



Biosecurity

March 2007

Safeguarding Our Nation's Plant Resources

One of the principal responsibilities of government is to promote and ensure the availability of safe and secure food, fiber, feed, and natural resources. US agriculture is highly productive and provides the safest and most secure food supply in the world due to the scientific advances that resulted from past investments in agricultural research. Recently, there has been an increased awareness of the need to protect our crops and forest systems from intentional tampering as well as from natural new and emerging pathogens. As a result of this awareness, various governmental initiatives have enhanced the operations and responsiveness of our plant diagnostic systems, increased the effectiveness of many regulatory processes, and initiated specific planning for recovery from plant diseases. These commendable efforts must continue, with strong focus on addressing remaining gaps and needs, to ensure that the next generations of U.S. citizens have an ample supply of high quality foods, feed, fiber, bioenergy, and feedstocks for industrial products.

Some Recent Accomplishments of Note:

- **Diagnostics:** The National Plant Diagnostic Network (NPDN; USDA-CSREES) has created a dynamic, interconnected, well-trained and responsive system to anticipate, respond to, diagnose, and report plant diseases and pests of concern. APS members served on the recent 5-year review team.
- **Recovery:** The National Plant Disease Recovery System (NPDRS; USDA-ARS) is working, with input from subject matter experts, to develop recovery plans specifically targeted to Select Agents and other high-threat plant pathogens.
- **Research Funding:** Limited funding for research in plant biosecurity has been provided in the USDA-NRI Plant Biosecurity Program.
- **Select Agent List:** The mandatory 2-year APHIS Select Agent list revision is underway, and, at the request of USDA APHIS PPQ, members of the APS Emerging Diseases and Pathogens Committee formally provided technical input.
- **Professional Society Efforts:** The APS has provided support and input to plant biosecurity policy-makers through its Crop Biosecurity Committee, Emerging Diseases and Pathogens Committee, and Public Policy Board. Recently, APS approved the formation of an Agricultural Biosecurity Advisory Committee to inform the APS Council and Officers of these issues.

Continuing Gaps and Needs:

- **Research:** A continued need for research in microbial genomics, biology, and epidemiology of high-threat pathogens and synthetic agents, diagnostics, forensic technologies, disease management strategies. *APS will solicit member input to assist in identification of research priorities.*
- **Resources:** Biosecurity-related resources in great need of financial support include culture collections, pathogen and expert databases, and funding to ensure the availability of secure facilities. Validation of new diagnostic/detection tests requires personnel and funding.
- **Education:** Plant pathologists trained in the field-oriented aspects of our discipline are essential to plant protection efforts and training in the coming years, in contrast to the recent trend in many universities to train students primarily in basic research. First detector training must be continued.
- **Communication and Coordination:** There is a continuing need for greater communication and coordination among (and within) agencies, industry, academia, scientific societies, and other stakeholders.
- **Regulatory:** Evaluate the potential of identification of risk group classification for plant pathogens analogous to those of animal and human pathogens.

Specific Requests:

- **Increase funding for USDA plant biosecurity programs by**
 - Providing funding for planning, design, and implementation of the high containment plant pathogen research facility at Ft. Detrick;
 - Increasing funding for the CSREES regional diagnostic network to \$14 million in FY 2008 as proposed in the Administration's budget request by ensure that the NPDN receives \$12 million in FY 2008 with additional increases in subsequent years to bring total funding for the NPDN to \$15 million by FY 2010;
 - Increasing funding for the NPDRS by \$4.3 million in FY 2008 as proposed in the President's budget request; to \$10 million;
 - Providing \$5 million for the Higher Education Agrosecurity Program as proposed in the budget request;
 - Supporting the continuation of the CSREES Biosecurity competitive grants program; and
 - Providing funding to APHIS for increased surveillance and detection of plant related pests and pathogens, outbreak response activities, diagnostics development and validation, training programs for diagnostics, lab accreditation programs that involve NPDN labs, and increase staffing in PPQ.
- **Increase funding for research directed at genomics of agriculturally related plants and microbes by.**
 - Increasing funding on agriculturally relevant plant and microbial genomics programs at the various agencies (DOE, NSF, USDA-ARS, USDA-CRSEES, and NIH), particularly those that contribute to improving capabilities in detection, diagnostics and forensic science;
 - Including agriculturally relevant plant and microbial genomics programs as a priority in any mandatory funding research programs included in farm bill or disaster assistance legislation; and
 - Ensuring the continuation of an adequately funded USDA-NSF Microbial Genome Program.



- ***Ensure the availability of adequate USDA competitively awarded funding for critically important plant biosecurity programs and programs that underpin plant biosecurity by increasing funding for the USDA-NRI to \$400 million by FY 2012.***
- ***Provide for the development and maintenance of key resources for plant biosecurity research, such as pathogen culture collections, databases, and other irreplaceable resources by***
 - Supporting the establishment of a USDA, DOD, FBI, and DHS joint task force, and hosting a national workshop, to evaluate and propose financial and infrastructural plans to maintain and manage essential pathogen culture collections and databases.
- ***Ensure the availability of plant pathologists with broadly based training and expertise to fill plant biosecurity-related positions in the coming years***
 - USDA, NSF, and other agencies, working with APS, host a national workshop to address the needs and strategies for plant pathology education in the universities of the future.
- ***Support efforts to enhance inter- and intra- agency communication and coordination in the area of plant biosecurity by***
 - Providing \$2 million for the USDA Office of Homeland Security (as proposed in the budget request) and use part of the \$1 million increase for funding at least one IPA or full-time equivalent position within the USDA Office of Homeland Security for an experienced plant pathologist who could serve as a focal point within the USDA for plant biosecurity issues; and
 - Supporting the appointment of plant pathologists to serve on all USDA, EPA, FBI, DHS, and HHS advisory boards, committees, and task forces related to biosecurity.

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