbon Panel on Future Strategies for Pest Exclusion (1993-4), CACASA's Pest Exclusion Committee (1994-5); Roger's 1997-98 Study on CACASA (in response to a California legislative mandate to study county pest prevention issues), and the Governor's Pest Eradication Task Force, which began in 1995 and is ongoing as an implementation committee.

Dorthea has participated in the National Plant Board committees on Japanese Beetle Harmonization and Pine Shoot Beetle Management and represents the National Plant Board to the USDA in an advisory capacity regarding the NAPPO dunnage standard. She participates as a member of the USDA's technical advisory committee for sweet potato weevil.

Prior to moving to Pest Exclusion, Dorthea had various positions in the Pest Detection/Emergency Projects Branch developing, organizing and directing pest detection and eradication projects, which included Mediterranean fruit fly, Mexican fruit fly, Oriental fruit fly, melon fly, gypsy moth and Japanese beetle.

Joseph L. Knapp, Jr.

For the past 21 years, Joseph Knapp has been Extension Integrated Pest Management (IPM) Specialist for citrus, assuming a leadership role in developing and implementing the IPM program for Florida citrus. He worked with IFAS and USDA researchers, all state regulatory agencies, and the agricultural chemical industry to establish statewide and county grower educational programs. He is a Professor in the Department of Entomology/Nematology at the University of Florida.

Joseph specializes in integrated pest management with expertise in cultural, chemical, and biological control of insects, mites, nematodes and plant diseases affecting citrus crops. His special interests are application technology, pesticide regulatory actions, and the effects of pesticides on man and the environment. As Principal Investigator for 4 years, Joseph worked on a cooperative project with the University of Florida, the University of California, and Egypt (National Agricultural Research Project) to establish a Citrus Integrated Pest Management Program in Egypt with funding from USDA/OICD.

In the past two decades, Joseph has been an international consultant on crop protection. He participated in exchange programs in China and toured citrus growing regions around the world. He is a member of the Entomology Society of America, the Florida State Horticultural Society, the International Organization on Biological Control, the Caribbean Food Crops Society, The Florida Entomological Society, and The American Registry of Professional Entomologists. His honors include the Achievement Award for Extension and Research Scientist of the Year, Florida Fruit and Vegetable Association.

Joseph earned his BS and PhD in Entomology from the Mississippi State University and his MS in Entomology from Kansas State University.

Richard J. Kinney

For 15 years, Richard Kinney has served as Executive Vice President of the Florida Citrus Packers in Lakeland, Florida, which is a non-profit trade association representing 65 commercial packers of fresh citrus. Richard is also a citrus grower. For 10 years, he served on the Citrus Canker Technical Advisory Committee and was particularly active in pest and disease issues. He was a Congressional Staffer in the US Senate (1976-81) and the US Congress (1981-83). Richard has a BA and MA in Political Science from the University of West Florida.

Howard M. Singletary, Jr.

Howard Singletary is Executive Secretary and Treasurer of the Plant Food Association of North Carolina, Inc., in Raleigh. He began his career as Research Technician in the Horticultural Science Department at North Carolina State University. Howard worked in various capacities at the North Carolina Department of Agriculture. He was Entomologist II and Plant Ecologist in the Entomology Division. He was Plant Pest Administrator in both the Pesticide and Plant Protection Division and the Plant Industry Division (of which he was also Director from 1987-97). Howard served as Secretary/Treasurer, Vice Chairman and Chairman of the Southern Plant Board and the National Plant Board. He was Chairman of the Regulatory Entomology for the Entomological Society of America, the Federal Noxious Weed Committee of the Weed Science Society of America, and the National Gypsy Moth Management Board.

Howard's past memberships include the North Carolina Genetic Engineering Review Board; Executive Committee of the National Gypsy Moth Management Board; USDA Interagency Working Group on Gypsy Moth; National Plant Board Council (of which he was also Chairman from 1995-97); North Carolina Plant Conservation

Board; North Carolina Aquatic Weed Council; and the Board of Directors of the North Carolina Weed Science Society. His current memberships include the Entomological Society of America, the Weed Science Society of America, the North Carolina Association of Nurserymen, and the North Carolina Entomological Society. He has received numerous special awards, including most recently from the United States Department of Agriculture Honor Award (1994), North Carolina Seedsmen's Association Honorary Seedsman of the Year Award (1993), and the National Association of State Departments of Agriculture Service Award (1993). Howard received his BS and MS in Horticultural Science from North Carolina State University.

William E. Wallner

Bill Wallner is Senior Research Forest Entomologist with the US Forest Service Northeastern Center for Forest Health Research in Hamden, Connecticut. For 13 years prior to joining the US Forest Service in 1976, he was a Professor of Entomology at Michigan State University. Bill has a joint appointment with Yale University. He conducted research on forest insects in Europe and Asia and is a specialist on Gypsy Moth. He made scientific trips to the former Soviet Union on 13 different occasions, where, in 1989, he spent 6 months as US Academy of Sciences scholar. In 1982, at the invitation of the Chinese Academy of Forestry, he conducted research on forest pests in China for 3(months. He published over 125 scientific articles and, in 1993, was recognized for his contributions with USDA's highest award for superior service.

Bill served on a wide array of academic and scientific review committees. As a member of the US Forest Services Pest Risk Assessment and Mitigation Evaluation Team, he traveled to numerous countries to observe harvesting, yarding, and shipping operations to assess their potential as pathways for invasive pests. Acknowledged as an expert on invasive forest pests, Bill served on science panels for exclusion and eradication programs for Washington, Oregon, California, North and South Carolina, and British Columbia, Canada. As a member of the North American Forestry Commissions Insect and Disease working group, he helped formulate the Exotic Forest Pest Information System for North America that is international in scope. Currently, he is advising APHIS on efforts to prepare a risk assessment for wood packaging materials.

Bill earned a BS in Agriculture from University of Connecticut and a PhD in Entomology and Plant Pathology from Cornell University.

Andrew L. Bishop

For the past 7 years, Andrew Bishop has been Crop Health Services Group Leader for Yoder Brothers, Inc., a grower and breeder of starter plants for ornamental horticulture and floriculture in both domestic and international markets. He oversees service departments that provide plant introduction and certification services, disease diagnostics, internal process audits for crop health management, and entomology support services. He is also lead researcher and trainer in plant pathology, evaluating crop health management tools and strategies through investigative research, traveling to facilities to train staff, troubleshoot and review crop processes, and advise senior management. He has been active in international and domestic regulatory affairs resulting from his involvement with importation of germplasm for breeding and cultivar introduction and the certification for crop export. Andrew took a lead role in the articulation of both scientific and industry perspectives on the problem of exclusion, quarantine, and eradication of chrysanthemum white rust. Previously, he served as a plant pathologist in the Analysis and Identification Branch at the California Department of Food and Agriculture.

Andrew has an AB in Biology from Cornell University and an MS and PhD in Plant Pathology from the University of Wisconsin-Madison. His research interests are crop systems based on the principles of foundation planting materials—clean stock programs that apply the exclusion strategy to manage certain diseases. He has published research regarding bacterial diseases including bacterial ring rot of potatoes and crown gall of grapevines, and has given presentations to academic, grower, and pest management groups.

Thomas Sim IV

Tom Sim has been the plant regulatory official for the Kansas Department of Agriculture since 1988. Prior to this appointment, he served at the department's plant pathologist for 13 years.

Tom has served the Central Plant Board as President, Vice-President, and Secretary-Treasurer. He has served the National Plant Board as a member of the National Plant Board Council, the Chair of the Quarantine and Nursery Standards Committee, a member of the National Plant Board's Strategic Planning Committee, and a member of the U.S. Domestic Japanese Beetle Harmonization Plan revision committee.

Tom earned a BS in Botany from Oklahoma State University and an MS in Plant Pathology from Kansas State University. He also holds an adjunct assistant professor appointment in that department.

Jeff Eisenberg

Jeff is the Senior Policy Advisor for Agriculture, Government Relations, to The Nature Conservancy. Jeff was previously employed by the U.S. Department of Health and Human Service as a program attorney from 1986-1990 doing general litigation. Subsequently, he worked for the Office of the General Counsel for the U.S. Department of Agriculture from 1990-1998. In that capacity, Jeff's principal clients were the Natural Resources Conservation Service and the Forest Service. He provided program advice and conducted litigation on program and environmental issues.

Jeff graduated in 1982 from the University of Minnesota with a Bachelor of Arts in Scandinavian Studies. He received a Juris Doctor from the University of Wisconsin-Madison in 1986.

International Pest Information Committee

Waldemar “Waldy” Klassen, Chair, International Pest Information Committee

Waldy Klassen is Center Director and a Professor at the Tropical Research and Education Center of the University of Florida, IFAS, in Homestead, Florida. In 1994, he began serving in this capacity when he returned from 4 years at the International Atomic Energy Administration (IAEA) in Vienna, Austria. At IAEA he first served as Head of the Insect and Pest Control Section of the Joint Food and Agriculture Organization (FAO)/ IAEA Division of Nuclear Techniques in Food and Agriculture and then as the Deputy Director of that division.

From 1967 to 1990, Waldy worked for USDA’s Agricultural Research Service (ARS), in Beltsville, Maryland, rising to the level of Associate Deputy Administrator for Plant and Natural Resource Sciences, after serving as National Program Director for Crop Protection Sciences and Director for the Beltsville Area. His career has combined research, teaching, and program work on a range of pests.

Waldy’s participation in professional societies is extensive. He authored over 150 published articles and professional presentations in topics ranging from genetics and insect physiology to overviews of pest management options and insecticide resistance. Waldy presented professional papers throughout the world, including the then USSR and China.

Waldy received a BS in Entomology and Chemistry and an MSc in Entomology from the University of Alberta, and a PhD in Zoology (Genetics) from the University of Western Ontario. His postdoctoral research was at the University of Illinois. His education includes the Executive Excellence Course at the Federal Executive Institute in Charlottesville, Virginia, and a Management Course from the American Management Association.

Dr. Anne K. Vidaver

Anne Vidaver is Professor and Head of the Department of Plant Pathology, University of Nebraska-Lincoln. From 1988 to 1989 and from 1997 to the present, she has served as the Director of the Center for Biotechnology. Her career began with undergraduate summer employment at Brookhaven National Laboratory, followed by research associate experience in Plant Pathology at the University of Nebraska after obtaining her doctorate. She became a staff member of the Department of Plant Pathology and moved up the ranks to her present position. She has been very active in her major professional society, the American Phytopathological Society, including achieving the Presidency. She also served as President of the Intersociety Consortium for Plant Protection, and President of the Board of the H.A.W. Institute for Alternative Agriculture. She chairs the National Plant Pathology Board of the APS, the Food and Agriculture Committee of the American Society for Microbiology’s Public and Scientific Affairs Board. She was a member of the USDA’s National Agricultural, Research, Extension, Education, and Economics Advisory Board.

Her research interests have focused principally on plant-associated bacteria. This work has included systematics, epidemiology and control; plasmid, bacteriophage and bacteriocin characterization and genetics. She has also been interested in research policy issues. Her work has led to her being advisor or consultant to several companies and several Federal agencies, including membership on the NIH-RAC (Recombinant DNA Advisory Committee) and USDA-ABRAC (Agricultural Biotechnology Research Advisory Committee). She has authored or co-authored over 180 scientific articles and a book. In collaboration with colleagues, she also holds two patents.

Anne, a native of Vienna, Austria, graduated from Russell Sage College, NY with a BA in Biology, followed by an MA and PhD in Bacteriology, with a minor in Plant Physiology at Indiana University-Bloomington.

Joseph G. Morse

Joseph Morse is the Director of the University of California’s Center for Exotic Pest Research. His program covers both applied and fundamental research dealing with the management of pests of subtropical crops, particularly pests of citrus such as citrus thrips, California red scale, Fuller rose beetle, various soft scales, Lepidoptera, and brown garden snail and on avocados working with avocado thrips. Joseph’s own fields of concentration are integrated pest management, biological control, parasitoid behavior, insectary rearing of natural enemies, the acute and sublethal impact of pesticides on both target pests and nontarget organisms, modeling and computer simulation, and pesticide resistance. He works closely with a number of citrus growers, pest control advisors, university extension agents, and researchers in other departments in order that his applied research efforts will have practical applicability to field pest management efforts.

Joseph has been involved in citrus pest management projects and in cooperative projects with researchers in Arizona, Florida, Argentina, Australia, Egypt, Japan, South Africa, and in an FAO-sponsored analysis of citrus IPM in the Near East. He received his BS from Cornell University and an MS in Systems Science and an MS and PhD in Entomology from Michigan State University, where he began his teaching career as well.

Denis C. McGee

Denis McGee is a plant pathologist with expertise in seed borne diseases. Over the course of his career, Denis has worked on these issues with the World Bank, FAO, CIAT, CIMMYT, private companies, and trade associations including the American Soybean Association. He has organized a number of symposium through the American Seed Trade Association and provided technical advice to their phytosanitary regulation negotiating

teams to China, Israel, and several European and North American countries. Some of the other technical organizations in which Denis is active or has held leadership are the American Pathological Society, the Association of Official Seed Analysts, the journals of Seed Technology and Plant Disease, and in the International Society of Plant Pathologists. He has served on various committees for the International Seed Testing Association (ISTA) and the International Seed Health Initiative (ISHI), the primary associations for creating standards in seed trade on the global scale. Denis is a collaborator with CAB International in the recent development of a Seed borne Disease Database that is distributed through CABI. He is called upon as an expert witness in seed pathology litigation issues.

Denis earned a BSc with honors in Botany and a PhD in Plant Pathology from the University of Edinburgh, Scotland. He worked as a plant pathologist at the University of Minnesota; the Victorian Plant Research Institute in Melbourne, Australia; an Agriculture Canada Research Station; and the University of Maine before joining the staff of Iowa State University in 1978. He continues to be a professor in the Iowa State Department of Plant Pathology and the Seed Science Center in addition to his research and consultations.

Ronald E. Stinner

Ron Stinner is Professor of Entomology and Biomathematics and the Director of the NSF Center for Integrated Pest Management at North Carolina State University. The Center is an Industry/University/ Government Cooperative Research Center that funds numerous research projects throughout the United States. The Center has been active in providing web-based information delivery systems and maintains over 25 websites and web-based databases. Ron and his staff maintain key pest-related websites including the www Virtual Library for Agriculture, IPMnet, and several National IPM Network sites.

In addition, they maintain a number of web-searchable databases involving agricultural pests, including invasive species, for several federal agencies including the USDA/APHIS Regulated Plants Pests Database (APHIS' official database of regulated pests, including taxonomy and regulation information); the North American Non-Indigenous Arthropods Database (from K.C. Kim, the only major list of taxonomic information on invasive arthropod species in the US); Federal Noxious Weeds; the USDA/Forest Service Exotic Forest Pest Information System for North America (in English, French, and Spanish); and the USDA/CSREES and OPMP—Pest Management Information and Decision Support System (PMIDSS) (to access multiple databases concurrently) and Crop Profiles (for key crops in every state).

Ron has published over 135 scientific papers, served on numerous national panels (including two NSF panels and five pest management-related review teams), and was Editor of Environmental Entomology for 11 years. He has international experience in the former Soviet Union, Costa Rica, and Kenya. His research interests include pest management, biocontrol, modeling, and, most recently, information processing and dissemination.

Ron has a BS in Entomology from North Carolina State University and a PhD in Entomology from the University of California at Berkeley.

Sarah Elizabeth Hayden Reichard

Sarah Reichard is a Research Assistant Professor of Urban Conservation Biology at the Center for Urban Horticulture and Ecosystem Sciences Division at the University of Washington. Her research interests are the biology and ecology of invasive species, the development of screening models and early detection and monitoring of invasive species, and the horticultural aspects of the reintroduction of rare plant species. She has taught classes in Urban Horticulture and Forestry, Biology, Ecosystem Science and Conservation, and Botany.

Sarah has written several journal articles, book chapters, proceeding contributions and abstracts. She has been invited to give numerous seminars on the topic of invasion biology and risk assessment. Her current grantors include the U.S. Department of Agriculture, Weed Science Division for Comparative analysis of herbaceous weed and non-weed species in the United States: Developing predictive methods and The Bullitt Foundation for Developing an ex situ conservation program for Washington State. She also has received grants from the Washington Department of Fish and Wildlife, The Mountaineers, the Washington Native Plant Society, The Nature Conservancy, the Northwest Orchid Society, the Cooperative Parks Program of the University of Hawai'i, National Biological Service, and the University of Washington.

Sarah is a member of the American Society for Botanical Gardens and Arboreta (currently, Co-deputy chair, Conservation Committee), Ecology Society of America, Society for Conservation Biology (Secretary, 1999-2002), Society for Restoration Ecology, Natural Areas Association, California Exotic Pest Plant Council, Northwest Exotic Pest Plant Council, Washington Native Plant Society, and the Weed Science Society. She was on the Steering Committee of the First International Weed Risk Assessment Workshop by the Australian Government, Animal and Plant Control Commission, and was a keynote speaker at the workshop. Sarah earned her BS in Botany, and MS and PhD degrees from the Seattle College of Forest Resources, Center for Urban Horticulture, at the University of Washington.

Wayne Neal Dixon

From 1993 to the present, Wayne Dixon has been Chief of the Bureau of Entomology, Nematology, and Plant Pathology, Division of Plant Industry, Florida Department of Agriculture & Consumer Services. He is Chief Scientist for diagnostic services (botany, entomology, nematology, and plant pathology) provided by the division's scientists, especially for arthropod and pathogen survey and diagnosis and plant protection programs. Wayne is Administrator for the Florida State Collection of Arthropods. He is Editor for the division's Publication

Committee, which reviews all scientists' manuscripts. Wayne's research emphasis is on identification and management of forest and shade tree pest insects, agricultural commodities, and native plants. From 1980 to 1992, he was Forest Entomologist at the Division of Forestry, FDACS, where he coordinated statewide forest pest surveys and provided pest management strategies.

Since 1980, Wayne has given over 250 lectures, seminars, workshops, and presentations to county foresters in training plant inspectors, governmental agency staff, university classes, and other groups regarding forest and shade tree pests and other agricultural commodity pest management and has published over 90 journal articles and reports. His society and professional affiliations are the Association of Systematics Collection, Florida State Collection of Arthropods (Administrator; Research Associate), Center for Systematic Entomology (Board of Directors), International Union of Forestry Research Organizations Work Party S.2.0-09, Southern Forest Insect Work Conference, and the State of Florida Task Forces: Fern Anthracnose, Brown Citrus Aphid and Citrus Tristeza Virus, Citrus Canker, Southern Pine Beetle. He has numerous fellowships and his total grants and funds awarded is approximately \$1 million.

Wayne has a BS in Biology from the University of Maine, Orono, an MS in Entomology from Texas A&M University, College Station, and a PhD in Forestry from the University of Maine at Orono.

James Franklin Quinn

Jim Quinn works on strategies for interagency information systems addressing biodiversity, land use, and water quality. Jim joined the faculty of the University of Pennsylvania in 1979, and moved to the University of California at Davis in 1981, where he is currently a Full Professor. He worked on a variety of problems in community ecology and conservation biology, including the effects of land use patterns and habitat fragmentation on biodiversity and extinction risks, strategies for inventory and monitoring studies, the design of systems of natural areas, and estimation of demographic rates for fisheries management. He is currently working with the National Biological Infrastructure on information on international invasive species.

Jim Co-directs the Information Center for the Environment (ICE) at the University of California at Davis and worked to develop the principal biodiversity databases for US National Parks (NPFauna and NPFlora), UNESCO Biosphere Reserves worldwide (MABFauna and MABFlora), and a variety of public and private lands in California. He serves on a number of advisory groups for California environmental policy, including the Source Water Assessment Program, the Clean Water Action Plan, the Science Coordinating Committee for the California Biodiversity Council, the Interagency Floodplain Management Group, and a number of committees associated with the CALFED process. He is author of more than 60 scholarly publications and has his AB in Biology from Harvard and his PhD in Zoology from the University of Washington.

Perry L. Adkisson

Since 1995, Perry Adkisson has worked as Chancellor and Distinguished Professor at the Texas A&M University System. He taught Entomology for over 40 years, first at the University of Missouri and then at Texas A&M. He headed the Department of Entomology for 11 years and was Chancellor of the University for four. He was Regents Professor of Entomology as well as Executive Director of the George Bush Presidential Library Center.

Perry is a member and leader of a variety of professional organizations. He was Executive Director of the Consortium for International Crop Protection. He has been a member of the Food Forum of the Institute of Medicine. He has been Chairman of the Panel of Experts on Integrated Control of the UN/FAO. He has consulted with the UN/FAO Plant Protection Division as well as the UNDP. He was a member of the Research Advisory Committee of the US Agency for International Development, a member of the Commission on Life Sciences of the National Research Council, and a member of the National Research Council Committee on Strategies for Management of Pesticides-Resistant Pest Populations from. Perry has also acted as the Vice Chairman of the NAS Committee on Acquisition and Use of Scientific and Technical Information in Regulatory Decision-Making and President of the Entomological Society of America. Selected honors include the World Food Prize, the Wolf Prize in Agriculture, and the Distinguished Scientist of the Year Award from the Texas Academy of Sciences. He has authored or co-authored 200 scholarly articles related to integrated pest management, cotton insect control, insect physiology, photoperiodism, and ecology.

Perry has a BS in Agriculture and an MS in Agronomy from the University of Arkansas. He received his PhD in Entomology from the Kansas State University. He was also USPHS Senior Postdoctoral Fellow at Harvard University.

Bill L. Callison

Bill L. Callison is the Assistant Director for the Plant Health and Pest Prevention Services (PH&PPS) and the Branch Chief for the Plant Pest Diagnostics Branch. He has been an employee of the California Department of Food and Agriculture for the past 34 years. His assignments there have involved close collaboration with agricultural commissioners, many different industries and industry organizations (such as the apple, beekeeping, citrus, cotton, nursery, potato, seed, and wheat advisory committees, the California Farm Bureau Federation, Agricultural Council, Western Growers, etc.; and the apiary, cotton, seed and other advisory boards), the U. S., Canadian and Mexican Departments of Agriculture, various European agricultural groups, other state departments of agriculture, and the University of California. One of his functions as Assistant Director has been responsibility for the legislative function of the Division. He has frequently drafted legislation enacted and approved by the Governor.

He currently serves as the National Plant Board's (NPB) Secretary-Treasurer, a position that begins the rotation up through the organization's officers to the presidency. He is also working with the NPB council and officers to develop a strategic plan for the organization. Bill currently chairs the NPB's Plant Seed Health Committee which is working with USDA and the seed industry (American Seed Trade Association) to develop a private entity accreditation system for field inspection and diagnostics that support the issuance of phytosanitary certificates for foreign exports. He represents the Department and the Division in the North American Plant Protection Organization (NAPPO), one of the sanitary and phytosanitary setting organizations named in the North American Free Trade Agreement.

Pest Detection and Response Committee

Richard D. Gaskalla, Co-Chair, Pest Detection and Response Committee

Richard Gaskalla is the Director of the Division of Plant Industry for the Florida Department of Agriculture and Consumer Services. In 1976, he began his career with the Florida Department of Agriculture and Consumer Services as a District Plant Protection Specialist in Fort Lauderdale. After several transfers and promotions, Richard was appointed to the position of Assistant Director, Division of Plant Industry in 1983 and later Director in 1988.

During his 24 years of employment with the Department of Agriculture and Consumer Services, Richard directed several successful agricultural pest eradication programs, including multiple Mediterranean fruit fly and citrus canker programs. Richard is a member of the National Plant Board and the Gamma Sigma Delta Honor Society of Agriculture. He was recognized by the Entomology Society of America, the American Association of Nurserymen for Distinguished Service, and with the Honor Award from the National Association of State Departments of Agriculture. Richard received a BS in Biological Science from Florida State University in 1975.

Susan D. McCombs, Co-Chair, Pest Detection and Response Committee

Susan McCombs is an Assistant Professor of Entomology at the University of Hawaii at Manoa. Her expertise is in the field of insect genetics and molecular biology. Her research program encompasses genetic studies that integrate traditional and molecular biological approaches to developing genetic engineering techniques for agricultural pests. Susan's instructional responsibilities include Insect Physiology, Insect Genetics, Scopes and Foundations of Entomology, and The World of Insects.

Susan has served as an expert consultant for the Insect and Pest Control Section of the Joint Food and Agriculture Organization (FAO)/International Atomic Energy Agency (IAEA). In this capacity, she undertook FAO/IAEA missions to Bangladesh and provided training on tephritid genetics to scientists from the Philippines, Pakistan and Bangladesh. Susan served as a consultant to the Insect Biocontrol Laboratory, USDA/ARS; Hawaii Biotechnology Group, Inc.; and Hawaii High Health Aquaculture, Inc. She has held leadership positions in the International Workshop on Transgenesis of Invertebrate Organisms, a joint French and American venture with worldwide participation, and the Hawaiian Entomological Society and organized the Pacific Entomology Conference for the past 6 years. Susan is Co-Editor of the Proceedings of the Hawaiian Entomological Society. As an active member of the Entomological Society of America, she was invited to organize the Formal Conference on Genetics and Molecular Biology at the 1997 Conference.

Susan has authored numerous research publications including journal articles, book chapters, and professional papers presented throughout the world on topics ranging from insect physiology and genetics to germline transformation. She received her BA in Zoology from DePauw University, MS in Biology (Medical Entomology) from the University of Notre Dame, and Ph.D. in Entomology (Insect Genetics) from the University of Hawaii at Manoa.

W. A. Dickerson

Bill Dickerson is the Director of Plant Industry Division for the North Carolina Department of Agriculture and Consumer Services. For over 25 years, Bill served as Research Entomologist for USDA, Agricultural Research Service at laboratories in Oxford, North Carolina, Columbia, Missouri, Quincy, Florida, and Raleigh, North Carolina. He has extensive research and applied experience in area-wide pest management and eradication programs, pheromone trap development, and biological control. From 1977 to 1987, he provided research support for the Boll Weevil Eradication Program in North Carolina. In 1987, he came to work with NCDA&CA as Administrator of Plant Protection Programs. Bill has authored or co-authored over 70 scientific publications and serves on the Board of Directors of the North Carolina Boll Weevil Eradication Foundation, the Southeastern Boll Weevil Eradication Foundation, and the Steering Committee for the Gypsy Moth "Slow-the-Spread" Program. Bill did his undergraduate studies at North Carolina State University and has his MS from the University of Missouri at Columbia.

E. Alan Cameron

Alan Cameron is a Professor in the Department of Entomology, Penn State University, having joined the faculty in 1970. Throughout his career, his research program has been geared towards improving the capabilities to manage forest insect pests. His early experience in biological control included exploration for and collection of natural enemies of a major forest pest of Australian and New Zealand pine forests. For a decade, he led an evaluation of the role of disparlure, the synthetic pheromone of the gypsy moth, for management of populations of

this pest. He has also worked with parasitoids and invertebrate predators of the gypsy moth, studied the bio-nomics of the oak leafroller, evaluated chemical and biological insecticides for control of various Christmas tree and forest insect pests, conducted studies to improve aerial spray technology, assessed pesticide efficacy, conducted an environmental assessment of a novel chemical insecticide prior to registration, studied influences of acid deposition on insect fauna along a deposition gradient, investigated the biology, population dynamics, biological control, and management of pear thrips in maple forests and sugarbushes, and coordinated the Pennsylvania component of the North American Maple Project. He has taught forest entomology, insect ecology and behavior, forest protection, and forest pest management, in addition to supervising student independent study and thesis research, and post-doctoral students.

Frequent visits to both western and eastern Europe, including sabbatical years as a Gastdozent at the Eidgenössische Technische Hochschule in Zurich, Switzerland, and as a Visiting Scientist at the European Biological Control Laboratory (USDA-ARS), in Montpellier, France, have given him broad knowledge of forest management practices and approaches under many different economic and ecological conditions. Alan has been recognized with a number of awards and citations for his contributions both to science and to a number of professional societies. He is certified in plant-related entomology by the Registry of Board Certified Entomologists, and holds a Pennsylvania Restricted Pesticide License.

Alan earned his BS in Agriculture (1960) from the Ontario Agricultural College (University of Toronto), Guelph, Ontario, Canada, and both his MS (1967) and PhD (1974) degrees in Entomology, specializing in forest entomology, from the University of California, Berkeley.

Ray R. Bingham

Ray Bingham works for the California Department of Food and Agriculture as Associate Economic Entomologist for Pest Detection/Emergency Projects. He develops and conducts training in a district of 10 counties on proper methods of insect detection with primary emphasis on the state's trapping program. He hires, trains, and oversees the Japanese beetle inspection program at the Oakland International Airport and plans and oversees the conduct of special insect surveys as they occur. He is Quality Control Coordinator of County Trapping Programs, responsible for coordinating quality control of insect trapping within the 10-county district, which involves scheduling of state personnel and participation in QC evaluations. Ray is co-author of the state's "Insect Trapping Guide," published by Pest Detection/Emergency Projects, which is the state's approved procedures manual for exotic insect detection throughout the state, and the "Medfly Delimitation Plan," which establishes standardized procedures for organizing and conducting intensive trapping around a Medfly find.

Eric H. LaGasa

Eric LaGasa has been an entomologist with the Washington State Department of Agriculture (WSDA) since the creation of the Washington State entomology program in 1982 and has served as Chief Entomologist for the past 12 years. He is the principal state specialist in the field of regulatory entomology and lead scientist and agency technical liaison for programs dealing with insect pest detection, control, and export market certification. His significant accomplishments include the establishment of the Gypsy Moth program in Washington State, which pioneered the first use of Bt for eradication in the United States (in 1983), and has since successfully handled the greatest number of Gypsy Moth introductions (including Asian Gypsy Moth) in the Western United States. Many of his published articles and presentations are on insect emergence traps. He is a member of the Entomology Society of America. Eric has his BA (1971) in Zoology and MS (1979) in Biology from the Central Washington University, Ellensburg, Washington.

Tad N. Hardy

Since 1989, Tad Hardy has been Administrative Coordinator of the Louisiana Department of Agriculture and Forestry, where he is responsible for planning, implementing, administering, and overseeing state and federal plant regulatory programs and agricultural biotechnology statewide. Previously, he was a Research Associate at the Department of Entomology, Louisiana State University and a Graduate Teaching Assistant at the Department of Zoology, Iowa State University. His extensive professional activities include the National Plant Board, of which he is currently a member of the Executive Committee. He was on the Annual Meeting Program Committee, Moderator of the Biotechnology Session, Quarantine and Nursery Standards National Committee, the Biotechnology Standing Committee, and the Ad Hoc State Quarantine Summaries Committee of the National Plant Board. He was Chairman of the Awards Committee and ad hoc Committee for State Quarantine Summaries of the Southern Plant Board. He was also a member of the State Survey Committee of the Gypsy Moth Operating Procedures and State Contact of the USDA Cooperative Agricultural Pest Survey Committee. Currently, he works as a freelance writer part-time and is a reviewer of journals of the Entomological Society of America. In 1997, Tad received the ESA Distinguished Achievement Award in Regulatory Entomology, Southeastern Branch of the Entomological Society of America and was a Nominee for the National ESA Distinguished Achievement Award in Regulatory Entomology of both the National Plant Board Nominee and the Southern Plant Board. Among his other awards was the Carl Carlson Memorial Award (Distinguished Achievement) from the National Plant Board in 1995.

Tad has written two science reference text chapters and authored or co-authored over a dozen scientific articles for proceedings and refereed journals, including *Environmental Entomology*, *Journal of Economic Entomology*, *Oecologia*, *Physiological Entomology*, *Annals of the Entomological Society of America*, *American*

Entomologist, and Louisiana Agriculture. He has given numerous presentations on topics encompassing plant/insect research data, food safety, plant pests, state and federal regulations and rule making, biotechnology, free-lance writing and insect phobias.

Tad has a BS in Biology and Chemistry from Fort Hays State University (1979) and an MS in Entomology and Zoology from Iowa State University (1981).

Tim R. Gottwald

Tim Gottwald worked at the USDA Agricultural Research Service in Orlando, Florida as a Research Plant Pathologist/Epidemiologist since 1985. Prior experience includes a position as a Research Plant Pathologist at the USDA Agricultural Research Service, Fruit and Tree Nut Research Laboratory in Byron, Georgia. University affiliations include adjunct teaching positions in plant pathology and business at the University of Florida, University of Georgia, and Valencia Community College. He currently holds membership in such professional societies as the American Phytopathological Society, the International Organization of Citrus Virologists, the Florida Phytopathological Society, and the Florida State Horticultural Society. Tim served as Chair of the Mycology and Resolutions Committees of the Southern Division of the American Phytopathological Society and served on the Epidemiology Plant Disease Loss and Electronic Technology Committees. He served as an Editor for Phytopathology and Plant Disease and is currently a Senior Editor for APS Press. He is a recipient of the American Phytopathological Society's Lee M. Hutchins Award and the International Organization of Citrus Virologists Wallace Award among others.

Tim has received numerous research grants to predict severity and improve control of fungal diseases of citrus fruit and foliage, and for the study of CTV, citrus variegated chlorosis, and citrus canker. He has consulted with the UNDP/FAO, USDA/OICD/IRD, the Minister of Agriculture of the State of Sao Paulo in Brazil, IVIA, Valencia, Spain, and private organizations about numerous citrus related problems. He has served on many advisory committees, provided expert testimony in federal and state hearings and court cases against the Florida Department of Agriculture, and advised the citrus industry on many issues. Publications include authorship or co-authorship of more than 75 journal articles, more than 40 technical publications, four book chapters, 80 abstracts, and several articles in popular publications.

Tim is a graduate of Long Beach State University with a BS in Botany, Magna Cum Laude (1975). He received his PhD (1979) and had a postdoctoral position as diagnostician, Plant Disease Clinic, at Oregon State University.

Tom Hofacker (bio not available) - US Forest Service

Robert J. Mungari

Robert J. Mungari was appointed Director of the Division of Plant Industry at the New York State Department of Agriculture and Markets in 1991. Since 1978, he served the Department in the capacity of Inspector, Entomologist and Assistant Director. The State University of New York has had a history of non-indigenous pest introductions and subsequent colonizations requiring federal and state cooperative programs for their control and abatement. For more than 50 years, the golden nematode has been successfully contained within New York. More recently, introductions involving the honeybee tracheal and Varroa mites, the pine shoot beetle and the Asian longhorned beetle have provided significant challenges to the State relating specifically to the importance of pest detection and response. Robert is President of the Eastern Plant Board. He has a BS and MS in Forest Entomology from the New York State College of Environmental Science and Forestry at Syracuse.

Robert Vernon Dowell

Robert Dowell is Primary State Entomologist with the Pest Detection/Emergency Projects Branch of the California Department of Food and Agriculture (CDFA). He has been with CDFA since 1982. His accomplishments are many, including developing temperature driven computer models to predict the development of life states of exotic pests including Mediterranean, Oriental, Mexican, and peach fruit flies, melon fly, Japanese beetle, Gypsy Moth, and sweet potato weevil. He represents the CDFA and United States Department of Agriculture (USDA) in consultations with California Department of Fish and Game and U.S. Fish and Wildlife Service scientists to determine which exotic pest eradication tactics can be used in habitats containing threatened and endangered species to insure compliance of exotic pest eradication projects with state and federal endangered species acts and the migratory bird act. He has written articles for refereed scientific journals pertaining to CDFA pest detection and eradication activities. Robert also lead a task force that prepared environmental impact reports following California Environmental Quality Act guidelines for Gypsy Moth and exotic fruit fly eradication projects and collaborated with USDA APHIS and US Forest Service to develop Environmental Impact Statements for the national Medfly and Gypsy Moth programs.

He was elected a Fellow of the California Academy of Sciences in 1987 and awarded the State of California Superior Achievement Awards (1984 & 1994), the CDFA Unit Citation for Medfly Project (1982), and the Unit Citation for Japanese Beetle Project (1987). He has his BS (1969) in Biology from the University of California at Irvine; his MS in Insect Ecology (1972) from the California State University at Hayward; and his PhD in Entomology (1976) from the Ohio State University, Columbus.

Kenneth J. Rauscher

Ken Rauscher is Director of the Pesticide & Plant Pest Management Division of the Michigan Department of Agriculture, where he works with regulated industry, university specialists, government agencies, and staff regarding legislation and regulatory enforcement, President of the Central Plant Board, and a member of the Central Chapter of the Horticultural Inspection Society. In response to the Food Quality Protection Act (FQPA), Ken established a workgroup to advise and solicit information on FQPA and design strategies for protecting Michigan agriculture. He was instrumental in the formation of the Michigan Biocontrol Task Force comprised of representatives from USDA, MDA, MSU, and industry to develop a proposal for a Midwest Regional Biocontrol Partnership at Niles Laboratory to enter into an innovative partnership with Midwestern State Departments of Agriculture, land grant universities, commodity organizations, and private industry to develop alternative pest management strategies. Under Ken's guidance MDA developed and implemented a compliance agreement and an alternative plan to facilitate the movement of pine logs from Pine Shoot Beetle (PSB) quarantined counties to mills and marshaling yards located in the PSB non-quarantined Upper Peninsula counties. As an officer of the American Association of Seed Control Officials, Ken has been actively involved in the development of a National Seed Health Accreditation system. He is a voting member of the Gypsy Moth Slow the Spread (STS) Implementation Team. Ken secured EPA funding to develop data on pesticide use, residues, available alternatives, education of growers, and development of a data system to supply information to EPA on pesticide use in Michigan agriculture.

In 1996, Ken led an effort to gain approval of a systems work plan to facilitate the shipment of apples to Brazil that resulted in Brazil becoming the leading importer of Michigan apples. Ken works with EPA-FIFRA and the Great Lakes National Project Office to support FIFRA programs (pesticide use and production regulation) and New Urban Initiatives and Environmental Justice programs protecting the health of Michigan residents. Ken earned his BS in Forestry and MS in Municipal Forestry and Forest Pathology from the University of Wisconsin.

Permits Committee

William W. Metterhouse, Chair, Permits Committee

Bill Metterhouse retired from 36 years with the Division of Plant Industry of the New Jersey State Department of Agriculture in 1992. During his tenure, he was Supervisor of Nursery Inspection, Chief of Plant Laboratories, Deputy Director and the Director for 12 years. In 1981, he was a member of the US Forest Service's Scientific Exchange Team to study forest pest management strategies in China.

Bill has served as a member and chairman on numerous APHIS Committees and Working Groups related to biological control, the Interagency Working Group (TWG) on Gypsy Moth, the Africanized Honey Bee, and the Technical WG on Russian Wheat Aphid. He served on the National Biological Control Institute Advisory Committee and the APHIS/Plant Board Advisory Council. He was the Chair of both the Eastern Plant Board and the National Plant Board. Bill has been a member of the Governor's Pesticide Advisory Council and the Biotechnology Advisory Council as well as the New Jersey Mosquito Commission.

Bill received various awards including the North American State Departments of Agriculture (NASDA) Award for Outstanding Accomplishments in Biological Control. He published articles primarily on Alfalfa Weevil, Gypsy Moth, honeybee strategies, and biological control, which is the focus of many of his lectures throughout the country.

Bill received a BS in Biological Sciences from Ohio State University in 1952 and pursued graduate studies in Entomology at Rutgers. His first work with USDA was as the field supervisor for barberry eradication in the state of Ohio. He later taught science in the New Jersey school system.

Sue Ann Tolin

Sue Tolin is a Professor of Plant Pathology at Virginia Polytechnic Institute and State University (Virginia Tech), where she began her professional career in 1966 and developed a teaching and research program with plant viruses. She has recognized and confirmed the identification of numerous viruses in Virginia's diverse crops, with recent emphasis on soybean and legume viruses, mechanisms of host genetic resistance to viruses, and seed transmissibility. Other crops she has addressed include tobacco, corn, beans, and cucurbits, as well as ornamentals, apples, peaches, and grapes where issues of virus-free propagative stocks were critical for phytosanitary clearance. She has been active in several USDA Regional Research Projects dealing with plant viruses, and is currently Executive Secretary for the International Working Group on Legume Viruses.

Sue also held a shared faculty appointment with USDA CSRS from 1978-1992 and was involved extensively as a key science advisor in the development of U.S. government and international policies, guidelines and regulations relative to research with recombinant DNA and genetically engineered organisms. She contributed significantly to developing guidelines for laboratory, large-scale, and greenhouse practices, and containment facilities, as well as risk assessment and regulatory policies relative to food safety, environmental release, large-scale field testing, and commercialization of biotechnology products. Her expertise is recognized on her own campus by her long-term service on Virginia Tech's Institutional Biosafety Committee, Intellectual Properties Committee, and current chair of the campus-wide Biosciences and Biotechnology Cross-Cutting Initiative Committee.

William F. Gimpel, Jr.

Bill Gimpel has worked for the Maryland Department of Agriculture for more than 25 years. He began in the Nursery Inspection Program and worked his way up to head the Plant Protection Section, which was recently combined with the Noxious Weed Control program. Bills group at the Department conducts the Nursery Inspection and Apiary Inspection programs, the Noxious Weed Control program, and IPM and biological control programs. They also make insect, plant disease, and nematode identifications. He is the State Plant Regulatory Official for Maryland and, at the national level, represents Maryland in matters of plant health, phytosanitary issues, and plant quarantines. Bill has been very active in the Entomological Society of America. He serves on the Governing Board representing Section E (Extension and Regulatory) at the national level and is currently Treasurer of the Eastern Branch.

Bill has received many awards, including the ESA Distinguished Achievement Award in Regulatory Entomology. He completed a 2-year program in Horticulture at the University of New Hampshire. After 4 years in the US Navy, he earned a BS in Agricultural Economics and an MS and PhD in Entomology from the University of Maryland.

Charles H. Matthews, Jr.

Charles Matthews is the Assistant Director in the Environmental and Pest Management (E&PM) Division of the Florida Fruit & Vegetable Association (FFVA) which represents the majority of fresh vegetable, citrus, and sugar cane producers in the state. The EP&M staff cover a variety of issues on behalf of their membership including: water quality and quantity; land use and property rights; pesticides and pest management solutions; potential microbial hazards; international trade issues (phytosanitary and pesticide tolerances); and environmental and pesticide related regulation and legislation. Specific to pesticides, E&PM staff are involved in a variety of State and Federal issues. At the State level, they initiate one to two dozen emergency exemptions every year; provide support for many Special Local Need registrations; and negotiate numerous generic issues, i.e. Generic State Management plan, mix/load sites, endangered species, etc. At the Federal level, they work on legislative issues; are members of the EPA's Stewardship Program; and serve on a variety of committees dealing with FQPA implementation, international tolerance harmonization, emergency exemptions, minor crops, and pesticide use. Specific to potential microbial hazards, E&PM staff are involved in a variety of State and Federal issues ranging from individual grower consultations to development of a generic checklist for growers, to serving on a variety of national committees. The E&PM Division also manages a wholly owned subsidiary of FFVA, Third Party Registrations, Inc. (TPR), which pursues and supports pesticide registrations on behalf of FFVA's membership. TPR currently holds eight herbicide registrations for a variety of crops. Prior to joining FFVA, he was a multi-county citrus extension agent for the University of Florida in southwest Florida.

Charlie holds BS and MS degrees from Clemson University.

Lynnell Brandt

Lynnell purchased a small peach orchard and began farming and packing fruit in a small warehouse owned by his father. He now owns more fruit producing land and is Vice President in charge of administration of E.W. Brandt & Sons, Inc. ®. He is also CEO of Brandt's Fruit Trees, Inc. ®, where he is in charge of one of the most innovative commercial fruit tree nurseries in the United States. It is through the company's alliance with the Dave Wilson Nursery of California that it has access to new varieties of fruit such as plumcots, apriums ®, pluots ®, white fleshed peaches and nectarines. Through the company's membership in the Associated International Group of Nurseries (AIGN), it is testing many other new fruit varieties, including the increasingly popular Pink Lady ® apple.

Lynnell is Co-founder of AIGN, the first international group of nurseries to freely share information on new fruit varieties and rootstocks. Its members are from major fruit production regions in Chile, Argentina, Australia, New Zealand, Northern and Southern Europe, and South Africa. Lynnell visited most of these areas to view new fruit varieties and growing practices. In 1996, at a meeting in Perth Australia where he spoke on "Fruit Trends in the United States," he was elected president of AIGN. Lynnell served on the Peach Marketing Order Committee and the Washington State Research Soft Fruits Sub-Committee. He was President of the Northwest Nursery Improvement Institute (NNII), a non-profit organization composed of commercial nurseries in the Northwest that allocates research funds and addresses industry problems. Lynnell has a BS in Oceanography from the University of Washington in Seattle (1972).

Harold W. Browning

Harold Browning served as a faculty member of the Entomology Department at Texas A&M University conducting research on biological control as a component of IMP for citrus, sugarcane and vegetable crops at the Texas Agricultural Experiment Station's Research Center in the Rio Grande Valley of Texas. He relocated to the University of Florida, where he has served as Associate Professor and Professor of Entomology/Nematology. His research focuses on biological control of citrus pests and preservation of biological control within an aggressive Florida citrus IPM program. In recent years, numerous exotic pests have been introduced into the Florida, and much of his research has focused on management of new pests in such an intensively managed system. He is the Director of the University of Florida's Institute of Food and Agricultural Sciences Citrus Research and Education Center.

Harold served for 5 years in a part-time capacity with CSREES (formerly CSRS) in support of national

issues relative to the science of biological control. He supported regional research activities and has participated in numerous unit administrative and technical reviews. He served as program manager within the USDA, Competitive Research Grants Programs in Biological Control and served on panels in Entomology/Nematology. He also participated in an advisory capacity to the National Academy of Sciences, Board on Agriculture, Council of Agricultural Science and Technology, and USDA, APHIS in relation to Biological Control and IPM. Currently, he is serving on the USDA, Interagency Action Team for Coordination and Communication of Biological Control. He is an active member of the Entomological Society of America and the Florida Entomological Society. He has authored over 100 research and extension publications, six book chapters, and co-authored one book.

Harold received a BS in Biology from Willamette University and a PhD in Entomology from University of California, Riverside.

Barbara J. Hass

Barbara Hass is the Special Assistant for Permits and Regulations of the Plant Health and Pest Prevention Services of the California Department of Food and Agriculture. Serving in this capacity since 1986, Barbara is responsible for and provides lead direction for the permits and regulations activities in the division. She promulgates all regulations administered by the division; serves as the division regulatory coordinator; issues state permits involving agricultural pests, approved laboratories, and quarantine commodities; and, as the State Regulatory Official, approves or disapproves applications for federal permits which are issued by the USDA, APHIS, PPQ. She also serves as technical staff to the Chief, Pest Exclusion Branch, and Director, Plant Health and Pest Prevention Services, making recommendations concerning policies or procedures relating to plant pest exclusion issues. In addition, she performs liaison work between the division and county agricultural commissioners, federal agricultural officials, university researchers, agricultural companies, and other private groups concerned with state and federal pest prevention laws and regulations.

Barbara began working for the Department in 1966 as a technician in the plant pathology (bacteriology) laboratory, was appointed to a botanist position in the botany and seed laboratories, and transferred into pest prevention work as a senior agricultural biologist prior to being promoted to her current position. Barbara's undergraduate work was in biological sciences and chemistry with graduate work in plant taxonomy and governmental management.

APHIS Steering Committee

Daniel A. Fieselmann, Chair

Dan Fieselmann, of the United State Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS) Plant Protection and Quarantine Program (PPQ), serves as a Biological Scientist (entomologist) at the Center for Plant Health Science and Technology in Raleigh, North Carolina. His current duties include leading the PPQ New Pest Advisory Group and working with other strategic projects that contribute to a more effective system to safeguard the United States from exotic pests. This focus naturally leads to chairing the Steering Committee for the Pest Safeguard Review.

Dan began his career in federal service in 1975 with the US Environmental Protection Agency (EPA) Pesticide Registration Division. In 1976, he joined USDA/APHIS in Plant Protection and Quarantine and for the past 22 years has worked on a wide variety of programs including plant protection, domestic programs, and pre-clearance assignments in the Netherlands and Japan.

Dan worked in programs in Florida, Maryland, and Mississippi and served as Botanist at the Miami Plant Inspection Station. As Regional Biotechnologist and, subsequently, as Program Manager for the Southeastern Region, Dan continued to bring science to bear on PPQ operations.

Dan earned a BA in biology from Wittenberg University, Springfield, Ohio (1974) and, while working at USDA, an MSc in Entomology with a special emphasis on Integrated Pest Management (IPM) from the University of Maryland.

Helene R. Wright

Since 1994, Helene Wright has been California State Plant Health Director, where she is responsible for all PPQ activities within the State of California, including a budget of over \$25 million and 370 employees. Helene works on programs that are cooperative in nature and that require working closely with industry and the public. She began her career with the United States Department of Agriculture. She joined APHIS, PPQ as a PPQ Officer in Los Angeles at the maritime workstation. She was accepted into PPQ's Management Intern Program, where she served in several positions. She was responsible for developing guidelines and training as well as coordinating several Agricultural Quarantine Inspection and Domestic programs. In the position of Acting Area Director in Seattle, Washington, she was responsible for a large Gypsy Moth program conducted in conjunction with the State of Oregon and one of the largest grasshopper cooperative programs covering about 6.5 million acres in nine states. Helene was selected as the Assistant to the Deputy Administrator for PPQ in Washington, DC, where she was responsible for the main PPQ Training Center as well as the Headquarters' administrative activities. She worked in conjunction with the Deputy Administrator to resolve issues with industry, other federal and state agencies, and the public. Helene was Chief of Regulatory Analysis and Development (RAD) of APHIS, Policy and

Program Development in Hyattsville, Maryland, where she was exposed to all facets of APHIS, beyond PPQ, and worked to write and publish the controversial animal welfare regulations. Helene was Associate Regional Director, Western Regional Office, in Sacramento, California, where she worked closely with the Regional Director and the State Cooperators to administer PPQ programs to the 13 Western states.

She earned her BS (1974) with honors in Biological Sciences from California Polytechnic State University, San Luis Obispo.

Michael J. Shannon

Since May 1995, Mike Shannon has been State Plant Health Director accountable for all Federal Plant Protection and Quarantine (PPQ) activities in the State of Florida, which include port of entry exclusion, detection, regulation eradication, and management of a wide range of pests, diseases, and weeds, and the certification and facilitation of exports. State programs are conducted by 393 staff members operating at 27 sites with an annual, planned budget of approximately \$25 million. Activities are planned and executed in close partnership with the Florida Division of Plant Industry. In his 3_ years prior to this assignment, Mike was Assistant Director of all headquarters operations staff, managing support activities to upper management and the field for all programs. He also had specific responsibility for management of trade issues.

In this role, Mike was responsible for working with a wide range of agricultural groups and direct negotiation with a number of foreign trading partners. He developed and implemented initiatives that expanded the Agency's efforts to enhance exports and continues to work in the development of international phytosanitary standards. Mike's 27-year career with the PPQ began as a PPQ Officer in New York and Baltimore. He served at the Hyattsville, MD headquarters office in various leadership positions on technical, operational and policy, and planning units spanning the entire range of APHIS's national and international plant health activities. He is a past recipient of Superior and Distinguished Service Awards of the USDA.

Mike has his BS from Briar Cliff College in Sioux City, Iowa. He is a graduate of the Federal Executive Institute in Charlottesville, Virginia, and USDA's Senior Executive Service Certification program.

Robert G. Spaide

Bob Spaide has been with the United States Department of Agriculture for 28 years, working as a line officer, supervisor, staff officer, Assistant to the Deputy Administrator, and currently as the Assistant Director for Safeguarding and Pest Management Programs.

Bob began his career as a Plant Pest Control Officer in New York State working on domestic programs. He later assumed additional responsibilities for agricultural quarantine inspection activities in upstate New York. After leaving New York, he served as Officer in Charge for Pennsylvania before transferring to headquarters in 1984. Since 1984, Bob has held a number of staff positions for APHIS. Pest program responsibilities included national and international fruit fly programs, Gypsy Moth, cotton pests, and domestic and international emergency programs. In between 1995 and July 1998, he led PPQ's Phytosanitary Issues Management Team responsible for managing and overcoming technical barriers trade. Since July, Bob has served as the Assistant Director for Safeguarding and Pest Management responsible for operational support to PPQ's domestic, emergency, and AQI programs.

Bob holds an Associate Degree in Applied Science in Forestry from Paul Smith's College and BS in Biological Sciences from Stephen F. Austin State University, Nacogdoches, Texas.

PEST DETECTION AND RESPONSE SURVEY

DATE: January 22, 1999

TO: State Plant Regulatory Official

FROM: Tad Hardy, Louisiana Department of Agriculture & Forestry
NPB Liaison to PPQ Safeguarding System Review
Richard Gaskalla, Florida Department of Agriculture and Consumer
Susan D. McCombs, University of Hawaii
Co-Chairpersons, Pest Detection and Response Committee,
Safeguarding American Plant Resources Review

The United States Department of Agriculture, Animal and Plant Health Inspection Service, Plant Protection and Quarantine (USDA APHIS PPQ) wants to more effectively fulfill its mission of protecting the Nation's plant resources. Recent significant infestations of pest species, e.g., Asian longhorned beetle, Mediterranean fruit fly, citrus canker and Karnal bunt, have underscored the need to review the present safeguarding system. To accomplish this goal, the USDA APHIS PPQ requested that the National Plant Board (NPB) assemble a panel of experts from industry, government, academia and other organizations to conduct a comprehensive review of current safeguarding procedures and their implementation. The Review, "Safeguarding American Plant Resources," will propose specific recommendations on how to optimize PPQ activities to improve our ability to protect domestic plant resources from non-native pests and invasive alien species. An Implementation Panel, including members of the Review Panel, will be assembled to address recommendations and implementation strategies. Please visit the National Plant Board home page at <http://partners.usda.gov/npb/safeguard.html> for more information.

The Pest Detection and Response Committee of the Safeguarding Review panel is requesting your input in the review process. Please take this opportunity to assist in the evaluation of systems used for detection of, and response to, exotic plant and forest pests. In addition to the following questionnaire, we welcome written comments on issues impacting plant safeguarding activities in the United States. The survey can be completed most easily by e-mail as the answers can be provided on a simple checklist of responses. **Because we are working under severe time constraints, we ask that the survey be returned by February 1, 1999.** Individuals wishing to respond via hardcopy may forward responses to:

Tad Hardy
Louisiana Department of Agriculture & Forestry
FAX: (225) 925-3760
e-mail: tad_h@ldaf.state.la.us

Respondent information is requested so that documentation is available to support Review Panel recommendations. The results of the survey will be tabulated separately to insure confidentiality of respondents. Please provide the following information:

Name:
Title:
Organization:
Address:
Telephone:
e-mail:

For purposes of this questionnaire:

‘Survey’ means any formal activity conducted to determine the presence or distribution of a pest of concern to your state. This includes trapping, sampling, or other designated survey activities targeting a specific pest.

‘Controls’ means any formal action taken to reduce or eliminate the introduction, spread or economic damage resulting from a specific pest.

Pests listed may be of federal or state concern. Federal examples may include gypsy moth, Japanese beetle, pine shoot beetle, tropical soda apple, Karnal bunt, etc.

Your input is essential to the review process. We realize our requested timeframe for response is relatively short. However, the questionnaire has been structured to contain as many Yes / No answers as possible. The few questions asking for lists of groups and agencies you use also are very important so please complete them accurately and completely. Please take the time to complete and return it by February 1.

If you are receiving this via e-mail, the entire questionnaire has been entered below in the body of this message. This has been done to avoid format problems with attachments. If you have problems reading this entire message and/or the questionnaire, please contact Tad at (225) 925-7772. When responding via e-mail, please include this entire message in your reply, answering the questions in the message. If this is not practical, please fax your response.

Thank you again for your assistance and input.

**APHIS SAFEGUARDING REVIEW
PEST DETECTION AND RESPONSE COMMITTEE QUESTIONNAIRE**

1) List—in order of priority—up to ten important exotics pests (not currently in your state or for which restrictions are in effect) for which survey should be conducted in your state. List all federal / state agencies involved. By listing a pest, it is assumed that you feel survey is warranted. Also indicate whether you believe federal funds are essential to do each survey.

<u>Pest</u>	<u>Doing survey?</u>	<u>Agencies Involved</u>	<u>Have CAPS \$?</u>	<u>Federal \$ essential?</u>
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Which surveys are conducted on a cost-share basis with APHIS? (List #s) _____

2) For pests being surveyed: On scale of 1-10: Is survey adequate to protect the industry for which you have responsibility?

(10-EXTREMELY ADEQUATE, 5-OK, 1-WOEFULLY INADEQUATE)

Pest Adequacy Rating Did APHIS contribute? (Indicate Y or N)
\$? supplies? staff? tech. support? controls?

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

3) For pests not being surveyed:

Explain why no survey is conducted. Example reasons: a) no practical technology, b) insufficient state resources, c) insufficient federal resources, d) short sightedness by regulatory officials, OTHER (please explain).

Pest Reason for no survey

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

4) For surveys in general:

Do you initiate surveys for purposes of a) control or b) trade facilitation? _____
Do surveys involving APHIS contain quality assurance/quality control elements? _____
When APHIS response is requested, is that response timely? _____

5) List your main sources of information for choosing survey targets, priorities and methods:

Do you consider these sources to be adequate for your needs? _____

6) List the agencies, groups, etc. with whom you typically share your survey results:

7) Please use the space below to elaborate on any of the above answers or to comment on any aspects of your relationship with APHIS which you feel need addressed (positive and negative):

PPQ SAFEGUARDING REVIEW QUESTIONNAIRE—SUMMARY

State	Q1-A	Q1-B	Q1-C	Q2-A	Q2-B	Q2-C	Q2-D	Q2-E	Rating	Q3-Svy	Q3-A	Q3-B	Q3-C	Q3-D	QA/QC	Timely	Reason	Source
AR	8	5	2	4	4	1	5	1	6	1	0	1	1	0	Y	M	B	N
CO	9	1	1	1	2	2	2	1	5	1	1	1	1	0	*	Y	B	Y
CT	6	0	0	1	0	0	0	0	*	1	1	1	0	0	Y	Y	B	Y
DE	6	6	2	3	6	1	6	1	4	5	1	1	1	1	N	M	B	Y
FL	10	7	1	7	7	7	7	0	4	3	1	2	0	1	*	*	B	Y
HI (fs&pp)	10	2	0	3	3	3	3	1	4	5	0	5	5	5	Y	N	B	N
HI (dpi)	3	2	0	0	0	0	0	0	6.5	7	5	2	0	0	*	*	C	Y
ID (dpi)	7	0	2	0	4	1	4	2	6	3	0	3	0	0	Y	M	B	N
ID (lands)	1	1	0	1	1	1	3	1	4	2	2	2	0	1	Y	Y	B	Y
IA	5	3	3	4	4	3	4	1	6	1	1	0	0	0	N	Y	B	Y
KS	10	5	3	3	4	3	6	0	4	10	1	10	10	1	N	Y	B	M
KY	2	2	1	2	2	2	0	0	6	2	0	1	0	0	M	Y	C	Y
LA	11	4	1	1	4	3	5	0	7	3	1	2	0	0	N	M	B	Y
MD (for)	10	3	4	4	1	1	0	5	5	2	2	2	1	0	M	M	C	Y
MD (dpi)	10	2	1	1	0	0	1	1	3	8	0	8	8	0	N	Y	B	M
ME	9	4	1	4	1	3	2	0	5	0	*	*	*	*	Y	Y	B	N
MA	10	3	3	6	6	0	4	0	*	1	1	1	1	1	Y	Y	B	Y
MI	6	3	1	0	1	0	2	0	5	3	0	3	3	0	Y	N	B	M
MN	6	3	3	3	3	3	3	1	4	4	0	2	2	1	Y	Y	B	Y
MS	8	4	4	5	3	5	5	0	5	3	3	0	0	0	Y	Y	B	*
MO	3	1	0	1	3	2	0	0	7	2	0	2	0	0	*	Y	B	M
MT	7	2	5	6	1	0	2	2	6	4	0	4	0	0	M	Y	B	Y
NV	10	0	3	3	0	0	6	0	8.5	0	*	*	*	*	Y	Y	B	Y
NH	1	0	0	0	0	0	0	0	5	1	0	1	0	0	*	*	C	Y
NJ (for)	9	2	3	0	2	0	2	0	7	0	*	*	*	*	Y	Y	C	*
NJ (dpi)	6	6	2	2	5	6	6	3	4	4	1	3	3	0	Y	Y	T	N
NY (for)	0	*	*	*	*	*	*	*	*	4	1	3	0	0	*	*	*Y	
NY (dpi)	7	6	6	7	7	7	7	7	4	0	*	*	*	*	Y	M	B	M
NC	10	5	4	6	4	5	8	4	6	0	*	*	*	*	*	*	B	Y
ND	8	0	6	6	1	0	5	0	6	1	1	1	0	0	M	*	B	M
OH	0	*	*	*	*	*	*	*	*	6	0	6	0	6	*	N	B	N
OK	3	1	0	0	1	0	0	0	7	3	0	3	0	0	Y	M	T	Y
OR	7	3	3	3	2	0	6	1	4	3	3	2	0	0	Y	M	B	M
PA (for)	1	1	0	0	0	1	1	0	6	0	*	*	*	*	*	Y	C	Y
PR	8	7	4	7	7	7	7	5	9	2	0	2	0	0	Y	Y	B	Y
RI	1	0	0	0	0	1	1	0	5	0	*	*	*	*	Y	Y	B	Y
SC	7	6	3	0	3	6	2	0	3.5	3	0	3	0	0	M	M	B	Y
SD (for)	1	1	1	1	1	1	1	0	8	1	1	0	0	0	*	Y	T	Y
SD (dpi)	8	7	4	5	5	5	8	3	5	3	2	3	3	2	Y	Y	B	Y
TN (for)	2	2	1	1	1	2	0	1	4	1	*	*	*	*	Y	Y	C	Y
TN (dpi)	9	6	0	2	4	5	8	3	6	1	0	0	0	0	Y	Y	B	Y
TX	8	5	1	4	4	4	5	0	5	0	*	*	*	*	N	M	B	N
UT (natrs)	6	1	0	0	1	1	1	1	5.5	1	0	1	1	0	*	Y	C	Y
VT (for)	5	3	3	4	3	0	3	0	6	2	3	3	3	0	M	Y	B	M
VT (dpi)	9	1	5	5	4	1	0	0	6	1	0	0	0	0	M	Y	B	M
VA	12	5	2	3	4	5	8	1	6	8	1	6	0	0	Y	Y	B	Y
WA	5	2	3	3	1	0	0	0	7	3	1	3	0	0	Y	Y	B	M
WV	5	5	4	8	9	9	9	0	5	5	2	2	1	0	Y	Y	B	Y
WI	6	3	1	1	0	2	1	0	3	3	3	3	3	0	N	N	B	N
WY	2	2	0	0	2	1	2	0	8	0	*	*	*	*	Y	Y	C	*
TOTALS	313	143	97	131	131	110	161	46	252	127	39	98	47	19				
AVE/ST	6.5	3.0	2.0	3	2.7	2.3	3.4	1.0	5.5	3.1	1.0	2.4	1.1	0.5				
% OF TOT				42%	42%	35%	51%	15%		41%	12%	31%	15%	6%				

Legend:

TOTALS = Total # of responses. An "*" indicates no response and was not counted in the total

AVE/ST = Total for a column / # respondents for that question

% OF TOT = Total for that column / total # of surveys conducted

% SURVEYS INVL. PPQ = 46%

% SURVEYS WITH CAPS = 31%

Q1-A = # pests being surveyed for

Q1-B = # of those surveys involving PPQ

Q1-C = # of those surveys with CAPS \$

Q2-A = # of surveys where PPQ contributed \$

Q2-B = # of surveys where PPQ contributed supplies

Q2-C = # of surveys where PPQ contributed staff
Q2-D = # of surveys where PPQ contributed tech support
Q2-E = # of surveys where PPQ contributed control measures

Rating = overall ave. adequacy rating of all surveys in a state
Q3-Svy = # of pests for which survey is not being conducted
Q3-A = # times 'no practical technology' was offered as a reason for no survey
Q3-B = # times 'inadequate state funds' was offered as a reason for no survey
Q3-C = # times 'inadequate federal funds' was offered as a reason for no survey
Q3-D = # times 'shortsightedness' was offered as a reason for no survey

QA/QC = Does APHIS have a quality assurance/quality control component in your surveys? Y = yes, N = no, M = moderate

Timely = Is the APHIS response, when requested, timely? Y = yes, N = no, M = moderate

Reason = Why do you conduct surveys? C = control, T = trade, B = both

Source = Do you feel you have adequate sources of information with which to make survey decisions? Y = yes, N = no, M = moderate

**CHART OF STATES
APHIS SAFEGUARDING REVIEW
PEST DETECTION AND RESPONSE COMMITTEE QUESTIONNAIRE**

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DESCRIPTION OF COMPUTER-RELATED SYSTEMS USED BY APHIS/PPQ

ABI - the Automated Broker Interface

A module of the Automated Commercial System (ACS) in which the brokers and filers submit import entries and entry summaries to Customs. 96% of all commercial entries are filed through ABI.

ACE - the Automated Commercial Environment

The Customs project to redesign and rebuild the ACS system. This project will give the system more efficiency and flexibility and will provide a better user interface. The Automated Targeting System (ATS) was built as an ACE project.

ACS - the Automated Commercial System

The system through which Customs interfaces electronically with the trade and other government agencies. It is composed of 13 different modules among which are ABI and AMS. Duties are paid, manifests are submitted, penalties are paid, and entries are filed through the ACS.

AMS - the Automated Manifest System

A module of ACS that accepts electronic manifest information from carriers (air, sea, and rail) that volunteer to participate. APHIS has an interface to this module and can place holds and releases with the carrier participants.

APIS - Advance Passenger Information System

The system through which volunteer airlines submit passenger information so that passengers may be targeted for inspection before arrival. Passenger Analysis Units (PAU) consisting of Customs, Immigration, and Agriculture analyze the data provided by the APIS airline participants and target passenger for inspection through TECS.

AQIM - Agricultural Quarantine Inspection Monitoring

A process whereby PPQ monitors the performance of its activities. Random samples are taken in selected pathways and compared to what the port is actually doing in that pathway. The data is currently stored in a database called Epi- Info.

ATS - the Automated Targeting System (APHIS)

The APHIS system will integrate the AMS data and the ABI data from Customs. It will be more user-friendly windows-based system. The system will be accessed through the Intranet. Better data analysis will be achieved since APHIS will now have access to entry and entry summary information that was previously restricted by Customs. A MOU is in place to provide for this data feed from Customs.

VESSEL GARBAGE VIOLATION DATABASE -

A Quarterly report of maritime vessels having received garbage violations is generated from an Oracle database. The report may now be accessed through the Intranet. Vessels remain on the list for one year from the date of the violation.

HTS - Harmonized Tariff Schedule

A system of 10-digit numbers used mostly by Census, the International Trade Commission, and Customs. Commodities are described on entries using the HTS number; it provides a way to standardize the description of commodities. Some commodities may have as many as 4 or 5 different numbers.

IBIS - Interagency Border Inspection System

The system was designed to integrate all violation and security information of agencies to protect the borders of the US. The main participants are Immigration, Customs, APHIS, and the State Department. Other agencies such as the IRS, CIA, FBI, and Interpol participate through the interface of their databases through TECS. IBIS focuses on passenger and vehicle processing only.

ITDS - International Trade Data System

A National Performance Review (NPR) project attempting to integrate the trade data needs of all government agencies and the needs of the trade industry. It will use a central database to which industry submits its information. The government agencies will then access the information it needs from this central database. The big distinction is that ITDS will require only transportation data and invoice-level data. ITDS does away with the use of manifests and entries, which are required by Customs.

PIN-OPS - Port Information Network - Operations

Originally designed to integrate the WADS and AQIM data. This system is being built so that a port can meet its local data needs and generate WADS reports and AQIM reports from its data input. Local hold sheets will be generated for the port's cargo inspections. The PQ280 report will be generated from this system also. This system requires more data input from the port than is currently being performed.

PIN- 309 - Port Information Network - 309 module

The module is used mostly by Scientific Services and Pest Identifiers to track pest interceptions. Data analysis can be used to see what pests are being found on what commodities.

PQ280 DATABASE -

Database for tracking fruits, vegetables, cut flowers, propagative material, logs, and lumber. This data is tracked by port of entry, month, commodity, country of origin, number of shipments, unit of measure (weight, stems, cubic meters, pieces) and the disposition of the commodity.

SELECTIVITY -

A module of ACS by which Customs targets its inspections. APHIS provides Customs with a list of HTS numbers for Customs to flag in Selectivity (HOLD For PPQ).

VIOLATION DATABASES

A collection of databases to track the pre-departure violations, the notification violation, and the non-compliance violations. Also, the paid civil penalties as reported by Customs are tracked by port.

WADS - Work Accomplishment Data System

The system, originally developed in 1985, to track the various activities of PPQ. Activities are tracked using activity codes to denote specific activities in the AQI programs. Port send their data to the Regions where it is compiled and sent to the National database. The WADS was expanded over the years to support not only the tracking of AQI activities but the staffing guidelines and AQIM. Ports may currently review their activities on the Intranet using the Short Term Reporting Tool (SRT). Future WADS reports will be generated from the PIN-OPS module.

TECS- the Treasury Enforcement Communication System

TECS stores all violation information for Customs; APHIS PPQ also uses TECS to store its violators or lookouts. The data stored in TECS is very sensitive; TECS users are required to take a security test to qualify. All full-time PPQ Officers with at least a certified NACI check may participate as a TECS user. APHIS has a designated number of Security Control Officers (SCO) to setup users in TECS or reset the passwords of APHIS users.

APHIS violations are programmed to come up on the TECS screen to a primary inspector (usually Immigration) for a one-year period regardless of where the violator enters the country. The violation is stored in TECS for a total of three years.

DATABASES

List of databases currently used by PPQ personnel in Riverside. PPQ field personnel may use some of these or other Internet sources. Those databases exclusive to APHIS Library presented separately.

In house electronic pest database of pest distributions/hosts based on literature sources maintained by Ahmad Chawkat of Scientific Services.

PPQ Port Information Network (PIN-309) database of Interception Records database maintained by National Identification staff.

EEPO plant pest database (v3.7 on hand) mainly based on the European Union's vision of plant pest with EU being the protected area.

Commonwealth Agricultural Bureau (CAB) Crop Protection Compendium - Module 1 available on CD-ROM from APHIS Library.

CAB virus database online available at: <http://biology.anu.edu.au/Groups/MES/vide/refs.htm>

ARS - online Germplasm Resources Information Network (GRIN) database - taxonomic database available at: <http://www.ars-grin.gov/npgs/tax/index.html>

ARS - online Plant List of Accepted Nomenclature, Taxonomy, and Symbols (PLANTS) database - taxonomic database available at: <http://plants.usda.gov/plants/qurymenu.html>

ARS - online ScaleNet database - taxonomic database on Scale Insects of the World available at: <http://www.sel.barc.usda.gov/scalenet/scalent.htm>

ARS - online Systematic Botany and Mycology Fungal database available at: <http://nt.ars-grin.gov/fungaldatabases/databaseframe.cfm>

The Plant and Insects Parasitic Nematodes homepage available at: <http://ianrwww.unl.edu/ianr/plntpath/nematode/wormhome.htm>

NEMABASE Host-Nematode database available at: <http://ucdnema.ucdavis.edu/imagemap/nemmap/ent156html/nemabase.htm>

ARS Common and Scientific names of nematodes database available at: <http://sun.ars-grin.gov/ars/Beltsville/barc/psi/nem/common.htm>

Florida Museum of Natural History - Malacology Collection database available at: <http://www.flmnh.ufl.edu/natsci/malacology/malacology.htm#Top>

Hawaiian Arthropods database @ Bishop Museum - online taxonomic database of insects and other arthropods of Hawaii available at: <http://www.bishop.hawaii.org/bishop/HBS/hbswebdb.html>

PPQ Microfiche collection in APHIS Library - selected literature but none added since about 1988.

CAB & USDA's National Agriculture Library's AGRICOLA bibliographic databases - Literature bibliographies available from CD-ROM from APHIS Library.

Commonwealth Institute of Entomology (CIE) & Commonwealth Mycological Institute (CMI) Pest Distribution Maps - Literature hard copy

Global Plant & Pest Information System from FAO available online at: <http://pppis.fao.org/>

MELVYL - California State Library database - Bibliographic information from State of California Library system available at: telnet melvyl.ucop.edu

National Agricultural Pest Information system (NAPIS) database available at: <http://www.ceris.purdue.edu:80/napis/>

HYPPZ - Institut National de la Recherche Agronomique - database listing of some insect pests of Europe available at: <http://www.inra.fr/HYPPZ/species.htm>

HYP3 - Institut National de la Recherche Agronomique - database listing of some plant pathogens in Europe available at: <http://www.inra.fr/HYP3/index.html>

Numerous online entomological taxonomic lists *such as*:

Catalogue of the Lepidoptera of the French Antilles available at: <http://www.jouy.inra.fr/USER/PRODUCTIONS/BDD/PAPILLON/indexeng.htm>

A Synonymic List of Lycaenidae (Lepidoptera) from the Philippines available at: <http://www.asahinet.or.jp/~EY4Y-TKNM/philframe.html>

Primarily operational databases:

EXCERPT PPQ's database of foreign countries plant import requirements. Requires account and password to use but demo available at: <http://www.ceris.purdue.edu/excerpt/ExcerptHome.html>

Automated Targeting System (ATS) - manifest data and entry data and entry summary data from U. S. Customs. PPQ Miami is pilot port. Safeguards and Program Management staff.

PPQ 280 database of regulated importations and disposition of fruits, vegetables, cut flowers, propagative materials, logs and lumber. Safeguards and Program Management staff.

AQI Monitoring database of PPQ inspections. Safeguards and Program Management staff.

Treasury Enforcement Communications system. U. S. Customs violations database. Safeguards and Program Management staff.

PPQ Garbage violations database. Safeguards and Program Management staff.

Automated Manifest System (AMS). U. S. Customs database. Safeguards and Program Management staff.

Advanced Passenger Information System. U. S. Customs database. Safeguards and Program Management staff.

Office of Management Review (OMR) Warehouse database. U. S. Customs database of work counts such as number of full containers, empty containers by port. Safeguards and Program Management staff.

CONTACTS

The review of the APHIS Safeguarding System was conducted in cooperation with various APHIS employees from throughout the organization as well as representatives from other Federal agencies, State Departments of Agriculture, international officials, industry, and academia. The National Plant Board and the Safeguarding Review Team acknowledges and appreciates the participation by representatives of the following:

USDA

- Agricultural Research Service
- Office of General Counsel
- Office of Risk Assessment and Cost Benefit Analysis

USDA-APHIS

- Administrator's Office
- Information Technology Community
- Legislative and Public Affairs
- Organizational and Professional Development
- Policy and Program Development
- Plant Protection and Quarantine
 - Deputy Administrator's Office
 - Operational Support
 - Resource Management Support
 - Detroit Work Unit
 - Port Huron Work Unit
 - Miami Work Unit
 - Florida Citrus Canker Project
 - San Francisco Work Unit
 - Oakland Work Unit
 - Los Angeles Work Unit
 - Long Beach Work Unit
 - San Diego Work Unit
 - Western Regional Office
 - Eastern Regional Office
 - Central Regional Office
 - Florida State Plant Health Director's Office
 - California State Plant Health Director's Office
 - North Carolina State Plant Health Director's Office
 - West Virginia State Plant Health Director's Office
 - Center for Plant Health Science and Technology
- International Services
 - Deputy Administrator's Office
 - Region II - South America
 - Region III - Asia and Pacific
 - Region IV - Europe, Africa, Russia, Near East
 - Region V - Screwworm Eradication Program
 - Region VI - Mexico
 - Region VII - Central America
 - Operational Support

National Association of Agricultural Employees

U.S. Department of The Treasury—Customs Service

Centers for Disease Control

International Officials

Australian Agricultural Quarantine Inspection Service, Agriculture, Fisheries,
and Forestry (AQIS)
New Zealand Ministry of Agriculture and Forestry (MAF)
United Kingdom Ministry of Agriculture, Fisheries, and Food (MAFF)
Canadian Food Inspection Agency (CFIA)
Sanidad Vegetal - Mexico

State Departments of Agriculture

Delaware
Maine
Connecticut
Florida
Maryland
Illinois
Indiana
Washington

In addition to those that contributed through the Detection Survey as noted in
Appendix D.

Private Associations

American Nursery & Landscape Association
Florida Fruit and Vegetable Association

Private businesses

Thermo Trilogy
Brandt's Fruit Trees
Asgrow Seed
Pioneer Seed Company

And the approximately 30 private associations and businesses that provided com-
ments during the review process.

Universities

Montana State University
Cornell University
University of Maryland

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