United States General Accounting Office

GAO

Report to the Honorable Frank Horton
House of Representatives

September 1986

PESTICIDES

Better Sampling and Enforcement Needed on Imported Food

GAO/RCED-86-219

GAO

United States
General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

B-222128

September 26, 1986

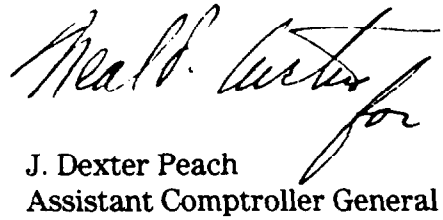
The Honorable Frank Horton
Ranking Minority Member
Committee on Government Operations
House of Representatives

Dear Mr. Horton:

As requested in your June 3, 1985, letter and subsequent discussions with your office, we have reviewed the Food and Drug Administration's (FDA) activities to protect the public from exposure to illegal pesticide residues in imported food under the Federal Food, Drug, and Cosmetic Act. The report discusses the extent of FDA's coverage of food imported for domestic consumption; the factors FDA uses to select samples of imported foods for pesticide analysis; FDA's capabilities to test pesticides potentially used on imported food; and FDA's ability to deter the marketing of imported food containing illegal pesticide residues.

As arranged with your office, unless you publicly release its contents earlier, we plan no distribution of this report until 30 days after the date of this letter. At that time we will send copies to other appropriate congressional committees; the Commissioner, FDA; the Secretary, Department of Health and Human Services; the Director, Office of Management and Budget; and other interested parties upon request.

Sincerely yours,



J. Dexter Peach
Assistant Comptroller General

Executive Summary

Purpose

Pesticides are used extensively in worldwide food production and residues of these chemicals may remain in foods imported into the United States. The Food and Drug Administration (FDA) is responsible for protecting the public by monitoring imported foods—both fresh and processed fruits and vegetables—for illegal pesticide residues. Illegal pesticide residues are those that are not allowed to be present on food or are present in greater concentrations than that authorized by the Environmental Protection Agency.

The Ranking Minority Member, House Committee on Government Operations, asked GAO to provide information on (1) how FDA selects samples of food for testing, (2) what pesticides FDA tests for, and (3) how FDA protects American consumers from consuming imported foods that contain illegal pesticide residues.

Background

The Federal Food, Drug, and Cosmetic Act gives FDA responsibility for prohibiting the importation of adulterated foods (including those that contain illegal pesticide residues). Under its pesticide monitoring program, FDA collects and analyzes samples of shipments of imported food to determine whether illegal residues are present. FDA works in cooperation with the Customs Service to take action against importers of shipments containing illegal pesticide residues. If illegal residues are found, FDA notifies Customs which in turn directs the importer to either destroy or export the shipment or take other action to bring the food into compliance with the act. Customs is to impose and collect monetary damages from importers who fail to comply unless FDA recommends otherwise.

Results in Brief

FDA samples only a very small percentage of imported food shipments, and the selection of which foods and shipments to sample are left to the individual judgment of FDA inspectors. GAO found that sampling tends to focus on foods imported in large quantities, leaving many other foods unsampled. GAO selected 40 foods to determine the sampling coverage nationwide and found that shipments from many of the countries exporting these foods were not being sampled even though they are being imported year after year.

FDA laboratories generally rely on one of five analytical methods to test imported food samples for illegal pesticide residues. Although these methods are capable of testing for most pesticides banned for use in the United States, cumulatively they can detect less than half the pesticides potentially available in world markets. FDA is limited in its ability to

better target testing because it lacks knowledge about which pesticides are being used in foreign countries.

Removing adulterated food shipments from the marketplace and assessing liquidated damages (monetary payments) where removal is not accomplished are key elements in FDA's monitoring program. If used effectively, these elements should serve to protect consumers and deter future violations. FDA has been unable to prevent the marketing of about half of the imported fresh fruits and vegetables that it has determined contain illegal pesticide residues. Further, liquidated damages for the distribution of such food in the United States are usually not assessed.

Principal Findings

Limited Sampling Performed

Given the large number of food shipments entering the United States each year that could contain illegal pesticide residues and the limited number of samples taken, FDA's pesticide monitoring program provides limited protection against public exposure to illegal residues in food. FDA annually samples less than 1 percent of approximately 1 million imported food shipments.

FDA's general sample selection criteria include (1) high-volume imports, (2) foods of high dietary significance, and (3) products with past pesticide residue problems. The extent to which these factors are applied depends on the individual knowledge and judgment of FDA inspectors at the various ports of entry.

Between fiscal years 1979 and 1985, FDA collected and analyzed 33,687 imported food samples and found that 2,056 (6.1 percent) contained illegal residues. A review of the samples taken in fiscal year 1984 indicates that a large percentage of these samples were high-volume imported foods, while many lower volume imported foods were not sampled. In addition, foods imported from many countries are not being sampled. For example, shipments from only 9 of 27 countries exporting cucumbers to the United States from 1983 through 1985 have been sampled. The country exporting the second largest volume of cucumbers to the United States as well as 16 other countries had not had their cucumber shipments sampled since at least 1978, according to available records. (See ch. 2.)

Lack of Pesticide Use Knowledge Hinders FDA

FDA generally uses multiresidue tests that can detect many pesticides on a single sample rather than single residue tests that can only detect one pesticide on a sample. FDA has five multiresidue tests that individually can detect from 24 to 123 pesticides. In combination these tests can detect 203 pesticides, less than one-half of the pesticide chemicals available for use worldwide. FDA laboratories normally use only one multiresidue method for each sample.

To select the proper test, FDA should have information on pesticides actually used on food produced in foreign countries. Little such information is currently available. Better information could be obtained from (1) U.S. manufacturers who export pesticides to countries that export food to the United States, (2) importers of food, if required to certify which pesticides were applied during food production, (3) a commercially available data source, and (4) cooperative agreements with foreign countries that export food to the United States. FDA is now in the process of obtaining commercially available data but will not know the impact of this data until later. (See ch. 3.)

Deterrents Against Adulterated Shipments Not Used

FDA's policy requires importers to maintain all sampled shipments intact until the agency determines that the product is free of illegal pesticide residues. In practice, however, FDA permits importers to release the majority of sampled shipments to U.S. markets to allow consumers to receive fresh fruits and vegetables before they spoil. FDA is to notify Customs if illegal residues are later found in the sample and Customs in turn is to notify the importer to return the shipment. If the shipment is not returned, Customs is required to assess liquidated damages unless FDA recommends otherwise. FDA usually recommends against assessing damages in those cases where it has not found previous violations by the grower during the current growing season.

Of 164 adulterated samples that GAO reviewed, 73 were not recovered and are presumed to have been consumed by the public. FDA recommended against damages in 52 of the 73 cases.

GAO was able to document only eight cases where importers were assessed damages. Damages in six cases had not been collected a year after being assessed. Thus about 45 percent of the adulterated shipments are reaching consumers with few importers paying damages. The irony is that the importer that recovers and disposes of the adulterated shipment incurs an economic loss while those that do not, incur no economic loss.

In order for the public to be protected from adulterated shipments and for the monitoring program to be an effective deterrent against such shipments, GAO believes that all importers of shipments determined to be adulterated should be assessed damages when the adulterated food is not removed from the marketplace. (See ch. 4.)

Recommendations

GAO recommends that the Secretary, Department of Health and Human Services, direct the FDA Commissioner to

- redirect sampling coverage to a wider range of imported foods and countries (see p. 30) and
- consider several options for obtaining additional information on pesticides actually used in foreign food production and to test for these pesticides (see p. 38).

In order to provide a deterrent against adulterated food shipments, GAO recommends that

- the Secretary, Department of Health and Human Services, direct the Commissioner, FDA, to stop recommending against liquidated damages on the importers of food shipments containing illegal pesticide residues that are not recovered (see p. 48) and
- the Secretary, Department of the Treasury, direct the Commissioner, U.S. Customs Service, to either recover the shipment or assess and collect damages from importers in all cases when FDA determines food has been adulterated with illegal pesticide residues (see p. 48).

Agency Comments

The views of responsible officials were obtained during our work and are incorporated in this report where appropriate. As requested, GAO did not obtain official agency comments on a draft of this report.

Contents

Appendixes

Tables

Abbreviations

CED	Community and Economic Development Division, GAO
EPA	Environmental Protection Agency
FDA	Food and Drug Administration
FFDCA	Federal Food, Drug, and Cosmetic Act
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
GAO	General Accounting Office
HRD	Human Resources Division, GAO
RCED	Resources, Community, and Economic Development Division, GAO
USDA	U.S. Department of Agriculture

Introduction

Pesticides are extensively used in food production worldwide to destroy or control weeds, insects, fungi, and other pests. While pesticides enhance agricultural productivity, human exposure can cause adverse health effects. Some pesticides have been shown to cause cancer or birth defects and may persist in the environment for long periods of time, accumulating in the tissues of plants, animals, and humans. Many pesticides used in food production remain on food and are ingested along with the food. Exposure to residue levels above certain amounts may create health risks to humans. The Environmental Protection Agency (EPA) determines the pesticide residue levels allowed on food grown and/or sold in the United States, and the Food and Drug Administration (FDA) monitors the food supply to enforce those levels.

The monitoring of pesticide residues in imported foods is a concern because such food is a significant portion of U.S. domestic food consumption. U.S. Bureau of Census data indicate that 21.7 million tons of food, valued at $19.8 billion, was imported into the United States in fiscal year 1985. This quantity included 7.3 million tons of fresh fruits and vegetables valued at $6.3 billion. Imported fresh fruits have increased from 21.8 percent of the total U.S. supply in fiscal year 1970 to 25.7 percent in fiscal year 1984. Imported fresh vegetables increased from 5.3 percent of total U.S. supply in fiscal year 1970 to 6.2 percent in fiscal year 1980, but declined to 5.6 percent in 1981—the last year for which comparable data were available.

The regulation of pesticide use in the United States is governed by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (7 U.S.C. 136 et seq.) which assigns responsibility for federal registration of pesticides and their use to EPA. The regulation of the amount of pesticides allowed in food is governed by the Federal Food, Drug, and Cosmetic Act (FFDCA)(21 U.S.C. 301 et seq.) which assigns responsibility to (1) EPA for determining the amount of individual pesticide residues (referred to as pesticide tolerances[1]) that are allowed to be present in specific foods without causing the food to be considered legally adulterated and (2) FDA to enforce the pesticide residue tolerances established by EPA for all food products except for meat, poultry, and eggs. The U.S. Department of Agriculture (USDA) monitors meat, poultry, and eggs for illegal pesticide residues under the Federal Meat Inspection Act (21 U.S.C. 601 et

[1]A pesticide residue tolerance represents an amount of the pesticide residue that EPA has concluded can be consumed without presenting an unreasonable health risk and that should not be exceeded on the crops for which it is registered when it is used as specified in its federal registration.

seq.), the Poultry Products Inspection Act (21 U.S.C. 451 et seq.), and the Egg Products Inspection Act (21 U.S.C. 1031 et seq.).

The use of pesticides on food in other countries is not governed by U.S. regulation, but rather by the laws of the country where the food is grown. These laws vary among the many countries that export food to the United States. However, the food that is imported into the United States is subject to U.S. regulations concerning what chemical residues are allowed on specific food crops and in what amounts.

FDA's Role in Monitoring Imported Food for Illegal Pesticide Residues

The purpose of FFDCA is to protect the public from unsafe foods and other products. Section 801 of the act authorizes FDA to examine samples of foods being offered for import into the United States. The U.S. Customs Service is authorized, under section 801, to refuse admission of any food presented for import into the United States, if it determines that the product is adulterated. The act specifies that a food shipment is adulterated if, among other things, it contains either (1) any pesticide residue that is not subject to an EPA-approved tolerance (i.e., approved by EPA for use on or in that food) or (2) a pesticide residue in an amount greater than the tolerance level established by EPA for that food under sections 408 and 409 of the act.[2] Such products are to be destroyed, re-exported, or in appropriate cases, allowed admission if other action brings it into compliance with the act. Customs may authorize delivery of imported food shipments to the owner or consignee, pending a decision on admission, if the broker, agent, or shipper (herein referred to as the importer) executes a bond providing for payment of liquidated damages if the shipment is adulterated or otherwise fails to comply with FDA admissibility requirements. Customs will assess and collect damages if shipments are not re-exported, destroyed, or reconditioned to comply with the act.

Under this authority FDA can request Customs to detain imported food that FDA suspects, either from past experience or initial sampling results, contains illegal pesticide residues. The food cannot move into U.S. commerce until it has been either further tested by FDA or until the importer presents a certification that it has been analyzed by a laboratory and is free of illegal pesticide residues.

[2]FFDCA also defines an adulterated product as one that is defective, unsafe, filthy, or not produced under sanitary conditions.

FDA's pesticide monitoring efforts are carried out through its chemical contaminants program—one of many programs FDA has responsibility for under the law. Under the contaminants program, FDA collects and analyzes food, animal feed, and other products for industrial chemicals, heavy metals, and pesticides to (1) assure that residue levels comply with established tolerances, (2) remove products found to contain illegal residues from interstate commerce, and (3) deny entry of adulterated products offered for import into the United States. FDA monitors imported foods for illegal pesticide residues by selectively sampling raw and processed food and feed products when they arrive at U.S. Customs ports of entry.

Imported food shipments are sampled for pesticide residues under FDA's general import food monitoring program and a special program for pesticides in Mexican produce. (Mexican imports account for a substantial percentage of all fresh fruits and vegetables consumed in the United States during the winter months.) FDA collects and analyzes two types of samples. Surveillance samples are collected by FDA inspectors without any suspicion that illegal pesticide residues are present. Compliance samples are collected when FDA finds illegal residues in a surveillance sample or when other information leads inspectors to suspect the presence of illegal residues. Compliance samples, taken as a result of violative surveillance samples, are normally taken from subsequent shipments entering the United States from the same importer or grower.

FDA consists of a headquarters staff, 10 regional offices, 22 district offices, and 20 laboratories (16 of which routinely analyze food samples for pesticides). Most staff associated with pesticide monitoring are located in the district offices and laboratories and include chemists and laboratory support staff who test food samples for residues, as well as investigators who collect food samples at the various U.S. Customs ports of entry. During fiscal year 1985, FDA's total budget was about $397.5 million and 7,000 staff years. FDA allocated about $13.7 million (3.4 percent) and 309 staff years (4.4 percent) of the budget to monitoring both domestic and imported foods, animal feeds, cosmetics, and other products for pesticides. About one-third of all samples collected and analyzed are for imported foods, animal feeds, processed foods, cosmetics, and other products.

This report addresses FDA's efforts to enforce prohibitions against illegal pesticide residues on foodstuffs imported into the United States. It does not address pesticide residues in imported meat, poultry, and eggs which are monitored by USDA.

Objectives, Scope, and Methodology

In a June 3, 1985, letter, the Ranking Minority Member, House Committee on Government Operations, asked us to provide information on (1) how FDA selects samples of imported foodstuffs for testing, (2) what pesticides FDA tests for, and (3) how FDA protects American consumers from consuming imported foods that contain illegal or unacceptable levels of pesticide residues.

To address these questions, we performed work at FDA headquarters in Washington, D.C., and Rockville, Maryland. We also performed work at FDA's Dallas, Los Angeles, and New York district offices. These locations were selected because they represent about two-thirds of all imported food samples selected in fiscal year 1985 and provide a good mix of imported commodities monitored under FDA's Mexican Import Program and the General Import Program (all importing countries excluding Mexico). We also reviewed records and interviewed officials at the U.S. Customs Service district offices in the three FDA districts we visited and officials at Customs' headquarters.

To understand FDA's program for monitoring imported foods for pesticide residues, we reviewed the agency's policies, procedures, laws, and regulations. We also interviewed officials at FDA headquarters and district offices, including FDA inspectors at ports of entry and laboratory personnel, to obtain their views on agency procedures.

To assess FDA enforcement actions for shipments of imported foods, we reviewed all shipments with illegal residues identified in FDA's Dallas, Los Angeles, and New York districts in fiscal year 1985. We reviewed FDA's follow-up actions to determine whether FDA was effective in removing these shipments from the market. For each violation, we attempted to identify (1) the enforcement action taken, (2) the value of the shipment in violation, (3) the amount of the damages assessed, and (4) the amount of damages ultimately paid.

To obtain information on foreign uses of pesticide chemicals, we contacted the following federal agencies and private sector organizations: USDA's Animal and Plant Health Inspection Service, Foreign Agricultural Service, Food Safety and Inspection Service, and Agricultural Research Service; EPA's Office of International Activities; the Department of State's Agency for International Development; and the National Agricultural Chemicals Association.

To review the distribution of FDA samples over the various imported food commodities, we obtained data on the volume of imported commodities from USDA's Report of U.S. Imports of Fruits and Vegetables Under Plant Quarantine Regulations, fiscal year 1984. We compared the volume of commodities imported in fiscal year 1984 with FDA samples taken by FDA district offices in fiscal years 1984 and 1985. Fiscal year 1985 volume data were unavailable at the time of our review.

We obtained automated copies of FDA's Laboratory Management System data files directly from their Division of Chemical Technology. This file contained data on samples taken by FDA for fiscal years 1979 through 1985. We also used the Bureau of Census, Foreign Trade Division's, import volume data. This file contained information on the volume of foodstuffs imported by country of origin for fiscal years 1979 through 1985. Fiscal year 1982 data was not used due to a problem with the product description field which was not recorded in that year. We then standardized these data files and compared the volume of foodstuffs imported with the number of samples taken and the results of those samples. We did not test the general and application controls of the systems which capture these data. However, we selectively verified the results of our analysis against published reports.

Our review was performed between November 1985 and April 1986, with additional information obtained through August 1986. The views of directly responsible officials were obtained during the course of the work and are incorporated in the report where appropriate. As requested, we did not obtain official comments on a draft of this report. Except as noted above, our work was conducted in accordance with generally accepted government auditing standards.

FDA Could Improve Sampling Coverage of Imported Commodities

FDA's monitoring program for pesticide residues in imported foods is based on selective sampling of a small number of shipments—less than 1 percent of all imported food shipments. FDA headquarters provides general guidance for sample selection, but the actual selection of commodities to be sampled, however, is the result of thousands of on-the-spot judgments made by individual FDA inspectors at the various ports of entry.

During fiscal years 1979 through 1985, FDA took about 33,700 samples of imported food and found that 6.1 percent of the samples contained illegal pesticide residues. In any given year, a number of commodities are not being sampled in the districts we reviewed while in the same year other commodities are extensively sampled.

Nationally, we found that while overall most of the 40 commodities we looked at were sampled over a 6-year period, shipments from many countries that regularly exported those commodities to the United States were unsampled. For example, cucumbers or cucumber products were imported from 27 countries in each of fiscal years 1983 through 1985, but shipments from 18 of those countries were never sampled, including shipments from the country with the second largest import volume of this commodity. This commodity had a violation rate of approximately 7.7 percent during these 3 years. Cucumbers from 17 of the 18 countries had not been sampled in any of the 6 years covered by our analysis. Our analysis raises concerns about FDA headquarters efforts to provide coverage of a wide range of commodities and importing countries.

A comprehensive monitoring summary of (1) food commodities being imported, (2) the country importing the food, (3) the samples taken, and (4) the violations found would provide FDA with sufficient information that could be analyzed to determine where adjustments could be made in its sampling program. For example, in one district over 500 samples of tomatoes were taken in each of the last 2 fiscal years, with only one violation in each year, while melons (other than watermelon and muskmelon) were not sampled at all. Such a summary would also assist the Congress in its oversight responsibilities in independently evaluating how well FDA is carrying out its sampling program.

When adulterated shipments are found, the importer of that commodity is placed on compliance status and is subject to follow-up sampling on future shipments. If the problem continues, importers must have every shipment of the commodity in question tested before it is allowed to

enter the United States. This is called certification status. Importers are removed from compliance status when samples of subsequent shipments indicate acceptable levels of pesticide residues. Similarly, certification status may be ended when the importer explains why the problem occurred and that future shipments will not contain unacceptable levels of the pesticide in question. If the problem has not been solved by the end of the growing season, the importer/commodity is automatically removed from certification or compliance status and not continued into the next growing season.

Factors to Be Emphasized in Sample Selection

FDA uses a decentralized approach to sampling imported foods as they arrive at U.S. entry points. While general guidance is provided to the various district offices, the products to be covered and the number of samples to be collected and analyzed are determined by each district. This allows districts to judgmentally select samples based on the specific commodity/country combinations characteristic of the imports entering its ports of entry.

FDA inspectors make a variety of checks of imported food shipments. These include (1) rapid visual checks for damage, spoilage, odor, and labeling, (2) actual physical examination sufficient to determine whether the product is in compliance or that sampling is needed, and (3) taking a sample of the shipment for laboratory analysis for acceptable levels of pesticide residues.

FDA headquarters provides general criteria for use by field inspectors in deciding which imported food shipments to sample. This guidance suggests that inspectors should emphasize the following factors in selecting samples for analysis:

- High-volume products.
- Foods of high dietary significance.
- Past problems with pesticide residues on a product.
- Collect most samples during peak shipping periods. (The winter months represent a large share of the yearly totals, especially for imports of Mexican produce).
- Priority coverage to raw products (FDA has found that pesticide levels in processed foods are usually significantly less than levels in raw products).

According to FDA officials in the three districts we visited, headquarters provides some additional information which may result in priority sampling for specific commodities. This information consists of:

- Import alert notifications that provide information to district offices about unusual or new problems. Import alerts serve as nationwide notifications of problems encountered with a specific commodity at one or more ports of entry. Alerts are intended to provide timely information to inspectors if problem commodities identified in one district are routinely entering or are directed to other ports of entry.
- Weekly and monthly detention lists indicating administrative actions taken by FDA against imported articles (including foodstuffs) that are not in compliance with the laws FDA administers. These lists are to provide information on commodities detained in all FDA districts and may be indicators of emerging problems that should be considered in sample selection.
- Special surveys directed by FDA headquarters to obtain data on pesticides that pose a potential health risk but which are not detected by the testing methods generally used by FDA laboratories in analyzing food.

In addition to general guidance from headquarters, FDA district personnel accumulate other information on imported foods. This information includes knowledge about past problems with foodstuffs imported by a specific importer or country, or specific crops with high violation rates in past years. Using this information, district offices have considerable discretion in the selection of imported foods for sampling and analysis. Inspectors generally try to concentrate their sampling on high-volume imported commodities and those with known or suspected problems with pesticide residues.

Inspector Judgments Determine Sample Selection

The samples actually taken at a port of entry are normally the result of professional judgments made by individual FDA inspectors. Although laboratory personnel, compliance officers, and field inspectors may discuss specific commodities needing coverage, field inspectors generally make on-the-spot sampling decisions as imported foods arrive at the ports of entry.

The guidance discussed above is general information to be considered by FDA inspectors in making their sample selection. Use of this guidance is affected by the environment in which the selections are made. FDA inspectors at border crossings along the U.S.-Mexican border, for example, do not know which commodities will be presented for entry on

any given day. Therefore, sample selection is based on memory of past sampling activities as well as suspicion that illegal pesticide residues may be present. Consequently, an inspector must make a decision to sample or not sample each shipment as it arrives at the port of entry.

At Nogales, Arizona, where FDA officials estimate that 70 percent of the Mexican produce entering FDA's Los Angeles district crosses the border, inspectors indicated they are unable to systematically select samples to ensure they comply with the guidelines. Usually one FDA inspector is on duty at Nogales from 8:30 a.m. to 4 p.m. Sunday through Thursday, but the port of entry is open from 6 a.m. to 8 p.m. daily. Therefore, no inspector is present on Fridays and Saturdays. During peak shipping seasons, the inspector is unable to review all import documents in detail because several hundred trucks may arrive daily and documents are not available until the trucks reach the border crossing.

The FDA inspector stationed at Hidalgo, Texas, is also responsible for border crossings at two other locations. These three points of entry are spread over a distance that makes it almost impossible for one inspector to monitor all imported food shipments. In this case, as at Nogales, documentation for shipments arriving when an FDA inspector is unavailable are generally not reviewed. As a result, commodities are unlikely to be considered for sampling unless the importer or commodity has been specifically identified by the FDA inspector based on earlier problems. In this case, Customs officials may collect the sample in the absence of the FDA inspector.

According to an official of the Los Angeles district office, the district has not expanded on the headquarters guidance for sample selection. The district's informal guidance suggests that inspectors sample all commodities being imported but sample those with few past violations less and sample those with high rates of past violations more. Officials indicated that inspectors depend on their experience, knowledge, and memory to recall what commodities are being imported, which have been sampled, and which have high violation rates. The inspectors then make the day-to-day decisions about sampling.

Sampling Mainly Covers High-Volume Imported Foods

FDA's judgmental approach results in an uneven distribution of samples over the various imported foods. Such a distribution is inevitable given FDA's strategy of sampling commodities of high dietary significance. Because of the emphasis placed on high-volume imports and known or suspected problems, FDA's annual coverage is likely to result in little or

no sampling of low-volume imports in the absence of problems which would necessitate increased sampling of such commodities.

Appendixes II through VI show the 15 highest volume foods imported into FDA's Dallas, Los Angeles, and New York districts in fiscal year 1984 and the number of samples taken for these commodities.

In the Dallas and Los Angeles districts, about 74 percent, and 86 percent, respectively, of the samples taken and analyzed for illegal pesticide residues in fiscal year 1984 were from shipments of the 15 highest volume commodities. In these districts, these 15 commodities accounted for about 85 percent and 95 percent, respectively, of Mexican import volume. The 15 highest volume commodities accounted for more than 99 percent of imports into both districts from other countries. In the New York district, the 15 highest volume commodities made up about 55 percent of the samples taken and analyzed for illegal pesticide residues in fiscal year 1984 and accounted for about 98 percent of the import volume.

As indicated above, FDA sampling is concentrated on high-volume commodities. However, many commodities are not sampled. For example,

- In fiscal year 1984, FDA's New York district office took 391 samples of 38 imported commodities, but took no samples of 50 other commodities, including 2 of the 15 highest volume foods. In fiscal year 1985, 330 samples were taken of 39 commodities, with 52 unsampled.
- In fiscal year 1984, FDA's Los Angeles district office took 2,420 samples of 39 commodities imported from Mexico. However, 24 commodities imported from Mexico were not sampled during fiscal year 1984. In the same year Los Angeles took 168 samples of 21 commodities imported from countries other than Mexico, but 98 commodities were not sampled, including 5 of the top 15 commodities by volume.
- The Los Angeles district took 596 samples of imported Mexican tomatoes in fiscal year 1984 and found only one sample adulterated because of pesticide residues. Despite the lack of violations in 1984, the district took 561 samples of Mexican tomatoes in fiscal year 1985. Again only one sample was found to be adulterated.

In our opinion it seems reasonable that some samples could be redirected from heavily sampled food commodities to cover other foods as was done in FDA's Dallas district. For example, in fiscal year 1984, Dallas took 962 samples of 99 fresh and frozen imported foods, but 46 foods were not sampled. In fiscal year 1985, however, all foods not sampled in 1984 were sampled at least once.

FDA officials point out that some relatively high-volume foods are sampled relatively few times annually because they have no history of problems with illegal pesticide residues. On the other hand, other commodities of relatively small volume (peppers in the Dallas district ranked 10th in volume but were sampled 110 times in 1984) have had recent problems with illegal residues and warrant more sampling. Mexican tomatoes, for example, are heavily sampled despite few recent violations because of the extremely large volume as compared with other imported commodities. An FDA official at Nogales, Arizona, pointed out that Mexican tomatoes are heavily sampled because the FDA district has a requirement to take about 30 import samples per day at this port of entry during peak shipping seasons. In many cases, according to this official, tomatoes are the most readily available commodity to ensure the quota is met.

FDA does not produce a comprehensive monitoring summary containing (1) the commodities being imported, (2) the country of origin, (3) the volume, (4) the number of samples taken, and (5) the number of violations. The information is available from various sources within FDA and other federal agencies; however, FDA has not compiled all of this information. Such a summary would enable FDA headquarters to analyze what each district is doing and what coverage is being given on a nationwide basis. Thus, FDA would be able to make adjustments in its program within current resources as in the case with the sampling of tomatoes. Also such a summary would assist the Congress in its oversight responsibility of independently reviewing coverage of imported food.

FDA believes its current approach to sampling is the most efficient and effective within available resources. FDA concentrates on commodities of high dietary importance (tomatoes are consumed more than artichokes) and gives priority to monitoring those pesticides posing the greatest health risks and those commodities posing the greatest potential for containing high residue levels at the time of consumption. The program is flexible, however, and allows for shifts in emphasis as new problems are identified. For example, a commodity of low dietary significance may warrant increased sampling, if a pattern of violative residues is indicated. FDA believes this approach is more effective than attempts to randomly sample all commodities.

Food From Many Countries Are Not Being Sampled

Our review of national statistics for fiscal years 1983 through 1985 for 40 selected food commodities showed that while all of these commodities were sampled at least once, foods from many of the importing countries were not sampled even though they are imported year after year. (See app. I for a summary of the 40 food commodities.) Some of these same foods had not been sampled in 6 years. We believe FDA should improve the sampling of foods that are imported from various foreign countries and not concentrate its sampling on a limited number of foods or countries. This situation provides additional evidence that FDA needs to prepare a comprehensive monitoring summary in order to conduct an analysis upon which an improved sampling program can be based.

To determine what FDA was sampling on a nationwide scale, we listed for each of the three districts where we conducted our detailed work the top 10 commodities by volume, the top 10 commodities that were most frequently sampled, and the top 10 commodities by volume that were not sampled. Since a number of commodities appeared on more than one list, the final list contained 40 commodities. We then compared Census data on foods imported into the United States with FDA data on commodities sampled in fiscal years 1983-85 as explained in the Objectives, Scope, and Methodology section. (See ch. I.)

This analysis was done for the selected commodities to determine if, over a period of years, FDA was sampling imports of the individual commodities from all the countries that were exporting the commodity to the United States. Our analysis showed that imports of the individual commodities from many countries had gone unsampled in the 3 fiscal years, 1983 through 1985. For example, the United States imported cucumbers from 50 different countries during this 3 year period and from 27 countries in each of the 3 years. However, FDA sampled shipments of cucumbers from only 9 of the 27 countries. Further analysis showed that cucumbers from 17 of these countries had not been sampled in any of the 6 years for which we had data, including the country from which we imported the second largest volume. During these 6 years FDA took 1,561 samples of imported cucumbers and found that about 6.9 percent of them contained illegal pesticide residues. Similar information is presented on the 40 selected commodities in appendix I for fiscal years 1983 through 1985.

In addition, some commodities with low or no violations are being sampled heavily. Tomatoes or tomato products (the second largest volume commodity) were sampled 2,210 times by FDA during fiscal years 1983 through 1985 in spite of a violation rate of less than 1 percent. Even

with the high level of sampling, shipments from 17 of the 30 countries regularly exporting tomatoes to the United States were not sampled.

While there might be some valid reasons for this lack of coverage of some food commodities being imported on a regular basis, the large number of different foods imported from various countries not being sampled indicates a need for FDA to re-evaluate its overall sampling plan for imported foods. There also appears to be some oversampling, e.g., tomatoes. It is important to note that these are commodities that are regularly being imported into the United States. As we have previously stated, a comprehensive monitoring summary would assist FDA in this task as well as provide a vehicle for independent congressional oversight.

Results of Imported Food Sampling

FDA's monitoring of imported foods indicates that between 1979 and 1985 about 6.1 percent of the samples collected and analyzed were found to contain illegal pesticide residues.

FDA data indicate that 2,056 of 33,687 imported food samples contained illegal residues. Imported food samples containing illegal residues ranged from a high of 8.2 percent in 1981 to a low of 4.7 percent in 1983. Table 2.1 shows the number of imported food samples collected and the violation rates for fiscal years 1979 through 1985.

Table 2.1: Violation Rates of Imported Food Samples Analyzed by FDA in Fiscal Years 1979 Through 1985

Fiscal year	Samples collected and analyzed	Samples containing illegal residues	Violation rate (percent)
1979	3,635	225	6.2
1980	4,515	305	6.8
1981	4,401	362	8.2
1982	4,050	299	7.4
1983	5,190	245	4.7
1984	5,948	290	4.9
1985	5,948	330	5.5
Total	**33,687**	**2,056**	**6.1**

Since fiscal year 1979, FDA has conducted a special surveillance program for pesticide residues in produce imported from Mexico. This program came about because Mexican produce represents a substantial percentage of fruits and vegetables consumed in the United States during

the winter and because past FDA sampling showed a relatively high violation rate for pesticide residues in Mexican produce. The major concern was for residues of pesticides on crops for which usage in the United States is prohibited. The program included

(1) a significant increase in the number of samples taken,

(2) use of analytical methods that detect residues of pesticides approved by the Mexican government,

(3) improved information exchange between the district offices (Los Angeles and Dallas) that participate in the program, and

(4) more rapid determination of the regulatory significance of a pesticide residue finding and initiation of regulatory action as appropriate.

FDA data indicate that, during the period 1979 to 1985, 1,005 of 18,292 samples of commodities imported from Mexico (5.5 percent) were found to contain illegal pesticide residues. Samples of Mexican foods containing illegal residues ranged from a high of 8.1 percent in 1980 to a low of 4.2 percent in 1983.

Table 2.2 shows the number of Mexican import samples collected and the violation rates for fiscal years 1979 through 1985.

Table 2.2: Violation Rates for Mexican Produce Program in Fiscal Years 1979 Through 1985

Fiscal year	Samples collected and analyzed	Samples containing illegal residues	Violation rate (percent)
1979	1,455	88	6.0
1980	2,194	177	8.1
1981	2,142	114	5.3
1982	2,291	152	6.6
1983	3,511	151	4.3
1984	3,329	168	5.0
1985	3,370	155	4.6
Total	**18,292**	**1,005**	**5.5**

FDA data indicate that, during 1979 to 1985, 1,051 of 15,395 samples of commodities imported from countries other than Mexico (6.8 percent) were found to contain illegal pesticide residues. Samples of foods from

these countries containing illegal residues ranged from a high of 11 percent in 1981 to a low of 4.6 percent in 1984. Table 2.3 shows the number of imports from countries other than Mexico and the violation rates for fiscal years 1979 through 1985.

Table 2.3: Violation Rates for FDA's General Import Program (All Countries Except Mexico) **in Fiscal Years 1979 Through 1985**

Fiscal year	Samples collected and analyzed	Samples containing illegal residues	Violation rate (percent)
1979	2,180	137	6.3
1980	2,321	128	5.5
1981	2,259	248	11.0
1982	1,759	147	8.4
1983	1,679	94	5.6
1984	2,619	122	4.6
1985	2,578	175	6.8
Total	**15,395**	**1,051**	**6.8**

These data indicate that the overall violation rate for Mexican imports has been lower than the rate for other importing countries (5.5 percent compared with 6.8 percent) during the period 1979 through 1985.

FDA officials told us the violation rates indicated in Tables 2.1 to 2.3 are higher than the percentage of violations FDA finds when sampling without suspicion that a violation exists (surveillance sampling). Conversely, samples taken after a violative surveillance sample from the same grower/shipper, or because other information leads FDA officials to suspect a problem (compliance samples), have higher violation rates. Tables 2.4 and 2.5 show the difference in violation rates for surveillance and compliance samples under FDA's Mexican Produce Program and the General Import Program.

Table 2.4: Violation Rates for Surveillance and Compliance Samples Taken Under FDA's Mexican Import Program in Fiscal Years 1979 Through 1985

Figures in Percent

Year	Surveillance samples	Compliance samples
1979	4.4	18.1
1980	5.3	17.1
1981	3.2	22.2
1982	4.2	26.7
1983	2.7	18.2
1984	3.1	23.0
1985	2.7	20.3
Overall violation rate	**3.4**	**20.2**

Table 2.5: Violation Rates for Surveillance and Compliance Samples Taken Under FDA's General Import Program in Fiscal Years 1979 Through 1985

Figures in Percent

Year	Surveillance samples	Compliance samples
1979	5.3	6.2
1980	4.2	6.6
1981	8.0	11.8
1982	6.2	9.1
1983	3.2	7.0
1984	3.9	5.6
1985	6.2	7.8
Overall violation rate	**5.2**	**8.1**

Tables 2.4 and 2.5 clearly demonstrate that violation rates for compliance samples, especially in the Mexican Produce Program, are significantly higher than violations rates for samples selected randomly, without suspicion.

Targeting of Problem Crops and Growers Could Be Improved

FDA's monitoring program of imported food provides for follow-up (compliance) sampling of importers who enter shipments containing illegal pesticide residues. This follow-up is required only until the end of the growing season where the first violation occurred. The requirement is not carried over to the next year even if the problem remains at the end of a growing season.

FDA's monitoring procedures vary depending on past experience with the various importers, growers, or commodities. FDA's approach to sampling both imported and domestic foods is based on the principle that samples are ordinarily selected randomly, without suspicion that the shipment

may contain illegal pesticide residues. These samples are called surveillance samples. Importers may release these shipments into domestic commerce before sample analysis is completed. When violative shipments are found, however, the importer or grower of that commodity is subject to follow-up sampling on future shipments. Compliance samples are samples that are collected after an illegal residue has been found or when other evidence (information relating to the grower, importer, or conditions within the country of origin) indicates the likelihood of a violation. Importers are required to maintain control of these shipments until sample analysis is completed and FDA gives notice of release. If violations continue, the importer may be required to present a certificate of analysis showing that each shipment does not contain unacceptable levels of the pesticide in question.

Officials in the Dallas and Los Angeles districts normally place an importer, grower, or commodity on compliance sampling after one violative surveillance sample. However, the New York district samples all foodstuffs on a compliance basis. When two violative compliance samples are found during the same growing season (usually illegal residues of the same pesticide on the same commodity from the same shipper or grower) the commodity is placed in certification status. Under certification, FDA requires that imported produce be accompanied by a certificate of analysis from a private laboratory indicating that the shipment complies with the pesticide tolerance levels set under the Federal Food, Drug, and Cosmetic Act. Shipments accompanied by a certificate of analysis are normally released into the United States without FDA sampling and analysis. FDA may, however, periodically analyze samples of food under certification to audit the validity of the certificates. Suspect shipments subject to the certification requirement, but not accompanied by a certificate, are to be refused entry. In fiscal year 1985, six commodities were placed on certification in Dallas, four in Los Angeles, and none in New York.

Although guidelines were proposed in fiscal year 1986, FDA did not have guidelines for audits of certificates of analysis presented by importers at the time we conducted our field work. The districts we contacted used varying approaches for auditing certificates of analysis. For example, the Dallas district did periodic parallel sampling and compared analytical results with residue levels indicated on the certificates. We could not determine the total number of audit samples taken in fiscal years 1984 and 1985. However, according to officials in FDA's Dallas laboratory, in fiscal year 1985 two of six audit samples of serrano peppers certified to be below tolerance levels exceeded tolerance and were violative. In the

Los Angeles district, independent laboratories were required to submit documentation indicating that laboratory procedures were of sufficient professional quality to guarantee valid results. The laboratory did its own analysis if the documentation was found to be insufficient. The Los Angeles district indicated that nine shipments were sampled to verify independent FDA laboratory analyses in fiscal years 1984 and 1985. New York district officials indicated they had placed no importer on certification since 1983 and therefore performed no audits.

Importers remain on compliance or certification status for the remainder of a growing or shipping season or unless otherwise removed. An FDA district may remove the requirement if the grower or shipper demonstrates that

(1) the residue problem no longer exists or

(2) the produce to be shipped is orginating from fields that were not treated with the pesticide in question.

However, if the requirement has not been removed for one of these reasons by the end of the growing season, it is automatically removed and not extended into the next growing season even if the problem has not been solved. FDA's position is that new growing seasons may be characterized by new climatic conditions and new pest problems and, therefore, may require the application of different pesticides than in prior years. Because of these factors, each growing season is considered independently.

An importer or grower may be removed from certification or compliance if he/she submits a letter explaining how violations occurred and how future problems will be avoided. We found no indication that FDA does follow-up work to verify that the information contained in such letters is factual. FDA officials said they cannot directly review the pesticide practices used in foreign countries, because they have neither the authority nor the resources to do so. They said that district offices do perform follow-up sampling after an importer or grower is removed from certification or compliance status.

Conclusions

Given the huge number of imported food shipments presented for entry into the United States, FDA is faced with an enormous task of sampling for violative levels of pesticide residues. FDA headquarters provides general guidance for sampling, with the actual selection of imported food

samples dependent on the knowledge and judgments of individual inspectors at the various ports of entry. These individual decisions result in uneven coverage of imported foodstuffs. Analysis of FDA's commodity coverage in the three districts where we conducted our review indicates that high-volume imports are heavily sampled, but many other commodities are not sampled. Nationwide statistics that we were able to compile on selected commodities show that many commodities imported on a regular basis from many countries are not being sampled.

Although FDA believes its current approach is better than attempts to randomly sample all commodities, we believe coverage of a wider range of foods is warranted. For example, continued sampling of one commodity with few or no violations (nearly 600 samples of tomatoes in the Los Angeles district in fiscal years 1984 and 1985 when only one violation is found each year) is not the most efficient use of resources. It seems reasonable that some of these samples could easily be redirected toward other commodities that may otherwise not be sampled. Also it may allow sampling of commodities that are not currently sampled from many importing countries. This would put importers on notice that FDA will be testing most if not all commodities and more care might be taken in the use of pesticides. Thus, this coverage would act as a deterrent against future adulterated food shipments.

To assist FDA in analyzing its commodity coverage, we believe a comprehensive monitoring summary containing the commodities being imported, the country of origin, the volume, the number of samples taken, and the number of violations should be produced. This information is available from various sources within FDA and at other federal agencies, but the information is not currently compiled and used in a formal systematic way by FDA for imported food as we believe it should be done. Such a summary would allow FDA to look at its entire program and make those adjustments needed to make its monitoring program more effective. Such a summary would also assist the Congress in its independent oversight of the program.

When FDA identifies imported foods or growers in violation of acceptable levels of pesticide residues, district offices do specific follow-up sampling through the current growing season or until the importer or grower provides information explaining that the problem no longer exists. Since FDA can do little to assure itself that a problem has been properly addressed, we believe the agency could ensure greater protection for consumers if problem crops and importers were specifically

targeted for follow-up (compliance or certification) sampling in succeeding growing seasons. This requirement would better ensure that problems do not carry over to succeeding growing seasons.

Recommendations to the Secretary of Health and Human Services

We recommend that the Secretary direct the FDA Commissioner to (1) redirect resources away from highly sampled commodities with low violation rates to provide coverage of a wide range of imported commodities and importing countries using a comprehensive monitoring summary to assist in the analysis and (2) improve monitoring of importers and commodities with histories of pesticide violations by continuing follow-up sampling and certification requirements through successive growing seasons.

FDA Testing of Imported Foods for Pesticide Residues Is Limited by a Lack of Information on Foreign Usage

The major problem facing FDA in testing imported food for pesticide residues is that FDA has limited knowledge about the pesticides used in foreign countries. We have identified several possible alternatives that FDA could pursue to obtain better information.

Normally, FDA tests food samples using one of five multiresidue methods that can detect a large number of pesticides but not all pesticides. These methods individually can detect from 24 to 123 pesticides, but cumulatively they can detect less than half of the pesticides currently in use worldwide. However, these methods are capable of detecting most pesticide chemicals that EPA has banned for use in the United States. Individual analytical methods would have to be used to detect each of the pesticides not detectable under these five multiresidue methods at the approximate cost and time it takes to test for a number of pesticides under one of the five multiresidue methods. Thus the more pesticides that can be detected by a multiresidue method, the greater protection FDA can provide to consumers of imported foods.

Testing Methods Do Not Cover All Possible Uses

FDA laboratories normally analyze food samples using one of five methods (multiresidue methods) that can detect a large number of pesticides on a single sample. However, the five methods, in combination, can detect less than one-half the pesticides available in world markets. Time and resource constraints prevent FDA from routinely using methods other than one of the five multiresidue tests or analyzing samples for all pesticides detectable by the five methods.

When analyzing a food sample, FDA may use test methods designed to detect one chemical (single residue method) or many chemicals (multiresidue method). The method used depends on the commodity sampled and the pesticides the laboratory officials believe were used during production. FDA laboratories normally analyze imported food samples for illegal pesticide residues with one of five multiresidue test methods. The test most frequently used in the districts we visited is capable of detecting approximately 120 different pesticide chemicals. The five multiresidue tests, in combination, cover 203 pesticide chemicals. FDA laboratories normally use only one multiresidue method to analyze food samples, however. Even in those cases, FDA may not test for all pesticides that the method is capable of detecting because of staff and equipment shortages and the amount of time required to perform a complete analysis.

FDA's routine testing methods detect less than one half the hundreds of pesticides that may be used in foreign countries. The International Union for Conservation of Natural Resources estimates that about 600 pesticides are available in international markets. Two surveys, conducted by the United Nations Food and Agriculture Organization's Codex Committee on Pesticide Residues, in 1981 and 1982, indicated that 364 chemicals were used as pesticides on 39 different crops in the 42 responding countries. The number of potential pesticide/commodity combinations to be monitored is astounding when we consider that hundreds of different food commodities are imported into the United States each year from approximately 100 foreign countries.

FDA maintains that routinely testing for many of the pesticides not covered by its multiresidue methods is not practical because it would require conducting numerous individual tests on each sample. Many of these additional tests are as costly or more costly, in terms of time, equipment, and staff resources, than the multiresidue tests. Therefore, if FDA were to regularly test food samples for pesticides not covered by its multiresidue tests FDA estimates that the time and resources needed to analyze an individual food sample could be increased several times over. The net result would be that FDA would in all probability have to considerably reduce the number of food samples it could analyze.

FDA officials said the agency recognizes the need to expand the capabilities of its multiresidue tests. However, this expansion would be extremely time consuming and costly. Consequently, FDA has concluded that the most effective approach is to expand the multiresidue methods and selectively test for pesticides that pose the greatest health risks.

Laboratories Exercise Discretion in Testing Imported Food Samples

The choice of the multiresidue test method(s) used to analyze individual imported food samples is made by the FDA laboratory conducting the analysis. The method is selected after considering factors such as (1) the type of food to be analyzed (some methods may be better for analyzing certain types of food, i.e., fatty foods versus non-fatty foods), (2) the pesticides that are known or suspected or most likely to be used on that particular type of food, (3) the type and amount of test equipment in the laboratory, and (4) the laboratory workload.

Laboratory officials in the Dallas, Los Angeles, and New York districts indicated they primarily use the multiresidue method that detects the greatest number of chemicals that are most likely to be used on the food being tested. These officials also said their testing is generally limited to

the one multiresidue method. Single residue methods are used when there are indications of a problem with a specific pesticide not detectable by the multiresidue method being used or to confirm the presence of a pesticide previously detected by a multiresidue method.

Although FDA's multiresidue tests are capable of detecting a number of pesticides, the tests are not normally done in a manner necessary to analyze each sample for all the pesticides the tests are capable of detecting. Detecting different types and groups of pesticides requires a difference in the way a test is carried out. The laboratory staff determines what pesticides will be tested based on available information about known or suspected uses of the pesticide in the producing country or pesticides found in previous analyses.

FDA officials have said that, even with reliable information on foreign usage, FDA would still be required to test for other pesticide residues of concern. In addition to pesticides applied directly to the crops, they may become contaminated with pesticides intended for other crops because of drift and persistence in the environment.

In order to analyze imported food samples for pesticide residues, FDA laboratories must make trade-offs between testing for all possible pesticide uses and testing for a limited number of pesticides based on available information, equipment, and staff resources. As an example of such trade-offs, consider the following. We asked officials at FDA's Dallas district laboratory to describe its coverage of chemicals registered for use on cabbage, okra, and tomatoes—three high-volume, highly sampled commodities imported into that district. According to laboratory staff, nine chemicals are registered for use in the United States on one or more of these commodities that are not detectable by the usual multiresidue test and evidence shows possible high-risk toxicity effects. In analyzing these commodities, the Dallas laboratory does not supplement its multiresidue tests with single residue tests designed to detect these nine chemicals because laboratory officials have no information that the chemicals are used extensively.

FDA Lacks Information on Pesticides Used in Foreign Food Production

FDA's ability to monitor imported foods for illegal levels of pesticide residues is limited by a lack of knowledge about actual pesticide use in foreign food production. While U.S. regulation of pesticides provides a good basis for knowing which chemicals to test for on specific domestically produced crops, FDA has little specific information about chemicals that may be produced and used by foreign growers. Such information is currently acquired from various sources, including trade publications, professional journals, international agricultural and environmental groups, data submitted by foreign growers or governments, and FDA data on residues found as a result of previous laboratory tests. All of these sources combined, however, provide little country-by-country information on specific pesticide/commodity combinations.

In addition to a lack of knowledge about pesticide chemicals manufactured and used overseas, FDA lacks country-by-country information about the ultimate destination and use of pesticides manufactured in the United States and exported to other countries. FDA's monitoring of imported food would be enhanced if the agency had specific export information on pesticides produced in this country that are registered for domestic uses on food crops and those that are not registered for domestic use. Because of a lack of authority and resources, FDA can do little to acquire information about pesticides made or sold overseas, but not registered for use in the United States. Also, little useful information is available about unregistered pesticides which are produced in the United States but sold to countries that export food to the United States.

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), administered by EPA, regulates the marketing and use of pesticides in the United States and requires that pesticide products be registered with EPA. Pesticides not intended for use in the United States, however, are not required to be registered but must comply with certain labeling and notification requirements. The objective of these requirements is to ensure that importing countries are aware of significant regulatory actions taken in the United States and that information on pesticides that have been deemed in this country to pose an unreasonable risk of adverse effects to man or the environment be brought to the attention of foreign countries.

Under Section 17 of FIFRA, an unregistered pesticide cannot be lawfully exported unless the exporter obtains a signed written statement from the foreign purchaser acknowledging that the purchaser is aware that the pesticide is unregistered and cannot be used in the United States. The statement is to be obtained for the first annual shipment of each

unregistered pesticide to a particular purchaser for each importing country, a copy of the statement along with certification that the export was performed following receipt of the statement must be submitted to EPA. Under EPA regulations this requirement does not apply to subsequent shipments occurring in the same year.

Section 7 of FIFRA and implementing regulations require that all registered pesticide-producing establishments submit annual reports to EPA by February 1 of each year. Manufacturers must report the types and amounts of pesticides and devices produced and those produced and sold or distributed in the past year. These reports provide EPA information on pesticides produced in the United States and sold domestically and those produced in the United States and exported but does not include the specific countries where the products were exported. Reporting under sections 7 and 17 of FIFRA, therefore, does not assist FDA in obtaining detailed information on foreign use of pesticides unregistered for use in this country.

Options for Obtaining Information on Foreign Pesticide Use

To perform cost-effective testing of imported food samples, FDA needs better information on the pesticide chemicals used on foreign crops. FDA's current approach is to do selective monitoring of imported foods with emphasis on crops with known or suspected problems with pesticide residues. Currently, little foreign pesticide usage information is available. Such information would be invaluable since FDA's testing could be directed more toward known pesticide uses. Given the limitations in test methodologies, laboratory equipment, and staff, having the best possible information to conduct an efficient and effective monitoring program is essential.

According to FDA's Director, Office of Contaminants Policy, FDA must have information on actual pesticide use in order to deploy resources in the most cost-effective manner to protect public health and to have the data necessary to promote confidence in the food supply. According to the Director, pesticide use information that would effectively direct the sampling and analysis of imported food has not been available. The Director acknowledged that FDA needs country-by-country data on pesticide usage in foreign countries; but in the past has not had the resources to develop the information on its own. The Director stated that if available, such information should be relatively recent, account for the majority of pesticide use worldwide, cover the major food producing and exporting countries, and be assembled in a computer program that

allows for easy manipulation to evaluate country/commodity/pesticide use.

During fiscal year 1985, FDA identified a commercially available source of this type. In fiscal year 1986, FDA began procuring access to this system with first-year funding at about $238,000. FDA believes this information will make a significant improvement in its pesticide program, but the effectiveness of this information will not be known until it has been analyzed and used. The Director, Office of Contaminants Policy, said FDA would incorporate this information in its monitoring program for imported foods in three stages.

- Identify major imported food commodities for monitoring coverage.
- For the commodities identified above, tabulate significant pesticide usage for each commodity on a country-by-country basis.
- Implement program changes in the import program, including a commodity/country/pesticide listing and initiation of special surveys as necessary for selected pesticides.

We agree that this information will improve FDA's ability to monitor imported foods for pesticide residues. However, we believe FDA should supplement this information by attempting to acquire foreign pesticide use information from other sources.

First, FDA may seek a requirement for improved reporting of information on pesticides exported to foreign countries. Reporting under the existing provisions of FIFRA does not result in information that is specific about the amounts of pesticides exported and the country of final destination. Such information would increase FDA's ability to select the proper analytical methods when testing imported food samples. However, this information would provide better knowledge of pesticides produced in the United States but not cover pesticides produced in other countries.

Second, the U.S. government could require that foreign growers or importers certify which pesticides were used during production. This certification may be submitted as a part of the import documentation. FDA could then do testing based on the pesticides declared and take action if other chemicals are found.

Additional legislative or regulatory authority might be needed to implement these two alternatives.

Third, FDA should consider entering into cooperative agreements with foreign countries for the direct exchange of pesticide usage information. FDA officials said they have solicited such information on several occasions, but many countries do not respond to FDA's requests. Significant amounts of information has been obtained from Mexico, New Zealand, and several other countries, however.

FDA officials said that while the first and third sources might have some merit, the second source might not be reliable.

Conclusions

Due to limitations in time, equipment, and staff resources, FDA generally tests imported food samples by using one of five analytical methods to screen for a large number of pesticides. Laboratory chemists determine which pesticides will be tested for, based on his/her knowledge about pesticides used during production. FDA testing of imported food samples could be generally improved if the agency had better information about pesticides actually used in the production of foods imported into the United States. Better information on foreign pesticide uses could be obtained from U.S. manufacturers, foreign growers, improved information exchanges between FDA and other countries, or through commercially available sources. Such information would allow FDA to more accurately select analytical methods based on actual pesticide usage in countries that export food to the United States.

Recommendations to the Secretary of Health and Human Services

We recommend that the Secretary direct the FDA Commissioner to assess the relative merits of the following alternative means to obtain information on actual foreign pesticide use (including current legislative and regulatory authority): (1) require U.S. pesticide manufacturers who export pesticide chemicals to foreign countries to report the pesticides and quantities sold overseas, (2) require importers of food to certify which pesticides were used during production, and (3) develop cooperative agreements with foreign countries for the exchange of information on pesticide uses in food production.

As better information becomes available on foreign pesticide uses, we also recommend that the FDA Commissioner be directed to test imported food for the pesticides used or suspected of being used on imported foods.

Damages Should Be Collected to Enforce Compliance With FDA Requirements

Even when imported food shipments are found to contain illegal pesticide residues, the food will probably be marketed and consumed rather than re-exported or destroyed. Current law and FDA procedures permit imported products, primarily perishable foods, to be distributed before laboratory analysis is completed. Those commodities suspected of containing illegal residues, usually as a result of a prior adulterated shipment being sampled, are to be withheld from the marketplace until FDA completes its laboratory analysis. However, importers (brokers, agents, or shippers) often ignore FDA's requirement and distribute the commodities. If the analysis subsequently determines that the product is adulterated, which takes about 5 days from the time the sample is collected until the results are known, generally, the product has already been marketed and consumed.

Importers are not assessed damages for marketing foods adulterated with illegal pesticide residues provided this is his/her first violation for a particular commodity and the importer makes a reasonable effort to recall the food. FDA believes it is inappropriate to assess damages against importers who act in good faith when receiving adulterated shipments from foreign shippers and growers. Rather, FDA officials believe the burden for proof of the admissibility of the shipment of food should be on the shippers or growers. Accordingly, once an illegal shipment is identified, FDA requires future shipments to be detained until certificates of analysis are presented to indicate acceptable levels of the pesticide in question.

In addition, importers with prior violations rarely paid damages for marketing adulterated food even when according to FDA officials they ignore FDA requirements to hold the shipments. Although FDA policy supports the assessment of damages against repeat violators, FDA officials do not monitor the progress of such cases, as required by its regulatory procedures, beyond the issuance of a notice to Customs that the shipment contains illegal pesticide residues and must be recovered. We found evidence that damages were assessed against the importers of 8 of 22 adulterated shipments sampled under compliance in fiscal year 1985. After reviewing FDA and Customs files, we found no evidence that damages were assessed in the remaining 14 cases.

Thus, commodities containing illegal pesticide residues are consumed by the American public and the importers are often not required to pay liquidated damages. There is no strong deterrent against this situation. One of the ironies of the situation is that when an importer does recover and destroy the shipment before it reaches the consumer, that party

loses the value of the shipment while the importer of the shipment that reaches the consumer suffers no loss.

U.S. Customs Assists FDA in Enforcing Admissibility Requirements for Imported Food

In monitoring the entry of imported foods and removing adulterated products from the marketplace, FDA works in cooperation with the U.S. Customs Service, Department of Treasury. As a principal border enforcement agency, Customs is responsible for (1) notifying FDA of all formal entries subject to its jurisdiction, (2) requiring importers to post a bond on imported food distributed to owners or consignees pending FDA approval for release into U.S. commerce, (3) ordering and supervising the export or destruction of foods FDA identifies as adulterated, and (4) imposing and collecting liquidated damages against importers who fail to export or destroy adulterated shipments.

As part of the entry process, commercial goods imported into the United States are to remain in Customs' custody until they are cleared of all duties and taxes and comply with all applicable laws and regulations. However, Customs does not retain possession of all food shipments pending FDA's final approval. Customs' regulations state that imported products valued at $1,000 or more may be released to importers if a performance bond is posted. This is allowed to help minimize port congestion. Although owners may take possession of imported food upon execution of a bond, they are not to release the shipment for consumer use until FDA issues a release notice. If analysis of a sample or other evidence indicates that the shipment contains illegal residues, FDA notifies the importer and Customs that the shipment is refused admission into U.S. commerce and must be redelivered to Customs.

Customs assists FDA in enforcing pesticide tolerances and ensuring the removal of adulterated food from the market by enforcing the redelivery requirement of the bond. The bond serves as a guarantee that the shipment will be returned to Customs for either (1) re-export or destruction under Customs supervision or (2) with FDA's approval, reconditioning to bring the product into legal conformity, or render it other than a food product for human consumption. If delivery is not made within 30 days, the importer has violated the bond. A bond violation occurs when an importer distributes a shipment, or any portion of it, before FDA releases it and the importer fails to redeliver the shipment to Customs upon request. Failure to meet the conditions of the bond requires that Customs notify the importer in writing of his/her liability for liquidated damages. Liquidated damages are based on the transaction value of the shipment as it was appraised by Customs upon entry, plus duties, if any.

The transaction value is the price actually paid or payable for the merchandise when sold for export to the United States.

FDA Policy Allows Imported Foods to Enter Domestic Commerce Before Sample Analysis Is Complete

FDA guidelines state that all samples collected from imported food shipments are compliance samples and owners must maintain control of the shipments until FDA analyzes a sample and issues a release notice. However, since the ports of entry for perishable commodities are often border ports distant from the FDA examining laboratory, FDA guidelines permit district offices to collect samples of fresh fish, seafood, and perishable produce on a surveillance basis. To avoid deterioration and spoilage, FDA permits such shipments to enter commerce pending sample analysis. Therefore, importers may immediately distribute perishable food if all of the following conditions are met:

- First, there is no reason to suspect the product is adulterated,
- Second, the projected time lapse between sample collection and the importer being notified about the shipment's admissibility is such that the product would deteriorate or spoil, and
- Third, the importer has signed an agreement with FDA that an attempt will be made to recall any distributed merchandise if the sample is later found to be adulterated.

FDA believes that shipments sampled on a surveillance basis should not be held since violation rates for surveillance samples are low and immediate distribution ensures that American consumers receive fresh commodities.

Most of the imported food entering FDA's Dallas and Los Angeles districts is perishable fresh fruits and vegetables from Mexico. Since both districts are responsible for monitoring the entry of food at numerous border crossings spread over several hundred miles along the U.S.-Mexican border and distant from FDA laboratories, the districts sample all perishable commodities not suspected of adulteration on a surveillance basis. FDA's New York district office samples all imports on a compliance basis and directs that all shipments be held pending notice of release.

Americans May Consume Shipments of Imported Food Containing Illegal Pesticide Residues

Some adulterated shipments of imported food reach U.S. consumers despite FDA suspicions that illegal pesticide residues are present. This occurs because many importers ignore FDA directives to hold the shipments until official release notices are given. In addition, shipments allowed to proceed directly into domestic commerce are less likely to be recovered and are often consumed before sample analysis is completed. Our review of adulterated shipments entering the United States in fiscal year 1985, whose disposition we were able to determine, indicated that 27 percent (21 of 77) of the shipments sampled when FDA suspected illegal residues were not recovered and 60 percent (52 of 87) of shipments sampled without suspicion were not recovered. (We were not able to determine whether 23 adulterated shipments were recovered.)

Adulterated Food Sampled Without Suspicion Is Likely to Be Consumed

Our review of 87 adulterated surveillance samples identified in FDA's Los Angeles and Dallas districts indicated that 18 shipments were fully recovered, and exported or destroyed, 5 shipments were partially recovered, and 52 shipments were not recovered. It takes an average of 5 days from the time the sample is collected until the test results are known. After a review of FDA and U.S. Customs files in the two districts, we were unable to determine the disposition of 12 adulterated shipments sampled under surveillance nor were these agencies able to provide information on the disposition of the cases other than what was in their files. Data for FDA's New York district is not included because that district samples all commodities on a compliance basis. Table 4.1 summarizes the disposition of adulterated surveillance samples identified in fiscal year 1985.

Table 4.1: Recovery of Adulterated Imported Food Sampled Without Suspicion in Fiscal Year 1985 for Los Angeles and Dallas[a]

	Los Angeles	Dallas	Total
Number of adulterated samples	63	24	87
Shipments not recovered	37	15	52
Shipments partially recovered	2	3	5
Shipments fully recovered	12	6	18
Unable to determine	12	0	12

[a]Customs files were reviewed when FDA's files did not include the final disposition of a shipment. In 12 cases we could not determine from either source whether the shipments were recovered.

FDA recognizes that shipments immediately released for distribution and later found to be adulterated may ultimately be consumed by the public. However, FDA maintains that such shipments do not present a risk to the public health. The Associate Commissioner for Legislation and Information has stated that in the short term, these adulterated commodities do

not make a toxicologically significant contribution to a consumer's total dietary intake of pesticide residues. Furthermore, subsequent shipments of the same commodity from the same importer or grower will be specifically monitored under compliance sampling.

Some Food Sampled With Suspicion Still Reaches Consumers

When a shipment is sampled under compliance, FDA notifies the importer that the shipment must be held until FDA releases it. As a result, adulterative produce identified through compliance sampling should not enter commerce and should be available for recovery and destruction or reexport. However, FDA officials told us that importers often ignore this requirement and distribute shipments before FDA's approval or following FDA's notice that the shipment contains illegal residues and must be recovered by Customs. Therefore, some of these shipments reach consumers despite the legal requirement to hold the shipment.

Our review of 77 adulterated compliance samples identified in FDA's New York, Dallas, and Los Angeles districts indicated that 43 shipments were fully recovered, 21 shipments were not recovered, 1 shipment was partially recovered, and 1 shipment was reconditioned and released. FDA and Customs district offices' files did not contain information on the disposition of 11 adulterated compliance cases. Table 4.2 summarizes the disposition of adulterated compliance samples identified in the three districts in fiscal year 1985.

Table 4.2: Recovery of Adulterated Imported Food Sampled on a Compliance Basis in Fiscal Year 1985 for New York, Los Angeles, and Dallas[a]

	New York	Los Angeles	Dallas	Total
Number of adulterated samples	11	49	17	77
Shipments not recovered	3	14	4	21
Shipments partially recovered	1	0	0	1
Shipments fully recovered	6	26	11	43
Released or reconditioned[b]	0	0	1	1
Unable to determine	1	9	1	11

[a]Customs files were reviewed when FDA's files did not include the final disposition of a shipment. In 11 cases we could not determine from either source whether the shipments were recovered.

[b]This shipment was reconditioned to comply with pesticide tolerances.

Damages Were Not Assessed in All Cases Where Shipments Were Not Recovered

Liquidated damages against importers for distributing adulterated food are not always assessed. FDA district officials do not recommend that Customs seek damages against importers for distributing shipments that FDA did not require to be held (surveillance samples) while testing was done. In those instances where the importer is to hold the shipment (compliance sample) while the testing is conducted, FDA supports Customs' efforts to assess damages against the importer who distributes the shipment. In the 22 violations involving compliance samples, only eight importers were assessed damages—four in New York and four in Dallas. For 14 shipments entering the Los Angeles district we could find no evidence, in FDA or Customs files, that damages were assessed or collected.

Damages Are Not Recommended for Adulterated Shipments Sampled Without Suspicion

Customs requires importers to post bonds for food they release before FDA determines that their shipments comply with all residue requirements. The bond will be forfeited by the importers on those shipments determined to contain illegal pesticide residues if they are not recovered from the marketplace. However, FDA believes it would be inappropriate to assess damages against an importer for distributing perishable produce sampled on a surveillance basis and later found adulterated or for unknowingly receiving a shipment of adulterated food. In both situations, FDA believes the importer is acting in "good faith" and that damages for importing pesticide-adulterated food should be directed at the individual (i.e., grower) responsible for the adulteration. This would include the detention of all future shipments from the same grower until certificates of analysis are presented to prove the admissibility of the shipment. Consequently, bonds as currently used provide little incentive for importers to remove adulterated shipments from the market.

If illegal pesticide residues are subsequently detected in a shipment of perishable food that was allowed to proceed immediately to market, FDA requests the importer to recall the shipment. However, FDA relies solely on the voluntary cooperation of the importer to return the shipment. FDA district officials told us they have insufficient personnel to follow-up and verify importers' recall efforts. The officials said that they assume that most perishable food is distributed and consumed prior to analysis and is, therefore, unavailable for recall and redelivery.

In such cases, FDA does not recommend that Customs collect damages from importers for failure to redeliver shipments sampled without suspicion. Instead, FDA will initiate compliance sampling of all subsequent shipments of the commodity from the shipper or grower involved. These

shipments are to be withheld from domestic commerce until FDA completes sample analysis even though the commodity is perishable, because of the greater likelihood that illegal residues are present. The irony is that the importer who recovers and destroys the shipment loses the economic value of the shipment while the importer who does not recover the adulterated shipment incurs no economic loss.

Importers May Not Pay Damages for Marketing Food Requested to Be Held

FDA's policy is to request that Customs seek liquidated damages against the importers of shipments containing illegal pesticide residues when the importer proceeds to market a shipment that was to be held pending analysis. In such cases, where the importer fails to redeliver adulterated produce to Customs, Customs is to assess and collect damages equal to the full transaction value of the shipment, plus duties.

Although Customs is responsible for assessing damages against importers for distributing adulterated food, FDA regulations require that its district offices monitor the final disposition of cases referred to Customs. After FDA gives notice to Customs that a shipment is adulterated, FDA regulatory procedures state that the case should be kept open until FDA receives notice from Customs that the shipment was either returned or the importer was assessed damages. If Customs does not notify FDA within 100 days after the case was referred, a letter is to be sent from FDA to the appropriate Customs office requesting information on the status of the refused shipments.

FDA's Import Manager told us, however, that district offices only track shipments to the point of release or notice of refusal. After a notice is issued, the case is referred to Customs. He added that time and staff limitations make it impossible for FDA districts to monitor the actual disposition of the adulterated shipments. Therefore, FDA headquarters suggests that district officials follow up on the disposition of shipments involving significant health hazards. However, the FDA district offices are directed to assure, through contact with Customs, that damages are assessed when the refused goods are not recovered.

Although we found that in 22 of the 77 cases FDA identified as adulterated by compliance sampling the importers failed to redeliver all or portions of the shipments, we found evidence that only eight importers were assessed damages. The New York Customs district assessed damages for all four of the adulterated shipments that were not recovered. Two of the importers were assessed and ultimately paid damages equal to the value of the shipments they distributed. As of February 1986,

damages assessed in the other two cases had not been paid even though the samples were taken in October 1984 and June 1985. In the Dallas district, damages were assessed for four adulterated shipments sampled in February 1985. However, we found no evidence that damages had been collected as of February 1986. In the Los Angeles district 14 shipments, entering from countries other than Mexico, were not recovered and neither FDA nor Customs files contained evidence that damages were assessed. As indicated in table 4.2, lack of documentation in FDA and Customs files prevented a determination of the disposition of 11 adulterated shipments sampled with suspicion.

Conclusions

The forfeiture provisions of compliance bonds could be an effective enforcement tool for obtaining redelivery of adulterated food and act as a deterrent against future adulterated shipments; however, their limited use weakens their impact and the overall effectiveness of the program. Thus, importers are distributing adulterated foods in the United States generally without being assessed damages.

While FDA is responsible for ensuring that sampled commodities with illegal residues do not reach the American consumer, the agency cannot do so without Customs' assistance. Identifying adulterated food is a positive step in protecting U.S. consumers from illegal pesticide residues, but it is not the final step. When adulterated merchandise is distributed to American consumers, Customs' enforcement system must ensure that importers pay damages, especially when importers distribute shipments they were specifically requested to detain.

We are concerned about the lack of commitment by FDA to collect damages from importers of shipments containing illegal pesticide residues. Currently, those importers who recover adulterated shipments incur an economic loss while those importers who do not recover their shipments incur no loss and are not assessed damages, with the exception of 8 cases we identified. FDA believes the importer is acting in good faith and that it is the shipper and/or grower that action should be directed against. That action, includes detaining future shipments until evidence shows that the shipment is not adulterated. However, this approach lessens FDA's ability to protect American consumers from adulterated imports.

Since only a small number of imported food shipments are sampled for pesticide residues, it is essential that FDA recommend damages that

would be a strong deterrent to discourage other importers from distributing adulterated food. Consequently, FDA should recommend the payment of damages for all bond violations and Customs should assess and collect damages to make it unprofitable to import and distribute adulterated shipments. Damages should be assessed for all adulterated shipments not recovered. Failure to do so will continue to provide little or no incentive for importers to comply with acceptable pesticide residue levels and destroy or re-export adulterated shipments.

Recommendation to the Secretary of Health and Human Services

We recommend that the Secretary direct the FDA Commissioner to recommend to Customs that liquidated damages be assessed for all shipments found to contain illegal pesticide residues if the shipment is not recovered. This assessment should apply whether the shipment was sampled under surveillance or compliance.

Recommendation to the Secretary of the Treasury

We recommend that the Secretary direct the Customs Commissioner to assess and collect liquidated damages from importers in all cases when FDA determines that imported food has been adulterated with illegal pesticide residues and the food is not recovered.

Sampling and Violation Rates for Selected Food Commodities Exported to the United States in Fiscal Years 1983 Through 1985

Commodity	Total Volume (Pounds)	Total Samples	Total Violations	Violation Rate	Exporting Countries	Exporting Countries In all 3 years	Countries Not Sampled in any of the 3 years
Bananas	17,620,058,245	160	0	.0000	50	19	10
Tomatoes	3,544,578,848	2,210	10	.0045	52	30	17
Pineapples	1,457,155,650	137	39	.2847	58	26	17
Cucumbers	1,178,566,781	1,019	78	.0765	50	27	18
Onions	749,617,017	147	0	.0000	46	18	5
Apples	726,561,174	414	3	.0072	40	18	4
Watermelons	684,297,859	178	4	.0225	21	6	5
Peppers	602,639,198	1,964	153	.0779	53	21	11
Plantains	601,223,466	10	0	.0000	29	14	10
Carrots	448,696,746	73	1	.0137	31	11	5
Squash	362,174,442	1,016	25	.0246	14	5	0
Peas	325,518,161	622	50	.0804	69	34	11
Mangoes	263,533,830	381	86	.2257	44	18	8
Peaches	259,038,703	126	2	.0159	42	16	9
Yams/Dasheen	251,892,819	24	0	.0000	34	16	11
Melons (Other)	245,515,583	86	8	.0930	39	21	9
Cabbages	211,946,334	291	42	.1443	37	15	11
Strawberries	189,333,733	206	11	.0534	48	25	11
Beans	186,160,891	806	51	.0633	64	36	6
Broccoli	177,261,820	95	1	.0105	12	4	2
Waterchestnuts	148,094,982	9	0	.0000	15	6	3
Pears	129,145,747	104	6	.0577	35	11	1
Okra	118,657,748	236	31	.1314	16	5	1
Eggplants	109,633,888	314	16	.0510	18	4	2
Artichokes	104,475,991	9	0	.0000	19	6	4
Garlic	100,079,593	15	0	.0000	30	15	11
Tangerines	77,579,583	179	23	.1285	9	3	2
Blueberries	64,893,338	60	3	.0500	18	11	8
Plums	62,646,973	53	0	.0000	38	19	16
Grapes	50,682,399	660	9	.0136	25	10	3
Blackberries	47,407,986	61	23	.3770	23	3	1
Raspberries	46,699,672	2	0	.0000	29	10	8
Chinese Gooseberries	40,897,679	0	0	.0000	12	2	2
Cassaba/Yuccas	39,130,208	4	0	.0000	11	4	2
Chestnuts	32,091,494	14	0	.0000	21	9	6
Papayas	24,341,700	28	0	.0000	37	13	7

Commodity	Total Volume (Pounds)	Total Samples	Total Violations	Violation Rate	Exporting Countries	Exporting Countries In all 3 years	Countries Not Sampled in any of the 3 years
Pumpkins	19,907,604	18	0	.0000	15	4	2
Cherries	16,780,917	26	0	.0000	32	15	10
Endives	15,048,922	42	0	.0000	28	9	4
Ginger roots	3,689,891	8	0	.0000	19	6	6

Source: This data was compiled by GAO staff from U.S. Bureau of Census data on import volume and FDA's Laboratory Management Data System information on commodities sampled.

Fifteen Highest Volume Foods Imported Into FDA's Dallas District (From Mexico) and Number of Samples Taken in Fiscal Year 1984

Commodity	Weight (in Kilograms)	Samples taken
1. Onions	68,261,316	23
2. Cucumbers	61,655,694	59
3. Cantaloupes	60,022,819	82
4. Watermelons	55,615,420	03
5. Cabbages	51,205,712	153
6. Bananas	26,147,209	45
7. Strawberries	25,248,673	17
8. Broccoli	25,074,662	18
9. Okra	21,084,672	49
10. Peppers	17,908,387	110
11. Pineapples	17,633,791	40
12. Limes	17,199,924	13
13. Tangerines	16,973,471	30
14. Tomatoes	15,062,081	27
15. Melons-"other"	14,802,763	32
Total (top 15 commodities)	**493,896,594**	**705**
Total (all Mexican imports)	**577,825,400**	**897**

Source: Commodity volume is taken from USDA's Report of U.S. Imports of Fruits and Vegetables Under Plant Quarantine Regulations. The number of samples was taken from automated records and other files available at FDA's headquarters and district offices.

Fifteen Highest Volume Foods Imported Into FDA's Dallas District (From Countries Other Than Mexico) and Number of Samples Taken in Fiscal Year 1984

Commodity	Weight (in Kilograms)	Samples taken
1. Bananas	332,084,700	0
2. Pineapples	8,791,423	1
3. Plantains	1,261,847	0
4. Onions	181,607	1
5. Oranges	60,445	0
6. Peas, Garden	56,924	0
7. Endives	22,078	3
8. Limes	17,988	0
9. Melons (other than watermelon)	13,958	1
10. Peppers	10,387	0
11. Ginger Roots	6,000	0
12. Beans, Green	4,424	1
13. Cantaloupes	2,944	0
14. Corn salad	1,768	0
15. Hogplums	1,643	0
Total (top 15 commodities)	**342,518,136**	**7**
Total (other than Mexican)	**342,524,887**	**65**

Source: Commodity volume is taken from USDA's Report of U.S. Imports of Fruits and Vegetables Under Plant Quarantine Regulations. The number of samples was taken from automated records and other files available at FDA's headquarters and district offices.

Fifteen Highest Volume Foods Imported Into FDA's New York Import District and Number of Samples Taken in Fiscal Year 1984

Commodity	Weight (in Kilograms)	Samples taken
1. Bananas	170,930,855	9
2. Pineapples	23,041,051	2
3. Plantains	5,185,948	1
4. Yams/Dasheen	4,779,935	5
5. Chestnuts	3,584,475	0
6. Peas (all types)	976,922	32
7. Melons (excluding bitter melons)	898,262	5
8. Peppers	871,027	44
9. Cabbages	842,925	4
10. Tomatoes	710,214	20
11. Garlic	645,035	0
12. Mangoes	575,522	3
13. Beans (all types)	570,507	55
14. Bitter Melons	549,298	30
15. Asparagus	536,238	4
Total (top 15 commodities)	**214,698,214**	**214**
Total (all imports)	**219,901,759**	**391**

Source: Commodity volume is taken from USDA's Report of U.S. Imports of Fruits and Vegetables Under Plant Quarantine Regulations. The number of samples was taken from automated records and other files available at FDA's headquarters and district offices.

Fifteen Highest Volume Foods Imported Into FDA's Los Angeles District (From Mexico) and Number of Samples Taken in Fiscal Year 1984

Commodity	Weight (in Kilograms)	Samples taken
1. Tomatoes	368,614,335	596
2. Cucumbers	121,488,056	256
3. Peppers	82,106,992	384
4. Watermelons	74,275,519	31
5. Muskmelons	59,356,696	120
6. Squash	54,609,721	284
7. Mangoes	53,384,519	22
8. Onions	28,447,786	29
9. Eggplants	18,936,591	75
10. Grapes	10,549,586	161
11. Beans, Green	9,855,803	120
12. Jicama	7,563,418	5
13. Bananas	6,783,195	3
14. Radishes	6,135,842	22
15. Lettuce	5,874,571	19
Total (top 15 commodities)	**907,982,630**	**2,127**
Total (all Mexican imports)	**957,217,216**	**2,420**

Source: Commodity volume is taken from USDA's Report of U.S. Imports of Fruits and Vegetables Under Plant Quarantine Regulations. The number of samples was taken from automated records and other files available at FDA's headquarters and district offices.

Fifteen Highest Volume Foods Imported Into FDA's Los Angeles District (From Countries Other Than Mexico) and Number Samples Taken in Fiscal Year 1984

Commodity	Weight (in Kilograms)	Samples taken
1. Bananas	513,971,040	3
2. Grapes	26,049,130	4
3. Plantains	5,738,404	0
4. Apples	5,601,497	9
5. Nectarines	4,572,208	5
6. Melons, Other	2,886,986	8
7. Chinese Gooseberries	2,119,132	8
8. Onions	1,519,897	0
9. Pears	1,022,589	1
10. Ginger Roots	962,297	0
11. Endives	880,457	0
12. Strawberries	647,936	60
13. Peaches	641,403	6
14. Plums	404,326	4
15. Dasheen/Tannia	372,553	0
Total (top 15 commodities)	**567,389,855**	**108**
Total (other than Mexican)	**570,203,683**	**168**

Source: Commodity volume is taken from USDA's Report of U.S. Imports of Fruits and Vegetables Under Plant Quarantine Regulations. The number of samples was taken from automated records and other files available at FDA's headquarters and district offices.

Requests for copies of GAO reports should be sent to:

U.S. General Accounting Office
Post Office Box 6015
Gaithersburg, Maryland 20877

Telephone 202-275-6241

The first five copies of each report are free. Additional copies are $2.00 each.

There is a 25% discount on orders for 100 or more copies mailed to a single address.

Orders must be prepaid by cash or by check or money order made out to the Superintendent of Documents.

United States
General Accounting Office
Washington, D.C. 20548

Official Business
Penalty for Private Use $300

Address Correction Requested

First-Class Mail
Postage & Fees Paid
GAO
Permit No. G100