

USDA APHIS OFFSHORE PEST INFORMATION SYSTEM

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Abstract

International trade is rapidly expanding and the relevance of international borders as barriers to pest movement is diminishing. As trade expands, so does the risk of accidentally or intentionally spreading exotic plant pests. The Offshore Pest Information System (OPIS) is a process designed to collect, analyze, communicate and use relevant international information concerning pests that are not known to occur in the U.S. Using OPIS will enable USDA, Animal and Plant Health Inspection Service (APHIS) to meet its mission. That mission is to “safeguard American resources from exotic invasive pests and diseases.” By using OPIS, the Agency can quickly and effectively respond to imminent pest threats.

A stakeholder review of the USDA’s plant safeguarding system in 1999 found that a “broad range of highly reliable information on international pests is needed to enable APHIS PPQ to effectively safeguard America’s plant resources.” Likewise, the Animal Health Safeguarding Review found in 2001 “that the U.S. cannot achieve exclusion, detection, assessment of risk or eradication, and control of foreign animal diseases without adequate, scientifically sound, rapidly accessible and completely communicated international animal health information.” Both reviews recognized the importance of identifying pest threats.

The components of an effective safeguarding system include offshore risk management, port-of-entry exclusionary measures, quarantines, pest detection, and emergency response. One of the most important of these is pest detection. The Offshore Pest Information System provides for the detection of pests on a global scale for specific targeted plant and animal pests. Communication of this information through the designed system complements the other components of the effective safeguarding system.

There are four basic elements to OPIS:

1) Collecting the information

- 2) Synthesizing the information
- 3) Communicating the information, and
- 4) Supporting the system through research and data collection

The Offshore Pest Information System is designed to identify for American plant and animal regulatory officials based domestically and abroad, and our trading partners, a maximum number of targeted plant pests and animal diseases which the Agency has determined represent a current and significant threat to the U.S. agricultural and natural resources.

With the assistance of several professional scientific societies and industry groups, the USDA APHIS has developed a target pest list. This list is comprised of more than 600 insects, mites, pathogens, nematodes, mollusks, and weeds that the cooperating groups identified as the most threatening to U.S. plant and animal health. Approximately 100 pests have been identified as “priority” targets. Disclosure of these pests of concern by the U.S. helps U.S. trading partners become aware of American concerns and its desire to work with those countries to keep such pests out of their countries as well; this helps both the U.S. and its trading partners.

Information on the density and distribution of priority target pests is collected regularly in the foreign countries where they are known to occur. New detections of these organisms are also monitored and reported. As current status information is collected and reported on these priority target pests and diseases, safeguarding personnel in the U.S. and elsewhere adjust pest and disease risk management options. These options may include modifying the following:

- Initiating offshore pest management or risk mitigation
- Organizing early-detection surveys for these pests and diseases in the U.S.
- Improving port-of-entry inspection procedures

- Re-evaluating existing phytosanitary policies

The OPIS consists of the following components:

- Global pest and disease database—A reference tool on pests
- Target pest list—A list that is reviewed and updated periodically
- Pest/Pathway status in foreign countries—Monthly reports on target pests
- Pest interception data from U.S. ports—Information reported into the system
- Communication component—Getting the word out through monthly or emergency pest alerts and news releases
- Initiation of protective and mitigation measures—Actions by U.S. and foreign countries

To ensure timely, accurate, and secure management of this international pest and disease information, a web-based reporting and reference system has been developed. The system identifies and communicates to those who have a need to know, the target pests and diseases that have been identified by APHIS as a current potential threat to the U.S. Offshore safeguarding officers and others can report their findings immediately through the secure electronic system. Reported information is evaluated by key scientists and policy making officials within APHIS to determine credibility, spatial and geographic impact on American plant and animal resources, and to determine risk mitigation procedures or policies to be undertaken by safeguarding officials here in the U.S. Following this analysis, the collected information and appropriate mitigation or advisory measures are electronically reported through a secure system as ranked pest alerts or pest news items to federal and state safeguarding officials for subsequent commodity inspection, pest detection or quarantine activities.

The electronic system provides a link to basic pest information contained in a USDA APHIS Global Pest and Disease Database. The information contained in this database includes geographic distribution, host commodities, animals, or other material, taxonomy and identification information. The offshore pest and disease

status information reported by safeguarding officials is also stored electronically for use by risk assessors and policy makers when needed for future decision making.

Beginning in 2004, APHIS will conduct a pilot program of the Offshore Pest Information System in three countries or regions: Caribbean Region, Brazil, and South Africa. These countries/regions have been determined to be a significant threat of exotic pest introduction because of their proximity to the U.S., developing pest populations, and existence of potential pathways identified by present or planned trading activities. Safeguarding officers will be hired by APHIS and placed in these countries to cooperate with foreign officials to monitor the populations of the target pests and diseases in that region or in regions with which they conduct trade.

Several mutual benefits are anticipated from the pilot program in these countries. Included among those benefits is increased communication about specific pests with potential for disrupting trade between the U.S. and these pilot program countries. An example outcome of a pest monitoring system in the South American and Caribbean region would be the implementation of Caribbean regional exclusion measures designed to impede the northward spread of soybean rust from South America. Another mutual benefit from such a system would be the facilitation of pest mitigation or pest management programs for pests of concern. This benefit has already been demonstrated in at least one Caribbean country through the development and establishment of a biological control program for pink hibiscus mealybug.

References

- Safeguarding American Plant Resources, A Stakeholder review of the APHIS-PPQ Safeguarding System**, July 1999, National Plant Board.
- The Animal Health Safeguarding Review, Results and Recommendations**, October 2001, National Association of State Departments of Agriculture Research Foundation.