UPDATE

Plant Protection & Quarantine

APHIS

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Agricultural Quarantine Inspection Results Monitoring

Let's take a more indepth look at data-collection processes, forms, and data bases. At more than 50 ports, the Plant Protection and Quarantine (PPQ) unit is using scientific survey techniques to gather data regarding agricultural quarantine inspection (AQI) effectiveness. PPQ plans to use the data to drive future program decisions.

Keep in mind that the AQI results-monitoring data systems currently in place at ports across the country all work together to help PPQ to: (1) better define and document the pest risk of various pathways; (2) determine how likely is it for agricultural pests and diseases to enter the United States through identified routes; and (3) support the requirements of the Government Performance and Results Act, which calls for managing Federal programs based upon information about program results.

The two keys to all of the port data-collection projects are (1) a random sample— whether the thing being sampled is passengers, cargo, or vehicles; and (2) a complete inspection of the sample.

Some of the projects require collaboration with the Department of Treasury's U.S. Customs Service. These activities support the broad APHIS initiative to foster a more cooperative relationship with other Federal activities. The charts attached to this update describe (1) the current and projected analysis locations for results-monitoring activities, (2) data-collection processes and data bases in use by location; and (3) associated ports of entry for pest risk.

Data Collection Processes

PPQ uses four varieties of processes for collecting data for the results monitoring project. First, there is the **AQI Monitoring (AQIM) Sample**, which PPQ does itself. At each selected airport, border crossing, and mail facility, PPQ officers conduct 3,650 total random inspections each year of passengers, vehicles, and mail. At cargo facilities, PPQ officers randomly inspect 400 shipments a year. Though shipments are chosen randomly, PPQ officers completely inspect each sample. Results of the inspections of vehicles and passengers are used to make a statistically valid estimate of the rate of quarantine material arriving at each port. This estimate, called the *quarantine material approach rate*, is used as the basis for program effectiveness and efficiency indicators. For cargo, sample inspection results are used to estimate the rate of cargo shipments requiring action as they arrive at a port. This estimate, called the *actionable cargo approach rate*, can be used by ports to estimate their effectiveness in managing the pest risk in cargo. There is also the *pest threat rate*, which is an estimate of the percentage of units approaching with significant pests. The pest threat rate can also be used to evaluate the relative risk of various known pest entry pathways. The AQI Results-Monitoring Design Team is testing and refining this system. Data have been collected for a year using the system at Laredo, TX, Los Angeles, CA, Philadelphia, PA, and San Juan, PR, and for 6 months at about 10 other ports.

Next, there is the **Shared Sample**, which involves sharing the sample selection and inspection with the U.S. Customs Service. In most cases, Customs' computer system selects a random person or determines a random time for each inspection. When PPQ officers are present, the PPQ officer does the inspection or conducts a joint inspection with Customs officers. When PPQ officers are not present, Customs officers conduct the inspection based on PPQ's instructions. The advantage to this process is that PPQ and Customs officers inconvenience fewer travelers and save resources by joining sample selection and inspection processes. Data may be entered into the AQIM data base, the compliance examination entry system called the **COMPEX** data base, or both. Shared samples are used at some airports and Mexican border locations and at all five major ports on the Canadian border. Sample sizes in each port range from 3,650 to 10,000 inspections per year.

The **North Border (NB) Protocol**, another data-collection process used in the results-monitoring project, was developed to meet the specific needs of ports along the Canadian border. For cargo inspections at all Canadian border ports and at 13 smallers ports for passengers, PPQ officers select a sample independently of Customs, inspect the sample, and record results on PPQ forms. Because PPQ does not continually staff most of these locations, a sample cannot be taken every hour or two as at other ports. At the intermittently staffed locations, a PPQ officer (or possibly another APHIS employee) visits a port or bridge for a 4-to 8-hour block of time and inspects a random sample of cars and trucks. At the five larger Canadian border ports, a shared sample is used for vehicles, and the data are entered into the Customs data base. PPQ also independently gathers data on cargo at the Canadian border because Customs does not. Sample sizes for individual ports may be smaller on the Canadian border because the data is aggregated to show results border wide and not for individual ports.

PPQ is also interested in random sampling being done by Customs. In particular, PPQ is reviewing a sample of selected agricultural cargo coming from Canada that PPQ normally doesn't inspect, assuming it is of Canadian origin. Customs' goal is to validate, to the extent possible, that the cargo is indeed of Canadian origin. Customs is also looking at a sample of a broad range of cargo to determine if any agricultural cargo is being smuggled or mismanifested. Again, this is cargo PPQ would not normally inspect. In both cases, Customs is keeping records and notifying PPQ immediately if problems are found.

Data-Collection Forms and Data Bases

Three varieties of forms and data bases have been created to assist PPQ in collecting data for the results-monitoring project. The **AQIM paper forms** were developed to record data for air passengers, air cargo, maritime cargo, border vehicles, border cargo trucks, and mail. Currently, all data entries for these areas are recorded on paper by the PPQ officer conducting the inspections, and the forms are mailed to headquarters for entry into the data base. A system using EpiInfo software is now being tested to allow input and analysis to be done at the port or regional office.

PPQ is also working with Customs to utilize their comparable **COMPEX** system. With this system, Customs is trying to determine what percentage of passengers comply with Customs regulations. Even though Customs' goal in using this system is different from PPQ's, the overall concept and framework are similar to that of the AQIM system. PPQ expects to have full access to this data-base information on agricultural items in the near future.

Finally, PPQ utilizes the **North border (NB) forms** and data bases, which are also similar to the AQIM forms. However, these forms reflect the specific requirements and circumstances of the Canadian border ports. The forms are completed by PPQ officers conducting the inspections and are sent to the PPQ State Office in Manchester, NH, for entry into a data base.

In summary, the operational differences at various ports of entry require different data collection systems. However, all the data elements lead to providing information about AQI effectiveness in meeting its goal of protecting American agriculture by managing pest risk from agricultural imports.