United States Department of Agriculture

Marketing and Regulatory Programs

Animal and Plant Health Inspection Service

Plant Protection and Quarantine

Agricultural Quarantine Inspection Monitoring (AQIM) Handbook

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Purpose

The AQIM Handbook provides an information source for:

- Iimplementing AQIM activities,
- Training employees about risk analysis and management, and
- Analyzing information enabling managers to make risk-based decisions

Scope

The AQIM Handbook covers background information about the Government Performance Results Act (GPRA) and its influence to integrate risk analysis and risk management into PPQ's Agriculture Quarantine Inspection (AQI) program. With that introduction, the Handbook then provides necessary information about statistics, risk analysis, and a sampling process to provide the foundation for implementing AQIM. Next, the Handbook provides guidelines and instruction for setting up designated locations for AQIM. The remainder of the Handbook is divided into pathway sections.

Given that AQIM is a different way of conducting business, this Handbook is an attempt to provide officers and managers with background and guidance to implement AQIM activities. As processes improve and are developed, the Handbook will expand in its scope. Along with specific documents written to establish local procedures, such as a standard operating procedure, this Handbook will serve as the information tool for implementing AQIM activities and for training individuals about risk analysis and risk management.

The Handbook is divided into 15 major sections:

- Introduction
- Start-Up
- Air—Passenger Baggage
- Air—Cargo
- Maritime—Cargo
- Mail Facility
- Northern Border—Vehicles
- Northern Border—Truck Cargo
- Southern Border—Vehicles
- Southern Border—Truck Cargo
- Predeparture

- Rail
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- Appendixes
- Index
- Blank Tabs (for local use)

The Introduction section provides basic information about the Handbook and information that supports AQIM activities. The information includes background; the GPRA; strategic plans, performance plans, reports, and budgets; agriculture quarantine inspection monitoring; basic statistics and their importance to AQIM activities; the fundamentals of risk analysis; and the sampling process established for AQIM activities.

The Start-Up section provides a list of activities for setting up a designated location that is implementing AQIM, the roles and responsibilities of individuals involved, and a checklist to help designated locations implement AQIM.

The pathway sections begin with Air—Passenger Baggage and end with Rail. The sections are tabbed with color for easier access from the other sections of this Handbook. Each pathway section has a set of national guidelines developed for a specific pathway covering the following topics:

- Introduction and sampling guidelines
- Data collection and maintenance guidelines
- Data analysis guidelines

The Glossary defines specialized words, abbreviations and acronyms, and other difficult terms used related to risk analysis, risk management, and AQIM.

The Appendixes list information, such as governing Acts, key contacts, duties, examples of forms, samples of standard operating procedures, steps for conducting specific functions using Epi Info, information about the Short-term Reporting Tool (SRT) for querying AQI data, and a checklist for monitoring reviews.

The blank tabs allow work locations to add information about AQIM that is specific to that location, for example, a copy of the local standard operating procedure, information lists, and contacts.

Users

The AQIM Handbook is used primarily by PPQ employees (including officers, managers, technicians, identifiers) involved in implementing AQIM. The users would include those who are responsible for:

- Determining a random sampling scheme
- Completing data entry forms
- Entering information into Epi Info
- Interpreting information in Epi Info and the SRT
- Documenting statistical information
- Monitoring AQIM implementation
- Conducting risk management

Secondary users of the information in this Handbook would include specialists of PPQ's Permits and Risk Assessments and cooperators from Veterinary Services and other Federal agencies such as U.S. Customs Service and U.S. Immigration and Naturalization Service.

Related Documents

The Government Performance Results Act (GPRA) of 1993 is the basis for implementing AQIM. This Act is introduced in this Handbook beginning on page-1-5.

Another related document that describes PPQ's new way of doing business is titled, "Safeguarding American Plant Resources" dated July 1, 1999. This document describes the new systems needed to deliver plant protection programs. AQIM activities support a safeguarding system founded on risk-based pathway studies and performance measurement that allow maximum effectiveness of operations.

1 Introduction

AQIM Handbook

The Government Performance and Results Act

Background

The Government Performance and Results Act (GPRA), which was passed by Congress in 1993, is a law that requires all government programs to be managed based on results achieved. This process includes setting specific program outcome targets, measuring progress towards those outcomes, and analyzing and using the results to make program improvements. The law connects this focus on program outcomes to the budget development process by requiring the President's budget, starting in FY 99, to include the following for each program activity:

- A long-term (5 year) strategic plan that includes a comprehensive mission statement and general outcome oriented goal statements;
- Annual performance plans, including annual measurable goals and indicators of goal achievement; and,
- Annual performance reports which show whether measurable goals have been achieved.

Managing for results requires a different conceptual or philosophical framework. Use Table 1-1 to view the difference between our old framework and that of GPRA.

TABLE 1-1: One Way Of Viewing The Difference Between The Old Framework And that Of GPRA

In the old framework for managing programs, the focus was on:	When managing for results, the focus is on:
Inputs	Outcomes
Process	Results
Activities	Strategic Objectives
Compliance	Performance
Management Control	Management Improvement
Retrospective Data Analysis	On-going Monitoring
Reporting Data	Using Data

The remainder of this section of the Introduction contains excerpts from the Comptroller General of the United States dated June 1996, effectively implementing the GPRA (GAO/GGD-96-118).

Federal Management Reform

Over the past several years, Congress has taken steps to fundamentally change the way Federal Agencies go about their work. Congress took these steps in response to management problems so common among Federal Agencies that they demanded government-wide solutions. In addition, two contemporary forces converged to spur Congressional action:

- Year-in and year-out budget deficits that had to be brought down, and
- A public now demanding not only that Federal Agencies do their jobs more effectively, but that they do so with fewer people and at lower cost.

This change was, and remains, an enormous challenge. For one thing, many of the largest Federal Agencies find themselves encumbered with structures and processes rooted in the past, aimed at the demands of earlier times, and designed before modern information and communications technology came into being. These Agencies are poorly positioned to meet the demands of the 1990's. Moreover, many of these Agencies find themselves without a clear understanding of who they are or where they are headed. Over the years, as new social or economic problems emerged, Congress assigned many Agencies new and unanticipated program responsibilities. These additions may have made sense when they were made, but their cumulative effect has been to create a government in which many Agencies cannot say just what business they are in.

In some cases, Agencies' legislative mandates have grown so muddled that Congress, the executive branch, and other Agency stakeholders and customers cannot agree on program goals, worthwhile strategies, or appropriate measures of success.

Traditionally, Federal Agencies have used the amount of money directed toward their programs, or the level of staff deployed, or even the number of tasks completed as some of the measures of their performance. But at a time when the value of many Federal programs is undergoing intense public scrutiny, an Agency that reports only these measures has not answered the defining question of whether these programs have produced real results.

Today's environment is ***results-oriented***. Congress, the executive branch, and the public are beginning to hold Agencies accountable less for inputs and outputs than for outcomes, by which is meant the results of government programs as measured by the differences they

make, for example, in the economy or program participants' lives. The difference between outcomes and outputs is the key to understanding government performance in a results-oriented environment.

Legislative Requirements

Congress' determination to make Agencies accountable for their performance lay at the heart of two landmark reforms of the 1990's:

- The Chief Financial Officers (CFO) Act of 1990, and
- The Government Performance and Results Act of 1993 (GPRA).

With these two laws, Congress imposed on Federal Agencies a new and more businesslike framework for management and accountability. In addition, the GPRA created requirements for Agencies to generate the information that decision makers in Congress and the executive branch need when considering measures to improve government performance and reduce costs.

The CFO Act was designed to remedy decades of serious neglect operating and reporting financial management. While the CFO Act established the foundation for improving management and financial accountability among the Agencies, GPRA is aimed more directly at improving their program performance. The GPRA requires that Agencies consult with Congress and other stakeholders to clearly define their missions. It requires that they establish long-term strategic goals, as well as annual goals that are linked to them. They must then measure their performance against the goals they have set and report publicly on how well they are doing.

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AQIM Handbook

Introduction

Strategic Plans, Performance Plans, Reports, and Budgets

Background

The experiences of leading organizations suggest that the successful implementation of the Government Performance and Results Act (GPRA) may be as difficult as it is important. For example, obtaining agreement among often competing stakeholders is never easy, particularly in an environment where available resources are declining. In addition, measuring the Federal contribution to outcomes that require the coordinated effort of numerous public and private entities--such as improvements in education, employment, or health--can require sophisticated and costly program evaluations. Three key steps are contained within the guidelines of the GPRA that redefine the methods by which strategic plans, performance plans, reports, and budgets are developed and conducted within the Federal sector. These three key steps are:

- Define Mission and Desired Outcomes
- Measure Performance
- Use Performance Information

Step 1—Define Mission/Desired Outcomes

The GPRA requires that federal agencies, no later than September 30, 1997, develop **strategic plans** covering a period of at least 5 years and submit them to Congress and the Office of Management and Budget (OMB). If done well, continuous strategic planning provides the basis for everything the organization does each day.

Strategic plans are intended to be the starting point for each agency's performance measurement efforts. Each plan must include a comprehensive **mission statement** based on the agency's statutory requirements, a set of outcome-related strategic goals, and a description of how the agency intends to achieve these goals.

The **mission statement** brings the agency into focus. It explains why the agency exists, tells what it does, and describes how it does it.

The **strategic goals** that follow are an outgrowth of the clearly stated mission. The strategic goals explain the purposes of the agency's programs and the results they are intended to achieve.

For strategic planning to have this sort of impact, three practices appear to be critical. Organizations must do the following:

- Practice 1—Involve their stakeholders;
- Practice 2—Assess their internal and external environments; and
- Practice 3—Align their activities, core processes, and resources to support mission-related outcomes.

Practice 1—Involve Stakeholders

Successful organizations base their strategic planning, to a large extent, on the interests and expectations of their stakeholders. These organizations recognize that stakeholders will have a lot to say in determining whether their programs succeed or fail.

Among the stakeholders of Federal Agencies are Congress and the administration, State and local governments, third-party service providers, interest groups, Agency employees, and the American public.

Involving customers is important as well. An Agency's customers are the individuals or organizations that are served by its programs. This is not to say that contact between a Federal Agency and its customers is always direct. Many Federally mandated or Federally funded services are dispensed through third parties, such as State agencies, banks, or medical insurance providers. In such cases, Federal Agencies face the particularly challenging task of balancing the needs of customers, service providers, and other stakeholders, who at times may have differing or even competing goals.

Practice 2—Assess The Environment

Successful organizations monitor their internal and external environments continuously and systematically. Organizations that do this have shown an ability to anticipate future challenges and to make adjustments so that potential problems do not become crises. By building environmental assessment into the strategic planning process, they are able to stay focused on their long-term goals even as they make changes in the way they intend to achieve them.

Assessing the **external environment** is particularly important, in part because so many external forces that fall beyond an organization's influence can powerfully affect its chances for success. For organizations both public and private, external forces can include newly emerging economic, social, and technological trends and new statutory, regulatory, and judicial requirements.

An organization's **internal forces** include its culture, its management practices, and its business processes. Today, Federal Agencies find that monitoring these internal forces is especially important, given the

effects of funding reductions and reorganizations. The tools available to organizations assessing the internal environment include program evaluations, employee surveys, independent audits, and reviews of business processes.

Practice 3—Align Activities, Core Processes, and Resources

An organization's activities, core processes, and resources must be aligned to support its mission and help it achieve its goals. Such organizations start by assessing the extent to which their programs and activities contribute to meeting their mission and desired outcomes. As organizations became more results-oriented, they often find it necessary to fundamentally alter activities and programs so that they can more effectively and efficiently produce the services to meet customers' needs and stakeholders' interests.

As Agencies align their activities to support mission-related goals, they should match funding with their anticipated results. Under a series of initiatives called Connecting Resources to Results, OMB is seeking to adopt a greater focus on Agencies' goals and performance in making funding decisions.

Leading organizations strive to ensure that their core processes efficiently and effectively support mission-related outcomes. This sort of integrated approach may include tying individual performance management, career development programs, and pay and promotion standards to organizational mission, vision, and culture.

Step 2—Measure Performance

After defining their missions and desired outcomes, the second key step that successful, results-oriented organizations take is to measure their performance. **Measuring performance** allows these organizations to track the progress they are making toward their goals and gives managers crucial information on which to base their organizational and managerial decisions.

The GPRA incorporates performance measurement as one of its most important features. Under the Act, agencies are required to develop annual performance plans that use performance measurement to reinforce the connection between the long-term strategic goals outlined in their strategic plans and the day-to-day activities of their managers and staff. The **annual performance plans** are to include the following:

- Performance goals for an Agency's program activities as listed in the budget,
- A summary of the necessary resources to conduct these activities,

- The performance indicators that will be used to measure performance, and
- A discussion of how the performance information will be verified.

Practices 4 and 5 are designed to ensure that performance measures are an integral part of Agency activities.

Practice 4—Produce a Set Of Performance Measures

The experiences are that at least four characteristics are common to successful hierarchies of performance measures. That is, a set of performance measures must be produced at each organizational level that:

- **Demonstrate Results—**Performance measures should tell each organizational level how well it is achieving its goals.
- **Limited To The Vital Few—**The number of measures for each goal at a given organizational level should be limited to the vital few. Those vital few measures should cover the key performance dimensions that will enable an organization to assess accomplishments, make decisions, realign processes, and assign accountability.
- **Respond To Multiple Priorities—**Government agencies often face a variety of interests whose competing demands continually force policy makers and managers to balance quality, cost, customer satisfaction, stakeholder concerns, and other factors. Performance measurement systems must take these competing interests into account and create incentives for managers to strike the difficult balance among competing demands.
- **Link To Responsible Programs—**Performance measures should be linked directly to the offices that have responsibility for making programs work. A clear connection between performance measures and program offices helps to both reinforce accountability and ensure that, in their day-to-day activities, managers keep in mind the outcomes their organization is striving to achieve.

Practice 5—Collect Sufficiently Complete, Accurate, and Consistent Data

As successful organizations develop their performance measures, they pay special attention to data collection. As the experiences of these organizations demonstrated, managers striving to reach organizational goals must have systems in place to provide them with needed information.

Step 3—Use Performance Information

After establishing an organizational mission and goals and building a performance measurement system, the third key step in building successful results-oriented organizations is to put performance information to work. Managers should use **performance information** to:

- Continuously improve organizational processes,
- Identify performance gaps, and
- Set improvement goals.

Organizations that progressed the farthest to results-oriented management did not stop after strategic planning and performance measurement. They applied their acquired knowledge and information to:

- Identify gaps in performance,
- Report on the performance, and
- Improve performance to better support their missions.

Practices 6 through 12 give structure to identifying and responding to performance information.

Practice 6—Identify Performance Gaps

Performance information can have real value only if they are used to identify the gap between an organization's actual performance level and the performance level it has identified as its goal. Once the performance gaps are identified for different program areas, managers can determine where to target their resources to accomplish the mission. When managers are forced to reduce their resources, the same analysis can help them target reductions to keep to a minimum the threat to the mission.

By analyzing the gap between where they are and where they need to be to achieve desired outcomes, management can:

- Target those processes that are in most need of improvement,
- Set realistic improvement goals, and
- Select an appropriate technique to improve processes.

Practice 7—Report Performance Information

Annual performance reports document the progress made toward achieving the goals established in annual performance plans. The reports link levels of performance to the budget expenditures, which is consistent with the GAPER's requirements that annual performance plans be tied to budget requests.

Practice 8—Use Performance Information To Support The Mission

Federal Agencies are feeling the pressure to demonstrate that they are putting the taxpayers' money to sound use. They are expected to demonstrate improved performance even as they cut costs--two simultaneous demands that are driving the trend toward results-oriented government.

As they focus on the outcomes they hope to achieve, federal managers increasingly are finding that the traditional ways they measured their success--and thus the traditional ways they did business and provided services--are no longer appropriate or practical.

Practice 9—Devolve Decision Making With Accountability

Leading organizations create a set of mission-related processes and systems within which to operate, along with giving their managers extensive authority to pursue organizational goals while using those processes and systems. Allowing managers to bring their judgment to bear in meeting their responsibilities, rather than having them merely comply with overly rigid rules and standards, can help them make the most of their talents and lead to more effective and efficient operations.

Practice 10—Create Incentives

Across government, the best incentive Congress can apply to foster results-oriented management is to use information about performance measurement to make decisions about policy, program, and resource allocation, and to provide agencies with the authority and flexibility to achieve results.

Successful organizations define their missions clearly and communicate them to their employees--particularly to their managers--so that they understand their contribution. At both the organizational and managerial levels, accountability requires results-oriented goals and appropriate performance measures through which to gauge progress.

Practice 11—Build Expertise

To make the most of results-oriented management, staff at all levels of an organization must be skilled in strategic planning, performance measurement, and the use of performance information in decision making. Training has proven to be an important tool for Agencies that want to change their cultures.

Results-oriented managers view training as an investment rather than an expense. And as experts in human resource management at leading private and public organizations have pointed out,

organizational learning must be continuous in order to meet changing customer needs, keep skills up to date, and develop new personal and organizational competencies.

Practice 12—Integrate Management Reforms

Within a given Federal Agency, the management reforms now under way may come from various sources. Some of these reforms may be self-initiated, others may have been mandated by legislation, still others may be the result of administration initiatives such as the National Performance Review. All of these reform activities need to be integrated, as the CFO Council urged in May 1995:

> "Existing planning, budgeting, program evaluation and fiscal accountability processes should be integrated with the GPRA requirements to ensure consistency and reduce duplication of effort. In addition, other management improvement efforts, such as implementation of the CFO Act, and FMFIA (Federal Managers' Financial Integrity Act), customer service initiatives, reengineering, and Total Quality Management, etc., should be incorporated into the GPRA framework to capitalize on the synergy and availability of key information and to improve responsiveness to customers and other stakeholders".

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AQIM Handbook

Introduction

Agriculture Quarantine Inspection Monitoring (AQIM)

Introduction

This section of the Introduction gives you the what's and the why's of AQIM.

What Is AQIM?

AQIM is a group of activities initiated to help PPQ become a results-oriented organization. That is, an organization that uses information about the performance and the pathway risk of the Agricultural Quarantine Inspection (AQI) program to make decisions.

The PPQ Executive Team initiated AQIM for two basic reasons:

- To provide information for risk-based decision-making; and
- To meet the requirements of the Government Performance and Results Act (GPRA) of 1993. (Refer to page-1-5 for an explanation of the GPRA.)

What Is Risk Based Decision Making?

PPQ is accountable for reducing the pest threat to U.S. agriculture in a way that does not unduly restrict commerce. To accomplish this, PPQ is moving to better methods for determining not only what to inspect, but how to inspect it. Many of those methods use **risk analysis**.

Risk analysis in business and government provides the framework for organizing and presenting information. This framework helps employees select and justify their actions. For unimpeded trade and movement of commodities in today's world, PPQ must show that we inspect and treat imports and people based on the widely accepted science of risk analysis.

Traditionally, PPQ based work on the quantity of pest interceptions and quarantine material intercepted (QMI). This seemed logical. We filled our inspection tables with QMI, we found pests, and we tallied them to justify a good job performance. We did not, however, consider the seriousness of the threat posed by the pest. In other words, we based our effort on quantity, not the quality of the risk.

When time is spent on low risk activities, then work on high risk pathways suffers. Each work location must assess the risk of a particular pathway and change that assessment as trade and travel changes.

We decrease the entry potential of our worst pests when we track pathways, predict risk, and reassign our work. This process of tracking, predicting risk, and reassigning work based on those predictions is **risk-based decision making**. Therefore, the information produced from AQIM provides us with what we need to assess the risk of entry of exotic pests and diseases.

How Does AQIM Produce Information?

Information is needed for risk management and the GPRA. To produce the necessary information, AQIM uses a sampling process to estimate the amount and kind of quarantine materials and pests approaching a work location via various known pathways of pest entry. Relative pathway risks can be measured by plugging in estimated numbers of actionable pests and information about pest destination into risk assessment models. We are using information from AQIM to measure the gap between the **estimated** amount of quarantine materials or pests approaching a location and the **actual** amount being intercepted by PPQ at that location.

AQIM data is collected and entered at designated locations into a computer software program called Epi Info. This software allows each location to do simple analyses of the data. The information from locations is also sent to PPQ's Quarantine Policy, Analysis & Support Staff for submission to the national database and further analysis.

Monitoring results can be used at various levels within PPQ. Work locations can use the results to verify the risk of various entry pathways and to shift resources to activities that are most effective in managing risks. State and regional offices can use the results to assess the relative risks of various entry pathways and locations. At a national level, the information can be used to assess risk, redesign regulations, and justify budget requests.

Who Is Responsible?

A national monitoring team has input in coordinating AQIM via the national coordinator in Headquarters. Information is collected by inspectors at designated locations. Basic analysis and use of the monitoring data can be accomplished by PPQ managers and

employees at work locations to assist in decision making processes. A list of key contacts is in **Appendix B** of this Handbook for your reference.

Developing an appropiate sampling process is an important part of this effort. Designated locations must give considerable thought to a sampling process to ensure the gathering of valid and useful information about pathway risk and program performance. The national monitoring team can offer help in setting up a sampling process that is practical and sustainable at designated locations.

Who Is Involved?

Designated locations around the country and in Puerto Rico are collecting data. In order for AQIM to be fully operational, most ports of entry locations will need to become involved in some way. Each designated location collecting information selects an AQIM coordinator and assistant (refer to "Roles and Responsibilities" on **page 2-5** for more information). An infrastructure at the regional and national levels is also set up to coordinate the program implementation (refer to **Appendix B** for information on key contacts for AQIM).

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AQIM Handbook

Introduction

Statistics and AQIM

Introduction

Statistics deal with the collection, analysis, and interpretation of information. The AQIM process uses proven statistical techniques to collect monitoring information about various pathways and the commodities entering through them into United States. The information is then used to explain and to explore the characteristics of the various pathways to assist in managing the risk they present to U.S. agriculture.

The information collected as part of AQIM will have very practical uses that will impact the work of port employees. Statistics will allow PPQ to use the AQIM information to respond to such practical questions as:

1. How much cargo approaching the work location is carrying actionable pests? What is the level of infestation of the pests in the cargo?
2. What poses the greater risk of spreading citrus canker? Is it maritime imports from South America or air passenger transport of home-grown fruit?
3. How effective is a work location in managing the pest and quarantine material threats that are identified through AQIM?

The use of valid, statistical techniques allows PPQ to establish the facts of the situation, and allows officers and managers to make risk-based decisions.

The following section provides additional information to better understand the role of statistics in monitoring and PPQ operations.

The Why of Statistics

Statistics allow for the objective analysis of information. The principles behind statistics help guide us to use the best methods for gathering information about a population without giving bias to the information.

Historically, PPQ has used selective criteria choosing inspectional units that are the most likely to transport something of agricultural interest. Inspectional units that don't fit the criteria have less of a chance of being selected--that isn't random sampling. When selecting random samples, selective criteria cannot be used.

In AQIM, ports of entry randomly select pathway entrants to create a picture representative of the entire population. For example, the population might be all air passengers arriving at the international terminal of an airport. The random sampling unit would consist of 10 custom declarations (and associated passengers' baggage) per day for a year, or of 3,650 passengers for the year. The sample would be selected randomly, such that every passenger had the same chance of selection. The randomness could be achieved in many different ways. One example might be that the random sampling units are selected at preselected random times of the day.

The data could be further refined to reflect which of those units in the population pose a threat and which do not. Why do we do this? So that we can draw inferences and make decisions about the population in an objective, scientific way. **Statistical inference** is drawing conclusions about the larger population from smaller, randomly sampled portions. From these sampled portions, we can construct generalizations about the population with varying levels of confidence.

Random Selection as a Key Step

In order to draw accurate conclusions about the larger population from a smaller subset or sample of the population, it is important that the subset be as similar to the larger group as possible. This means that each unit in the subset must be randomly chosen from the larger population. Consequently, each unit of the larger population must have the same chance of being randomly selected.

Because sampling units are chosen randomly where all units have the same chance of being selected, we can measure the error involved in the information. This measure of error will allow us to judge how good our information is and how much confidence we have in the overall monitoring process.

What Are The Implications for AQIM?

There are several implications of using a random sampling process for AQIM.

1. Monitoring is not the same as using selective criteria to determine a random sampling unit. (See the section about AQIM Sampling Process beginning on page-1-39 for additional information.)
2. It is imperative that selected sampling units are truly random. This eliminates the possibility of human choice or preference in the selection.

3. Biasing the information to reflect high levels of pest and quarantine material interceptions, will mislead the interpretation. In some instances, giving higher levels than what really exists will cause a work location to appear extremely inefficient because time is spent on low risk activities, rather than on high risk pathways. Additionally, showing a no or low risk rate can result in high risk pathways being interpreted as low risk causing inappropriate staffing to occur.
4. Selected random sampling units must be thoroughly inspected to be sure if pests or quarantine materials are present. The goal is to have a clear snapshot of what is approaching a work location.
5. The goal of AQIM is not in the number of pest interceptions and DIM's collected, but in the decisions based on risk and analysis that can be drawn from the monitoring.

Statistical Concepts

There are several ways of analyzing the monitoring information that has been collected. This section addresses the types and benefits of analysis that are available to you. Much of this analysis can be accomplished using Epi Info. The details of how to use Epi Info to analyze information are under the appropriate pathway sections of this Handbook. The pathway sections are: Air—Passenger Baggage, Air—Cargo, Maritime—Cargo, Mail Facility, Northern Border—Vehicle, Northern Border—Truck Cargo, Southern Border—Vehicle, Southern Border—Truck Cargo, Predeparture, and Rail.

Following are definitions of some basic terms used when analyzing monitoring information:

Confidence Interval—A level of belief that the true value of the population was captured. For AQIM, the numbers of samples taken at each work location were designed to ensure that by detecting the presence of certain pests and quarantine materials during the monitoring, PPQ could be 95 percent sure that it would happen again.

Data—Raw information that provides values for any characteristic of a larger population. For AQIM, these would be all the entries on the data collection form (i.e., flight number, origin, contaminant codes, etc.).

Mean—This term is also referred to as the average. It is computed by adding all the values for a characteristic and dividing by the number of observations. For example, the mean of passengers going through an airport in a day would be the total number of passengers in one year divided by 365 days.

Probability—The statistical prediction of the likelihood of possible outcomes.

Sample—The part (or a subset) of a population that has been selected for monitoring.

Simple Random Sampling—A selection process where each member of the population must have a known probability (greater than 0) of being sampled.

Variable—Any characteristic on which the elements of a sample differ from each other (i.e., height versus weight, cargo destinations versus type).

Data is the information that is collected from a **random sampling unit** (or smaller subsets) that accurately depicts characteristics (measured **variables**) of the larger population. Gathering data for AQIM is **simple random sampling** where we collect information regarding specific variables. This is done so we can predict the likelihood of an event occurring such as a pest or quarantine material interception. The number of inspections conducted at a work location is established so that there will be a **95 percent confidence interval**.

Types of Analysis and Use

There are several types of analysis that can be done with the AQIM data. The analysis can range from the simple to the complex. Explained here are some of the more useful methods available for use at your work location. More detailed analysis questions are located under the following pathway sections: Air—Passenger Baggage, Air—Cargo, Maritime—Cargo, Mail, Northern Border—Vehicles, Northern Border—Truck Cargo, Southern Border—Vehicles, Southern Border—Truck Cargo.

The simplest analysis is just to look at **a listing of the data**. Listings can answer questions such as what, what kind, and how many. Figure 1-1 is an excerpt from a listing of the data gathered for passenger vehicles at a work location along the Southern border. Looking at the data could tell how many inspections were made on what dates, and the types of items being found.

REC.#	WORK UNIT	DATE	TIME DESTIN	ITEM
1413	Laredo, TX	01/01/97	1110 TX	Orange
1414	Laredo, TX	01/01/97	1300 TX	.
1415	Laredo, TX	01/01/97	1253 TX	.
1416	Laredo, TX	01/01/97	2010 TX	.
1417	Laredo, TX	01/01/97	2330 TX	.
1418	Laredo, TX	01/02/97	2130 TX	.
1419	Laredo, TX	01/02/97	2015 TX	.
1420	Laredo, TX	01/02/97	1540 TX	Apple
1421	Laredo, TX	01/04/97	0845 TX	.

FIGURE 1-1: An Example of a Listing Data

Since there are many variables in the data files for each work location, you have the option to **select** one of those records with specific variables that you are interested in looking at. Refer to Figure 1-2 for an example of records containing quarantine material.

REC.#	WORK UNIT	DATE	TIME DESTIN	ITEM
1421	Laredo, TX	01/04/97	0845 TX	Orange
1428	Laredo, TX	01/08/97	1927 TX	Apple
1432	Laredo, TX	01/10/97	1849 TX	Sugarcane
1453	Laredo, TX	01/14/97	1840 TX	Hay
1466	Laredo, TX	01/17/97	1840 TX	Pear
1486	Laredo, TX	01/05/97	0813 TX	Avocado, w/seed
1590	Laredo, TX	01/20/97	1005 TX	Orange
1614	Laredo, TX	01/24/97	0854 TX	Apple
1631	Laredo, TX	01/25/97	0900 TX	Eggs

FIGURE 1-2: Printout From Epi Info of Records Having Specific Information

Frequencies answer the question, “To what degree do unique values exist in a variable?” Looking at the frequency of a certain variable will show summary data about the variable. For example, running a frequency on the date variable will give the number of inspections that were done on each date as well as the total number of inspections.

Figure 1-3 shows the frequency of items intercepted. You get a list of the different types of items intercepted and how many there were in the monitoring samples.

ITEM	Freq	Percent	Cum.
APPLE	3	30.0%	30.0%
AVOCADO, W/ SEED	1	10.0%	40.0%
EGGS	1	10.0%	50.0%
HAY	1	10.0%	60.0%
ORANGE	2	20.0%	80.0%
PEAR	1	10.0%	90.0%
SUGARCANE	1	10.0%	100.0%
Total	10	100.0%	

FIGURE 1-3: Printout From Epi Info of Frequencies of Items Intercepted

Frequencies, as well as the raw data, can also be displayed graphically using **pie** and **bar charts**. Refer to Figure 1-4

.

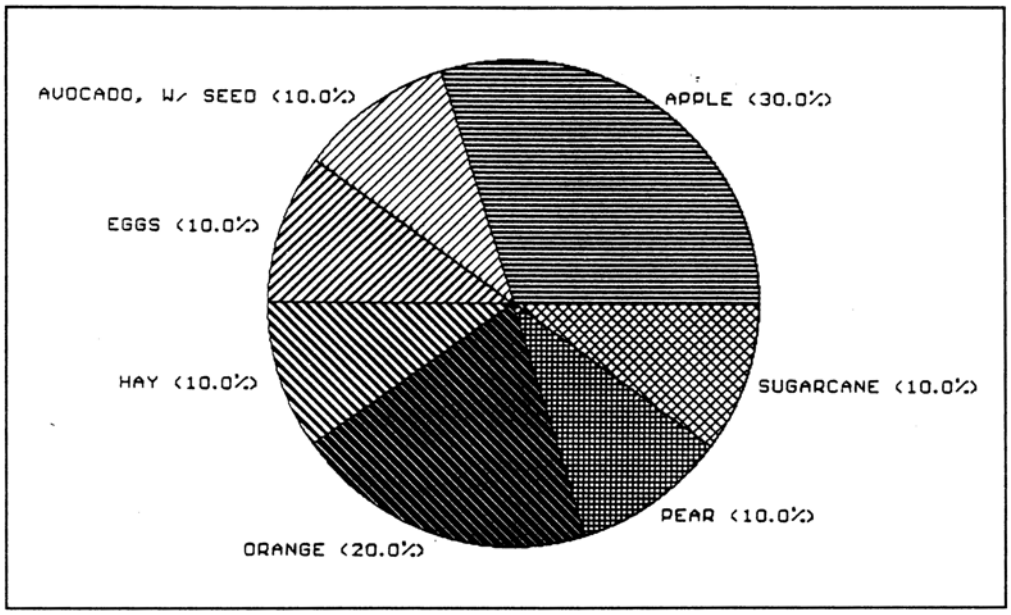

FIGURE 1-4: Example of Frequencies Displayed Using Pie Chart

Means or averages give an overview of the general tendency of a variable. The average number of passengers on a declaration might be of interest for your work location. This could be calculated by dividing the total number of passengers in the data file by the number of declarations (or samples). We can calculate the 'error' in this estimate and express it in the form of a **confidence interval**. Remember that the confidence interval gives an indication of how accurate the estimate is.

Proportions show the relative frequency of an event. For AQIM, we may be interested in the proportion or percentage of passengers with a QMI. We could calculate this by dividing the total number of QMI's by the number of passengers. We can also compute a confidence interval around proportions.

Next Steps

These are all statistics that are necessary to initially conduct and understand AQIM. These different statistics can be computed using the Epi Info software program used to analyze data for AQIM activities. (Refer to page-1-45 to What Is Epi Info?) Each subsection titled Data Analysis under the major pathways contains detailed instructions on analyzing using Epi Info.

Using statistics and risk management principles will become more critical as PPQ progresses toward complying with the GPRA and evaluating results-based performance.

1 Introduction

AQIM Handbook

Fundamentals of Risk Analysis

Basics About Risk

Agriculture is a business filled with numerous risks. Pests, diseases, weather, and market fluctuations continually impact the potential earnings of producers. These elements of risk and the reaction of producers and consumers to that risk, result in agricultural policy setting and government programs.

USDA has several programs by which it enhances overall U.S. agricultural markets; ranging from economic forecasting to genetic research. APHIS, PPQ helps protect the natural agricultural resource base of the United States by minimizing the entry potential of risk elements, which would increase the risk agents (i.e., pests and diseases). These efforts are designed to help give producers the best possible standing in international markets.

In the past, APHIS, PPQ has responded to risk issues on a historical knowledge basis. Through observation and experience, officers made judgements and decisions about the potential threat posed by various commodities entering the United States. These decisions must now be supported by empirical information.

Risk analysis processes give PPQ a basis for responding to the new mandates required by the international trade agreements: General Agreement on Tariffs and Trade (GATT) and North American Free Trade Agreement (NAFTA). GATT and NAFTA require transparency of risk-based decisions impacting agricultural products in U.S. markets. Therefore, PPQ must do business differently than in the past because of these new mandates. For information and criteria about risk management, refer to the **APHIS Trade Risk Analysis Position** paper and the **GATT Agreement on the Application of Sanitary and Phytosanitary Measures** located in **Appendix C** of this Handbook.

The basic function of PPQ is to manage exotic pest and plant disease risk. To accomplish this work, decisions must be based upon the risk that various commodities pose to U.S. agriculture. At the heart of risk-based decision-making is the need for good information. Because PPQ does not have perfect knowledge about the absolute risk of a particular pest, disease, or commodity; decisions must be made with clear understanding, knowledge, and an element of uncertainty.

Risk Analysis Process

Risk analysis is the process, tools, and methodologies by which organizations estimate the likelihood and potential consequences of an adverse event. International trade agreements require these processes be consistent, systematic, and transparent. Therefore, the organizational objective is that risk-based decision-making should be pervasive throughout all levels of PPQ and APHIS.

A risk analysis process places risk analysis activities within an organizational context. The process provides an internal structure and roles and responsibilities, which define and respond to risk-based policy issues. A risk analysis process comprises risk assessment, risk management, and risk communication. Figure 1-5 chronicles the difference between risk assessment, risk management, and risk communication.

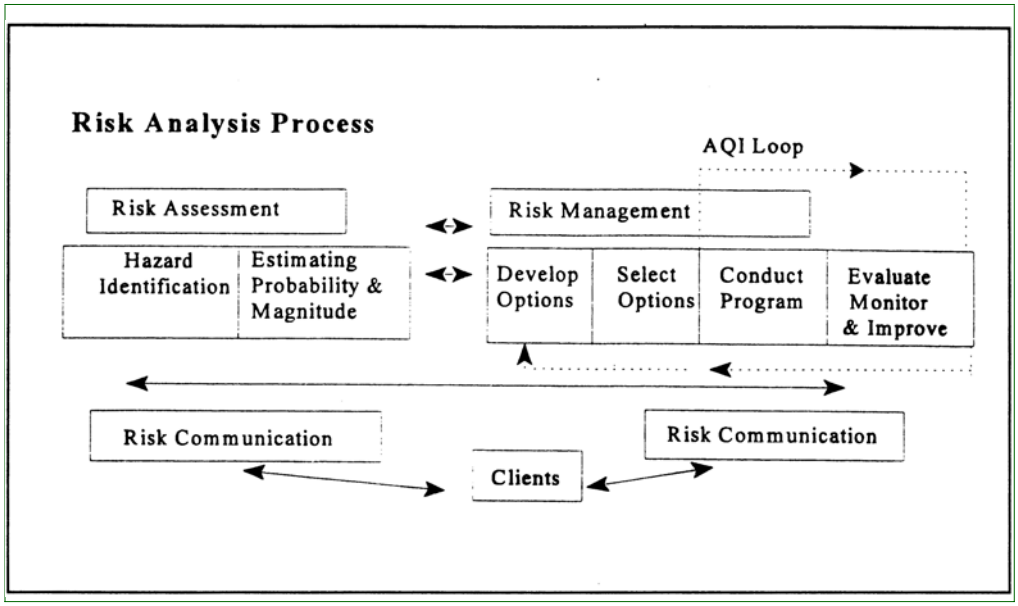

FIGURE 1-5: A Model of a Risk Analysis Process

The risk assessment (or analysis) portion of the model pays attention to estimating the probability and magnitude of the risk. Analysis ends with developing and selecting options. AQIM plays a major role in evaluating, monitoring, and improving options or mitigation programs. As risk analysis processes are used, it is essential to communicate with clients to ensure programmatic goals are met, and to ensure the results improve or to re-tool the process.

Field work occurs primarily at the implementation levels of risk management. PPQ officers are responsible for implementing risk management programs; monitoring and evaluating those programs;

and adjusting and improving activities to ensure that risk is being managed at the best possible level. Risk analysis is a systematic way of achieving risk-based decisions.

The major barrier to risk analysis is reliable data. Data errors may come from improper sampling procedures, errors in record-keeping and data entry or faulty analysis. In addition, risk analysis must take into account aggregate risks. For example, fruit that has citrus canker poses one level of threat while fruit that is contaminated with medfly poses another. However, if infested with citrus canker and medfly, the risk rate is more intense.

From a risk management viewpoint, agency leaders must actively respond to:

- What can be done to prevent, reduce, or eliminate the risk?
- What are the best options?
- Why?

There are multiple uses of risk analysis: problem definition, risk prediction, risk avoidance measures, mitigation strategies, management programs, and standards for protecting agriculture. From risk analyses, work locations can evaluate ongoing risk reduction activities; determine management and policy priorities; and identify and rank research and data collection needs.

The following model on pest risk assessment (analysis) gives context to risk analysis processes. See **Figure 1-6.**

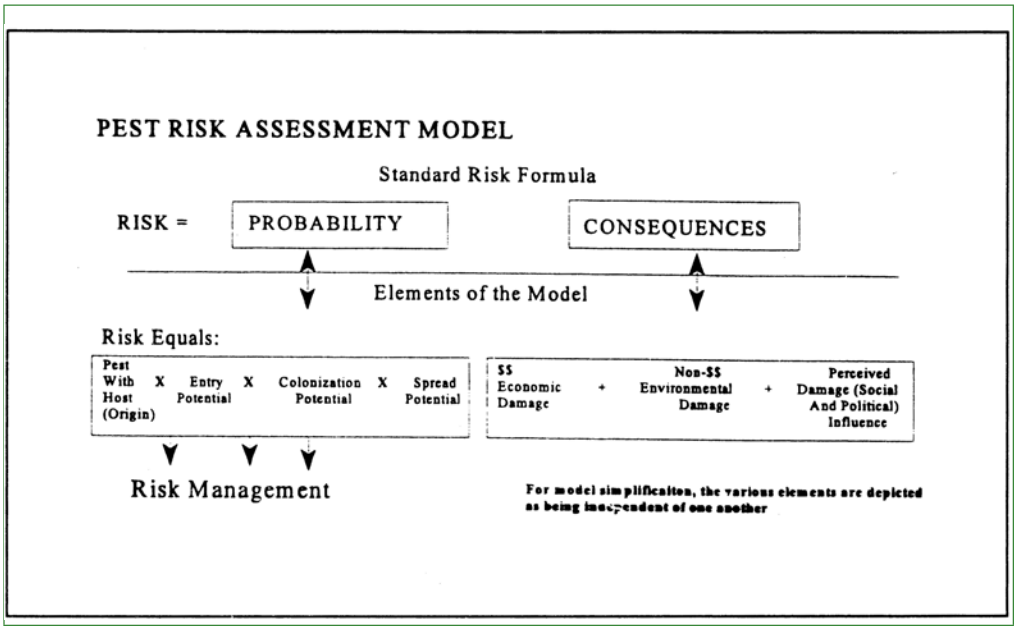

FIGURE 1-6: Pest Risk Assessment Model

The model in Figure 1-6 helps to exemplify that risk equals probability and consequences. It is important to note in this model that AQIM activities are focused in the element of entry potential. The intent of AQIM is to assess entry potential and devise methodologies for reducing or eliminating that potential to the best possible level through the most efficient use of resources. Therefore, PPQ work locations can assess the approach rate of pests, evaluate the rate of detection, and devise methods to minimize or to ameliorate entry of any pest or disease.

It is important that work locations and Risk Management Teams concentrate a majority of their activities on reducing entry potential. However, they must also be aware of the other risk elements that impact overall effectiveness. Final activities at work locations may be influenced by such factors as colonization, spread potential, economic damage potential, environmental damage potential, and socio-political influences.

Referring to Figure 1-6, the probability portion of the standard risk formula is multiplicative. This means that if any of the elements listed are zero (i.e., pest with host origin, entry potential, colonization potential, spread potential), then nothing can happen and there is no risk. However, if there is a positive occurrence or likelihood in all of these elements, then the risk level must be considered.

In Figure 1-6, the second portion of the standard risk formula is consequences. We tend to think of consequences in the negative. How much damage will this pest or disease threat pose in terms of dollars, environment, social, and political elements. The elements of risk consequences (i.e., economic damage potential, environment damage potential, perceived socio-political damage) are additive in nature. You may have a “zero” or non-issue in any two elements. But, as long as one of the elements has a positive impact, then consequences have to be addressed. The intent is to determine if a risk will require mitigation. This brings us to the third part of the pest risk assessment model--risk management.

Risk Management

Risk management is the analysis of various options and the determination of which options can be pursued based upon current operating issues and parameters. The analysis discerns ‘what is viable’. Still, it is the responsibility of the decision-makers to weigh the various options, considering positive implications as well as the negative. All consequences are not equal.

Historically, APHIS has viewed all pest establishments as equally unacceptable. However, some pests may be harder to eradicate than others, and some may be harder to trap or have more long term effects. Management uses risk analysis to give greater specificity in the relative threat levels. Probability of establishment and consequences of impact must mutually be considered.

Therefore, the product of a risk analysis is a conclusion (or characterization) about the relative risk of a particular commodity or pest as it relates to others. It is not an absolute value. It is then up to the decision-makers to judge whether or not the risk is acceptable. If the risk is not acceptable, then the agency must move into risk management: the active intervention to minimize risk elements.

Decision makers must also understand that there is uncertainty in the conclusions. We are conducting predictive analysis. We cannot always be assured that what we think will happen, will in reality, occur. There is no perfect knowledge. In some cases, such as citrus canker and Medfly, the likelihood and impact of establishment is so great, that we can express a high confidence level in the appropriate type of action to take. However, not all situations are so clearly defined.

Risk strategies or decisions usually fall into one of four categories:

- Control of risk,
- Avoidance of risk,
- Risk transfer, or
- Acceptance of risk.

When the probability of the loss occurring is high, the general rule is to either avoid (e.g., commodity exclusion) or control (e.g., fumigation activities) the risk agent. When the probability of the loss is low, generally the activities center around accepting or transferring the risk. Accepting risk is exemplified by the discontinued inspection of low risk pathways. Risk transfer would occur if we decided, on some future date, we would stop excluding a particular commodity that had a high smuggling rate. We would begin to permit entry upon inspection. This way, we have transferred the risk from unknown entry paths to known ones.[1]

Regardless of which avenues are selected, there are certain principles for good risk management decision-making. A good risk management decision:[2]

1 Risk Management. “Designing Risk Management Strategies.” Module 4, Agriculture Canada.
2 Presidential Commission on Risk Assessment and Risk Management. “Framework for Environmental Health Risk Management.” Final Report Volume 1. 1997

- Addressees an articulated problem in its agricultural pest or disease threat context
- Emerges from a decision-making process that elicits the view of those affected by the decision, so that differing technical assessments, public values, knowledge, and perceptions are considered
- Is based on a careful analysis of the weight of scientific evidence that supports conclusions about a problem's potential risks to animal and plant health
- Is made after examining a range of regulatory and non-regulatory risk management options
- Reduces or eliminates risks in ways that:
  - are based on the best available scientific, economic, and other technical information;
  - account for their multi-source, multi-risk contexts;
  - are feasible, with benefits reasonably related to their costs;
  - give priority to preventing risks, not just controlling them;
  - are sensitive to political, social, legal and cultural considerations; and
  - include incentives for innovation, evaluation and research.
- Can be implemented effectively, expeditiously, flexibly, and with stakeholder support
- Can be shown to have a significant impact on the risks of concern
- Can be revised and changed when significant new information becomes available while avoiding "paralysis by analysis."

Multiple elements or factors influence decisions made concerning risk. Management must carefully weigh each option in terms of effectiveness, feasibility, costs, benefits, unintended consequences, and cultural or social impacts.

Risk Communication

Stakeholders play an essential role in this phase by assisting in identifying risk-reduction options, developing and analyzing various avenues to pursue and evaluating the ability of each option to reduce risk (as offset by the above elements such as cost, etc.)
Non-regulatory and regulatory approaches (or some combination) can be used to minimize or eliminate risk. Innovative approaches to

changing behavior relative to risk (i.e., education, market incentives, monitoring, and research) may prove as effective to regulatory restrictions in ensuring compliance.

Risk Management Teams

It is essential to have an infrastructure, such as Risk Management Teams, at work locations to deal with risk analysis and to assist management in making risk-based decisions. Following are general guidelines for the composition and structure of Risk Management Teams.

Composition

The composition of Teams is flexible and should be diverse. Team membership should include Port Directors, managers, officers, and identifiers. Also, membership should include a back-up identifier, persons responsible for AQIM, and a representative of the NAAE.

Structure

The structure of Risk Management Teams depends on the size and complexity of operations at a work location. Team size may vary but should not be greater than 8 members. Larger ports may have more than one team based on the different risk pathways being monitored (i.e., cargo, passenger, etc.).

Skill

Teams need to have various skills. Such a skill base may include having experience of other work locations, using data base systems, and training or experience in researching.

Automated Data Sources for Teams

- Work accomplishment data systems (WADS),
- Pest interceptions (PPQ 309's),
- Importation of regulated articles (PPQ 280's),
- AQIM data (Epi Info and SRT),
- Pest Not Known To Occur (KNOT's), and
- Recommendations of PPQ's New Pest Advisory Group

Role

The role of Risk Management Teams is to conduct local risk assessments that result in ranking the risks of various pathways associated with plant pests and diseases. Teams:

- Recommend risk management options;

- Identify information needs and methods to obtain information;
- Design sampling processes; and
- Share information with other work locations, industry, States, and regions.

Recommendations from Risk Management Teams may include some of the following options:

- Change selection criteria by validating the existing ones and developing new ones;
- Create release programs for low risk cargo, e.g., border cargo release, maritime or air cargo release;
- Develop compliance agreements for low risk pathways in such areas as aircraft, ships, and rail cars;
- Change the number of units inspected, decreasing or increasing as necessary;
- Allocate staffing based upon relative risk of entry (i.e., pedestrian versus vehicle, cargo versus passenger, solid versus mixed loads, etc.);
- Change cargo inspection protocols (i.e., de-van versus tailgate);
- Target public awareness activities to high risk situations; and,
- Focus on risk (e.g., quality of pest interceptions and quarantine material interceptions, not the quantity)

Risk Management Teams need to:

- Raise AQIM questions, such as, what additional data is needed;
- Explore varying solutions to gathering additional data in a statistical sound format, and
- Share successes and experiences with other Risk Management Teams.

Once Risk Management Teams set issues into context, they need to establish a stakeholder collaboration process to begin risk communication. Stakeholders do not define the risk, but must be involved from the beginning to ensure cooperation and compliance.

Outcome of Risk Analysis

The Risk Management Teams can use risk analysis to answer basic operating questions such as:

- What can go wrong (if we do nothing)?

- What is the probability of an adverse action happening?
- What is or will be the magnitude of the outcome of the adverse action?
- How certain can we be that our predictions are correct?

The outcome of a risk analysis is a risk characterization. A risk characterization should respond to these questions:

- Considering the hazard, what is the nature and likelihood of the pest disease damage to agriculture?
- Which markets or groups are at risk: are some groups more likely to be a risk than others?
- How severe are the anticipated adverse impacts or effects? Are the effects reversible?
- What scientific evidence supports the conclusions about risk? How strong is the evidence? What is uncertain about the nature or magnitude of the risk?
- What is the range of informed views about the nature and probability of the risk? How confident are the analysts about their predictions for risk?
- What other sources cause the same type of effect?
- Does the risk have impacts besides those on agriculture or the environment, such as social or cultural consequences?

NOTICE

The level of detail considered in a risk assessment and included in a risk characterization should be commensurate with the problem's importance (local, regional, national), expected impact, and level of controversy. Risk characterizations must include information that is useful for all stakeholders.

Risk Management Teams:

1. Analyze AQIM survey data to develop estimates of agricultural pest risk approach rates for each major mode of entry at the work location.
2. Use the estimated approach rates to calculate the number of agricultural pests and diseases and high-risk quarantine materials approaching the work location.
3. Compare these numbers with the number of agricultural pests and diseases and high risk quarantine materials actually intercepted at the work location.
4. Use the comparisons from Step 3 above, to draw some conclusions about how well the work location manages the agricultural threat approaching the work location.

5. Report its findings to work location management and PPQ officers. The group recommends actions to take at the work location to improve risk management effectiveness at the work location and recommends risk management targets for the upcoming year. The recommended actions can be based on AQIM analysis or other information collected at the work location. For example, if monitoring data shows a certain commodity to be carrying more agricultural pests than previously suspected or reported, then the work location can inspect that commodity more carefully for interceptions.
6. Then, as the work location continues its baseline monitoring, at the end of the following year (or other time frame) the Teams check to see if the actions initiated in Step 5 above, lead to meeting risk management targets.

1

AQIM Handbook

Introduction

AQIM Sampling Process

Information Versus Detection

Sampling for information, also known as objective or random sampling, is used to **estimate characteristics for** a population. On the other hand, sampling for detection, is used to **detect characteristics of** a population. The two types of sampling are fundamentally different in their approach to bias.

Sampling For Information

When sampling to estimate for information, bias in selection must be avoided in order to ensure objectivity in the selection of representative samples from the population. Each member of the population must have a known probability (greater than 0) of being sampled. The result is a high degree of confidence that the sample represents the population, thus useful inference can be made about the population based upon the sample.

The most effective way to eliminate bias is to **randomize** the sampling process and design unbiased selection mechanisms. Mathematical, mechanical, or automated (computerized) systems and random number generators or random number tables are characteristic of the tools commonly used when sampling for information.

Sampling For Detection

Sampling for detection uses bias in order to discover if a specific characteristic occurs in the population. When sampling for detection, the objective is to use prior knowledge to ensure that certain members of the population have a higher probability of being sampled; whenever, prior knowledge indicates that detectable factors or patterns distinguish members of the population.

Using selective criteria based on profiling and similar subjective techniques and drawing from prior knowledge are characteristic of methodologies used when sampling for detection. It is important that such techniques are based on firm information or valid assumptions and applied as consistently as possible in order to detect the largest number of target items.

Summary

Based on the example in Figure 1-7, it would seem that there is a subtle difference between sampling for information and sampling for detection. In fact, it may be argued that sampling for detection, utilizing bias and subjective sampling, will result in better information concerning the amount of prohibited agricultural material carried by vehicles. This may be true, provided the assumptions used for biasing the samples are 100 percent accurate. However, sampling for information would be necessary to determine the soundness of the assumptions. Therefore, the soundness of a scheme sampling for detection cannot be adequately measured without a baseline level of knowledge provided through sampling for information.

Question: What amount of prohibited agricultural material is carried by vehicles?

Sampling for information would require a randomized sample of vehicles over a period of time suitable for the degree of confidence required.

However, if the objective were to detect as much quarantine material as possible, then a sampling **for detection** would be designed based on prior information about the vehicles believed most likely to carry prohibited items.

If no such information is available or the information does not allow for sound assumptions, then a random sample without bias is necessary.

FIGURE 1-7: Example of Sampling for Information Versus for Detection

There are critical, although sometimes subtle, differences between sampling for information and sampling for detection. The use and legitimacy of each is dependent upon the reason sampling is needed (the objective) and the kind of prior information available.

Important

It is important to note that the results of sampling for detection can provide some information about the existence for a characteristic within a population but cannot be used to infer information concerning the entire population. In situations where there is insufficient knowledge from which to develop biases, sampling must be randomized as in sampling for information.

Sampling for information can be more resource intensive than sampling for detection; and it can be difficult to execute in an environment that is focused on detection. Using the same mechanisms (personnel, work areas, etc.) Designed for detection tends to encourage the use of the same biases used for detection. Sampling for information under such conditions requires a special effort to overcome the psychological and logistical tendencies to bias for detection.

Figure 1-8 provides a summary comparison that can be used to quickly determine which type of sampling is most appropriate for a given situation.

Characteristic	Sampling for Information	Sampling for Detection
Type of sampling	Random, objective	Non-random or random; subjective or objective
Randomness	Essential	Not important unless a lack of knowledge prevents sampling from being biased
Bias	Eliminate	Use to advantage

FIGURE 1-8: Summary Comparison To Determine The Most Appropriate Type of Sampling

Random Sampling

A basic introduction to sampling was provided in the subsection titled, Statistics and AQIM beginning on page-1-21. This section will further explain the sampling that is used in AQIM and contrast it to the other types of sampling used by APHIS.

Sampling

First, sampling consists of selecting some part of a larger population to observe so that you can estimate something about the whole population. Sampling is used in a wide variety of situations, some of which you may be very familiar with. Political polls use a random sample of voters to predict who will win an election. A random sample of households with televisions is used to produce the Nielson ratings of television shows. Gallup polls use samples to produce estimates on wide ranging social and political issues. In almost any newspaper, magazine, or broadcast of the evening news you can see information based on some type of sample.

So why do we use samples? Because they provide a practical as well as an economical way to gather needed information. We can't afford (either the time or money) to inspect every person or piece of cargo entering the United States, so a properly chosen random sample can provide an 'estimate' for the sample that is representative of the population. Political polls commonly use around 1,000 voters to predict who is ahead in an election - even in national elections! Remember that with random sampling we can also measure the accuracy of the estimate. Therefore, we use random samples to gather information in a timely and economical manner.

How do we get a representative sample--one which we will be comfortable using to make an inference about the larger population? The answer is, by using the statistical properties of random sampling.

Statistical Criteria For Random Sampling

For a sample to be random, it has to satisfy some statistical criteria:

1. Each unit has an equal chance of being selected. An example from AQIM would be that every air passenger baggage has an equal chance of being in the sample.
2. Each unit is selected independently of other units. An example of this might be that the usual inspection of air passenger baggage from flight X does not influence the selection of the next air passenger baggage to be in the sample.

Random Sampling Contrasted to Other APHIS Sampling Processes

Other sampling being done by APHIS is as follows:

- Haphazard sampling--where an officer points out a number of boxes without any specific knowledge.
- Convenience sampling--officer chooses X number of boxes from the rear of a sea container to do a tailgate inspection.
- Selection criteria (authoritative or intuitive) sampling--based on knowledge and skill of the officer (or sampler).

Each of these types of sampling violate one or both of the statistical criteria for random sampling. Can you determine why these aren't random samples? Would any of the above samples produce a representative sample? Probably not. A selection criteria should have a higher rate of pest and quarantine material interceptions than would a truly random sample, since you are choosing air passenger baggage most likely to have pest and quarantine material interceptions. A convenience sample only looks at the tailgate, so boxes at the front of a container would have no chance of selection. Haphazard sampling may appear to be random, but if the officer knowingly (or unknowingly) excludes any part of the cargo from inspection, then it would not be truly random. An example of haphazard sampling is conducting a blitz of a low risk flight causing misguided random selection to complicate the recovery process.

One of the things that makes random sampling so attractive is that it allows you to attach some measure of confidence or certainty to the data. (Or we can measure some of the error involved with sampling). Why is that important? Remember we took just **one** random sample from our population. If we took another sample, we would end up with different units from the population in the sample. This second sample could give us data that could be very different from the first sample, or it could give us data that is very similar. That's one of the problems of using samples - there are no money-back guarantees. However, we can measure the accuracy of the information we gather. This accuracy

is expressed in the form of a confidence interval. Using random sampling allows us to pick a confidence level, say 95 percent, and express how confident we are that our estimate is within the confidence interval. An example would be that our monitoring data shows that 2 percent of the vehicles crossing at a land border site had interceptions of quarantine material.

Given we used random sampling, we could compute a confidence interval that would allow us to say we were 95 percent certain that the true percentage of vehicles crossing the border at that work location was between 1.4 percent and 2.8 percent.

Telling a work location that their samples HAVE to be random is the easy part. Developing a sampling scheme to suit each work location and pathway is much more difficult. This is why each work location has developed its own sampling process. Some work locations are cooperating with U.S. Customs in sampling. Other locations have set up their own schemes to reflect the unique aspects and abilities of its location and personnel. The important thing is that the samples are random, not that every sample is chosen in a like fashion.

If you have some prior knowledge about the population you are interested in, there can be better (more efficient and cost effective) ways to do the sampling. If the population can be broken up into homogenous groups, then the sample can be drawn from each of the groups. Separate samples are drawn from each strata and inspected. If the stratification was done properly and the samples in each strata are more similar to each other than to the samples in other strata, the resulting confidence interval should be smaller. This doesn't always happen, but if the stratification is done properly, the chances are pretty good you will end up with a better estimate. Refer to **Figure 1-9** for a simplistic example about the importance of knowing your population.

For Example: You have often wondered how many red M & M's are in the 1 lb. bag of candy. Instead of counting all of them, you measure out 4 ounces and count each color and record the results. Your counts reveal:

3 reds, 17 browns, 10 greens, and 14 blues

You then multiply these numbers by four to get your final counts for the entire bag:

12 reds, 68 browns, 40 greens, and 56 blues

Based on your findings, you write a letter to the candy maker to complain; red is your favorite color. Little did you know that the reds are slightly heavier and put in the bag first. Your 4 ounce sample, however, came from the top of the bag and you did not shake it up first. This non-random sample provided inaccurate information about the population.

FIGURE 1-9: Example of Importance of Knowing Your Population

One Final Word on Sampling

As explained above, we could potentially decrease the error in our estimate by using stratified sampling. There is another, more direct, way to control the error (which controls the width of the confidence interval). Increasing the sample size can decrease the error associated with an estimate, regardless of the population size. The error is inversely proportion to the square root of the sample size. So, the larger the sample the narrower the confidence interval around the estimate.

An example of this concept is illustrated in Figure 1-10. If we keep the proportion of pest and quarantine material interceptions constant at 5 percent, watch how changing the sample size changes the width of the confidence interval. If your random sampling unit is only 60 of a population, the confidence interval is between .7 and 20—a very broad interval representing a greater possibility of error. But where the random sampling unit is 600 of the population, the confidence interval is between 3.2 and 7.3—much narrower. So, the larger the sample the narrower the confidence interval will be representing a smaller possibility of error.

Sample Size	Width of the Confidence Level
60	.7 - 20
100	1.1 - 13.5
200	1.8 - 10.4
400	2.6 - 8.5
600	3.2 - 7.3

FIGURE 1-10: Example of How Sample Size Changes the Width of the Confidence Interval

AQIM uses this statistical relationship to determine the different sample sizes for each estimate. To generate the sample size, you need to have some information on the approximate population size and the expected proportion in the population. You also have to choose a confidence level and set the absolute precision at some level. Then, you have to look at the practicality of the situation. Is the sample size realistic in terms of time and money? If not, what sample size would be realistic and would the resulting changes lead to acceptable estimates?

The bottom line is we use random sampling because it allows us to use statistical principles to make assumptions about the resulting sample. It should be an independent, representative part of the population from which we can generate estimates and confidence intervals around the estimate. We can then take the data from AQIM and compare it to other data that is available or combine it with data available from other sources to make more informed decisions.

The random sampling process of AQIM is probably the trickiest part of this effort. Work locations must give considerable thought to a sampling process to ensure the gathering of valid and useful information about pathway risk and program performance. Several sections in this Handbook provide the basic information about sampling methodology to assist work locations produce valid data. The AQIM national team can offer help in setting up a random sampling process that is practical and sustainable at a new work location (see Appendix B for a list of key contacts).

What Is Epi Info?

Epi Info, Version 6, is DOS-based software developed by the Center for Disease Control. The program was originally designed to handle epidemiologic data in questionnaire format, and to organize data and results into text that may form part of written reports. However, its analytical capabilities make Epi Info applicable to AQIM.

The following features make Epi Info ideal for collecting, organizing, and analyzing AQIM data.

- Creating the data forms with EPED, the word processor (already done for AQIM pathways).
- Entering data in the questionnaire using the ENTER program
- Analyzing the data using the ANALYSIS program to produce lists, frequencies, cross tabulations, means, graphs, and accompanying statistics.
- Generate random numbers or random number lists. (See Appendix F for procedures on simple random number generating in Epi Info.)
- Insert error checking, skip patterns, and automatic coding in the questionnaire using the CHECK program
- Select records, create new variables, recode data, manipulate dates, and carry out conditional operations with IF statements during ANALYSIS.

Data Collection and Use

AQIM uses ongoing random sample monitoring to estimate the amount and kind of agricultural materials and pests approaching a work location via various known pest entry **pathways**. A work location may have monitoring estimates on how many pests, contaminants, and smuggled prohibited materials are approaching via air, maritime, or truck cargo. These estimates serve as baseline data to help work locations answer several important questions:

1. How much cargo approaching the work location is carrying actionable pests? What is the level of infestation of the pests in the cargo?
2. Which transportation pathway has the greatest pest risk for the work location?
3. How effective are the current regulations in managing the risk of introduction of pests and diseases?
4. How effective is the work location in managing the pests and quarantine material threats which were identified in the monitoring?
5. How effective is the current cargo hold process for managing the pest threat at the work location?

AQIM data for each entry pathway is collected and entered into Epi Info at work locations. (For additional information specific to Epi Info, refer to the specific pathway sections of this Handbook and see entries about Epi Info.) The software allows work locations to do simple analyses of the data. For example, if the work location wants to know

the proportion of certain commodities with actionable pest infestation, the Epi Info can quickly generate a report giving an estimate, with a confidence interval. This baseline data can then be used at the work location to compare with what and how many pests were detected and treated in normal AQI activities.

The work location AQIM data is forwarded to PPQ's QPAS staff, who are currently managing a central database and analyzing national trends. The newly established Center for Plant Health Science and Technology (CPHST) will have access to this central database for risk assessments and pathway risk modeling.

2

AQIM Handbook

Start-Up

Work Location Set-Up for AQIM

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Introduction

AQIM activities provide useful data on AQI program activities to local, regional, and national employees.

Success of results monitoring activities requires the following:

- Commitment of managers and employees at all levels,
- Strategic and performance planning throughout the organization,
- Involvement of stakeholders and customers including Congressional views and co-providers (i.e., Customs), and
- Adequate assistance from internal support groups--processes, requirements, facilitation, training, electronic support systems.

The activities outlined in this section and the procedures for data collection (under each pathway section of the Handbook) will help set up a work location to begin AQIM. The process selected for AQIM at each work site will become part of the ongoing operational activities for that location.

The first program being implemented at work locations to support risk monitoring is AQIM. AQIM is a process that will help APHIS become a results-oriented organization that uses information about performance and pathway risk of the AQI program to make regulatory decisions.

Activities for Implementing AQIM

Initially, a work location must make a commitment to follow the Agency's strategic course. This commitment is not just a set of prescribed activities, but is a new way of doing business.

Next, work locations should establish an AQIM coordinator to develop processes that are used to collect and analyze information. (See "Roles and Responsibilities" on **page-2-5**, for what a work location must do to implement AQIM.) Results should be shared and published for all employees to benchmark process and performance. AQIM Coordinators and teams should continue the fluid process of improving AQIM systems locally.

Based upon the analysis of the information, work locations set performance targets. These targets would have an overall goal to improve AQI performance. Work locations must:

- Identify goals and align them with regional and national goals,
- Determine actual results,
- Measure the gaps,
- Develop strategies for closing the gaps, and
- Develop analysis process for measuring goals and results.

Collecting information becomes an ongoing activity with the processes being continually evaluated and revised. There must be a continual cycle of:

- Assessing and evaluating process,
- Identifying other relevant sources of information,
- Recommending risk management options, and
- Implementing and coordinating work change activities.

Use the following start-up activities along with the roles and responsibilities and the checklist in this section as guides when implementing AQIM.

1. Develop a common understanding of AQIM. Work with local management teams and employee representatives to conduct meetings or use other ways of communicating to all employees at the work location. Introduce the who, why, when, and where of results monitoring and AQIM. For help, contact the Regional AQIM Manager and members of the National AQIM Team.
2. Inform brokers, other government agencies, and representatives from private industry that they will be included. Use a positive approach about their involvement and explain the advantages of

monitoring. But, be realistic about how the new procedures affect timeliness, and holds on imports for monitoring that may not have been held in the past.

3. Select specific individuals for the AQIM coordinator roles at each work site. Refer to **Roles and Responsibilities** in this section beginning on **page 2-5**. Refer to **Appendix B** for additional roles. The primary roles are:
   - AQIM Coordinator
   - Assistant AQIM Coordinator, if needed
4. Prepare and document a standard operating procedure (SOP) that details selected sampling processes, joint inspection procedures (if applicable), steps to resolve issues and concerns, etc. Document these details in the SOP. Keep a copy of the SOP in this Handbook. Refer to **Appendix D** for samples or examples of standard operating procedures. Use **Appendix D** as a guide for format and suggested content. The standard components of an SOP are:
   - Purpose
   - Background
   - Guidelines (unit of inspection, sample size, operational norms)
   - Sampling procedures
   - Data collection and entry procedures
   - Personnel and resources
   - Quality control
5. Meet with the pest identifier for each work site. If not already "URGENT," establish details of a "PROMPT" pest identification process when pests are encountered from AQIM sampling.
6. Acquire the necessary equipment and supplies to support Epi Info, the software tool used to gather information for AQIM (Refer to **page 1-45** for a description of Epi Info.), such as:
   - Computer--486 processor or better, with at least 10 Megabytes of free hard drive (to run software for Epi Info), and no special RAM memory needs
   - Disks--Six 3.5 inch
   - Additionally, in order to access data in the automated Short-term Reporting Tool (SRT), the computer system must have LAN or RLD access and connection. Refer to **Appendix J** for more details about the SRT.

The following supplies can be obtained from a regional or headquarter contact.

- Epi Info software
- AQIM Handbook, which contains guidelines for using Epi Info (The AQIM Handbook can be accessed electronically on the Internet at the following URL:

  http://www.aphis.usda.gov/ppq/manuals/pdf_files/AQIM_Chapters.htm

  Pages from the AQIM Handbook can be printed from this URL)
- Data entry forms for AQIM with instructions for specific pathways. See examples of data entry forms behind each pathway section of this Handbook. These forms have been printed to enable you to remove, photocopy, and reuse them. They are also available on disk from your local AQIM coordinator.
- Implementation package for the AQIM sampling process

7. Contact the Regional Representatives on the AQIM National Team to set up the Epi Info software for data entry and analysis, to install Epi Info, and to train data entry personnel. See Appendix B for a list of members of the AQIM National Team. Refer to Epi Info Installation in Appendix F and Epi Info User Guide under Data Collection and Maintenance section under each pathway section of this Handbook.

8. Currently, the AQIM Handbook is only updated on the Internet, and paper editions may include old information. Always check the electronic version of the AQIM Handbook on the Interent for the most current information.

2

AQIM Handbook

Start-Up

Roles and Responsibilities

Introduction

Given that AQI monitoring is a key component to conducting statistically sound risk assessments, it is essential to form internal structures to ensure that monitoring activities continue. Managers (i.e. supervisors, Port Directors, SPHDs) should become involved with results monitoring activities and should take an active role in the tasks, issues, and goals of AQIM. The following roles and responsibilities are suggested for collecting, recording, organizing, storing, and analyzing results monitoring data as part of the AQIM program. The numbers and roles may vary among work locations based on the size and activity of a work location.

- AQIM Coordinator
- Assistant AQIM Coordinator

AQIM Coordinator

AQIM Coordinators:

- Work with management and personnel at the work location to produce a standard operating procedure (SOP) for implementing AQIM at each work site.
- Help with training of employees.
- Work with management to communicate to all personnel at the work location the importance of AQIM and the sampling process.
- Implement and coordinate the established sampling process, and monitor the sampling for adherence to proper sampling techniques.
- Help resolve work site concerns and issues that directly or indirectly involve results monitoring activities.
- Coordinate and facilitate with local managers, supervisor(s), employee representatives, any change or revision (major or minor) to the results monitoring activities.
- Serve as the first contact point for answering basic questions about Epi Info software and data entry. This responsibility requires that the AQIM coordinator be familiar with the basics of Epi Info software such as, starting the program and knowing

what data entry screens are needed, how data entry occurs, and basic data analysis procedures. At larger work locations, serves as the central collection point from multiple work sites.

- Arrange and coordinate data entry of AQIM records for all work sites, including installing Epi Info, collecting data, maintaining data, analyzing data, and preparing reports.
- Maintain and archive all record files for Epi Info in a timely manner, including sending copies of data files on a regular basis, monthly, to Riverdale, Maryland.
- Report survey results to work location personnel. This responsibility involves running analysis procedures on Epi Info and the SRT and preparing written material or facilitating meetings to discuss implications for AQI decision-making.
- Serve as the main contact point for PPQ, QPAS in Riverdale, Maryland, and for regional personnel involved with results monitoring activities.

Assistant AQIM Coordinator

Helps an AQIM Coordinator perform their responsibilities as needed. Large ports with multiple work sites may have more than one Assistant AQIM Coordinator.

Checklist

The following checklist provides a general guide for starting AQIM. All listed activities may not apply to all work locations. These activities have contributed to the successful implementation of AQIM at many sites.

TABLE 2-1: Checklist for Roles and Responsibilities

Start-Up Activities	Who Is Involved?	Date/ Time Line Determined By Work Location
Meet and develop a common understanding of AQIM.	◆ Port Director initiates meetings ◆ Work with employee representatives, Port management, and Customs (if applicable) ◆ Have Regional or National AQIM Coordinator facilitate the meeting (see **Appendix B** for a list).	
Inform and include external customers and stakeholders.	◆ Port managers and officers ◆ Impacted brokers, government agencies, private industry	
Select an AQIM coordinator and assistant.	Port management	
Establish a risk management team to review local operations based on monitoring results.	◆ Port managers ◆ AQIM Coordinator ◆ Employee representatives	
Write standard operating procedures. (Refer to **Appendix D**)	◆ AQIM Coordinator and Risk Management Team ◆ Customs Compliance Measurement Representatives, if applicable ◆ Regional Coordinator and the AQIM National Team may assist	
Develop a training plan for the employees at work locations.	◆ Port management, AQIM Coordinator and Risk Management Team ◆ Customs Compliance Measurement Representatives, if applicable.	

TABLE 2-1: Checklist for Roles and Responsibilities (continued)

Start-Up Activities	Who Is Involved?	Date/ Time Line Determined By Work Location
Train employees to carry out AQI monitoring.	◆ Those individuals specified in a training plan. ◆ Regional Coordinator and AQIM National Team may be involved.	
Install Epi Info and train data entry personnel. (Refer to **Appendix E** and Epi Info User Guide under Data Collection and Maintenance subsections under the pathway sections of this Handbook.)	AQIM Coordinator with assistance as needed.	
Set a date to begin monitoring and collecting data.	AQIM Coordinator and Risk Management Team.	
Begin monitoring and collecting data	◆ Port Officers ◆ AQIM Coordinator ◆ Customs Officers, if applicable	
Enter information into Epi Info data base. ◆ Enter data from paper forms into Epi Info computer software. ◆ Transfer Pest Identification numbers to Epi Info data base, as necessary. (Refer to Epi Info User Guides in this handbook under the subsection Data Collection and Maintenance under the pathway sections.)	◆ Individual responsible for data entry ◆ Port Identifier and AQIM Coordinator	
Send Epi Info data files to Riverdale	AQIM Coordinator	Monthly
Analyze data and prepare report.	AQIM Coordinator	Monthly
Communicate monitoring results to work location personnel. Facilitate discussion of what results mean and implications for work location decisions.	AQIM Coordinator and Port managers	Quarterly
Set port performance targets based on monitoring feedback.	◆ Port managers ◆ Port officers ◆ AQIM Coordinator ◆ Employee representatives	Annually

3 Air Passenger Baggage

AQIM Handbook

Introduction

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Background

The arrival of international passengers by air has increased significantly in the past decade. The various agricultural items that air passengers can potentially carry is staggering. These items can pose a significant pest and exotic disease risk to agriculture in the United States.

The pathway “Air Passenger Baggage” encompasses all aspects of baggage movement into the United States by way of various aircraft (passenger, charter, corporate, private, etc.). AQIM randomly samples air passenger baggage to determine this pathway’s potential threat to agriculture.

Each work location will randomly sample air passenger baggage arriving at that location. The data collected from the random sampling will help to answer the following questions:

1. What is the threat of agricultural pests approaching the work location?
2. How effective is the AQI program at managing this threat?

The origin and destination of the passenger is important to determine risk levels. Just as important is whether the baggage carried by the passenger carries an agriculture pest.

While each work location will have differing rates of quantity of passengers, the same criteria for sampling will apply to all work locations. Through consistent random sampling a depiction of the pest threat of air passenger baggage movement will emerge. Combined data from all work locations will help determine the pest risk for baggage carried by the universe of air passengers.

Monitoring of air passenger baggage is an ongoing function and is an integral part of the AQI program. The ongoing sampling of air passenger baggage will allow work locations to adjust their selection criteria for the present and the future. Monitoring helps measure how well PPQ accomplishes its mission of pest and exotic disease exclusion.

Pathway Monitoring Maintenance

Port managers and local AQIM coordinators are responsible for ensuring that monitoring activities are being performed properly. To help with reviewing the status of monitoring activities, refer to **Appendix L—Pathway Monitoring Maintenance**. This appendix contains a checklist of questions port managers and local AQIM coordinators should periodically answer to ensure proper monitoring of each designated pathway at their work stations. See **Figure L-1**. The questions review the following topics:

- Random sampling
- Proportional sampling
- Adequate sampling
- Accurate and complete data
- Working risk committees
- Local support

Air Passenger Baggage Worksheet

There is one worksheet for recording information gathered from your inspection of air passenger baggage for the purpose of AQIM. Two worksheets are printed on the following page so you can remove, photocopy, and reuse them. They are also available on disk; contact your local AQIM coordinator. The form is also available as a fillable form; go to:

http://www.aphis.usda.gov/ppq/manuals/pdf_files/AQIM_in_PDF/Air_Passenger_Baggage.pdf

3 Air Passenger Baggage

AQIM Handbook

Data Collection and Maintenance

Epi Info User Guide For Data Entry– Air Passenger Baggage

General Instructions

At completion of **each data entry session** make a back up of data records file, AQIAIM.REC, to a computer disk. See Appendix G for procedures for backing up monitoring data.

1. Press [**CAPS LOCK**] (to ensure typing capital letters).
2. Be sure to start at C:\ prompt. Epi Info is a DOS program.
3. Change to the Epi Info directory. Type: **CD EPI6**, then Press [**ENTER**].
4. Start Epi Info program. Type: **EPI6,** then Press [**ENTER**].
5. Wait several seconds, the Main Menu will appear with the word Program highlighted.
6. Press [**P**] (to list Program menu).
7. Press [**N**] (to choose ENTER from Program menu).
8. Cursor should be in space below phrase "Data file (.REC)".
9. Type in the space the cursor is in: **AQIAIM.**
10. Press [**ENTER**] **3** times (to load files for data entry).
11. Data entry screen for Air Passenger should appear.

Help Statements

Read the following help statements before entering data:

- Each data entry screen represents only one monitoring inspection. After correct data entry is made and saved, this becomes a record for that one inspection.
- Some data fields will automatically advance the cursor after entering data, some require pressing the enter key to advance the cursor after entering data.
- Data entry messages and valid data values for each data field appear at the bottom of the screen or by pressing [**F9].**
- **DO NOT PRESS [F6] to delete a record**. Despite the screen label, this does not delete the record, it only places an asterisk on the Epi info record number. Epi Info will ignore records with an

asterisk when doing analysis commands. To eliminate the unwanted records from the data file type over the unwanted record with a new record.

- If an error is made and the cursor has left the data field, use the Up (↑) and Down (↓) arrow keys to move from field to field in order to change or correct data fields already entered.

Entering Data

Read the following as you enter data to become familiar with each of the fields.

Workunit & WU Code—With the first record, you will need to complete these data fields. Place cursor in Workunit field. Press [F9] to open window of work unit names. Choose the correct work unit name. For each record thereafter, these fields will repeat the work unit, terminal, and work unit code from the previous record. You should not have to enter data in these fields. These fields are automatically filled in, if not contact your local AQIM coordinator.—Rec Num—Do no enter data in this field. This field is automatically filled in. THIS FIELD WILL SERVE AS THE "OFFICIAL" PERMANENT RECORD NUMBER. DO NOT USE THE NUMBER LOCATED IN THE LOWER RIGHT HAND CORNER OF THE SCREEN TO IDENTIFY A RECORD.

Terminal—Enter the correct terminal name. Keep the terminal name spelling consistent.

Date

Enter the date of inspection in MM/DD/YYYY format.

Day Week—Press F9 to select day of the week.

A) Airline—Enter the airline name using the standardized two or three letter designation for the airline. Do not add spaces in the codes.

B) Flight Num—Enter the flight number. Do not use preceding zeros as fillers for unused number slots.

C) Arrived From Airport/City—Enter the 3-letter code of the foreign airport/city that passenger(s) plane arrived from.

D) Time—Enter time of day the inspection began, use military time.

E) Pax Origin—Press [**F9**] to open window of country names. Type the first and second letters of the country name in order to scroll down the list faster. Use Up (↑) and Down (↓) arrow keys to highlight the

country name. Press [**ENTER**] to select it. The country of origin recorded on the data form is that where the passenger began the trip to the U.S. port of entry.

Origin Code—Do not enter data in this field. This code is entered automatically. Press [**ENTER**] to advance the cursor and automatically fill in the data fields Reg Code and World Region.

—Reg Code

Do not enter data in this field. This code is entered automatically.

World Region—Do not enter data in this field. This code is entered automatically.

F) State Destination

Press [**F9**] to select the state destination. Then, type in the city. (Be consistent with spelling).

G) Num Pax—Enter number of passengers recorded on the data form. Press [**ENTER**] to advance to next data field.

H) Pax Trips—Enter number of foreign air trips passenger(s) has taken during the past year. If this is the first trip, enter '0'.

I) U.S. Citizen—Enter response recorded on the data form.

J) U.S. Resident—Enter response recorded on the data form.

K) How is Agricultural Question on Custom Declaration marked (For plant and animal products)—Choose either [**N**] (no) or [**Y**] (yes), or not checked if custom declaration question was answered.

L) Reason for Travel—Press [**F9**] to open window of travel reasons. Note that refugees would be considered Humanitarian Service. Use Up (↑) and Down (↓) arrow keys to highlight correct choice. Press [**ENTER**] to select the appropriate travel reason.M) Have been on a Farm or Ranch

Choose either [**N**] (no) or [**Y**] (yes) if passenger has been on a farm or ranch.

N) Going To a Farm or Ranch—Press either [**N**] (no) or [**Y**] (yes) response from the data form on whether passenger is going to a farm environment within the next 30 days.

O) Items(s) of Agr Interest?—Press either [**N**] (no) or [**Y**] (yes):

- If Y: cursor will proceed to the next data field.
- If N: then cursor will jump to the bottom of the screen asking the question: "Write data to disk (Y/N/<Esc>)?" If data entry is correct and complete, press [**Y**] to this question and data screen will renew for next record entry.

Item—Press [**F9**] to open window of valid item names. Type the first and second letter of the item name in order to scroll down the list faster. Use Up (↑) and Down (↓) arrow keys to highlight correct item. Press [**ENTER**] to select the item.

ICode—Do not enter data in this field. This code is entered automatically. Press [**ENTER**] to advance the cursor and automatically fill in the data field QMIType.

QMIType—Do not enter data in this field. This code is entered automatically.

ItmAmnt—Indicate the weight in kilograms. Obtain or **accurately estimate** weight of items (apple, orange, etc.) whenever possible. **(1 LB is approximately .5 KGS, 3.5 ounces=.1 KGS.) For plant items (flowers, etc.) record number of stems or pieces. For items not practical for obtaining weight (shoes, trophies, etc.)**, record the quantities of these that correspond to the "U" (unit field).

U(Unit of Measure)—Press: F9 to open window of unit values. Use Up (↑) and Down (↓) arrow keys to highlight the unit value. Press [**ENTER**] to select it.

Declared—Enter response recorded on the data form.

Action—Enter action by either typing the response or pressing [**F9**] to open window of valid actions. Use the Up (↑) and Down (↓) arrow keys to highlight correct action. Press [**ENTER**] to select the action.

Type Found In—Enter luggage type by either typing the response or pressing F9 to open window of valid luggage types. Use Up (↑) and Down (↓) arrow keys to highlight correct type. Press [**ENTER**] to select the luggage type.

HC/CKD—Enter response from the data form. The response is either HC for hand carried or CKD for checked.Pest Present

Press either [**N**] (no) or [**Y**] (yes) response recorded on the data form for reportable or actionable pests. If status not known yet, make sure to update the record.

Contaminant—Press either [**N**] (no) or [**Y**] (yes) to indicate if a contaminant was present with the item that is listed.

Pest Intercep. Num.—System will automatically enter NONE (for no pest found). Enter the pest interception number if assigned at your work location. This number may be assigned later or by another office. **IF PEST INTERCEPTION NUMBER IS GOING TO BE ASSIGNED BY ANOTHER OFFICE, THEN ENTER THE LETTERS "TBA" (To Be Assigned).** When TBA is used, be sure to note the permanent record number in the upper right corner of screen so updating can be done.

Pest ID/Contaminant—System will automatically enter NONE (for no pest found). Enter either the name of the contaminant or the taxonomic name of the pest found. Be sure to update this record with the pest name, if necessary.

Civil Penalty—Choose either [**N**] (no) or [**Y**] (yes) for civil penalty. This field may be left blank.

Continue—

- Type [**Y**] if additional items ARE to be entered. Press [**ENTER**] to leave field and continue on. (Cursor jumps down to next Item field. You can enter up to four items in a record, i.e., ITEM01, ITEM02, ITEM03.)
- Type [**N**] if no other items are to be entered in this record. Cursor will jump to the prompt, "Write data to disk (Y/N/<Esc>)?"

Write data to disk (Y/N/<Esc>)?—

- Press [**Y**] if data entry is complete for this record. Record will be saved to the record's file.
- Press [**N**] if you wish to make changes or corrections to the record field. After making changes or corrections remember to return the cursor to the last Continue field that was N. Press [ENTER] to return to the prompt "Write data to disk (Y/N/<Esc>)?" Press: **Y** to complete record.

MO—Do not enter data in this field. This field is filled in automatically with the numeric value of the month. This field is used for analysis purposes.

ANACTREQ—Do not enter data in this field. This field is filled in automatically. This field is used for analysis purposes.

TOTAL SEIZED—Do not enter data in this field. This field is filled in automatically. This field is used for analysis purposes.'

When finished with data entry—

12. Press [**F10**] to return to the main start up screen.
13. Press [**F10**] again to leave Epi Info and return to regular computer screen.

Important

After **each data entry session**, make a back up of the data records file, AQIAIM.REC, to a computer disk. See **Appendix G** for backup instructions.

Data Accuracy Checks and Data Corrections

This section outlines the basic procedures to check on data accuracy, correct data, and begin basic data analysis. It is important to perform these procedures on a REGULAR basis to ensure data quality.

NOTICE

Do not start this correction/analysis mode until you have read the entire section, especially the last part that requires creating a new file BEFORE leaving the analysis mode

Before Starting

Before starting the Epi Info software, copy your working Epi Info records file to the back up disk before correcting data. See Appendix G for procedures for backing up monitoring data.

To Start Corrections

1. Enter Epi Info, and
   At the first Epi Info screen, select the **Program** menu.
2. Under the Program menu, select **Analysis.**
   You should have an EPI6> prompt at the bottom of the analysis screen.

Read

3. To choose the file you would like to work with, Type **READ**, and Press [**ENTER**] once.
4. A list of files should appear.
   Select the appropriate *.REC file from the list by highlighting it, and Press [**ENTER**].
5. The cursor will appear at the EPI6> prompt again.

Commands

To check on data accuracy, use the following commands:

- BROWSE
- FREQ
- IF THEN

BROWSE—To BROWSE the file of records:

6. Press [**F4**]. Browsing allows you to look at the records in the file you have selected.

NOTICE

The order of records in browse is the order they were entered.

7. While there, check for any duplicate records (records with the same date and same time). Also check for any deleted records. Deleted records will show an asterisk and usually a different shade of color. See "Delete Records" on **page-3-15** to work with records that have an asterisk.

FREQ (Frequency)—Start by performing frequencies on each data field.

1. Press [**F2**] (to get your list of commands).
2. Choose **FREQ,** then
3. Press [**F3**] for a list of variables you can perform frequencies on. **Choose only one variable at a time**. Some of the variables you should start with are:
   - WORKUNIT
   - WUCODE
   - DATE
   - AIRLINE
   - PAXORIGIN
   - PEST NUM
   - PESTNUM01
   - PESTNUM02
   - PESTNUM03

When you perform your first FREQ command, check the total number of records from the FREQ command statement against the total number of records at the very top of the page (listed after Dataset: and the file name). If they are different totals it is because the deleted records are not included in the analysis.

When you perform a frequency on a data field (i.e.,: FREQ AIRLINE) and find misspellings in this field, an **IF THEN** statement can be used to correct the mistakes.

IF THEN Statements—If then statements are used to correct common errors found.

NOTICE

If you use IF THEN statements to make corrections, be sure to do the **save changes** steps after all IF THEN changes are made. Review the steps for saving changes beginning on **page-3-16**. None of the IF THEN changes you make will be saved unless you save the changes

To correct the spelling of an AIRLINE (should be AA, not SS). At the analysis prompt EPI6>, type: **IF FLIGHT= "SS" THEN FLIGHT= "AA",** and Press [**ENTER**]. **NOTE:** A generic statement example would be: IF VARIABLE= "what you want to change," THEN VARIABLE= "what to change it to."

TABLE 3-11: : Example of How to Correct Spelling

Check your changes by performing the frequency command again. Go to page-3-13 for the steps to run the frequency command. If the corrections were made, the mistakes will not be listed this time.

Hint

Once a command is used, it is quickly and easily accessed again by using the Up (¦) arrow key to correct several related misspellings without retyping the entire IF THEN statement.

Delete Records

Important

There is a difference between the permanent record number and the Epi Info record number. The permanent record number is found in the upper right corner of the data entry screen at the data field named Rec Num. (In the analysis mode it is also named RECNUM.) The Epi Info record number is found at the lower right of the data entry screen at Rec=.

During data entry, pressing [**F6]** will cause Epi Info to place an asterisk on that Epi Info record number. People mistakenly believe that the record is deleted. **The record is not deleted from the data file**. (Epi Info analysis commands (such as FREQ) will ignore all records that have an asterisk.)

- Deleted records will have an **asterisk** in front of the record number (when viewing records either via the data entry screen or analysis - BROWSE mode). Write down the record number of the records with asterisks.
- Check the paper forms for the records to verify that they are deleted, or if they are records that should not be deleted.

Delete/Undelete Records (Update)

1. If the record needs an asterisk added or removed to be deleted or undeleted, type **UPDATE** at the analysis prompt EPI6>, and

   Press [**ENTER**]. This puts you in the Update mode with a screen similar to Browse.
2. Use the Page Up and Down keys to get to the record number you need.
3. Use the Up (↑) or Down (↓) arrow keys to highlight the record you want to change.
4. Press [**F6**] to delete or undelete records.
5. When moving from updated record to another, the computer will ask you if you would like to save it to a disk. Indicate YES if the change you made was correct. It will save the changes to the file.
6. When you are finished, Press [**F10**] to go back to the analysis command screen.

Save Changes

If you used **only** the UPDATE command (described above) to make corrections to records with asterisks, then you **DO NOT** need to do the following steps.

If you used IF THEN statements at any time to make corrections, NONE OF THE CHANGES YOU HAVE MADE WILL BE SAVED UNLESS **YOU DO** THE FOLLOWING STEPS:

7. **If the changes were made to your current AQIAIM.REC** file:

   At the analysis prompt, type **ROUTE AIMNEW.REC** to route the corrected records to a file to make the changes permanent.

   "New" is added in the filename to show which file you are referring to and the latest version of that file.

8. At the analysis prompt, type **WRITE RECFILE /NOECHO**, and

   Press [**ENTER**].

   This actually writes the new data file. Be patient, this process may take some time.

9. Check to make sure all of the changes were made to the new file by reading the new file, browsing it, and doing several FREQ commands on the corrected data fields.

ONCE ALL CHANGES ARE MADE—Leave the Epi Info program and go to the C:\EPI6> prompt.

1. **If the changes were made to your current AQIAIM.REC file**, then YOU MUST:

   At the C:\EPI6> prompt, delete the original record file. Type **DEL AQIAIM.REC** (This will delete the file and it will no longer be accessible.)

2. Rename the new file with the corrected records to the original file name. At the C:\EPI6> prompt, type **RENAME AIMNEW.REC AQIAIM.REC**

   The Epi Info file is now available for more data entry and other analysis procedures.

Merging Similar Files

Data entry of monitoring records may take place at several sites throughout a work location. This section outlines the necessary steps to merge these various work site files into one work location file for analysis and distribution to Riverdale, Maryland.

** THIS SECTION ASSUMES THAT YOU WANT TO MERGE A DATA FILE ON A DISK WITH A MAIN DATA FILE ON YOUR COMPUTER HARD DRIVE.**

Before merging files, be sure to do a backup of your MAIN Epi Info data records file (AQIAIM.REC) onto a disk if you have not done it recently. (Backups should be completed at the end of every data input session! Refer to Appendix G for procedures for backing up data in Epi Info.)

Prepare For The Merge Process

1. Press [**CAPS LOCK**].
2. Start at a C:\ > prompt.

3. Change to the Epi Info directory by typing **CD\EPI6**, and Press [**ENTER]**

   Computer prompt should appear as: C:\EPI6> (This assumes Epi Info is loaded on the C: drive.)

4. Insert the disk that has an Epi Info file on it to be merged into an original file on the computer drive. This step assumes you already have an original AQIAIM.REC file on the computer to merge the second file with.

   NOTICE

   If your 3.5 disk drive is B, then substitute B where A appears in the following directions

   Type **DIR A:**, and Press [**ENTER**]

   This will show a list of the files on the disk. There should be a file named [**AQIAIM.REC**]

5. The file on the disk must be renamed because the disk file is the same name as the one on the computer.

   Type **RENAME A:AQI*.* ADD*.*** and Press [**ENTER**]

   This renames the disk files to **ADDAIM.REC**.

6. Type **DIR A:** and Press [**ENTER**]

   This will show a list of the files on the disk again, be sure that the files now appears as **ADDAIM.REC**.

7. Type **COPY A:*.***, and Press [**ENTER**]

   This copies the renamed file into the Epi Info directory.

   If an older **ADDAIM.REC** file exists from a previous merge, the computer may prompt you to overwrite it. Press [**Y**](yes) to overwrite.

Begin Merge Process

8. Enter into Epi Info's main screen.
9. Press [**P**] (to list Program menu).
10. Arrow down (↓) and highlight MERGE files, and Press [**ENTER**]

    Main merge screen appears with cursor in File 1 box.

11. Type **ADDAIM.REC**

    (As you type, the default text in File 1 box disappears.)

12. Press [**ENTER]**

The cursor moves to File 2 box.

13. Type **AQIAIM.REC**

NOTICE

Use **AQIAIM.REC** for merging **the first** "other" location file with the main file. Use the **SUMAIM.REC** file at this step if merging **any other** additional location files to form one main file.

14. Press [**ENTER**]

The cursor moves to Output file box.

15. Type **SUMAIM.REC**

16. Press [**ENTER**]

The cursor moves to Merge Options box and highlights ( ).

17. Press [**ENTER]**

OK box is highlighted.

18. Press [**ENTER]**

Screen changes:

If Older **SUMAIM.REC** file exists, an information box will appear stating this. The word "Yes "is already highlighted.

Press [**ENTER**] to overwrite older file and continue merging.

IF Error box appears stating files are not similar or merge cannot take place,

Press [**ESC**] until you return to main Epi Info screen, and **call for assistance.**

IF: Merge is successful, a completion bar scale may appear. This will change to a screen with an information box indicating the number of records merged and the files that were merged.

19. Press [**ENTER]** (to return to main merge screen).

If done, Press [**ESC**] to return to the main screen, OR

If you need to merge another location's records file, then

Press [**F10**] to leave Epi Info software.

Return to C:\EPI6> prompt and go back to page-3-17, Step 4, under "Prepare For The Merge Process." **Be sure to use SUMAIM.REC file in Step 14 if merging more than one location file at one time.**

Summary of Merge Process

Copy the results to a blank disk to send out:

- SUMAIM.REC contains both original records and records from another location that was on the disk.
- **Be sure to make a separate disk backup copy of this file to keep at your location.**

Copy Files To a Disk

Leave Epi Info, after inserting a properly labeled blank disk into drive a:.

Go to the C:\EPI6> prompt,

Type **COPY SUM*.REC A:**. This copies the file to the disk.

Air Passenger Baggage

Data Analysis

Survey Results and How To Use Them

AQIM activities have been put into place to develop baseline data to help answer two basic questions:

1. What is the threat of agricultural pests approaching work locations?
2. How effective is the AQI program at managing this threat?

Preliminary results for air passenger surveys provide a general answer for Question 1. That is, there are varying rates at which prohibited agricultural materials approach work locations. These prohibited agricultural materials are what could have agricultural pests. Surveys show that at some work locations about 2 percent of the passengers carried prohibited items in the past year. At other work locations, surveys show that passengers are carrying prohibited items at a higher rate, sometimes near 10 percent.

These percentages are a rough approximation of agricultural pest threat. Further analysis of the monitoring data is needed to determine the risk associated with the prohibited items approaching the work location. The origin and destination of the prohibited items are important to determine risk levels. Also, whether or not the prohibited item carries an actual agricultural pest is analyzing risk.

Analyses of the monitoring data need to occur at several levels of PPQ. At the work locations, PPQ personnel need to study what the data means and answer the first question for their specific location. Analysis tools are available to help with these analyses, which are explained in the next subsection. At the same time, PPQ holds risk analysis workshops around the country to introduce risk analysis concepts. At some work locations, teams of PPQ officers and managers form Risk Management Teams to look at monitoring data and other data, which are normally collected at the location.

At other locations, analyses of monitoring data occur to establish rates at which quarantine items and agricultural pests are approaching the borders of States, areas of the country, and the United States.

Once baseline rates are well established, PPQ can use the monitoring data as a baseline to answer the second basic question: How effective is the AQI program at managing the risk of introduction of agricultural

pests and diseases? Again, each work location must conduct this type of analysis. AQIM provides a framework which work locations can use to carry out the analysis.

Analysis Tools

There are two tools available for analyzing AQI monitoring data. One is the ANALYSIS program in Epi Info. The other tool is the Short-term Reporting Tool (SRT) accessed using Netscape.

Using the SRT you can look at data entered for your work location, as well as data for other work locations within a State, a Region, or across the nation. Also, using the SRT you can look at WADS data to use with AQI monitoring data. Refer to **Appendix J - Internet** for guidelines on how to use the SRT.

Using the ANALYSIS program in Epi Info you can look at data entered specifically for your work location. While in Epi Info ANALYSIS, you can select a data analysis program file (*.PGM) that automatically runs a series of Epi Info commands. The program will produce various listings, tables, analysis commands, and explanatory text from data files for a designated pathway. Follow the guidelines on how to load and run data analysis program files beginning on **page-3-25**.

The data analysis *.PGM file saves the analysis output to a file for viewing and/or printing. The file contains basic information that answer some of the questions to guide data analysis that follow. For questions not answered by running an automatic program, you will need to key in and run various analysis commands. Follow the Epi Info User Guide for Data Analysis–Air Passenger beginning on **page-3-29** to help you with the analysis commands.

Questions to Guide Data Analysis

1. How many declarations were selected for sampling during the survey period?

How many declarations sampled required an action (seizure or other action required as a condition of entry) during the survey period?

What is the action approach rate of declarations requiring action (number of declarations, with one or more items categorized as seized or clean/treatment, divided by the total number of declarations sampled)?

How many passengers were represented by all declarations sampled?

How many seizures (QMIs) came from the samples?

What is the QMI approach rate of passengers with prohibited agricultural material (total number of QMIs divided by total passengers sampled during the survey period)?

2. How many pest interceptions (actionable pests) were made from survey samples?

Pest Approach Rate: What is the rate of pest interceptions in relation to number of passengers (number of actionable pests divided by number of passengers in the sample)?

3. How many QMIs were plant material? Meat or animal products?

What is the rate of QMIs for plant material and meat/animal products?

DISCUSSION:

Is there a greater risk from plant material or animal products at the work location?

4. Generate a list of all the origins of passengers transiting the work location. Produced a list of origins of passengers **with QMIs** transiting the work location?

DISCUSSION:

Which countries of origin have a higher rate of QMIs than passengers? Have these countries always been recognized as high risk countries at the work location? (Example: 10 percent of all passengers surveyed were from Italy. Passengers from Italy were responsible for 20 percent of the QMIs seized. Passengers from Italy carried double the amount of QMIs expected as based on the volume of passengers from that country.)

5. Generate a list of the destinations of passengers transiting the work location. What are the top five destinations of passengers? What are the top five destinations of passengers **with QMIs**?

DISCUSSION:

Which States are considered high risk States?

6. What is the action approach rate for each month of the survey period?

DISCUSSION:

Do these monthly rates correlate with traditional peak and off-peak travel times?

Are there easily identified trends when the rate of QMIs transiting the work location are higher?

Are there seasonal trends or do higher rates correlate with national or religious holidays, beginning or end of the school year, vacation periods, etc.?

7. Generate a listing and frequency of items seized. What are the top five most frequently seized items? Which QMI items present the greater risk?

8. Generate a list of flights.

Which flights were most likely carrying passengers with QMIs (top five flights)? Where were seized items found--hand carried bags or checked luggage? Did the passenger declare all prohibited items? Was the passenger traveling alone, as a couple, or family? What was the reason for travel--business, vacation, visit family, tour group, school? What is the passenger's citizenship and residency?

DISCUSSION:

What selectivity factors are currently used to identify passengers likely to carry prohibited agricultural items? How do these factors compare with survey results?

What additional selectivity factors would be useful to identify passengers carrying prohibited items?

What percentage of resources are dedicated to staffing AQI activities for air passenger at the work location?

What is the relative risk of air passenger compared with other pathways in the work location?

Should resources be reallocated among all the pathways in the work location to better address the relative risk of the pathways?

9. Apply the survey results to the total passenger population to estimate the number of QMIs and interceptions likely to transit the work location during the survey period.

How many (total) passengers/crew arrived at the airport during the survey period? Using WADS data and using the QMI approach rate and rate of pest interceptions on QMIs, calculate estimates of the number of QMIs and actionable pests transiting the work location.

DISCUSSION:

How does the estimated number of QMIs compare with the reported number of QMIs on WADS?

What percentage of all QMIs transiting the work location were seized as a result of the AQI program?

How does the estimated number of actionable pest interceptions compare with the reported number of actionable pests on WADS?

What percentage of all actionable pests transiting the work location were intercepted as a result of the AQI program?

How to Load and Run Data Analysis Program Files

Data analysis program files are meant to provide only listings, tables, and explanatory text about the monitoring data gathered at work locations. The program files are not intended to be used as final analysis tools. The outputs from these program files should raise further questions and discussion by local personnel and risk management committees.

NOTICE

Each year the AQIM National Team reviews, discusses, and decides about suggested improvements (additions, removals, changes) to the baseline data fields based on analysis and operational needs. A summary of the changes made during previous fiscal years to data fields for the air passenger pathway begin on **page-3-33** under Air Passenger Baggage Epi Data Translation. Use the summary to identify data field changes that may impact the results of an analysis report run for a particular year.

Data analysis program files automatically run a series of Epi Info analysis commands. Use the following guidelines to load and run data analysis program files.

1. Determine which data analysis program file (*.PGM) you will load and run in Epi Info.

   In Epi Info, ANALYSIS, there is a data analysis program file for each fiscal year of data gathered. Look at the table below to identify the file to load and run depending on which fiscal year's data you are analyzing:

If you want to analyze data for:	Then load and run the following Epi Info ANALYSIS data analysis program file (*.PGM):
FY 1997	AIR97.PGM
FY 1998	AIR98.PGM
FY 1999	AIR99.PGM
FY 2000	AIR2000.PGM
FY 2001	AIR2001.PGM
FY 2002	AIR2002.PGM
FY 2003	AIR2003.PGM

2. Get ready to run a data analysis program file.

A. Press [**CAPS LOCK**] (to ensure typing capital letters).

B. Be sure to start at C:\ prompt. Epi Info is a DOS program.

C. Change to the Epi Info directory. Type **CD EPI6**, then Press [**ENTER**]

D. Start Epi Info program. Type **EPI6**, then Press [**ENTER**]

E. Wait several seconds, the Main Menu will appear with the word Program highlighted.

F. Press [**P**] (to list Program menu).

G. Press [**A**] (to choose ANALYSIS from Program menu).

H. Look at the table below to determine your next action:

If you are running:	Then:
A data program analysis file using Epi Info, ANALYSIS	CONTINUE to Step 3
Further analysis commands using Epi Info	GO to the **Epi Info User Guide for Data Analysis–Air Passenger Baggage** beginning on **page-3-29**

3. Run the selected data analysis program file (*.PGM) from Step 1.

You should be at the Epi Info ANALYSIS screen. If not, review Step 2.

NOTICE

To leave the analysis mode at any time, Press [F10]

A. .At the EPI6 command prompt, Type **RUN FILENAME**, where FILENAME is the *.PGM file you selected in Step 1. For example, if you are analyzing data gathered in Fiscal Year 2000, then you would enter at the command prompt, **RUN AIR2000.PGM.** Then,

Press [**ENTER]**

If you:	Then:
See the following prompt at the bottom of the screen: "Press enter key to pick the records file you want to analyze"	1. Press [ENTER]. A window appears with a listing of *.REC files. 2. GO to **Step B.**
Do not see the prompt stated in the cell above	DO the following 3 steps

i. Type [**RUN**], then Press [**ENTER**]. A window appears with a list of *.PGM files.

ii. Using the Up (↑) and Down (↓) arrow keys, search and highlight the program file name you want to run (for example, AIR2000.PGM), then

Press [**ENTER**]

NOTICE

If you cannot locate the file name you are looking for, then contact your local AQIM coordinator. If they are not available, then contact the National AQIM Coordinator.

iii. When the following prompt appears at the bottom of the screen: "Press enter key to pick the records file you want to analyze,"

Press [**ENTER].** A window appears with a listing of *.REC files.

Go to **Step B.**.

B. Using the Up (↑) and Down (↓) arrow keys, highlight the records file for the desired fiscal year.

Important

The program file (*.PGM) must match the records file (*.REC). When you are sure,

Press [**ENTER**]

C. You are prompted for a file name where the program will save the output. (An example is given on the screen using a three-letter port code and the date.)

Type **FILENAME**, where FILENAME is the file name you have created to save the program output. Then,

Press [**ENTER**]

D. You are prompted to enter the date that is **one day prior to** the date you want the program analysis to start. (The analysis program analyzes records between two given dates, but does not include the given dates. Therefore, you must enter the dates of the days just before and after the dates you want included in the analysis.).

EXAMPLE: To analyze Fiscal Year 2000 data, you would enter 09/30/1999 (one day before the beginning of Fiscal Year 2000).

Type the start date following the format (MM/DD/YYYY), where it is one day before the date you want the program analysis to start, then Press [**ENTER**].

E. You are prompted to enter the date that is **one day after** the date you want the program analysis to end.

Type the end date following the format (MM/DD/YYYY), where it is **one day after** the date you want the program analysis to end, then Press [**ENTER**].

4. The program will begin analyzing. You will see the program's output scroll quickly on the screen. It is being saved to the file name you specified in Step 3.C.

5. The program is finished when the cursor returns to the EPI6> prompt. At this time, you may want to do any of the following:

TABLE 3-12:

If you want to:	Then:
View or print the program output file	1. Press [**F10**] to exit Epi Info 2. Use a word processing program, such as WordPro to view and/or print the file. NOTE: The file usually is in the C:\EPI6 diretory saved in an ASCII (DOS) text file format.
Run a data analysis program file for another fiscal year's data.	Return to Step 1 at the beginning of this subsection to decide which program file to run
Continue with further analysis commands using the Epi Info User Guide for Data Analysis	Go to the **Epi InfoAgriculture Quarantine Inspection Systems (AQAS) User Guide For Data Entry– Air Passenger Baggage** beginning on **page-3-3**
Exit Epi Info, ANALYSIS	Press [**F10**]
Exit Epi Info	Press [**F10**] twice

Epi Info User Guide for Data Analysis–Air Passenger Baggage

When first running analysis commands in Epi Info, thoroughly read the user guide to become familiar with basic analysis procedures to use with the monitoring data at your work site.

Get Ready

1. You should be at the Epi Info, ANALYSIS screen. If not, refer to Step 2, **Get ready to run a data analysis program file.** under How to Load and Run Data Analysis Program Files on **page-3-26**.
2. Press [**F2**] (to list Commands menu).
3. Use the arrow key to move the cursor to the READ command.
4. Press [**ENTER**] **twice** (to get a list of .REC files that can be analyzed).
5. Use arrow keys to move cursor to highlight **AQIAIM.REC**.
6. Press [**ENTER**] (to bring the *.REC file you have chosen into the analysis screen).
7. Press [**F4**] (to browse the data records in the file).
8. Use the arrow keys to look over the data to make sure it has been entered properly during the past month. (In subsequent months, you will want to browse through the entire file to see that all months of data have been properly entered, repeated fields such as work unit are consistently the same).

   To view only one individual record, press **[F4]** again to see the entire record as it was originally entered. If it is necessary to make changes to the record, **note the Epi Info record number in the lower right corner of the screen.**

   If you want to edit, correct or change this record, go to "**Edit Records**," beginning on **page-3-33**.

Analyze Records

9. Press: [**F10**] (to return to the main analysis screen).
10. Press: [**F2**] (to see a list of analysis commands).
11. Use the arrow keys to move the cursor to FREQ (frequency), and Press [**ENTER**].
12. Press: [**F3**] (to see a list of data variables). To better understand the data variables, refer to **page-3-33** for a list of data variable translations for the current FY and a summary of changes to data fields from previous FYs.

13. Use arrow keys to highlight the data variable you wish to know the frequency of.

Press [**ENTER**] **twice** and you will get a frequency table

EXAMPLE: .If you want to know how many times a sample was taken on a certain date, you can choose the DATE variable and Press [**ENTER**] **twice**. You will get a table showing the number of records entered into the database on each date of the survey.

14. Explore the database by doing FREQ commands for as many data variables as is logical. By doing this you will begin to understand the survey data and see some patterns in the data.

For each variable, use the F2 and F3 keys to choose the FREQ command and variable of interest, or type the word FREQ and the data variable names directly at the Analysis prompt.

15. To explore graphic commands: (The PIE command is one of several graphics commands which allow you to analyze the variables with graphs. This may make it easier to see patterns in the data and to understand the survey results.)

Press [**F2**] again and choose the PIE command with the cursor. Press [**ENTER**]

Press [**F3**] and select a data variable of interest from your data exploration in the FREQ analysis (Steps 10-14).

Press [**ENTER**] **twice** and you will see a pie chart on your screen which might help you understand a pattern in the data.

For example, if you have chosen the DATE variable for a pie graph, then you may see that a larger percentage of samples were taken on different days, which may cause you to question the sampling procedures.

See Appendix H for procedures on printing graphics while in Epi Info.

To leave the graph screen and return to the main screen, Press [**ESC**]

16. Further FREQ exploring.

To see the total number of samples that were of agriculture interest (from all random inspections), Press [**F2]** to list commands.

Highlight FREQ and Press [**ENTER**]

Press [**F3]** to list data variables. Highlight ITEMAGRINT. Press [**ENTER]**

The analysis command line should appear: EPI6>FREQ ITEMAGRINT.

Press [**ENTER**] The output screen should display a table listing the number of samples that were of agriculture interest. The table also lists a percentage of records that were of agriculture interest.

17. More FREQ exploring: To see the different ACTION types (Seized, Cln/trmt, IR).

Press [**F2**] to list commands. Highlight FREQ. Press [**ENTER**]. You will next "tag" more than one data variable to move these variables to the analysis command line.

Press [**F3**] to list data variables. Highlight ACTION and "tag" this variable by pressing [**SHIFT**] and [**+**]. A small arrow will appear next to ACTION.

Next, highlight the variable ACTION01 and "tag" it. Do the same for ACTION02 and ACTION03.

The analysis command line should appear: EPI6>FREQ ACTION ACTION01 ACTION02 ACTION03.

Press [**ENTER**]. The output screen should display counts of SEIZED, CLN/TRMT, I&R for each of the category data lines for all records. Adding up the SEIZED, CLN/TRMT, I&R counts will provide a category breakdown of the agricultural items seized, or clean and treated, or inspected and released during random sample inspections.

18. Further exploration. Two other commands (F2 TABLE, F2 SELECT) are very useful to explore the survey data and to begin answering questions you may have after using the FREQ and PIE commands.

For example, you may want to know what airlines are carrying the most prohibited items.

Press [**F2**]. Move the cursor to SELECT. Press [**ENTER**].

Press [**F3**]. Move cursor to ACTION.

Press [**ENTER**] once. Type **= "SEIZED."**

The command line will then look like this: EPI6>SELECT ACTION= “SEIZED”

Press [**ENTER**].

When you run new analysis commands, the analysis will only look at a subset of records in which the category SEIZED is listed (prohibited) for an item found in the sample inspection. If you want to get back to the entire set of records (records with and without prohibited items), Type [**F3**]. Move the cursor to SELECT. Press [**ENTER**].

Important

This analysis will only list the records that have SEIZED on the first category line of the data entry form. Other SEIZED items can be listed on the second, third, or fourth line of the data record. To work with these subsets, you first clear the select process (type SELECT, then Press [ENTER]), then repeat the above SELECT phrase using ACTION01, then repeat using ACTION02, then ACTION03.

19. To continue working with the subset of records established in Step 18:

Press [**F2**]. Move the cursor to FREQ. Press [**ENTER**].

Press [**F3**]. Choose AIRLINE. Press [**ENTER**] **twice**. You will get a table that lists the frequency of prohibited items for each airline.

Do a PIE FLIGHTNUM analysis command to get a graphic picture of which flights are carrying the most prohibited items.

Use this type of analysis to start seeing if your high risk flights match the survey data. This can either confirm or call into question your ideas about high risk and low risk flights.

20. Type in the command line: TABLES FLIGHTNUM PASSDESTIN. (Or use the F2 and F3 keys to select the TABLES command and the two variables.)

Press [**ENTER**]. You will get a table which shows the frequency that passengers carrying prohibited items on a flight are destined for various States in the United States.

This analysis can be used to further understand the risk of certain flights. For example, if one flight has a lot of passengers carrying prohibited items and destined for Florida, this would be important information.

21. Type **SELECT** (or choose SELECT from the F2 commands menu) to work with all the records.

Edit Records

E1. Press [**F10**] twice (to get back to the main EPI6 program menu).

E2. Press [**P**] (to list Program menu).

E3. Press [**N**] (to get to the Edit menu).

E4. Press [**F9**] (to list .REC files).

E5. Use arrow keys to highlight appropriate .REC file, and

Press [**ENTER**] **four times** to get to the data entry screen for this file.

E6. Press [**CONTROL**] **and** [**F**] keys at the same time (to find the record which needs editing).

E7. Press [**F2**] and then, **type the Epi Info number** of the record you need to edit.

E8. Press [**ENTER**] (to get to the record you need to edit).

E9. Make corrections to the record, using the Up (↑) and Down (↓) arrow keys to move from field to field.

When finished editing, Press [**F10**] and answer **YES** to the question (at the bottom of the screen) that asks to write the edited record to the data file.

Return to page-3-29 under "Get Ready."

Air Passenger Baggage Epi Data Translation

TABLE 3-13: Core Data Fields for the Current Fiscal Year

VARIABLE NAME	SCREEN NAME
WORKUNIT	Work Unit:
WUCODE	WU Code:
RECNUM	Rec Num: (Permanent record number)
TERMINAL	Terminal:
DAYWEEK	Day of Week:
DATE	Date:
AIRLINE	A) Airline: (two letter airline abbreviation)
FLIGHTNUM	B) Flight Num (number of flight):
ARRIVCITY	C) Arriving From City
TIME	D) Time (24 Hour):
PAXORIGIN	E) Pax Origin
ORIGINCODE	Origin Code:

TABLE 3-13: Core Data Fields for the Current Fiscal Year

VARIABLE NAME	SCREEN NAME
REGCODE	Reg Code
CITYDESTIN	F) City Destination:
STATEDESTI	State Destination:
NUMPAX	G) Num Pax:
PAXTRIPS	H) Pax Trips:
USCITIZEN	I) U.S. Citizen:
USRESIDENT	J) U.S. Resident:
REASONTRAV	L) Reason Trav:
QUESCUSDEC	K) Ag Ques-Customs Dec:
First Item Information:	
ITEM	Item:
ICODE	ICode: (Item Code Number)
QMITYPE	QMIType: (QMI type of item: A(Animal), P(Plant), N(None)
ITMAMNT	ItmAmnt: (Item Amount)
U	U: (Unit of measure used for amount)
DECLARED	Declared: (Did passenger declare item, written or orally)
ACTION	Action: (Either seized, cln/trmt, or I&R)
TYPEFOUN	Type Found In: (type of luggage item was found in)
HCCKD	HC/CKD: (item in hand carry or check luggage)
PESTPRES	Pest Present:
CONTAMINAN	Contaminant: (Is contaminant present)
PESTNUM	Pest Intercep.Num: (Pest interception number)
PESTID	Pest ID/Contaminant:
CONTINUE	Continue:
Second Item Information:	
ITEM01	Item:
ICODE01	Icode: (Item Code Number)
QMITYPE01	QMIType: (QMI type of item: A(Animal), P(Plant), N(None)
ITMAMNT01	ItmAmnt: (Item Amount)
U01	U: (Unit of measure used for amount)
DECLARED01	Declared: (Did passenger declare item, written or orally)
ACTION01	Action: (Either seized, cln/trmt, or I&R)
TYPEFOUN01	Type Found In: (type of luggage item was found in)
HCCKD01	HC/CKD: (item in hand carry or check luggage)
PESTPRES01	Pest Present:
CONTAMIN01	Contaminant: (Is contaminant present)
PESTNUM01	Pest Intercep. Num: (Pest interception number)
PESTID01	Pest ID/Contaminant:
CONTINUE01	Continue:

TABLE 3-13: Core Data Fields for the Current Fiscal Year

VARIABLE NAME	SCREEN NAME
Third Item Information:	
ITEM02	Item:
ICODE02	Icode: (Item Code Number)
QMITYPE02	QMIType: (QMI type of item: A(Animal), P(Plant), N(None)
ITMAMNT02	ItmAmnt: (Item Amount)
U02	U: (Unit of measure used for amount)
DECLARED02	Declared: (Did passenger declare item, written or orally)
ACTION02	Action: (Either seized, cln/trmt, or I&R)
TYPEFOUN02	Type found in (type of luggage item was found in)
HCCKD02	HC/CKD: (item found in hand carry or check luggage)
PESTPRES02	Pest Present:
CONTAMIN02	Contaminant: (Is contaminant present)
PESTNUM02	Pest Intercep. Num: (Pest interception number)
PESTID02	Pest ID/Contaminant:
CONTINUE02	Continue:
Fourth Item Information:	
ITEM03	Item:
ICODE03	Icode: (Item Code Number)
QMITYPE03	QMIType: (QMI type of item: A(Animal), P(Plant), N(None)
ITMAMNT03	ItmAmnt: (Item Amount)
U03	U: (Unit of measure used for amount)
DECLARED03	Declared: (Did passenger declare item, written or orally)
ACTION03	Action: (Either seized, cln/trmt, or I&R)
TYPEFOUN03	Type found in: (type of luggage item was found in)
HCCKD03	HC/CKD: (item in hand carry or check luggage)
PESTPRES03	Pest Present:
CONTAMIN03	Contaminant: (Is contaminant present)
PESTNUM03	Pest Intercep. Num: (Pest interception number)
PESTID03	Pest ID/Contaminant:
MO	MO:
ANACTREQ	ANACTREQ: (An action required)
SEIZED	TOTAL SEIZED: (QMIs seized)

TABLE 3-14: Summary of Data Field Changes Made During Previous Fiscal Years

For Fiscal Year:	The following additions, changes, and removals were made to the data fields:
2001	Additions: ARRIVCITY=Arriving From City REGCODE=RegCode WOLDREG=World Region PAXTRIPS=Pax Trips
	Changes: NUMPAX used to be NUMBERPAX GOFARMRAN used to be GOVISWORK PESTPRES used to be INFESTED PESTPRES01 used to be INFESTED01 PESTPRES02 used to be INFESTED02 PESTPRES03 used to be INFESTED03
1999	Additions: ANACTREQ=ANACTREQ SEIZED=Total Seized
	Removals: GENDER=Gender AGE=Age LUGGAGE=Luggage
2003	Additions: DAYWEEK=Day of week CITYDESTIN=City destination STATEDEDSTI=State destination BEENONFARM=Benn on a farm CIVPENALITY=Civil penality issued: FFH-FFH03-FFH-FFH03 WORLDREG-Worldregion Changes: ARRVARPORT=ARRIVECITY CUSDEC=QUESCUSDEC

4

AQIM Handbook

Air Cargo

Introduction

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Background

The cargo population, or sampling universe, for AQI monitoring is now defined perisable agricultural cargo. Random samples can be taken from this population with more intensive (hypergeometric) inspections completed and necessary data recorded about these commodities.

In order to properly monitor cargo, you need to have a good understanding of two key statistical principles:

1. It is important that the sample selected be representative of the commodity. Random selection helps ensure this.
2. Once the sample is selected, it is necessary to inspect the sample thoroughly and according to hypergeometric sampling procedures if applicable.

If you want your port to produce quality risk information, then each person participating must have a clear understanding of the sampling universe, the unit of sampling, and inspection consistency issues.

The Sampling Universe

You estimate the number of actions due to pests or smuggling in a cargo entry pathway by taking random samples from the cargo in the pathway. It is key to good statistics to carefully define this universe from which you want to draw your random sample. The following questions need answers in order select the sample correctly and to make statistical inferences for the entire universe.

- How are commodities transported?
- How many shipments of these commodities are arriving at a work location?
- What is the seasonality of the commodity?

For cargo AQIM, the sampling universe is defined by a commodity grouping in each of the major cargo pathways such as airplane, ship, or truck. The following commodities or commodity types are **excluded** from the sampling universe:

- Commodities which are pre-cleared at foreign sites
- Frozen commodities
- Commodities which undergo some type of mandatory treatment, other than cold treatment (for example, fumigation, irradiation, hot water treatment) at work locations
- Oil, salt, iron ore, coal, etc., which have no pest risk.

Cargo Strata and Stratifying the Sample

The sampling and inspection processes for AQIM were designed to be compatible with PPQ cargo inspection groupings. The cargo universe is divided into several homogeneous and distinctly separate groups. Each group contains commodities that will be sampled in order to estimate the action and pest approach rates in each group. A port may be sampling one or more of the commodities in a group or across groups. With air cargo, the sampling universe is perisable agricultural cargo. This perisable category is defined as any commercial shipment of fresh fruit or vegetables.

By sampling this category, PPQ is able to get precise estimates of the number of containers with pests approaching or other needed actions. This risk information helps the work location understand how effectively it manages the pest risk for this category, as well as for the entire cargo universe at the port.

It's very important that each commodity in the category selected be representative of all other units of that category. All shipments of a category should have a chance of being selected as a sample. One way to ensure that the sample is representative is to choose a shipment of the commodity at random (either random time, or random number, etc.). This random selection process eliminates the bias of the officer who is selecting the sample. The officer's experience (bias) might lead to choosing a shipment that is more likely to be harboring a pest. This bias would make the sample not representative of the entire commodity universe. The survey results would be skewed and this kind of bias would hamper the port's ability to make the best decisions based on risk analysis.

Setting Up A Process

Setting up a process of selecting representative samples for each of the commodities will be one of the biggest challenges in AQIM. Because each port has its own unique set of circumstances in cargo operations, the port must individualize its random sampling process. It will be necessary to document the process and possibly ask for feedback from other air cargo ports, regional AQIM coordinators or Port Operations staff who have experience in selecting random samples in the cargo environment. The port may even decide that the Port Risk Management Team determine and review the random sampling process on a regular basis.

The Unit of Sampling

For air cargo, the sample unit is the air waybill. It is crucial that the sample unit is inspected closely enough to detect any actionable pests and any smuggling of prohibited agriculture commodities. Summary inspection procedures for air cargo begin on page 4-5. The procedures must be followed exactly in order for the monitoring estimates to be valid and useful.

Consistency of Data Collection

It is crucial that the monitoring results from the inspection of a random sample unit are recorded accurately and consistently. Because each sample represents many other units, all officers must be as consistent as possible in following the inspection procedures.

Regulated commodities pose a special challenge. If the sample selected is a regulated commodity, it is important to understand the following:

Cargo monitoring estimates the number of air waybills approaching the work location with pest infestation levels requiring action by PPQ. AQIM uses risk-based inspection procedures for detecting a 10

percent or more pest infestation rate. This initial threshold is used to estimate the number of containers approaching a work location with a pest threat.

NOTICE

This 10 percent infestation level may change as the data for AQIM is collected and analyzed

To be 95 percent sure that the officer inspecting the sampled container will find the pest, when the shipment is infested at a 10 percent infestation or more level, the officer must select, at random, a specific number of boxes in the shipment. Determine this number of boxes by using the hypergeometric table illustrated in **Table 4-1: Hypergeometric Table For Random Sampling In Commodity Inspection.** Each of these boxes must be inspected at level of intensity to ensure that:

- No hitchhiker pests are present in the box,
- No internal feeding insects are present in randomly selected fruit in the box, and
- No mismanifested or smuggled items are present.

TABLE 4-1: Hypergeometric Table For Random Sampling In Commodity Inspection

Total Number of Boxes on Air waybill	Number of Boxes to Select at Random From the Air Waybill and to Inspect to Detect Pests
1-10	10
11-12	11
13	12
14-15	13
16-17	14
18-19	15
20-22	16
23-25	17
26-28	18
29-32	19
33-38	20
39-44	21
45-53	22
54-65	23
66-82	24
83-108	25
109-157	26
158-271	27
272-885	28
886-200,000	29

Officers should follow normal inspection procedures of the commodities to determine pests. For example, officers should cut fruit to detect internal feeders if external evidence is present.

Air Cargo Procedures Summary

AIR CARGO AQIM PROCEDURES	
Commodity	(1) Random Sample of perisable agricultural cargo commodities (non-frozen cargo & excluding pre-cleared cargo)
	Miscellaneous Animal/Meat Meal: all countries - includes blood, bone, hoof, feather meals foodstuffs (PPQ Interest): Pacific Rim

AIR CARGO AQIM PROCEDURES (continued)	
Cargo Population Definition	All air waybills carrying the above category destined to US. This does not include precleared and frozen commodities. Also it does not include commodities with mandatory treatments at port of entry. Note: Commodities with mandatory cold treatments are included.
Sample Size	Two (2) Air Way Bills (AWBs) per week per airport at ALL ports that can sustain this sampling. (excluding cut flowers, precleared and mandatory treatment cargo). **Contact Regional AQIM Risk Mgmt Program Mgr. for assistance.**[1]
Sample Selection	Port discretion, random time, skip intervals, etc. May need to first determine the total number of shipments of a category received at a port in one year.
Inspection Methodology	Each selected shipment requires a physical inspection at port or consignee premise. Boxes for inspection must be taken from random locations throughout the container to detect a 10 percent level of infestation (at 95% confidence). The number of boxes shall be set using **Table 5-1**. Entire contents of boxes selected and available floor space of the container shall be inspected for agricultural pests or mismanifested or smuggled items.
Other Issues	Inspections shall be conducted during the normal business hours at the port. Costs for OT clearance will be paid by the shipper/ broker/consignee or government as per port management. Need to advise shippers, importers, and brokers that random sampling and inspection will be part of day-to-day operations. They should understand that there is a probability that their shipment will be intensely inspected.

1 Regional AQIM Risk Mgmt. Mgrs: Western Region - Judy Pasek: 970-494-7580 Eastern Region - Calvin Shuler: 919-716-5591

Pathway Monitoring Maintenance and Quality Assurance

Port managers and local AQIM coordinators are responsible for ensuring that monitoring activities are being performed and performed properly. To help with reviewing the status of monitoring activities, refer to Appendix L. Pathway Monitoring Maintenance in the AQIM Handbook. This appendix contains a checklist of questions port managers and local AQIM coordinators should periodically answer to ensure proper monitoring of each designated pathway at their work locations. **See** Figure L-1. The questions review the following topics:

- Random sampling
- Proportional sampling
- Adequate sampling
- Accurate and complete data

- Working risk committees
- Local support

Air Cargo Worksheet

On the following pages there is one worksheet for recording information gathered from your inspection of air cargo for the purpose of AQIM. Be sure to record the commodity being inspected properly.

The form is also available as a fillable form; go to:

http://www.aphis.usda.gov/ppq/manuals/pdf_files/AQIM_in_PDF/Air_Cargo.pdf

4

AQIM Handbook

Air Cargo

Data Collection and Maintenance

Introduction

The movement of international cargo by aircraft can pose a significant exotic pest and disease risk to agriculture in the United States. The pathway "Air Cargo" encompasses all aspects of cargo movement into the United States by the use of various types of aircraft (cargo freighter, passenger aircraft, etc.). AQIM is designed to randomly sample air cargo shipments to determine the potential threat to agriculture.

Each work location will randomly sample air cargo arriving at that work location. The data collected from the random sampling will help to answer the following questions:

1. What is the threat of agricultural pests approaching the work location?
2. How effective is the AQI program at managing this threat?

The origin and destination of air cargo shipments is important to determine risk. Just as important is if the air cargo shipment carries an actual agriculture pest. While each work location will have different rates of quantity and variety of cargo, the same criteria for sampling will apply to all work locations. Through consistent random sampling a depiction of the pest threat of each type of cargo will emerge. Combined data from all work locations will help determine the pest risk posed by various air cargo items.

AQIM of air cargo shipments is an ongoing function and is an integral part of the AQI program. The ongoing sampling of air cargo shipments will allow work locations to adjust their selection criteria and will ultimately help accomplish our mission.

Epi Info User Guide for Data Entry–Air Cargo

NOTICE

When first using Epi Info, thoroughly read the user guide to become familiar with entering data into each of the data fields.

General Instructions

After each data entry session make a back up of the data records file, CGMAIR.REC, to a computer disk. See Appendix G for procedures for backing up monitoring data.

1. Press [**CAPS LOCK**] (to ensure typing capital letters).
2. Be sure to start at C:\ prompt. Epi Info is a DOS program.
3. Change to the Epi Info directory. Type **CD EPI6** then Press [**ENTER**].
4. Start Epi Info program. Type: [**EPI6**] then Press [**ENTER**].
5. Wait several seconds, the Main Menu will appear with the word Program highlighted.
6. Press [**P**] (to list Program menu).
7. Press [**N**] (to choose ENTER from Program menu).
8. Cursor should be in space below the phrase "Data file (.REC)".
9. Type in the space the cursor is in [**02CGMAIR**].
10. Press [**ENTER**] **3 times** (to load files for data entry).
11. Data entry screen for Cargo Strata should appear.

Help Statements

Read the following help statements before entering data:

- Each data entry screen represents only one monitoring inspection. After correct data entry is made and saved, this becomes a record for that one inspection.
- Some data fields will automatically advance the cursor after entering data, some require pressing [**ENTER**] to advance the cursor after entering data.
- Some data fields will be skipped depending on the strata.
- Data entry messages and valid data values for each data field appear at the bottom of the screen or by pressing [**F9**].
- If an error is made and the cursor has left the data field, use the Up (↑) and Down (↓) arrow keys to move from field to field in order to change or correct data fields already entered.
- **DO NOT PRESS F6 to delete a record**. Despite the screen label, this does not delete the record, it only places an asterisk on the record number. Epi Info will ignore records with an asterisk when doing analysis commands. To eliminate the unwanted record from the data file, type over the unwanted record with a new record.

Enter Data

Read the following as you enter data to become familiar with each of the fields.

Port—With the first record, you will need to complete this data field. For each record thereafter, this field will repeat. This field is automatically filled in, if not contact the local AQIM Coordinator.

AIRRECNUM—Do not enter data in this field. This field is automatically filled in. THIS FIELD WILL SERVE AS THE "OFFICIAL" PERMANENT RECORD NUMBER. DO NOT USE THE NUMBER LOCATED IN THE LOWER RIGHT HAND CORNER OF THE SCREEN TO IDENTIFY A RECORD.

A) Commodity:—Press **[F9]** and select the commodity. If you can't find the commodity, select other and type in the desired commodity in the other field.

B) Date—Enter date of inspection from the data form in MM/DD/YYYY format.

C) Consignee—Enter the consignee of this shipment.

D) Carrier—Enter carrier name and flight number.

E) Cargo Origin—Press [**F9**] to open window of valid country names. Type the first and second letters of the country name in order to scroll down the list faster. Use Up (↑) and Down (↓) arrow keys to highlight the country name. Press [**ENTER**] to select it. Note, if you are unable to determine origin, then select a region such as Asia, Middle East.

OrgnCode—Do not enter data in this field. This code is entered automatically. Press [**ENTER**] to advance the cursor and automatically fill in the data fields Reg Code and World Region.

Reg Code—Do not enter data in this field. This code is entered automatically.

World Region—Do not enter data in this field. This code is entered automatically.

F) Destination—Press [**F9**] to open window of valid destination names. Type the first letter of destination name in order to scroll down the list faster. Use Up (↑) and Down (↓) arrow keys to highlight correct choice. Press **[ENTER]** to select the destination.

G) Description Group—(for regulated cargo only) Enter general group recorded on data form (I).

H) Cargo Count (Num)—Enter the amount of cargo units (boxes, cartons, bags, etc.)

Cargo Weight (KG)—Enter the amount of cargo by recording the weight in kilograms.

I) Am. Insp (Num) (Amount Inspected)—(for regulated cargo only) Enter the number of singular units sampled and inspected (boxes, bags, cartons, etc.).

J) Inspection Method—Enter the inspection method circled on the data form (L). Valid values for the methods are listed at the bottom of the screen.

K) Solid Wood Packing (SWP)—Enter either [**N**](no) or [**Y**](yes).

- If Y: Cursor will proceed to next data field (SWP Type)
- If N: Cursor will jump to "Require Action Beyond Inspection to Reduce Risk?"

1. SWP Type—Press [**F9**] to open window of valid SWP types. Use Up (↑) and Down (↓) arrow keys to highlight the correct type. Press [**ENTER**] to select it.

2. Amount of SWP Inspected%—Enter percentage of SWP inspected.

3. Bark on SWP—Enter either [**N**](no) or [**Y**](yes) response from the data form.

4. SWP Fumigation Certif. or Other Treatment presented—Enter either [**N**](no) or [**Y**](yes) response from the data form.

Required Action Beyond Inspection to Reduce Risk?—Enter either [**Y**](yes) or [**N**](no):

- If Y: cursor will proceed to next data field.
- If N: then cursor will jump to bottom of screen asking the question: "Write data to disk (Y/N/<Esc>)?" If data entry is correct and complete, answer Y to this question and the data screen will renew for the next record entry.

1. Intended Use of Cargo—Press [**F9**] to open window of valid uses. Use Up (↑) and Down (↓) arrow keys to highlight correct use. Press [**ENTER**] to select it.

2. Action Pest—Enter either [**Y**](yes) or [**N**](no):

- If Y: cursor will proceed to the next data field.
- If N: Cursor will jump to "3. Contaminant Found?".

Cargo Item—Enter the cargo item that the pest was found on, include cargo conveyance as an option, if appropriate. NOTE: When recording:

- Use the singular form (except for leaves)
- Use precise descriptors: fresh, dried, frozen, etc.
- Describe using common English names, if possible
- DO NOT use the general descriptors **cucurbit, bean, or rubus sp.** Break down these descriptions to more detailed items, if possible.

Pest ID—System will automatically enter NONE (for no pest found). Enter the identified pest name (genus/species).

Pest Intercep. Num—System will automatically enter NONE (for no pest found). Enter the pest interception number assigned to the pest. This number maybe assigned later or by another office. If pest interception number assignment is delayed, then enter the letters "TBA" (To Be Assigned). When TBA is used, be sure to note the permanent record number in the upper right corner of screen so updating can be done.

Where found:WFA—Enter where the pest was found in relationship to the container/conveyance that the cargo arrived in. See the valid values to enter at the bottom of the screen.

WFA—A second field for where the pest was found if the pest is found in more than one of the locations listed.

Cont (Continue)—

- Type [**Y**] if additional pests and cargo items ARE to be entered. Press [ENTER] to leave field and continue on. (Cursor jumps down to next cargo item field. You can enter up to three cargo items in a record.)
- Type [**N**] if no other items are to be entered in this record. Cursor will jump to "3. Contaminant Found?".

3. Contaminant Found?—Enter [**Y**](yes) or [**N**](no) to indicate if a contaminant was present with the cargo. IF YES, be sure to enter the contaminant information after answering next data field.

4. Agr. Item Mismanifested/Smuggled?—[Enter [**Y**](yes) or [**N**](no) to indicate if any mismanifested or smuggled items were found with the cargo.

- If Y, then cursor will proceed to next data field.
- If N, and
  - if Yes to previous Contaminant question, cursor will move to next data field.
  - if No to previous Contaminant question, cursor will jump to the bottom of the screen asking the question: "Write data to disk (Y/N/<Esc>)?". If data entry is correct and complete, answer Y to this question and the data screen will renew for the next record entry.

Contaminant/Item—

- If Contaminant: Enter the contaminant name and the cargo item (cargo conveyance) it's associated with. (Soil on yams, manure on truck, etc.)
- If Mismanifested/Smuggled: Enter the items found.

Cnt (Cargo Count)—Enter the amount in singular units (boxes, cartons, bags, etc.), if appropriate.

Wght, KG—Enter the amount of listed contaminant or mismanifested/smuggled item in kilograms. Enter best accurate estimate, if necessary.

Prohibited—Enter if contaminant or mismanifested/smuggled item is prohibited because of a regulation or quarantine.

Where found:WFA—Enter where the contaminant or mismanifested/smuggled item was found in relationship to the container/conveyance that the cargo arrived in. See the valid values to enter at the bottom of the screen.

WFA—A second field for where contaminant or mismanifested/smuggled item was found if found in more than one of the locations listed.

MO—Do not enter data in this field. This field is filled in automatically with the numeric value of the month. This field is used for analysis purposes.

Cont (Continue)—

- Type [**Y**] if additional pests and cargo items ARE to be entered. Press [ENTER] to leave field and continue on. (Cursor jumps down to the contaminant/item field).
- Type [**N**] if no other items are to be entered in this record. Cursor will jump to "Write data to disk (Y/N/<Esc>)?"

Write data to disk (Y/N/<Esc>)?--

- Type [**Y**] if data entry is complete for this record. Record will be saved to the record's file.
- Type [**N**] if you wish to make changes or corrections to the record field. After making changes or corrections remember to return the cursor to the last completed data field. Press [**ENTER**] to return to the prompt "Write data to disk (Y/N/<ESC>)?"

When finished with data entry—

1. Press [**F10**] to return to the main start up screen.
2. Press [**F10**] again to leave Epi Info and return to the regular computer screen.

Important

After each data entry session, make a back up of the data records file, **CGMAIR.REC**, to a computer disk. See **Appendix G** for back up instructions.

Air Cargo

Data Analysis

Survey Results and How to Use Them

AQIM activities have been put into place to develop baseline data to help answer two basic questions:

1. What is the threat of agricultural pests approaching ports? What is the level of infestation of the pests in the cargo?
2. How effective is the AQI program at managing this threat?

Preliminary results for air cargo surveys provides a general answer for question 1. That is, there are varying rates at which prohibited agricultural materials or cargo units infested with an agricultural pest approach the ports. Surveys show that at some ports about 1.5 percent of the cargo units carried actionable pests in the past year, while other work locations show rates as high as 10 percent.

These percentages are an approximation of agricultural pest threat. Further analysis of the monitoring data is needed to determine the risk associated with air cargo approaching the work location. The origin and destination of the cargo are important to determine risk levels. Also, whether or not the cargo carries an actual agricultural pest or smuggled item is crucial in analyzing risk.

Analyses of the monitoring data need to occur at several levels of PPQ. At the ports, PPQ personnel need to study what the data means and answer the first question for their specific location. The AQIM National Team is providing ports with a computer software tool, Epi Info, to help with these analyses. At the same time, PPQ holds risk analysis workshops around the country to introduce risk analysis concepts. At some ports, teams of PPQ officers and managers form Risk Management Teams to look at monitoring data and other data, which is normally collected at the location.

At other locations, analyses of monitoring data occur to establish rates at which quarantined items and agricultural pests are approaching the borders of States, areas of the country, and the United States.

Once baseline rates are well established, PPQ can use the monitoring data as a baseline to answer the second basic question: How effective is the AQI program at managing the risk of introduction of agricultural pests and diseases? Again, each work location must conduct this type of analysis. AQIM provides a framework which work locations can use to carry out the analysis.

Analysis Tools

The tool available for analyzing AQI monitoring data is the ANALYSIS program in Epi Info. Using the ANALYSIS program in Epi Info you can look at data entered specifically for your work location. While in Epi Info ANALYSIS, you can select a data analysis program file (*.PGM) that automatically runs a series of Epi Info commands. The program will produce various listings, tables, analysis commands, and explanatory text from data files for a designated pathway. Follow the guidelines on how to load and run data analysis program files beginning on page 4-20.

Epi Info ANALYSIS saves the analysis output to a file for viewing and/or printing. The file contains basic information that answer some of the questions to guide data analysis that follow. For questions not answered by running an automatic program, you will need to key in and run various analysis commands. Follow the Epi Info User Guide for Data Analysis-Air Cargo beginning on page 4-24 to help you with the analysis commands.

Questions to Guide Data Analysis

The following questions are a guide for managers and Risk Management Teams to formulate information around. With the answers, valid decisions can be made based on the potential risk of quarantined material and exotic pests and diseases entering a specific pathway. The value of using the monitoring data for decision making is better understood.

1. How many air way bills were selected for sampling during the survey period?

   How many actions were required on air waybills sampled?

   How many actions by strata category sampled were there?

   What is the action approach rate of air waybills that require action (number of air waybills requiring action divided by total air waybills in the sample)? What are the action approach rates by strata category?

2. How many pest interceptions (actionable pests) were made from survey samples?

   Pest Approach Rate: What is the rate of pest interceptions in relation to the total sampled number of air waybills (number of air waybills with actionable pests divided by total air waybills in the sample)?

3. Compare the rate of actions required for each month of the survey.

DISCUSSION:

Are there easily identified trends when the rate of QMI's transiting the work location are higher?

Are there seasonal trends?

Do higher rates correlate with national or religious holidays, certain types of containers, cargo, or importers?

4. Generate a listing and frequency of shipments requiring action. Which commodities present the greater risk?

Which commodities are most likely to require action? Where were the agricultural pests found? Which commodities involved solid wood packing (SWP) actions? What is the rate of air waybills with smuggled or mismanifested items?

DISCUSSION:

How effective is the current tailgate inspection process in detecting pests and/or smuggled cargo?

5. What types of shipments (refrigerated, mixed vegetables, dry containers, empties, cut flowers, express carriers, etc.) require higher rates of action?

DISCUSSION:

What selectivity factors are currently used to identify shipments likely to require action?

What additional selectivity factors would be used to identify shipments likely to require action?

Do the survey results indicate additional factors that help identify shipments most likely to require action?

6. Using monitoring data, apply the survey results to the cargo universe at the work location to estimate the number of actions required and interceptions likely to transit the work location during the same time the survey period took place.

How many air waybills arrived at the port during the survey period? Using the action approach rate for air waybills requiring action, calculate an estimate of the number of air waybills transiting the work location that are likely to require action. What are the estimates per strata category?

Using WADS data, how does the estimated number of actions required compare with the reported number of actions taken?

How many additional actions may have been required during the survey period?

How does the estimated number of actionable pest interceptions compare with the reported number of actionable pests on WADS?

DISCUSSION:

What percentage of resources are dedicated to staffing AQI activities for air cargo at the work location?

What is the relative risk of air cargo compared with other pathways in the work location?

Should resources be reallocated among all the pathways in the work location to better address the relative risk of the pathways?

How to Load and Run Data Analysis Program Files

Data analysis program files are meant to provide only listings, tables, and explanatory text about the monitoring data gathered at work locations. The program files are not intended to be used as final analysis tools. The outputs from these program files should raise further questions and discussion by local personnel and risk management committees.

NOTICE

Each year the AQIM National Team reviews, discusses, and decides about suggested improvements (additions, removals, changes) to the baseline data fields based on analysis an operational needs. A summary of the changes made during previous fiscal years to data fields for the air cargo pathway begin on **page 4-28** under Air Cargo Epi Data Translation. Use the summary to identify data field changes that may impact the results of an analysis report run for a particular year.

Data analysis program files automatically run a series of Epi Info analysis commands. Use the following guidelines to load and run data analysis program files.

1. Determine which data analysis program file (*.PGM) you will load and run in Epi Info.

In Epi Info, ANALYSIS, there is a data analysis program file for each fiscal year of data gathered. Look at the following table to identify the file to load and run depending on which fiscal year's data you are analyzing.

If you want to analyze data for:	Then load and run the following Epi Info ANALYSIS data analysis program file (*.PGM):
FY 1998	CGMAIR98.PGM
FY 1999	CGMAIR99.PGM
FY 2000	CGMAIR2K.PGM
FY 2001	CGMAIR01.PGM
FY 2002	CGMAIR02.PGM

2. Get ready to run a data analysis program file.

A. Press: **CAPS LOCK** (to ensure typing capital letters).

B. Be sure to start at C:\ prompt. Epi Info is a DOS program.

C. Change to the Epi Info directory. Type: [**CD EPI6**], then Press [ENTER].

D. Start Epi Info program. Type: [**EPI6**], then Press [ENTER].

E. Wait several seconds, the Main Menu will appear with the word Program highlighted.

F. Press [**P**] (to list Program menu).

G. Press [**A**] (to choose ANALYSIS from Program menu).

If you are running:	Then:
A data program analysis file using Epi Info, ANALYSIS	CONTINUE to **Step 3.**
Further analysis commands using Epi Info	GO to the "Epi Info User Guide for Data Entry–Air Cargo" on **page-4-4-9**

3. Run the selected data analysis program file (*.PGM) from **Step 1.**.

You should be at the Epi Info ANALYSIS screen. If not, review **Step 2.**.

NOTICE

To leave the analysis mode at any time, press [**F10**]

A. At the EPI6 command prompt, Type: **RUN FILENAME** where FILENAME is the *.PGM file you selected in Step 1.. For example, if you are analyzing data gathered in Fiscal Year 2000, then you would enter at the command prompt: **RUN CGMAIR2K.PGM**. Then,

Press [**ENTER]**

If you:	Then:
See the following prompt at the bottom of the screen: "Press enter key to pick the records file you want to analyze"	1. Press [ENTER]. A window appears with a listing of *.REC files. 2. GO to **Step B.**.
Do not see the prompt stated in the cell above	DO the following 3 steps

i. Type: **RUN**, then Press [**ENTER**]. A window appears with a list of *.PGM files.

ii. Using the Up (↑) and Down (↓) arrow keys, search and highlight the program file name you want to run (for example, CGMAIR2K.PGM), then Press [**ENTER**].

NOTICE

If you cannot locate the file name you are looking for, then contact you local AQIM coordinator. IF they are not available, then contact the National AIQM Coordinator.

iii. When the following prompt appears at the bottom of the screen: "Press enter key to pick the records file you want to analyze,"

Press [ENTER]. A window appears with a listing of *.REC files.

Go to Step B..

B. Using the Up (↑) and Down (↓) arrow keys, highlight the records file for the desired fiscal year.

Important

The program file (*.PGM must match the records file (*.REC). When you are sure,

Press [**ENTER**].

C. You are prompted for a file name where the program will save the output. (An example is given on the screen using a three-letter port code and the date.)

Type **FILENAME**, where FILENAME is the file name you have created to save the program output. Then, Press [**ENTER**].

D. You are prompted to enter the date that is **one day before** the date you want the program analysis to start. (The analysis program analyzes all records between two given dates, but does not include the given dates. Therefore, you must enter the dates of the days just before and after the dates you want included in the analysis.)

EXAMPLE: For example, to analyze Fiscal Year 2000 data, you would enter 09/30/1999 (one day before the beginning of Fiscal Year 2000).

Type the start date following the format (MM/DD/YYYY), where it is one day before the date you want the program analysis to start, then Press [**ENTER**].

E. You are prompted to enter the date that is **one day after** the date you want the program analysis to end.

Type the end date following the format (MM/DD/YYYY), where it is **one day after** the date you want the program analysis to end, then Press [**ENTER**].

4. The program will begin analyzing. You will see the program's output scroll quickly on the screen. It is being saved to the file name you specified in Step C.

5. The program is finished when the cursor return to the EPI6> prompt. At this time, you may want to do any of the following:

If you want to:	Then:
View or print the program output file	1. Press [F10] to exit Epi Info 2. Use a word processing program, such as Wordpro to view and/or print the file. **NOTE:** The file usually is in the C:\EPI6 directory saved in an ASCII (DOS) text file format.
Run a data analysis program file for another fiscal year's data	Return to **Step 1.** at the beginning of this subsection to decide which program file to run
Continue with further analysis commands using the Epi Info User guide for Data Analysis	Go to the "Epi Info User Guide for Data Entry–Air Cargo" on **page-4-4-9**
Exit Epi Info ANALYSIS	Press [**F10**]
Exit Epi Info	Press [**F10**] twice

When first running analysis commands in Epi Info, thoroughly read the user guide to become familiar with basic analysis procedures to use with the monitoring data at your work site.

Epi Info User Guide for Data Analysis–Air Cargo

Get Ready

1. You should be at the Epi Info, ANALYSIS screen. If not, refer to Step 2., getting ready to run a data analysis program file, under How to Load and Run Data Analysis Program Files on page 4-20.
2. Press [**F2**] (to list Commands menu).
3. Use arrow key to move cursor to READ command.
4. Press [**ENTER**] **twice** (to get a list of .REC files that can be analyzed).
5. Use arrow keys to move cursor to highlight **02CGMAIR.REC**.
6. Press [**ENTER**] (to bring the *.REC file you have chosen into the analysis screen).
7. Press [**F4**] (to browse the data records in the file).
8. Use arrow keys to look over the data to make sure it has been entered properly during the past month. (In subsequent months, you will want to browse through the entire file to see that all months of data have been properly entered, repeated fields such as workunit are consistently the same.)

To view only one individual record, press [**F4]** again to see the entire record as it was originally entered. If it is necessary to make changes to the record, note **the Epi Info record number in the lower right corner of the screen**.

If you want to edit, correct or change this record, go to "Edit Records" beginning on page 4-27.

Analyze Records

9. Press [**F10**] (to return to the main Analysis screen).
10. Press [**F2**] (to see a list of Analysis commands).
11. Use arrow keys to move the cursor to FREQ (frequency), and Press [**ENTER**]
12. Press: [**F3**] (to see a list of data variables). To better understand the data variables, refer to page 4-28 for a list data variable translations for the current FY and a summary of previous FYs.
13. Use arrow keys to highlight the data variable you wish to know the frequency of.

    Press [**ENTER**] **twice** and you will get a frequency table.

EXAMPLE: For example: If you want to know which carriers had shipments sampled, move the cursor to CARRIER and Press [ENTER] twice. You will get a table showing the number of records entered into the database for each carrier sampled in the survey.

14. Explore the database by doing FREQ commands for as many data variables as is logical. By doing this you will begin to understand the survey data and see some patterns in the data.

For each variable, use the **F2** and **F3** keys to choose the FREQ command and variable of interest, or type the word FREQ and the data variable names directly at the Analysis prompt.

15. To explore graphic commands: (The PIE command is one of several graphics commands which allow you to analyze the variables with graphs. This may make it easier to see patterns in the data and to understand the survey results.)

Press [**F2**] again and choose the PIE command with the cursor. Press [**ENTER**].

Press: [**F3**] and select a data variable of interest from your data exploration in the FREQ analysis (Step 10.-Step 14.).

Press [**ENTER**] **twice** and you will see a pie chart on your screen which might help you understand a pattern in the data.

For example, if you see you have chosen the CARRIER variable for a pie graph, then you may see that a larger percentage of samples were taken from one carrier, you might start to question the sampling procedures.

To leave the graph screen and return to the main screen, Press **<ESC>.**

16. Further FREQ exploring.

To see the number and kind items carrying pests from random shipment inspections, Press [**F2**] to list commands.

Highlight FREQ and Press [ENTER]. (You will next “tag” more than one data variable to move these variable to the analysis command line.)

Press [**F3**] to list data variables, highlight CARGOITEM, and “tag” this variable by pressing [**SHIFT**] and [+]. A small arrow will appear next to CARGOITEM.

Next, highlight the variable CARGOITE01 and "tag" it. Do the same for CARGOITE02.

The analysis command line should appear: EPI6> FREQ CARGOITEM CARGOITE01 CARGOITE02

Press [ENTER]. The output screen should display counts of items for each of the cargo item data lines for all records. Adding up the counts of the items will provide a category breakdown of the agriculture items carrying actionable pests during random sample inspections.

17. Further exploration. Two other commands (F2 TABLES, F2 SELECT) are very useful to explore the survey data and to begin answering questions you may have after using the FREQ and PIE commands.

For example, if you know what air cargo samples had solid wood packing (SWP), then do the following:

Press [**F2**]. Move the cursor to SELECT. Press [**ENTER**].

Press [**F3**]. Move cursor to SWP.

Press [**ENTER**]. Type: = **"Y"**.

The command line will then look like this: EPI6>SELECT SWP="Y"

Press [**ENTER**].

When you run new analysis commands, the analysis will only look at a subset of records where the cargo had SWP. If you want to get back to the entire set of records, Type: **F2**. Move the cursor to SELECT. Press [**ENTER**].

18. To continue working with the subset of records established in Step 17.:

Press [**F2**]. Move the cursor to FREQ. Press [**ENTER**].

Press [**F3**]. Choose ORIGIN. Press [**ENTER**] twice. You will get a table that lists the frequency of sampled records from each country of origin.

Do a PIE ORIGIN analysis command to get a graphic picture of which countries the random shipments are coming from.

19. Press Up (↑) arrow to move the command line cursor to the FREQ ORIGIN command.

Type **\C**. Press [**ENTER**]. The new table will give a statistical analysis with 95 percent confidence intervals.

20. Type on the command line: **TABLES ORIGIN ACTIONPEST** (Or use the F2 and F3 keys to select the TABLES command and the two variables.)

Press [**ENTER**]. You will get a table which shows the frequency that actionable pests are being found in the samples from various origins. This analysis can be used to further understand the cargo risk.

Edit Records

E1. Press [**F10**] **twice** (to get back to the main EPI6 program menu).

E2. Press [**P**] (to list Program menu).

E3. Press [**N**] (to get to the Edit menu).

E4. Press [**F9**] (to list.REC files).

E5. Use arrow keys to highlight appropriate.REC file, and

Press [**ENTER**] **four times** to get to the data entry screen for this file.

E6. Press: [**CONTROL**] and [**F**] at the same time (to find the record which needs editing).

E7. Press [**F2**] and then, **type the number** of the record you need to edit.

E8. Press [**ENTER**] (to get to the record you need to edit).

E9. Make corrections to the record, using the Up (↑) and Down (↓) arrow keys to move from field to field.

When finished editing, Press [**F10**] and answer **YES** to the question (at the bottom of the screen) that asks to write the edited record to the data file.

Return to the beginning of the user guide on page 4-9.

Air Cargo Epi Data Translation

Core Data Fields for the Current Fiscal Year

VARIABLE NAME	SCREEN NAME
PORT	Port:
PIERTERM	Pier- terminal:
AIRRECNUM	Cargo Type: AIRRECNUM: (Permanent record number)
COMMODITY	Commodity:
OTHER	Other:
CARGOCATEG	Cargo Category: (Regulated or Unregulated)
DATE	Date:
CONSIGNEE	Consignee:
CARRIER	Carrier:
ORIGIN	Cargo Origin:
ORGNCODE	OrgnCode:
REGCODE	RegCode:
DESTINATIO	Destination:
WORLDREG	World Region:
DESCGROUP	Description Group:
CARGOCOUNT	Cargo Count:
CARGOWEIGH	Cargo Weight(KG):
AMTINSP	Amt. Insp: (Amount of cargo that was inspected)
INSPECMETH	Inspection Method:
SWP	Solid Wood Packing (SWP):
SWPTYPE	SWP Type:
SWPINSP	Amount of SWP Inspected %:
BARKONSWP	Bark on SWP:
SWPFUMCERT	SWP Fumigation Certif. or Other Treatment presented:
REQACTION	Require Action Beyond Inspection to Reduce Risk?:
USECARGO	1. Intended Use of Cargo:
ACTIONPEST	2. Action Pest: (Actionable Pest Found)

First Pest Information:

CARGOITEM	Cargo Item:
PESTID	PestID:
PESTNUM	Pest Intercep. Num:
WFA	Where Found:WFA:
WFA01	WFA: (Second recording for more than one Where Found location)

VARIABLE NAME	SCREEN NAME
CONT	Cont: (Continue to next Second Pest Information)

Second Pest Information:

CARGOITE01	Cargo Item:
PESTID01	PestID:
PESTNUM01	Pest Intercep. Num:
WFA02	Where Found:WFA:
WFA03	WFA: (Second recording for more than one Where Found location)
CONT01	Cont: (Continue to next Third Pest Information)

Third Pest Information:

CARGOITE02	Cargo Item:
PESTID02	PestID:
PESTNUM02	Pest Intercep. Num:
WFA04	Where Found:WFA:
WFA05	WFA: (Second recording for more than one Where Found location)
CONTMFOUND	3. Contaminant Found?:
MISMANSMUG	4. Agr. Item Mismanifested/Smuggled?:

First Contaminant/Mismanifested or Smuggled Information:

CONTMITEM	Contaminant/Item:
CNT	Cnt: (Cargo Amount, count of boxes, cartons, units...etc.)
WGHT	Wght,KG:
PROHIBITED	Prohibited: (Prohibited by Regs or Quarantine #)
WFA06	Where Found: WFA:
WFA07	WFA: (Second recording for more than one Where Found location)
CONT02	Cont: (Continue to next Item Information)

VARIABLE NAME	SCREEN NAME
Second Contaminant/Mismanifested or Smuggled Information:	
CONTMITE01	Contaminant/Item:
CNT01	Cnt: (Cargo Amount, count of boxes, cartons, units...etc.)
WGHT	Wght,KG:
PROHIBIT01	Prohibited: (Prohibited by Regs or Quarantine #)
WFA08	Where Found: WFA:
WFA09	WFA: (Second recording for more than one Where Found location)
MO	MO: (month)

TABLE 4-1: Summary of Data Field Changes Made During Previous Fiscal Years

For Fiscal Year:	The following additions, changes, and removals were made to the data fields:
2001	**Additions:** REGCODE=RegCode WORLDREG=World Region DESCGROUP=Description Group
	Changes: The order of data fields was reversed for cargo weight and count. CARGOCOUNT used to be CARGOWEIGH CARGOWEIGH used to be CARGOCOUNT CNT used to be WGHT WGHT used to be CNT CNT01 used to be WGHT01 WGHT01 used to be CNT01
	Removals: MA03=MA REFERREDTO=Referred to
1999	Additions: AIRRECNUM=AIRRECNUM MA01=Manifested as MA02=Mnaifested as MA03=Manifested as INSPECMETH=Inspection Method SWP=Solid Wood Packing (SWP) SWPTYPE=SWP Type SWPINSP=Amount of SWP Inspected % BARKONSWP=Bark on SWP SWPFUMCERT=SWP Fumigation Certif on Other Treatment presented MO=MO
	Changes: MA used to be MANIFESAS
	Removals: TIME=Time IDENTNO=Ident AWB No.

TABLE 4-1: Summary of Data Field Changes Made During Previous Fiscal Years

For Fiscal Year:	The following additions, changes, and removals were made to the data fields:
2002	Removals: STRATA MA-MA02 Additions: COMMODITY=Commodity OTHER=Other

5

AQIM Handbook

Maritime Cargo

Introduction

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Background

The cargo population, or sampling universe, for AQI monitoring is now defined as specific categories. Random samples can be taken from these populations with more intensive (hypergeometric) inspections completed and necessary data recorded about these commodities

In order to properly monitor cargo, you need to have a good understanding of two key statistical principles:

1. It is important that the sample selected be representative of the category. Random selection helps ensure this.
2. Once the sample is selected, it is necessary to inspect the sample thoroughly and according to hypergeometric sampling procedures if applicable.

If you want your port to produce quality risk information, then each person participating must have a clear understanding of the sampling universe, the unit of sampling, and consistency issues.

The Sampling Universe

You estimate the number of actions due to pests or smuggling in a cargo entry pathway by taking random samples from the cargo in the pathway. It is key to good statistics to carefully define this universe from which you want to draw your random sample. The following questions need answers in order select the sample correctly and to make statistical inferences for the entire universe.

- How are commodities transported?
- How many shipments of these commodities are arriving at a work location?
- What is the seasonality of the commodity?

For AQIM, the universe is defined by the mode of transport of the cargo such as airplane, ship, or truck. Initially, PPQ has decided to limit the universe. The following commodities or commodity types are **excluded** from the sampling universe:

- Commodities which are pre-cleared at foreign sites
- Frozen commodities;
- Commodities which undergo some type of mandatory treatment, other than cold treatment (for example, fumigation, irradiation, hot water treatment) at work locations
- Oil, salt, iron ore, coal, etc., which have no pest risk.

Cargo Strata and Stratifying the Sample

The sampling and inspection processes for AQIM were designed to be compatible with PPQ cargo inspection groupings. The cargo universe is divided into several homogeneous and distinctly separate groups. Each group contains commodities that will be sampled in order to

estimate the action and pest approach rates in each group. A port may be sampling one or more of the commodities in a group or across groups. The following cargo categories are to be monitored in FY 2004:

Commercial Perishable Agricultural Cargo (This category is defined as any commercial shipment of fresh fruit or vegetables)	Sampling to take place at the ports of Brooklyn NY, Elizabeth NJ, Ft. Lauderdale FL, Long Beach CA, Miami FL, Wilmington DE, Philadelphia PA, Huston, TX
SWPM (Solid Wood Packing Material)	Sampling to take place at All Ports that receive SWPM in cargo shipments
Italian Tile Container Cargo	Sampling to specifically take place at the ports of Baltimore MD, Charleston SC, Chicago IL (maritime rail), Elizabeth NJ, Houston TX, Norfolk VA, Miami FL, and Savannah GA.

By selecting a set number from these categories, PPQ is able to get precise estimates of the number of containers with pests approaching or other needed actions. This risk information helps the work location understand how effectively it manages the pest risk for each commodity, as well as for the entire cargo universe at the port.

It's very important that each commodity in a category selected be representative of all other units of that commodity. All shipments of a category should have a chance of being selected as a sample. One way to ensure that the sample is representative is to choose a shipment of the commodity at random (either random time, or random number, etc.). This random selection process eliminates the bias of the officer who is selecting the sample. The officer's experience (bias) might lead to choosing a shipment that is more likely to be harboring a pest. This bias would make the sample not representative of the entire commodity universe. The survey results would be skewed and this kind of bias would hamper the port's ability to make the best decisions based on risk analysis.

Setting Up a Process

Setting up a process of selecting representative samples for each of the commodities will be one of the biggest challenges in AQIM. Because each port has its own unique set of circumstances in cargo operations, the port must individualize its random sampling process. It will be necessary to document the process and possibly ask for feedback from other maritime cargo ports, regional AQIM coordinators or Port Operations staff who have experience in selecting random samples in the cargo environment. The port may even decide that the Port Risk Management Team determine and review the random sampling process on a regular basis.

The Unit Of Sampling

For maritime cargo, the sample unit is the container or container equivalent of the commodity. A container equivalent is defined as the number of pallets of a commodity (20) that would fill a 40 foot container. It is crucial that the sample unit is inspected closely enough to detect any actionable pests and any smuggling of prohibited agriculture commodities. Summary inspection procedures for maritime cargo begin on page 5-6. The procedures must be followed exactly in order for the monitoring estimates to be valid and useful.

Consistency of Data Collection

It is crucial that the monitoring results from the inspection of a random sample unit are recorded accurately and consistently. Because each sample represents many other units, all officers must be as consistent as possible in following the inspection procedures.

Regulated commodities pose a special challenge. If the sample selected is a regulated commodity, it is important to understand the following:

Cargo monitoring estimates the number of containers approaching the work location with commodity pest infestation levels requiring action by PPQ. AQIM uses risk-based inspection procedures for detecting a 10 percent or more pest infestation rate. This initial threshold is used to estimate the number of containers approaching a work location with a pest threat.

NOTICE

This 10 percent infestation level may change as the data for AQIM is collected and analyzed

To be 95 percent sure that the officer inspecting the sampled container will find the pest, when the shipment is infested at a 10 percent infestation or more level, the officer must select, at random, a specific number of boxes in the shipment. Determine this number of boxes by using the hypergeometric table illustrated in **Table 5-1**. Each of these boxes must be inspected at level of intensity to ensure that:

- No hitchhiker pests are present in the box,
- No internal feeding insects are present in randomly selected fruit in the box
- No mismanifested or smuggled items are present

TABLE 5-1: Hypergeometric Table For Random Sampling In Commodity Inspection

Total Number of Boxes Inside Sample Container	Number of Boxes to Select at Random From the Container and to Inspect to Detect Pests
1-10	10
11-12	11
13	12
14-15	13
16-17	14
18-19	15
20-22	16
23-25	17
26-28	18
29-32	19
33-38	20
39-44	21
45-53	22
54-65	23
66-82	24
83-108	25
109-157	26
158-271	27
272-885	28
886-200,000	29

Officers should follow normal inspection procedures of the commodities to determine pests. For example, officers should cut fruit to detect internal feeders if external evidence is present

Maritime Cargo Procedures Summary

MARITIME CARGO AQIM PROCEDURES	
Commodity	Random Sample of one or more of the following categories (non-frozen cargo & excluding pre-cleared cargo)(Cargo categories are to be monitored in FY 2004) : **Commercial Perishable Agricultural Cargo** (This category is defined as any commercial shipment of fresh fruit or vegetables.) (Sampling to take place at the ports of Brooklyn NY, Elizabeth NJ, Ft. Lauderdale FL, Long Beach CA, Miami FL, Wilmington DE, Philadelphia PA, and Houston TX) **SWPM (Soild Wood Packing Material)** (Sampling to take place at All Ports that receive SWPM in cargo shipments) **Italian Tile Container Cargo** (Sampling to specifically take place at the ports of Baltimore MD, Charleston SC, Chicago IL (maritime rail), Elizabeth NJ, Houston TX, Norfolk VA, Miami FL, and Savannah GA) dasheens: all countries
Cargo Population Definition	All containers (or container equivalents) carrying the above commodities destined to US. This does not include precleared and frozen commodities. Also it does not include commodities with mandatory treatments at port of entry. Note: Commodities with mandatory cold treatments are included.
Sample Size	For **Commercial Perishable Agricultural Cargo,** select two (2) containers (or container equivalent) per week per port. (Excludes cut flowers. pre-cleared, and mandatory treatment cargo) For **SWPM (Solid Wood Packing Material,** select two (2) containers per week per port as All Ports that receive SWPM in cargo shipments. For **Italian Tile Container Cargo,** select two (2) containers per week per port required (and as tile is seasonality available) **Contact Regional AQIM Risk Mgmt Program Mgr. for assistance.****
Sample Selection	Port discretion, random time, skip intervals, etc. May need to first determine the total number of shipments of a commodity received at a port in one year. If commodity is seasonal, then sampling should be planned to occur during the full import season of commodity, if reasonable for the number of samples needed.

MARITIME CARGO AQIM PROCEDURES	
Inspection Methology	Each selected shipment requires a physical inspection at port or consignee premise. Boxes for inspection must be taken from random locations throughout the container to detect a 10 percent level of infestation (at 95% confidence). The number of boxes shall be set using **Table 5-1**. Entire contents of boxes selected and available floor space of the container shall be inspected for agricultural pests or mismanifested or smuggled items. For **Commercial Pershable Agricultural Cargo**: 1. Inspect cargo usiing appropriate AQIM hypergeometric inspection prodecures for each sample. 2. Record all needed data on appropiate FY 2004 AQIM data worksheet For **SWPM (Soild Wood Packing Material)** and **Italian Tile Container Cargo**: 1. Inspection of cargo and SWPM is to assure observation of as much SWPM as cargo will allow. Partial oor full de-vanning may be necessary based on situation and judgement of inspector. 2. Record all needed data on appropriate FY 2004 AQIM data worksheet
Other Issues	Inspections shall be conducted during the normal business hours at the port. Costs for OT clearance will be paid by the shipper/broker/ consignee. Need to advise shippers, importers, and brokers that random sampling and inspection will be part of day-to-day operations. They should understand that there is a probability that their shipment will be intensely inspected.
Regional AQIM Risk Management Managers:	Western Region - Judy Pasek: 970-494-2523 Eastern Region - Calvin Shuler: 919-716-5591

Pathway Monitoring Maintenance and Quality Assurance

Port managers and local AQIM coordinators are responsible for ensuring that monitoring activities are being performed and performed properly. To help with reviewing the status of monitoring activities, refer to Appendix L, Pathway Monitoring Maintenance, in the AQIM Handbook. This appendix contains a checklist of questions port managers and local AQIM coordinators should periodically answer to ensure proper monitoring of each designated pathway at their work locations. **See** Figure L-1. The questions review the following topics:

- Random sampling
- Proportional sampling
- Adequate sampling

- Accurate and complete data
- Working risk committees
- Local support

Maritime Cargo Worksheet

There is one worksheet for recording information gathered from your inspection of Maritime cargo for the purpose of AQIM. Be sure to record the commodity being inspected properly.

http://www.aphis.usda.gov/ppq/manuals/pdf_files/AQIM_in_PDF/Maritime_Cargo.pdf

5

AQIM Handbook

Maritime Cargo

Data Collection and Maintenance

Introduction

Traditionally, PPQ based our work on how much cargo we inspected and on the number of pest interceptions found on cargo. We inspected cargo, found pests, and tallied them to justify good job performance. AQIM emphasizes work efforts based on the potential threat posed by foreign pests and quarantine material.

By sampling a set number of samples from each cargo stratum, PPQ is able to get precise estimates of the number of cargo containers with pests approaching. It is then easier to make comparisons which help the port understand how effectively it manages the pest risk in each cargo grouping, and therefore, for the cargo universe.

Every PPQ port needs to be involved in AQIM. Each port has a group of managers, supervisors, and officers who manage results monitoring and the subsequent risk management functions at the port. All PPQ personnel are involved and supportive of the process.

The expected results are that PPQ will have results monitoring systems in place that will meet the needs of management and the requirements of the GPRA.

Epi Info User Guide for Data Entry– Maritime Cargo

NOTICE

When first using Epi Info, thoroughly read the user guide to become familiar with entering data into each of the data fields.

General Instructions

After **each data entry session** make a back up of the data records file, CGMMRT.REC, to a computer disk. See Appendix G for procedures for backing up monitoring data.

1. Press [**CAPS LOCK]** (to ensure typing capital letters).
2. Be sure to start at C:\ prompt. Epi Info is a DOS program.
3. Change to the Epi Info directory. Type: **CD EPI6** then Press [**ENTER**].
4. Start Epi Info program. Type: **EPI6** then Press [**ENTER**].

5. Wait several seconds, the Main Menu will appear with the word Program highlighted.
6. Press [**P**] (to list Program menu).
7. Press [**N**] (to choose **ENTER** from Program menu).
8. Cursor should be in space below the phrase "Data file (.REC)".
9. Type in the space the cursor is in: **02CGMMRT**.
10. Press [**ENTER**] **3 times** (to load files for data entry).
11. Data entry screen for Cargo Strata should appear.

Help Statements

Read the following help statements before entering data:

- Each data entry screen represents only one monitoring inspection. After correct data entry is made and saved, this becomes a record for that one inspection.
- Some data fields will automatically advance the cursor after entering data, some require pressing the enter key to advance the cursor after entering data.
- Some data fields will be skipped depending on the strata.
- Data entry messages and valid data values for each data field appear at the bottom of the screen or by pressing **[F9].**
- If an error is made and the cursor has left the data field, use the Up (↑) and Down (↓) arrow keys to move from field to field in order to change or correct data fields already entered.
- **DO NOT PRESS F6 to delete a record**. Despite the screen label, this does not delete the record, it only places an asterisk on the record number. Epi Info will ignore records with an asterisk when doing analysis commands. To eliminate the unwanted record from the data file, type over the unwanted record with a new record.

Enter Data

Read the following as you enter data to become familiar with each of the fields.

Cargo Type—With the first record, you will need to complete this data field. For each record thereafter, this field will repeat. This field is automatically filled in, if not contact the local AQIM Coordinator. This field is used for analysis purposes.

Pier/terminal—Enter the pier/terminal. Be consistent with spelling.

MRTRECNUM—Do not enter data in this field. This field is automatically filled in. THIS FIELD WILL SERVE AS THE "OFFICIAL" PERMANENT RECORD NUMBER. DO NOT USE THE NUMBER LOCATED IN THE LOWER RIGHT HAND CORNER OF THE SCREEN TO IDENTIFY A RECORD.

A) Commodity—Press **[F9]** choose a commodity. If you cannot find the desired commodity, select the "other" data field. Then, write the desired commodity in the "other" field.

B) Date—Enter date of inspection from the data form in MM/DD/YYYY format.

C) Consignee—Enter the consignee of this shipment.

D) Carrier—Enter shipping line and vessel name.

E) Cargo Origin—Press [**F9**] to open window of valid country names. Type the first and second letters of the country name in order to scroll down the list faster. Use Up (↑) and Down (↓) arrow keys to highlight the country name. Press [**ENTER**] to select it. Note, if you are unable to determine origin, then select a region such as Asia, Middle East.

OrgnCode—Do not enter data in this field. This code is entered automatically. Press [**ENTER**] to advance the cursor and automatically fill in the data fields Reg Code and World Region.

Reg Code—Do not enter data in this field. This code is entered automatically.

World Region—Do not enter data in this field. This code is entered automatically.

F) Destination—Press [**F9**] to open window of valid destination names. Type the first letter of destination name in order to scroll down the list faster. Use Up (↑) and Down (↓) arrow keys to highlight correct choice. Press [**ENTER**] to select the destination.

G) Description Group—(for regulated cargo only) Enter general group recorded on data form (I).

Cargo Count (Num)—Enter the amount of cargo units (boxes, cartons, bags, etc.).

H) Cargo Weight (KG)—Enter the amount of cargo by recording the weight in kilograms.

I) Amt. Insp (Num)—(for regulated cargo only) Enter the number of singular units sampled and inspected (boxes, bags, cartons, etc.).

J) Inspection Method—Enter the inspection method circled on the data form. Valid values for the methods are listed at the bottom of the screen.

K) Solid Wood Packing (SWP)—Enter either N(no) or Y(yes).

- If Y: Cursor will proceed to next data field (SWP Type)
- If N: Cursor will jump to "Require Action Beyond Inspection to Reduce Risk?"

1. SWP Type—Press [**F9**] to open window of valid SWP types. Use Up (↑) and Down (↓) arrow keys to highlight the correct type. Press [**ENTER**] to select it.

2. Amount of SWP Inspected— %Enter percentage of SWP inspected.

3. Bark on SWP—Enter either N(no) or Y(yes) response from the data form.

4. SWP Fumigation Certif. or Other Treatment presented—Enter either N(no) or Y(yes) response from the data form.

Required Action Beyond Inspection to Reduce Risk?—Enter either Y(yes) or N(no):

- If Y: cursor will proceed to next data field.
- If N: then cursor will jump to bottom of screen asking the question: "Write data to disk (Y/N/<Esc>)?" If data entry is correct and complete, answer Y to this question and the data screen will renew for the next record entry.

1. Intended Use of Cargo—Press [**F9**] to open window of valid uses. Use Up (↑) and Down (↓) arrow keys to highlight correct use. Press [**ENTER**] to select it.

2. Action Pest—Enter either **Y**(yes) or **N**(no):

- If Y: cursor will proceed to the next data field.
- If N: Cursor will jump to "3. Contaminant Found?".

Cargo Item—Enter the cargo item that the pest was found on, include cargo conveyance as an option, if appropriate. NOTE: When recording:

- Use the singular form (except for leaves)

- Use precise descriptors: fresh, dried, frozen, etc.
- Describe using common English names, if possible
- DO NOT use the general descriptors **cucurbit, bean, or rubus sp.** Break down these descriptions to more detailed items, if possible.

Pest ID—System will automatically enter NONE (for no pest found).Enter the identified pest name (genus/species).

Pest Intercep. Num—System will automatically enter NONE (for no pest found). Enter the pest interception number assigned to the pest. This number maybe assigned later or by another office. **If pest interception number assignment is delayed, then enter the letters "TBA" (To Be Assigned).** When TBA is used, be sure to note the permanent record number in the upper right corner of screen so updating can be done.

Where found:WFA—Enter where the pest was found in relationship to the container/conveyance that the cargo arrived in. See the valid values to enter at the bottom of the screen.

WFA—A second field for where the pest was found if the pest is found in more than one of the locations listed.

Cont (Continue)

- Type: **Y** if additional pests and cargo items ARE to be entered. Press [**ENTER**] to leave field and continue on. (Cursor jumps down to next cargo item field. You can enter up to three cargo items in a record.)
- Type: **N** if no other items are to be entered in this record. Cursor will jump to "3. Contaminant Found?".

3. Contaminant Found?—Enter **N**(no) or **Y**(yes) to indicate if a contaminant was present with the cargo. IF **YES**, be sure to enter the contaminant information after answering next data field.

4. Agr. Item Mismanifested/Smuggled?—Enter **N**(no) or **Y**(yes) to indicate if any mismanifested or smuggled items were found with the cargo.

- If **Y**: then cursor will proceed to next data field.

- If **N** and
  - if **Yes** to previous Contaminant question, cursor will move to next data field.
  - if **No** to previous Contaminant question, cursor will jump to the bottom of the screen asking the question: "Write data to disk (**Y/N/<Esc>**)?". If data entry is correct and complete, answer **Y** to this question and the data screen will renew for the next record entry.

Contaminant/Item—

- If Contaminant: Enter the contaminant name and the cargo item (cargo conveyance) it's associated with. (Soil on yams, manure on truck, etc.)
- If Mismanifested/Smuggled: Enter the items found.

Cnt (Cargo Count)—Enter the amount in singular units (boxes, cartons, bags, etc.), if appropriate.

Wght, KG—Enter the amount of listed contaminant or mismanifested/smuggled item in kilograms. Enter best accurate estimate, if necessary.

Prohibited—Enter if contaminant or mismanifested/smuggled item is prohibited because of a regulation or quarantine.

Where found:WFA—Enter where the contaminant or mismanifested/smuggled item was found in relationship to the container/conveyance that the cargo arrived in. See the valid values to enter at the bottom of the screen.

WFA—A second field for where contaminant or mismanifested/smuggled item was found if found in more than one of the locations listed.

MO—Do not enter data in this field. This field is filled automatically with the numeric value of the month. This field is used for analysis purposes.

Cont (Continue)

- Type: **Y** if additional pests and cargo items ARE to be entered. Press [**ENTER**] to leave field and continue on. (Cursor jumps down to the contaminant/item field).
- Type: **N** if no other items are to be entered in this record. Cursor will jump to "Write data to disk (**Y/N/<Esc>**)?"

- Type: **Y** if data entry is complete for this record. Record will be saved to the record's file.
- Type: **N** if you wish to make changes or corrections to the record field. After making changes or corrections remember to return the cursor to the last completed data field. Press [**ENTER**] to return to the prompt "Write data to disk (**Y/N/**<**ESC**>)?"

When finished with data entry

1. Press [**F10**] to return to the main start up screen.
2. Press [**F10**] again to leave Epi Info and return to the regular computer screen.

Important

After each data entry session, make a back up of the data records file, **02CGMMRT.REC**, to a computer disk. See **Appendix G** for back up instructions.

Maritime Cargo

Data Analysis

Survey Results and How To Use Them

AQIM Activities have been put into place to develop baseline data to help answer two basic questions:

1. What is the threat of agricultural pests approaching ports? What is the level of infestation of the pests in the cargo?
2. How effective is the AQI program at managing this threat?

Preliminary results for maritime cargo surveys provide a general answer for question 1. That is, there are varying rates at which prohibited agricultural materials or cargo units infested with an agricultural pest approach the ports. Surveys show that at some ports about 1.5 percent of the container units carried actionable pests in the past year, while other work locations show rates as high as 20 percent.

These percentages are an approximation of agricultural pest threat. Further analysis of the monitoring data is needed to determine the risk associated with maritime cargo approaching the work station. The origin and destination of the cargo are important to determine risk levels. Also, whether or not the cargo carries an actual agricultural pest or smuggled item is crucial in analyzing risk.

Analyses of the monitoring data need to occur at several levels of PPQ. At the ports, PPQ personnel need to study what the data means and answer the first question for their specific location. Analysis tools are available to help with these analyses, which are explained in the next subsection. At the same time, PPQ holds risk analysis workshops around the country to introduce risk analysis concepts. At some ports, teams of PPQ officers and managers form Risk Management Teams to look at monitoring data and other data, which are normally collected at the location.

At other locations, analyses of monitoring data occur to establish rates at which quarantined items and agricultural pests are approaching the borders of States, areas of the country, and the United States.

Once baseline rates are well established, PPQ can use the monitoring data as a baseline to answer the second basic question: How effective is the AQI program at managing the risk of introduction of agricultural pests and diseases? Again, each work location must conduct this type of analysis. AQIM provides a framework which work locations can use to carry out the analysis.

Analysis Tools

There are two tools available for analyzing AQI monitoring data. One is the ANALYSIS program in Epi Info. The other tool is the Short-term Reporting Tool (SRT) accessed using Netscape.

Using the SRT you can look at data entered for your work location, as well as for other work locations within a State, a Region, or across the nation. Also, using the SRT you can look at WADS data to use with AQI monitoring data. Refer to **Appendix J**—Internet for guidelines on how to use the SRT.

Using the ANALYSIS program in Epi Info you can look at data entered specifically for your work location. While in Epi Info ANALYSIS, you can select a data analysis program file (*.PGM) that automatically runs a series of Epi Info commands. The program will produce various listings, tables, analysis commands, and explanatory text from data files for a designated pathway. Follow the guidelines on how to load and run data analysis program files beginning on page 5-20.

Epi Info ANALYSIS saves the analysis output to a file for viewing and/or printing. The file contains basic information that answer some of the questions to guide data analysis that follow. For questions not answered by running an automatic program, you will need to key in and run various analysis commands. Follow the Epi Info User Guide for Data Analysis-Maritime Cargo beginning on page 5-23 to help you with the analysis commands.

Questions to Guide Data Analysis

1. How many containers were selected for sampling during the survey period?

   How many actions were required on containers sampled?

   How many actions by strata category sampled were there?

   What is the action approach rate of containers that require action (number of containers requiring action divided by total containers in the sample)? What are the action approach rates by strata category?

2. How many pest interceptions (actionable pests) were made from survey samples?

Pest approach rate: What is the rate of pest interceptions in relation to the total sampled number of containers (number of containers with actionable pests divided by number of containers total in the sample)?

3. Compare the rate of actions required for each month of the survey.

DISCUSSION:

Are these easily identified trends when the rate of QMIs transiting the port are higher?

Are there seasonal trends?

Do higher rates correlate with national or religious holidays, certain types of containers, cargo, or importers?

4. Generate a listing and frequency of shipments requiring action. Which commodities present the greater risk?

Which commodities most likely require action? Where were the agricultural pests found? Which commodities involved solid wood packing (SWP) actions? What is the rate of containers with smuggled or mismanifested items?

DISCUSSION:

How effective is the current tailgate inspection process in detecting pests and/or smuggled cargo?

5. What types of shipments (refrigerated, mixed vegetables, dry containers, empties, cut flowers, express carriers, etc.) require higher rates of action?

DISCUSSION:

What selectivity factors are currently used to identify shipments likely to require action?

What additional selectivity factors would be used to identify shipments likely to require action?

Do the survey results indicate additional factors that help identify shipments most likely to require action?

6. Using monitoring data, apply the survey results to the cargo universe at the port to estimate the number of actions required and interceptions likely to transit the port during the same time the survey period took place.

How many containers arrived at the port during the survey period? Using the action approach rate for containers requiring action, calculate an estimate of the number of containers transiting the port that are likely to require action. What are the estimates per strata category?

Using WADS data, how does the estimated number of actions required compare with the reported number of actions taken?

How many additional actions may have been required during the survey period?

How does the estimated number of actionable pest interceptions compare with the reported number of actionable pests on WADS?

DISCUSSION:

What percentage of resources are dedicated to staffing AQI activities for maritime cargo at this port?

What is the relative risk of maritime cargo compared with other pathways in the port?

Should resources be reallocated among all the pathways in the port to better address the relative risk of the pathways?

How to Load and Run Data Analysis Program Files

Data analysis program files are meant to provide only listings, tables, and explanatory text about the monitoring data gathered at work locations. The program files are not intended to be used an final analysis tools. The outputs from these program files should raise further questions and discussion by local personnel and risk management committees.

NOTICE

Each year the AQIM National Team reviews, discusses, and decides about suggested improvements (additions, removals, changes) to the baseline data fields based on analysis and operational needs. A summary of the changes made during previous fiscal years to data fields for the maritime cargo pathway begin on **page 5-27** under Maritime Cargo Epi Data Translation. Use the summary to identify data field changes that may impact the results of an analysis report run for a particular year.

Data analysis files automatically run a series of Epi Info analysis commands. Use the following guidelines to load and run data analysis program files.

1. Determine which data analysis program file (*.PGM) you will load and run in Epi Info.

In Epi Info, ANALYSIS, there is a data analysis program file for each fiscal year of data gathered. Look at the table below to identify the file to load and run depending on which fiscal year's data you are analyzing.

If you want to analyze data for:	Then load and run the following Epi Info ANALYSIS data analysis program file (*.PGM):
FY 1998	CGMMRT98.PGM
FY 1999	CGMMRT99.PGM
FY 2000	CGMMRT2K.PGM
FY 2001	CGMMRT01.PGM
FY2002	CGMMRT02.PGM

2. Get ready to run a data analysis program file.

A. Press [**CAPS LOCK]** (to ensure typing capital letters).

B. Be sure to start at C:\ prompt. Epi Info is a DOS program.

C. Change to the Epi Info directory. Type: **CD EPI6**, then Press [**ENTER**].

D. Start Epi Info program. Type: **EPI6**, then Press [**ENTER**].

E. Wait several seconds, the Main Menu will appear with the word Program highlighted.

F. Press [**P**] (to list Program menu).

G. Press [**A]** (to choose ANALYSIS from Program menu).

H.

If you are running:	Then:
A data program analysis file using Epi Info, ANALYSIS	CONTINUE to **Step 3.**
Further analysis commands using Epi Info	GO to the **Epi Info User Guide for Data Analysis–Maritime Cargo** beginning on **page 5-23**

3. Run the selected data analysis program file (*.PGM) from Step 1..

You should be at the Epi Info ANALYSIS screen. If not, review Step 2.

NOTICE

To leave the analysis mode at any time, Press [F10]

A. At the EPI6 command prompt, Type: **RUN FILENAME**, where FILENAME is the *.PGM file you selected in Step 1. For example, if you are analyzing data gathered in Fiscal Year 2000, then you would enter at the command prompt: **RUN CGMMRT2K.PGM**

Then Press [**ENTER**]

If you:	Then:
See the following prompt at the bottom of the screen: "Press enter key to pick the records file you want to analyze"	1. Press [ENTER]. A window appears with a listing of *.REC files. 2. GO to **Step B.**
Do not see the prompt stated in the cell above	DO the following 3 steps

i. Type: **RUN**, then Press [**ENTER**]. A window appears with a list of *.PGM files.

ii. Using the Up (↑) and Down (↓) arrow keys, search and highlight the program file name you want to run (for example, CGMMRT2K.PGM), then, Press [**ENTER**].

NOTICE

If you cannot locate the file name you are looking for, then contact your local AQIM coordinator. If they are not available, then contact the National AQIM Coordinator.

iii. When the following prompt appears at the bottom of the screen: "Press enter key to pick the records file you want to analyze,"

Press [**ENTER**]. A window appears with a listing of *.REC files.

Go to **Step B.**

B. Using the Up (↑) and Down (↓) arrow keys, highlight the records file for the desired fiscal year.

Important

The program file (*.PGM) must match the records file (*.REC). When you are sure,

Press [**ENTER**].

C. You are prompted for a file name where the program will save the output. (An example is given on the screen using a three-letter port code and the date.)

Type **FILENAME**, where FILENAME is the file name you have created to save the program output. Then, Press [**ENTER**].

D. You are prompted to enter the date that is **one day before** the date you want the program analysis to start. (The analysis program analyzes records between two given dates, but does not include the given dates. Therefore, you must enter the dates of the days just before and after the dates you want included in the analysis.)

For example, to analyze Fiscal Year 2000 data, you would enter 09/30/1999 (one day before the beginning of Fiscal Year 2000).

Type the start date following the format (MM/DD/YYYY), where it is one day before the date you want the program analysis to start, then Press [**ENTER**].

E. You are prompted to enter the date that is **one day after** the date you want the program analysis to end.

Type the end date following the format (**MM/DD/YYYY**), where it is one day after the date you want the program analysis to end, then Press [**ENTER**].

4. The program will begin analyzing. You will see the program's output scroll quickly on the screen. It is being saved tot he file name you specified in Step C..

5. The program is finished when the cursor returns to the EPI6> prompt. At this time, you may want to do any of the following:

If you want to:	Then:
View or print the program output file	1.Press [**F10**] to exit Epi Info. 2.Use a word processing program, such as WordPro to view and/or print the file. **NOTE**: The file usually is in the C:\EPI6 directory saved in an ASCII (DOS) text file format.
Run a data analysis program file or another fiscal year's data	Return to **Step 1.** at the beginning of this subsection to decide which program file to run.
Continue with further analysis commands using the Epi Info User Guide for Data Analysis	Go to the **Epi Info User Guide for Data Analysis– Maritime Cargo** beginning on **page 5-23**
Exit Epi Info, ANALYSIS	Press [**F10**]
Exit Epi Info	Press [**F10**] twice

Epi Info User Guide for Data Analysis– Maritime Cargo

When first doing analysis commands in Epi Info, thoroughly read the user guide to become familiar with basic analysis procedures to use with the monitoring data at your work site.

Get Ready

1. You should be at the Epi Info, ANALYSIS screen. If not, refer to Step 2., getting ready to run a data analysis program file, under How to Load and Run Data Analysis Program Files on page 5-20.
2. Press [**F2**] (to list Commands menu).
3. Use the arrow keys to move the cursor to the READ command.
4. Press [**ENTER**] **twice** (to get a list of .REC files which can be analyzed).
5. Use the arrow keys to move the cursor to highlight **02CGMMRT.REC**.
6. Press [**ENTER**] (to bring the *.REC file you have chosen into the Analysis screen).
7. Press [**F4]** (to browse the data records in the file).
8. Use the arrow keys to look over the data to make sure it has been entered properly during the past month. (In subsequent months, you will want to browse through the entire file to see that all months of data have been properly entered, repeated fields such as workunit are consistently the same.)

   To view only one individual record press [**F4]** again to see the entire record as it was originally entered. If it is necessary to make changes to the record, **note the Epi Info record number in the lower right corner of the screen.**

   If you want to edit, correct, or change this record, go to "Edit Records:" on page 5-26

Analyze Records

9. Press [**F10**] (to return to the main Analysis screen).
10. Press [**F2**] (to see a list of analysis commands).
11. Use the arrow keys to move the cursor to FREQ (frequency) and Press [**ENTER**].
12. Press [**F3**] (to see a list of data variables). To better understand the variables list, refer to page 5-27 for a list of data variable translations for the current FY and a summary of previous FYs.
13. Use arrow keys to highlight the data variable you wish to know the frequency of.

    Press [**ENTER**] **twice** and you will get a frequency table

EXAMPLE: If you want to know which carriers had shipments sampled, move the cursor to CARRIER and Press [**ENTER] twice.** You will get a table showing the number of records entered into the database for each carrier sampled in the survey.

14. Explore the database by doing FREQ commands for as many data variables as is logical. By doing this you will begin to understand the survey data and see some patterns in the data.

For each variable, use the F2 and F3 keys to choose the FREQ command and variable of interest, or type the word FREQ and the data variable names directly at the Analysis prompt.

15. To explore graphic commands: (The PIE command is one of several graphics commands which allow you to analyze the variables with graphs. This may make it easier to see patterns in the data and to understand the survey results.)

Press [**F2**] again and choose the PIE command with the cursor. Press [**ENTER**].

Press [**F3**] and select a data variable of interest from your data exploration in the FREQ analysis (Step 10.-10.).

Press [**ENTER**] **twice** and you will see a pie chart on your screen which might help you understand a pattern in the data.

EXAMPLE: For example, if you have chosen the CARRIER variable for a pie graph, then you may see that a larger percentage of samples were taken from one carrier, which may cause you to question the sampling procedures.

To leave the graph screen and return to the main screen, Press **<ESC>.**

16. Further FREQ exploring.

To see the numbers and kins of items carrying pests from random shipment inspections, Press [**F2**] to list commands.

Highlight FREQ and Press [**ENTER**]**.** (You will next "tag" more than one data variable to move these variables to the analysis command line.)

Press [**F3**] to list data variables, highlight CARGOITEM, and "tag" this variable by pressing: **SHIFT** and (+). A small arrow will appear next to CARGOITEM.

Next, highlight the variable CARGOITE01 and "tag" it. Do the same for CARGOITE02.

The analysis command line should appear: EPI6> FREQ CARGOITEM CARGOITE01 CARGOITE02.

Press [**ENTER**]. The output screen should display counts of items for each of the cargo item data lines for all records. Adding up the counts of the items will provide a category breakdown of the agriculture items carrying actionable pests during random sample inspections.

17. Further exploration. Two other commands (**F2 TABLES**, **F2 SELECT**) are very useful to explore the survey data and to begin answering questions you may have after using the FREQ and PIE commands.

18. To continue working with the subset of records established in Step 17.

Press [**F2**]. Move cursor to **FREQ**. Press [**ENTER**].

Press [**F3**]. Choose **ORIGIN**. Press [**ENTER**] **twice.** You will get a table that lists the frequency of sampled records from each country of origin.

Do a PIE ORIGIN analysis command to get a graphic picture of which countries the random shipments are coming from.

19. Press: Up (↑) arrow to move the command line cursor to the FREQ ORIGIN command.

Type: \C. Press [**ENTER**]. The new table will give a statistical analysis with 95 percent confidence intervals.

20. Type on the command line [**TABLES ORIGIN ACTIONPEST**]. (Or use the **F2** and **F3** keys to select the TABLES command and the two variables.)

Press [**ENTER**]. You will get a table which shows the frequency that actionable pests are being found in the samples from various origins.

This analysis can be used to further understand the cargo risk.

Edit Records:

E1. Press [**F10**] **twice** (to get back to the main EPI6 program menu).

E2. Press [**P**] (to list Program menu).

E3. Press [**N**] (to get to the Edit menu).

E4. Press [**F9**] (to list .REC files).

E5. Use arrow keys to highlight appropriate .REC file.

Press [**ENTER**] **four times** to get to the data entry screen for this file.

E6. Press [**CONTROL**] **and F** at the same time (to find the record which needs editing).

E7. Press [**F2**] and then **type the number** of the record you need to edit.

E8. Press [**ENTER**] (to get to the record you need to edit).

E9. Make corrections to the record, using the Up (↑) and Down (↓) arrow keys to move from field to field.

When finished editing, Press [**F10**], and answer **YES** to the question (at the bottom of the screen) that asks to write the edited record to the data file.

Return to the beginning of the user guide on page 5-23.

Maritime Cargo Strata Epi Data Translation

Core Data Fields for the Current Fiscal Year

VARIABLE NAME	SCREEN NAME
CARGOTYPE	Cargo Type:
PORT	Port:
PIERTERM	PIERTERM:
MRTRECNUM	MRTRECNUM: (Permanent record number)
STRATA	Strata: (name of cargo port or pathway strata)
COMMODITY	A) COMMODITY:
OTHER	OTHER:
DATE	B) Date:
CONSIGNEE	C) Consignee:
CARRIER	D) Carrier:
ORIGIN	E) Cargo Origin:
ORGNCODE	OrgnCode:
REGCODE	RegCode:
DESTINATIO	F) Destination
WORLDREG	World Region:
MA	Manifest As MA:

VARIABLE NAME	SCREEN NAME
MA01	MA:
MA02	MA:
DESGROUP	G) Description Group:
CARGOCOUNT	H) Cargo Count:
CARGOWEIGH	Cargo Weight(KG):
AMTINSP	I) Amt. Insp: (Amount of cargo that was inspected)
INSPECMETH	J) Inspection Method
SWP	K) Solid Wood Packing (SWP):
SWPTYPE	1. SWP Type:
SWPINSP	2. Amount of SWP Inspected %:
BARKONSWP	3. Bark on SWP:
SWPFUMCERT	4. SWP Fumigation Certif. Or Other Treatment presented:
REQACTION	L) Require Action Beyond Inspection to Reduce Risk?
USECARGO	1. Intended Use of Cargo:
ACTIONPEST	2. Action Pest: (Actionable Pest Found)
First Pest Information:	
CARGOITEM	Cargo Item:
PESTID	PestID:
PESTNUM	Pest Intercep. Num:
WFA	Where Found:WFA:
WFA01	FA: (Second recording for more than one Where Found Location)
CONT	Cont: (Continue to next Second Pest Information)
Second Pest Information:	
CARGOITE01	Cargo Item:
PESTID01	PestID:
PESTNUM01	Pest Intercep. Num:
WFA02	Where Found:WFA:
WFA03	WFA: (Second recording for more than one Where Found Location)
CONT01	Cont: (Continue to next Third Pest Information)
Third Pest Information:	
CARGOITE02	Cargo Item:
PESTID02	PestID:
PESTNUM02	Pest Intercep. Num:
WFA04	Where Found:WFA:
WFA05	WFA: (Second recording for more than one Where Found Location)

VARIABLE NAME	**SCREEN NAME**
CONTMFOUND	3. Contaminant Found?:
MISMANSMUG	5. Agr. Item Mismanifested/Smuggled?:
First Contaminant/Mismanifested or Smuggled Information:	
CONTMITEM	Contaminant/Item:
CNT	Cnt: (Cargo Amount, count of boxes, cartons, units... etc.)
WGHT	Wght,KG:
PROHIBITED	Prohibited: (Prohibited by Regs or Quarantine #)
WFA06	Where Found:WFA:
WFA07	WFA: (Second recording for more than one Where Found Location)
CONT02	Cont: (Continue to next Item Information)
Second Contaminant/Mismanifested or Smuggled Information:	
CONTMITE01	Contaminant/Item:
CNT01	Cnt: (Cargo Amount, count of boxes, cartons, units...etc.)
WGHT01	Wght,KG:
PROHIBIT01	Prohibited: (Prohibited by Regs or Quarantine #)
WFA08	Where Found:WFA:
WFA09	WFA: (Second recording for more than one Where Found Location)
MO	MO: (month)

Summary of Data Field Changes Made During Previous Fiscal Years

For Fiscal Year:	The following additions, changes, and removals were made to the data fields:
2001	Additions: REGCODE=Reg Code WORLDREG=World Region DESCGROUP=Description Group
	Changes: The order of the data fields was reversed for cargo weight and count. CARGOCOUNT used to be CARGOWEIGH CARGOWEIGH used to be CARGOCOUNT CNT used to be WGHT WGHT used to be CNT CNT01 used to be WGHT01 WGHT01 used to be CNT01
	Removals: REFERREDTO=Referred To MA03=Manifested As
1999	Additions: MRTRECNUM=MRTRECNUM MA01=Manifested As MA02=Manifested As MA03=Manifested As INSPECMETH=Inspection Method SWP=Solid Wood Packing (SWP) SWPTYPE=SWP Type SWPINSP=Amount of SWP Inspected % BARKONSWP=Bark on SWP SWPFUMCERT=SWP Fumigation certif on Other Treatment presented MO=MO
	Changes: MA used to be MANIFESTAS
	Removals: TIME=Time IDENTNO=Ident Cntr No COUNTMFOUN=COUNTMFOUND

For Fiscal Year:	The following additions, changes, and removals were made to the data fields:
2002	**Additions:** Commodity: Other:
	Removals: Strata: Cargo category: MA MA01 MA02

6 Mail Facility

AQIM Handbook

Introduction

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Background

During the past decade, the arrival of air and surface foreign mail has increased significantly. The various agricultural items that foreign mail can potentially carry is staggering. These agricultural items can pose significant exotic pest and disease risks to U.S. agriculture. Therefore, PPQ is using AQIM to randomly sample foreign mail enabling it to determine the potential threat of foreign mail. For monitoring purposes, this pathway does not include packages moving via express carrier services such as DHL and Federal Express.

Each work location that services a mail facility will randomly sample air and surface foreign mail arriving at that location. The data collected from the random sampling will help to answer the following questions:

1. What is the threat of agricultural pests approaching the work location via this pathway?
2. How effective is the AQI program at managing this threat?

In order to determine risk levels, the origin and destination of foreign mail is important, as well as, whether agriculture items in foreign mail carry any pest or disease.

While each mail facility has a differing amount of foreign mail, the same criteria for sampling foreign mail applies to all mail facilities. By consistently taking random samples of foreign mail, PPQ will be able to depict any emerging pest threat by this pathway. The combined data from all work locations that service mail facilities will help PPQ determine the pest risk of agricultural items carried in the universe of foreign mail.

Monitoring foreign mail is an ongoing PPQ function and is an integral part of the AQI program. The ongoing sampling of foreign mail will allow work locations to adjust their selection criteria for the present and the future. Also, monitoring helps PPQ measure how well its workforce is accomplishing the mission to exclude exotic pests and diseases.

Pathway Monitoring Maintenance

Port managers and local AQIM coordinators are responsible for ensuring that monitoring activities are being performed and being performed properly. To help with reviewing the status of monitoring activities, refer to **Appendix L**—Pathway Monitoring Maintenance.

This appendix contains a checklist of questions port managers and local AQIM coordinators should periodically answer to ensure proper monitoring of each designated pathway at their work locations. See **Figure L-1**. The questions review the following topics:

- Random sampling
- Proportional sampling
- Adequate sampling
- Accurate and complete data
- Working risk committees
- Local support

Mail Facility Worksheet

On the next page, there are three record forms you can use to record the information gathered for AQIM purposes from inspecting foreign mail. Feel free to remove, photocopy, and reuse the following page. The worksheet is also available on disk; contact your local AQIM coordinator. The form is also available as a fillable form; go to:

http://www.aphis.usda.gov/ppq/manuals/pdf_files/AQIM_in_PDF/Mail_Facility.pdf

6 Mail Facility

AQIM Handbook

Data Collection and Maintenance

Epi Info User Guide For Data Entry– Mail Facility

NOTICE

When first using Epi Info, thoroughly read the user guide to become familiar with entering data into each of the fields.

General Instructions

At completion of **each data entry session** make a back up of data records file, **AQIMAIL.REC**, to a computer disk. See Appendix G for procedures for backing up monitoring data.

1. Press [**CAPS LOCK]** (to ensure typing capital letters).
2. Be sure to start at C:\ prompt. Epi Info is a DOS program.
3. Change to the Epi Info directory. Type **CD EPI6**, then press [**ENTER**].
4. Start Epi Info program. Type **EPI6,** then press [**ENTER**].
5. Wait several seconds, the Main Menu will appear with the word Program highlighted.
6. Press [**P**] (to list Program menu).
7. Press [**N**] (to choose ENTER from Program menu).
8. Cursor should be in space below phrase “Data file (.REC)”.
9. Type in the space the cursor is in: **AQIMAIL.REC.**
10. Press [**ENTER**] **3 times** (to load files for data entry).
11. Data entry screen for Foreign Mail should appear.

Help Statements

Read the following help statements before entering data:

- Each data entry screen represents only one monitoring inspection. After correct data entry is made and saved, this becomes a record for that one inspection.
- Some data fields will automatically advance the cursor after entering data, some require pressing the enter key to advance the cursor after entering data.
- Data entry messages and valid data values for each data field appear at the bottom of the screen or by pressing [**F9**].

- **DO NOT PRESS [F6] to delete a record**. Despite the screen label, this does not delete the record, it only places an asterisk on the Epi info record number. Epi Info will ignore records with an asterisk when doing analysis commands. To eliminate the unwanted records from the data file type over the unwanted record with a new record.
- If an error is made and the cursor has left the data field, use the Up (↑) and Down (↓) arrow keys to move from field to field in order to change or correct data fields already entered.

Enter Data

Read the following as you enter data to become familiar with each of the fields.

Workunit & Workunit Code—With the first record, you will need to complete these data fields. Place cursor in Workunit field. Press [F9] to open window of work unit names. Choose the correct work unit name. For each record thereafter, these fields will repeat the work unit, and work unit code from the previous record. You should not have to enter data in these fields. These fields are automatically filled in, if not contact your local AQIM coordinator.

Day of Week—Press **[F9]** to select day of week.

Date—Enter the date of inspection in MM/DD/YYYY format.

A) Time—Enter time of day the inspection began, use military time.

B) Mail Type—Press [**F9**] to open window of mail types. Use Up (↑) and Down (↓) arrow keys to highlight the mail type. Press [**ENTER**] to select it.

C) APO—Enter response recorded on the data form whether the package came APO mail.

D) FPO—Enter response recorded on the data form whether the package came FPO mail.

E) Mail Package Type—Enter code circled on the data form for type of package.

F) Mail Origin—Press [**F9**] to open window of country names. Type the first and second letters of the country name in order to scroll down the list faster. Use Up (↑) and Down (↓) arrow keys to highlight the country name. Press [**ENTER**] to select it.

Origin Code—Do not enter data in this field. This code is entered automatically.

G) Mail CITY/STATE Destination—Press [**F9**] to select the state. Then, enter the city name. Be consistent with spelling.

H) Referred To—Press [**F9**] to open window of referred to agencies. Use Up (↑) and Down (↓) arrow keys to highlight the agency. Press [**ENTER**] to select it.

I) Item(s) of Agriculture Interest?—Enter either Y(yes) or N(no):

- If **Y**: cursor will proceed to the next data field.
- If **N**: then cursor will jump to the bottom of the screen asking the question: "Write data to disk (**Y/N/**<**Esc**>)?" If data entry is correct and complete, answer **Y** to this question and data screen will renew for next record entry.

Item—Press [**F9**] to open window of valid item names. Type the first and second letter of the item name in order to scroll down the list faster. Use Up (↑) and Down (↓) arrow keys to highlight correct item. Press [**ENTER**] to select the item.

Code—Do not enter data in this field. This code is entered automatically. Press [**ENTER**] to advance the cursor and automatically fill in the data fields QMIType.

QMIType—Do not enter data in this field. This code is entered automatically.

ItmAmnt—I**ndicate the weight in kilograms.** Obtain or **accurately estimate** weight of items (apple, orange, etc.) whenever possible. **(1 LB is approximately.5 KGS, 3.5 ounces=.1 KGS.) For plant items (flowers, etc.) record number of stems or pieces. For items not practical for obtaining weight,** record the quantities of these that correspond to the "U" (unit field).

U(Unit of Measure)—Press [**F9**] to open window of unit values. Use Up (↑) and Down (↓) arrow keys to highlight the unit value. Press [**ENTER**] to select it.

Declared—Enter response recorded on the data form.

Action—Enter action by either typing the response or pressing F9 to open window of valid actions. Use the Up (↑) and Down (↓) arrow keys to highlight correct action. Press [**ENTER**] to select the action.

Pest Pres—Enter either [**N**](no) or [**Y**](yes) response recorded on the data form.

Contaminant—Enter either [**N**](no) or [**Y**](yes) to indicate if a contaminant was present with the item that is listed.

Pest Number—System will automatically enter NONE (for no pest found). Enter the pest interception number if assigned at your work location. This number may be assigned later or by another office. **IF PEST INTERCEPTION NUMBER IS GOING TO BE ASSIGNED BY ANOTHER OFFICE, THEN ENTER THE LETTERS "TBA" (To Be Assigned).** When TBA is used, be sure to note the permanent record number in the upper right corner of screen so updating can be done.

Pest ID/Contaminant—System will automatically enter NONE (for no pest found). Enter either the name of the contaminant or the taxonomic name of the pest found. Be sure to update this record with the pest name, if necessary.

Continue—

- Type [**Y**] if additional items ARE to be entered. Press [**ENTER**] to leave field and continue on. (Cursor jumps down to next Item field. You can enter up to two items in a record.)
- Type [**N**] if no other items are to be entered in this record. Cursor will jump to the prompt, "Write data to disk (**Y/N/**<**Esc**>)?"

Write data to disk (Y/N/<Esc>)?—

- Type [**Y**] if data entry is complete for this record. Record will be saved to the record's file.
- Type [**N**] if you wish to make changes or corrections to the record field. After making changes or corrections remember to return the cursor to the last Continue field that was N. Press [**ENTER**] to return to the prompt "Write data to disk (**Y/N/**<**Esc**>)?" Press [**Y**] to complete record.

MO—Do not enter data in this field. This field is filled in automatically with the numeric value of the month. This field is used for analysis purposes.

ANACTREQ—Do not enter data in this field. This field is filled in automatically. This field is used for analysis purposes.

TOTAL SEIZED—Do not enter data in this field. This field is filled in automatically. This field is used for analysis purposes.

When finished with data entry—

1. Press [**F10**] to return to the main start up screen.

2. Press [**F10**] again to leave Epi Info and return to regular computer screen.

Important

IMPORTANT: After **each data entry session**, make a back up of the data records file, **AQIMAIL.REC**, to a computer disk. See **Appendix G** for backup instructions.

Data Accuracy Checks and Data Corrections

Introduction

This section outlines the basic procedures to check on data accuracy, correct data, and begin basic data analysis. It is important to perform these procedures on a REGULAR basis to ensure data quality.

Do not start this correction/analysis mode until you have read the entire section, especially the last part that requires creating a new file BEFORE leaving the analysis mode.

Before Starting

Before starting the Epi Info software, copy your working Epi Info records file to the back up disk before correcting data. See Appendix G for procedures for backing up monitoring data.

To Start Corrections

1. Enter Epi Info, and

   At the first Epi Info screen, select the **Program** menu.

2. Under the Program menu, select **Analysis.**

   You should have an EPI6> prompt at the bottom of the analysis screen.

Read

1. To choose the file you would like to work with, Type **READ**, and press [**ENTER**] once.
2. A list of files should appear.

   Select the appropriate *.REC file from the list by highlighting it, and press [**ENTER**].

3. The cursor will appear at the EPI6> prompt again.

Commands

To check on data accuracy, use the following commands:

- **BROWSE**
- FREQ

BROWSE—To BROWSE the file of records:

1. Press [**F4**]. Browsing allows you to look at the records in the file you have selected.

The order of records in browse is in the order they were entered

2. While there, check for any duplicate records (records with the same date and same time). Also check for any deleted records. Deleted records will show an asterisk and usually a different shade of color. See **Delete Records** beginning on **page 6-9** to work with records that have an asterisk.

FREQ (frequency)—Start by performing frequencies on each data field.

1. Press [**F2**] (to get your list of commands).
2. Choose [**FREQ**], then
3. Press [**F3**] for a list of variables you can perform frequencies on. **Choose only one variable at a time**. Some of the variables you should start with are:

   WORKUNIT
   WORKUNITCO
   DATE
   MAILTYPE
   MAILORIGIN
   PEST NUM
   PESTNUM01
   PESTNUM02
   PESTNUM03

When you perform your first FREQ command, check the total number of records from the FREQ command statement against the total number of records at the very top of the page (listed after Dataset: and the file name). If they are different totals it is because the deleted records are not included in the analysis.

Delete Records

During data entry, pressing F6 will cause Epi Info to place an asterisk on that Epi Info record number. People mistakenly believe that the record is deleted. **The record is not deleted from the data file**. (Epi Info analysis commands (such as FREQ) will ignore all records that have an asterisk.)

- Deleted records will have an **asterisk** in front of the record number (when viewing records either via the data entry screen or analysis - BROWSE mode). Write down the record number of the records with asterisks.
- Check the paper forms for the records to verify that they are deleted, or if they are records that should not be deleted.

Delete/Undelete Records (Update)

1. If the record needs an asterisk added or removed to be deleted or undeleted, type **UPDATE** at the analysis prompt EPI6>, and

   Press [**ENTER**]. This puts you in the Update mode with a screen similar to Browse.
2. Use the Page Up and Down keys to get to the record number you need.
3. Use the Up (↑) or Down (↓) arrow keys to highlight the record you want to change.
4. Press: [**F6**] to delete or undelete records.
5. When moving from updated record to another, the computer will ask you if you would like to save it to a disk. Indicate YES if the change you made was correct. It will save the changes to the file.
6. When you are finished, Press [**F10**] to go back to the analysis command screen.

Data entry of monitoring records may take place at several sites throughout a work location. This section outlines the necessary steps to merge these various work site files into one work location file for analysis and distribution to Riverdale, Maryland.

Important

THIS SECTION ASSUMES THAT YOU WANT TO MERGE A DATA FILE ON A DISK WITH A MAIN DATA FILE ON YOUR COMPUTER HARD DRIVE.

Before merging files, be sure to do a backup of your MAIN Epi Info data records file (AQIMAIL.REC) onto a disk if you have not done it recently. (Backups should be completed at the end of every data input session! Refer to Appendix G for procedures for backing up data in Epi Info.)

Merging Similar Files

Prepare For The Merge Process

1. Press: **CAPS LOCK**.
2. Start at a C:\ > prompt.
3. Change to the Epi Info directory by typing: **CD\EPI6**, and press [**ENTER**].

   Computer prompt should appear as: C:\EPI6> (This assumes Epi Info is loaded on the C: drive.)
4. Insert the disk that has an Epi Info file on it to be merged into an original file on the computer drive. This step assumes you already have an original **AQIMAIL.REC** file on the computer to merge the second file with.

NOTE: If your 3.5 disk drive is B, then substitute B where A appears in the following directions.

5. Type [**DIR A:**], and press [**ENTER**].

   This will show a list of the files on the disk. There should be a file named: **AQIMAIL.REC**.
6. The file on the disk must be renamed because the disk file is the same name as the one on the computer.

   Type [**RENAME A:AQI*.* ADD*.***], and press [**ENTER**].

   This renames the disk files to **ADDMAIL.REC**.
7. Type **DIR A:**, and press [**ENTER**].

   This will show a list of the files on the disk again, be sure that the files now appears as **ADDMAIL.REC**.
8. Type: **COPY A:*.***, and press [**ENTER**].

   This copies the renamed file into the Epi Info directory.

If an older **ADDMAIL.REC** file exists from a previous merge, the computer may prompt you to overwrite it. Choose **Y**(yes) to overwrite.

Begin Merge Process

9. Enter into Epi Info's main screen.

10. Press [**P**] (to list Program menu).

11. Arrow down (↓) and highlight MERGE files, and press [**ENTER**].

Main merge screen appears with cursor in File 1 box.

12. Type: **ADDMAIL.REC**.

(As you type, the default text in File 1 box disappears.)

13. Press [**ENTER**].

The cursor moves to File 2 box.

14. Type: **AQIMAIL.REC**

NOTE: Use **AQIMAIL.REC** for merging **the first** "other" location file with the main file. Use the **SUMMAIL.REC** file at this step if merging **any other** additional location files to form one main file.

15. Press [**ENTER**].

The cursor moves to Output file box.

16. Type: **SUMMAIL.REC**.

17. Press [**ENTER**].

The cursor moves to Merge Options box and highlights ( ).

18. Press [**ENTER**].

OK box is highlighted.

19. Press [**ENTER**].

Screen changes:

IF: Older **SUMMAIL.REC** file exists, an information box will appear stating this. The word "Yes "is already highlighted.

Press [**ENTER**] to overwrite older file and continue merging.

IF: Error box appears stating files are not similar or merge cannot take place,

Press [**ESC**] until you return to main Epi Info screen, and **call for assistance.**

IF: Merge is successful, a completion bar scale may appear. This will change to a screen with an information box indicating the number of records merged and the files that were merged.

20. Press [**ENTER**] (to return to main merge screen).

If done, press [**ESC**] to return to the main screen, OR

If you need to merge another location's records file, then

Press [**F10**] to leave Epi Info software.

Return to C:\EPI6> prompt and go back to page 6-10, Steps 4. under "Prepare For The Merge Process." **Be sure to use SUMMAIL.REC file in Step 14 if merging more than one location file at one time.**

Summary of Merge Process

Copy the results to a blank disk to send out:

- SUMMAIL.REC contains both original records and records from another location that was on the disk.
- **Be sure to make a separate disk backup copy of this file to keep at your location.**

Copy Files To a Disk

Leave Epi Info, after inserting a properly labeled blank disk into drive a:.

Go to the C:\EPI6> prompt,

Type: **COPY SUM*.REC A:** This copies the file to the disk.

Mail Facility

Data Analysis

Survey Results and How To Use Them

AQIM activities have been put into place to develop baseline data to help answer two basic questions:

1. What is the threat of agricultural pests approaching work locations?
2. How effective is the AQI program at managing this threat?

Preliminary results for foreign mail surveys provide a general answer for Question 1. That is, there are varying rates at which prohibited agricultural materials approach work locations. These prohibited agricultural materials are what could have agricultural pests. Surveys show that at some work locations about 2 percent of the foreign mail had prohibited items. At other work locations, surveys show that the rate of prohibited items in foreign mail occurred near 6 percent.

These percentages are a rough approximation of agricultural pest threat. Further analysis of the monitoring data is needed to determine the risk associated with the prohibited items approaching the work location. The origin and destination of the prohibited items are important to determine risk levels. Also, whether or not the prohibited item carries an actual agricultural pest is analyzing risk.

Analyses of the monitoring data need to occur at several levels of PPQ. At the work locations, PPQ personnel need to study what the data means and answer the first question for their specific location. Analysis tools are available to help with these analyses, which are explained in the next subsection. At the same time, PPQ holds risk analysis workshops around the country to introduce risk analysis concepts. At some work locations, teams of PPQ officers and managers form Risk Management Teams to look at monitoring data and other data, which are normally collected at the location.

At other locations, analyses of monitoring data occur to establish rates at which quarantine items and agricultural pests are approaching the borders of States, areas of the country, and the United States.

Once baseline rates are well established, PPQ can use the monitoring data as a baseline to answer the second basic question: How effective is the AQI program at managing the risk of introduction of agricultural

pests and diseases? Again, each work location must conduct this type of analysis. AQIM provides a framework which work locations can use to carry out the analysis.

Analysis Tools

The tool available for analyzing AQI monitoring data is the ANALYSIS program in Epi Info. Using the ANALYSIS program in Epi Info you can look at data entered specifically for your work location. While in Epi Info ANALYSIS, you can select data analysis program file (*.PGM) that automatically runs a series of Epi Info commands. The program will produce various listings, tables, analysis commands, and explanatory text from data files for a designated pathway. Follow the guidelines on how to load and run data analysis program files beginning on **page 6-16**

Epi Info ANALYSIS saves the analysis output to a file for viewing and/ or printing. The file contains basic information that answer some of the questions to guide data analysis that follow. For questions not answered by running an automatic program, you will need to key in and run various analysis commands. Follow the Epi Info User Guide for Data Analysis–Mail Facility beginning on **page 6-194** to help you with the analysis commands.

Questions to Guide Data Analysis

1. How many foreign mail packages were selected for sampling during the survey period?

   How many mail packages sampled required an action (seizure or other action required as a condition of entry) during the survey period?

   What is the action approach rate of mail packages requiring action (number of mail packages, with one or more items categorized as seized or clean/treatment, divided by the total number of mail packages sampled)?

   How many seizures (QMIs) came from the samples?

   What is the QMI approach rate of mail packages with prohibited agricultural material (total number of QMIs divided by total mail packages sampled during the survey period)?

2. How many pest interceptions (actionable pests) were made from survey samples?

   Pest Approach Rate: What is the rate of pest interceptions in relation to number of mail packages (number of actionable pests divided by number of mail packages in the sample)?

3. How many QMIs were plant material? Meat or animal products?

   What is the rate of QMIs for plant material and meat/animal products?

   DISCUSSION:

   Is there a greater risk from plant material or animal products at the work location?

4. Generate a list of all the origins of mail packages transiting the work location. Produce a list of origins of mail packages **with QMIs** transiting the work location?

5. Generate a list of the destinations of mail packages transiting the work location. What are the top five destinations of mail packages? What are the top five destinations of mail packages **with QMIs**?

   DISCUSSION:

   Which States are considered high risk States?

6. What is the action approach rate for each month of the survey period?

   DISCUSSION:

   Do these monthly rates correlate with traditional peak and off-peak mailing periods?

   Are there easily identified trends when the rate of QMIs transiting the work location are higher?

   Are there seasonal trends or do higher rates correlate with national or religious holidays, beginning or end of the school year, vacation periods, etc.?

7. Generate a listing and frequency of items seized. What are the top five most frequently seized items? Which QMI items present the greater risk?

8. Apply the survey results to the total mail package population to **estimate** the number of QMIs and interceptions likely to transit the work location during the survey period.

How many (total) mail packages arrived at the mail facility during the survey period? Using WADS data and using the QMI approach rate and rate of pest interceptions on QMIs, calculate estimates of the number of QMIs and actionable pests transiting the work location.

DISCUSSION:

How does the estimated number of QMIs compare with the reported number of QMIs on WADS?

What percentage of all QMIs transiting the work location were seized as a result of the AQI program?

How does the estimated number of actionable pest interceptions compare with the reported number of actionable pests on WADS?

What percentage of all actionable pests transiting the work location were intercepted as a result of the AQI program?

How to Load and Run Data Analysis Program Files

Data analysis program files are meant to provide only listings, tables, and explanatory text about the monitoring data gathered at work locations. The program files are not intended to be used as final analysis tools. The outputs from these program files should raise further questions and discussion by local personnel and risk management committees.

NOTICE

Each year the AQIM National Team reviews, discusses, and decides about suggested improvements (additions, removals, changes) to the baseline data fields based on analysis and operational needs. A summary of the changes made during previous fiscal years to data fields for the mail pathway begin on **page 6-24** under Mail Facility Epi Data Translation. Use the summary to identify data field changes that may impact the results of an analysis report run for a particular year.

Data analysis files automatically run a series of Epi Info analysis commands. Use the following guidelines to load and run data analysis program files.

1. Determine which data analysis program file (*.PGM) you will load and run in Epi Info.

In Epi Info, ANALYSIS, there is a data analysis program file for each fiscal year of data gathered. Look at the table below to identify the file to load and run depending on which fiscal year's data you are analyzing.

If you want to analyze data for:	Then load and run the following Epi Info ANALYSIS data analysis program file (*.PGM):
FY 2000	MAIL.PGM

2. Get ready to run a data analysis program file.

A. Press [**CAPS LOCK]** (to ensure typing capital letters).

B. Be sure to start at C:\ prompt. Epi Info is a DOS program.

C. Change to the Epi Info directory. Type **[CD EPI6]**, then press [**ENTER**].

D. Start Epi Info program. Type [**EPI6]**, the press [**ENTER**].

E. Wait several seconds, the Main Menu will appear with the word Program highlighted.

F. Press [**P**] (to list Program menu).

G. Press [**A**] (to choose ANALYSIS from Program menu).

H.

If you are running:	Then:
A data program analysis file using Epi Info, ANALYSIS	CONTINUE to **Steps 3.**
Further analysis commands using Epi Info	GO to the **Epi Info User Guide for Data Analysis–Mail Facility** beginning on **page 6-19**

3. Run the selected data analysis program file (*.PGM) from Steps 1.

You should be at the Epi Info ANALYSIS screen. If no, review step 2.

NOTICE

To leave the analysis mode at any time, press [F10]

A. At the EPI6 command prompt, Type: **RUN FILENAME**, where FILENAME is the *.PGM file you selected in Step 1. For example, if you are analyzing data gathered in Fiscal Year 2000, then you would enter at the command prompt: **RUN MAIL.PGM**

Then, press [ENTER].

If you:	Then:
See the following prompt at the bottom of the screen: "Press enter key to pick the records file you want to analyze"	1. Press [ENTER]. A window appears with a listing of *.REC files. 2. GO to **Steps B.**.
Do not see the prompt stated in the cell above	DO the following 3 steps

i. Type **RUN**, then press [**ENTER**]. A window appears with a list of *.PGM files.

ii. Using the Up (↑) and Down (↓) arrow keys, search and highlight the program file name you want to run (for example, MAIL.PGM).

Press [ENTER]

NOTE: If you cannot locate the file name you are looking for, then contact your local AQIM coordinator. If they are not available, then contact the National AQIM Coordinator.

iii. When the following prompt appears at the bottom of the screen: "Press enter key to pick the records file you want to analyze,"

Press [**ENTER**]. A window appears with a listing of *.REC files

Go to **Steps B.**

B. Using the Up (↑) and Down (↓) arrow keys, highlight the records file for the desired fiscal year.

Important

The program file (*.PGM) must match the records file (*.REC). When you are sure,

Press [**ENTER**]

C. You are prompted for a file name where the program will save the output. (An example is given on the screen using a three-letter port code and the date.)

Type **FILENAME**, where FILENAME is the file name you have created to save the program output. Then, press [**ENTER**].

D. You are prompted to enter the date that is **one day before** the date you want the program analysis to start. (The analysis program analyzes records between two given dates, but does

not include the given dates. Therefore, you must enter the dates of the days just before and after the dates you want included in the analysis.)

For example, to analyze Fiscal Year 2000 data, you would enter 9/30/1999 (one day before the beginning of Fiscal Year 2000).

Type the start date following the format (MM/DD/YYYY), where it is one day before the date you want the program analysis to start, then press [**ENTER**].

E. You are prompted to enter the date that is **one day after** the date you want the program analysis to end.

Type the end date following the format (MM/DD/YYYY), where it is one day after the date you want the program analysis to end, then press [**ENTER**].

4. The program will begin analyzing. You will see the program's output scroll quickly on the screen. It is being saved to the file name you specified in Steps C.

5. The program is finished when the cursor returns to the EPI6> prompt. At this time, you may want to do any of the following:

If you want to:	Then:
View or print the program output file	1. Press [F10] to exit Epi Info 2. Use a word processing program, such as WordPro to view and/or print the file. NOTE: The file usually is in the C:\EPI6 diretory saved in an ASCII (DOS) text file format.
Run a data analysis program file for another fiscal year's data.	Return to **Steps 1.** at the beginning of this subsection to decide which program file to run
Continue with further analysis commands using the Epi Info User Guide for Data Analysis	Go to the **Epi Info User Guide for Data Analysis–Mail Facility** beginning on **page 6-19**
Exit Epi Info, ANALYSIS	Press [F10]
Exit Epi Info	Press [F10] twice

Epi Info User Guide for Data Analysis–Mail Facility

When first running analysis commands in Epi Info, thoroughly read the user guide to become familiar with basic analysis procedures to use with the monitoring data at your work site.

Get Ready

1. You should be at the Epi Info, ANALYSIS screen. If not, refer to Steps 2. getting ready to run a data analysis program file, under How to Load and Run Data Analysis Program Files on **page 6-16**.
2. Press [**F2]** (to list Commands menu).
3. Use the arrow key to move the cursor to the READ command.
4. Press [**ENTER**] **twice** (to get a list of .REC files that can be analyzed).
5. Use arrow keys to move cursor to highlight **AQIMAIL.REC**.
6. Press [**ENTER**] (to bring the *.REC file you have chosen into the analysis screen).
7. Press [**F4]** (to browse the data records in the file).
8. Use the arrow keys to look over the data to make sure it has been entered properly during the past month. (In subsequent months, you will want to browse through the entire file to see that all months of data have been properly entered, repeated fields such as work unit are consistently the same).

   To view only one individual record, press [**F4]** again to see the entire record as it was originally entered. If it is necessary to make changes to the record, **note the Epi Info record number in the lower right corner of the screen.**

   If you want to edit, correct or change this record, go to "Edit Records" beginning on **page 6-23**

Analyze Records:

9. Press [**F10**] (to return to the main analysis screen).
10. Press [**F2**] (to see a list of analysis commands).
11. Use the arrow keys to move the cursor to FREQ (frequency), and press [**ENTER**].
12. Press [**F3**] (to see a list of data variables). To better understand the variables listed, refer to **page 6-24** for a list of data variable translations for the current FY and a summary of data field changes made during previous fiscal years.
13. Use arrow keys to highlight the data variable you wish to know the frequency of.

    Press [**ENTER**] **twice** and you will get a frequency table.

EXAMPLE: If you want to know how many times a sample was taken on a certain date, you can choose the DATE variable and press **ENTER twice**. You will get a table showing the number of records entered into the database on each date of the survey.

14. Explore the database by doing FREQ commands for as many data variables as is logical. By doing this you will begin to understand the survey data and see some patterns in the data.

For each variable, use the F2 and F3 keys to choose the FREQ command and variable of interest, or type the word FREQ and the data variable names directly at the Analysis prompt.

15. To explore graphic commands: (The PIE command is one of several graphics commands which allow you to analyze the variables with graphs. This may make it easier to see patterns in the data and to understand the survey results.)

Press [**F2**] again and choose the PIE command with the cursor. Press [**ENTER**].

Press [**F3**] and select a data variable of interest from your data exploration in the FREQ analysis (Steps 10.-14.).

Press [**ENTER] twice** and you will see a pie chart on your screen which might help you understand a pattern in the data.

For example, if you have chosen the DATE variable for a pie graph, then you may see that a larger percentage of samples were taken on different days, which may cause you to question the sampling procedures.

See Appendix H for procedures on printing graphics while in Epi Info.

To leave the graph screen and return to the main screen, press: **<ESC>.**

16. Further FREQ exploring.

To see the total number of samples that were of agriculture interest (from all random inspections), press [**F2**] to list commands.

Highlight FREQ and press [**ENTER**].

Press [**F3**] to list data variables. Highlight ITEMAGRINT. Press [**ENTER**].

The analysis command line should appear: EPI6>FREQ ITEMAGRINT.

Press [**ENTER**]. The output screen should display a table listing the number of samples that were of agriculture interest. The table also lists a percentage of records that were of agriculture interest.

17. More FREQ exploring: To see the different ACTION types (S, CT, IR).

Press [**F2**] to list commands. Highlight FREQ. Press [**ENTER**]. You will next "tag" more than one data variable to move these variables to the analysis command line.

Press [**F3**] to list data variables. Highlight ACTION and "tag" this variable by pressing: **SHIFT** and (+). A small arrow will appear next to ACTION.

Next, highlight the variable ACTION01 and "tag" it. Do the same for ACTION02 and ACTION03.

The analysis command line should appear: EPI6>FREQ ACTION ACTION01 ACTION02 ACTION03.

Press [**ENTER**]. The output screen should display counts of SEIZED, CLN/TRMT, I&R for each of the category data lines for all records. Adding up the SEIZED, CLN/TRMT, I&R counts will provide a category breakdown of the agricultural items seized, or clean and treated, or inspected and released during random sample inspections.

18. Further exploration. Two other commands (F2 TABLE, F2 SELECT) are very useful to explore the survey data and to begin answering questions you may have after using the FREQ and PIE commands.

For example, you may want to know what country of origin prohibited items are coming from.

Press [**F2**]. Move the cursor to SELECT. Press [**ENTER**].

Press [**F3**]. Move cursor to ACTION.

Press [**ENTER**] once. Type: **= "SEIZED."**

The command line will then look like this: EPI6>SELECT ACTION= “SEIZED”

Press [**ENTER**].

When you run new analysis commands, the analysis will only look at a subset of records in which the category SEIZED is listed (prohibited) for an item found in the sample inspection. If you want to get back to the entire set of records (records with and without prohibited items), Type: **F3**. Move the cursor to SELECT. Press [**ENTER**].

Important

This analysis will only list the records that have SEIZED on the first category line of the data entry form. Other SEIZED items can be listed on the second, third, or fourth line of the data record. To work with these subsets, you first clear the select process (type SELECT, then press [ENTER]), then repeat the above SELECT phrase using ACTION01, then repeat using ACTION02, then ACTION03.

19. To continue working with the subset of records established in Step 18:

Press [**F2**]. Move the cursor to FREQ. Press [**ENTER**].

Press [**F3**]. Choose MAILORIGIN. Press [ENTER] **twice**. You will get a table that lists the total number of prohibited items from each country of origin.

Do a PIE MAILORGIN analysis command to get a graphic picture of where prohibited items are coming from.

Use this type of analysis to start seeing if your knowledge of high risk countries of origin match the survey data. This can either confirm or call into question your ideas about high risk and low risk countries of origin.

20. Type **SELECT** (or choose SELECT from the F2 commands menu) to work with all the records.

Edit Records

E1. Press [**F10**] **twice** (to get back to the main EPI6 program menu).

E2. Press [**P**] (to list Program menu).

E3. Press [**N**] (to get to the Edit menu).

E4. Press [**F9**] (to list .REC files).

E5. Use arrow keys to highlight appropriate .REC file, and

Press [**ENTER**] **four times** to get to the data entry screen for this file.

E6. Press [**CONTROL**] **and [F]** keys at the same time (to find the record which needs editing).

E7. Press [**F2**] and then, **type the Epi Info number** of the record you need to edit.

E8. Press [**ENTER**] (to get to the record you need to edit).

E9. Make corrections to the record, using the Up (↑) and Down (↓) arrow keys to move from field to field.

When finished editing, press [F10] and answer **YES** to the question (at the bottom of the screen) that asks to write the edited record to the data file.

Return to the beginning of the user guide on **page 6-19**.

Mail Facility Epi Data Translation

Core Data Fields for the Current Fiscal Year

VARIABLE NAME	SCREEN NAME
WORKUNIT	Work Unit:
WORKUNITCO	Work Unit Code:
DAYWEEK	Day Week:
DATE	Date:
TIME	A) Time (24 Hour):
MAILTYPE	B) Mail Type:
APO	C) APO:
FPO	D) FPO:
PACKTYPE	E) Mail Package Type
MAILORIGIN	F) Mail Origin:
MAILDESTIN	
STATEDEST	G) State Destination:
CITYDEST	City Destination:
REFERTO	H) Referred To:
ORIGINCODE	Origin Code:
ITEMAGRINT	I) Items of Agriculture Interest?
First Item Information:	
ITEM	Item:
ICODE	ICode: (Item Code Number)
QMITYPE	QMIType: (QMI type of item: A(Animal), P(Plant), N(None)

VARIABLE NAME	SCREEN NAME
ITMAMNT	ItmAmnt: (Item Amount)
U	U: (Unit of measure used for amount)
DECLARED	Declared: (Does package invoice declare item)
ACTION	Action: (Either seized, cln/trmt, or I&R)
PESTPRES	Pest Pres: (was package infested with a pest)
CONTAMINAN	Contaminant: (Is contaminant present)
PESTNUM	Pest Number: (Pest interception number)
PESTID	Pest ID/Contaminant:
CONTINUE	Continue:
Second Item Information:	
ITEM01	Item:
ICODE01	Icode: (Item Code Number)
QMITYPE01	QMIType: (QMI type of item: A(Animal), P(Plant), N(None)
ITMAMNT01	ItmAmnt: (Item Amount)
U01	U: (Unit of measure used for amount)
DECLARED01	Declared: (Does package invoice declare item)
ACTION01	Action: (Either seized, cln/trmt, or I&R)
PESTPRES01	Pest Pres: (was package infested with a pest)
CONTAMIN01	Contaminant: (Is contaminant present)
PESTNUM01	Pest Num: (Pest interception number)
PESTID01	Pest ID/Contaminant:
MO	MO: (month of record, for analysis purposes)
ANACTREQ	ANACTREQ: (An action required)
SEIZED	TOTAL SEIZED: (QMIs seized)

Summary of Data Field Changes Made During Previous Fiscal Years

For Fiscal Year:	The following additions, changes, and removals were made to the data fields:
2001	**Additions:** APO=APO FPO=FPO PACKTYPE=Mail Package Type
	Changes: PESTPRES used to be INFESTED PESTPRES01 used to be INFESTED01
2003	DAYWEEK=Day of Week STATEDEST=State destination CITYSDEST=City destination

7 Northern Border Vehicles

AQIM Handbook

Introduction

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Survey Guidelines

Each port location will be responsible for their respective random sampling schedules at their work locations. See **Table 7-1** for port locations expected to conduct AQIM sampling. The National and Regional AQIM Coordinators offer assistance in designing specific sampling schedules. Their input will allow managers at port locations the flexibility they desire, the best use of staff resources, yet ensure that the random distribution of sampling is not compromised.

Designated work locations are required to conduct random sampling. Local AQIM sample schedule should indicate the month, week, day, and time the survey will be conducted.

The minimum time for unstaffed work locations for the survey is 4 hours. However, a full 8-hours would minimize the number of trips required at unstaffed work locations to achieve the required sampling.

Staffed work locations may use shorter time frames.

Work locations that do not complete collecting data in the allotted time may extend the time or make other adjustments as necessary. Please consult with the National or Regional AQIM coordinator.

The important ingredient to maintain is random selection within the target sample.

Also, each work location should develop standard operating procedures (SOP) to:

- Ensure random selection prevails over selective criteria.
- Provide specific inspection criteria.
- Stress degree of inspection for pests.

Each work location should provide copies of the random sampling schedules and the SOP to the PPQ Regional Coordinator. A list of contacts is on page 7-4.

The volume schedule in Table 7-1 provides the **minimum** monthly counts necessary to attain the samples for the Northern border. All work locations are encouraged to sample more than the minimum where resources and time will permit.

All permanently agriculture staffed work locations will contribute to their own sample for vehicles. The unstaffed locations along the Northern border contribute to a single sample for vehicles.

This requires the staffed port to use all COMPEX sample vehicles per day for AQIM sampling and inspection. If COMPEX samples are not available, then apply an alternate sampling procedure that selects a minimum of 10 vehicles per day.

Important

If a port location has only one (single) agriculture position, then 5–10 vehicle samples per day are to be taken based on staffing and days the port is staffed. However, these work locations are encouraged to sample more than the minimum of 5 vehicle samples per day. Please contact and consult with National or Regional AQIM coordinators on all questions of further sampling issues.

TABLE 7-1: Volume Schedule to Determine Monthly Counts

If the Northern Border is:	Then, the minimum monthly sample is:
Alexandria Bay, NY	150+
Blaine, WA	COMPEX # or 300+
Buffalo, NY	COMPEX # or 300+
Calais, ME	150+
Champlain, NY/Rouses Pt., NY	150+
Detroit, MI	COMPEX # or 300+
Eastport, ID	150+
Grand Portage/International Falls, MN	150+
Highgate Springs, VT	150+
Oroville, WA	150+
Pembina, ND	150+
Port Huron, MI	COMPEX # or 300+
Sweetgrass, MT	150+
Other Unstaffed Crossings[1]	20

1 AQIM sampling/inspection at unstaffed ports is highly encouraged; unstaffed crossings on less than a monthly frequency, if necessary. Nevertheless, the minimum monitoring sample should remain at 20 per monitoring period.

Passenger Vehicle Universe

Definition

Passenger vehicle includes autos, vans, recreational vehicles, cab area of all types of trucks, and other similar passenger type vehicles.

Inspection Criteria

The following areas of all randomly selected passenger vehicles should be inspected:

- Under hood
- Glove compartment
- Trunk area including side panel compartment
- Under spare tire compartment
- Under seats
- All luggage and handbags
- Other interior side panel compartments

Pest Interception Procedures

Pest interception information resulting from random sample surveys is an important factor with regard to risk management. All quarantine material found need to undergo 100 percent inspection for pests. All pest types and quantities found on quarantine material must be recorded on pest interception form(s).

Pest interceptions from seized items should be sent to port or area identifiers. Mark the interception **"PROMPT: NORTHERN BORDER MONITORING."**

Pest interceptions should be handled according to the instructions in Appendix 15 of the Airport and Maritime Operations Manual.

When pest identifications are received, enter the pest name on appropriate random sample survey forms and update local Epi Info records.

Safety

Safe working conditions must be maintained at all times. When a condition develops that challenges the safety of the officer, the inspection should be terminated until the hazardous condition is corrected. The exercise of good judgement will dictate when these situations need to be addressed and how acceptable alternatives can be employed.

Contacts

National AQIM Coordinator

Ron Komsa
USDA, APHIS, PPQ
4700 River Road, Unit 60
Riverdale, MD 20737
Tel: 301-734-8514
FAX: 301-734-8318

Pathway Monitoring Maintenance

AQIM Regional Contacts

Western Region:

Judy Pasek
2150 Centre Avenue, Bldg. B
Fort Collins, CO 80526-8117
Tel: 970-494-7580

Eastern Region:

Calvin Shuler
920 Campus Drive, Suite 200
Raleigh, NC 27606-5202
Tel: 919-855-7326

Port managers and local AQIM coordinators are responsible for ensuring that monitoring activities are being performed and being performed properly. To help with reviewing the status of monitoring activities, refer to **Appendix L—Pathway Monitoring Maintenance**. This appendix contains a checklist of questions port managers and local AQIM coordinators should periodically answer to ensure proper monitoring of each designated pathway at their work locations. See **Figure L-1**. The questions review the following topics:

- Random sampling
- Proportional sampling
- Adequate sampling
- Accurate and complete data
- Working risk committees
- Local support

Northern Border– Vehicle Worksheet

There is one worksheet for recording information gathered from your inspection of vehicles at Northern border crossings for the purpose of AQIM. The worksheet is printed on the following pages so you can remove, photocopy, and reuse it.

The form is also available online, go to:

http://www.aphis.usda.gov/ppq/manuals/pdf_files/AQIM_in_PDF/Northern_Border_Vehicle.pdf

7

AQIM Handbook

Northern Border—Vehicles

Data Collection and Maintenance

Introduction

Traditionally, PPQ based our work on the quantity of quarantine material intercepted. We filled our inspection tables with quarantine material, found pests, and tallied them to justify good job performance. AQIM emphasizes work efforts based on the potential threat posed by foreign pests and quarantine material.

Regular, baseline AQIM will be incorporated as a part of PPQ's on-going operations.

Many small or unstaffed work locations **will not** have enough statistical data to stand alone. Therefore, they must combine data with other locations to form **group data.**

Many Northern border crossings will be involved in AQIM collecting group data.

Each State will manage results monitoring and the subsequent risk management functions for their respective crossings. All PPQ personnel are involved and supportive of the process. The expected results are that PPQ will have results monitoring systems in place that will meet the needs of management and the requirements of the GPRA.

Routine Data Entry and Management

1. Begin data entry of collected monitoring data.

   For details on data entry and accessing the Epi Info screens, see the next section titled "Epi Info User Guide for Data EntryNorthern Border—Vehicles."

2. Back up monitoring data to a computer disk.

   At the end of each data entry session, the computer files containing monitoring data must be copied to a disk. See Appendix G for procedures for backing up monitoring data.

3. Check data quality and accuracy.

   Periodically you must check the data accuracy and correct any spelling errors, duplicate records, or other errors found. To begin this process, go to page 7-13.

4. Sending data to a central collection point.

   Send new data files to Susann Irwin, the central collection point for Northern Border monitoring data. Before you send your data, the files on the disk you send must be renamed. To rename data files, go to page 7-18, under the heading, "Before Beginning." **Send the files monthly by the fifteenth of the following month to:**

   Susann Irwin
   USDA, APHIS, PPQ
   P.O. Box 1930
   275 ½ Interstate 5
   Peace Arch POE
   Blaine, WA 98230

Epi Info User Guide for Data EntryNorthern Border– Vehicles

NOTICE

When first using Epi Info, thoroughly read the user guide to become familiar with entering data into each of the data fields.

General Instructions

After each data entry session**,** make a back up of data records file, NBV.REC, to a computer disk. See Appendix G for procedures for backing up monitoring data.

1. Press [**CAPS LOCK**] (to ensure typing capital letters).
2. Be sure to start at C:\ prompt. Epi Info is a DOS program.
3. Change to the Epi Info directory. Type **CD EPI6,** then

   Press [**ENTER**].
4. Start Epi Info program. Type **EPI6,** then

   Press [**ENTER**].
5. Wait several seconds, the Main Menu will appear with the word Program highlighted.
6. Press [**P**] (to list Program Menu).
7. Press [**N**] (to choose ENTER from Program Menu).
8. Cursor should be in the space below the phrase "Data file (.REC)."

9. Type in the space the cursor is in **NBV.**
10. Press [**ENTER**] **3 times** (to load files for data entry).
11. Data entry screen for Border Vehicles should appear.

Help Statements

Read the following help statements before entering data:

- Each data entry screen represents only one monitoring inspection. After correct data entry is made and saved, this becomes a record for that one inspection.
- Some data fields will automatically advance the cursor after entering data, some require pressing [**ENTER**] to advance the cursor after entering data.
- Data entry messages and valid data field values for each data field appear at the bottom of the screen or by pressing [**F9**].
- If an error is made and the cursor has left the data field, use the Up (↑) and Down (↓) arrow keys to move from field to field in order to change or correct data fields already entered.
- **DO NOT PRESS [F6] to delete a record.** Despite the screen label, this does not delete the record, it only places an asterisk on the Epi Info record number. Epi Info will ignore records with an asterisk when doing analysis commands. To eliminate the unwanted record from the data file, type over the unwanted record with a new record.

Enter Data

Read the following as you enter data to become familiar with each of the fields.

Workunit & Work Unit Code—With the first record, you will need to complete these data fields. Place cursor in Workunit field. Press [**F9**] and choose correct work unit name. For each record thereafter, these fields will repeat the work unit, terminal, and work unit code from the previous record. You should not have to enter data in these fields. These fields are automatically filled in, if not contact the Northern Border coordinator. Refer to **Contacts** beginning on page 7-4

Rec Num—Do not enter data in this field. This field is automatically filled in. THIS FIELD WILL SERVE AS THE “OFFICIAL” PERMANENT RECORD NUMBER. DO NOT USE THE NUMBER LOCATED IN THE LOWER RIGHT HAND CORNER OF THE SCREEN TO IDENTIFY A RECORD.

Bridge/Crossing—Enter the correct crossing name. Keep crossing name spelling consistent.

Day of Week—Press **[F9]** to choose day of week.

Holiday Wknd—Select either yes or no if the day was a holiday weekend.

Date—Enter date of inspection in MM/DD/YYYY format.

A) Time—Enter time of day the inspection began usuing military time.

B) Pax Origin—Press **[F9]** to open window of country names and Provinces of Canada. Type the first and second letters of the country name to stroll down the list faster. Use Up (↑) and Down (↓) arrow keys to highlight the country name or Canadian Province. Press [**ENTER**] to select it.

Origin Code—Do not enter data in this field. This code is entered automatically.

C) Orgin—Enter Local or Distant for origin of vehicle inspected.

D) Pax City/State Destination—Press [**F9**] to select state. Then enter city. Be consistent with spelling. Press [**ENTER**] to select the destination.

E) Destination—Enter Local or Distant for destination of vehicle inspected.

F) Number Pax—Enter number of passengers recorded on the data form. Press [**ENTER**] to advance to the next data field.

G) Status—Enter response recorded on the data form or press [**F9]** to open window of valid choices. Use Up (↑) and Down (↓) arrow keys to highlight correct choice. Press [**ENTER**] to select the appropriate status.

H) From a Canadian Airport—Select either [**N**](no) or [**Y**](yes) whether the passenger(s) was from a Canadian airport.

I) Reason for Travel—Enter response recorded on the data form or press [**F9**] to open window of valid reasons. Use Up (↑) and Down (↓) arrow keys to highlight correct reason. Include Sports/Recreation in "Tourist" category. Press [**ENTER**] to select the appropriate travel reason.

J) Vehicle Type—Enter response recorded on the data form or press [**F9**] to open window of valid types. Use Up (↑) and Down (↓) arrow keys to highlight correct choice. Press [**ENTER**] to select the appropriate type.

K) Have been on a Farm/Ranch—Choose either [**N**](no) or [**Y**](yes) whether the passenger has been on a farm or ranch.

L) Going to a Farm or Ranch—Enter either [**N**](no) or [**Y**](yes) response from the data form on whether the passenger will be visiting or working in a farm environment within the next 30 days.

M) Items of Agr Interest?—Enter either [**N**](no) or [**Y**](yes):

- If [**Y**] cursor will proceed to next data field.
- If [**N**] cursor will jump to the bottom of the screen asking the question: "Write data to disk (Y/N/<Esc>)?" If data entry is correct and complete, answer Y to this question and the data screen will renew for the next record entry.

Item—Press [**F9**] to open the window of valid item names. Type the first and second letters of the item name in order to scroll down the list faster. Use Up (↑) and Down (↓) arrow keys to highlight the correct item. Press [**ENTER**] to select the item.

ICode—Do not enter data in this field. This code is entered automatically. Press [**ENTER**] to advance the cursor and automatically fill in the data field QMIType.

QMIType—Do not enter data in this field. This code is entered automatically.

Item OriginCode—Do not enter data in this field. This code is entered automatically.

O: (Origin Name)—Press [F9] to open window of valid origin names. Use Up (↑) and Down (↓) arrow keys to highlight the correct name. Press [**ENTER**] to select name. This action will also fill in the "Item OriginCode" data field.

ItmAmnt—Indicate the weight in kilograms. Obtain or **accurately estimate** weight of items (apple, orange, etc.) whenever possible. (1 **LB. is approximately .5 KGS, 3.5 ounces=.1 KGS.) For plant items (flowers, etc.), record number of stems or pieces. For items not practical for obtaining weight (shoes, trophies, etc.),** then record the quantity of these as pieces.

U(Unit of Measure)—Press [**F9]** to open window of unit values. Use Up (↑) and Down (↓) arrow keys to highlight the unit value. Press [**ENTER**] to select it.

Declared—Enter response recorded on the data form.

Action—Enter action by either typing the response or pressing F9 to open window of valid actions. Use the Up (↑) and Down (↓) arrow keys to highlight correct action. Press [**ENTER**] to select the action.

O(Item Origin)—Do not enter data in this field. The origin has automatically been entered.

Whre (Where) Found In—Enter where item was found in vehicle by either typing the response or pressing F9 to open window of valid areas. Use Up (↑) and Down (↓) arrow keys to highlight correct area. Press [**ENTER**] to select the area.

Found In—Enter what the item was found in by either typing the response or pressing [**F9**] to open window of valid choices. Use Up (↑) and Down (↓) arrow keys to highlight correct choice. Press [**ENTER**] to select the choice.

Pest Pres—Enter either **N**(no) or **Y**(yes) to indicate if a contaminant was present with the item that is listed.

Contaminant—Enter either **N**(no) or **Y**(yes) to indicate if a contaminant was present with the item that is listed.

Pest Intercep. Num—System will automatically enter NONE (for no pest found). Enter the pest interception number if assigned at your work location. This number may be assigned later or by another office. **IF PEST INTERCEPTION NUMBER IS GOING TO BE ASSIGNED BY ANOTHER OFFICE, THEN ENTER THE LETTERS "TBA" (To Be Assigned).** When TBA is used, be sure to note the permanent record number in the upper right corner of the screen so updating can be done.

Pest ID/Contaminant—System will automatically enter NONE (for no pest found). Enter either the name of the contaminant or the taxonomic name of the pest found. Be sure to update this record with the pest name, if necessary.

Continue—

- Press [**Y]** if additional items ARE to be entered. Press [**ENTER**] to leave field and continue on.

- Press **[N]** if no other items are to be entered in this record. The cursor will jump to "Write data to disk (Y/N/<Esc>)?".

Write data to disk (Y/N/<Esc>)?—

- Press **[Y]** if data entry is complete for this record. Record will be saved to the record's file.
- Press **[N]** if you wish to make changes or corrections to the record field. After making changes or corrections remember to return the cursor to the Continue field that was N. Press [ENTER] to return to the prompt "Write Data to Disk (Y/N/<Esc>)?" Press **[Y]** to complete the record.

MO—Do not enter data in this field. This field is filled in automatically. This field is used for analysis purposes.

ANACTREQ—Do not enter data in this field. This field is filled in automatically. This field is used for analysis purposes.

TOTAL SEIZED—Do not enter data in this field. This field is filled in automatically. This field is used for analysis purposes.

When finished with data entry—

1. Press **[F10]** to return to the main start up screen.
2. Press **[F10]** again to leave EPI Info and return to the regular computer screen.

Important

After each data entry session, make a back up of the data records file, **NBV.REC**, to a computer disk. See **Appendix G** for back up instructions.

Data Accuracy Checks and Data Corrections

Introduction

This section outlines the basic procedures to check on data accuracy, make Epi Info data corrections, and begin basic data analysis. It is important to perform these procedures on a REGULAR basis to ensure data quality.

NOTICE

Do not start this correction/analysis mode until you've read through the entire process, especially the last section that requires creating a new file BEFORE leaving this analysis mode.

Before Starting

Before starting any data correction in the Epi Info software, copy your working Epi Info records file to the back up disk copy before you begin the correcting procedures. See Appendix G for procedures on backing up monitoring data.

Start Corrections

1. Enter Epi Info and at the first Epi Info screen, select the **Program** menu.
2. Enter the Program menu, select **Analysis**.

   You will see an EPI6> prompt at the bottom of the analysis screen.

Read

1. To choose the file you would like to work with, Type [**READ]**, and

   Press [**ENTER**].
2. You will see a list of files.

   Select the appropriate *.REC file from the list by highlighting it, and

   Press [**ENTER**].
3. The cursor will appear at the EPI6> prompt again.

Commands

To check on data accuracy, you will use the following commands.

- **BROWSE**—allows you to see all the records at one time.
- **FREQ** for frequency—allows you to see how many times something appears.
- **IF THEN statement**—allows you to make changes to correct spelling errors, dates, etc.

See below for details on each command.

BROWSE—To **BROWSE** the file of records:

1. Press [**F4**]. Browsing allows you to look at the records in the file you have Correcting data for:Northern border:vehiclesselected.

NOTICE

The order of records in browse is the order they were entered.

2. While there, check for any duplicate records (records with the same date and same time). Also check for any deleted records. Deleted records will show an asterisk and usually a different shade of color. See **Delete Records** beginning on **page 7-16** to work with records that have an asterisk.

FREQ (Frequency)—Start by performing frequencies on each individual data field.

1. Press [**F2**] (to get your list of commands).
2. Choose **FREQ**, then
3. Press [**F3**] for a list of variables you can perform frequencies on. **Choose only one variable at a time**. Some of the variables you should start with are:

   WORKUNIT
   WORKUNITCO
   CROSSING
   MONTH
   YR (YEAR)
   ORIGIN
   PESTNUM
   PESTNUM01
   PESTNUM02

When you perform your first FREQ command, check the total number of records from the FREQ command statement against the total number of records at the very top of the page (listed after Dataset: and the file name). If they are different totals it is because the deleted records are not included in the analysis.

When you perform a FREQuency on a data field (i.e., FREQ CROSSING) and find misspellings with this field, an **IF THEN** statement can be used to correct the mistakes.

IF THEN statements—If then statements are used to correct common errors found.

NOTICE

If you use IF THEN Statements to make corrections, be sure to do the saving changes steps after all IF THEN changes are made. None of the IF THEN changes you make will be saved unless you do the saving changes steps, beginning on **page 7-17**

EXAMPLE: to correct the spelling of the crossing. At the analysis prompt EPI6>, type:

IF CROSSING = "PRT HURN" THEN CROSSING = "PORT HURON, and Press [ENTER].

NOTE: A generic statement example would be: IF VARIABLE = "what you want to change" THEN VARIABLE = "what to change it to"

Check your changes by performing the Frequency command again. If the corrections were made, the mistakes will not be listed this time.

Once a command is used it is quickly and easily accessed again by using the Up (↑) arrow key to correct several misspellings without retyping the entire IF THEN statement.

Delete Records

During data entry, pressing **[F6]** will cause Epi Info to place an asterisk on that record number. People mistakenly believe that the record is deleted. **The record is not deleted from the data file**. Epi Info analysis commands (such as FREQ) will ignore all records that have an asterisk.

- Deleted records will have an **asterisk** in front of the record number and will appear as a different color shade. Write down the record number of the records with asterisks.
- Check the paper forms for the records to see if they are supposed to be "deleted," or if they are records that should not be deleted.

Delete/Undelete Records (Update)

1. If the record needs to be deleted or undeleted, Type **UPDATE** at the EPI6> analysis prompt, and

   Press [ENTER]. This puts you in the Update mode with a screen similar to Browse.
2. Use the Page Up and Down keys to get to the record number you need.
3. Use the Up (↑) or Down (↓) arrow keys to highlight the record you want to change.
4. Press **[F6]** to Delete or Undelete records.
5. When moving from updated records to another, the computer will ask if you would like to save it to a disk. Indicate YES if the change you made was correct. It will save the changes to the file.
6. When you are finished, Press [F10] to go back to the analysis command screen.

Save Changes

If you used only the UPDATE command (described above) to make corrections to records with asterisks, then you **DO NOT** need to do the following steps.

If you used IF THEN statements at any time to make corrections, none of the changes you have made will be saved unless **you do the following steps.**

The corrections you've made using the IF THEN statements are only stored in the computer's memory, they are not written to the data file. To make these changes permanent you must do the following:

1. If the changes were made to your current NBV.REC file:

   At the analysis prompt type **ROUTE NBVNEW.REC** to route the corrected records to a new file to make the changes permanent.

   New is added in the filename to show which file you are referring to and the latest version of that file.

2. At the analysis prompt type **WRITE RECFILE /NOECHO** and

   Press [**ENTER**].

   This actually writes the new data file. Be patient this process may take some time.

3. Check to make sure all of the changes were made to the new file by reading the new file, browsing the file, and doing several FREQ commands on the corrected data fields.

ONCE ALL CHANGES ARE MADELeave the Epi Info program and go to the C:\EPI6> prompt.

1. If the changes were made to your current NBV.REC file**,** then **YOU MUST**:

   At the C:\EPI6> prompt delete the original record file by typing **DEL NBV.REC** (this will delete the file and it will no longer be accessible).

2. Rename the new file with the corrected records to the original file name. At the C:\EPI6> prompt, type **RENAME NBVNEW.REC NBV.REC**.

The Epi Info file is now available for more data entry and other analysis procedures.

If you have any questions or comments about these procedures contact the Northern Border Coordinator. Refer to **Contacts** beginning on page 7-4

Renaming Data Files for EPI6

Before Beginning

To rename the files on the disk you must:

1. Determine your 3-letter work unit code (see Table 7-1), and
2. Determine if multiple data entry locations will occur under one work unit name. (The file naming format is as follows: NBVxxxy.REC, where xxx represents the 3-letter work unit code and y represents the local identifier number. For most work units y = 1. For multiple data entry locations under one work unit (Detroit doing data entry, and Port Huron, which is under the Detroit work unit, doing data entry), the y would change. Therefore at the Detroit location y = 1, and at the Port Huron location y = 2.

TABLE 7-1: Work Unit Codes

Work Unit	Work Unit Code
Bangor	BAN
Billings	BIL
Bismarck	BIS
Blaine	BLA
Buffalo	BUF
Detroit	DET
Minneapolis	MSP
Montpelier	MTP
Rouses Point	ROU
Spokane	SPO

Instructions

Step 1—If you are in the Epi Info software, exit Epi Info and, go to the C:\EPI6> prompt

Step 2—Label a blank 3.5 inch disk: NB Monitoring Data Files <current date> and, place the disk in the 3.5 drive

NOTICE

If your 3.5 disk drive is B, then substitute B where A appears

Step 3—At the C:\EPI6> prompt, Type **COPY NB*.REC A:** . This will copy the file that you are using: **NBV.REC**.

Step 4—To check that the files are on the disk, Type **DIR A:** . The working data file should be listed.

Step 5—To rename the file on the disk, you must do the following: NBV.REC - RENAME to format NBV.xxxy.REC. At C:\EPI6> prompt, Type **RENAME A:NBV.REC**.

EXAMPLE: (using Detroit/Port Huron)Detroit would Type **RENAME A:NBV.REC NBVDET1.REC**. Port Huron would Type **RENAME A:NBV.REC NBVDET2.REC**

Step 6—To check the files on the disk, Type **DIR A:** . Check to assure that renaming is in correct format.

Step 7—Send the disk to the central collection point (refer to page 7-19).

Northern Border Vehicles

Data Analysis

Survey Results And How To Use Them

AQIM activities have been put into place to develop baseline data to help answer two basic questions:

1. What is the threat of agriculture pests approaching work locations?
2. How effective is the AQIM program at managing this threat?

Preliminary results for Northern border vehicle surveys provide a general answer for Question 1. That is, there are varying rates at which prohibited agricultural materials approach the Northern border crossings. These prohibited agricultural materials are what could have agricultural pests.

Further analysis of the monitoring data is needed to determine the risk associated with the specific agricultural items approaching the work location. The origin and destination of the agricultural items are important to determine risk levels. Also, whether or not the agricultural items carry an actual agricultural pest is crucial to analyzing risk.

Analysis of the monitoring data need to occur at several levels of PPQ. First, PPQ personnel need to study what the data means and answer the first question for their specific work location. Analysis tools are available to help with these analyses, which are explained in the next subsection. At the same time, PPQ holds of risk analysis workshops around the country to introduce risk analysis concepts. At some work locations, teams of PPQ officers and managers form Risk Management Teams to look at monitoring data and other data which is normally collected. Those locations that contribute to a group sample may want to form an interstate risk management group.

At other locations, analyses of monitoring data occur to understand the rates at which prohibited items and agricultural pests are approaching the borders of States, areas of the country, and the United States.

Once baseline rates are well established, PPQ can use the monitoring data as a baseline to answer the second basic question: How effective is the AQIM program at managing the risk of introduction of

agricultural pests and diseases? Again, each work location must conduct this type of analysis. AQIM provides a framework which work locations can use to carry out the analysis.

Analysis Tools

There are two tools available for analyzing AQI monitoring data. One is the ANALYSIS program in Epi Info. The other tool is the Short-term Reporting Tool (SRT) accessed using Netscape.

Using the SRT you can look at data entered for your work location, as well as data for other work locations within a State, a Region, or across the nation. Also, using the SRT you can look at WADS data to use with AQI monitoring data. Refer to **Appendix J—Internet** for guidelines on how to use the SRT.

Using the ANALYSIS program in Epi Info you can look at data entered specifically for your work location. While in Epi Info ANALYSIS, you can select a data analysis program file (*.PGM) that automatically runs a series of Epi Info commands. The program will produce various listings, tables, analysis commands, and explanatory text from data files for a designated pathway. Follow the guidelines on how to load and run data analysis program files beginning on **page 7-25**.

Epi Info ANALYSIS saves the analysis output to a file for viewing and/or printing. The file contains basic information that answer some of the questions to guide data analysis that follow. For questions not answered by running an automatic program, you will need to key in and run various analysis commands. Follow the Epi Info User Guide for Data Analysis–Northern Border–Vehicles beginning on **page 7-28** to help you with the analysis commands.

Questions to Guide Data Analysis

1. How many vehicles were selected for the sampling during the survey period?

   How many vehicles sampled required an action (seizure or other action required as a condition of entry) during the survey period?

   What is the action approach rate of vehicles requiring action (number of vehicles with one or more items categorized as seized or clean/treatment divided by the total number of vehicles sampled)?

What is the total number of QMIs seized during the survey period?

How many seizures (QMIs) came from the samples during the survey period?

What is the QMI approach rate of vehicles with prohibited agricultural material (total number of QMIs divided by total vehicles sampled during the survey period)?

2. How many pest interceptions (actionable pests) were made from survey samples?

Pest approach rate: What is the rate of pest interceptions in relation to number of vehicles (number of actionable pests divided by number of vehicles in the sample)?

3. How many QMIs were plant material? Meat or animal products?

What is the rate of QMIs for plant material and meat or animal products?

DISCUSSION:

Is there a greater risk from plant material or animal products at the work location?

4. How many vehicles were sampled at each crossing? What is the rate of QMI seizures at each crossing? Which crossings have a higher rate of QMIs than vehicles? (See **DISCUSSION:**)

DISCUSSION:

Are these crossings staffed accordingly? (Example: 30 percent of all vehicles surveyed crossed at Bridge A, 20 percent crossed at Bridge B, and 50 percent crossed at Bridge C. Fifteen (15) percent of the QMIs seized in the work location were seized at Bridge A, 35 percent were seized at Bridge B, and 50 percent were seized at Bridge C.) Vehicles crossing Bridge B could represent the greater risk at the work location and staffing should be reviewed based on this risk.

5. What are the destinations of vehicles transiting the work location? Is local traffic (less than X miles from the work location) considered a high risk? What are the number of QMIs traveling to local locations versus distant locations?

DISCUSSION:

Which states are considered high risk States? How can you best select vehicles destined to these high risk States to protect U.S. agriculture?

6. Compare the **action** approach rate for each month of the survey period.

   DISCUSSION:

   Are there easily identified monthly trends when the rate of QMIs transiting the work location are higher?

   Are there seasonal trends or do higher rates correlate with national or religious holidays, beginning or end of the school year, vacation periods, etc.?

   Do these rates correlate with traditional peak and off-peak travel times?

7. Generate a listing and frequency of items seized. What are the top five items most frequently seized? Which QMIs present the greatest risk?

8. Which vehicles (and at which crossing) were carrying prohibited items? Where were the items foundhand carried bags, passenger compartment, glove box, truck, luggage? Did the passenger declare all prohibited items? Was the passenger traveling alone, as a couple, or family? What was the reason for travelbusiness, vacation, visit family, tour group, school? What type of vehicle was used to transport prohibited items?

   DISCUSSION:

   How do current selectively factors compare with survey results?

   What selectivity factors could be changed or added to identify vehicles carrying prohibited items?

   What percentage of resources are dedicated to staffing AQI activities for northern border vehicles at the work location?

   What is the relative risk of northern border vehicles compared with other pathways in the work location?

   Should resources be reallocated among all the pathways in the work location to better address the relative risk of the pathways?

9. Apply the monitoring results to the total approaching population to estimate the number of QMIs and pest interceptions likely to transit the port during the survey period by answering:

How many total vehicles entered the port during the survey period? Using the rate of QMIs and pest interceptions from AQIM, calculate estimates of the number of QMIs and actionable pests transiting the port.

DISCUSSION:

What percentage of all QMIs transiting the port were seized as a result of the AQI program, use WADS data?

How does the estimated number of QMIs compare with the reported number of QMIs on WADS?

How does the estimated number of actionable pest interceptions compare with the reported number of actionable pests on WADS?

What percentage of all actionable pests transiting the port were intercepted as a result of the AQI program?

How to Load and Run Data Analysis Program Files

Data analysis program files are meant to provide only listings, tables, and explanatory text about the monitoring data gathered at work locations. The program files are not intended to be used as final analysis tools. The outputs from these program files should raise further questions and discussion by local personnel and risk management committees.

Important

Each year the AQIM National Team reviews, discusses, and decides about suggested improvements (additions, removals, changes) to the baseline data fields based on analysis and operational needs. A summary of the changes made during previous fiscal years to data fields for the Northern border vehicles pathway begin on **page 7-32** under Northern Border–Vehicles Epi Data Translation. Use the summary to identify data field changes that may impact the results of an analysis report run for a particular year.

Data analysis files automatically run a series of Epi Info analysis commands. Use the following guidelines to load and run data analysis program files.

1. Determine which data analysis program file (*.PGM) you will load and run in Epi Info.

In Epi Info, ANALYSIS, there is a data analysis program file for each fiecal year of data gathered. Look at the table below to identify the file to load and run depending on which fiscal year's data you are analyzing.

If you want to analyze data for:	Then load and run the following Epi Info ANALYSIS data analysis program file (*.PGM)
FY 1999	BORDER99.PGM
FY 2000	BDR2000.PGM
FY 2001	BDR2001.PGM
FY 2002	NOVEH02.PGM
FY 2003	NOVEH03.PGM

2. Get ready to run a data analysis program file.

A. Press [**CAPS LOCK**] (to ensure typing capital letters)

B. Be sure to start at C:\ prompt. Epi Info is a DOS program.

C. Change to the Epi Info directory. Type **CD EPI6**, then Press [**ENTER**].

D. Start Epi Info program. Type **EPI6**, then Press [**ENTER**].

E. Wait several seconds, the Main Menu will appear with the word Program highlighted.

F. Press [P] (to list Program menu).

G. Press [**A**] (to choose ANALYSIS from Program menu).

H.

If you are running:	Then:
A data program analysis file using Epi Info, ANALYSIS	CONTINUE to **Step 3.**
Further analysis commands using Epi Info	GO to the **Epi Info User Guide for Data AnalysisNorthern Border– Vehicles** beginning on **page 7-28**

3. Run the selected data analysis program file (*.PGM) from Step 1.

You should be at the Epi Info ANALYSIS screen. If not, review Step 2.

NOTICE

To leave the analysis mode at any time, Press [F10].

A. At the EPI 6 command prompt, Type **RUN FILENAME**, where FILENAME is the *.PGM file you selected in Step 1. For example, if you are analyzing data gathered in Fiscal Year 2000, then you would enter at the command prompt: **RUN BDR2000.PGM**, then

Press [**ENTER**]

If you:	Then:
See the following prompt at the bottom of the screen: "Press enter key to pick the records file you want to analyze"	1. Press [ENTER]. A window appears with a listing of *.REC files. 2. GO to **Step B.**
Do not see the prompt stated in the cell above	DO the following 3 steps.

i. Type **RUN**, then Press [**ENTER**]. A window appears with a list of *.PGM files.

ii. Using the Up (↑) and Down (↓) arrow keys, search and highlight the program file name you want to run (for example, BDR2000.PGM), then Press [**ENTER**].

NOTICE

If you cannot locate the file name you are looking for, then contact your local AQIM coordinator. If they are not available, then contact the National AQIM Coordinator.

iii. When the following prompt appears at the bottom of the screen: "Press enter key to pick the records file you want to analyze"

Press [**ENTER**]

Go to **Step B.**

B. Using the Up (↑) and Down (↓) arrow keys, highlight the records file for the desired fiscal year.

Important

The program file (*.PGM) must match the records file (*.REC). When you are sure,

Press [**ENTER**].

C. You are prompted for a file name where the program will save the output. (An example is given on the screen using a three-letter port code and the date.)

Type **FILENAME**, where FILENAME is the file name you have created to save the program output. Then, Press [**ENTER**].

D. You are prompted to enter the date that is **one day before** the date you want the program analysis to start. (The analysis program analyzes records between two given dates, but does not include the given dates. Therefore, you must enter the dates of the days must before and after the dates you want included in the analysis.

EXAMPLE: For example, to analyze Fiscal Year 2000 data, you would enter 09/30/1999 (one day before the beginning of Fiscal Year 2000).

Type the start date following the format (MM/DD/YYYY), where it is one day before the date you want the program analysis to start, then Press [**ENTER**].

E. You are prompted to enter the date that is one day after the date you want the program analysis to end.

Type the end date following the format (MM/DD/YYYY), where it is one day after the date you want the program analysis to end, then Press [**ENTER**].

4. The program will begin analyzing. You will see the program's output scroll quickly on the screen. It is being saved to the file name you specified in Step C.

5. The program is finished when the cursor returns to the EPI6> prompt. At this time, you may want to do any of the following:

If you want to:	Then:
View or print the program output file	1. Press [F10] to exit Epi Info 2. Use a word processing program such as Word Pro to view and/or print the file. **NOTE**: The file usually is in the C:\EPI6 directory saved in an ASCII (DOS) text file format.
Run a data analysis program file for another fiscal year's data	Return to Step 1 at the beginning of this subsection to decide which program file to run.
Continue with further analysis commands using the Epi Info User Guide for Data Analysis	Go to the **Epi Info User Guide for Data AnalysisNorthern Border– Vehicles** beginning on **page 7-28**
Exit Epi Info, ANALYSIS	Press [F10]
Exit Epi Info	Press [F10] twice

Epi Info User Guide for Data AnalysisNorthern Border– Vehicles

When first running analysis commands in Epi Info, thoroughly read through the user guide to become familiar with the basic analysis procedures used with the monitoring data at your work location.

Get Ready

1. You should be at the Epi Info ANALYSIS screen. If not, refer to Step 2. getting ready to run a data analysis program file, under How to Load and Run Data Analysis Program Files, on page 7-25.
2. Press [**F2**] (to list Commands menu).
3. Use arrow key to move cursor to READ command.
4. Press [**ENTER**] **twice** (to get a list of .REC files which can be analyzed).
5. Use the arrow key to move the cursor to highlight NBV.REC.
6. Press [**ENTER**] **(**to bring the *.REC file you have chosen on the Analysis screen).
7. Press [**F4**] (to browse the data in the file).
8. Use the arrow keys to look over the data to make sure it has been entered properly during the past month. (In subsequent months, you will want to browse the entire file to see that all months of data have been properly entered, repeated fields such as workunit are consistently the same.)

To view only one individual record, press **[F4]** again to see the entire record as it was originally entered. If it is necessary to make changes to the record, **note the Epi Info record number in the lower right of the screen**.

If you want to edit or change this record, go to "Edit Records" on page 7-31

Analyze Records

9. Press [**F10**] (to return to the main Analysis screen).
10. Press **[F2]** (to see a list of commands)
11. Use arrow keys to move the cursor to FREQ (frequency) and,

    Press **[ENTER]**
12. Press **[F3**] (to see a list of variables.) To better understand the variables listed, refer to page 7-32 for a list of data variable translations for the current FY and a summary of data field changes made during previous FYs.
13. Use arrow keys to highlight the data variable you wish to know the frequency of.

    Press [**ENTER**] **twice** and you will get a frequency table.

EXAMPLE: If you want to know how many times samples were taken at a crossing, you can choose CROSSING and Press [ENTER] **twice**. You will get a table showing the number of records entered into the database for each crossing.

14. Explore the database by doing FREQ commands for as many data variables as is logical. By doing this you will begin to understand the survey data and possibly see some patterns in the data.

For each variable, use the [**F2**] and [**F3**] keys to choose the FREQ command and variable of interest. Also, you can type the word FREQ and the data variable names directly at the Epi Analysis prompt. The Page Up and Page Down keys will move the contents of the Output-Screen up or down for review.

15. To explore graphic commands: (The PIE command is one of several graphics commands which allow you to analyze the variables with graphs. This may make it easier to see patterns in the data and to understand the survey results.)

Press [**F2**] again and choose the PIE command with the cursor.

Press [**F3**] and select a data variable of interest from your data exploration in the FREQ analysis (Step 10.-14.).

Press [**ENTER**] **twice** and you will see a pie chart on your screen which might help you understand a pattern in the data.

For example, if you chose the MONTH variable for a pie graph, you may see that a large number of samples were taken in one month, which may cause you to question why this happened.

To return to the main screen, Press: **<ESC>.**

16. Further exploration: Two other commands (F2 TABLES, F2SELECT) are very useful to explore the survey data and to begin answering questions you may have after using the FREQ and PIE commands.

If you want to know if there is a pattern to when prohibited items are seized, do the following:

Press [**F2**]. Move cursor to SELECT. Press [ENTER].

Press [**F3**]. Move cursor to AGRSEIZ.

Press [**ENTER**] once. Type: **= "Y"**.

The command will then look like this: EPI6> SELECT AGRSEIZ= "Y" (if using vehicle file NBV.REC)

Press [**ENTER**].

When you run any new analysis commands, the analysis will only look at the records in which there was a prohibited item seized. If you want to get back to analyzing all the records, Press [F2]. Move cursor to SELECT. Press [**ENTER**] **twice**.

17. If working with **NBV.REC**, and wish to continue working with the subset of records established in Step 16:

Press [**F2**]. Move the cursor to FREQ. Press [**ENTER**].

Press [**F3**]. Choose MONTH. Press [**ENTER**] **twice**.

You will get a table that lists the frequency of seized items for each month. Do a PIE MONTH analysis to get a graphic picture of which months represent the most prohibited items. You can use this type of analysis to start seeing if any patterns exist as to when people are carrying across prohibited material. This can either confirm or call into question your ideas about risk.

18. Select all records in the database. Type **SELECT** at the command prompt and

Press [**ENTER**].

19. If working with the **NBV.REC** file, Type at the command line: TABLES **DESTINATIO AGRSEIZ**. (Or use the [**F2]** and [**F3]** keys to select the TABLES command and the two variables.)

Press [ENTER], and you will get a table which shows the frequency that vehicles carrying seized items are destined for various States in the United States.

Edit Records

E1. Press [**F10**] **twice** (to get back to the main EPI6 program menu).

E2. Press [**P**] (to list Program menu).

E3. Press [**N**] (to get to the Edit menu).

E4. Press [**F9**] (to list .REC files).

E5. Use arrow keys to highlight appropriate .REC file.

Press [**ENTER**] **four times** to get to the data entry screen for this file.

E6. Press [**CONTROL**] **and F** at the same time (to find the record which needs editing).

E7. Press [**F2**] and then **type the number** of the record you need to edit.

E8. Press [**ENTER**] (to get to the record you need to edit).

E9. Make corrections to the record, using the Up (↑) and Down (↓) arrow keys to move from field to field.

When finished editing, Press [**F10**], and answer YES to the question (at the bottom of the screen) that asks to write the edited record to the data file.

Return to the beginning of the user guide on page 7-28.

Northern Border Vehicle Epi Data Translation

Core Data Fields for the Current Fiscal Year

VARIABLE NAME	SCREEN NAME
WORKUNIT	Work Unit:
RECNUM	Rec Num: (Permanent Record Number)
WORKUNITCO	Work Unit Code:
CROSSING	Crossing:
DAYWEEK	Day of Week:
HOLIDAYWKN	Holiday Weekend
DATE	Date:
TIME	A) Time: (24 Hour)
PAXORIGIN	B) Pax Origin:
ORIGINCODE	Origin Code:
ORIGIN	C) Origin: (Whether local or distant)
StateDest	State Destination
CITYDEST	City Destination
DESTIN	E) Destination:
NUMBERPAX	F) Number Pax:
STATUS	G) Status:
CANAIRPORT	H) From a Canadian Airport
REASONTRAV	I) Reason for Travel:
VEHTYPE	J) Luggage Type:
BEENONFARM	K) Been on Farm
GOFARMRAN	L) Going to a Farm or Ranch:
ITEMAGRINT	M) Items of Agr Interest?:

VARIABLE NAME	SCREEN NAME
First Item Information:	
ITEM	Item:
ICODE	Icode:(Item Code Number)
QMITYPE	QMIType: (QMI type of item: A (Animal), P (Plant), N(None)
ITEMORCO	Item OriginCode:
ITMAMNT	ItmAmnt: (ItmAmnt)
U	U: (Unit of measure used for amount)
DECLARED	Declared: (Did passenger declare item, written or orally)
ACTION	Action: (Either seized, cln/trmt, or I&R)
O	O: (Full origin name)
WHREFOUND	Whre Found: (what area of vehicle item found in)
FOUNDIN	Found In: (what type of container item found in)
PESTPRES	PestPres: (was item infested with a pest)
CONTAMINAN	Contaminant: (is contaminant present)
PESTNUM	Pest Intercep. Num: (Pest Interception Number)
PESTID	Pest ID/Contaminant
CONTINUE	Continue:
Second Item Information:	
ITEM01	Item:
ICODE01	Icode: (Item Code Number)
QMITYPE01	QMIType: (QMI type of item: A(Animal), P(Plant), N(None)
ITEMORCO01	Item Origin Code:
ITMAMNT01	ItmAmnt: (ItmAmnt)
U01	U: (Unit of measure used for amount)
DECLARED01	Declared: (Did passenger declare item, written or orally)
ACTION01	Action: (Either seized, cln/trmt, or I&R)
O01	O: (Full origin name)
WHREFOUN01	Whre Found: (what area of vehicle item found in)
FOUNDIN01	Found In: (what type of container item found in)
PESTPRES01	PestPres: (was item infested with a pest)
CONTAMIN01	Contaminant: (is contaminant present)
PESTNUM01	Pest Intercep. Num: (Pest interception number)
PESTID01	Pest ID/Contaminant:
CONTINUE01	Continue:
Third Item Information:	
ITEM02	Item:
ICODE02	Icode: (Item Code Number)

VARIABLE NAME	SCREEN NAME
QMITYPE02	QMIType: (QMI type of item: A(Animal), P(Plant), N(None)
ITEMORCO02	Item Origin Code:
ITMAMNT02	ItmAmnt: (ItmAmnt)
U02	U: (Unit of measure used for amount)
DECLARED02	Declared: (did passenger declare item, written or orally)
ACTION02	Action: (either seized, cln/trmt, or I&R)
O02	O: (Full origin name)
WHREFOUN02	Whre Found: (what area of vehicle item found in)
FOUNDIN02	Found In: (what type of container item found in)
PESTPRES02	PestPres: (was item infested with a pest)
CONTAMIN02	Contaminant: (is contaminant present)
PESTNUM02	Pest Intercep. Num: (Pest interception number)
PESTID02	Pest ID/Contaminant:
MO	MO: (month of record, for analysis purposes)
ANACTREQ	ANACTREQ: (an action required)
SEIZED	SEIZED: (QMIs seized)
CONTINUE02	Continue:

Fourth Item Information:

ITEM03	Item:
ICODE03	ICode: (Item Code Number)
QMITYPE03	QMIType: (QMI type of item: A(Animal), P(Plant), N(None)
ITEMORCO03	Item Origin Code:
ITMAMNT03	ItmAmnt: (ItmAmnt)
U03	U: (Unit of measure used for amount)
DECLARED03	Declared: (did passenger declare item, written or orally)
ACTION03	Action: (either seized, cln/trmt, or I&R)
O03	O: (Full origin name)
WHREFOUN03	Whre Found: (what area of vehicle item found in)
FOUNDIN03	Found In: (what type of container item found in)
PESTPRES03	PestPres: (was item infested with a pest)
CONTAMIN03	Contaminant: (Is contaminant present)
PESTNUM03	Pest Intercep. Num: (Pest interception number)
PESTID03	Pest ID/Contaminant:
ORCONTAMIN	Or Contaminant

Summary of Data Field Changes Made During Previous Fiscal Years

For Fiscal Year:	The following additions, changes, and removals were made to the data fields:
2001	Changes: GOFARMRAN used to be GOVISWORK PESTPRES used to be INFESTED PESTPRES01 used to be INFESTED01 PESTPRES02 used to be INFESTED02 PESTPRES03 used to be INFESTED03
2003	Additions: DAYWEEK= Day of Week HOLIDAYWKN= Holiday Weekend STATEDEST- State destination CITYDEST- City destination CANAIRPORT- Canadian airport

For Fiscal Year:	The following additions, changes, and removals were made to the data fields:	
1999	Additions: RECNUM=RecNUM PAXORIGIN=PaxOrigin PAXDESTIN=Pax Destination STATUS=Status REASONTRAV=Reason for Travel VEHTYPE=Vehicle Type GOVISWORK=Go Visit or Work on Farm or Ranch ITEMAGRINT=Items of Agr Interest? ITEMAGRINT1 ICODE=Icode QMITYPE=QMIType ITEMORCO=Item Origin Code ITMAMNT=ItmAmnt U=U DECLARED=Declared ACTION=Action O=O WHREFOUND=Whre Found FOUNDIN=Found In INFESTED=Infested CONTAMINAN=Contaminant PESTID=Pest ID ICODE01-Icode QMITYPE01 ITEMORCO01 ITMAMNT01 U01 DECLARED01 ACTION01 O01 WHREFOUND01 FOUNDIN01	**Additions:** (continued) INFESTED01 CONTAMIN01 PESTID01 ICODE02=Icode QMITYPE02 ITEMORCO02 ITMAMNT02 U02 DECLARED02 ACTION02 O02 WHREFOUND02 FOUNDIN02 INFESTED02 CONTAMIN02 PESTID02 ICODE03=Icode QMITYPE03 ITEMORCO03 ITMAMNT03 U03 DECLARED03 ACTION03 O03 WHREFOUND03 FOUNDIN03 INFESTED03 CONTAMIN03 PESTID03 MO=MO ANACTREQ=ANACTREQ SEIZED=SEIZED ORCONTAMIN=or contaminant

For Fiscal Year:	The following additions, changes, and removals were made to the data fields:
1999	Changes: DATE used to be DAY and YR NUMBERPAX used to be NUMBERPASS DESIN used to be DESINATO ORIGINCODE used to be ORIGCODE CONTINUE01 used to be CONT01 CONTINUE02 used to be CONT02
	Removals: LOCATION=Location MONTH=Month LOC TRAFFIC AGRSEIZ AGRSEIZ1 WEIGHT ITEMCODE WEIGHT01 ITEMCODE01 WEIGHT02 ITEMCODE02 WEIGHT03 ITEMCODE03

8

AQIM Handbook

Northern Border Truck Cargo

Introduction

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Background

In order to properly monitor cargo, you need to have a good understanding of two key statistical principles:

1. It is important that the sample selected be representative of the universe. Random selection helps ensure this.
2. Once the sample is selected, it is necessary to inspect the sample thoroughly.

If you want your work location to produce quality risk information, then each person participating must have a clear understanding of the sampling universe, cargo strata and stratifying the sample, the unit of sampling, and consistency issues.

The Sampling Universe

You estimate the number and kinds of pests or improperly manifested items in a cargo entry pathway by taking a random sample from the universe of all cargo in the pathway. It is key to good statistics to carefully define this universe from which you want to draw your random sample. The following questions need answers in order to be able to select the sample correctly and make statistical inferences for the entire universe.

- How are commodities transported?
- How many commodities are arriving at a work location?
- What kinds of commodities are arriving?
- Are certain types of commodities of more interest to PPQ than others?

For AQIM, the universe is defined by the mode of transport of the cargo such as truck. Initially, PPQ has decided to limit the universe. The following commodities or commodity types will be **excluded** from the sampling universe:

- Commodities which are pre-cleared at foreign sites;
- Frozen commodities;
- Commodities which undergo some type of mandatory treatment, other than cold treatment (for example, fumigation, irradiation, hot water treatment) at work locations; and
- Oil, salt, iron ore, coal, etc., which have no pest risk.

Cargo Strata and Stratifying the Sample

The survey processes for AQIM were designed to be compatible with PPQ cargo inspection groupings. The surveys divide the cargo universe into several homogeneous and distinctly separate groups, in order to estimate the pest approach rates in each group.

By sampling a set number of samples from each cargo group, PPQ is able to get precise estimates of cargo containers with pests. It is then easier to make comparisons, which help the work location understand how effectively it manages the pest risk for cargo strata, as well as for the cargo universe.

The survey processes provide the sample sizes for each work location monitoring the pathway strata. Following is a summary of the stratified sample design and sizes in Northern border truck cargo:

Northern Border Truck Cargo	
Commodity	The following cargo categories are to be monitored in FY 2004, and sampling will take place at the ports of Blaine WA, Buffalo NY, Detroit MI, Port Huron MI, and Rouses Point NY: **Commercial Plant Perishable Agricultural Cargo** (This category is defined as any commercial formal or informal entry of fresh fruit, vegetables, plants or other non-processed or not refined plant product that is perishable. **Reefer Equipped Containers (Includes whether reefer unit is running or not)**
Sample Size	For **Commercial Plant Perishable Agricultural Cargo,** select six (6) trucks per week per port. (This excludes Brass released cargo and mandatory treatmetn cargo.) For **Reffer Equipped Containers (Includes whether reefer unit is running or not),** select six (6) random samples per week per port for checking compliance.
Inspection Methodology	For **Commercial Perishable Agricultural Cargo**: 1. Inspect cargo using appropriate AQIM hyper geometric inspection procedures for each sample. 2. Record all needed data on appropriate FY 2004 AQIM data worksheet For **Reefer Equipped Containers (Includes whether reefer unit is running or not)**: 1. This excludes the reefers of plant perishables already monitored in the above category. (Note: Inspection of this cargo can be predominantly tailgate, with occasional climb in or de-van, **as long as the inspection satisfies the inspector the cargo is what documents state**.) 2. Need to monitor primarily for smuggling of agricultural and other prohibited items. 3. Record all needed data on appropriate FY 2004 AQIM data worksheet

It is very important that each sample selected be representative of all other units in the stratum being sampled. One way to ensure that the sample is representative is to choose a truck at random (either random

time, or random number). This random selection process eliminates the bias of the officer selecting the sample. The officer's experience (bias) might lead to choosing a truck that is carrying a commodity that is more likely to be harboring a pest. This bias would make the sample not represent the entire stratum of trucks. The monitoring results would be skewed toward those commodities likely to harbor a pest. This kind of bias would hamper the work location's ability to make the best decisions based on risk analysis.

What is Not Part of the Sampling Universe

For the time being, pre-cleared cargo will continue to be left out of the sampling universe for all categories. Also, frozen commodities and commodities that undergo mandatory treatments at work locations, other than cold treatment, are left out of the sampling universe for now. Other bulk commodities, such as, oil, iron ore, salt, and coal, that have no possibility of pest risk associated with them are also not part of the sampling universe.

Setting Up a Process

Setting up a process of selecting representative samples in each group will be one of the biggest challenges in AQIM. Because each work location has its own unique set of circumstances in cargo operations, the work location must individualize its random sampling process. It will be necessary to document the process and ask for feedback from other work locations and headquarters staff who have experience in selecting random samples in the cargo environment. Work locations may even decide that this particular part of the monitoring is important enough to form a Northern Border Risk Management Team to review the random sampling process on a regular basis.

The Unit of Sampling

For Northern border truck cargo, the sample unit is a truck box, not including the cab. It is crucial that the sample unit is inspected closely enough to detect any actionable pests or improperly manifested items. Summary inspection procedures for Northern border truck cargo begin on page 8-7. The procedures must be followed exactly in order for the monitoring estimates to be valid, and useful.

Consistency of Data Collection

It is crucial that the monitoring results from the inspection of a random sample unit are recorded accurately and consistently. Because each sample represents many other units, all officers must be as consistent as possible in following the inspection procedures.

The group containing regulated commodities pose a special challenge. If the sample selected is a regulated commodity, it is important to understand the following:

Cargo monitoring estimates the number of trucks approaching the work location with pest infestation levels requiring action by PPQ. AQIM uses risk-based inspectional procedures for detecting 10 percent pest infestation rate. This initial threshold is used to estimate the number of trucks approaching a work location and to mitigate a pest threat.

NOTICE

This 10 percent infestation level may change as the data for AQIM is collected and analyzed.

To be 95 percent sure that the officer inspecting the sample truck will find the pest, when the shipment is infested at a 10 percent infestation level, the officer must select, at random, a specific number of boxes in the shipment. Determine this number of boxes by using the hypergeometric table illustrated in Table 8-1. Each of these boxes must be inspected at a level of intensity to ensure that:

- No hitchhiker pests are present in the box,
- No internal feeding insects are present in randomly selected fruit in the box, and
- No mismanifested or smuggled items are present.

TABLE 8-1: Hypergeometric Table For Random Sampling

Total number of boxes on the truck:	Randomly Select This Number of Boxes to Inspect:
1-10	10
11-12	11
13	12
14-15	13
16-17	14
18-19	15
20-22	16
23-25	17
26-28	18
29-32	19
33-38	20
39-44	21
45-53	22
54-65	23
66-82	24
83-108	25
109-157	26
158-271	27
272-885	28
886-200,000	29

Officers should follow normal inspectional procedures of fruits or vegetables to make these determinations. For example, officers should cut fruit to detect internal feeders if external evidence is present.

AQIM provides information about the relative risk of various entry pathways. To do this, the AQIM activities will follow a qualitative risk assessment model (see Figure 1-2). The survey analysts will "plug into the model" the estimated number of specific actionable pests identified in the samples. Therefore, when an officer is inspecting a regulated sample shipment for AQIM, the officer needs to inspect every box required by the hypergeometric table (refer to Table 8-1). Also, the officer needs to count how many pest specimens are actually observed and record this number on PPQ Form 309, Pest Interception Record.

For the relative pathway risk model to be useful, all officers doing the monitoring at all work locations must report the number of pest specimens accurately and consistently. It is necessary to follow the inspection guidelines, sampling processes, Epi Info User Guides, and sampling protocols.

Northern Border–Truck Cargo Procedures Summary

Use the summary of procedures for Northern Border—Truck Cargo as

an aid when sampling and inspecting commodities for AQIM.

LAND-BORDER TRUCK CARGO UNIVERSE PROCEDURES SUMMARY	
Category	The following cargo categories are to be monitored in FY 2004, and sampling will take place at the ports of Blaine WA, Buffalo NY, Detroit MI, Port Huron MI, and Rouses Point NY: **Commercial Perishable Agricultural Cargo** (This category is defined as any commercial formal or informal entry of fresh fruit, vegetables, plants or other non-processed or not refined plant product that is perishable. **Reefer Equipped Containers (Includes whether reefer unit is running or not)**
Strata Definition	All trucks carrying non-frozen cargo regulated or non-regulated. EXCEPT: *Commodities receiving a mandatory treatment other than cold treatment at Port of Entry, and empties.*
Sample Size	For **Commercial Plant Perishable Agricultural Cargo,** select six (6) trucks per week per port. (This excludes Brass released cargo and mandatory treatmetn cargo.) For **Reffer Equipped Containers (Includes whether reefer unit is running or not),** select six (6) random samples per week per port for checking compliance.
Sample Selection	At port discretion, random time, skip intervals, etc.
Inspection Methodology	For **Commercial Perishable Agricultural Cargo**: Each truck requires a physical inspection at port or consignee premise. Boxes with agriculture items will be selected for inspection from random locations throughout the truck to detect a *10 percent level of infestation (95 percent confidence)*. The number of boxes shall be set using the **Table 8-1**. Entire contents of boxes selected and available floor space of the container shall be inspected for pests or mismanifested or smuggled items. For **Reefer Equipped Containers (Includes whether reefer unit is running or not)**: 1. This excludes the reefers of plant perishables already monitored in the above category. (Note: Inspection of this cargo can be predominantly tailgate, with occasional climb in or de-van, **as long as the inspection satisfies the inspector the cargo is what documents state**.) 2. Need to monitor promary for smuggling of agricultural and other prohibited items. 3. Record all needed data on appropriate FY 2004 AQIM data worksheet.
Other Issues	1.Most inspections will be conducted during normal business hours at the port. 2.Ports need to advise shippers, importers, and brokers that low level random sampling and inspection will be part of day-to-day operations. They should understand that there is a small probability that their shipment will be intensely inspected.

Pathway Monitoring Maintenance and Quality Assurrance

Port managers and local AQIM coordinators are responsible for ensuring that monitoring activities are being performed and being performed properly. To help with reviewing the status of monitoring activities, refer to **Appendix L—Pathway Monitoring Maintenance** This appendix contains a checklist of questions port managers and local AQIM coordinators should periodically answer to ensure proper monitoring of each designated pathway at their work locations. See **Figure L-1**

The questions review the following topics:

- Random sampling
- Proportional sampling
- Adequate sampling
- Accurate and complete data
- Working risk committees
- Local support

Northern Border–Truck Cargo Worksheet

There is one worksheet for recording information gathered from your inspection of Northern border–truck cargo for the purpose of AQIM. The stratum represents cargo of PPQ interest and on-line release.

The worksheet is printed on the following page so you can remove, photocopy, and reuse it. It is also available on disk; contact your local AQIM coordinator.

The worksheet is also available as a fillable form; go to:

http://www.aphis.usda.gov/ppq/manuals/pdf_files/AQIM_in_PDF/Northern_Border_Cargo.pdf

8

AQIM Handbook

Northern Border—Truck Cargo

Data Collection and Maintenance

Introduction

Traditionally, PPQ based our work on the quantity of quarantine material intercepted. We inspected cargo, found pests, and tallied them to justify good job performance. AQIM emphasizes work efforts based on the potential threat posed by foreign pests and quarantine material.

Regular baseline AQIM will be incorporated as a part of PPQ's ongoing operations at work locations. Inspection time will vary depending on the strata and on the commodity.

Every staffed PPQ work location needs to be involved in the AQIM process.

The expected results are that PPQ will have results-monitoring systems in place that will meet the needs of management and the requirements of the GPRA.

NOTICE

When first using Epi Info thoroughly read the user guide to become familiar with entering data into each of the data fields.

Epi Info User Guide for Data EntryNorthern Border–Truck Cargo

General Instructions

At completion of **each data entry** session make a back up of data records file, **CGMNBG.REC**, file to a computer disk. See Appendix G for procedures for backing up monitoring data.

1. Press [**CAPS LOCK**] (to ensure typing capital letters).
2. Be sure to start at C:\prompt. Epi Info is a DOS program.
3. Change to the Epi Info directory. Type **CD EPI6** then Press [**ENTER**].
4. Start Epi Info program. Type **EPI6** then Press [**ENTER**].
5. Wait several seconds, the Main Menu will appear with the word Program highlighted.

6. Press [**P**] (to list Program Menu).
7. Press [**N**] (to choose ENTER from Program Menu).
8. Cursor should be in the space below the phrase "Data file (.REC)".
9. Type **CGMNBG** in the space the cursor is in.
10. Press [**ENTER**] **3 times** (to load files for data entry).
11. Data entry screen for Cargo Strata should appear.

Help Statements

Read the following help statements before entering data:

- Each data entry screen represents only one monitoring inspection. After correct data entry is made and saved, this becomes a record for that one inspection.
- Some data fields will automatically advance the cursor after entering data. Some require pressing [**ENTER**] to advance the cursor after entering data.
- Some data fields will be skipped depending on the strata.
- Data entry messages and valid data values for each data field appear at the bottom of the screen or by pressing [**F9**].
- If an error is made and the cursor has left the data field, use the Up (↑) and Down (↓) arrow keys to move from field to field in order to make changes or corrections to data fields already entered.

Enter Data

Read the following as you enter data to become familiar with each of the fields.

Port—You should not have to enter data in this field. This field is automatically filled in, if not contact the local AQIM Coordinator.

Crossing—-You should not have to enter data in this field beyond the first record. This field is automatically filled in, if not contact the local AQIM Coordinator.

BDRRECNUM—This field is automatically assigned by the computer.

Cargo Type—You should not have to enter data in this field. This field is automatically filled in, if not, contact your local AQIM Coordinator.

Cargo Refrig—Enter response circled on the data form.

Entry Size—Enter truck size circled on the data form.

Strata—Must enter data. Press [**F9**] to open window of valid strata names. Use Up (↑) and Down (↓) arrows keys to highlight correct choice. Press [**ENTER**] to select this strata.

Cargo Category—Record the appropriate category of cargo that is being inspected: regulated or unregulated.

FOR STRATA 1: **Cargo Refrig.:** Record if the cargo is under refrigeration.

FOR STRATA 1: **Entry Size:** Record the entry or truck size, as it relates to the cargo. Choose either > 20 ft. Or < 20 ft. Press [**F9**] to open window with these choices. Use Up (↑) and Down (↓) arrows keys to highlight correct choice. Press [**ENTER**] to select the size.

Date—Must enter data. Enter date of inspection from data form in MM/DD/YYYY format.

Consignee—Record the consignee of this shipment.

Carrier—Must enter data: Enter trucking line/company, spell names completely.

Cargo Origin—Record origin of the cargo; for Canadian origin, record the Province name. Must enter data. Press [**F9**] to open window of valid origin names. Type the first and second letters of country name in order to scroll down the list faster. Use Up (↑) and Down (↓) arrows keys to highlight correct choice. Press [**ENTER**] to select this origin.

OrgnCode—You should not have to enter data. This code is entered automatically.

Destination—Must enter data. Press [**F9**] to open window of State codes. Type the first letter of the State name in order to scroll down the list faster. Use Up (↑) and Down (↓) arrows keys to highlight correct choice. Press [**ENTER**] to select this destination.

Manifest As—Must enter data. Record up to 3 cargo item(s) as they appear on the on the manifest or entry documents. Spell out all words.

Description Group—Enter the code representing the general group of the cargo. The cargo description groups are listed at the bottom of the data form. If the cargo does not fit in any group listed or is unknown, then use OTHR.

Cargo Count (Num)— Record the amount of cargo units (boxes, cartons, bags, etc.).

Cargo Weight (KG)—Record the amount of cargo by recording the weight in kilograms.

Amt. Insp. (Num)—FOR REGULATED CARGO ONLY!! Record the amount of cargo sampled and inspected by recording the number of singular units inspected (boxes, bags, etc.)

Inspection Method—Enter the inspection method code recorded on the data form: HG, OEC, OPC, or TGT.

Solid Wood Packing (SWP)—Must enter data. Enter either [**Y**](yes) or [**N**](no):

- If Y: cursor will proceed to next data field.
- If N: then cursor will jump to the 'Required Action Beyond Inspection to Reduce Risk'

SWP Type—Enter Dunnage, pallet, crating, or other.

Was Bark Found on SWP—Enter either [**Y**](yes) or [**N**](no).

Amount of SWP Inspected %—Enter percentage recorded on data form.

SWP Fumigation or Other Treatment presented—Enter either [**Y**](yes) or [**N**](no).

Required Action Beyond Inspection to Reduce Risk—Must enter data. Enter either [**Y**](yes) or [**N**](no):

- If Y: cursor will proceed to next data field.
- If N: then cursor will jump to the bottom of the screen asking the question: "Write data to disk (Y/N/<Esc>)?." If data entry is correct and complete, answer [**Y**] to this question and the data screen will renew for the next record entry.

1. **Intended Use of Cargo**Record the intended use of the cargo.
2. **Action Pest**Record if actionable pest(s) were found or not. Enter either [**Y**](yes) or [**N**](no):

- If Y: cursor will proceed to the next data field.
- If N: then cursor will jump to "3. Contaminant Found?"

Cargo Item—Record the cargo item that the pest was found on, include cargo conveyance as an option if appropriate. NOTE: When recording:

- Use the singular form (except for leaves)
- Use precise descriptors: fresh, dried, frozen, etc.
- Describe using common English names if possible
- DO NOT use the general descriptors **cucurbit, bean, or rubus sp.** Break these down to more detailed items, if possible.

Pest ID—System will automatically enter NONE (for no pest found). Record the identified pest name (genus/species).

Pest Intercep. Num.—System will automatically enter NONE (for no pest found). Enter the pest interception number assigned to the pest. This number maybe assigned later or by another office. If pest interception number assignment is delayed, then enter the letters: TBA (To Be Assigned.) Remember to update this data field with the pest interception number.

Where found:WFA—Record where the pest was found in relationship to the container/conveyance that the cargo arrived in: EXT, TGT, RR, FR, or SWP. See the bottom of the data form for description of codes.

WFA—A second field for 'where pest was found' if pest is found in more than one of the locations listed.

Cont (Continue)—

- Press [**Y**] if additional pests and cargo items ARE to be entered, Press [**ENTER**] to leave field and continue on.
- Press [**N**] if no other items are to be entered in this record. Cursor will jump to "3. Contaminant Found?".

3. **Contaminant Found?**Must enter [**Y**](yes) or [**N**](no) to indicate if a contaminant was present with the cargo. **If yes, be sure to enter the contaminant information after answering next data field.**
4. **Agr. Item Mismanifested/Smuggled?**Must enter [**Y**](yes) or [**N**](no) to indicate if any mismanifested or smuggled items were found with the cargo.

- If **Y**: then cursor will proceed to next data field.

- If **N**: then:
  - if Yes to previous Contaminant question, cursor will move to the next data field,
  - if No to previous Contaminant question, cursor will jump to the bottom of the screen asking the question: "Write data to disk (Y/N/<Esc>)?" If data entry is correct and complete, answer [**Y**] to this question and the data screen will renew for the next record entry.

Contaminant/Item—

- If Contaminant: record the contaminant name and the item it's associated with, i.e., manure on truck, soil on yams, etc.
- If Mismanifest/Smuggled: record the items found.

CntRecord the amount in singular units (boxes, cartons, bags, etc.) if appropriate.

Wght, KG—Record the amount of listed contaminant/item in kilograms. Record best "accurate estimate," if necessary.

Prohibited—Record if contaminant/item is prohibited due to regulations or quarantine.

Where found:WFA—Record where the contaminant/item was found in relationship to the container/conveyance that the cargo arrived in: EXT, TGT, RR, FR, or SWP. See the bottom of the data form for description of codes.

WFA—A second recording for 'where contaminant/item was found' if found in more than one of the locations listed.

MO—Do not enter data in this field. This field is filled in automatically with the numeric value of the month. This field is used for analysis purposes.

Cont (Continue)—

- Type [**Y**] if additional pests and cargo items ARE to be entered, Press [**ENTER**] to leave field and continue on.
- Type **[N]** if no other items are to be entered in this record. Cursor will jump to "Write data to disk (Y/N/<Esc>)?"

Write data to disk (Y/N/<Esc>)—

- Type **[Y]** if data entry is complete for this record. Record will be saved to the record's file.

- Type [**N**] if you wish to make changes or corrections to the record field. After making changes or corrections remember to return the cursor to the last field of form (Going To Work On Farm.), and Press [**ENTER**] to return to the prompt "Write data to disk (Y/N/ <Esc>)?"

When finished with data entry—

- Press [**F10**] to return to Main Epi Info menu.
- Press [**F10**] again to leave Epi Info and return to regular computer menu.

Data Accuracy Checks and Data Corrections

[To Be Developed]

8

AQIM Handbook

Northern Border—Truck Cargo

Data Analysis

Survey Results and How To Use Them

AQIM activities have been put into place to develop baseline data to help answer two basic questions:

1. What is the threat of agricultural pests approaching work locations?
2. How effective is the AQI program at managing this threat?

Results of surveys for Norther border truck cargo provided a general answer for question 1. There are varying rates at which prohibited agricultural materials and pests approach the work locations. These prohibited agricultural materials are what can have agricultural pests.

Further analysis of the monitoring data is needed to determine the risk associated with the prohibited items approaching the work location. The origin and destination of the prohibited items is important to determine risk levels. Also, whether or not the prohibited item carries an actual agricultural pest is crucial in analyzing risk.

Analyses of the monitoring data need to occur at several levels of PPQ. At the work locations, PPQ personnel need to study what the data means and answer the first question for their specific work location. Analysis tools are available to help with these analyses, which are explained in the next subsection. At the same time, PPQ holds risk analysis workshops around the country to introduce risk analysis concepts. At some work locations, teams of PPQ officers and managers form Risk Management Teams to look at monitoring data and other data, which are normally collected at the work location.

At other locations, analyses of monitoring data occur to establish the rates at which quarantined items and agricultural pests are approaching the borders of States, areas of the country, and the United States.

Once baseline rates are well established, PPQ can use the monitoring data as a baseline to answer the second basic question: How effective is the AQI program at managing the risk of introduction of agricultural pests and diseases? Again, each work location must conduct this type of analysis. AQIM provides a framework which work location can use to carry out the analysis.

Analysis Tools

The tool available for analyzing AQI monitoring data is the ANALYSIS program in Epi Info. Using the ANALYSIS program in Epi Info you can look at data entered specifically for your work location. While in Epi Info ANALYSIS, you can select a data analysis program file (*.PGM) that automatically runs a series of Epi Info commands. The program will produce various listings, tables, analysis commands, and explanatory text from data files for a designated pathway. Follow the guidelines on how to load and run data analysis program files beginning on page 8-22.

Epi Info ANALYSIS saves the analysis output to a file for viewing and/or printing. The file contains basic information that answer some of the questions to guide data analysis that follow. For questions not answered by running an automatic program, you will need to key in and run various analysis commands. Follow the Epi Info User Guide for Data Analysis-Northern Border-Truck Cargo beginning on page 8-25 to help you with the analysis commands.

Questions To Guide Data Analysis

1. How many trucks were selected for sampling during the survey period?

   How many actions were required on the trucks sampled?

   How many actions by strata category sampled were there? (Previous data has multiple strata.)

   What is the action approach rate of trucks that require action (number of trucks requiring action divided by total trucks in the sample)?

2. How many pest interceptions (actionable pests) were made from survey samples?

   Pest Approach Rate: What is the rate of pest interceptions in relation to the total sampled number of trucks (number of trucks with actionable pests divided by total trucks in the sample)?

3. Compare the rate of actions required for each month of the survey.

   DISCUSSION

   Are there easily identified trends when the rate of cargo actions transiting the work location are higher?

Are there seasonal trends?

Do higher rates correlate with national or religious holidays, certain types of trucks, cargo, or importers?

4. Generate a listing and frequency of shipments requiring action. Which commodities present the greater risk?

Which commodities most likely to require action? Where were the agricultural pests found? What is the rate of trucks with smuggled or mismanifested items?

DISCUSSION:

How effective is the current tailgate inspection process in detecting pests and/or smuggled cargo?

5. What types of shipments (refrigerated, mixed vegetables, dry containers, empties, cut flowers, express carriers, etc.) require higher rates of action?

DISCUSSION:

What selectivity factors are currently used to identify shipments likely to require action?

What additional selectivity factors would be used to identify shipments likely to require action?

Do the survey results indicate additional factors that help identify shipments most likely to require action?

6. Using monitoring data, apply the survey results to the cargo universe at the work location to estimate the number of actions required and interceptions likely to transit the work location during the same time the survey period took place.

How many trucks arrived at the work location during the survey period? Using the action approach rate for trucks requiring action, calculate an estimate of the number of trucks transiting the work location that are likely to require action.

Using WADS data, how does the estimated number of actions required compare with the reported number of actions taken?

How many additional actions may have been required during the survey period?

How does the estimated number of actionable pest interceptions compare with the reported number of actionable pests on WADS for truck cargo?

DISCUSSION:

What percentage of resources are dedicated to staffing AQI activities for Northern border truck cargo at the work location?

What is the relative risk of this pathway compared with other pathways in the work location?

Should resources be reallocated among all the pathways in the work location to better address the relative risk of the pathways?

How to Load and Run Data Analysis Program Files

Data analysis program files are meant to provide only listings, tables, and explanatory text about the monitoring data gathered a work locations. The program files are not intended to be used as final analysis tools. The outputs from these program files should raise further questions and discussion by local personnel and risk management committees.

These program files automatically run a series of Epi Info analysis commands. Use the following guidelines to load and run data analysis program files.

1. Determine which data analysis program file (*.PGM) file you will load and run in Epi Info.

In Epi Info, ANALYSIS, there is a data analysis program file for each fiscal year of data gathered. Look at the table below to identify the file to load and run depending on which fiscal year's data you are analyzing.

If you want to analyze data for:	Then load and run the following Epi Info ANALYSIS data analysis program file (*.PGM)
FY 2001	CGMNBG01.PGM

2. Get ready to run a data analysis program file.

A. Press [**CAPS LOCK**] (to ensure typing capital letters).

B. Be sure to start at C:\prompt. Epi Info is a DOS program.

C. Change to the Epi Info directory. Type **CD EPI6**, then Press [**ENTER**].

D. Start Epi Info program. Type **EPI6**, then Press [**ENTER**].

E. Wait several seconds, the Main Menu will appear with the word Program highlighted.

F. Press [**P**] (to list Program menu).

G. Press [**A**] (to choose ANALYSIS from Program menu).

H.

If you are running:	Then:
A data program analysis file using Epi Info, ANALYSIS	CONTINUE to **Step 3.**
Further analysis commands using Epi Info	GO to the **Epi Info User Guide for Data AnalysisNorthern Border–Truck Cargo** beginning on **page 8-25**

3. Run the selected data analysis program file (*.PGM) from Step 1.

You should be at the Epi Info ANALYSIS screen. If not, review Step 2.

NOTICE

To leave the analysis mode at any time, Press **F10**

A. At the EPI6 command prompt, Type: RUN filename, where FILENAME is the *.PGM file you selected in Step 1. For example if you are analyzing data gathered in Fiscal Year 2001, then you would enter at the command prompt: **RUN CGMNBG01.PGM**.

Then, Press [**ENTER**].

If you:	Then:
See the following prompt at the bottom of the screen: “Press enter key to pick the records file you want to analyze”	1. Press [ENTER]. A window appears with a listing of *.REC files. 2. GO to **Step B.**
Do not see the prompt stated in the cell above	DO the following 3 steps

i. Type: RUN, then Press [**ENTER**]. A window appears with a list of *.PGM files.

ii. Using the Up (↑) and Down (↓) arrow keys, search and highlight the program file name you want to run (for example, CGMNBG01.PGM), then

Press [**ENTER**].

NOTE: If you cannot locate the file name you are looking for, then contact your local AQIM coordinator. If they are not available, then contact the National AQIM Coordinator.

iii. When the following prompt appears at the bottom of the screen: "Press enter key to pick the records file you want to analyze"

Press [**ENTER**].

Go to **Step B.**

B. Using the Up (↑) and Down (↓) arrow keys, highlight the records file for the desired fiscal year.

Important

The program file (*.PGM) must match the records file (*.REC). When you are sure,

Press [ENTER].

C. You are prompted for a file name where the program will save the output. (An example is given on the screen using the three-letter port code and the date.)

Type **FILENAME**, where FILENAME is the file name you have created to save the program output. Then, Press [**ENTER**].

D. You are prompted to enter the date that is **one day before** the date you want the program analysis to start. (The analysis program analyzes records between two given dates, but does not include the given dates. Therefore, you must enter the dates of the days just before and after the dates you want included in the analysis.)

For example, to analyze Fiscal Year 2001 data, you would enter 09/30/2000 (one day before the beginning of Fiscal Year 2001).

Type the start date following the format (MM/DD/YYYY), where it is one day before the date you want the program analysis to start, then Press [ENTER].

E. You are prompted to enter the date that is one day after the date you want the program analysis to end.

Type the end date following the format (MM/DD/YYYY), where it is **one day after** the date you want the program analysis to end, the Press [**ENTER**].

4. The program will begin analyzing. You will see the program's output scroll quickly on the screen. It is being saved to the file name you specified in Step C.
5. The program is finished when the cursor returns to the EPI6> prompt. At this time, you may want to do any of the following:

If you want to:	Then:
View or print the program output file	1. Press [F10] to exit Epi Info. 2. Use a word processing program such as WordPro to view and/or print the file. **NOTE**: The file usually is in the C:\EPI6 directory saved in an ASCII (DOS) text file format.
Run a data analysis program file for another fiscal year's data	Return to Step 1 at the beginning of this subsection to decide which program file to run
Continue with further analysis commands using the Epi Info User Guide for Data Analysis	Go to the **Epi Info User Guide for Data AnalysisNorthern Border–Truck Cargo** beginning on **page 8-25**
Exit Epi Info, ANALYSIS	Press [F10].
Exit Epi Info	Press [F10] twice.

Epi Info User Guide for Data AnalysisNorthern Border–Truck Cargo

When first running analysis commands in Epi Info, thoroughly read through the user guide to become familiar with basic analysis procedures used with the data about AQI monitoring for a specific work location.

Get Ready

1. You should be at the Epi Info, ANALYSIS screen. If not, refer to Step 2. getting ready to run a data analysis program file, under How to Load and Run Data Analysis Program Files on page 8-22.
2. Press [**F2**] (to list Commands menu).
3. Use the arrow keys to move the cursor to the READ command.
4. Press [**ENTER**] **twice** (to get a list of .REC files that can be analyzed).
5. Use the arrow keys to move cursor to highlight the records **CGMNBG01.REC**.
6. Press [**ENTER**] (to bring the *.REC file you have chosen into the Analysis screen).
7. Press [**F4**] (to browse the data records in the file).

8. Use the arrow keys to look over the data to make sure it has been entered properly during the past month. (In subsequent months, you will want to browse through the entire file to see that all months of data have been properly entered, repeated fields such as workunit are consistently the same.)

   To view only one individual record press [**F4]** again to see the entire record as it was originally entered. If it is necessary to make changes to the record, **note the Epi Info record number in the lower right corner of the screen.**

   If you want to edit or change this record, go to Edit Records beginning on page 8-28

Analyze Records

9. Press [**F10**] (to return to the main Analysis screen).
10. Press [**F2**] (to see a list of analysis commands).
11. Use the arrow keys to move the cursor to FREQ (frequency) and Press [**ENTER**].
12. Press [**F3**] (to see a list of data variables). To better understand the variables listed, refer to page 8-30 for a list of data variable translations for the current fiscal year.
13. Use arrow keys to highlight the data variable you wish to know the frequency of.

    Press [**ENTER**] **twice** and you will get a frequency table.

For example: if you want to know which carriers had shipments sampled, move the cursor to CARRIER and press enter twice. You will get a table showing the number of records entered into the database for each carrier sampled in the survey.

14. Explore the database by doing FREQ commands for as many data variables as is logical. By doing this you will begin to understand the survey data and see some patterns in the data.

    For each variable, use the [**F2]** and [**F3]** keys to choose the FREQ command and variable of interest, or you can type the word FREQ and the data variable names directly at the Analysis prompt.
15. To explore graphic commands: (The PIE command is one of several graphics commands which allow you to analyze the variables with graphs. This may make it easier to see patterns in the data and to understand the survey results.)

Press [**F2**] and choose the PIE command with the cursor. Press [ENTER].

Press [**F3**] and select a data variable of interest from your data exploration in the FREQ analysis (Step 9.-14.).

Press [**ENTER**] **twice** and you will see a pie chart on your screen which might help you understand a pattern in the data.

For example, if you have chosen the CARRIER variable for a pie graph, then you may see that a larger percentage of samples were taken from one carrier, which may cause you to question the sampling procedures.

See Appendix H for procedures for printing graphics while in Epi Info.

To leave the graph screen and return to the main screen, Press: **<ESC>.**

16. Further FREQ exploring.

To see the number and kind items carrying pests from random shipment inspections, Press [**F2**] to list commands.

Highlight FREQ and Press [**ENTER**]. (You will next "tag" more than one data variable to move these variable to the analysis command line.)

Press [**F3**] to list data variables, highlight **CARGOITEM** and "tag" this variable by Pressing: **Shift and the (+)**. A small arrow will appear next to **CARGOITEM**.

Next, highlight the variable **CARGOITE01**, and "tag" it. Do the same for **CARGOITE02**.

The analysis command line should appear:

EPI6> FREQ CARGOITEM CARGOITE01 CARGOITE02

Press [**ENTER**]. The output screen should display counts of items for each of the cargo item data lines for all records. Adding up the counts of the items will provide a category breakdown of the agriculture items carrying actionable pests during random sample inspections.

17. Further exploration. Two other commands (F2 TABLES, F2 SELECT) are very useful to explore the survey data and to begin answering questions you may have after using the FREQ and PIE commands.

For example, if you want to know if truck cargo strata 1 has samples taken from shipments coming from Great Britain, then do the following:

Press [**F2**]. Move cursor to SELECT. Press [ENTER].

Press [**F3**]. Move cursor to SWP.

Press [**ENTER**]. Type = “Y”.

The command line will then look like this: EPI6>SELECT SWP=”Y"

Press [**ENTER**].

When you run new analysis commands, the analysis will only look at a subset of records where the cargo had solid wood packing (SWP). If you want to get back to the entire set of records, type [**F2**]. Move cursor to SELECT. Press [**ENTER**].

18. To continue working with the subset of records established in Step 17:

Press [**F2**]. Move cursor to FREQ. Press [**ENTER**].

Press [**F3**]. Choose ORIGIN. Press [**ENTER**] **twice**. You will get a table that lists the frequency of sampled records from each country of origin.

Do a PIE ORIGIN analysis command to get a graphic picture of which countries the random shipments are coming from.

19. Press the Up (↑) arrow key to move the command line cursor to the FREQ ORIGIN command.

Type: **\C**. Press [**ENTER**]. The new table will give a statistical analysis with 95 percent confidence intervals.

20. Type on the command line: **TABLES ORIGIN ACTIONPEST**. (Or use the **F2** and **F3** keys to select the TABLES command and the two variables.)

Press [**ENTER**]. You will get a table which shows the frequency that actionable pests are being found in the samples from various origins.

This analysis can be used to further understand the cargo risk.

Edit Records

E1. Press [**F10**] **twice** (to get back to the main EPI6 program menu).

E2. Press [**P**] (to list Program menu).

E3. Press [**N**] (to get to the Edit menu).

E4. Press [**F9**] key (to list .REC files).

E5. Use arrow keys to highlight appropriate .REC file

Press [**ENTER] four** times to get to the data entry screen for this file.

E6. Press [**CONTROL**] **and [F]** at the same time (to find the record which needs editing).

E7. Press [**F2**] and then **type the number** of the record you need to edit.

E8. Press [**ENTER**] (to get to the record you need to edit).

E9. Make corrections to the record, using the Up (↑) and Down (↓) arrow keys to move from field to field.

When finished editing, Press [**F10]**, and answer YES to the question (at the bottom of the screen) that asks to write the edited record to the data file.

Return to the beginning of the user guide on **page 8-25**

Northern Border Truck Cargo Epi Data Translation

Core Data Fields for the Current Fiscal Year

VARIABLE NAME	SCREEN NAME
PORT	Port:
CROSSING	Crossing:
BDRRECNUM	BDRRECNUM:
CARGOTYPE	Cargo Type:
CARGOREFR	Cargo Refrig.:
ENTRYSIZE	Entry Size:
STRATA	Strata: (name of cargo port or pathway strata)
CARGOCATEG	Cargo Category: (Regulated or Unregulated)
DATE	Date:
CONSIGNEE	Consignee:
CARRIER	Carrier:
ORIGIN	Cargo Origin:
ORGNCODE	OrgnCode:
DESTINATIO	Destination:
MA	Manifest MA
MA01	Manifest MA
MA02	Manifest MA
DESCGROUP	Description Group:
CARGOCOUNT	Cargo Count (Num):
CARGOWEIGH	Cargo Weight(KG):
AMTINSP	Amt. Insp (Num):
INSPMETH	Inspection Method:
SWP	Solid Wood Packing (SWP):
SWPTYPE	SWP Type:
SWPINSP	Amount of SWP Inspected %:
BARKONSWP	Bark on SWP:
SWPFUMCERT	SWP Fumigation Certif. or Other Treatment presented
REQACTION	Require Action Beyond Inspection to Reduce Risk?:
REQACTION01	Require Action Beyond Inspection to Reduce Risk?:
USECARGO	1. Intended Use of Cargo:
ACTIONPEST	2. Action Pest: (Actionable Pest Found)
VARIABLE NAME	SCREEN NAME

First Pest Information:

VARIABLE NAME	SCREEN NAME
CARGOITEM	Cargo Item:
PESTID	PestID:
PESTNUM	Pest Intercep. Num:
WFA	Where Found:WFA:
WFA01	WFA:
CONT	Cont:

Second Pest Information:

CARGOITE01	Cargo Item:
PESTID01	PestID:
PESTNUM01	Pest Intercep. Num:
WFA02	Where Found:WFA:
WFA03	WFA:
CONT01	Cont:

Third Pest Information:

CARGOITE02	Cargo Item:
PESTID02	PestID:
PESTNUM02	Pest Intercep. Num:
WFA04	Where Found:WFA:
WFA05	WFA:
CONTMFOUND	3. Contaminant Found?:
MISMANSMUG	4. Agr. Item Mismanifested/Smuggled?:

First Contaminant/Mismanifested or Smuggled Information:

CONTMITEM	Contaminant/Item:
CNT	Cnt:
WGHT	Wght,KG:
PROHIBITED	Prohibited:
WFA06	Where Found: WFA:
WFA07	WFA:
CONT02	Cont: (Continue to next Item Information)
VARIABLE NAME	SCREEN NAME

VARIABLE NAME	SCREEN NAME
Second Contaminant/Mismanifested or Smuggled Information:	
CONTMITE01	Contaminant/Item:
CNT01	Cnt:
WGHT	Wght,KG:
PROHIBIT01	Prohibited:
WFA08	Where Found: WFA:
WFA09	WFA: (Second recording for more than one Where Found location)
MO	MO: (month)

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AQIM Handbook

Southern Border–Vehicles

Introduction

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Background

This pathway covers passenger vehicles entering via Southern border crossings. Information must be recorded on a worksheet even if no agricultural item(s) are found.

Pathway Monitoring Maintenance

Port managers and local AQIM coordinators are responsible for ensuring that monitoring activities are being performed and being performed properly. To help with reviewing the status of monitoring activities, refer to **Appendix L—Pathway Monitoring Maintenance**. This appendix contains a checklist of question port managers and local AQIM coordinators should periodically answer to ensure proper monitoring of each designated pathway at their work locations. See **Figure L-1**. The questions review the following topics:

- Random sampling
- Proportional sampling
- Adequate sampling
- Accurate and complete data
- Working risk committees

- Local support

Southern Border– Vehicles Worksheet

There is one worksheet for recording information gathered from your inspection of Southern Border—Vehicles for the purpose of AQIM. Two worksheets are printed on the following page so you can remove, photocopy, and reuse them. The worksheet is also available on disk; contact your local AQIM coordinator.

The form is also available as a fillable form; go to:

http://www.aphis.usda.gov/ppq/manuals/pdf_files/AQIM_in_PDF/Southern_Border_Vehicle.pdf

9 Southern Border—Vehicles

AQIM Handbook

Data Collection and Maintenance

Introduction

Traditionally, PPQ based our work on the quantity of quarantine material intercepted (QMI). We filled our inspection tables with QMI, found pests, and tallied them to justify good job performance. AQIM emphasizes work efforts based on the potential threat posed by foreign pests and QMI.

Regular baseline AQIM will be incorporated as a part of PPQ's ongoing work location operations. A minimum of 10 random samples are required at southern border crossings per day. Experience has shown that each sample takes approximately 5 to 7 minutes.

Every PPQ work location needs to be involved in AQIM. Each work location has a group of managers, supervisors, and officers who manage results monitoring and the subsequent risk management functions at the work location. All PPQ personnel are involved and supportive of the process.

The expected results are that PPQ will have results monitoring systems in place that will meet the needs of management and the requirements of the GPRA.

Epi Info User Guide for Data EntrySouthern Border– Vehicles

NOTICE

When first using Epi Info, thoroughly read the user guide to become familiar with entering data into each of the fields.

General Instructions

At the completion of **each data entry session** make a back up of data records file, **AQIBRM.REC**, to a computer disk. See Appendix G for procedures for backing up monitoring data.

1. Press [**CAPS LOCK**] (to ensure typing capital letters).
2. Be sure to start at C:\ prompt. Epi Info is a DOS program.
3. Change to the Epi Info directory. Type **[CD EPI6**], then

   Press [**ENTER**].
4. Start Epi Info program. Type [**EPI6]**, then

Press [**ENTER**].

5. Wait several seconds, the Main Menu will appear with the word Program highlighted.
6. Press [**P**] (to list Program menu).
7. Press [**N**] (to choose ENTER from Program menu).
8. Cursor should be in space below phrase "Data file (.REC)".
9. Type in the space the cursor is in: **AQIBRM**
10. Press [**ENTER**] **three times** (to load files for data entry).
11. Data entry screen for Border Vehicles should appear.

Help Statements

Read the following statements before entering data:

- Each data entry screen represents only one monitoring inspection. After correct data entry is made and saved, this becomes a record for that one inspection.
- Some data fields will automatically advance the cursor after entering data. Some require pressing [**ENTER**] to advance the cursor after entering data.
- Data entry messages and valid data values for each data field appear at the bottom of the screen or by pressing [**F9]**.
- If an error is made and the cursor has left the data field, use the Up (↑) and Down (↓) arrow keys to move from field to field in order to change or correct data fields already entered.
- **DO NOT PRESS F6 to delete a record.** Despite the screen label, this does not delete the record, it only places an asterisk on the Epi Info record number. Epi Info will ignore records with an asterisk when doing analysis commands.
  To eliminate the unwanted record from the data file, type over the unwanted record with a new record.

Enter Data

Read the following as you enter data to become familiar with each of the fields.

Workunit & Work Unit Code—With the first record, you will need to complete these data fields. Place cursor in Workunit field. Press: F9 and choose the correct work unit name. For each record thereafter, these fields will repeat the work unit, terminal, and work unit code from the previous record. You should not have to enter data in these fields. These fields are automatically filled in, if not contact the local AQIM Coordinator.

Rec Num—Do not enter data in this field. This field is automatically filled in. THIS FIELD WILL SERVE AS THE “OFFICIAL" PERMANENT RECORD NUMBER. DO NOT USE THE NUMBER LOCATED IN THE LOWER RIGHT HAND CORNER OF THE SCREEN TO IDENTIFY A RECORD.

Bridge/Crossing—Enter the correct crossing or bridge name. Keep crossing name spelling consistent.

Day of Week—Press: [**F9]** to select Day of Week.

Date—Enter date of inspection in MM/DD/YYYY format.

A) Time—Enter time of day the inspection began using military time.

B) Pax Origin—Press: [**F9]** to open window of country names and States of Mexico. Type the first and second letters of the country name to scroll down the list faster. Use Up (↑) and Down (↓) arrows keys to highlight the country name or State of Mexico. Press [**ENTER**] to select it.

Origin Code—Do not enter data in this field. This code is entered automatically.

C) Origin—Enter Local or Distant for origin of vehicle inspected.

D) Pax City/State destinaiton—Press: [**F9]** to select the state. Enter in the city. Be consistent with spelling.

E) Destination—Enter Local or Distant for destination of vehicle inspected.

F) Number Pax—Enter number of passengers recorded on the data form. Press [**ENTER**] to advance to the next data field.

G) Status—Enter response recorded on the data form or press: **F9** to open window of valid choices. Use Up (↑) and Down (↓) arrow keys to highlight correct choice. Press [**ENTER**] to select the appropriate status.

H) Reason for Travel—Enter response recorded on the data form or press: [**F9]** to open window of valid reasons. Use Up (↑) and Down (↓) arrow keys to highlight correct reason. Include Sports/Recreation in “Tourist" category. Press [**ENTER**] to select the appropriate travel reason.

I) Vehicle Type—Enter response recorded on the data form or press: **F9** to open window of valid types. Use Up (↑) and Down (↓) arrow keys to highlight correct choice. Press [**ENTER**] to select the appropriate type.

J) Have been on a Farm or Ranch near Livestock—Enter either N(no) or Y(yes) if the passenger has been on a farm or ranch.

K) Going to a Farm or Ranch—Enter either N(no) or Y(yes) response from the data form on whether passenger will be visiting or working in a farm environment within the next 30 days.

L) Items of Agr Interest?—Enter either Y(yes) or N(no):

- If Y: cursor will proceed to next data field.
- If N: then cursor will jump to the bottom of the screen asking the question: "Write data to disk (Y/N/<Esc>)?" If data entry is correct and complete, answer Y to this question and the data screen will renew for the next record entry.

Item—Press: F9 to open window of valid item names. Type the first and second letter of item name in order to scroll down the list faster. Use Up (↑) and Down (↓) arrow keys to highlight correct item. Press [ENTER] to select the item.

ICode—Do not enter data in this field. This code is entered automatically. Press [ENTER] to advance the cursor and automatically fill in the data field QMIType.

QMIType—Do not enter data in this field. This code is entered automatically.

Item Drv or Pax—Enter response recorded on the data form whether the item of agricultural interest was from the driver of the vehicle or from a passenger of the vehicle.

ItmAmnt—Indicate the weight in kilograms. Obtain or accurately estimate weight of items (apple, orange, etc.) whenever possible. **(1 LB is approximately .5 KGS, 3.5 ounces =.1 KGS.) For plant items (flowers, etc.), record number of stems or pieces. For items not practical for obtaining weight (shoes, trophies, etc.),** then record the quantity of these as pieces.

U(Unit of Measure)—Press: F9 to open window of unit values. Use Up (↑) and Down (↓) arrow keys to highlight the unit value. Press [ENTER] to select it.

Declared—Enter response recorded on the data form.

Action—Enter action by either typing the response or pressing F9 to open window of valid actions. Use Up (↑) and Down (↓) arrow keys to highlight correct action. Press [ENTER] to select the action.

Whre (Where) Found In—Enter where item was found in vehicle by either typing the response or pressing [**F9]** to open window of valid areas. Use Up (↑) and Down (↓) arrow keys to highlight correct area. Press [**ENTER**] to select the area.

Found In—Enter what the item was found in by either typing the response or pressing [**F9]** to open window of valid choices. Use Up (↑) and Down (↓) arrow keys to highlight correct choice. Press [**ENTER**] to select the choice.

PestPres—Enter either **N**(no) or **Y**(yes) response recorded on the data form.

Contaminant—Enter either **N**(no) or **Y**(yes) to indicate if a contaminant was present with the item that is listed.

Pest Intercep. Num.—System will automatically enter NONE (for no pest found). Enter the pest interception number if assigned at your work location. This number maybe assigned later or by another office. **IF PEST INTERCEPTION NUMBER IS GOING TO BE ASSIGNED BY ANOTHER OFFICE, THEN ENTER THE LETTERS "TBA" (To Be Assigned)**. When TBA is used, be sure to note the permanent record number in the upper right corner of the screen so updating can be done.

Pest ID/Contaminant—System will automatically enter NONE (for no pest found). Enter either the name of the contaminant or the taxonomic name of the pest found. Be sure to update this record with the pest name, if necessary.

- Press [**Y]** if additional items ARE to be entered. Press [**ENTER**] to leave field and continue on. (Cursor jumps down to next Item field. You can enter up to four Items in a record.)
- Press [**N]** if no other items are to be entered in this record. The cursor will jump to "Write data to disk (Y/N/<Esc>)?".

Write data to disk (Y/N/<Esc>)?—

- Press [**Y]** if data entry is complete for this record. Record will be saved to the record's file.

- Press [**N**] if you wish to make changes or corrections to the record field. After making changes or corrections, remember to return the cursor to the Continue field that was N. Press [ENTER] to return to the prompt "Write data to disk (Y/N/<Esc>)?". Press [**Y**] to complete record.

MO—Do not enter data in this field. This field is filled in automatically with the numeric value of the month. This field is used for analysis purposes.

ANACTREQ—Do not enter data in this field. This field is filled in automatically. This field is used for analysis purposes.

TOTAL SEIZED—Do not enter data in this field. This field is filled in automatically. This field is used for analysis purposes.

When finished with data entry—

1. Press [**F10**] to return to the main start up screen.
2. Press [**F10**] again to leave Epi Info and return to the regular computer screen.

Important

After each data entry session, make a back up of the data records file, **AQIBRM.REC**, to a computer disk. See **Appendix G** for back up instructions.

Data Accuracy Checks and Data Corrections

Introduction

This section outlines the basic procedures to check on data accuracy, make Epi Info data corrections, and begin basic data analysis. It is important to perform these procedures on a REGULAR basis to ensure data quality.

Important

Do not start this correction/analysis mode until you have read through the entire document, especially the last section that requires creating a new file BEFORE leaving this analysis mode.

Before Starting

Before starting the Epi Info software, copy your working Epi Info records file to the back up disk copy before you begin the correcting procedures. See Appendix G for procedures for backing up monitoring data.

Start Corrections

1. Enter Epi Info and at the first Epi Info screen, select the **Program** menu.
2. Under the Program menu, select **Analysis**.
3. You should have an EPI6> prompt at the bottom of the analysis screen.

Read

1. To choose the file you would like to work with, Type **READ**, and

   Press [**ENTER**].
2. A list of files should appear.

   Select the appropriate *.REC file from the list by highlighting it, and

   Press [**ENTER**].
3. The cursor will appear at the EPI6> prompt again.

Commands

To check on data accuracy, you will be using the following commands:

BROWSE allows you to see all the records at one time

FREQ for frequency - allows you to see how many times something appears

IF THEN statement allows you to make changes to correct spelling errors, dates, etc.

BROWSE

To BROWSE the file of records:

1. Press [**F4**]. Browsing allows you to look at the records in the file you have selected. **NOTE**: The order of records in browse is the order they were entered.
2. While there, check for any duplicate records (records with the same date and same time). Also, check for any deleted records. Deleted records will show an asterisk and usually a different shade of color. See **Delete Records** beginning on **page-9-9-11** to work with records that have an asterisk.

FREQ (Frequency)—Start by performing frequencies on each individual data field.

1. Press [**F2**] (to get your list of commands).

2. Choose **FREQ**, then
3. Then Press [**F3**] for a list of variables you can perform frequencies on. **Choose only one variable at a time.** Some of the variables you should start with are:

WORKUNIT	PESTNUM
WORKUNITCO	PESTNUM01
CROSSING	PESTNUM02
DATE	PESTNUM03
PASSORIGIN	

When you perform your first FREQ command, check the total number of records from the FREQ command statement against the total number of records at the very top of the page (listed after Dataset: and the file name). If they are different totals it is because the deleted records are not included in the analysis.

When you perform a frequency on a data field (i.e., FREQ CROSSING) and find misspellings in this field, an **IF THEN statement** can be used to correct the mistakes.

IF THEN Statements If then statements are used to correct common errors found.

NOTICE

If you use IF THEN Statements to make corrections, be sure to save the changes after all IF THEN changes are made. None of the IF THEN changes will be saved unless you save them following the steps beginning on **page-9-9-11**

EXAMPLE: to correct the spelling of the crossing:

At the analysis EPI6> prompt, type:

IF CROSSING= “LRADO" THEN CROSSING= “LAREDO," and Press [ENTER].

NOTE: A generic statement example would be:

IF VARIABLE= “what you want to change" THEN VARIABLE="what to change it to"

Check your changes by performing the frequency command again. If the corrections were made, the mistakes will not be listed this time.

Once a command is used it is quickly and easily accessed again by using the Up (↑) arrow key to correct several misspellings without retyping the entire IF THEN statement.

Delete Records

Important

There is a difference between the permanent record number and the Epi Info record number. The permanent record number is found in the upper right hand corner of the data entry screen at the data field name **Rec Num.** (In analysis it is also named **RECNUM**.) The Epi Info record number is found at the lower right of the data entry screen at **Rec=.**

During data entry, pressing [**F6]** will cause Epi Info to place an asterisk on the Epi Info record number. People mistakenly believe that the record is deleted. **The record is not deleted from the data file**. Epi Info analysis commands (such as FREQ) will ignore all records that have an asterisk.

- Deleted records will have an **asterisk** in front of the Epi Info record number (when viewing records either via the data entry screen or analysis - BROWSE mode). Write down the Epi Info record number of the records with asterisks.
- Check the paper forms for the records to see if they should be deleted or not.

Delete/Undelete Records (Update)

1. If the record needs an asterisk added or removed, Type **UPDATE** at the EPI6> analysis prompt, and

   Press [**ENTER]**. This puts you in the Update mode with a screen similar to Browse.
2. Use the Page Up or Page Down key to get to the Epi Info record number you need. (Under first column titled REC.)
3. Use the Up (↑) or Down (↓) arrow keys to highlight the record you want to change.
4. Press [**F6**] to delete or undelete records. (Actually add or remove an asterisk.)
5. When moving from updated record to another the computer will ask you if you would like to save it to a disk. Indicate YES if the change you made was correct. It will save the changes to the file.
6. When you are finished, Press [**F10**] to go back to the analysis command screen.

Saving Changes

IF you used **only** the UPDATE command (described above) to make corrections to records with asterisks, then you **DO NOT** need to do the following steps.

IF you used IF THEN Statements at any time to make corrections, none of the changes you have made will be saved unless **you do the following steps.**

1. **If the changes were made to your current AQIBRM.REC** file:

   At the analysis prompt type: **ROUTE BRMNEW.REC** to route the corrected records to a new file to make the changes permanent.

   "New" is added in the filename to show which file you are referring to and the latest version of that file.

2. At the analysis prompt type: **WRITE RECFILE /NOECHO**, and

   Press [**ENTER**].

   This actually writes the new data file. Be patient, this process may take some time.

3. Check to make sure all of the changes were made to the new file by reading the new file and Browsing the file and doing several FREQ commands on the corrected data fields.

ONCE ALL CHANGES ARE MADE - Leave the Epi Info program and go to the C:\EPI6> prompt

1. **If the changes were made to your current AQIBRM.REC file** then YOU MUST:

   At the C:\EPI6> prompt delete the original record file by Typing: **DEL AQIBRM.REC** (this will delete the file and it will no longer be accessible).

2. Rename the new file with the corrected records to the original file name. At the C:\EPI6> prompt, type:

   RENAME BRMNEW.REC AQIBRM.REC.

   The Epi Info file is now available for more data entry and other analysis procedures.

If you have any questions or comments about these procedures, contact the local AQIM Coordinator.

Merging Similar Files

Data entry of monitoring records may take place at several sites throughout a work location. This section outlines the necessary steps to merge these various work site files into one work location file for analysis and distribution to Riverdale, Maryland.

THIS SECTION ASSUMES THAT YOU WANT TO MERGE A DATA FILE ON A DISK WITH A MAIN DATA FILE ON YOUR COMPUTER HARD DRIVE.

NOTICE

Before starting these steps, be sure to do a backup of your Main Epi Info data records files (**AQIBRM.REC** for inspections) onto a disk if you have not done it recently. Backups should be completed at the end of every data input session. Refer to **Appendix G** for procedures for backing up data.

Prepare for the Merge Process

1. Press [**CAPS LOCK**].
2. Start at C:\ > prompt.
3. Change to the Epi Info directory by Typing: **CD\EPI6** and, Press [**ENTER**].

   Computer prompt should appear as: C:\EPI6> (This assumes Epi Info is loaded on the C: drive.)
4. Insert the disk that has second Epi file(s) to be merged into appropriate computer drive. This step assumes you already have an original **AQIBRCNT.REC** file on the computer to merge second files with.
5. **NOTE:** If your 3.5 disk drive is B, then substitute B where A appears in these directions).

   Type: **DIR A:,** and Press [**ENTER**].

   This will show the file on the disk: **AQIBRM.REC**
6. The files on the disk must be renamed (because the disk files are the same name as those on the computer).

   Type: **RENAME A:AQI*.* ADD*.*,** and Press [**ENTER**].

   This renames the disk file to **ADDBRM.REC**
7. Type: **DIR A:,** and Press [**ENTER**]

   This will show a list of the files on the disk again, be sure that the file now appears as **ADDBRM.REC**
8. Type: **COPY A:*.*,** and Press [**ENTER**]

   This copies the renamed file into the Epi Info directory.

   If an older **ADDBRM.REC** file exists from a previous merge, the computer may prompt you to overwrite it. Choose **Y**(yes) to overwrite.

Begin Merge Process

9. Enter into Epi Info's software main screen.

10. Press [**P**] (to list Program menu).

11. Arrow down (↓) and highlight MERGE files, and Press [**ENTER**].

Main Merge screen appears with cursor in File 1 box.

12. Type: **ADDBRM.REC** (if merging count files, type: **ADDBRCNT.REC**)

As you type, the default text in File 1 box disappears.

13. Press **ENTER**.

The cursor moves to File 2 box.

14.

IF you are merging with the main file:	THEN type:
Only one location file	AQIBRM.REC
Two or more location files at one time	SUMBRM.REC

15. Press [**ENTER**]

The cursor moves to Output file box.

16. Type: **SUMBRM.REC**

17. **Press [ENTER]**

The cursor moves to Merge Options box and highlights ( ).

18. **Press [ENTER]**

OK box is highlighted.

19. Press [**ENTER**]

Screen changes:

IF:	THEN:
An older SUMBRM.REC file exists	An information box appears stating that an older file exists. The word “Yes" is highlighted. Press [ENTER] to overwrite the older file and continue merging.
An error box appears stating: ◆ files are not similar, or ◆ merge cannot take place	Press: **ESC** until you return to the main Epi Info screen and **call for assistance.**
Merge is successful	A completion bar scale may appear. Then an information box will appear indicating the number of records merged and the files that were merged.

This will change to a screen with an information box indicating the number of records merged and the files that were merged.

20. Press [**ENTER**] (to return to main Merge screen).

IF you:	THEN:
Are done merging files	Press: **ESC** to return to the main Epi Info screen
Need to merge another port location’s records	Press [F10] to leave Epi Info software. Return to C:\EPI6> prompt and go back to **Step 4.** under Prepare for the Merge Process on **page-9-9-13**.

Summary of Merge Process

Copy the resulting file to disk to send out:

- **SUMBRM.REC** contains both original records and records from another location that was on the disk.

Be sure to make a **separate** disk backup copy of these files to keep at your location.

Copy Files to a Disk

Leave Epi Info, after inserting blank disk into drive, go to the C:\EPI6> prompt.

Type **COPY SUM*.REC A:** This copies the file to the disk.

Southern Border—Vehicles

Data Analysis

Survey Results and How To Use Them

AQIM activities have been put into place to develop baseline data to help answer two basic questions:

1. What is the threat of agricultural pests approaching work locations?
2. How effective is the AQI program at managing this threat?

Preliminary results for Southern border vehicle surveys provide a general answer for Question 1. That is, there are varying rates at which prohibited agricultural materials approach the work locations. These prohibited agricultural materials are what can have agricultural pests. Surveys show that at some work locations about 1 percent of the vehicles carried prohibited items in the past year. At other ports, surveys show that passengers and vehciles are carrying prohibited items at a higher rate, sometimes near 6 percent.

These percentages are a rough approximation of agricultural pest threat. Further analysis of the monitoring data is needed to determine the risk associated with the prohibited items approaching the work location. The origin and destination of the prohibited items is important to determine risk levels. Also, whether or not the prohibited item carries an actual agricultural pest is analyzing risk.

Analyses of the monitoring data need to occur at several levels of PPQ. At the work locations, PPQ personnel need to study what the data means and answer the first Question for their specific location. Analysis tools are available to help with these analyses which are explained in the next subsection. At the same time, PPQ holds risk analysis workshops around the country to introduce risk analysis concepts. At some work locations, teams of PPQ officers and managers form Risk Management Teams to look at monitoring data and other data, which are normally collected at the location.

At other locations, analyses of monitoring data occur to establish rates at which quarantined items and agricultural pests are approaching the borders of States, areas of the country, and the United States.

Once baseline rates are well established, PPQ can use the monitoring data as a baseline to answer the second basic question: How effective is the AQI program at managing the risk of introduction of agricultural

pests and diseases? Again, each work location must conduct this type of analysis. AQIM provides a framework which work location can use to carry out the analysis.

Analysis Tools

There are two tools available for analyzing AQI monitoring data. One is the ANALYSIS program in Epi Info. The other tool is the Short-term Reporting Tool (SRT) accessed using Netscape.

Using the SRT you can look at data entered for your work location, as well as data for other work locations within a State, a Region, or across the nation. Also, using the SRT you can look at WADS data to use with AQI monitoring data. Refer to **Appendix J—Internet** for guidelines on how to use the SRT.

Using the ANALYSIS program in Epi info, you can look at data entered specifically for your work location. While in Epi Info ANALYSIS, you can select a data analysis program file (*.PGM) that automatically runs a series of Epi Info commands. The program will produce various listings, tables, analysis commands, and explanatory text from data files for a designated pathway. Follow the guidelines on how to load and run data analysis program files beginning on page-9-9-21.

Epi Info ANALYSIS saves the analysis output to a file for viewing and/or printing. The file contains basic information that answer some of the questions to guide data analysis that follow. For questions not answered by running an automatic program, you will need to key in and run various analysis commands. Follow the Epi Info User Guide for Data AnalysisSouthern Border–Vehicles beginning on page-9-9-25 to help you with the anlaysis commands.

Questions to Guide Data Analysis

The following questions are a guide for managers and Risk Management Teams to formulate information around. With the answers, valid decision can be made based on the potential risk of quarantined material and exotic pests and diseases entering a specific pathway. The value of using the monitoring data for decision making is better understood.

1. How many vehicles were selected for the sampling during the survey?

   How many vehicles sampled required an action (seizure or other action required as a condition of entry) during the survey?

What is the action approach rate of vehicles requiring action (number of vehicles with one or more items categorized as seized or clean/treatment divided by the total number of vehicles sampled)?

What is the total number of QMIs seized during the survey?

How many seizures (QMIs) came from the samples during the survey?

What is the QMI approach rate of vehicles with prohibited agricultural material (total number of QMIs divided by total vehicles sampled during the survey)?

2. How many pest interceptions (actionable pests) were made from survey samples?

Pest approach rate: what is the rate of pest interceptions in relation to number of vehicles (number of actionable pests divided by number of vehicles in the sample)?

3. How many QMIs were plant material? Meat or animal products?

What is the rate of QMIs for plant material and meat or animal products?

DISCUSSION

Is there a greater risk from plant material or animal products at this work location?

4. How many vehicles were sampled at each crossing? What is the rate of QMI seizures at each crossing? Which crossings have a higher rate of QMIs than vehicles? (See DISCUSSION.)

DISCUSSION

Are these crossings staffed accordingly? (Example: 30 percent of all vehicles surveyed crossed at Bridge A, 20 percent crossed at Bridge B, and 50 percent crossed at Bridge C. Fifteen (15) percent of the QMIs seized in the work location were seized at Bridge A, 35 percent were seized at Bridge B, and 50 percent were seized at Bridge C.) Vehicles crossing Bridge B could represent the greater risk at the work location and staffing should be reviewed based on this risk.

5. What are the destinations of vehicles transiting the work location? Is local traffic (less than X miles from the work location) considered a high risk? What are the number of QMIs traveling to local locations versus distant locations?

DISCUSSION

Which states are considered high risk States? How can you best select vehicles destined to these high risk States to protect U.S. agriculture?

6. Compare the **action** approach rate for each month of the survey period.

DISCUSSION

Are there easily identified monthly trends when the rate of QMIs transiting the work location are higher?

Are there seasonal trends or do higher rates correlate with national or religious holidays, beginning or end of the school year, vacation periods, etc.?

Do these rates correlate with traditional peak and off-peak travel times?

7. Generate a listing and frequency of items seized. What are the top five items most frequently seized? Which QMIs present the greatest risk?

8. Which vehicles (and at which crossing) were carrying prohibited items? Where were the items foundhand carried bags, passenger compartment, glove box, truck, luggage? Did the passenger declare all prohibited items? Was the passenger traveling alone, as a couple, or family? What was the reason for travelbusiness, vacation, visit family, tour group, school? What type of vehicle was used to transport prohibited items?

DISCUSSION

How do current selectively factors compare with survey results?

What selectivity factors could be changed or added to identify vehicles carrying prohibited items?

What percentage of resources are dedicated to staffing AQI activities for southern border vehicles at the work location?

What is the relative risk of southern border vehicles compared with other pathways in the work location?

Should resources be reallocated among all the pathways in the work location to better address the relative risk of the pathways?

9. Apply the monitoring results to the total approaching population to estimate the number of QMIs and pest interceptions likely to transit the work location during the survey period by answering:

How many total vehicles entered the work location during the survey period? Using the rate of QMIs and pest interceptions from AQIM, calculate estimates of the number of QMIs and actionable pests transiting the work location.

DISCUSSION

What percentage of all QMIs transiting the work location were seized as a result of the AQI program, use WADS data?

How does the estimated number of QMIs compare with the reported number of QMIs on WADS?

How does the estimated number of actionable pest interceptions compare with the reported number of actionable pests on WADS?

What percentage of all actionable pests transiting the work location were intercepted as a result of the AQI program?

How to Load and Run Data Analysis Program Files

Data analysis program files are meant to provide only listings, tables, and explanatory text about the monitoring data gathered at work locations. The program files are not intended to be used as final analysis tools. The outputs from these program files should raise further questions and discussion by local personnel and risk management committees.

Important

Each year the AQIM National Team reviews, discusses, and decides about suggested improvements (additions, removals, changes) to the baseline data fields based on analysis and operational needs. A summary of the changes made during previous fiscal years to data fields for the Southern Border–Vehicles pathway begins on **page-9-9-30** under Southern Border Vehicles Epi Data Translation. Use the summary to identify data field changes that may impact the results of an analysis report run for a particular year.

Data analysis files automatically run a series of Epi Info analysis commands. Use the following guidelines to load and run data analysis program files.

1. Determine which data analysis program file (*.PGM) you will load and run in Epi Info. In Epi Info, ANALYSIS, there is a data analysis program file for each fiscal year of data gathered. Look at the table below to identify the file to load and run depending on which fiscal year's data you are analyzing.

If you want to analyze data for:	Then load and run the following Epi Info ANALYSIS data analysis program file (*.PGM):
FY 1997	BORDER97.PGM
FY 1998	BORDER98.PGM
FY 1999	BORDER99.PGM
FY 2000	BDR2000.PGM
FY 2001	BDR2001.PGM
FY 2002	SOVEH02.PGM
FY 2003	SOVEH03.PGM

2. Get ready to run a data analysis program file.

A. Press [CAPS LOCK] (to ensure typing capital letters).

B. Be sure to start at C:\prompt. Epi Info is a DOS program.

C. Change to the Epi Info directory. Type: **CD EPI6,** then Press [ENTER]**.**

D. Start Epi Info program. Type **EPI6,** then Press **[ENTER].**

E. Wait several seconds, the Main Menu will appear with the word Program highlighted.

F. Press **[P]** (to list Program menu).

G. Press **[A]** (to choose ANALYSIS from Program menu).

H.

If you are running:	Then:
A data program analysis file using Epi Info, ANALYSIS	CONTINUE to **Step 3.**
Further analysis commands using Epi Info	GO to the **Epi Info User Guide for Data Analysis** beginning on **page-9-9-25**

3. Run the selected data analysis program file (*.PGM) from Step 1.

You should be at the Epi Info ANALYSIS screen. If not, review Step 2.\

NOTICE

To leave the analysis mode at any time, Press [F10].

A. At the EPI6 command prompt, Type **RUN FILENAME,** where FILENAME is the *.PGM file you selected in Step 1. For example, if you are analyzing data gathered in Fiscal Year 2000, then you would enter at the command prompt, **RUN BDR2000.PGM**

Then, Press [**ENTER**].

If you:	Then:
See the following prompt at the bottom of the screen: "Press enter key to pick the records file you want to analyze"	1. Press [ENTER]. A window appears with a listing of *.REC files. 2. GO to **Step B.**
Do not see the prompt stated in the cell above	DO the following 3 steps

i. Type RUN, then Press [**ENTER**]. A window appears with a list of *.PGM files.

ii. Using the Up (↑) and Down (↓) arrow keys, search and highlight the program file name you want to run (for example, BDR2000.PGM), then Press [**ENTER**].

If you cannot locate the file name you are looking for, then contact your local AQIM coordinator. If they are not available, then contact the National AQIM Coordinator.

iii. When the following prompt appears at the bottom of the screen: "Press enter key to pick the records file you want to analyze"

Press [ENTER]

Go to **Step B.**

B. Using the Up (↑) and Down (↓) arrow keys, highlight the records file for the desired fiscal year.

The program file (*.PGM) must match the records file (*.REC). When you are sure,

Press [**ENTER**].

C. You are prompted for a file name where the program will save the output. (An example is given on the screen using a three-letter port code and the date.)

Type [**FILENAME**], where FILENAME is the file name you have created to save the program output. Then, Press [ENTER].

D. You are prompted to enter the date that is **one day before** the date you want the program analysis to start. (The analysis program analyzes records between two given dates, but does not include the given dates. Therefore, you must enter the dates of the days just before and after the dates you want included in the analysis.

EXAMPLE: For example, to analyze Fiscal Year 2000 data, you would enter 09/30/1999 (one day before the beginning of the Fiscal Year 2000).

Type the start date following the format (MM/DD/YYYY), where it is one day before the date you want the program analysis to start, then Press [**ENTER**].

E. You are prompted to enter the date that is **one day after** the date you want the program analysis to end.

Type the end date following the format (MM/DD/YYYY), where it is one day after the date you want the program analysis to end, then Press [**ENTER**].

4. The program will begin analyzing. You will see the program's output scroll quickly on the screen. It is being saved to the file name you specified in Step C.

5. The program is finished when the cursor returns to the EPI6> prompt. At this time, you may want to do any of the following:

If you want to:	**Then:**
View or print the program output file	1. Press [**F10**] to exit Epi Info 2. Use a word processing program such as WordPro to view and/or print the file. NOTE: The file usually is in the C:\EPI6 directory saved in an ASCI (DOS) text file format.
Run a data analysis program file for another fiscal year's data	Return to **Step 1.** at the beginning of this subsection to decide which program file to run
Continue with further analysis commands using the Epi Info User Guide for Data Analysis	Go to the **Epi Info User Guide for Data Analysis** beginning on **page-9-9-25**
Exit Epi Info, ANALYSIS	Press [**F10**]
Exit Epi Info	Press [**F10**] twice

Epi Info User Guide for Data Analysis

Southern Border– Vehicles

When first running analysis commands in Epi Info, thoroughly read the user guide to become familiar with basic analysis procedures to use with the monitoring data at your work location.

Get Ready

1. You should be at the Epi Info, ANALYSIS screen. If not, refer to Step 2. getting ready to dun a data analysis program file, under How to Load and Run Data Analysis Program files on page-9-9-21.
2. Press [**F2**] (to list Commands menu).
3. Use arrow key to move cursor to READ command.
4. Press [**ENTER**] **twice** (to get a list of .REC files which can be analyzed).
5. Use the arrow keys to move the cursor to highlight **AQIBRM.REC**.
6. Press [**ENTER**] (to bring the *.REC file you have chosen into the Analysis screen).
7. Press [**F4**] (to browse the data records in the file).
8. Use the arrow keys to look over the data to make sure it has been entered properly during the past month. (In subsequent months, you will want to browse through the entire file to see that all months of data have been properly entered, repeated fields such as workunit are consistently the same.)

   To view only one individual record, press [**F4]** again to see the entire record as it was originally entered. If it is necessary to make changes to the record, **note the Epi Info record number in the lower right corner of the screen.**

If you want to edit, correct, or change this record, go to Edit Records beginning on page-9-9-29

Analyze Records

9. Press [**F10**] (to return to the main Analysis screen).
10. Press [**F2**] (to see a list of analysis commands).
11. Use the arrow keys to move the cursor to FREQ (frequency) and,

    Press [**ENTER**].

12. Press [**F3**] (to see a list of data variables). To better understand the variables listed, refer to page-9-9-30 for a list of data variable translations for the current FY and a summary of data field changes made during previous FYs.
13. Use arrow keys to highlight the data variable you wish to know the frequency of.

    Press [**ENTER**] **twice** and you will get a frequency table.

EXAMPLE: If you want to know how many times a sample was taken on a certain date, you can choose the DATE variable and press [**ENTER] twice**. You will get a table showing the number of records entered into the database on each date of the survey. If the word <more> appears, keep pressing ENTER until cursor returns to EPI6> prompt. You can review the analysis output by using the Page Up and Down keys.

14. Explore the database by doing FREQ commands for as many data variables as is logical. By doing this you will begin to understand the survey data and see some patterns in the data.

    For each variable, use the **F2** and **F3** keys to choose the FREQ command and variable of interest. Also, you can type the word FREQ and the data variable names directly at the Analysis prompt.
15. To explore graphic commands: (The PIE command is one of several graphics commands which allow you to analyze the variables with graphs. This may make it easier to see patterns in the data and to understand the survey results.)

    Press [**F2]** again and choose the PIE command with the cursor.

    Press [**F3**] and select a data variable of interest from your data exploration in the FREQ analysis (Step 9.- 15.).

    Press [**ENTER**] **twice** and you will see a pie chart on your screen which might help you understand a pattern in the data.

    For example, if you have chosen the DATE variable for a pie graph, you may see that a larger percentage of samples were taken on different days, which may cause you to question the sampling procedures.

    See Appendix H for procedures for printing graphics while in Epi Info.

To leave the graphic screen and return to the main screen, Press **[ESC].**

16. Further FREQ exploring:

To see the total number of SEIZED, I&R, or CLN/TRMT items from random inspections, Press [**F2**] to list commands.

Highlight FREQ, and Press [**ENTER**]. (You will next “tag" more than one data variable to move these variable to the analysis command line.)

Press [**F3**] to list data variables. Highlight ACTION, and “tag" this variable by pressing **Shift and the (+)**. A small arrow will appear next to ACTION.

17. Further FREQ exploring: (continued)

Next, highlight the variable ACTION01, and “tag" it. Do the same for ACTION02 and ACTION03.

The analysis command line should appear:

EPI6> FREQ ACTION ACTION01 ACTION02 ACTION03.

Press [ENTER]. The output screen should display counts of SEIZED, CLN/TRMT, I&R for each of the category data lines for all records. Adding up the SEIZED, CLN/TRMT, I&R counts will provide a category breakdown of the agriculture items seized, clean/treated, or inspected and released during random sample inspections.

18. Further exploration. Two other commands (F2 TABLES, F2 SELECT) are very useful to explore the survey data to begin answering questions you may have after using the FREQ and PIE commands.

For example, you want to know what vehicle destinations are receiving the most prohibited items, then do the following:

Press [**F2**] to list commands. Highlight FREQ and Press [**ENTER**].

Press [**F3**] key to list data variables. Highlight ACTION, and Press [**ENTER**].

The analysis command line should appear: EPI6> FREQ ACTION

Press [**ENTER**] and the output screen should display a table listing the number of samples that required action. The table also lists a percentage of records requiring action.

Press [**F2**]. Move cursor to SELECT. Press [**ENTER**].

Press [**F3**]. Move cursor to ACTION.

Press [**ENTER**]. Type: = “SEIZED "

19. Further exploration (continued).

The comand line will then look like this: EPI6>SELECT ACTION = “SEIZED"

Press [**ENTER**]

When you run any new FREQ commands (such as FREQ PAXDESTIN) or other analysis commands, the analysis will only look at a subset of records in which the category ACTION type is seized for the items from the sample inspection. If you want to get back to the entire set of records (records with and without prohibited items), press [**F2**]. Move cursor to SELECT. Press [**ENTER**].

Important

This analysis will only list the records that have SEIZED on the first ACTION line of the data entry form. Other prohibited items can be listed on the second, third or fourth line of the data record. To work with these subsets, you first clear the select process (type: SELECT, then Press [ENTER]) and then repeat the above Select phrase using ACTION01, then repeat using ACTION02, then ACTION03.

20. To continue working with the subset of records established in Step 19.

Press [**F2**]. Move cursor to FREQ. Press [**ENTER**].

Press [**F3**]. Choose PAXDESTIN. Press [**ENTER**] **twice**. You will get a table that lists the destination frequencies of where prohibited items went.

Do a PIE PAXDESTIN or a BAR PAXDESTIN analysis command to get a graphic picture of which destinations are getting the most prohibited items.

21. Type **SELECT** (or choose select from the F2 commands menu) to work with all the records.

22. Type on the command line: **TABLES CROSSING ACTION**. (Or use the [F2] and [F3] keys to select the TABLES command and the two variables.)

Press [**ENTER**]. You will get a table which shows the frequency of seized items broken down by crossing.

This analysis can be used to further understand the risk presented by the various crossings at a land border port.

Edit Records

E1. Press [**F10**] **twice** (to get back to the main EPI6 program menu).

E2. Press [**P**] (to list Program menu).

E3. Press [**N**] (to get to the Edit menu).

E4. Press: [**F9]** (to list .REC files).

E5. Use arrow keys to highlight appropriate .REC file

Press [**ENTER**] **four times** to get to the data entry screen for this file.

E6. Press [**CONTROL**] **and** [**F**] at the same time (to find the record which needs editing).

E7. Press [**F2**] and then **type the Epi Info number** of the record you need to edit.

E8. Press [**ENTER**] (to get to the record you need to edit).

E9. Make corrections to the record, using the Up (↑) and Down (↓) arrow keys to move from field to field.

When finished editing, Press [**F10**], and answer YES to the question (at the bottom of the screen) that asks to write the edited record to the data file.

Return to the beginning of the user guide on page-9-9-25.

Southern Border Vehicle Epi Data Translation

Core Data Fields for the Current Fiscal Year

VARIABLE NAME	SCREEN NAME
WORKUNIT	Work Unit:
RECNUM	Rec Num: (Permanent Record Number)
WORKUNITCO	Work Unit Code:
CROSSING	Crossing:
DAYWEEK	Day of Week:
DATE	Date:
TIME	A) Time:
PAXORIGIN	B) Pax Origin
ORIGINCODE	Origin Code:
ORIGIN	C) Origin: (Whether local or distant)
STATEDEST	D) State destin:
CITYSDEST	City destin::
DESTIN	E) Destination:
NUMBERPAX	F) Number Pax:
STATUS	G) Status:
REASONTRAV	H) Reason For Travel:
VEHTYPE	I) Vehicle type:
BEENONFARM	J) Have been on a Farmor Ranch/Near Livstock
GOFARMRAN	K) Going to a Farm or Ranch:
ITEMAGRINT	L) Items of Agr Interest?

First Item Information

ITEM	Item:
ICODE	ICode:(Item Code Number)
QMITYPE	QMIType: (QMI type of item: A(Animal), P(Plant), N(None)
ITMAMNT	ItmAmnt: (Item Amount)
U	U: (Unit of measure used for amount)
DECLARED	Declared: (Did passenger declare item, written or orally)
ACTION	Action: (Either seized, cln/trmt, or I&R)
WHREFOUND	Whre Found: (what area of vehicle item found in)
FOUNDIN	Found In: (what type of container item found in)
PESTPRES	PestPres: (was item infested with a pest)
CONTAMINAN	Contaminant: (is contaminant present)
PESTNUM	Pest Intercep. Num: (Pest Interception Number)
PESTID	Pest ID/Contaminant
CONTINUE	Continue:

VARIABLE NAME	SCREEN NAME
Second Item Information	
ITEM01	Item:
ICODE01	ICode:(Item Code Number)
QMITYPE01	QMIType: (QMI type of item: A(Animal), P(Plant), N(None)
ITMAMNT01	ItmAmnt: (ItmAmnt)
U01	U: (Unit of measure used for amount)
DECLARED01	Declared: (Did passenger declare item, written or orally)
ACTION01	Action: (Either seized, cln/trmt, or I&R)
WHREFOUN01	Whre Found: (what area of vehicle item found in)
FOUNDIN01	Found In: (what type of container item found in)
PESTPRES01	PestPres: (was item infested with a pest)
CONTAMIN01	Contaminant: (is comtaminant present)
PESTNUM01	Pest Intercep.Num: (Pest interception number)
PESTID01	Pest ID/Contaminant:
CONTINUE01	Continue:
Third Item Information	
ITEM02	Item:
ICODE02	ICode:(Item Code Number)
QMITYPE02	QMIType: (QMI type of item: A(Animal), P(Plant), N(None)
ITMAMNT02	ITMAMNT: (Item Amount)
U02	U: (Unit of measure used for amount)
DECLARED02	Declared: (did passenger declare item, written or orally)
ACTION02	Action: (either seized, cln/trmt, or I&R)
WHREFOUN02	Whre Found: (what area of vehicle found in)
FOUNDIN02	Found In: (what type of container item found in)
PESTPRES02	PestPres: (was item infested with a pest)
CONTAMIN02	Contaminant: (is comtaminant present)
PESTNUM02	Pest Intercep.Num: (Pest interception number)
PESTID02	Pest ID/Contaminant:
CONTINUE02	Continue:
MO	MO: (month of record, for analysis purposes)
ANACTREQ	ANACTREQ: (an action required)
SEIZED	SEIZED: (QMIs seized)
Fourth Item Information	
ITEM03	Item:
ICODE03	ICode:(Item Code Number)

VARIABLE NAME	SCREEN NAME
QMITYPE03	QMIType: (QMI type of item: A(Animal), P(Plant),N(None)
ITMAMNT03	ItmAmnt: (Item Amount)
U03	U: (Unit of measure used for amount)
DECLARED03	Declared: (did passenger declare item, written or orally)
ACTION03	Action: (either seized, cln/trmt, or I&R)
WHREFOUN03	Whre Found: (what area of vehicle item found in)
FOUNDIN03	Found in: (what type of container item found in)
PESTPRES03	PestPres: (was item infested with a pest)
CONTAMIN03	Contaminant: (is contaminant present)
PESTNUM03	Pest Intercep. Num: (Pest interception number)
PESTID03	Pest ID/Contaminant:

Summary Of Data Field Changes Made During Previous Fiscal Years:

For Fiscal Year:	The following additions, changes, and removals were made to the data fields:
2001	**Additions:** DRVPAX=Item Drv or Pax DRVPAX01=Item Drv or Pax DRVPAX02=Item Drv or Pax
	Changes: GOFARMRAN used to be GOVISWORK PESTPRES used to be INFESTED PESTPRES01 used to be INFESTED01 PESTPRES02 used to be INFESTED 02 PESTPRES03 used to be INFESTED 03
	Removals: ITEMORCO=Item Origin Code O=O ITEMORCO01 O01=O ITEMORCO02 O02=O ITEMORCO03 O03=O
2003	Additions: DAYWEEK= Day of Week STATEDEST= State destination CITYDEST= City destination BEENONFARM= Been on a Farm
	Removals: DRVPAX–DRVPAX03– Driver or passengers.

For Fiscal Year:	The following additions, changes, and removals were made to the data fields:
1999	**Additions:** O=O MO=MO ANACTREQ=ANACTREQ SEIZED=SEIZED O01 O02 O03 ORCONTAMIN=or Contaminant
	Changes: ITEMORCO used to be ITEMORIGIN ITEMORCO01 used to be ITEMORIGIN01 ITEMORCO02 used to be ITEMORIGIN02 ITEMORCO03 used to be ITEMORIGIN03
	Removals: GENDER=Gender AGE=Age

10 Southern Border—Truck Cargo

AQIM Handbook

Introduction

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Background

The cargo population, or sampling universe, for AQI monitoring is now defined as commercial plant perishable agricultural cargo. Random samples can be taken from this population with more intensive (hypergeometric) inspections completed and necessary data recorded about these commodities.

In order to properly monitor cargo, you need to have a good understanding of two key statistical principles:

1. It is important that the sample selected be representative of the commodity. Random selection helps ensure this.
2. Once the sample is selected, it is necessary to inspect the sample thoroughly and according to hypergeometric sampling procedures if applicable.

If you want your port to produce quality risk information, then each person participating must have a clear understanding of the sampling universe, the unit of sampling, and inspection consistency issues.

The Sampling Universe

You estimate the number of actions due to pests or smuggling in a cargo entry pathway by taking random samples from the cargo in the pathway. It is key to good statistics to carefully define this universe from which you want to draw your random sample. The following questions need answers in order select the sample correctly and to make statistical inferences for the entire universe.

- How are commodities transported?
- How many shipments of these commodities are arriving at a work location?
- What is the seasonality of the commodity?

For AQIM, the universe is defined by the mode of transport of the cargo such as truck. Initially, PPQ has decided to limit the universe. The following commodities or commodity types will be excluded from the sampling universe:

- Commodities which are pre-cleared at foreign sites
- Frozen commodities
- Commodities which undergo some type of mandatory treatment, other than cold treatment (for example, fumigation, irradiation, hot water treatment) at work locations
- Oil, salt, iron ore, coal, etc., which have no pest risk.

Cargo Strata and Stratifying the Sample

The sampling and inspection processes for AQIM were designed to be compatible with PPQ cargo inspection groupings. The cargo universe is divided into several homogeneous and distinctly separate groups. Each group contains commodities that will be sampled in order to estimate the action and pest approach rates in each group. A port may be sampling one or more of the commodities in a group or across groups. With Southern border cargo, the universe is the Commercial Plant Perishable Agricultural Cargo. This category is defined as any commercial formal or informal entry of fresh fruit, vegetables or other non processed or non refined plant product.

By sampling this category, PPQ is able to get precise estimates of the number of trucks with pests approaching or other needed actions. This risk information helps the work location understand how effectively it manages the pest risk for this category, as well as for the entire cargo universe at the port.

It's very important that each commodity in the category selected be representative of all other units of that category. All shipments of a category should have a chance of being selected as a sample. One way to ensure that the sample is representative is to choose a shipment of the commodity at random (either random time, or random number, etc.). This random selection process eliminates the bias of the officer who is selecting the sample. The officer s experience (bias) might lead to choosing a shipment that is more likely to be harboring a pest. This bias would make the sample not representative of the entire commodity universe. The survey results would be skewed and this kind of bias would hamper the port s ability to make the best decisions based on risk analysis.

Setting Up a Process

Setting up a process of selecting representative samples for each of the commodities will be one of the biggest challenges in AQIM. Because each port has its own unique set of circumstances in cargo operations, the port must individualize its random sampling process. It will be necessary to document the process and possibly ask for feedback from other southern border ports, regional AQIM coordinators or Port Operations staff who have experience in selecting random samples in the cargo environment. The port may even decide that the Port Risk Management Team determine and review the random sampling process on a regular basis.

The Unit of Sampling

For Southern border cargo, the sample unit is the truck box containing the commodity, not including the cab. It is crucial that the sample unit is inspected closely enough to detect any actionable pests and any smuggling of prohibited agriculture commodities. Summary inspection procedures for border cargo begin on page 10-5. The procedures must be followed exactly in order for the monitoring estimates to be valid and useful.

Consistency of Data Collection

It is crucial that the monitoring results from the inspection of a random sample unit are recorded accurately and consistently. Because each sample represents many other units, all officers must be as consistent as possible in following the inspection procedures.

Regulated commodities pose a special challenge. If the sample selected is a regulated commodity, it is important to understand the following:

Cargo monitoring estimates the number of trucks approaching the work location with commodity pest infestation levels requiring action by PPQ. AQIM uses risk-based inspection procedures for detecting a 10 percent or more pest infestation rate. This initial threshold is used to estimate the number of containers approaching a work location with a pest threat.

NOTICE

This 10 percent infestation level may change as the data for AQIM is collected and analyzed.

To be 95 percent sure that the officer inspecting the sampled truck will find the pest, when the shipment is infested at a 10 percent infestation or more level, the officer must select, at random, a specific number of boxes in the shipment. Determine this number of boxes by using the hypergeometric table illustrated in **Table 5-1.** Each of these boxes must be inspected at level of intensity to ensure that:

- No hitchhiker pests are present in the box
- No internal feeding insects are present in randomly selected fruit in the box.
- No mismanifested or smuggled items are present.

TABLE 10-1: Hypergeometric Table For Random Sampling In Commodity Inspection

Total Number of Boxes on Truck	Number of Boxes to Select at Random From the Truck and to inspect to Detect Pests
1-10	10
11-12	11
13	12
14-15	13
16-17	14
18-19	15
20-22	16
23-25	17
26-28	18
29-32	19
33-38	20
39-44	21
45-53	22
54-65	23
66-82	24
83-108	25
109-157	26
158-271	27
272-885	28
272-885	28
886-200,000	29

Officers should follow normal inspection procedures of the commodities to determine pests. For example, officers should cut fruit to detect internal feeders if external evidence is present.

Southern Border–Truck Cargo Procedures Summary

Use the summary of procedures for Southern Border—Truck Cargo on page 10-5 as an aid when sampling and inspecting commodities for AQIM. The summary is printed so you can remove, photocopy, and reuse it.

LAND-BORDER TRUCK CARGO AQIM PROCEURES	
Cargo Population Definition	All trucks carrying the commodities from the sample category destined to US. This does not include precleared and frozen commodities. Also it does not include commodities with mandatory treatments at port of entry. Note: Commodities with mandatory cold treatments are included.
Sample Size	Select six (6) trucks per week per port that receives this category of cargo. THis excludes BCR (Border Cargo Release) and mandatory treatment cargo). **Contact Regional AQIM Risk Mgmt Program Mgr. for specific assistance.****
Sample Selection	Port discretion, random time, skip intervals, etc. May need to first determine the total number of shipments of a commodity received at a port in one year. If commodity is seasonal, then sampling should be planned to occur during the full import season of commodity, if reasonable for the number of samples needed.
Inspection Methodology	Each truck requires a physical inspection at port or consignee premise. Boxes for inspection must be taken from random locations throughout the truck to detect a 10 percent level of infestation (at 95% confidence). The number of boxes shall be set using **Table 5-1**. Entire contents of boxes selected and available floor space of the truck shall be inspected for agricultural pests or mismanifested or smuggled items.
Other Issues	Inspections shall be conducted during the normal business hours at the port. Costs for OT clearance will be paid by the shipper/broker/consignee, or government. Need to advise shippers, importers, and brokers that random sampling and inspection will be part of day-to-day operations. They should understand that there is a probability that their shipment will be intensely inspected.
**Regional AQIM Risk Mgmt. Mgrs:	Western Region - Judy Pasek: 970-494-2523 Eastern Region - Calvin Shuler: 919-716-5591

Pathway Monitoring Maintenance

Port managers and local AQIM coordinators are responsible for ensuring that monitoring activities are being performed and performed properly. To help with reviewing the status of monitoring activities, refer to Appendix L Pathway Monitoring Maintenance in the AQIM Handbook. This appendix contains a checklist of questions port managers and local AQIM coordinators should periodically answer to ensure proper monitoring of each designated pathway at their work locations. **See** Figure L-1. The questions review the following topics:

- Random sampling
- Proportional sampling

- Adequate sampling
- Accurate and complete data
- Working risk committees
- Local support

Southern Border–Truck Cargo Worksheet

There is one worksheet for recording information gathered from your inspection of Southern Border cargo for the purpose of AQIM. Be sure to record the commodity being inspected properly.

The form is also available as a fillable form; go to:

http://www.aphis.usda.gov/ppq/manuals/pdf_files/AQIM_in_PDF/Southern_Border_Cargo.pdf

10

AQIM Handbook

Southern Border—Truck Cargo

Data Collection and Maintenance

Introduction

Traditionally, PPQ based our work on the quantity of quarantine material intercepted. We inspected cargo, found pests, and tallied them to justify good job performance. AQIM emphasizes work efforts based on the potential threat posed by foreign pests and quarantine material.

Regular baseline AQIM will be incorporated as a part of PPQ's ongoing operations at work locations. Randomly selected samples belonging to four different strata are required at each Southern border crossing. Inspection time will vary depending on the strata and on the commodity.

Every PPQ work location needs to be involved in the AQIM process. Each work location will have a group of managers, supervisors, and officers who manage results- monitoring and the subsequent risk management functions at the work location. All PPQ personnel are involved and supportive of the process.

The expected results are that PPQ will have results-monitoring systems in place that will meet the needs of management and the requirements of the GPRA.

Epi Info User Guide for Data EntrySouthern Border–Truck Cargo

NOTICE

When first using Epi Info thoroughly read the user guide to become familiar with entering data into each of the data fields.

General Instructions

At completion of **each data entry** session make a back up of data records file, **02CGMBR.REC**, file to a computer disk. See Appendix G for procedures for backing up monitoring data.

1. Press [**CAPS LOCK]** (to ensure typing capital letters).
2. Be sure to start at C:\prompt. Epi Info is a DOS program.

3. Change to the Epi Info directory. Type: **CD EPI6** then Press [**ENTER**].
4. Start Epi Info program. Type: **EPI6** then Press [**ENTER**].
5. Wait several seconds, the Main Menu will appear with the word Program highlighted.
6. Press [**P**] (to list Program Menu).
7. Press [**N**] (to choose ENTER from Program Menu).
8. Cursor should be in the space below the phrase "Data file (.REC)".
9. Type in the space the cursor is in: **02CGMBR**
10. Press [**ENTER**] **3 times** (to load files for data entry).
11. Data entry screen for Cargo Strata should appear.

Help Statements

Read the following help statements before entering data:

- Each data entry screen represents only one monitoring inspection. After correct data entry is made and saved, this becomes a record for that one inspection.
- Some data fields will automatically advance the cursor after entering data. Some require pressing [**ENTER]** to advance the cursor after entering data.
- Some data fields will be skipped depending on the strata.
- Data entry messages and valid data values for each data field appear at the bottom of the screen or by pressing [**F9].**
- If an error is made and the cursor has left the data field, use the Up (↑) and Down (↓) arrow keys to move from field to field in order to make changes or corrections to data fields already entered.

Enter Data

Read the following as you enter data to become familiar with each of the fields.

Port—You should not have to enter data in this field. This field is automatically filled in, if not contact the local AQIM Coordinator.

Crossing—You should not have to enter data in this field beyond the first record. This field is automatically filled in, if not contact the local AQIM Coordinator.

BDRRECNUM—This field is automatically assigned by the computer.

A) Commodity—Press [F9] to select a commodity. If you cannot find the desired commodity, select other. In the other field, type in the name of the desired commodity.

B) Cargo Refrig—Enter response circled on the data form.

C) Entry Size—Enter truck size circled on the data form.

D) Date—Must enter data. Enter date of inspection from data form in MM/DD/YYYY format.

E) Consignee—Record the consignee of this shipment.

F) Carrier—Must enter data: Enter truck number.

G) Cargo Origin—Record origin of the cargo. Must enter data. Press: [**F9**] to open window of valid origin names. Type the first and second letters of country name in order to scroll down the list faster. Use Up (↑) and Down (↓) arrows keys to highlight correct choice. Press [**ENTER**] to select this origin.

OrigCode—You should not have to enter data. This code is entered automatically.

H) Destination—Must enter data. Press: [**F9**] to open window of valid destination names. Type the first letter of destination name in order to scroll down the list faster. Use Up (↑) and Down (↓) arrows keys to highlight correct choice. Press [**ENTER**] to select this destination.

I) Description Group—Enter description group. Press **[F9}** to select the description group

J) Cargo Count—Record the amount of cargo units (boxes, cartons, bags, etc.).

Cargo Weight (KG)—Record the amount of cargo by recording the weight in kilograms.

K) Amt. Insp. (Num)—FOR REGULATED CARGO ONLY!! This data field does not appear on all cargo strata forms. Record the amount of cargo sampled and inspected by recording the number of singular units inspected (boxes, bags, etc.)

L) Inspection Method—Enter the inspection method circled on the data form (I). Valid values for the methods are listed at the bottom of the screen.

M) Solid Wood Packing (SWP)—Enter either N(no) or Y(yes).

- If Y: Cursor will proceed to next data field (SWP Type)
- If N: Cursor will jump to “Require Action Beyond Inspection to Reduce Risk?"

SWP Type—Press: [**F9**] to open window of valid SWP types. Use Up (↑) and Down (↓) arrow keys to highlight the correct type. Press [**ENTER**] to select it.

Amount of SWP Inspected %—Enter percentage of SWP inspected.

Bark on SWP—Enter either N(no) or Y(yes) response from the data form.

SWP Fumigation Certif. or Other Treatment Presented—Enter either N(no) or Y(yes) response from the data form.

Required Action Beyond Inspection to Reduce Risk—Must enter data. Enter either **Y**(yes) or **N**(no):

- If **Y**: cursor will proceed to next data field.
- If **N**: then cursor will jump to the bottom of the screen asking the question: "Write data to disk (Y/N/<Esc>)?." If data entry is correct and complete, answer Y to this question and the data screen will renew for the next record entry.

1. Intended Use of Cargo—Record the intended use of the cargo.

2. Action Pest—Record if actionable pest(s) were found or not. Enter either **Y**(yes) or **N**(no):

- If **Y**: cursor will proceed to the next data field.
- If **N**: then cursor will jump to “3. Contaminant Found?"

Cargo Item—Record the cargo item that the pest was found on, include cargo conveyance as an option if appropriate. When recording:

- Use the singular form (except for leaves)
- Use precise descriptors: fresh, dried, frozen, etc.
- Describe using common English names if possible
- DO NOT use the general descriptors **cucurbit, bean, or rubus sp.** Break these down to more detailed items, if possible.

Pest ID—System will automatically enter NONE (for no pest found). Record the identified pest name (genus/species).

Pest Intercep. Num.—System will automatically enter NONE (for no pest found). Enter the pest interception number assigned to the pest. This number maybe assigned later or by another office. If pest interception number assignment is delayed, then enter the letters: TBA (To Be Assigned.) Remember to update this data field with the pest interception number.

Where found:WFA—Record where the pest was found in relationship to the container/conveyance that the cargo arrived in. See the bottom of the data form for “where found" code explanations.

WFA—A second field for “where pest was found" if pest is found in more than one of the locations listed.

Cont (Continue)—

- Press [**Y**] if additional pests and cargo items ARE to be entered, Press [**ENTER**] to leave field and continue on.
- Type: [**N**] if no other items are to be entered in this record. Cursor will jump to “3. Contaminant Found?".

3. Contaminant Found?—Must enter N(no) or Y(yes) to indicate if a contaminant was present with the cargo. **If yes, be sure to enter the contaminant information after answering next data field.**

4. Agr. Item Mismanifested/Smuggled?—Must enter **N**(no) or **Y**(yes) to indicate if any mismanifested or smuggled items were found with the cargo.

- If **Y**: then cursor will proceed to next data field.
- If **N**: then:
  - if Yes to previous Contaminant question, cursor will move to the next data field,
  - if No to previous Contaminant question, cursor will jump to the bottom of the screen asking the question: "Write data to disk (Y/N/<Esc>)?" If data entry is correct and complete, answer Y to this question and the data screen will renew for the next record entry.

Contaminant/Item—

- If Contaminant: record the contaminant name and the cargo item (cargo conveyance) it’s associated with. (Soil on yams, manure on truck, etc.)
- If Mismanifest/Smuggled: record the items found.

Wght, KG—Record the amount of listed contaminant/item in kilograms. Record best “accurate estimate," if necessary.

Cargo Count—Record the amount in singular units (boxes, cartons, bags, etc.), if appropriate.

Prohibited—Record if contaminant/item is prohibited due to regulations or quarantine.

Where found:WFA—Record where the contaminant/item was found in relationship to the container/conveyance that the cargo arrived in. See the bottom of the data form for “where found" code explanations.

WFA—A second recording for “where contaminant/item was found" if found in more than one of the locations listed.

MO—Do not enter data in this field. This field is filled in automatically with the numeric value of the month. This field is used for analysis purposes.

Cont (Continue)—

- Press [**Y**] if additional pests and cargo items ARE to be entered, Press [**ENTER**] to leave field and continue on.
- Press [**N]** if no other items are to be entered in this record. Cursor will jump to "Write data to disk (Y/N/<Esc>)?"

Write data to disk (Y/N/<Esc>)?—

- Type: **Y** if data entry is complete for this record. Record will be saved to the record's file.
- Press [**N]** if you wish to make changes or corrections to the record field. After making changes or corrections remember to return the cursor to the last field of form (Going To Work On Farm.), and Press [ENTER] to return to the prompt "Write data to disk (Y/N/<Esc>)?"

When finished with data entry—

1. Press [**F10**] to return to Main Epi Info menu.
2. Press [**F10]** again to leave Epi Info and return to regular computer menu.

Data Accuracy Checks and Data Corrections

[To Be Developed]

Southern Border—Truck Cargo

Data Analysis

Survey Results and How To Use Them

AQIM activities have been put into place to develop baseline data to help answer two basic questions:

1. What is the threat of agricultural pests approaching work locations?
2. How effective is the AQI program at managing this threat?

There are varying rates at which prohibited agricultural materials and pests approach the work locations. These prohibited agricultural materials are what can have agricultural pests.

Further analysis of the monitoring data is needed to determine the risk associated with the prohibited items approaching the work location. The origin and destination of the prohibited items is important to determine risk levels. Also, whether or not the prohibited item carries an actual agricultural pest is crucial in analyzing risk.

Analyses of the monitoring data need to occur at several levels of PPQ. At the work locations, PPQ personnel need to study what the data means and answer the first question for their specific work location. Analysis tools are available to help with these analyses, which are explained in the next subsection. At the same time, PPQ holds risk analysis workshops around the country to introduce risk analysis concepts. At some work locations, teams of PPQ officers and managers form Risk Management Teams to look at monitoring data and other data, which are normally collected at the work location.

At other locations, analyses of monitoring data occur to establish the rates at which quarantined items and agricultural pests are approaching the borders of States, areas of the country, and the United States.

Once baseline rates are well established, PPQ can use the monitoring data as a baseline to answer the second basic question: How effective is the AQI program at managing the risk of introduction of agricultural pests and diseases? Again, each work location must conduct this type of analysis. AQIM provides a framework which work location can use to carry out the analysis.

Analysis Tools

The tool available for analyzing AQI monitoring data is the ANALYSIS program in Epi Info. Using the ANALYSIS program in Epi Info you can look at data entered specifically for your work location. While in Epi Info ANALYSIS, you can select a data analysis program file (*.PGM) that automatically runs a series of Epi Info commands. The program will produce various listings, tables, analysis commands, and explanatory text from data files for a designated pathway. Follow the guidelines on how to load and run data analysis program files beginning on page 10-18.

Epi Info ANALYSIS saves the analysis output to a file for viewing and/or printing. The file contains basic information that answer some of the questions to guide data analysis that follow. For questions not answered by running an automatic program, you will need to key in and run various analysis commands. Follow the Epi Info User Guide for Data Analysis-Southern Border-Truck Cargo beginning on page 10-22 to help you with the analysis commands.

Questions To Guide Data Analysis

1. How many trucks were selected for sampling during the survey period?

   How many actions were required on the trucks sampled?

   How many actions by strata category sampled were there? (Previous data has multiple strata.)

   What is the action approach rate of trucks that require action (number of trucks requiring action divided by total trucks in the sample)?

2. How many pest interceptions (actionable pests) were made from survey samples?

   Pest Approach Rate: What is the rate of pest interceptions in relation to the total sampled number of trucks (number of trucks with actionable pests divided by total trucks in the sample)?

3. Compare the rate of actions required for each month of the survey.

   DISCUSSION:

   Are there easily identified trends when the rate of cargo actions transiting the work location are higher?

Are there seasonal trends?

Do higher rates correlate with national or religious holidays, certain types of trucks, cargo, or importers?

4. Generate a listing and frequency of shipments requiring action. Which commodities present the greater risk?

Which commodities most likely to require action? Where were the agricultural pests found? What is the rate of trucks with smuggled or mismanifested items?

DISCUSSION:

How effective is the current tailgate inspection process in detecting pests and/or smuggled cargo?

5. What types of shipments (refrigerated, mixed vegetables, dry containers, empties, cut flowers, express carriers, etc.) require higher rates of action?

DISCUSSION:

What selectivity factors are currently used to identify shipments likely to require action?

What additional selectivity factors would be used to identify shipments likely to require action?

Do the survey results indicate additional factors that help identify shipments most likely to require action?

6. Using monitoring data, apply the survey results to the cargo universe at the work location to estimate the number of actions required and interceptions likely to transit the work location during the same time the survey period took place.

How many trucks arrived at the work location during the survey period? Using the action approach rate for trucks requiring action, calculate an estimate of the number of trucks transiting the work location that are likely to require action.

Using WADS data, how does the estimated number of actions required compare with the reported number of actions taken?

How many additional actions may have been required during the survey period?

How does the estimated number of actionable pest interceptions compare with the reported number of actionable pests on WADS for truck cargo?

DISCUSSION:

What percentage of resources are dedicated to staffing AQI activities for southern border truck cargo at the work location?

What is the relative risk of this pathway compared with other pathways in the work location?

Should resources be reallocated among all the pathways in the work location to better address the relative risk of the pathways?

How to Load and Run Data Analysis Program Files

Data analysis program files are meant to provide only listings, tables, and explanatory text about the monitoring data gathered a work locations. The program files are not intended to be used as final analysis tools. The outputs from these program files should raise further questions and discussion by local personnel and risk management committees.

NOTICE

Each year the AQIM National Team reviews, discusses, and decides about suggested improvements (additions, removals, changes) to the baseline data fields based on analysis and operational needs. A summary of the changes made during previous fiscal years to data fields for the Southern Border–Truck Cargo pathway begin on **page 10-27** under Southern Border–Truck Cargo Epi Data Translation. Use the summary to identify data field changes that may impact the results of an analysis report run for a particular year.

Data analysis files automatically run a series of Epi Info analysis commands. Use the following guidelines to load and run data analysis program files.

1. Determine which data analysis program file (*.PGM) file you will load and run in Epi Info.

In Epi Info, ANALYSIS, there is a data analysis program file for each fiscal year of data gathered. Look at the table below to identify the file to load and run depending on which fiscal year's data you are analyzing.

If you want to analyze data for:	Then load and run the following Epi Info ANALYSIS data analysis program file (*.PGM)
FY 1998	CGMLND98.PGM
FY 1999	CGMLND99.PGM
FY 2000	CGMBR2K.PGM
FY 2001	CGMBR01.PGM
FY 2002	CGMBR02.PGM

2. Get ready to run a data analysis program file.

A. Press: **CAPS LOCK** (to ensure typing capital letters).

B. Be sure to start at C:\prompt. Epi Info is a DOS program.

C. Change to the Epi Info directory. Type: **CD EPI6,** then Press [**ENTER**].

D. Start Epi Info program. Type: **EPI6,** then Press [**ENTER**].

E. Wait several seconds, the Main Menu will appear with the word Program highlighted.

F. Press [**P**] (to list Program menu).

G. Press [**A**] (to choose ANALYSIS from Program menu).

H.

If you are running:	Then:
A data program analysis file using Epi Info, ANALYSIS	CONTINUE to **Step 3.**
Further analysis commands using Epi Info	GO to the **Epi Info User Guide for Data AnalysisSouthern Border–Truck Cargo**beginning on **page 10-22**

3. Run the selected data analysis program file (*.PGM) from Step 1.

You should be at the Epi Info ANALYSIS screen. If not, review Step 2.

NOTICE

To leave the analysis mode at any time, Press **F10**

A. At the EPI6 command prompt, Type: RUN FILENAME, where FILENAME is the *.PGM file you selected in Step 1. For example if you are analyzing data gathered in Fiscal Year 2000, then you would enter at the command prompt: **RUN CGMBR2K.PGM.**

Then, Press [**ENTER**].

If you:	Then:
See the following prompt at the bottom of the screen: "Press enter key to pick the records file you want to analyze"	1. Press [**ENTER**]. A window appears with a listing of *.REC files. 2. GO to **Step B.**
Do not see the prompt stated in the cell above	DO the following 3 steps

i. Type: RUN, then Press [**ENTER**]. A window appears with a list of *.PGM files.

ii. Using the Up (↑) and Down (↓) arrow keys, search and highlight the program file name you want to run (for example, CGMBR2K.PGM), then

Press [**ENTER**].

NOTICE

If you cannot locate the file name you are looking for, then contact your local AQIM coordinator. If they are not available, then contact the National AQIM Coordinator.

iii. When the following prompt appears at the bottom of the screen: "Press enter key to pick the records file you want to analyze"

Press [**ENTER**].

Go to **Step B.**

B. Using the Up (↑) and Down (↓) arrow keys, highlight the records file for the desired fiscal year.

Important

The program file (*.PGM) must match the records file (*.REC). When you are sure,

Press [**ENTER**].

C. You are prompted for a file name where the program will save the output. (An example is given on the screen using the three-letter port code and the date.)

Type **FILENAME**, where FILENAME is the file name you have created to save the program output. Then, Press [**ENTER**].

D. You are prompted to enter the date that is **one day before** the date you want the program analysis to start. (The analysis program analyzes records between two given dates, but does not include the given dates. Therefore, you must enter the dates of the days just before and after the dates you want included in the analysis.

EXAMPLE:)For example, to analyze Fiscal Year 2000 data, you wouldenter 09/30/1999 (one day before the beginning of Fiscal Year 2000).

Type the start date following the format (MM/DD/YYYY), where it is one day before the date you want the program analysis to start, then Press [**ENTER**].

E. You are prompted to enter the date that is one day after the date you want the program analysis to end.

Type the end date following the format (MM/DD/YYYY), where it is **one day after** the date you want the program analysis to end, the Press [**ENTER**].

4. The program will begin analyzing. You will see the program's output scroll quickly on the screen. It is being saved to the file name you specified in Step 3.C.

5. The program is finished when the cursor returns to the EPI6> prompt. At this time, you may want to do any of the following:

If you want to:	**Then:**
View or print the program output file	1. Press [F10] to exit Epi Info. 2. Use a word processing program such as WordPro to view and/or print the file. **NOTE**: The file usually is in the C:\EPI6 directory saved in an ASCII (DOS) text file format.
Run a data analysis program file for another fiscal year's data	Return to **Step 1.** at the beginning of this subsection to decide which program file to run
Continue with further analysis commands using the Epi Info User Guide for Data Analysis	Go to the **Epi Info User Guide for Data AnalysisSouthern Border–Truck Cargo** beginning on **page 10-22**
Exit Epi Info, ANALYSIS	Press [**F10**].
Exit Epi Info	Press [**F10**] twice.

Epi Info User Guide for Data AnalysisSouthern Border–Truck Cargo

When first running analysis commands in Epi Info, thoroughly read through the user guide to become familiar with basic analysis procedures used with the data about AQI monitoring for a specific work location.

Get Ready

1. You should be at the Epi Info, ANALYSIS screen. If not, refer to Step 2. getting ready to run a data analysis program file, under How to Load and Run Data Analysis Program Files on page 10-18.
2. Press [**F2**] (to list Commands menu).
3. Use the arrow keys to move the cursor to the READ command.
4. Press [**ENTER**] **twice** (to get a list of .REC files that can be analyzed).
5. Use the arrow keys to move cursor to highlight the records **02CGMBR.REC**.
6. Press [**ENTER**] (to bring the *.REC file you have chosen into the Analysis screen).
7. Press [**F4**] (to browse the data records in the file).
8. Use the arrow keys to look over the data to make sure it has been entered properly during the past month. (In subsequent months, you will want to browse through the entire file to see that all months of data have been properly entered, repeated fields such as workunit are consistently the same.)

   To view only one individual record press **F4** again to see the entire record as it was originally entered. If it is necessary to make changes to the record, **note the Epi Info record number in the lower right corner of the screen.**

   If you want to edit or change this record, go to **Edit Records:** beginning on page 10-25.

Analyze Records

9. Press [**F10**] (to return to the main Analysis screen).
10. Press [**F2**] (to see a list of analysis commands).
11. Use the arrow keys to move the cursor to FREQ (frequency) and Press [**ENTER**].

12. Press [**F3**] (to see a list of data variables). To better understand the variables listed, refer to page 10-27 for a list of data variable translations for the current FY and a summary of data field changes made during previous FYs.
13. Use arrow keys to highlight the data variable you wish to know the frequency of.

    Press [**ENTER**] **twice** and you will get a frequency table.

EXAMPLE: For example: if you want to know which carriers had shipments sampled, move the cursor to CARRIER and press enter twice. You will get a table showing the number of records entered into the database for each carrier sampled in the survey.

14. Explore the database by doing FREQ commands for as many data variables as is logical. By doing this you will begin to understand the survey data and see some patterns in the data.

    For each variable, use the [**F2**] and [**F3**] keys to choose the FREQ command and variable of interest, or you can type the word FREQ and the data variable names directly at the Analysis prompt.
15. To explore graphic commands: (The PIE command is one of several graphics commands which allow you to analyze the variables with graphs. This may make it easier to see patterns in the data and to understand the survey results.)

    Press [**F2**] and choose the PIE command with the cursor. Press [**ENTER**].

    Press [**F3**] and select a data variable of interest from your data exploration in the FREQ analysis (Step 9.-14.).

    Press [**ENTER**] **twice** and you will see a pie chart on your screen which might help you understand a pattern in the data.

    For example, if you have chosen the CARRIER variable for a pie graph, then you may see that a larger percentage of samples were taken from one carrier, which may cause you to question the sampling procedures.

    See Appendix H for procedures for printing graphics while in Epi Info.

    To leave the graph screen and return to the main screen, Press: **<ESC>.**

16. Further FREQ exploring.

To see the number and kind items carrying pests from random shipment inspections, Press [**F2**] to list commands.

Highlight FREQ and Press [**ENTER**]. (You will next “tag" more than one data variable to move these variable to the analysis command line.)

Press [**F3**] to list data variables, highlight **CARGOITEM** and “tag" this variable by Pressing: **Shift and the (+)**. A small arrow will appear next to **CARGOITEM**.

Next, highlight the variable **CARGOITE01**, and “tag" it. Do the same for **CARGOITE02**.

The analysis command line should appear:

EPI6> FREQ CARGOITEM CARGOITE01 CARGOITE02

Press [**ENTER**]. The output screen should display counts of items for each of the cargo item data lines for all records. Adding up the counts of the items will provide a category breakdown of the agriculture items carrying actionable pests during random sample inspections.

17. Further exploration. Two other commands (F2 TABLES, F2 SELECT) are very useful to explore the survey data and to begin answering questions you may have after using the FREQ and PIE commands.

For example, if you want to know if truck cargo strata 1 has samples taken from shipments coming from Great Britain, then do the following:

Press [**F2**]. Move cursor to SELECT. Press [ENTER].

Press [**F3**]. Move cursor to SWP.

Press [**ENTER**]. Type = “Y".

The command line will then look like this: EPI6>SELECT SWP="Y"

Press [**ENTER**].

When you run new analysis commands, the analysis will only look at a subset of records where the cargo had solid wood packing (SWP). If you want to get back to the entire set of records, Press [**F2]**. Move cursor to SELECT. Press [**ENTER].**

18. To continue working with the subset of records established in Step 17.:

Press [**F2**]. Move cursor to FREQ. Press [**ENTER**].

Press [**F3**]. Choose ORIGIN. Press [ENTER] **twice**. You will get a table that lists the frequency of sampled records from each country of origin.

Do a PIE ORIGIN analysis command to get a graphic picture of which countries the random shipments are coming from.

19. Press the Up (↑) arrow key to move the command line cursor to the FREQ ORIGIN command.

Type: **\C**. Press [**ENTER**]. The new table will give a statistical analysis with 95 percent confidence intervals.

20. Type on the command line: **TABLES ORIGIN ACTIONPEST**. (Or use the [**F2**] and [**F3**] keys to select the TABLES command and the two variables.)

Press [**ENTER**]. You will get a table which shows the frequency that actionable pests are being found in the samples from various origins.

This analysis can be used to further understand the cargo risk.

Edit Records:

E1. Press [**F10**] **twice** (to get back to the main EPI6 program menu).

E2. Press [**P]** (to list Program menu).

E3. Press [**N**] (to get to the Edit menu).

E4. Press: [**F9]** key (to list .REC files).

E5. Use arrow keys to highlight appropriate .REC file

Press [**ENTER] four times** to get to the data entry screen for this file.

E6. Press [**CONTROL**] **and F** at the same time (to find the record which needs editing).

E7. Press [**F2**] and then **type the number** of the record you need to edit.

E8. Press [**ENTER**] (to get to the record you need to edit).

E9. Make corrections to the record, using the Up (↑) and Down (↓) arrow keys to move from field to field.

When finished editing, Press [**F10**], and answer YES to the question (at the bottom of the screen) that asks to write the edited record to the data file.

Return to the beginning of the user guide on page 10-22.

Southern Border Truck Cargo Epi Data Translation

Core Data Fields for the Current Fiscal Year

VARIABLE NAME	SCREEN NAME
CARGOTYPE	Cargo Type:
PORT	Port:
CROSSING	Crossing:
BDRRECNUM	BDRRECNUM:
COMMODITY OTHER	A) Commodity:
OTHER	Other
CARGOTYPE	Cargo Type:
CARGOREFRI	B) Cargo Refrig:
ENTRYSIZE	C) Entry Size:
DATE	D) Date:
CONSIGNEE	E) Consignee:
CARRIER	F) Carrier:
ORIGIN	G) Cargo Origin:
ORGNCODE	Orgncode:
DESTINATIO	Destination:
DESCGROUP	Description Group:
CARGOCOUNT	J) Cargo Count:
CARGOWEIGH	Cargo Weight(KG):
AMTINSP	K) Amt. Insp: (Amount of cargo that was inspected)
INSPMETH	L) Inspection Method:
SWP	M) Solid Wood Packing (SWP):
SWPTYPE	SWP Type:
SWPINSP	Amount of SWP Inspected %:
BARKONSWP	Bark on SWP:
SWPFUMCERT	SWP Fumigation certif. Of Other Treatment Presented:
REQACTION	Require Action Beyond Inspection to Reduce Risk?:
USECARGO	1. Intended Use of Cargo:
ACTIONPEST	2. Action Pest: (Actionable Pest Found)

First Pest Information

CARGOITEM	Cargo Item:
PESTID	PestID:
PESTNUM	Pest Intercep. Num:
WFA	Where Found:WFA:
WFA01	WFA: (Second recording for more than one Where Found location)
CONT	Cont: (Continue to next Second Pest Information)

VARIABLE NAME	SCREEN NAME
Second Pest Information	
CARGOITE01	Cargo Item:
PESTID01	PestID:
PESTNUM01	Pest Intercep. Num:
WFA02	Where Found:WFA:
WFA03	WFA: (Second recording for more than one Where Found location)
CONT01	Cont: (Continue to next Third Pest Information)
Third Pest Information	
CARGOITE02	Cargo Item:
PESTID02	PestID:
PESTNUM02	Pest Intercep. Num:
WFA04 Where Found:WFA:	
WFA05	WFA: (Second recording for more than one Where Found location)
CONTMFOUND	3. Contaminant Found?:
MISMANSMUG	4. Agr. Item Mismanifested/Smuggled?:
First Contaminant/Mismanifest or Smuggled Information	
CONTMITEM	Contaminant/Item:
CNT	Cnt: (Cargo Amount, count of boxes, cartons, units...etc.)
WGHT	Wght, KG:
PROHIBITED	Prohibited: (Prohibited by Regs or Quarantine #)
WFA06	Where Found: WFA:
WFA07	WFA: (Second recording for more than one Where Found location)
CONT02	Cont: (Continue to next Item Information)

VARIABLE NAME	SCREEN NAME
Second Contaminant/Mismanifest or Smuggled Information	
CONTMITE01	Contaminant/Item:
CNT01	Cnt: (Cargo Amount, count of boxes, cartons, units...etc.)
WGHT	Wght,KG:
PROHIBIT01	Prohibited: (Prohibited by Regs or Quarantine #)
WFA08	Where Found: WFA:
WFA09	WFA: (Second recording for more than one Where Found location)
MO	MO: (month)

Summary of Data Field Changes Made During Previous Fiscal Years

For Fiscal Year:	The following additions, changes, and removals were made to the data fields:
2001	**Additions:** BDRRECNUM=BDRRECNUM MA01=Manifested As MA02=Manifested As DESCGROUP=Description Group INSPECMETH=Inspection Method SWP=Solid Wood Packing (SWP) SWPTYPE=SWP Type SWPINSP=Amount of SWP Inspected % BARKONSWP=Bark on SWP SWPFUMCERT=SWP Fumigation Certificate or Other Treatment Presented
	Changes: MA used to be MANIFESAS The order of data fields were reversed for cargo weight and count: CARGOCOUNT used to be CARGOWEIGHT CARGOWEIGHT used to be CARGOCOUNT CNT used to be WGHT WGHT used to be CNT CNT01 used to be WGHT01 WGHT01 used to be CNT01
	Removals: TIME=Time IDENTNO=Ident Cntr No REFERREDTO=Referred To
1999	**Additions:** MO=MO (month)
2002	Additions COMMODITY= Commodity OTHER= Other Commodity ORGNCODE= Origin code DESCGROUP= Description group Removals: STRATA MA-MA02

11 Predeparture Air Passenger

AQIM Handbook

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Data Collection and Maintenance **page 11-3**
Data Analysis **page 11-5**

Introduction

This pathway covers predeparture activities in air passenger. Information must be recorded on a worksheet.

Predeparture Air Passenger Worksheet

On the next page, there are two record forms you can use to record the information gathered for AQIM purposes for inspecting air passengers in predeparture. Feel free to remove, photocopy, and reuse the following page. The worksheet is also available on disk; contact your local AQIM coordinator.

The form is also available as a fillable form; go to:

http://www.aphis.usda.gov/ppq/manuals/pdf_files/AQIM_in_PDF/Predeparture_Passenger.pdf

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Predeparture Air Passenger

Data Collection and Maintenance

[To be developed.]

[To be developed.]

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[To be developed.]

[To be developed.]

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AQIM Handbook

Rail Cargo

Introduction

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Background

This pathway covers cargo arriving in rail cars. Information must be recorded on a worksheet.

Rail Cargo Worksheet

On the next page, there is a record form you can use to record the information gathered for AQIM purposes from inspecting cargo in rail cars. Feel free to remove, photocopy, and reuse the following page. The worksheet is also available on disk; contact your local AQIM coordinator.

The form is also available as a fillable form; go to:

http://www.aphis.usda.gov/ppq/manuals/pdf_files/AQIM_in_PDF/Rail_Cargo.pdf

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Rail Cargo

Data Collection and Maintenance

[To be developed.]

[To be developed.]

12 Rail Cargo

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Data Analysis

[To be developed.]

[To be developed.]

13 Glossary

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Acceptable risk—A judgement (management decision) regarding the permissibility of a hazard; a decision made in the risk management process about the safety of an option or the acceptability of a hazardous event.

Analysis—Determining the nature or proportion of one or more data elements or sets of data.

Approach rate—The total prohibited agricultural items seized or total PPQ cargo actions per the respective, total sampled population.

AQIM—Initials representing Agricultural Quarantine Inspection Monitoring.

Confidence interval—A level of belief that the true value of the population was captured. For AQIM, the numbers of samples taken at each work location were designed to ensure that by detecting the presence of certain pess and quarantine materials during the monitoring, PPQ could be 95 percent sure that it would happen again.

Data—Raw information that provides values for any characteristic of a larger population. For AQIM, these would be all the entries on the data collection form (i.e., flight number, origin, contaminant codes, etc.).

Decision-making—The final choice or commitment to action. Decisions are impacted by the risk analysis process, resource issues and political implications.

Hazard—Elements or events which represent potential harm; an adverse event or adverse outcome. In risk analysis, hazard is specified by describing what might go wrong and how this might happen.

Mean—This term is also referred to as the average. It is computed by adding all the values for a characteristic and dividing by the number of observations. For example, the mean of passengers going through an airport in a day would be the total number of passengers in one year divided by 365 days.

Mitigation—Deliberate action(s) taken to reduce the risk associated with a pest organism or plant disease. Consistent with risk management strategies.

Monitoring—To watch, check, or regulate the performance of a process or activity.

Negligible Risk—A risk value so low (or reasonable) that most parties agree to accept risk at or below this level under most circumstances (also known as tolerable, not significant or de minimis risk).

Pest Risk Assessment—Determination of whether a pest organism is of quarantine significance, and the evaluation of the likelihood and consequences of its introduction, including discussions of the uncertainty associated with the estimates.

Pest Risk Management—The decision-making process concerned with mitigating the risk of introduction or spread of a plant quarantine pest.

Probability—The statistical prediction of the likelihood of possible outcomes.

Proportions—Shows the relative frequency of an event, e.g. percentage of passengers with a QMI.

QMI—Quarantine material intercepted.

Quarantine Security—A management decision concerning the safety at a defined level of pest risk. Additional mitigation is not required when quarantine security is achieved.

Random Sampling—Each member of the population must have a known probability of being sampled (greater than 0).

Risk—The likelihood and magnitude (of the consequence) of occurrence of an adverse event.

Risk Analysis—The process which includes risk assessment, risk management, and risk communication.

Risk Assessment—The process of identifying a hazard and evaluating the risk of a specific hazard in qualitative or quantitative terms. This process should include estimates of uncertainty and should be objective, repeatable, and scientific.

Risk Communication—Open, two-way exchange of information and opinion about risk, leading to a better understanding and better risk management decisions.

Risk Management—The pragmatic process concerned with developing options for mitigating or eliminating the risk.

Risk Management Implementation—Implementing the programs, monitoring, and evaluating program effectiveness; and adjusting and improving program conduct to meet continual needs.

Risk Management Recommendations—Identifying options for intervention; evaluaiton of benefits and down-sides of each option; recommending final option(s) for implementation.

Safety—The degree to which risks are judged acceptable; a subjective measure of the acceptability of risk.

Sample—The part (or a subset) of a population that has been selected for monitoring.

Simple Random Sampling—A selection process where each member of the population must have a known probability (greater than 0) of being sampled.

Strata—Homogeneous and distinctly different groups created for the purpose of dividing cargo.

Unrestricted Risk Estimate—The measure of risk without the application of mitigation.

Variable—Any characteristic on which the elements of a sample differ from each other (i.e., height versus weight, cargo destinations versus type).

WADS—Initials representing the Work Accomplishment Data System.

A

AQIM Handbook

Appendix A

ACTS

Use this Appendix to obtain information about The government Performance Results Act (GPRA) of 1993.

One Hundred Third Congress
of the
United States of America

AT THE FIRST SESSION

Begun and held at the City of Washington on Tuesday, the fifth day of January, one thousand nine hundred and ninety-three

An Act

To provide for the establishment of strategic planning and performance measurement in the Federal Government, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Government Performance and Results Act of 1993".

SEC. 2. FINDINGS AND PURPOSES.

(a) FINDINGS.—The Congress finds that—

(1) waste and inefficiency in Federal programs undermine the confidence of the American people in the Government and reduces the Federal Government's ability to address adequately vital public needs;

(2) Federal managers are seriously disadvantaged in their efforts to improve program efficiency and effectiveness, because of insufficient articulation of program goals and inadequate information on program performance; and

(3) congressional policymaking, spending decisions and program oversight are seriously handicapped by insufficient attention to program performance and results.

(b) PURPOSES.—The purposes of this Act are to—

(1) improve the confidence of the American people in the capability of the Federal Government, by systematically holding Federal agencies accountable for achieving program results;

(2) initiate program performance reform with a series of pilot projects in setting program goals, measuring program performance against those goals, and reporting publicly on their progress;

(3) improve Federal program effectiveness and public accountability by promoting a new focus on results, service quality, and customer satisfaction;

(4) help Federal managers improve service delivery, by requiring that they plan for meeting program objectives and by providing them with information about program results and service quality;

(5) improve congressional decisionmaking by providing more objective information on achieving statutory objectives, and on the relative effectiveness and efficiency of Federal programs and spending; and

(6) improve internal management of the Federal Government.

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SEC. 3. STRATEGIC PLANNING.

Chapter 3 of title 5, United States Code, is amended by adding after section 305 the following new section:

"§ 306. Strategic plans

"(a) No later than September 30, 1997, the head of each agency shall submit to the Director of the Office of Management and Budget and to the Congress a strategic plan for program activities. Such plan shall contain—

"(1) a comprehensive mission statement covering the major functions and operations of the agency;

"(2) general goals and objectives, including outcome-related goals and objectives, for the major functions and operations of the agency;

"(3) a description of how the goals and objectives are to be achieved, including a description of the operational processes, skills and technology, and the human, capital, information, and other resources required to meet those goals and objectives;

"(4) a description of how the performance goals included in the plan required by section 1115(a) of title 31 shall be related to the general goals and objectives in the strategic plan;

"(5) an identification of those key factors external to the agency and beyond its control that could significantly affect the achievement of the general goals and objectives; and

"(6) a description of the program evaluations used in establishing or revising general goals and objectives, with a schedule for future program evaluations.

"(b) The strategic plan shall cover a period of not less than five years forward from the fiscal year in which it is submitted, and shall be updated and revised at least every three years.

"(c) The performance plan required by section 1115 of title 31 shall be consistent with the agency's strategic plan. A performance plan may not be submitted for a fiscal year not covered by a current strategic plan under this section.

"(d) When developing a strategic plan, the agency shall consult with the Congress, and shall solicit and consider the views and suggestions of those entities potentially affected by or interested in such a plan.

"(e) The functions and activities of this section shall be considered to be inherently Governmental functions. The drafting of strategic plans under this section shall be performed only by Federal employees.

"(f) For purposes of this section the term 'agency' means an Executive agency defined under section 105, but does not include the Central Intelligence Agency, the General Accounting Office, the Panama Canal Commission, the United States Postal Service, and the Postal Rate Commission.".

SEC. 4. ANNUAL PERFORMANCE PLANS AND REPORTS.

(a) BUDGET CONTENTS AND SUBMISSION TO CONGRESS.—Section 1105(a) of title 31, United States Code, is amended by adding at the end thereof the following new paragraph:

"(29) beginning with fiscal year 1998, a Federal Government performance plan for the overall budget as provided for under section 1115.".

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(b) PERFORMANCE PLANS AND REPORTS.—Chapter 11 of title 31, United States Code, is amended by adding after section 1114 the following new sections:

"§ 1115. Performance plans

"(a) In carrying out the provisions of section 1105(a)(29), the Director of the Office of Management and Budget shall require each agency to prepare an annual performance plan covering each program activity set forth in the budget of such agency. Such plan shall—

"(1) establish performance goals to define the level of performance to be achieved by a program activity;

"(2) express such goals in an objective, quantifiable, and measurable form unless authorized to be in an alternative form under subsection (b);

"(3) briefly describe the operational processes, skills and technology, and the human, capital, information, or other resources required to meet the performance goals;

"(4) establish performance indicators to be used in measuring or assessing the relevant outputs, service levels, and outcomes of each program activity;

"(5) provide a basis for comparing actual program results with the established performance goals; and

"(6) describe the means to be used to verify and validate measured values.

"(b) If an agency, in consultation with the Director of the Office of Management and Budget, determines that it is not feasible to express the performance goals for a particular program activity in an objective, quantifiable, and measurable form, the Director of the Office of Management and Budget may authorize an alternative form. Such alternative form shall—

"(1) include separate descriptive statements of—

"(A)(i) a minimally effective program, and

"(ii) a successful program, or

"(B) such alternative as authorized by the Director of the Office of Management and Budget,

with sufficient precision and in such terms that would allow for an accurate, independent determination of whether the program activity's performance meets the criteria of the description; or

"(2) state why it is infeasible or impractical to express a performance goal in any form for the program activity.

"(c) For the purpose of complying with this section, an agency may aggregate, disaggregate, or consolidate program activities, except that any aggregation or consolidation may not omit or minimize the significance of any program activity constituting a major function or operation for the agency.

"(d) An agency may submit with its annual performance plan an appendix covering any portion of the plan that—

"(1) is specifically authorized under criteria established by an Executive order to be kept secret in the interest of national defense or foreign policy; and

"(2) is properly classified pursuant to such Executive order.

"(e) The functions and activities of this section shall be considered to be inherently Governmental functions. The drafting of performance plans under this section shall be performed only by Federal employees.

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"(f) For purposes of this section and sections 1116 through 1119, and sections 9703 and 9704 the term—

"(1) 'agency' has the same meaning as such term is defined under section 306(f) of title 5;

"(2) 'outcome measure' means an assessment of the results of a program activity compared to its intended purpose;

"(3) 'output measure' means the tabulation, calculation, or recording of activity or effort and can be expressed in a quantitative or qualitative manner;

"(4) 'performance goal' means a target level of performance expressed as a tangible, measurable objective, against which actual achievement can be compared, including a goal expressed as a quantitative standard, value, or rate;

"(5) 'performance indicator' means a particular value or characteristic used to measure output or outcome;

"(6) 'program activity' means a specific activity or project as listed in the program and financing schedules of the annual budget of the United States Government; and

"(7) 'program evaluation' means an assessment, through objective measurement and systematic analysis, of the manner and extent to which Federal programs achieve intended objectives.

"§ 1116. Program performance reports

"(a) No later than March 31, 2000, and no later than March 31 of each year thereafter, the head of each agency shall prepare and submit to the President and the Congress, a report on program performance for the previous fiscal year.

"(b)(1) Each program performance report shall set forth the performance indicators established in the agency performance plan under section 1115, along with the actual program performance achieved compared with the performance goals expressed in the plan for that fiscal year.

"(2) If performance goals are specified in an alternative form under section 1115(b), the results of such program shall be described in relation to such specifications, including whether the performance failed to meet the criteria of a minimally effective or successful program.

"(c) The report for fiscal year 2000 shall include actual results for the preceding fiscal year, the report for fiscal year 2001 shall include actual results for the two preceding fiscal years, and the report for fiscal year 2002 and all subsequent reports shall include actual results for the three preceding fiscal years.

"(d) Each report shall—

"(1) review the success of achieving the performance goals of the fiscal year;

"(2) evaluate the performance plan for the current fiscal year relative to the performance achieved toward the performance goals in the fiscal year covered by the report;

"(3) explain and describe, where a performance goal has not been met (including when a program activity's performance is determined not to have met the criteria of a successful program activity under section 1115(b)(1)(A)(ii) or a corresponding level of achievement if another alternative form is used)—

"(A) why the goal was not met;

"(B) those plans and schedules for achieving the established performance goal; and

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"(C) if the performance goal is impractical or infeasible, why that is the case and what action is recommended;

"(4) describe the use and assess the effectiveness in achieving performance goals of any waiver under section 9703 of this title; and

"(5) include the summary findings of those program evaluations completed during the fiscal year covered by the report.

"(e) An agency head may include all program performance information required annually under this section in an annual financial statement required under section 3515 if any such statement is submitted to the Congress no later than March 31 of the applicable fiscal year.

"(f) The functions and activities of this section shall be considered to be inherently Governmental functions. The drafting of program performance reports under this section shall be performed only by Federal employees.

"§ 1117. Exemption

"The Director of the Office of Management and Budget may exempt from the requirements of sections 1115 and 1116 of this title and section 306 of title 5, any agency with annual outlays of $20,000,000 or less.".

SEC. 5. MANAGERIAL ACCOUNTABILITY AND FLEXIBILITY.

(a) MANAGERIAL ACCOUNTABILITY AND FLEXIBILITY.—Chapter 97 of title 31, United States Code, is amended by adding after section 9702, the following new section:

"§ 9703. Managerial accountability and flexibility

"(a) Beginning with fiscal year 1999, the performance plans required under section 1115 may include proposals to waive administrative procedural requirements and controls, including specification of personnel staffing levels, limitations on compensation or remuneration, and prohibitions or restrictions on funding transfers among budget object classification 20 and subclassifications 11, 12, 31, and 32 of each annual budget submitted under section 1105, in return for specific individual or organization accountability to achieve a performance goal. In preparing and submitting the performance plan under section 1105(a)(29), the Director of the Office of Management and Budget shall review and may approve any proposed waivers. A waiver shall take effect at the beginning of the fiscal year for which the waiver is approved.

"(b) Any such proposal under subsection (a) shall describe the anticipated effects on performance resulting from greater managerial or organizational flexibility, discretion, and authority, and shall quantify the expected improvements in performance resulting from any waiver. The expected improvements shall be compared to current actual performance, and to the projected level of performance that would be achieved independent of any waiver.

"(c) Any proposal waiving limitations on compensation or remuneration shall precisely express the monetary change in compensation or remuneration amounts, such as bonuses or awards, that shall result from meeting, exceeding, or failing to meet performance goals.

"(d) Any proposed waiver of procedural requirements or controls imposed by an agency (other than the proposing agency or the Office of Management and Budget) may not be included in a

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performance plan unless it is endorsed by the agency that established the requirement, and the endorsement included in the proposing agency's performance plan.

"(e) A waiver shall be in effect for one or two years as specified by the Director of the Office of Management and Budget in approving the waiver. A waiver may be renewed for a subsequent year. After a waiver has been in effect for three consecutive years, the performance plan prepared under section 1115 may propose that a waiver, other than a waiver of limitations on compensation or remuneration, be made permanent.

"(f) For purposes of this section, the definitions under section 1115(f) shall apply.".

SEC. 8. PILOT PROJECTS.

(a) PERFORMANCE PLANS AND REPORTS.—Chapter 11 of title 31, United States Code, is amended by inserting after section 1117 (as added by section 4 of this Act) the following new section:

"§ 1118. Pilot projects for performance goals

"(a) The Director of the Office of Management and Budget, after consultation with the head of each agency, shall designate not less than ten agencies as pilot projects in performance measurement for fiscal years 1994, 1995, and 1996. The selected agencies shall reflect a representative range of Government functions and capabilities in measuring and reporting program performance.

"(b) Pilot projects in the designated agencies shall undertake the preparation of performance plans under section 1115, and program performance reports under section 1116, other than section 1116(c), for one or more of the major functions and operations of the agency. A strategic plan shall be used when preparing agency performance plans during one or more years of the pilot period.

"(c) No later than May 1, 1997, the Director of the Office of Management and Budget shall submit a report to the President and to the Congress which shall—

"(1) assess the benefits, costs, and usefulness of the plans and reports prepared by the pilot agencies in meeting the purposes of the Government Performance and Results Act of 1993;

"(2) identify any significant difficulties experienced by the pilot agencies in preparing plans and reports; and

"(3) set forth any recommended changes in the requirements of the provisions of Government Performance and Results Act of 1993, section 306 of title 5, sections 1105, 1115, 1116, 1117, 1119 and 9703 of this title, and this section.".

(b) MANAGERIAL ACCOUNTABILITY AND FLEXIBILITY.—Chapter 97 of title 31, United States Code, is amended by inserting after section 9703 (as added by section 5 of this Act) the following new section:

"§ 9704. Pilot projects for managerial accountability and flexibility

"(a) The Director of the Office of Management and Budget shall designate not less than five agencies as pilot projects in managerial accountability and flexibility for fiscal years 1995 and 1996. Such agencies shall be selected from those designated as pilot projects under section 1118 and shall reflect a representative

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range of Government functions and capabilities in measuring and reporting program performance.

"(b) Pilot projects in the designated agencies shall include proposed waivers in accordance with section 9703 for one or more of the major functions and operations of the agency.

"(c) The Director of the Office of Management and Budget shall include in the report to the President and to the Congress required under section 1118(c)—

"(1) an assessment of the benefits, costs, and usefulness of increasing managerial and organizational flexibility, discretion, and authority in exchange for improved performance through a waiver; and

"(2) an identification of any significant difficulties experienced by the pilot agencies in preparing proposed waivers.

"(d) For purposes of this section the definitions under section 1115(f) shall apply.".

(c) PERFORMANCE BUDGETING.—Chapter 11 of title 31, United States Code, is amended by inserting after section 1118 (as added by section 6 of this Act) the following new section:

"§ 1119. Pilot projects for performance budgeting

"(a) The Director of the Office of Management and Budget, after consultation with the head of each agency shall designate not less than five agencies as pilot projects in performance budgeting for fiscal years 1998 and 1999. At least three of the agencies shall be selected from those designated as pilot projects under section 1115, and shall also reflect a representative range of Government functions and capabilities in measuring and reporting program performance.

"(b) Pilot projects in the designated agencies shall cover the preparation of performance budgets. Such budgets shall present, for one or more of the major functions and operations of the agency, the varying levels of performance, including outcome-related performance, that would result from different budgeted amounts.

"(c) The Director of the Office of Management and Budget shall include, as an alternative budget presentation in the budget submitted under section 1105 for fiscal year 1999, the performance budgets of the designated agencies for this fiscal year.

"(d) No later than March 31, 2001, the Director of the Office of Management and Budget shall transmit a report to the President and to the Congress on the performance budgeting pilot projects which shall—

"(1) assess the feasibility and advisability of including a performance budget as part of the annual budget submitted under section 1105;

"(2) describe any difficulties encountered by the pilot agencies in preparing a performance budget;

"(3) recommend whether legislation requiring performance budgets should be proposed and the general provisions of any legislation; and

"(4) set forth any recommended changes in the other requirements of the Government Performance and Results Act of 1993, section 306 of title 5, sections 1105, 1115, 1116, 1117, and 9703 of this title, and this section.

"(e) After receipt of the report required under subsection (d), the Congress may specify that a performance budget be submitted as part of the annual budget submitted under section 1105.".

FIGURE A-1: The Government Performance Results Act (GPRA) of 1993

B

AQIM Handbook

Appendix B

Key Contacts

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- Other **page B-4**

AQIM National Team

The AQIM National Team is responsible for overseeing the implementation and maintenance of results monitoring activities as the focus of agricultural quarantine inspection (AQI). The Team is also responsible for reviewing and making recommendations on design changes.

A list of the current members of the AQIM National Team who represent regions, employee unions, work locations, and headquarters are included in Table B-1:

AQI Monitoring National Team Members
Ron Blaskovich 200 Chestnut Street Custom House, Room 1007 Philadelphia, PA 19106 Tel: 215-597-4515
Tom Chanelli (NAPPQM Rep) 920 Main Campus Drive, Suite 200 Raleigh, NC 27606-5210 Tel: 919-716-5576
Bill Crowe 903 San Jacinto Blvd., Suite 270 Austin, TX 78701 Tel: 512-916-5241
Christina Daunt JFK International Airport Bldg. #77 Room M-46 Jamaica, NY 11430 Tel: 718-632-6720

TABLE B-1 AQI Monitoring National Team Members

AQI Monitoring National Team Members
Mark Grzeszkowiak O'Hare International Airport Terminal 5, Lower Level, Side A, LL305 Chicago, IL 60666 Tel: 773-894-2920
Susann Irwin (Northern Border Contact) 100 Peace Portal Drive Blaine, WA 98230 Tel: 360-332-8891
Ron Olivarez (NAAE Rep) Veterans International Bridge 3300 South Expressway 77/83, Room A151 Brownsville, TX 78521 Tel: 956-983-5800
Judy Pasek 2150 Centre Avenue, Bldg. B Fort Collins, CO 80526-8117 Tel: 970-494-7580
Pat McPherren 3950 N. Lewison Street, Suite 330 Aurora, CO 80011-1555 Tel: 303-371-3355
George Robinson 903 South American Way Miami, FL 33132 Tel: 305-536-4133
Nellie Robinson 423 Canal Street U.S. Custom House, Room 148 New Orleans, LA 70130 Tel: 504-589-6731
Calvin Shuler 920 Campus Drive, Suite 200 Raleigh, NC 27606-5202 Tel: 919-716-5591
Steve Switzer 4600 Goer Drive, Suite 204 North Charlestown, SC 29406 Tel: 843-746-2950
Tom Kalaris (CHPST Rep) 205 South 7th Street Bozeman, MT 59715 Tel: 406-586-3761
Michelle Walters (CPHST Rep) 3645 East Wier Phoenix, AZ 85040 Tel: 602-437-1578 Ext. 236

TABLE B-1 AQI Monitoring National Team Members

AQI Monitoring National Team Members
Glen Cordova 3600 East Pasino Street, Room 154A El Paso, TX 79905 Tel: 915-872-4720
Malcom Price Dallas-Fort Worth Airport Terminal A,Gate 33 FIS Area Dallas-Fort Worth, TX 75261 Tel: 972-574-2117
Leilani Sanchez 11840 South La Cienega Blvd. Hawthorne, CA 90250 Tel: 310-215-2432
Ronald Komsa (QPAS) 4700 River Road, #60 Riverdale, MD 20737 Tel: 301-734-8514
Michael Caporaletti (QPAS) 4700 River Road, #120 Riverdale, MD 20737 Tel: 301-734-5781

TABLE B-1 AQI Monitoring National Team Members

Work Locations

Work locations where AQIM is being implemented are responsible for the following duties related to AQIM activities:

1. Collect all results monitoring data.
2. Enter all data into designated automated systems (Epi Info).
3. Analyze the data collected.
4. Develop performance target, using selected indicators...
5. Ensure quality data and analysis.
6. Prepare budget documents and reports request by other USDA offices.
7. Set program and meeting end-results.
8. Coordinate with NAAE and NAPPQM on program responsibilities.

Key Contacts

Following is space for you to record the key contacts at your work location:

AQIM Coordinator

Roles and responsibilities for AQIM coordinators are listed in this Handbook under Start-Up, Roles and Responsibilities, beginning on page 2-5.

_____
_____
_____

Assistant AQIM Coordinator

Roles and responsibilities for assistant AQIM coordinators are listed in this Handbook under Start-Up, Roles and Responsibilities, beginning on page 2-5.

_____
_____
_____

Risk Management Team

General guidelines for the composition and structure of Risk Management Teams is in this Handbook under Introduction, Fundamentals of Risk Analysis, beginning on page 1-29.

_____
_____
_____

Other

_____
_____
_____

C

AQIM Handbook

Appendix C

Trade Articles

Contents

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- Introduction **page C-3**
- APHIS and Risk Assessment **page C-4**
- APHIS Risk Analysis Principles **page C-5**
- Conclusion **page C-10**

GATT Agreement on the Application of Sanitary and Phytosanitary Measures **page C-11**
- Assessment of Risk and Determination of the Appropriate Level of Sanitary or Phytosanitary Protection. **page C-11**

Use this appendix to obtain information and criteria on risk management. Contained here are the:

- APHIS Trade Risk Analysis Position (page C-3), and
- GATT Agreement on the Application of Sanitary and Phytosanitary Measure (page C-11)

C

AQIM Handbook

Appendix C

APHIS Trade Risk Analysis Position[1]

Introduction

The Animal and Plant Health Inspection Serviced (APHIS) anticipates and responds to U.S. issues that involve animal and plant health, conflicts with wildlife, environmental stewardship, and animal well-being. With our customers and stakeholders, we promote the health of animal and plant resources to facilitate their movement in the global marketplace and to ensure abundant agricultural products and services for American consumers.

An important component of the APHIS mission is to facilitate the safe movement of import and export commodities. APHIS uses risk analysis to make trade decisions in a risk assessment (the scientific evaluation of the biological risks and potential consequences), risk management (a process of determining appropriate mitigation measures to reduce risk), and risk communication (the sharing of risk information). The results of risk analyses provide well supported recommendations to APHIS decision makers to achieve the objective of facilitating safe trade.

The Agreement on Sanitary and Phytosanitary Measure of the General Agreement on Tariffs and Trade requires that countries base their animal, plant, and human health requirements related to trade on relevant international standards. If appropriate standards do not exist, or a country chooses not to use the existing international standards, then the Agreement requires that the regulatory authorities of the importing country base their import requirements on a scientific risk analysis.

Like many in the international trade community, APHIS holds the view that mutually accepted standards will help ensure safe trade that is consistent, fair, enhances economic prosperity and reduces trade tensions. APHIS is committed to an active role in the International Office of Epizootics, the International Plant Protection Convention, and other international standard setting bodies to further the development of risk analysis standards and guidelines.

1 APHIS Trade Committee, Trade Risk Analysis Core Team. 1996

APHIS recognizes that risk analysis is a dynamic process and therefore must retain sufficient flexibility to incorporate scientific advances. APHIS is committed to revising risk analysis procedures, as appropriate, to continually take advantage of the best available science.

The Agreement on Sanitary and Phytosanitary (SPS) Measures of the General Agreement on Tariffs and Trade (GATT) requires members to base their animal, plant, and human health requirements related to trade on an objective analysis of risk. The SPS Agreement also requires that members make their risk analysis procedures transparent and available to other interested members.

To address the issue of transparency under the SPS Agreement, this document provides an overview of the risk analysis process used by the Animal and Plant Health Inspection Service (APHIS) of the United States Department of Agriculture.

APHIS has a long history of practical experience and knowledge related to risk analysis. Considerable time and resources have been invested in refining risk analysis models and techniques as well as developing new ones. APHIS also actively supports and participates in international discussions to further the development of risk analysis standards and procedures related to trade.

APHIS and Risk Assessment

Risk analysis, as defined by APHIS, is equivalent to risk assessment as defined in the SPS Agreement. The APHIS risk analysis definition and subsequent explanations provide additional detail and interpretation of the SPS risk assessment definition.

The SPS Agreement defines risk assessment as:

> “The evaluation of the likelihood of entry, establishment or spread of a pest or disease within the territory of an importing Member according the sanitary or phytosanitary measure which might be applied, and of the associated potential for adverse effects on human or animal health arising from the presence of additives, contaminants, toxins, or disease-causing organisms in food, feedstuffs and beverages."

APHIS defines risk analysis as a process comprised of risk assessment (the scientific evaluation of the biological risks and potential consequences), risk management (a process of determining appropriate mitigation measures to reduce risk), and risk

communication (the sharing of risk information). The results of APHIS risk analyses provide well supported recommendations to APHIS decision makers to achieve the objective of facilitating safe trade.

APHIS believes its definition is fully consistent with the SPS Agreement. The documentation of this process provides risk analysts with guidance in the preparation of recommendations for decision makers and makes the process more transparent to our trading partners.

APHIS Risk Analysis Principles

APHIS recognizes that there are various approaches to risk analysis. The selection of the approach depends on the particular circumstances associated with the commodity and the current pest or disease information.

Regardless of the approach, APHIS believes that a credible risk analysis process must embody the following principles:

- GATT Consistent
- Science-based
- Well-documented
- Flexible
- Open to Review

GATT Consistent

APHIS risk analysts understand and comply with GATT SPS terms and principles and produce Agency recommendations that can withstand ATT/World Trade Organization (WTO) challenges. Compliance with the SPS Agreement also means that APHIS is committed to using relevant standards of the International Office of Epizootics, the International Plant Protection Convention, or other relevant international or regional organizations recognized by the WTO. Alternatives to the standards may be used when supported by objective risk analyses.

Science-based

Data used in APHIS risk analyses are collected and evaluated using the best available scientific methods. Also, APHIS analysts recognize the importance of describing uncertainty and identifying data gaps. APHIS analysts actively solicit input and review from the scientific community to the extent necessary to confirm the scientific integrity of risk analysis.

Well-documented

Data used in the risk analysis are organized, evaluated, and referenced in a systematic manner and in sufficient detail to allow interested parties to understand the process.

Flexible

Because of the pest and disease situations evaluated using risk analysis, methods that apply to one situation may be irrelevant or misleading in evaluating another. While acknowledging that various methods can be used, APHIS analysts are able to articulate the rationale for the choice of a method. Flexibility also means that the risk analysis process is dynamic and able to accommodate new information and technology.

Open to Review

APHIS acknowledges its responsibility to document the risk analysis process and allow interested parties to provide relevant scientific information and comments on the process and results.

Components of the APHIS Process for Risk Analysis

When initiating a risk analysis because action is proposed, such as a commodity importation or other relevant event, APHIS analysis will identify and record background information and situation-specific details, such as the source of the request, the origin, proposed destination, and intended use for the commodity. The analysis then proceeds following the general process outlined below.

Risk Assessment

APHIS defines risk assessment as the evaluation of the likelihood and the biological and economic consequences of entry, establishment or spread of a pest or disease agent within the territory of an importing country. Risk assessments also consider the degree of uncertainty associated with a proposed action.

The degree of uncertainty depends upon the availability and quality of pest/disease data. An agent for which little is known cannot be as precisely assessed as one for which much more relevant information is available. A high degree of biological uncertainty, because of limited scientific information, may justify conservative estimate. However, APHIS also recognized the importance of updating risk assessments as additional scientific information becomes available.

A risk assessment evaluates the unmitigated pest or disease risk in order to determine if there is sufficient risk to warrant mitigation. The focus is on establishing the existence of biological and economic consequences and the likelihood of their occurrence. In many cases, there is broad agreement concerning this risk, negating the need for formal risk assessment.

Formal risk assessments are conducted when the unmitigated risk is not clearly understood to be wither acceptable or unacceptable. These assessments are also important when assumptions concerning the level of unmitigated risk are challenged or when new information concerning the unmitigated risk has been provided. The assessment of risk at this level typically involves the evaluation of origin, commodity, and destination factors.

Origin Risk Factors: The evaluation of the exports are to estimate the likelihood that agents of sanitary or phytosanitary concern are associated with a commodity importation, including:

- Prevalence of a pest or disease agent in the exporting area
- Geographic and environmental characteristics
- Sanitary and Phytosanitary status of the adjoining or neighboring areas
- Trading partners and practices
- Regulatory infrastructure of the exporting country
- Surveillance system(s)
- Previous risk assessments (including foreign country) on commodity and related commodities from the same origin.

Commodity Risk Factors: APHIS analysts consider information about the commodity to estimate the likelihood of introduction of a particular pest or disease agent. Commodity factor include:

- Type of class of commodity
- Nature of raw material used to produce commodity
- Intended use of the product
- Pest or disease agent survival in transit
- Interception data

Destination Risk Factor: An evaluation of the likelihood and consequences of a particular pest or disease agent surviving, multiplying, establishing, and spreading in the territory of the importing country. Destination factors include:

- Distribution of the commodity
- Availability of susceptible host and/or competent vectors
- Geographical and environmental characteristics

Risk Management

APHIS defines risk management as the process of analyzing and recommending options for mitigating pest and disease agents of concern identified through risk assessment.

In determining appropriate levels of protections, the SPS Agreement requires that countries base their animal, plant, and human health requirements on relevant international standards. If an appropriate standard does not exist or a country chooses not to use an existing standard, then the Agreement requires regulatory authorities of the importing country to base their health requirements on a scientific analysis of the risks to animal, plant, or human health and to share information regarding the analyses with interested parties.

The analysis risk mitigation options may vary due to the differing nature of animal, plant, and human health issues.

Consistent with SPS Agreement, APHIS maintains transparent processes for objectively evaluating new risk mitigation alternatives in situations where an international standard may not exist or may not be appropriate. In evaluating these alternatives, APHIS will consider biological as well as economic factors including, but not limited to, potential damage in terms of loss of production or sales in the event of entry, establishment or spread of a pest or disease; the costs of control or eradication in the territory of the importing Member; and the relative cost effectiveness of alternative approaches to risk eradication.

APHIS recognizes the responsibility of the exporting country to address the importing country's sanitary and Phytosanitary issues of concern. APHIS approves risk management options based on a comprehensive evaluation of the efficacy and feasibility of the option in reducing the likelihood and magnitude of the biological and economic consequences identified in the risk assessment.

Efficacy: The degree to which a mitigation option reduces the likelihood magnitude of adverse biological and economic consequences is a measure of its efficacy. Evaluating mitigation options for efficacy is an iterative process that involves revisiting risk assessment to determine the degree to which risk is reduced by the implementation of the option. In cases where an acceptable efficacious option exists, the efficacy of new options needs to compare favorable with existing options.

Feasibility: The evaluation of mitigation options for feasibility normally focuses on technical, operational, and economical factors affecting the implementation of mitigation options. It is in this level of evaluation that factors relevant to industry needs and practices are considered, as well as the potential for applying new technologies.

This level of evaluation is a responsibility shared primarily by the exporting country and the commercial sector (industry). APHIS assumes that feasibility has been considered when a risk management proposal is offered by the exporting country. The role of APHIS in this

level of evaluation is to assess whether the exporting country is able to meet its obligations and to ensure that undesirable impacts are not placed upon the United States (e.g. at National level).

APHIS recognizes that information to objectively determine tolerable risk levels may not always be readily available. In accordance with the SPS Agreement, APHIS adheres to the premise that it may be necessary to institute provisional sanitary and phytosanitary measures until scientific evidence can be obtained to justify a different position. APHIS is committed to working with relevant parties to obtain and evaluate this information in a timely manner.

APHIS is committed to ensuring that recommended measure are not more trade restrictive than required to achieve their appropriate level of sanitary and phytosanitary protection.

Risk Communication

APHIS defines risk communication as the process of exchanging information concerning risk with interested parties (e.g. domestic and foreign industry groups, foreign governments, consumer groups, and other interested individuals). This includes the active exchange of information throughout the risk analysis process with involved parties and the communication of the conclusions of risk analyses to all interested and impacted parties. This process includes routine interaction with the scientific community to ensure the validity of scientific data, methods, and assumptions.

When risk analysis is used as a basis for promulgating regulations, APHIS meets risk communication goals and transparency obligations by publishing proposed and final rules in the Federal Register. APHIS demonstrates it commitment to transparency by notifying the WTO of any measure which may affect another country's trade.

New proposed regulatory changes published in the Federal Register specify the risks and the requirements which will be imposed to mitigate the risks. After public comments are received and reviewed a decision is made regarding a final result. If comments and input are compelling enough for APHIS to change its position, the proposed rules will be withdrawn and alternative courses of action may be considered. Both the proposed and final rules explain the factors supporting the Agency's choice of mitigation measures, including the Agency's geological concerns and scientific rationale to support the decision.

Conclusion

APHIS considers the product of risk analysis to be risk-based recommendations. Decision makers take those recommendations into account as well as other factors they may consider relevant.

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Appendix C

GATT Agreement on the Application of Sanitary and Phytosanitary Measures[2]

Assessment of Risk and Determination of the Appropriate Level of Sanitary or Phytosanitary Protection.

1. Members shall ensure that their sanitary or phytosanitary measures are based on an assessment, as appropriate to the circumstances, of the risk to human, animal or plant life or health, taking into account risk assessment techniques developed by the relevant international organizations.
2. In the assessment of risks, Members shall take into account available scientific evidence; relevant processes and production methods; relevant inspection, sampling and testing methods; prevalence of specific diseases or pests; existence of pest or disease-free areas; relevant ecological and environmental conditions; and quarantine or other treatment.
3. In assessing the risk to animal or plant life or health and determining the measure to be applied for achieving the appropriate level of sanitary or phytosanitary protection from such risk, Member shall take into account relevant economic factors: the potential damage in terms of loss of productions or sales in the event of the entry; establishment or spread of a pest or disease; the costs of control or eradication in the territory of the importing Member; and the relative cost-effectiveness of alternative approaches to limiting risks.
4. Member should, when determining the appropriate level of sanitary or phytosanitary protection, take into account the objective minimizing negative trade effects.
5. With the objective achieving consistency in the application of the concept of appropriate level of sanitary or phytosanitary protection against risks to human life or health, or to animal and plant life or health, each Member shall avoid arbitrary or unjustifiable distinctions in the levels it considers to be appropriate in different situations, if such distinctions result in discrimination or a disguised restriction on international trade. Member shall cooperate in the Committee, in accordance with paragraphs 1, 2, and 3 of Article 12, to develop guidelines to further the practical implementation of this provision. In

2 GATT Agreement, Article 5

developing the guidelines, the Committee shall take into account all relevant factors, including the exceptional character of human health risks to which people voluntarily expose themselves.

6. [4]Without prejudice to paragraph 2 of Article 3, when establishing or maintaining sanitary or phytosanitary measures to achieve the appropriate level of sanitary or phytosanitary protection, Members shall ensure that such measures are not more trade-restrictive than required to achieve their appropriate level of sanitary or phytosanitary protection, taking into account technical and economic feasibility.

7. In cases where relevant scientific evidence is insufficient, a Member may provisionally adopt sanitary or phytosanitary measures on the basis of available pertinent information, including that from the relevant international organizations, as well as from sanitary or phytosanitary measures applied by other Members. In such circumstance, Member shall seed to obtain the additional information necessary for a more objective assessment of risk and review the sanitary or phytosanitary measure accordingly within a reasonable period of time.

8. When a Member has reason to believe that a specific sanitary or phytosanitary measure introduced or maintained by another Member is constraining, or has the potential to constrain its exports and the measure is not based on the relevant international standards, guidelines, or recommendations, or such standards, guidelines, or recommendations do not exist, an explanation of the reasons for such sanitary or phytosanitary measure may be requested and shall be provided by the Member maintaining the measure

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Appendix D

Samples Of Standard Operating Procedures (SOP'S)

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Introduction

Use the samples in this appendix as models when developing standard operating procedures (SOP) for a work location.

The models include a sample SOP for the following pathways:

- Air-Passenger Baggage(page D-2)
- Maritime—Cargo (page D-3)
- Northern Border—Vehicle (page D-7)

Sample SOP—Air Passenger Baggage

Purpose

To help PPQ become a results-oriented unit that uses information about AQI program performance and pathway risk to make decisions. AQIM will provide "hard" data for risk-based decision-making, and meet the requirements of the Government Performance and Results Act.

Background

The National Performance Review is requiring agencies to objectively measure how well they are achieving their legislative missions. The Government Performance and Results Act requires that agencies develop accurate performance measurements as part of their budget submissions. AQIM is a valuable tool in performing risk assessment and is therefore an integral part of our selectivity approach.

Guidelines

1. Random examinations will be 100 percent hand inspection of all hand and checked baggage by office. Inspections will take place at USDA tables. All seizures shall be bagged and labeled as an AQIM seizure. The seizures shall be thoroughly inspected for pests.
2. All member of a household on the same declaration (6059-B) will be examined and counted as one sample.
3. Every declaration that approaches the work location through the FIS will be considered, excluding diplomats with A-1, A-2 status, and 'domestic' declarations.
4. Sample size: 7,300 declarations per year—3,650 declarations per year at both 'E' and 'B' (10 per day at both 'E' and 'B').
5. AQIM should not interfere with and does not replace normal passenger processing operations. Officers will continue to perform secondary examinations during this sampling period.

Procedures

Random times will be selected each day using SAMPLAN. Random times will be generated using previous weeks' passenger projections. The site monitoring leaders will prepare the daily schedule and notify all working on the baggage floor of the designated times. Inspections shall be rotated among all personnel. At the designated time, the officer or technician at concourse 'E' responsible for selecting the passenger for inspection shall select the fifth passenger back from the checkpoint. Alternate between all open red and green lines when counting to select the fifth passenger. If the passenger selected has already been designated to go to PPQ Secondary, the passenger shall

also be included in the sample. At concourse 'B' at the designated time, the officer or technician will select the first passenger that enters the baggage carousel area from immigration. The selected passenger's declaration will be marked with the random time, the work 'random' and 'USDA' with a green marker. If a random inspection is missed, a passenger may be selected using the above procedures any time prior to the next random inspection. Make a note on the data form each time an inspection is missed. Include a brief note as to why the inspection was missed.

Data Collection and Entry

1. Complete the PPQ Data Sheet for each examination.
2. Data forms will kept in a folder at the desk in PPQ secondary. Forms shall be taken to the operations office daily. Personnel assigned to the work unit shall share the task of data entry. The site leaders shall be responsible for ensuring data entry is completed within a reasonable time after inspection.

Quality Control

The Risk Management Team will ensure forms are collected and data entered. Bi-weekly reports will be forwarded to the work sites by the Team on the progress of the monitoring program.

Sample SOP—Maritime Cargo

Choosing And Inspecting The Sample

Exclusions:

- Commodities which are pre-cleared at foreign sites
- Frozen commodities, and those undergoing some type of mandatory treatment (for example: fumigation, irradiation, hot water, steam sterilization)
- Oil, salt, iron ore, coal, etc. which pose no risk
- Non-Reefer-AQI Interest that can be cleared with just a paperwork review

Exceptions: Mandatory cold treatments are **included.**

Sampling Unit: The random sampling unit is one container or container unit. A container unit is equivalent to 20 pallets or 20,000 kilograms for the purposes of AQI Monitoring when converting bulk shipments for sampling.

Reefer-AQI Interest (Refrigerated cargo normally held by PPQ)

There will be a total of 87 sample containers or container units chosen per year. This will break out to around eight per month, or two per section per month. The two for each section will be chosen on designated days of the month, about every 2 weeks. The procedure for choosing the samples will be as follows:

- Use the 'calendar chart' supplied to determine the day the sample will be chosen.
- All of the active '212's' (Hold Sheets) in the section will be used for sampling.
- Put all the 212's in a pile and count the total number of pages (like it is one big hold sheet).
- Take this number and go to your 'Random Digit Page' (this number will represent the maximum number you can choose from 1-18? Or 1-32?).
- Go down the random digit page and select the first number that is within this range.
- Use this number as the 'page number' to turn to in your pile of 212's to begin sampling.
- Put all the other 212's behind this 'chosen' 212 and start reviewing the containers.
- Look for the first refrigerated container or container units you come to as you go down the sheet.
- Turn to the next page if necessary (or to the next 212 behind the one you are reviewing).
- When you have located the 'reefer' container, verify that it is not under an exclusion.
- If no exclusion, indicate "Random Sample Reefer AQI Interest" on the line next to it.
- Notify section personnel of the 'hold' and fill in information on 'Random Sample Chart.'

These containers will be stripped 100 percent, at one of the CES sites of an off-port warehouse approved by management. The number of cartons required for inspection will be determined using the hypergeometric table and random selection of those cartons will be emphasized.

Non-Reefer AQI Interest: (Non-Refrigerated Cargo normally held by PPQ)

There will be a total of 87 sample containers or container units chosen per year. This will break out to around eight per month, or two per section per month. The two for each section will be chosen on designated days of the month, about every 2 weeks. The procedure for choosing the samples will be as follows:

- Follow the same procedures as stated above for 'Reefer' containers.
- If a container or container unit can be cleared by reviewing documents, then **choose** another container or container units.

These container units will be inspected based on the commodity, if it is regulated or not. If it is regulated, follow the 100 percent stripping procedures above. If it is unregulated, the normal inspetional procedures will apply, but a more intense exam is expected. Strip 100 percent if it is a mixed load.

Hypergeometric Table for Risk-Based Sampling

A table used to determine the number of boxes an officer must inspect, to reach a certain level of confidence (expressed in a percentile), that the officer will find a pest, at a certain percentage of infestation rate. AQIM has chosen to use risk-based sampling protocols for detecting 10 percent pest infestation rates. This means, to be 95 percent sure that the officer inspecting the sample container will find the pest when the shipment is infested at a 10 percent infestation level, the officer must select at random, a specific number of boxes in the shipment. The number of boxes is determined by using the hypergeometric table.

Inspection Protocol

The inspection protocol will depend on the type of strata a container falls into. Each container is required to have a physical inspection of the commodity. Inspections shall be conducted during normal business hours at the port. Costs for overtime clearance will be paid by the shipper/broker/consignee.

The ***Reefer-AQI Interest*** will be a 100 percent strip, with the number of boxes required for inspection to be determined using the hypergeometric table (remembering that the randomness of each box chosen is very important). The container may be move to a CES site or off-port warehouse location approved by management.

The ***Non-Reefer AQI Interest*** container will be inspected based on the commodity. If it is a regulated commodity* a 100 percent strip will be done using the hypergeometric table. If it is unregulated, the normal inspection procedures may be used, but requires a more intense examination. If it is a mixed load, you will have to follow the most restrictive mode of inspection. ***An Important Note:** A non-reefer AQI interest container that can be cleared by reviewing documents, should be disregarded for monitoring purpose and another container chosen.

Documentation

During the trial period of this 'new' random sampling procedure, members of the Risk Management Team will be performing the duties involved in choosing and inspecting most of the random samples. This will be necessary so that team members can attempt to refine the process, so that it may be incorporated smoothly into a work site or section's daily function, allowing section personnel to easily and routinely perform these duties on their own in the near future.

Documentation will include: Choosing and holding random samples on the 212 or Hold Sheet; logging details about the sample chosen on a 'Random Sample chart' (including vessel, container number, date, B/L for reference, and possibly a random sample number, date held, date inspect); CES or warehouse transport form (if a container is required to be moved and stripped in another location); and finally the 'Inspection Result' forms for each strata sampled.

Charts And Forms Required

There will be certain charts and forms required by the officer performing the 'random sampling' procedure. Some of them have been already provided and some will be created to specifically answer a particular need. The following is what will be necessary to bring with you:

To choose the sample:	Calendar Chart
	Random Digit Page
	Random Sampling Chart
	CES or Warehouse Transport Form
To inspect the sample:	Random Sampling Chart
	CES or Warehouse Transport Form
	Inspection Result Form (for the appropriate strata)

Samples SOP – Northern Border—Vehicles

Ensuring Random Sampling

In order to ensure that the vehicles selected are truly random. The officer will sample a vehicle that arrives at the primary customs booth in 15 minute time will be inspected. If no vehicle is at the booth when the sampling time occurs, the very next one to arrive will be selected. The 15 minute cycle then begins after the selection of the previous vehicle is completed.

If more than one primary lane is open, the inspection will alternate between each lane on a successive basis.

Degree of Inspection

All randomly selected vehicles will undergo the 7 point inspection process.

All agriculture material intercepted during the border survey will be inspected. If the material is fruit, it will be brought back to the office and sliced up. The peel will also be inspected for scale insects or plant diseases.

Any plants seized during this time will also inspected. Leaves will be looked at under a microscope, as will stems, flowers, etc.

Any bulk materials seized (i.e., bags of rice, seeds, etc) will be brought back to the lab and also put under a microscope. The entire contents of a bag will be emptied into another container and sifted through. If there are numerous bags, an appropriate number will be sampled.

Local Area

The local area will be considered 50 miles. All material seized from local travelers will be included in the survey.

TABLE D-1: : Schedule of Random Sample Times Month

Month	Day	Week	Shift	Actual Date	Hours
January	Tuesday	3	2	21st	1400-2230
February	Sunday	2	1	9th	0700-1530
March	Wednesday	2	1	12th	0800-1630
April	Friday	3	1	18th	0600-1430
May	Thursday	1	3	1st	2300-0730
June	Wednesday	4	2	25th	0700-1530
July	Sunday	3	1	20th	0800-1630
August	Monday	4	2	25th	1500-2330
September	Saturday	2	1	13th	0600-1430
October	Monday	1	1	6th	0700-1530
November	Tuesday	4	1	25th	0800-1630
December	Friday	1	1	6th	0600-1430

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Appendix E

EPI Info Installation

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Installing Epi Info **page E-2**
After Installing Epi Info **page E-3**

Introduction

When installing Epi Info, be aware of the following:

- The computer's operating system before installing Epi Info
- That a Y2K update file needs to be installed after installing Epi Info

Before Installing Epi Info

Use the following steps before installing Epi Info on a new computer.

1.

If the new computer has as its operating system:	Then:
Windows NT	Follow **Step 2.-9.** below
Windows 95 or 98	Continue on to Installing Epi Info

2. Go to Notepad using the following steps:

A. Begin in the lower left corner of the screen.

B. Click Start>Programs>Accessories>Notepad

3. Navigate to the file name: config.nt using the following steps:

A. Click on File>Open.

B. Go to the folder name: **c:\winnt 40\system32**

C. Open file **config.nt**

4. Go towards the end of the text to the line that says: **files=[number]**, where [number] is a number not the word number.

5. Put the cursor on the number and change it to: **45**

6. Select File>Save.
7. Exit Notepad.
8. Restart the computer before installing Epi Info.
9. Go to the next steps for installing Epi Info.

Installing Epi Info

Use the following steps to install Epi Info.

NOTICE

If your 3.5 disk drive is B, then substitute B where A appears in the following steps for installing Epi Info.

1. Turn on **Caps Lock**.
2. Make sure you are at a C:\ prompt.
3. Insert: Disk #1 of Epi Info software Version 6.04B.
4. Type **A:INSTALL**. Press **[ENTER]**.

   Start Epi Info installation.

NOTICE

The following instructions correspond to screens during Epi Info installation.

5. Source drive should be A. Press **[ENTER]**.
6. Destination drive should be C.
7. Floppy or removable disks should be N.
8. Press **[ENTER]**.

   For a normal Epi Info installation to directory EPI6.

9. Choose: **I** for installation.
10. Accept default Video Driver already marked by pressing **[F4]**.
11. Arrow down to HP Desk Jet, then

    Using space bar, **Select** all printers up to and including IBM Proprinter X24, then Press **[F4]**.

12. Arrow down to NETSS.

    Using space bar **De-select** the NETSS portion of the installation (check mark should disappear), then Press **[F4]**.

13. Press [**F4**] to accept all the installation parameters and start the installation.
14. Screen should change to files being copied.

    You will insert Disk #2 when the screen prompts to insert the next disk into drive A:.

    Insert disk and press [**ENTER**].
15. You will insert Disk #3 when the screen prompts for the next group to be inserted into Drive A:.

    Insert disk and press [**ENTER**].
16. When screen appears about editing Autoexec.bat and Config.sys files,

    Respond by typing [**Y**].

After Installing Epi Info

Use the following steps to install a Y2K update file after installing Epi Info.

1. Get disk labeled “Epi Info Software Update v. 6.04C," then put the disk into the 3.5 drive.

   At the C:\EPI6> prompt, type [**COPY A:*.***]. Press [**Enter].**

   This will copy the Y2K update file.

NOTE: This disk is part of a package that was sent out to the field in October 1999.

2. At the C:EPI6> prompt, type [**4bupdate**]. Press [**Enter**].
3. When you see the prompt: “Continue extraction?," type [**Y**] and Press [**Enter**] to continue.
4. Each time you see the prompt indicating an existing file, Overwrite?, type [**Y**] to overwrite the file. You will need to repeat this 20 times to continue the update process.
5. When finished, the C:\EPI6 prompt will return indicating that the Y2K updating process is complete.

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Appendix F

Simple Random Number Generating in EPI Info

1. Enter into Epi Info software
2. Press [**P**] (to list Program menu)
3. Arrow down and highlight Epi Table calculator, and Press [**ENTER**].
4. When Epi Table screen appears, arrow over to Sample, and Press [**ENTER**].
5. Arrow down to Random number list, and Press [**ENTER**].

EXAMPLE: Assume this example scenario for random numbers: 87 samples a year for cargo monitoring. You assign one sample each week, but this only accounts for 52 samples. There are still 35 samples left to be scheduled. You want to randomly pick 35 weeks out of the 52 weeks available to complete the sampling schedule. Using this example, at the Random Number screen do the following to generate random numbers.

NOTICE

The rest of these instructions use values specific to the example scenario listed above.

6. For "How many random numbers," Type: 35, and press [**ENTER**].
7. For "Minimum range of numbers," Type: 1, and Press [**ENTER**]. (Sample range is 1 to 52.)
8. For "Maximum range of numbers," Type: 52, and Press [**ENTER**]. (Sample range is 1 to 52.)
9. Cursor will move to field: "[ ] Drawing with replacement:"

   If you **do not want** a sample number to repeat, then leave this field blank. Press Down (↓) key once to highlight the word "Calculate." Go to Step 10.

   OR

If you want sample numbers to repeat, then Press: space bar to place an X in this field, and Press **[ENTER].**

10. Once Calculate is highlighted, Press **[ENTER]** and a list of random numbers should appear on screen.

11. TO PRINT THIS LIST, Press **[F5]** (to print directly to printer), **OR**

Press **[ESC]**, answer yes to save to a file, type in file name to save list to. This file is created and saved in the C:\EPI6> directory. After leaving Epi Info, you can then access this file via the Agency word processor to print out.

12. Press **[F10]** (to leave random number list generator or continue to generate other lists).

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Appendix G

Procedures for Backing up Monitoring Data

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Backup Procedures **page G-1**

Introduction

At the end of each data entry session copy your original records file(s) to a computer disk before you leave the computer. This is good practice because:

- The file serves as a backup file of records not on the computer hard disk.
- The computer may malfunction and stop working.
- The computer data file you are working with could become corrupt.

These same backup procedures can also be used for making an **additional** disk of files to send to Riverdale monthly. **Do not send** your backup copy of disks to Riverdale.

Backup Procedures

1. If you are in the Epi Info, exit the software and go to the Epi Info directory. You should have a C:\EPI6> prompt.
2. Label a blank computer disk (3.5 inch is best): **Monitoring Data Backup**,

   And place the disk in the 3.5 drive.

NOTICE

If your 3.5 disk drive is B, then substitute B where A appears here

3. At the C:\EPI6> prompt type the appropriate statement using the following decision table. This will copy to the disk the appropriate record file that you are using with Epi Info

For monitoring files of this pathway:	Type the following, then Press: ENTER
Air Passenger Baggage	COPY AQIAIM.REC A:
Air Cargo	COPY CGMAIR.REC A:
Mail Facility	COPY AQIMAIL.REC A:
Maritime Cargo	COPY CGMMRT.REC A:
Northern Border–Vehicle	COPY NBV.REC A:
Northern Border–Truck Cargo	COPY CGMNBG.REC A:
Southern Border–Vehicle	COPY AQIBRM.REC A:
Southern Border–Truck Cargo	COPY CGMBR.REC A:
Predeparture	COPY AQIDOM.REC A:

4. To check that the files are on the disk, type [**DIR A:**]

   The working data files should be listed.

5. Keep this backup disk of data files handy to facilitate backing up after each data entry session.

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Appendix H

Procedures for Printing Graphics While in EPI Info

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Setting Up for Printing **page H-2**
Printing the Graphic **page H-3**

Introduction

While in the Analysis mode of Epi Info, data can be displayed in a pie chart, bar chart and other graphics on the computer screen. Printing these graphics is **not the same as** printing other analysis outputs (by pressing F5). In order to print the graphic, you must know the brand and model of your printer, what computer LPT port your printer is hooked up to, and how to use the Epi Info SET command.

Getting Started

1. Start at the C:\prompt. Do not enter into the Epi Info software.
2. Change to the Epi Info directory. Type: **CD EPI6** and Press [**ENTER**].
3. At the C:\EPI6> prompt, Type: **DIR*. BGI,** and Press [**ENTER**].
   - **A.** If a listing of 4 or more files appear with .BGI extensions, then go on to Step 4.
   - **B.** If a listing of 3 or less files appear, STOP. Do not go any further with these instructions. First contact your local AQIM coordinator for instructions. If not available, then contact the National AQIM coordinator.
4. Find what LPT port your printer is hooked up to on your computer. With most computers it is usually LPT 1. But with computers hooked up to LAN printers or shared printers, it may be a different LPT port number.

   Write LPT port number here: LPT
5. Find your printer name and model. Example: Hewlett Packard Laser Jet, Hewlett Packard Laser Jet III, IBM Proprinter.

Write printer name and model here:

6. Find your printer name from those listed below and write down the $file name that is associated with it.

Hewlett Packard (HP) Laser Jet — $LJ.BGI

HP Laser Jet III — $LJ3R.BGI

HP Color DeskJet — $DJC.BGI

HP Paint Jet — $PJ.BGI

IBM Proprinter, 24 pin — $PP24.BGI

For example: $LJ.BGI for Hewlett Packard (HP) Laser Jet printer or $PP24.BGI for IBM Proprinter, 24 pin printer. If your model name is not listed, try a printer file that is similar and see if it will work with your printer. That is, if you have a laser printer, try the $LJ or $ LJ3R files. If you have a dot matrix printer, try the $PP24 file.

NOTE: If the installing of Epi Info software went correctly, the printer drivers listed above are loaded for use with graphic printing. These file names should have appeared in Step 3.

Write $file name here **without** the .BGI part: (Example: If the file name is $PP24.BGI, then just write $PP24.)

Setting Up for Printing

The following set of instructions **assumes** the following:

- You have entered Epi Info and are at the Analysis screen.
- You have read a data *.REC file.
- You have already displayed data in one of the graphic choices and now wish to print it.
- Your printer is connected properly and working.

1. In this step, replace <file name> with what you wrote down in Step 6. Do not type the < >'s.

At the analysis EPI6 command line, Type: **SET PRINTER = <file name>** and Press [**ENTER**].

For example: If you have an HP Laser jet printer, then this statement should appear on the EPI6 command line: SET PRINTER = $LJ

2. In this step, replace the # in <LPT#> with what you wrote down in Step 4. Do not type the <>'s.

At the analysis EPI6 command line, Type: **SET PORT = <LPT#>** and Press **[ENTER].**

For example: If you wrote LPT1 in Step 4, then this statement should appear on the EPI6 command line: **SET PORT = LPT1**

3. At EPI6 prompt type: **SET PMODE = 3** , Press **[ENTER]**

NOTICE

Once you leave Epi Info analysis mode, the computer will lose these settings. You must repeat steps 7, 8 and 9 when you next enter into Epi Info analysis mode and want to print a graphic. (You do not have to do these steps to print non-graphic analysis output screens. Simply, Press: F5 to send non-graphic analysis commands to a properly working printer.)

Printing the Graphic

1. Press: **[F5]** (to turn the printer function on.)

   The output screen should show =====> ROUTE PRINTER. The screen statement for the F5 key should read Printer off.

2. Repeat the graphic analysis command that gives the graph you want printed.

3. If all is working well, Epi Info will display a small STATUS window in the center indicating: "Printing graph. Please be patient." Go to **Step 4.**

   If you get an error message indicating: " Printer initialization error," OR "Graphic driver not found," exit out of analysis mode. Then, Reenter analysis mode and repeat Steps 7, 8 and 9. If error message continues, be sure that your printer is in good working order and you have chosen the appropriate printer file (**Step 5.**) in **Getting Started**. If error message still occurs, try choosing another printer file (if your exact printer model is not listed) and repeat Steps 1, 2, and 3 in **Setting Up for Printing**.

   If errors still occur, then it is possible that the necessary printer driver is not present for your printer make. Epi Info does has many printer drivers available, but were not loaded during installation in order to conserve computer hard drive space. To load additional printer drivers, first contact your local AQIM Coordinator. If not available, then contact the National AQIM Coordinator.

4. IF printing was successful, and as long as you **do not** leave the analysis mode of Epi Info, your printer is set to print any of the graphic displays. Press **[F5]** to toggle the printer ON or OFF if you first want to display, or ROUTE TO SCREEN the graphic to see it before printing.

I

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Appendix I

Epi Info Items List

Introduction

This list is the standard, common names used for the data field, Item, for the pathways Air Passenger Baggage, Southern Border–Vehicles, Northern Border–Vehicles, Mail Facility, and Predeparture. The names of fruits and vegetables are the same as the **bolded** names listed in the Nonpropagative, Fruits and Vegetables, Glossary. If you cannot find a standard name in this list, look it up in the Fruits and Vegetables, Glossary for the preferred common name (**bolded**).

AQIM Items Listing

Item Name

2 ADDITIONAL ITEMS
3 ADDITIONAL ITEMS
4 ADDITIONAL ITEMS
5 ADDITIONAL ITEMS
ABIU
ACACIA
ACASTACHE
ACHILLEA
ACONITUM
ACTINOTUS
ADANANTHUS
ADENANTHUS
AECHMEA
AGAPANTHUS
AGAVE
AGERATUM
AGLAONEMA
AGONIS
AKEE
AKIA
ALAYE
ALCHEMILLA
ALLIUM
ALLIUM
ALOE
ALOE
ALOE, LEAVES
ALOKON
ALPINIA
ALSTROEMERIA
ALYXIA
AMARANTH
AMARANTHUS
AMARCRINUM
AMARYLLIS
AMBARELLA
AMMIMAJUS
AMMOBIUM
ANANAS
ANEMONE
ANETHUM
ANGLED LOOFAH
ANIGOZANTHOS
ANIMAL BLOOD
ANIMAL HORN/ANTLER
ANIMAL PARTS
ANIMAL SKIN
ANIMAL SKULL
ANIMAL TROPHY
ANISE
ANTHURIUM
ANTHURIUM
ANTIRRHINUM
ANTRECHA
APIACEAE
APPLE
APPLE, BALSAM
APPLE, CUSTARD

APPLE, MALAY
APPLE, MAMMEE
APPLE, ROSE
APRICOT
AQUILEGIA
ARACHNIODES
ARALIA
ARBORVITAE
ARROWHEAD
ARROWROOT
ARTICHOKE
ARTICHOKE
ARTIPLEX
ARUGULA
ARUM
ASCLEPIAS
ASIATIC PENNYWORT
ASPARAGUS
ASPARAGUS
ASPARAGUSPLUME
ASPEDISTRA
ASTER
ASTILBE
ASTRANTIA
ATEMOYA
ATRIPLEX
AVOCADO
AVOCADO, WITHOUT SEED
AYALE
AZAROLE
BABACO
BACURY
BAEKEA
BAEL FRUIT
BALIETJE
BAMBOO
BAMBOO SHOOTS
BAMBUSA
BANANA
BANKSIA
BASIL
BASILICUM
BAUNO
BAY LAUREL
BAY LEAVES
BEAKED FILBERT
BEAN
BEAN SPROUTS
BEAN, DRIED
BEAN, PADS
BEARGRASS
BEAUCARNEA
BEAUFORTIA
BEEF
BEEF, CHORIZO
BEEF, DRY
BEEF, FLAKES
BEEF, JERKEY
BEEF, SAUSAGE
BEEF, SHREDDED
BEET
BELGIAN ENDIVE
BERRY
BERRY, ARBUTUS
BERRY, BLACKBERRY
BERRY, BLUEBERRY
BERRY, BOSENBERRY
BERRY, CHOKEBERRY
BERRY, CHOKECHERRY
BERRY, CRANBERRY
BERRY, CRANBERRY CHILEAN
BERRY, GOOSEBERRY
BERRY, HACKBERRY
BERRY, HEDGETHORN
BERRY, HONEYBERRY
BERRY, JUNEBERRY
BERRY, LOGANBERRY
BERRY, MULBERRY
BERRY, RASBERRY
BERRY, ROWAN
BERRY, SERVICE TREE
BERRY, STRAWBERRY
BERRY, TURKEY
BERRY, VELVETLEAF
BLUEBERRY
BERZELIA
BILIMBI
BIRD
BITTER MELON
BLACK CURRENT
BLACK HUCKLEBERRY
BLACK MUSTARD
BLACK SALSIFY
BLUE SPRUCE, SEEDS
BLUELACE
BOLTONIA
BONNET BELLFLOWER
BORAGE

BORONIA
BORRACHITO
BOTTLE GOURD
BOUQUET
BOUVARDIA
BOXWOOD
BRANCH, INFESTED
BRANCH, W/ LEAVES
BREADFRUIT
BREADFRUIT, LEAVES
IBREADNUT
BROCCOLI
BRUSSELS SPROUTS
BUCKTHORN
BUDDA'S FRUIT
BULB, PLANT/FLOWER
BUPLEURUM
BUR CUCUMBER
BURDOCK
BURLAP
BURNET
BUTTER
BUTTERBUR
BUXAFOLIA
CABBAGE
CACAO BEAN POD
CACTUS FRUIT
CACTUS PAD
CACTUS PLANT
CAGE
CALAHEADISCOLOR
CALALU
CALAMANSI
CALANTHE
CALATHEA
CALENDULA
CALLICARPA
CALLISTE
CALLISTEPHUS
CALOTHAMUS
CAMASSIA
CAMELLIA
CAMPANULA
CANDYTUFT
CANE, DRACAENA
CANE, YUCCA
CANISTEL
CANNONBALL FRUIT
CANTALOUPE
CAPE GOOSEBERRY
CAPER
CARAMBOLA
CARDOON
CARROT
CARTHAMUS
CARYOPTERIA
CARYOTA
CASPIA
CASSAVA
CASVARINA
CATHA
CATJAN
CAULIFLOWER
CAUSTIS
CELERIAC
CELERY
CELOSIA
CENIZA
CENTAUREA
CENTRANTHUS
CERIMAN
CESTRUM
CHAMAEDOREA
CHAMELAUCIUM
CHAMOMILE
CHAYOTE
CHEESE
CHEESE, GOAT
CHEESE, W/ CURD
CHEESE, W/ SERUM
CHEIRANTHUS
CHELONE
CHEMPEDAK
CHENILLE COPPERLEAF
CHERIMOYA
CHERRY
CHERVIL
CHERVIL, TURNIP-ROOTED
CHICKEN
CHICKEN, FEATHERS
CHICKPEA
CHICORY
CHINQUAPIN
CHIVE
CHRYSALID
CHRYSALIDOCARPUS
CHRYSANTHEMUM
CHRYSANTHEMUM GREENS

CIBOTIUM
CIKU
CILANTRO
CINAMMON
CIPOLLINO
CIRSIUM
CISSUS
CITRON
CITRONELLA
CITRUS, CALAMONDIN
CITRUS, GRAPEFRUIT
CITRUS, KUMQUAT
CITRUS, LEAVES
CITRUS, LEMON
CITRUS, LIME
CITRUS, ORANGE
CITRUS, PEEL
CITRUS, POMELLO
CITRUS, TANGERINE
CLAY
CLUSTERBEAN
COCCINIA
COCKSCOMB
COCO DE MONO
COCONUT
COCONUT, DRIED
COCONUT, PLANT
COCONUT, SEED
COCONUT, W/O HUSK
COCOPLUM
CODIAEUM
COFFEE
COFFEE, BEAN
COFFEE, LEAVES
COHUNE PALM COCONUT
COLA PODS
COLLARDS
COMMODORELEAF
CONCH SHELL
CONIFERA
CONOSPORUM
CONSOLIDA
CONTAINER
CONVALLARIA
CORDIFOLIUM
CORDYLINE
CORN
CORN SMUT GALLS
CORNSALAD
COROZO
CORRIANDER, SEEDS
COSMOS
COSTMARY
COTINUS
COTTON
COTTONGOSSYPIUM
CREAM
CRESS, GARDEN
CROCOSMIA
CROCUS
CROSPEDIA
CROTON
CROTON
CROWEA
CRYPTANDRA
CUCUMA
CUCUMBER
CUCURBIT
CUCURBIT, SEEDS
CUPRESSUS
CURCUMA
CURRANT
CURRANT TOMATO
CURRY
CURRY, LEAVES
CUTFLOWER
CYCAS
CYCLAMEN
CYNARA
CYPERUS
CYPERUS CORM
CYPREPEDIUM
CYRTHANTHUS
CYTISSUS
DAHLIA
DAISY
DANDELION
DANDELION GREENS
DASHEEN
DASHEEN, LEAVES
DATE
DAUCUS
DECORATIVEGREEN
DECORCUTLEAF
IDELPHINIUM
DIANTHUS
DIDISCUS
DIEFFENBACHIA

DIGITALIS
DILL
DODDER
DRACAENA
DRIEDFLOWER
DROPWORT, WATER
DRUMSTICK (FRUIT)
DRYANDRA
DURIAN
ECHINOPS
EGG SHELLS
EGGPLANT
EGGS
EGGS, PRESERVED
ELICHRYSOM
EMBLIC
ENDIVE
EPAZOTE
EREMURUS
ERICA
ERIGERON
ERIOSTEMON
ERYNGIUM
ERYNGO
ETHROG
ETLINGERA
EUCALYPTUS
EUCALYPTUS
EUCALYPTUS, LEAVES
EUCHARIS
EUCHRYSUM
EUONYMUS
EUPATHORIUM
EUPHATORIUM
EUPHORBIA
EURCUMA
EUSTOMA
FALSE KAMANI
FALSESAFFRON
FAMEFLOWER
FAVA BEAN
FEATHER(S)
FENNEL
FENUGREEK
FERN
FERNMING
FERNTREE
FIG
FIG, DRIED
FISH/SEAFOOD
FLOUR PRODUCT
FLOWER BULBS
FLOWER, SEEDS
FLOWERS
FLOWERS, CUT
FOLIAGE
FORNIA
FORSYTHIA
FOXHEAD
FOXHEAD
FREESIA
FRITILLARIA
FRUIT, DRIED
FRUIT, FRESH
FRUIT, FROZEN
FRUIT, PRESERVED
GALANGA
GARDENIA
GARLIC
GAZANIA
GBANJA KOLA
GELEZNOWIA
GENIP
GENISTA
GENTIANA
GERANIUM
GERANIUMGRASS
GERBERA
GERMINI
GINGER
GINGER
GINGER ROOT
GINGER, RED (FLOWER)
GINKGO
GINSENG ROOT
GINSTER
GLADIOLUS
GLORIOSA
GLOSE
GOA BEAN
GODETIA
GOMPHRENA
GOURKA
GRACENIAS
GRACILARIA
GRAIN
GRAPES
GREENERY

GREENERY, CUT
GREVILLEA
GRUMICHAMA
GUANABANA
GUARANA
GUAVA
GUAVA, PINEAPPLE
GUAVA, SLICED
GYPSOPHILA
HAY
HE'E
HEART-OF-JESUS
HEDERA
HEDYCHIUM
HELENIUM
HELIANTHUS
HELICHRYSUM
HELICONIA
HELLEBORUS
HERBS
HERBS, DRIED
HIBISCUS
HIMALAYAN
HIPPEASTRUM
HOG-PLUM
HONEWORT
HONEY
HONEY W/ COMB
HORSEMINT
HORSERADISH
HYACINTH BEAN
HYACINTHUS
HYDRANGEA
HYPERICUM
HYPOCALYMMA
HYPOXIS
IBERIS
ICE CREAM BEAN
ILAMA
ILEX
IMBU
INDIAN MULBERRY
INPOTE
INSECTS
IRIS
ISMEE
IVY GOURD
IXIA
JABOTICABA
JACK-BEAN
JACKFRUIT
JADE
JAMBOLAN
JAPONICA
JASMINUM
JESSAMINE
JICAMA
JOJOBA
JUJUBE
JUTE
KALE
KALE
KAPOK
KARANDA
KAUKI
KAVA
KERANDANG
KIKANIA
KIWI
KNIPHOFIA
KNIPHUFIA
KOCHIA
KOHLRABI
KUDZU
KUINI
KUNZIA
LACHNOSTOCHYS
LAMB
LAMBSQUARTER (PLANT PART)
LANGSAT
LANTANA
LARD FRUIT
LARKSPUR
LATHYRUS
LAURUSNOBILIS
LAVANDER
LAVATERA
LAVENDULA
LAVISTONIA
LEATRIX
LEAVES
LEAVES, INFECTED
LEAVES, INFESTED
LEEK
LEMONGRASS
LEMONLEAF
LENTIL
LEONOTIS

LEPTOSPERMUM
LEREN
LETTUCE
LEUCADENDRON
LEUCANTHEMUM
LEUCOCORYNE
LEUCOSPERMUM
LEYCESTERIA
LIATRIS
LICUALA
LILIUM
LILY BULB
LILYBULB
LIMA BEAN
LIMONIUM
LISIANTHUS
LONGAN
LONTAR
LOOFAH, ANGLED
LOPHOMYRTUS
LOQUAT
LOTUS ROOT
LOTUS SEED
LOVAGE
LUCUMA
LUFFA
LUMBER
LUPINUS
LVSCALATHEA
LYCOPODIUM
LYSIMACHIA
MACROPIDIA
MADRONO
MAGUEY
MAHUA
MAILE
MAMMEE
MANFRISIA
MANGEL
MANGO
MANGO, DRIED
MANGO, SEED
MANGO, SLICED
MANGOSTEEN
MANILA TAMARIND
MANINDJA
MANURE
MAQUI FRUIT
MARANG
MARANTA
MARIGOLD
MARIGOLD
MARJORAM
MARMALADE-BOX
MARSH MALLOW
MARUNGAI, LEAVES
MATA KUCING
MATRICARIA
MATTHIOLA
MAUNA LOA
MAYONAISE
MAYPOP
MEAT
MEAT, BOLOGNA
MEAT, BROTH
MEAT, CANNED
MEAT, COOKED
MEAT, HAMBURGER
MEAT, HOT DOG
MEAT, MINCED
MEAT, PRESERVED
MEAT, SANDWICH
MEAT, TAMALES
MEDICINE
MEDLAR
MELINDJO
MELON
MELON, SEEDS
METALASIA
MILK
MILK, DRIED
MILK, EVAPORATED
MILK, POWDERED
MILK, SWEETEN
MIMET
MIMETE
MIMOSA
MINT
MOKIHANA
MOLUCCELLA
MOMBIN
MONARDO
MONBRETIA
MONKEY-POD
MONSTERA
MONTBRETIA
MUGWORT
MUSA

MUSCARI
MUSHROOM
MUSTARD
MUSTARD GREENS
MUSTARD, WHITE
MYRTLE
NARANJILLA
NARCISSUS
NECTARINE
NERINE
NIGELLA
NUT
NUT, ALMOND
NUT, BEECHNUT
NUT, BETEL
NUT, BETEL W/ HUSK
NUT, BLACK PALM
NUT, BRAZIL
NUT, BUTTERNUT
NUT, CANDLENUT
NUT, CASHEW
NUT, CHESTNUT
NUT, CHIRAULI
NUT, COW
NUT, CYAD
NUT, CYAS
NUT, FILBERT
NUT, GROUNDNUT
NUT, GRU-GRU
NUT, HAZELNUT
NUT, HEARTNUT
NUT, HOG PEANUT
NUT, IVORY
NUT, KAKARI TACCY
NUT, KOLA
NUT, KUKUI
NUT, LAC
NUT, LITCHI
NUT, MACADAMIA
NUT, MADADAMIA
NUT, MALABAR
NUT, MANKETTI
NUT, MAPE
NUT, MARULA
NUT, MOGONGO
NUT, NIPA
NUT, NUA
NUT, OYSTER
NUT, PAKOO
NUT, PALM
NUT, PARRY'S PINE
NUT, PEANUT
NUT, PECAN
NUT, PETROLEUM
NUT, PHYSIC
NUT, PILI
NUT, PISTACHIO
NUT, QUANDONG
NUT, RATTAN
NUT, SABA
NUT, SAPUCAIA
NUT, SHEA
NUT, SUARI
NUT, TALLOW
NUT, TUNG-OIL
NUT, UCAHUBA
NUT, WALNUT
NUT, WOOD-OIL
NUT, YEHEB
NUTMEG
NYMPHAEA
OAKLEAF
OASIS
OCA
OENOTHERA
OHELO BERRY
OIL PALM
OKRA
OLEANDER
OLIVE
ONION
ONIONS, GREEN
ORACEAEAE
ORACH
ORCHID
ORCHID, FLOWER
ORCHID, PLANT
OREGANO
ORIENTALIS
ORNITHOGALUM
ORTANIQUE
ORTHOPHYTUM
OTICIA
OWE COLA
OXALIS
OZOTHAMNUS
PACAYA
PAEONIA

PAK CHOI
PALM HEART
PALM, FOLIAGE
PALM, SEEDS
PALM,SABAL
PANDANUS
PANDANUS
PANICULATA
PANSY
PAPAVER
PAPAYA
PAPYRUS
PARSLEY
PARSNIP
PASSION FRUIT
PASTE, LIVER
PATAUA OIL COCONUT
PATE
PAU KINIKINI
PAWPAW
PEA
PEA
PEACH
PEACH PALM
PEACOCK, FEATHERS
PEACOCKFEATHER
PEAR
PEAR, ASIAN
PEAR, BALSAM
PENSTEMON
PEPINO
PEPPER, BONNET
PEPPER, CAYENNE
PEPPER, CHILLI
PEPPER, DRIED
PEPPER, RED
PEPPER, ROCOTO
PEPPER, SEASONING
PEPPER, TABASCO
PEPPER, VEGETABLE
PEPPERBERRYTREE
PEPPERMINT
PEPPERONI
PEQUI
PERILLA
PERSIMMON
PERSOONIA
PHILODENDRON
PHLOMIS
PHLOX
PHORMIUM
PHYLLICA
PHYSALIS
PHYSOSTEGIA
PIERIS
PIGEON PEA
PINE, CONE(S)
PINE, SEEDS
PINEAPPLE
PINEAPPLE
PINGUIN
PINON
PINUS
PITAHAYA
PITTOSPORUM
PIZZA W/ MEAT
PLANT
PLANT, AQUATIC
PLANT, SEEDLINGS
PLANT, VINE
PLANT, W/O ROOTS
PLANTAIN
PLUM
PLUMCOT
PLUMERIA
PODOCARPUS
POKEWEED GREENS
POLIANTHES
POLYGONUM
POMEGRANATE
PORELEAF
PORK
PORK, BACON
PORK, CHORIZO
PORK, DRIED
PORK, HAM
PORK, SALAMI
PORK, SAUSAGE
PORK, SKIN
POSTER
POTATO
POTATO, SWEET
POULTRY
PRODUCE
PROTEA
PRUNUS
PTILOTUS
PUDDING, BLOOD

PULASAN
PUMMELO
PUMPKIN
PUMPKIN, SEEDS
PURPLE NUTSEDGE
PURSLANE
QUEENANN'SLACE
QUERCUS
QUINCE
QUINOA
RADICCHIO
RADISH
RAISINS
RAKKYO
RAMBAI
RAMBUTAN
RAMPION
RANUNCULUS
RAWHIDE
RED HAIL STONE
REGELIA
RHAMNUS
RHODODENDRON
RHUBARB
RHYNCHOSTYLIS
RICE
RICE BEAN
RICE, RED
ROOT(S)
ROSA
ROSE HIP
ROSE, BUD
ROSE, LEAVES
ROSELLE
ROSEMARY
RUDBECKIA
RUMOHRA
RUSCUS
RUTABAGA
SAFFLOWER
SAGE
SALIX
SALSIFY
SALUYUTE JUTE
SAMBAI
SAND
SAND PEAR
SANDERSONIA
SANDWICH, MEAT
SANTOL
SAPODILLA
SAPONARIA
SAPOTE
SAPOTE, BLACK
SAPOTE, WHITE
SARSAPARILLA
SAUSAGE FRUIT
SAVORY
SCABIOSA
SCHOLTZIA
SCILLA
SCREWPINE
SEA GRAPE
SEAWEED
SEBESTEN
SEDUM
SEEDS
SEMEN CONTAINER
SERRURIA
SERUM, BIOLOGICAL
SESAME
SESBANIA
SETARIA
SHELL(S)
SHEPHERD'S PURSE
SHOES
SHUNGIKU
SLOEBERRY
SNAIL
SNAIL, SHELL
SNAKEFRUIT
SNOW PEA
SOIL
SOLIDAGO
SOLIDASTER
SONCOYA
SORREL
SOUP, MIXES W/ MEAT
SOURSOP
SOYBEAN
SPICES
SPINACH
SPIREA
SQUASH
ST. JOHN'S BREAD
STEPHANOTIS
STINKING-TOE
STIRLINGIA

STRAW
STRAWFLOWER
STRELITZIA
STRILINGA
SUGARCANE
SUGARCANE, W/O NODES
SUNFLOWER
SWEET CICELY
SWEETSOP
SWISS CHARD
SWORDBEAN
SYRINGA
SZECHUAN PEPPERCORNS
TAMALE, NO MEAT
TAMARIND
TAMPOI
TANACETUM
TARO
TARRAGON
TEA
TEABUSH
TELOPEA
TEPEGUAJE
THAI BUDDIST FRUIT
THRYPTOMENE
THUJA
THYME
TI
TIBETAN
TILE
TINEKE
TIPO
TLANOCHTLES
TOMATILLO
TOMATO
TOPEPO
TOSTADOS, MEAT
TRACHELIUM
TREEFERN
TRICITRUS
TRITELEIA
TROLLIUS
TROPICALFOLIAGE
TRUFFLE
TULIP, BULBS
TULIPA
TUMERIC
TUNA
TURKEY
TURNIP
TYPHA
UGLI FRUIT
ULLUCU
UNG CHOY
UVILLA
VALLOTA
VANILLA
VEGETABLE
VEGETABLE MARROW
VEGETABLE, COOKED
VEGETABLE, FROZEN
VEGETABLE, PRESERVED
VEHICLE
VERONICA
VERTICORDIA
VIBURNUM
VINE, CUCURBIT
VINE, SWEET POTATO
WAMPI
WASABI
WATER DROPWORT
WATERCRESS
WATSONIA
WHEAT PRODUCT
WILD BERGAMOT
WOOD
WOOD ITEM
WOOD, CEDAR
WOODEN-ROSE
XANTHORRHOEA
YA PEAR
YACON
YAM
YLANG-YLANG
YOGURT
ZANTEDESCHIA
ZINGIBER
ZINNIA

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AQIM Handbook

Appendix J

Internet

Introduction

The information contained in this appendix is from a memo dated May 29, 1998, signed by Mary Neal, Acting Director of Operational Support, with the subject: Availability of Automated Short-term Reporting Tool (SRT). Also included is the information contained in the on-line help for the SRT.

The SRT is part of the AQIM/WADS Automation Project. It is an interim tool. No major enhancements are planned. It will be replaced with a new, long-term AQI system known as the updated Port Information Network-Operations (PIN-Ops). Parts of PIN-Ops will replace the current AQIM use of Epi Info for data entry.

What SRT Provides

The SRT provides a useful selection of reports summarizing AQI data, within a State, a Region, or across a nation. Users can select customized reports from

- Work Accomplishment Data System (WADS) data,
- Agricultural Quarantine Inspection Monitoring (AQIM) data, and limited PIN-Ops-309 pest interception data.

In this handbook, information about the SRT will focus only on AQIM data. The AQIM part of the SRT includes Epi Info records for Fiscal Years 1996 through 2000. The SRT data base is updated quarterly.

CAUTION

The data may contain errors because of how data is entered and collected.

Objectives For The SRT

The SRT provides:

- Access to reports that are based on the best information currently available
- An opportunity to understand the limited quality of the information
- An opportunity to identify and improve the information quality

- An immediate and relevant system and data experience to enhance the designing of PIN-Ops

How To Access SRT

There are two ways to access the SRT on **inside.aphis.usda.gov** (the APHIS Intranet).

1. Being on a Local Area Network (LAN) that is connected to the APHIS Wide Area Network (WAN).
2. Having a modem that can connect through WorldCom's Remote LAN Dial (RLD). See more under the heading, Remote LAN Dial (RLD)

Once connected, use Netscape to access the site address:

inside.aphis.usda.gov/protection/ppq/homesrt.html

NOTE: In order to use the SRT reporting tools, you must enter your last name and birth date. This information is checked against PPQ's national employee records. Therefore, if your last name on official records includes Jr., III, or a compound name, the complete name must be included in the last name you enter.

Remote LAN Dial (RLD)

WorldCom's Remote LAN Dial (RLD) replaced AT&Ts OASIS service that you previously used for Dial-up Internet access. If you want to access the Internet remotely, you must have the following:

- An RLD Log-on ID and password (available from ATAC at telephone number (877) 944-8457)
- A PC properly configured for RLD access to the Internet

To configure your PC for RLD access to the Internet, use the following procedure:

1. Double Left Click on **My Computer**
2. Double Left Click on **Dial Up Networking** (If you get *Welcome to Dial Up Networking banner*, click **Cancel**)
3. Double Left Click on **Make New Connection**
4. In box labeled "***Type a name for computer you are dialing***" ,Type **RLD** (In "Select a Device", your modem will appear.)
5. Left Click on **Next**
6. In box labeled Area Code, type **888**
7. In box labeled Telephone Number, type **523-3305**

Important

In OASIS, if you used a "9" to access an outside line or an "8" for FTS, you will need to do the same for this connection by double clicking on RLD, Dialing Properties.

To complete these procedures, you must have an RLD Log-on ID and password from the RLD Administrator at ATAC, Telephone: 877-944-8457.

8. Left Click on **Next**
9. Left Click on **Finish** (You should be back at Dial Up Networking screen)
10. In the **Dial Up Networking** screen, Right Click on **RLD icon**
11. Left Click on **Properties Tab**
12. Left Click on **Server Types**
13. In the box labled "***Type of Dial-up Server***", make sure it shows **PPP, Internet, Windows 98**. If it does not show this, click on the down arrow next to the block and select this option
14. In the box labeled "***Advanced Options***", make sure **Log on to Network** is checked.
15. In the box labeled "***Allowed netwok protocols***", make sure <u>only</u> **TCP/IP** is checked. (Settings on the **Scripting Tab** and **Multilink Tab** do not need to be changed.)
16. Once you have made the above settings in the RLD properties, Left Click on **OK**. (You should be back at the Dial Up Networking screen.)
17. Double Left Click on the **RLD icon**.
18. In the box labled "***Connect To***", Left Click on **Dialing Properties**.
19. In the box labeled "***When dialing frm here***", enter your outside line access number. (If you must enter any digit before dailing out of your office, make the change on this screen. For instance, if you are in an office that requires "9" to be dialed prior to dialing, enter "9" **For local calls** and **For long distant calls**.)
20. Left Click on **OK**. (You should be back at the box labeled "***Connect To.***")
21. In the block labeled "***User Name***", enter the user name e-mailed to you from the RLD Administrator at ATAC. It will be a series of **6 numbers@aphis%mci**. It is very important that you enter it the correct way.
22. In the block labeled "***Password***" enter the password e-mailed to you by the RLD Administrator at ATAC. The password is **24 characters long** and must be entered just as you see it.

23. In the block labled "***Phone Number***" block, if you must dail "1" for long distance, you will need to add it here.
24. Left Click on **Connect**. If you receive an error message, refer to the Standard Operating Procedures (SOP) on RLD Errors.
25. If your Internet connection is successful, finish the configuration by creating a shortcut on your PC desktop for the RLD Icon.

Important

Login ID's and passwords are case sensitive! Make sure your caps lock key is off before you start!

RLD Short Cut

To create a shortcut on your PC desktop for the RLD Icon, use the following procedure:

1. Double Left Click on **My Computer**
2. Double Left Click on **Dial Up Networking** (If you get *Welcome to Dial Up Networking banner*, click **Cancel**)
3. Right Click on the RLD Icon and hold down the mouse key
4. Drag the Icon to the Desktop and let go of the mouse key
5. A window will appear with four options
6. Single Left Click on **Create Shortcut Here**

RLD Internet Access

Once you have completed the configuration for the client side of RLD and created a shortcut on your PC desktop for the RLD Icon, you can access the Internet with the procedure:

1. Double Left Click on the **RLD Icon**
2. In the box labled "***Connect to Window***", enter your **User ID** and **Password**.
3. Right Click on **Connect**. The modem will dial the toll free 888 number that was provided when the software was installed. Once the connection is made to RLD you should have full functionality to all APHIS applications.

Once completed and connected to RLD, there is additional information on the RLD Website at the following location.

http://inside.aphis.usda.gov/atac/

SRT Reports

Two reports can be generated from the AQIM data in the SRT. These reports are as follows:

- Record Summary Report
- Approach Rate Reports (selections for each pathway)

The **date ranges** can be adjusted to report by fiscal year, calendar year, or a part of a year. The selected dates are inclusive from the beginning month/year through the ending month/year. Run the Record Summary Report to learn what date ranges are available for specific locations and pathways.

Multiple selections can be made in the **location** and **terminal** selection fields. How to select multiple locations and pathways will vary depending on the browser and operating system used to access the SRT. Using Netscape Browser, hold down the Ctrl key while clicking on each selection.

Record Summary Report:

CAUTION

Running a Record Summary Report for all locations and all pathways takes a long time. Therefore, run a report for one location or one pathway to create a benchmark that can be used to estimate how long it will take to run a report for all locations and pathways.

The Record Summary Report shows current coverage for each work location and pathway. This report generates the number of records in the data base for a given location or for all locations, and lists the dates of the earliest record and the latest record for each location.

The report can be run for a specific pathway or for all pathways. A **pathway selection field** is used only with the Record Summary Report. The other reports are run for a specific pathway so a pathway selection field is not needed. For an explanation of the other selection fields available, see Selection Fields.

Approach Rate Reports:

The AQIM data sent to Riverdale can be queried for action approach rates by year, month, location, destination, origin, and pathway. Depending on the pathway, additional formats are possible.

The data begins from October 1995, depending on location and pathway. The data is updated quarterly.

For more detailed information about approach rates for each pathway, refer to the heading Approach Rate Reports in this Appendix (or under each Data Analysis section of the pathways).

Approach Rate Reports

Following are the approach rate reports for each pathway.

Air Passenger Baggage:

There are currently four reports for air passenger approach rates. Each can be run with a combination of locations, origins, and destinations.

All air passenger approach rates are calculated by dividing the number of records with at least one action by the number of declarations.

1. Terminal/flight--This report will calculate approach rates by terminal and flight.
2. Work Unit--This report will calculate approach rates by work unit.
3. Origin--This report will calculate approach rates by origin.
4. Destination--This report will calculate approach rates by destination.

Northern Border

There are currently three reports for Northern Border approach rates. Each can be run with various combinations of locations, origins, and destinations.

All Northern Border approach rates are calculated by dividing the number of vehicles with at least one action item by the number of vehicles.

1. Work Unit--This report will calculate approach rates by work unit.
2. Origin--This report will calculate approach rates by origin.
3. Destination--This report will calculate approach rates by destination.

Southern Border

There are currently three reports for southern border approach rates. Each can be run with various combinations of locations, origins, and destinations.

All southern border approach rates are calculated by dividing the number of vehicles with at least one action by the number of vehicles.

1. Work Unit--This report will calculate approach rates by work unit.
2. Origin--This report will calculate approach rates by origin.
3. Destination--This report will calculate approach rates by destination.

Maritime Cargo

There are currently two reports for maritime cargo approach rates. Each can be run with various combinations of locations, origins, and destinations.

All maritime cargo approach rates are calculated by dividing the number of sampled units (containers) with at least one action item by the number of sampled units.

1. Work Unit—This report will calculate approach rates by work unit.
2. Strata—This report will calculate approach rates by strata. The currently defined strata are: reefer, non-refrigerated, no PPQ interest, and empty container.

Selection Fields

You can focus the data in a report by selecting specific information in the following data fields:

- Destination
- Origin
- Location
- Terminal
- Flight

Conversely, if you do not select specific information in these fields, the data in the report will include everything.

For example: When selecting Florida in the **destination selection field**, only data with a destination in Florida will be included in the report. When not selecting a specific destination in the **destination selection field**, the data will include that destined to all States.

Data for a report are put together by combining your selections in the data fields.

For example: When selecting Florida in the **destination selection field**, and Miami in the **location selection field**, then the report will include only Miami data with destinations in Florida.

Following is an explanation of the different selection fields. The fields are set up with pull down menus containing options to select from. Combining selections will further focus the data that is included in a report.

Destination Selection Field:

You can focus a report on samples where passengers, vehicles, or cargo were destined to a specific State or country. Select from a list of State names, In Transit, Mexico, or Canada.

For example: To run a report for air passengers destined to Florida, select the appropriate report and select Florida from the **destination selection field**.

NOTE: FY 96 data includes other destinations represented by two-letter country codes, which were used before In-Transit became the standard. These other destinations display in the report, but are not selectable from the list.

Origin Selection Field:

You can focus a report on samples where the passengers, vehciles, or cargo originated from a particular country. Select from a list that includes country names, Mexican state names, and Canadian province names.

For example: To run a Southern Border (by work unit) report that only includes vehicles from the Mexican State of Sonora, select Sonora, MX, from the origin selection field.

Location Selection Field:

You can focus a report on samples taken at one or more (but not all) locations. Select from a list of locations. The SRT allows for multiple selections in the location and terminal selection fields. Remember to hold down the Ctrl key while clicking on each selection.

Terminal Selection Field:

You can focus a report on samples taken at one or more (but not all) terminals. Select from a list of terminals. Note that the terminal selection field is used only for the air passenger (terminal/flight) report.

CAUTION

Terminal names are inconsistent. Mispellings or entering a different format can cause confusion. Therefore, to select all the terminal locations in Miami, select all possible locations from the list.

CAUTION

You must combine the terminal selected with the location selected, because work locations can have similarly named terminals.

Flight Selection Field:

You can focus a report on samples taken from a particular flight. Enter a flight designation in this field. Note that the flight selection field is used only for the air passenger (terminal/flight) report.

CAUTION

The flight selection field is not a uniform one. That is, flights can be entered having a different format, misspellings, etc.

Trouble-shooting

How To Tell If A Report Is Running

Indicators to use to tell if a **report is running** are the blank page, change in the URL, meteor shower, and activity elevator.

If you are using Netscape, the Netscape icon in the upper right of the screen will contain a “meteor shower" whenever the browser is in the process of “networking." Generally, if the meteor shower is on, then processing is occurring.

When you press the “Run Your Report" button at the bottom of the page, several things happen. A Security information window opens (if you have not disabled this in your Netscape). Also, you will notice that the Netscape icon in the upper right begins a meteor shower, and (in Communicator) the activity signal in the lower left begins its back and forth movement.

When you click on the “Continue" button (again, assuming you have not disabled this feature), the Security window closes and the screen becomes blank. Note also that the location URL in the Netscape location field has changed when the page becomes blank. The terminating item on the URL location line has changed from /.....html to /....pl. The .pl file is the file that actually controls the running of the report.

If the meteor shower stops, or if the message “stalled..." appears in the status line at the bottom of the browser, and the page remains in a blank state, click on “stop" and resubmit your report.

How To Print

Many of the reports in the SRT do not fit on standard pages (size 8 ½ x 11 inches). To accomodate the wide print lines in some reports, do the following. These instructions are for Netscape 4.x.

1. In file/page setup, set left and right margins to 0.25".
2. In print/properties, set the orientation to landscape.

Most of the AQIM reports do not require landscape orientation, and some reports do not require the 0.25" left and right margins. However, changing to these settings will not disrupt the printing of any report.

Definitions

Action Approach Rate--Defines the rate of sampled units resulting in an action. The action approach rate is calculated by dividing the number of sampled units that resulted in an action by the number of sampled units.

Actions—The actions column in each SRT report is a total of the sampled units that resulted in an action. A sampled unit can contain several items which result in an action. However, in the calculation of approach rate, action is counted as 0 (if no item resulted in an action) or 1 (if any item resulted in an action).

A sample results in an action in the following pathways:	Whenever an:
Northern Border–Vehicle	Item is in the categories: S (seized), CT (clean/ treatment)
Southern Border–Vehicle	
Air Passenger	
Air Cargo	Item or prohibited contaminant is found (includes prohibited, smuggled or mismanifested items)
Maritime Cargo	

Pests and Prohibited Items--The column called Pests and Prohibited Items in some reports is any cargo item or prohibited contaminant/ item found (including smuggled and/or mismanifested items).

QMIs—The column called QMIs in some reports is the total number of items seized.

Sampled Unit—In all pathways, a sampled unit results in one monitoring form being filled out and entered in Epi Info.

The sampled unit for the following pathway:	Is a:
Air Passenger Baggage	Declaration
Northern Border—Vehicle	Vehicle
Southern Border—Vehicle	
Air Cargo	Air Waybill
Maritime Cargo	Container (or container equivalent if a bulk shipment is selected)

95 Percent Confidence Interval--Confidence interval defines the range of the action approach rate if all units (declarations, vehicles, or cargo) were sampled. The interval calculation ensures a 95 percent level of certainty that the actual approach rate, if all units were sampled, would fall within the range of the confidence interval.

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AQIM Handbook

Appendix K

Maintenance: Supporting and Updating the Aqim Handbook

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Supporting and Updating the Agricultural Quarantine Inspection Monitoring Handbook (AQIM)

Just as it is cheaper and less time consuming over time to properly maintain a piece of equipment, so it is with a manual. The Agency must maintain and modify manuals properly. Without an orderly procedure for maintaining manuals, they are likely to fail, significantly reducing the effectiveness of the programs they support. So, to maintain manuals, an orderly procedure is critical. Here is a description of how Plant Protection and Quarantine (PPQ) will support the manuals. Here also are directions for you to follow in maintaining the integrity of the manuals issued to you.

Issuing Revisions

PPQ will revise the AQIM Handbook by distributing immediate updates. We will schedule new editions at fixed intervals–at least every 5 years. If more than 50 percent of some sections changes, we will issue a new section. We will **not** issue a new page solely to correct a minor typographical error. Errors will be corrected only when they would lead to an incorrect action.

As PPQ analyzes and adds new pathways for AQIM, we will issue a new pathway section to the Handbook. At annual meetings of the AQIM National Team, updates to the Handbook will be a topic of discussion. As risk analysis is integrated into other PPQ programs, the general information contained in this Handbook about risk analysis,

risk management, and risk communication may have to be revised. When Epi Info is replaced with an improved data base system, we will issue a new edition of the Handbook.

PPQ will issue all revision as either “add a page" or “replace a page." However, if information in the Handbook might result in an error on the job, PPQ will post a message on PPQ’s electronic bulletin board, informing that an update has been issued for this Handbook.

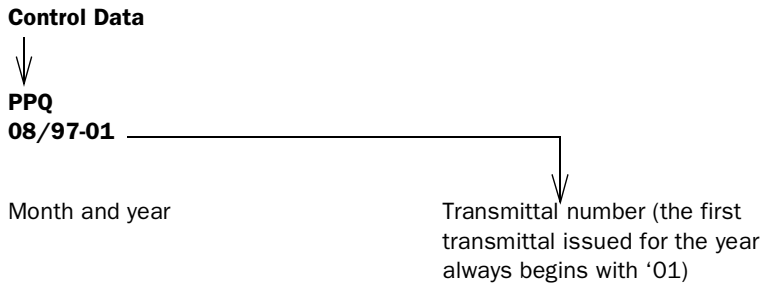
Keeping Manuals Current

There are three ways to track revisions to your AQIM Handbook–the Update Record, transmittal memos, and control data.

The *Update Record* is on the back of the title page of this Handbook. If you miss a transmittal, the *Update Record* alerts you. Also, during an audit, this record lets your supervisor know how up-to-date your manual is. Record all the transmittals you receive in the *Update Record*.

PPQ will mail all revisions with a transmittal memo. PPQ will number these consecutively–allowing you to know if you’ve missed a transmittal. Filing these memos to assure that you’ve received all the previous issuances is best. File transmittals immediately upon receiving them. If two or more transmittals accumulate, add the earliest first. PPQ Headquarters may audit how well the manuals are kept during reviews of work locations.

Besides having numbered transmittals, each page in the Handbook has control data. This is positioned at the bottom of the page. The revised pages’ control data alerts you to whether you have the most up-to-date version. The control data looks like this:



Knowing What is Revised

The transmittal will explain the revision’s purpose and give you directions for making the revision–adding or replacing pages.

Except changes to the index, PPQ will mark all revision with arrows ( ) or change bars (|). Deleted material will be marked with angle brackets (<). If no other changes occur, material moved from the bottom of one page to the top of the next page will **not** be marked.

Knowing Your Responsibility

To enhance professionalism, keep your manuals current. If you fail to update you AQIM Handbook, you run the risk of making a costly error. Therefore, please do the following:

1. When your work location implements AQIM:
   - **A.** Determine how many handbooks are needed at which work sites.
   - **B.** Order additional copies beyond the one issued during implementation, if necessary.
   - **C.** Update the distribution list for the AQIM Handbook in order to receive revisions to the Handbooks at your entire work location.
2. Read the revisions when you receive them.
3. Record your transmittal in the *Update Record*.
4. Add or replace the revised pages the day your receive them.
5. If a practice exercise is included, complete it.
6. File transmittal memos.
7. If you miss a transmittal, order another one.
8. Let the Manuals Unit know when it has made an error.
9. Give the Manuals Unit your suggestions for improvements.

Ordering Manuals

Management and Budget's Management Services Division, Printing, Distribution, and Mail Branch, is responsible for storing and distributing PPQ's manuals and their associated updates. Their address is as follows:

USDA, APHIS, MRP-BS, RWBS
Printing, Distribution, and Mail Services Center
4700 River Road, Unit 1A01
Riverdale, MD 2073

If you need to replace or order additional manuals, manual parts, or transmittals, use E-mail, facsimile, telephone, or use the Manual Order Form on page K-6.

To use Lotus Notes Mail, send your order to **mary.l.kellington@aphis.usda.gov** in Riverdale, Maryland, using the following format:

Part Number:	Date:	Title:	Quantity:
M319.8	11/62	Foreign Cotton Covers	2
7CFR 354.1	01/85	Overtime Service-Hourly Rate Increases	2
06/97-01		AQIM Handbook	1

Include the following information (if information is missing, shipment may be delayed or order may not be filled):

- Organization
- Street Address and Room Number (if solely P.O. Box is used,
- shipment has to be mailed)
- City, State, and nine-digit Zip code
- Contact Person
- Telephone Number

To use the telephone, call Area Code (301) 734-5523 (Printing, Distribution, and Mail Services Center, Riverdale, MD).

To mail or send a facsimile of the Order Form, fill out the Manual Order Form on page K-6. Please be sure to include all the necessary information. Make sure you affix postage on the form. For updates, order by Transmittal Number (for example, 12/95-05). Never order by page number. The Printing, Distribution, and Mail Services Center's facsimile number is Area Code (301) 734-8455.

Updating Distribution Lists

To change number of AQIM Handbook received, use the Distribution Update Sheet on page K-5. Follow these directions for completing the form:

1. Using M390.1120, list the distribution code(s) you want changed. The distribution code for the AQIM Handbook is 34188.
2. Enter total number of copies you need.
3. Get the Port Director's or manager's signature.
4. Attach an old mailing label (it has the necessary access or organization structure code).
5. Fold and mail or send a facsimile of the Distribution Update Sheet.

NOTICE

If any of the above information is missing, the Printing, Distribution, and Mail Services Center will return your request. If you don't have an old label, then wait until you get one. This Center cannot make the change without the access code. Your access code appears on every mailing label sent from the Printing, Distribution, and Mail Services Center in Riverdale, MD.

Change of Address

To change your mailing address, use the Distribution Update Sheet on page K-5. Follow these directions for completing the form:

1. Attach an old mailing label (it has the necessary access code).
2. Print or type the new address as it should appear.
3. Fold and mail or send a facsimile of the Distribution Update Sheet.

Correcting Errors and Suggesting Improvements

If you detect an error, report it by using a comment sheet that's included with this Handbook. Or if it is easier, call , send an E-mail message, or transmit a facsimile to John Patterson or anyone else in the Manuals Unit:

Commercial number:	(240) 629-1930
Facsimile number:	(301) 663-3240
E-mail address:	john.l.patterson@usda.gov

Do the same if you want to suggest an improvement or question a procedural change. If your improvement is substantive, you might want to submit a form suggestion, using the required form.

DISTRIBUTION UPDATE SHEET

1. List Distribution codes to be changed. (A list of distribution codes can be found in M390.1120, revised February 1982.) The distribution code of the AQIM Handbook is 34188.

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

2. Number of copies you get now _____ Number of copies you want to get _____

3. New or corrected address:

_____

_____

_____

_____

_____

_____

4. The address on the attached label is to be deleted ❑ Yes ❑ No

5. _____

(Port Director or Manager Signature)

Attach any mailing label used to mail information through APHIS Distribution to your location. The label will help locate your address in the system and eliminate duplicating your address in the system.

If you do not have a mailing label, wait until you receive one. This request may be returned to you if there is no label attached.

AFFIX POSTAGE (or this may be returned to you by the Post Office)

This Distribution Update Sheet is to be submitted by the person responsible for the distribution of manuals at your location.

Manual Order Form

Use the following to order your manual. Simply **FOLD, STAPLE, STAMP, AND DROP IN MAIL**.

I

I am missing the following manuals, part numbers, or transmittals. (if any information is missing, orders will not be filled.)

Manual, Part Number, or Transmittal Number	Dated:	Title:	Quantity:

Please send to:

_____

Name

_____

Organization

_____

P.O. Box or street address (include your room number)

_____

City, State, Zip Code

_____

Telephone number

_____

United States Department of Agriculture

_____

United States Department of Agriculture
Animal and Plant Health Inspection Service

USDA, APHIS, MRP-BS, RWBS
Printing, Distribution, and Mail Services Center
4700 River Road, Unit 1A01
Riverdale, MD 20737

ATTN: Mary Kellington

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AQIM Handbook

Appendix L

Pathway Monitoring Maintenance

Introduction

This Appendix contains a checklist of questions that should be used to review the status of monitoring activities at work locations. See Figure L-1. Port managers local and local AQIM coordinators should periodically answer these questions to ensure proper monitoring of each designated pathway at their work locations.

1. What is being done to ensure that the samples are randomly selected?
   - ❒ What process is used?
   - ❒ What is being done to limit bias?
   - ❒ What difficulties are encountered to ensure randomness?
2. How are samples selected so that they are proportional to arriving populations?
   - ❒ What is being done to ensure that all populations (i.e., all passengers, cargo, foreign mail, etc.) have a chance to be selected?
   - ❒ What system is used to select times for selecting samples?
   - ❒ How is timings adjusted when selecting samples so that during peak travel periods more samples are selected?
3. What is done to ensure that all samples are 100 percent hand inspected?
4. How are QMI's separated and marked?
5. How are QMI's inspected for pests?
   - ❒ If pests are found, what system is used to ensure tat the number of the PPQ Form 309 is entered as part of the monitoring record?
   - ❒ How often is contraband fruit inspected for pests?
   - ❒ How often is contraband completely searched for multiple pests?
6. Review the data
   - ❒ What system is used to enter data?
   - ❒ Are current forms and instructions used?
   - ❒ Is the data up to date?
   - ❒ Are data files backed up after each data entry session?
   - ❒ How often is data checked for errors?
   - ❒ How is consistency ensured?
   - ❒ What does the gap analysis information show about AQIM and port operations?
   - ❒ How reasonable are the initial results?
   - ❒ What is the port doing with the information?
7. Has a risk committee been established? If yes, then:
   - ❒ What do the committee members understand about their roles?
   - ❒ What successes has the committee had?
   - ❒ What are the committee's next steps or activities?
8. What is the level of support at the port?
   - ❒ What is the level of understanding and support shown by the port director and supervisors?
   - ❒ Is sufficient time available for the AQI coordinator to do the job?
   - ❒ What is the level of understanding and support shown by officers?
   - ❒ What could be done to improve the level of support?
9. General questions
   - ❒ What aspects of monitoring have been the most difficult to implement? What has been done to improve the situation?
   - ❒ What changes have been made in daily operations as a result of monitoring?
   - ❒ What have been the responses to the training and explanatory material provided? What could be improved?
   - ❒ What is the level of cooperation with INS and Customs? What could be improved and how?

FIGURE L-1: A Checklist of Monitoring Review Questions

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COMMENT SHEET

Directions: Use this sheet to suggest an improvement or to identify a problem in the content of the Handbook. To mail, please follow the directions on the reverse side.

Description of problem (error, inconsistency, missing or insufficient information, etc.):

Description of improvement or recommended change (add attachments if necessary):

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