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United States Department of Agriculture  
Animal and Plant Health Inspection Service  
Program Aid No. 1791

# Center for Plant Health Science and Technology National Programs

## Risk and Pathway Analysis





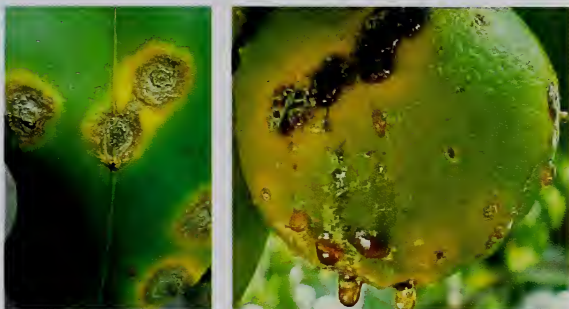
## Who We Are

The mission of the Risk and Pathway Analysis (RPA) team is to use pathway research and risk-analysis procedures to provide scientific support to regulatory program managers and decisionmakers engaged in strategic planning and deployment of programs in the U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service's (APHIS) Plant Protection and Quarantine (PPQ) branch. RPA team members work out of the Center for Plant Health Science and Technology's (CPHST) offices in Raleigh, NC.

RPA's vision is to apply risk-analysis methodologies to safeguard natural biological systems and agriculture, and to become a leader in pathway and risk-analysis methods development and application.

The RPA team investigates and facilitates the analysis of data relevant to regulatory issues. RPA specialists maintain partnerships with international counterparts, other Federal agencies, State departments of agriculture, nongovernment organizations, academia, and industry.

The RPA staff provides essential support to risk-based policymaking, while covering a broad range of issues in APHIS-PPQ. The staff provides support by analyzing and managing scientific issues relevant to safeguarding plant health from the threats of harmful exotic pests of agriculture and natural ecosystems.



*Citrus canker, a bacterial disease of Asian origin, affects both leaves and fruits of all varieties of citrus. (APHIS photos by Daniel Robl.)*

## What We Do

To support APHIS–PPQ program management, RPA

- Performs risk assessments that provide the scientific basis for policies and programs designed to safeguard U.S. plant resources from harmful exotic pests associated with imports.
- Analyzes offshore pest dynamics; identifies agroenvironmental pests of greatest concern and potential pathways for the introduction of harmful exotic pests.
- Identifies measures to eliminate or reduce the risk of pest introduction.
- Develops technology applications and strategies for protecting imports and exports from pest threats, including systems for spatial analysis-based methodologies for pest risk assessment and management.
- Provides scientific and analytical support to expedite the U.S. export process.
- Provides leadership to the New Pest Advisory Group in achieving consensus action on newly detected invasive species.
- Integrates weather, pest distribution, and other databases in forecasting and risk-management models.



*Thrips damage on an immature Wisconsin red pepper.*  
(APHIS file photo.)

## Where We Are Going

Activities that the RPA team primarily focuses on include the analysis of risks posed by emerging and reemerging plant pests and invasive species. Many of these analyses are associated with the import and export of agricultural commodities. Analyses may also deal with specific organisms or pathways. Specific projects are coordinated by the National Science Program Leader and reviewed by the Board of Directors of CPHST.



*CPHST scientists determine strategies to protect crops, such as these soybeans, from foreign pests. (USDA Agricultural Research Service photo by Scott Bauer.)*

The analyses produced by the RPA group help APHIS–PPQ to design risk-based regulations for imports, in addition to domestic pest-management programs. The work of the staff is important for identifying and assessing new pest threats, monitoring the effectiveness of existing programs, and helping to prioritize available resources to maximize protection capabilities.



*Flowering kudzu is a fast-growing exotic weed with a grapelike odor. (USDA Agricultural Research Service photo by Peggy Greb.)*



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*Sudden oak death symptoms on tanoak (Lithocarpus densiflorus). (USDA Forest Service photo by Joseph O'Brien.)*



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*Asian longhorned beetle, an oriental pest that attacks many tree species, was first detected in the United States by PPQ in 1996. (APHIS file photo.)*

*Cover photo: Mexican fruit flies laying their eggs in a grapefruit. (USDA Agricultural Research Service photo by Jack Dykinga.)*

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Issued November 2004