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Miscellaneous
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Plant Protection and Quarantine:

Safeguarding
American
Agriculture,
Fighting Invasive
Species, and
Facilitating
Trade



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Front cover: Plant Protection and Quarantine officers serve as the first line of defense against invasive animal and plant pests and diseases.

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Mission

Protecting American agriculture and environmental resources is the basic charge of the U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS). APHIS provides leadership in protecting and ensuring the health and care of animals and plants. We improve agricultural productivity, ensure competitiveness, and

contribute to the national economy and the public health.

The Plant Protection and Quarantine (PPQ) program in APHIS touches the lives of all Americans by ensuring the availability of domestic and imported foods in the marketplace, facilitating agricultural exports, and contributing to the health of U.S. public and private lands.



PPQ provides leadership in protecting and ensuring the health and care of America's agricultural resources.

Scope of Activities

PPQ takes a lead role for APHIS in plant health issues as specialists in the safe movement of agricultural products around the world. PPQ also joins with other APHIS programs, USDA agencies, and Federal partners to mitigate the introductions of, and adverse impacts caused by, invasive species—plants and animals from abroad that threaten our ecosystems. PPQ's activities can be grouped into three categories:

safeguarding plant and animal resources from exotic pests and diseases, managing plant pests to protect plant resources, and enhancing trade through phytosanitary procedures. Specific actions in support of these categories include animal and plant pest exclusion, smuggling interdiction, trade compliance, pest monitoring, risk analysis, and areawide pest management, including response to emergency situations.



The Federal Government has maintained the first line of defense for United States agriculture since the early 1900's. (Historical image from the APHIS photo archives.)

Employees

About half of APHIS' employees work in PPQ. These 3,000 employees represent a wide variety of academic disciplines and are a highly educated and skilled work force. Plant pathology, entomology, botany, ecology, zoology, veterinary science, biotechnology, computer science, statistics, and management are only some of the areas PPQ employees specialize in. The vast majority of them hold college degrees, and many have advanced degrees in the sciences. PPQ employees work all over the United States and in several foreign countries. Management and staff specialists work at APHIS headquarters offices in and near Washington, DC.

PPQ focuses its organizational structure on its 50 State plant health directors, who receive support from headquarters and two regional hubs: the eastern hub in Raleigh, NC, and the western hub in Ft. Collins, CO (opening in 2001). PPQ employees work closely with State and local plant health officials and regulatory authorities. To manage the volume and scope of its work, PPQ depends on help from State cooperators and foreign counterparts. PPQ realizes that the increasing interest and sophistication of State agencies, declining State and Federal budgets, accessibility to critical expertise, and the reconciling of traditional agricultural and emerging environmental interests require teamwork among all participants in plant protection.



PPQ employees represent a wide variety of academic disciplines and are a highly educated and skilled workforce.

Safeguarding Plant, Animal, and Environmental Resources From Exotic Pests and Diseases

Agricultural Quarantine and Inspection Program: The First Line of Defense

The agricultural quarantine and inspection (AQI) program is designed to prevent the introduction of harmful plant and animal pests and diseases, such as noxious weeds, insects, fungi, and parasites, into the United States. These pests and diseases could threaten the abundance and variety of the U.S. food supply, damage our natural resources, and cost American taxpayers hundreds of millions of dollars for higher priced food and fiber products and the cost of control and eradication programs. PPQ officers and technicians inspect



PPQ officers and technicians inspect passenger baggage, mail, ship and airline stores or food supplies, vehicles, and cargo in the Federal Inspection Services areas at U.S. ports of entry. (USDA photo by Larry Rana.)

passenger baggage, mail, ship and airline stores or food supplies, vehicles, and cargo in the Federal Inspection Services areas at U.S. ports of entry. In Hawaii and Puerto Rico, and in some parts of Canada and some Caribbean countries, passengers undergo predeparture inspection before leaving for the U.S. mainland.

PPQ inspectors look for prohibited agricultural products and associated materials that could serve as pathways for introduction of invasive pests. These products are forbidden entry into the United States or are allowed in only under very specific conditions. Every year, PPQ port personnel intercept tens of thousands of insects and tons of agricultural contraband and associated material that could contain microscopic plant and animal pests and diseases.

PPQ employs more than 120 x-ray machines and detector dog teams at more than 20 airports and 3 land-border ports to increase the efficiency of passenger baggage inspection. The dog teams, USDA's Beagle Brigade, work primarily at international airports and selected post offices for baggage and package inspection. The beagles' average success rate in finding concealed regulated items is 90 percent. Beagle Brigade teams and PPQ officers have also become goodwill ambassadors for PPQ, making speeches and giving demonstrations at schools and fairs or other public events.

PPQ cooperates with the U.S. Department of the Interior in carrying out provisions of the



PPQ employees x-ray hundreds of thousands of suitcases annually, looking for prohibited fruits, vegetables, and meat.

Endangered Species Act that forbid the import or export of endangered plant species. PPQ officers at ports of entry are trained to identify these plant species and take appropriate action.

PPQ officers also inspect and sample seed imported from foreign countries to ensure that it is accurately labeled and free of noxious weeds. International garbage and ship and airline stores must be inspected as well to ensure that they are treated with special care and according to regulations so no plant or animal pests and diseases accidentally enter the United States. PPQ also inspects and supervises the cleaning of all military equipment and troop supplies when the U.S. military returns from missions out of the country. (The household goods of military and civilian

personnel moving back stateside are also subject to inspection.)

All prohibited items seized from inspections are examined, rendered harmless, and disposed of in an incinerator or grinder. Large shipments of agricultural goods found to be ineligible for entry may be subject to treatment or returned to the country of origin. At large airports like John F. Kennedy International Airport in New York, seaports like Miami, and land-border ports like San Ysidro, CA, PPQ operates around the clock. Congress has authorized PPQ to collect user fees to cover the costs of providing certain services under the AQI program.

There are civil penalties for intentionally misleading an inspector or being caught smuggling prohibited agricultural goods.

Many people are not intentionally trying to circumvent the law when they attempt to bring in a prohibited item. But from time to time, our inspectors discover large shipments of prohibited agricultural commodities or goods subject to certain restrictions or treatment on import. PPQ has organized special teams of officers and investigators to pursue individuals who smuggle high-risk produce. The Florida Interdiction and Smuggling Team (FIST) and Closing the Los Angeles Area Medfly Pathway (CLAMP) Team have identified and gathered evidence against many alleged smugglers.



Dogs in USDA's Beagle Brigade sniff luggage and sit when they detect an odor that might come from concealed agricultural material. (USDA photo by Larry Rana.)

Emergency Response: What Happens If a Pest or Disease Gets Past the Front Line?

No matter how effectively PPQ inspectors cope with incoming international passengers, mail, and cargo, occasionally an exotic pest or disease outbreak occurs. PPQ takes immediate action to protect U.S. plant and animal resources by eradicating the pest or disease and allaying fears of our trading partners and the public about the health of U.S. agriculture.



All prohibited items seized from inspections are destroyed immediately.

PPQ has a special cadre of people who deal with introductions of exotic plant pests. Known as Rapid Response Teams, these groups have been mobilized on several occasions to combat costly infestations of the Asian longhorned beetle, Mediterranean fruit fly (Medfly), and Asian gypsy moth. Rapid Response Teams also swung into action when the destructive "A" strain of citrus canker was found in Florida orange groves and when Karnal

bunt, a fungal disease of wheat, was discovered in Arizona.

These teams work in concert with local and State officials to assess the situation and develop a strategy to determine the extent of infestations and to eradicate the pest or disease. Sometimes the approach is as basic as removing the host material and trapping associated insects at the infestation site. At other times, PPQ employs more sophisticated methods like the use of federally approved pesticides in limited spray programs or the breeding and release of sterilized insects to suppress pest populations. PPQ always looks for the safest and most effective and environmentally responsible strategy in these situations.

The work of these Rapid Response Teams is supported by the most recent science and research performed or sponsored by PPQ. Methods and policies developed for use in an emergency outbreak situation must be environmentally acceptable and in compliance with Federal, State, and local laws



PPQ always looks for the safest and most effective and environmentally responsible strategy to deal with plant health emergencies. Here, PPQ is rearing sterilized insects for release into a quarantine area.

such as those governing pesticide use and notification to enter or treat private property. A Medfly infid or outbreak of Karnal bunt has the potential to excite concern among our trading partners, who need to be reassured that U.S. commodities will not introduce pests or diseases into their ecosystems. Emergency response methods must bring our exports into compliance with international standards as established by the World Trade Organization (WTO) and trade agreements such as the North American Free Trade Agreement (NAFTA).



Rapid Response Teams work in concert with State and local officials to deal with introductions of invasive plant pests like the Asian longhorned beetle spotted in this suburb near the Statue of Liberty. (APHIS photo by Ken Law, PPQ officer.)

Managing Plant Pests To Protect Plant Resources

Science, Documentation, and Risk Analysis:

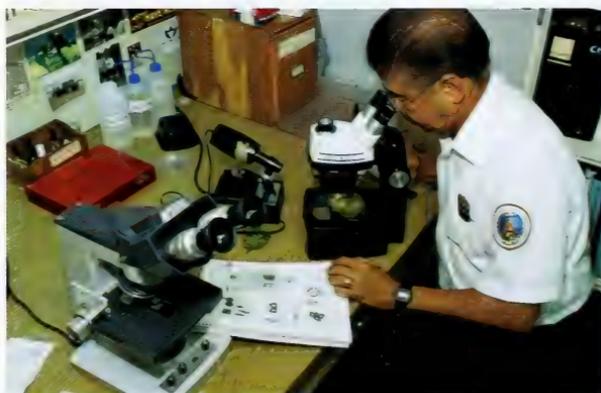
Mitigating the Risks

PPQ is uniquely capable of delivering specific plant protection services to manage plant pests because of its infrastructure, statutory authorities, and operational and technical expertise. Outside scientists and researchers often partner with PPQ to capitalize on its expertise and resources when dealing with plant health issues.

International standards that govern trade in plant and animal products must be science based and transparent so trading partners are not subject to political whims and fair trade is possible. The United States has a solid plant protection infrastructure, thanks to the internationally recognized work of PPQ, and is a world leader in setting phytosanitary and zoosanitary standards.

When they intercept potentially invasive plant pests, diseases, or noxious weeds, PPQ personnel (1) identify the pest or disease, (2) assess the risks it poses, (3) communicate the risks to stakeholders, (4) consider management options, (5) determine the pest's or disease's "quarantine action status" (e.g., does it present enough of a risk to take some regulatory or preventive action?), and (6) implement the final risk-management action. This process has generated an extensive data base of actionable pests and has helped PPQ and its partners develop effective strategies for managing and mitigating disease or pest risk.

PPQ scientists at headquarters take the lead, along with field staff, to identify plant pests and diseases intercepted at ports of entry and exit from import and export cargo and from passengers or



PPQ scientists identify plant pests and diseases intercepted at ports or collected from domestic eradication programs. (APHIS photo by Laurie Smith.)

carriers arriving from foreign origins. These specialists also identify organisms from domestic APHIS surveys such as the agency's virtually nationwide examination of wheat for the presence of the fungus that causes Karnal bunt. PPQ specialists also perform pest risk assessments for foreign agricultural commodities to determine the risks associated with importing them.

PPQ classifies organisms as quarantine pests using pest analysis models to help prevent the establishment of exotic plant pests in the United States and to facilitate international trade. PPQ manages a pest-interception data base to maintain a record of potential pest introductions to the United States, provide information necessary to formulate PPQ and APHIS policy, and provide information to APHIS customers. Scientists also support emergency response efforts by conducting genetic identification of pests that can often point to their origin. For example, a test could determine if the genetic material of a trapped fruit fly matches the material from a previous outbreak or has been introduced from somewhere else.

Each activity undertaken by PPQ is examined within the context of the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). NEPA requires Federal agencies to prepare a detailed statement, which must be signed by a responsible official, on the environmental impact of every major Federal action significantly



PPQ employs expert staff for environmental monitoring and services related to biotechnology. (USDA file photo.)

affecting the quality of the human environment (i.e., an environmental assessment or environmental impact statement). Frequently, PPQ programs require careful environmental assessment and public notification before operations can start. The ESA requires an examination of the potential impact of Federal activities on federally listed threatened and endangered species. Overseen by the Environmental Protection Agency (EPA), FIFRA regulates the use of pesticides. As needed, PPQ seeks special-use permits for some of these pesticides—a permitting process managed by EPA. PPQ maintains the National Monitoring Residue and Analysis Laboratory and employs expert staff who conduct environmental monitoring and documentation. The Laboratory's activities are a part of compliance with these environmental statutes and ensure the success of PPQ's control and eradication programs. Consultations between the U.S. Fish and Wildlife Service (FWS), EPA, and other Federal cooperators and PPQ resolve potential interagency disagreement before it can affect program delivery.

PPQ also provides certain services that deal with biotechnology. U.S. scientists use agricultural biotechnology together with a variety of laboratory techniques, such as genetic engineering, to improve plants, animals, and micro-organisms. Since 1987, APHIS' role in agricultural biotechnology has been to manage and oversee regulations to ensure the safe and rapid deployment of the products of biotechnology. Under PPQ's effective regulations and practical guidelines, private-sector firms can safely test genetically engineered organisms outside the physical containment of the laboratory. PPQ officials issue permits or acknowledge notification for the importation, interstate movement, or field testing of genetically engineered plants, micro-organisms, and invertebrates that are developed using components from plant-pathogenic material.

Federal biotechnology regulations also provide for an exemption process once it has been established that a genetically engineered product does not present a plant pest risk. Under this process, applicants can petition PPQ for a determination of nonregulated status for specific genetically engineered products. Some examples of deregulated crops include five tomato types modified for delayed ripening; five cotton types, one modified for insect resistance and four for herbicide tolerance; two soybean types modified for herbicide tolerance; and six corn types, three modified for herbicide tolerance and three for insect resistance.

PPQ biotechnology personnel meet with regulatory officials from other nations on a regular basis to foster the harmonization of trade regulations. These discussions help ensure that requirements imposed by other countries are as consistent as possible with U.S. requirements and that our trading partners are kept informed of regulatory developments affecting biotechnology.

Other scientific information and methods development are gathered through PPQ's Center for Plant Health Science and Technology. The Center, with headquarters in Raleigh, NC, serves as the umbrella organization for various PPQ labs and the National Biological Control Institute. Its multidisciplinary staff concentrates on analyzing scientific and technical elements of plant protection programs and systems, and identifying needs and appropriate ways to meet present and future phytosanitary challenges. PPQ forges collaborative working partnerships with Federal and State agencies, academic institutions, and the private sector to accomplish its work.

PPQ carries out methods development to translate research findings into operational program activities at 10 different field stations known as plant protection centers. These field stations are located at Edinburg, TX, Gulfport and Starkville, MS, Gainesville and Miami, FL, Waimanalo, HI, Otis ANGB (Cape Cod), MA, Phoenix, AZ, and Oxford, NC. There is one PPQ methods group working



PPQ employees and cooperators distribute parasites of leafy spurge in Montana rangeland where this exotic weed has displaced native forage plants.

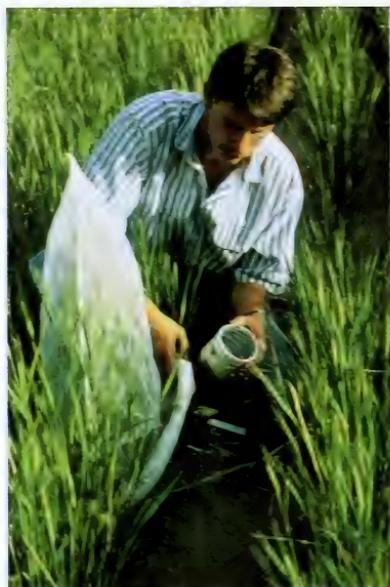
outside the country, in Guatemala. PPQ also works collaboratively on international research projects with organizations like the North American Plant Pest Organization and other cooperators or trading partners. New pest advisory groups, science panels, and other ad hoc advisory and regulatory organizations are formed by PPQ to respond to new pest finds, evaluate current pest programs, and deal with other phytosanitary issues.

Monitoring and Managing Certain Pests: Keeping the Damage Under Control

PPQ is also responsible for the operational aspects of APHIS' biological control programs, which mobilize the natural enemies of weeds and pests—foes such as predatory beetles, parasites, and diseases. PPQ biological control laboratories are located at Niles, MI, Mission, TX, and Bozeman, MT. The National Biological Control Institute (NBCI), formed in

1990 and now a part of PPQ's Center for Plant Health Science and Technology, facilitates biocontrol efforts throughout the country. Its mission is to promote, facilitate, and provide leadership for biological control. NBCI's main work is to compile and release technical information and coordinate the work needed to find, identify, and augment or distribute new biological control agents. NBCI publicizes significant activities, cosponsors and participates in meetings and exhibitions, encourages documentation and evaluation of biological control releases, and provides training in and educational resources on biological control.

Various agencies have successfully cooperated on biocontrol projects. For example, several decades ago, scientists from USDA's Agricultural Research Service (ARS) found in Europe six species of stingless wasps that keep alfalfa weevils in check. In



Biocontrol agents—natural enemies of plant pests—are identified, collected, and released by PPQ employees. (APHIS photo by Laurie Smith.)

1980, PPQ and APHIS took on the job of placing those beneficial wasps across the United States. By 1989, PPQ, APHIS, and its cooperators had raised and distributed about 17 million wasps. Today these beneficial wasps are within reach of virtually every alfalfa field in the country. Other PPQ biocontrol programs currently underway in cooperation with State agencies include efforts against the cereal leaf beetle, sweet potato whitefly, Russian wheat aphid, euonymus scale, brown citrus aphid, leafy spurge, diffuse and spotted knapweed, and purple loosestrife.

In addition to its biocontrol programs, PPQ also has programs that monitor and manage estab-

lished plant pests and invasive species like boll weevil, gypsy moth, and noxious weeds. To monitor plant pests, PPQ works with the States in a project called the Cooperative Agricultural Pest Survey (CAPS). Survey information on insects and plant diseases is entered into a nationwide data base, the National Agricultural Pest Information System (NAPIS). Information from this data base can be accessed from anywhere in the country by persons with an authorized account. PPQ has also used the CAPS program to conduct ongoing surveys for alien invasive species.

By accessing NAPIS, users can retrieve the latest data on pests. NAPIS data can assist in pest forecasting, early pest warning, quicker and more precise delimiting efforts, and better planning for plant pest eradication or control efforts. Survey data—which can reflect the absence as well as the presence of pests—also help U.S. exports, assuring foreign countries that our commodities are free of specific pests and diseases. More than a million records are in the NAPIS data base. About 200 Federal and State agencies use NAPIS. Its data can be downloaded and analyzed with geographic information systems to provide graphic representation of information. For example, locations of pine shoot beetle detections can be shown graphically to indicate where and how often surveys have been conducted for the beetle.

PPQ carries out several cooperative programs against domestic

plant pests and diseases. Cooperative efforts have eradicated witchweed, a parasitic plant that attacks corn and other crops, from more than 98 percent of the originally infested area in North and South Carolina. PPQ efforts against the gypsy moth focus on stopping the artificial spread of this tree-destroying caterpillar when outdoor household items are moved from infested areas. To find better and more effective ways of controlling rangeland grasshoppers in the Great Plains and Intermountain West, PPQ headed a 5-year integrated pest management, or IPM, project.

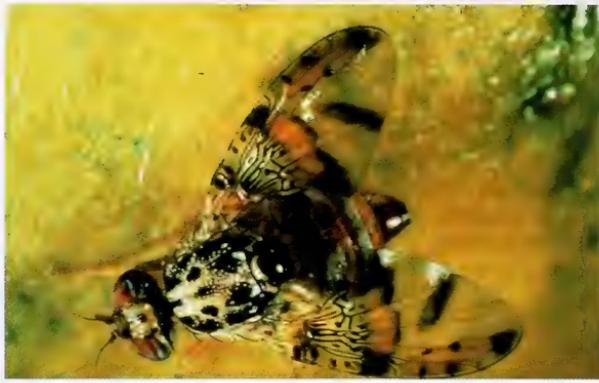
Boll weevils, the long-time scourge of cotton producers, have been

eliminated from Virginia, the Carolinas, Georgia, Florida, south Alabama, California, and Arizona through a combination of pesticides, attractants, and cultural methods. Programs now underway in Alabama, Tennessee, Mississippi, and Texas are also making good progress against the weevil.

Other plant pests or invasive species that PPQ is working to manage or eradicate include the Mexican fruit fly in the lower Rio Grande Valley in Texas, grasshoppers and Mormon crickets, several honeybee pests, noxious weeds, and pink bollworm. PPQ becomes involved with new insects or plant diseases that present an economic threat to American agriculture or a threat to the natural environment.



PPQ employees and cooperators mapped Arizona wheat fields contaminated by the fungus that causes Karnal bunt.



Mediterranean fruit fly

PPQ fights all types of plant and animal pests and diseases, including insects, fungi, noxious weeds, and parasites.
(All images from the APHIS photo library.)



Witchweed



Asian longhorned beetle



Plant disease



Gypsy moth



Imported fire ant



Japanese beetles

Enhancing Trade Through Phytosanitary Procedures

Facilitating Imports: Safeguarding the Diversity of Available Agricultural Products

Over the years, Americans have come to count on a diverse array of agricultural products for their dinner table. To satisfy the ever-changing tastes of Americans, the United States imports commodities from around the globe. Local stores now carry everything from Mexican artichokes to Italian zucchini. PPQ strives to ensure that these imported products are pest and disease free. PPQ does this by regulating the importation of agricultural products, as well as helping to ensure that inspections are performed for admissible products and treatments are administered to infested products before they are released into trade channels.

PPQ advises importers on phytosanitary restrictions and requirements and provides importers with information (including regulations, policies, and

procedures) on agricultural commodities they wish to import into this country. For instance, if an importer wants to bring in a shipment of flowers from The Netherlands, PPQ officers provide the importer with U.S. phytosanitary requirements in advance so the flowers can enter this country expeditiously.

Importers must obtain import permits for many, but not all, commodities before the goods begin their trip to the United States. Importers must also obtain phytosanitary certificates for certain commodities from the exporting country. These certificates verify that the quarantine officials of the exporting country have examined the commodities for pests prior to the commodities' departure from the country.

PPQ's permit unit provides information to potential importers on permit requirements and processes applications for permits.



PPQ employees advise importers and exporters and provide phytosanitary certificates for certain commodities.

If an application does not fall within APHIS' authority, the permit unit will try to find out where the applicant can get more information. The permit unit manages a high volume of requests and interprets the constantly changing import regulations for myriad plants and plant products. For some commodities, no acceptable quarantine treatments have been proven to destroy pests and diseases of concern. These commodities are not allowed to be imported.

Many plants and animals whose populations are threatened in the wild are protected by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The purpose of this treaty is to regulate the commercial trade of endangered and threatened plants and animals and monitor trade involving species that may become extinct in the near future. CITES-protected items must be accompanied by special paper-

work and are subject to careful inspection at only certain PPQ-staffed ports of entry.

PPQ enforces the plant provisions of CITES and inspects all shipments of plants and plant products presented for importation at any of its 15 designated plant inspection stations located nationwide (or for CITES plants, at other inspection ports approved by the U.S. Department of the Interior like Laredo, TX). These plant inspection stations are located at Nogales, AZ, New Orleans, LA, San Juan, PR, San Francisco, San Ysidro, and Los Angeles, CA, Miami and Orlando, FL, Los Indios, El Paso, and Houston, TX, Honolulu, HI, John F. Kennedy International Airport, NY, Seattle, WA, and Linden, NJ.

At the National Plant Germplasm and Quarantine Center in Beltsville, MD, employees specialize in postentry requirements (like quarantines) and seed imports and facilitate the importa-



PPQ officers are trained to examine items to see if they are protected under the CITES agreement.



PPQ officers work in some foreign countries inspecting agricultural commodities, like these mangos, before shipment to the United States.

tion of plant germplasm for research uses at ARS or other official institutions. About 99 percent of propagative plant germplasm imported into the United States for research purposes in small quantities by ARS and their cooperators is cleared at this station. Personnel at this center do five main kinds of work onsite: germplasm import clearance, export certification, postentry quarantine programs, seed examinations, and quarantine facilities security.

PPQ officers also work in some foreign countries inspecting agricultural commodities before shipment to the United States to facilitate the products' movement to markets. One of the most successful of these preclearance programs is in The Netherlands, where PPQ officers have been inspecting flower bulbs since 1951. In Chile, PPQ has been inspecting all fruits and vegetables destined for U.S. consumers since 1983.

Facilitating Exports: Guarantees for Our Trading Partners and Services for U.S. Exporters

To facilitate agricultural exports, PPQ provides assurance that U.S. plants and plant products meet the plant quarantine import requirements of foreign countries. This assurance takes the form of a phytosanitary certificate, issued by PPQ or its State cooperators.

PPQ assists American farmers and exporters by providing phytosanitary inspection and certification for plants and plant products being shipped to foreign countries. As a service, PPQ will provide phytosanitary certificates to exporters when required by a foreign country. These phytosanitary certificates verify that the products have been inspected and are pest and disease free. PPQ issues two kinds of phytosanitary certificates: those for domestic plants and plant products and those for



PPQ examines and certifies agricultural products as free of plant pests and diseases.

foreign plants and plant products offered for reexport. Under direction from Congress, PPQ charges a user fee for issuing phytosanitary certificates. These fees cover the costs of providing certification services, and exporters must pay at the time the certificate is issued.

Because of the sheer quantity of certificates that PPQ issues—paperwork for more than 300,000 shipments each year—and because many countries have vastly different entry requirements for agricultural products, PPQ developed a data base to track the phytosanitary requirements for each country. This data base, called EXCERPT, allows PPQ officers, State and county officials, and members of the agricultural industry to access export information. If a U.S. exporter wanted to send grain to Mexico, for example, accessing the EXCERPT data base would reveal that a U.S. phytosanitary certificate and a

Mexican import permit are both required before the wheat leaves this country. The same exporter would also be able to find out that there is no specific certification needed to ship fruit for consumption to Hong Kong.

The EXCERPT data base also lists the status of endangered plant species, commodities that are not eligible to be exported to specific countries, and any changes in other countries' entry requirements. EXCERPT identifies ports that are authorized to certify for export those endangered and threatened plants protected by CITES. For example, PPQ officials at San Francisco, a CITES-approved port, can certify endangered cacti for export.

With the availability of such extensive export information, U.S. exporters usually run into few complications with trade. However, in cases where U.S. goods arrive at a foreign nation and are denied

entry, PPQ will try to negotiate with foreign plant health authorities on behalf of the U.S. exporter.

PPQ also helps to expand markets for U.S. farmers and exporters by engaging in bilateral or multilateral talks with foreign nations. For example, after several years of bilateral talks, PPQ reached agreement with Japanese officials who had previously prohibited the importation of such U.S. products as apples, cherries, nectarines,

inshell peanuts, and walnuts. Convinced that USDA could mitigate any potential agricultural health threat and that the produce would be of high quality, Japan agreed to allow the importation of these products. PPQ participates in international plant health standards-setting with organizations like the International Plant Protection Convention and the plant health bodies affiliated with the WTO.



The EXCERPT data base provides extensive information on the phytosanitary requirements of other countries.

Future Trends

Growth in international travel and trade shows no sign of slowing down. Each year, PPQ officers inspect an estimated 500 million plants that are mailed, carried, or shipped into this country by brokers, travelers, and nursery owners. Some of these plants carry hitchhiking pests and diseases that are not native to the United States and could cause great harm to the Nation's agriculture and natural resources. The Mediterranean fruit fly (and a host of other fruit flies), potato wart disease, giant African snail, Asian gypsy moth, and khapra beetle are just a few of the harmful pests and diseases accidentally introduced into and eradicated from this country in the past. PPQ must continue to be an organization that—using the best information science and technology can provide—adapts quickly to a volatile and changing global environment.

Invasive species introductions have risen markedly during the last century as modes of human

transportation became more efficient and world travel proliferated. An invasive species is defined as an alien species whose introduction causes or is likely to cause economic or environmental harm or harm to human health. Invasive plants, animals, and aquatic organisms often reduce the economic productivity and ecological integrity of U.S. agriculture and natural resources. Increased introductions of invasive species not only have adversely affected agricultural productivity but also have damaged native fish and wildlife habitats, renewable resources, and human health.

A recent Executive Order focuses on (1) enhancing and coordinating Federal activities that prevent the introduction of invasive species and provide for their control and (2) minimizing the economic, ecological, and human health impacts that invasive species cause. The Executive Order also established a National Invasive Species Council, which is co-chaired by the Secretaries of the



Growth in international travel and trade shows no sign of slowing down.

Interior, Agriculture, and Commerce. PPQ is positioned to take a leading role in the implementation of this Executive Order and plans to work cooperatively across agency and departmental lines to battle insidious invasive species and prevent future introductions.

Also, under the influence of the WTO, agricultural trade is booming. And PPQ's dual role of facilitating agricultural exports and imports while safeguarding American agriculture has become

even more crucial. PPQ export certification efforts inspire much-needed trust from foreign countries that they are receiving healthy, pest- and disease-free agricultural shipments. Moreover, efforts on the homefront to protect American agriculture ensure that U.S. consumers can continue to enjoy the tastes of America while still sampling the tastes of the world. PPQ touches the lives of all Americans by safeguarding American agriculture, fighting invasive species, and facilitating trade in the global marketplace.



PPQ's dual role of facilitating trade while safeguarding American agriculture has become more and more crucial.

Additional Information

APHIS–PPQ has an open-door information policy. We encourage people to learn about our activities, and we try to share as much information as possible. For additional information on APHIS–PPQ, visit our Web page at www.aphis.usda.gov. This page provides hotlinks to details about several PPQ functions, like pest exclusion, tips for travelers, biotechnology, and import–export permits.

You can also write to USDA, APHIS, Unit 1, Distribution Center, 4700 River Rd., Riverdale, MD 20737–1229, and ask for available information about Plant Protection and Quarantine. Or call the local PPQ office nearest you. Its number will be listed in the blue pages of your phone book under “U.S. Government” and “Department of Agriculture.”



PPQ must continue to be an organization that uses science and technology to support its decisions and adapts quickly to a volatile and changing global environment.

Highlights in Federal Plant Protection and Quarantine in the United States

- 1912 Prompted by a gift of Japanese cherry trees that was found to be infested with oriental fruit moth, the United States passed a Federal Plant Quarantine Law.
- 1957 To facilitate more effective control of the movement of plants and pests, predeparture inspection is established at some sites like Hawaii and Puerto Rico, and the Federal Plant Pest Act is passed.
- 1968 One-stop Federal inspection is instituted at John F. Kennedy International Airport in New York. Each inspector is tasked with all Federal entry inspections: immigration, public health, customs, and agriculture. Volume quickly becomes overwhelming.
- 1970 The Plant Protection and Quarantine Program is formed and placed under the newly formed Animal and Plant Health Service. (The word "inspection" was added to APHS' name in 1972.)
- 1972 The United States becomes a signatory to the 1952 International Plant Protection Convention.
- 1974 The United States ratifies the Convention on International Trade of Endangered Species (CITES), and the Federal Noxious Weed Act is passed.
- 1976 APHIS-PPQ plant health officials and their counterparts in Canada and Mexico sign the North American Plant Protection Agreement, the basis for NAPPO.
- 1984 The USDA Beagle Brigade begins with one dog team at Los Angeles International Airport to detect prohibited agricultural items in the baggage of international travelers.
- 1990 The National Biological Control Institute is established to provide leadership for biological control.
- 1991 APHIS starts collecting user fees for AQI services.
- 1994 NAFTA is ratified.
- 1995 The WTO is formed.
- 1997 APHIS' Center for Plant Health Science and Technology is established.

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Beagles from New York's John F. Kennedy International Airport pose in front of the Brooklyn Bridge with the twin towers of the World Trade Center in the background. PPQ's detector dogs help screen passenger baggage for prohibited agricultural materials so that they don't carry foreign pests and diseases into the United States. (USDA photo by Larry Rana.)