United States Department of Agriculture
Agricultural Marketing Service
Science & Technology

Pesticide Data Program

Annual Summary Calendar Year 1999

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Acronyms

AMS	Agricultural Marketing Service
APHIS	Animal and Plant Health Inspection Service
ARS	Agricultural Research Service
CARAT	Committee to Advise on Reassessment and Transition
CDFA	California Department of Food and Agriculture
CFR	Code of Federal Regulations
CV	Coefficient of Variation
DE-42/43	Dextrose Equivalent Corn Syrup 42/43
EMRL	Extraneous Maximum Residue Limit
EPA	Environmental Protection Agency
ERS	Economic Research Service
FAS	Foreign Agricultural Service
FDA	Food and Drug Administration
FQPA	Food Quality Protection Act
GIPSA	Grain Inspection, Packers & Stockyards Administration
GLP	Good Laboratory Practice
JMPR	Joint Meeting on Pesticide Residue
LIB	Laboratory Information Bulletin
LOD	Limit of Detection
LOQ	Limit of Quantitation
MRM	Multiresidue Method
MRL	Maximum Residue Limit
NAS	National Academy of Sciences
NASS	National Agricultural Statistics Service
NPRD	National Pesticide Residue Database
OPMP	Office of Pest Management Policy
PDP	Pesticide Data Program
QA/QC	Quality Assurance/Quality Control
QAO	Quality Assurance Officer
QAU	Quality Assurance Unit
SOP	Standard Operating Procedure
SRM	Selective Residue Method
RDE	Remote Data Entry
TRAC	Tolerance Reassessment Advisory Committee
USDA	United States Department of Agriculture

Preface

In 1991, the United States Department of Agriculture (USDA) was charged with implementing a program to collect data on pesticide residues in food. The USDA's Agricultural Marketing Service (AMS) was appointed to undertake the creation and implementation of such a program, currently known as the Pesticide Data Program (PDP). PDP has been in operation since May 1991 and has published its findings annually since 1991.

PDP planning and policy are formulated with the support of various USDA agencies and the Environmental Protection Agency (EPA). Agencies from USDA include: AMS, the National Agricultural Statistics Service (NASS), the Economic Research Service (ERS), the Agricultural Research Service (ARS), and the Office of Pest Management Policy (OPMP).

PDP's data on pesticides in selected commodities strengthen the Government's ability to respond to food safety and marketing concerns, to protect public health, and to provide EPA with data needed to implement the Food Quality Protection Act (FQPA) enacted by the U.S. Congress in August 1996. Title III Sec. 301(c) of FQPA states: *"The Secretary of Agriculture shall ensure that the residue data collection activities conducted by the Department of Agriculture in cooperation with the Environmental Protection Agency and the Department of Health and Human Services, provide for the improved data collection of pesticide residues, including guidelines for the use of comparable analytical and standardized reporting methods and increased sampling of foods most likely consumed by infants and children."* PDP has been actively involved on behalf of the Department in the implementation of FQPA and has participated in various public forums sponsored by the Tolerance Reassessment Advisory Committee (TRAC) and its successor, the Committee to Advise on Reassessment and Transition (CARAT). Information obtained at these forums allowed for careful planning of program activities and projection of future data needs.

In estimating the potential risks of pesticide residues in food, EPA uses a step-wise approach that assures pesticides are examined as closely as necessary to understand their risks, but minimizes the Agency's resource expenditures. As an initial assessment, EPA assumes that all acres of all crops are treated with all pesticides for which there is an approved use. EPA also assumes that residues in treated crops are present at the maximum allowed level. While such an assessment is easy and quick to generate, risk estimates based on these worst case assumptions may significantly exceed the actual risk from pesticide residues in the food supply. Therefore, if the initial "worst case" assessment indicates potential risks that would be of concern, EPA refines its assessment using available, reliable data. These refinements may include using: data on the percent of a crop treated with a pesticide; studies of the effects of washing, cooking, processing, and storage; and residue monitoring data. This is where PDP data can be pivotal. PDP's sampling procedures were designed to capture actual residues in the food supply as close as possible to the time of consumption, which makes PDP valuable. These data are considerably more realistic than the assumptions used in EPA's initial risk assessments.

PDP operations are guided by recommendations presented to the U.S. Congress by the National Academy of Sciences (NAS) in its 1993 report *"Pesticides in the Diets of Infants and Children."* In that report, the Academy examined scientific and policy issues that government agencies need to address when regulating pesticide residues in foods consumed by infants and children. The NAS report provided various recommendations to improve methods for estimating exposure to pesticides, including the need for better data on dietary exposure and information on the harmful effects of pesticides. PDP concentrates its efforts in providing better pesticide residue data on foods most consumed by children.

In 1999, in response to NAS' concerns regarding acute exposures to pesticides, that is, exposures occurring within a short period (e.g., over the course of a day or even a single eating occasion), PDP conducted two special studies on single servings of apples and pears. Other Academy recommendations implemented in 1999 are the inclusion of more metabolites and degradates in screening profiles and the testing of additional raw and processed foods listed as most consumed by children.

The States participating in PDP deserve special recognition for their contributions to the program. Sample collectors' vigilance and dedication allow AMS to adjust sampling protocols to respond to changing trends in commodity distribution. Laboratory staffs were helpful in formulating recommendations to increase productivity and improve analytical methods. PDP thanks NASS for providing statistical support; the Food and Drug Administration (FDA) staff, particularly Milton Luke and chemists in FDA field laboratories for their help in addressing method issues; the AMS Eastern Laboratory, the Animal and Plant Health Inspection Service (APHIS) Laboratory, and the Grain Inspection, Packers and Stockyards Administration (GIPSA) Laboratory for providing testing services to the program. PDP also acknowledges the exceptional support of EPA's Office of Pesticide Programs-Health Effects Division staff for their contributions in refining the 1999 Program Plan.

We welcome any comments on the Summary's presentation. A form for submitting comments is provided at the end of the Summary.

Data presented in this Summary were collected and processed through the efforts of the following:

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Executive Summary

The Pesticide Data Program (PDP) was implemented by USDA in May 1991 to collect data on pesticide residues in foods. The data are released annually on a calendar year basis in the form of summaries and through the Internet. This publication summarizes PDP results for 1999.

PDP data are used by EPA, FDA, ERS, the USDA's Foreign Agricultural Service (FAS), and various groups within the private sector. EPA uses PDP data to refine estimates of dietary exposure as part of the pesticide reregistration process under FQPA. PDP data are also used by the government and agricultural community to examine residue issues which may affect agricultural practices and U.S. trade. Recent uses of PDP data include: targeting crops that need pesticide alternatives; promoting export of U.S. commodities in a competitive global market; and addressing food safety concerns.

Program operations were carried out with the support of ten states: California, Florida, Michigan, New York, Ohio, Texas, and Washington for collection and analysis of samples, and Colorado, Maryland, and Wisconsin for sample collection only (their samples are shipped to other State and Federal laboratories for analysis). Federal laboratories providing testing services include the GIPSA Laboratory, the AMS Eastern Laboratory, and the APHIS National Monitoring and Residue Analysis Laboratory. The AMS Science and Technology program is responsible for PDP's day-to-day administrative, sampling, technical, and database activities.

PDP is designed to provide information on pesticide residues in food in order to improve the quality of data that EPA uses to estimate dietary exposure to consumers. PDP data are collected as close to the point of consumption as possible while retaining identity of product origin. Sampling is based on statistically reliable protocols, thereby upgrading their usefulness for risk assessment. Pesticides and commodities are chosen based on EPA's data needs and USDA's food consumption surveys.

Samples collected by each State are apportioned according to the State's population, except for highly seasonal commodities. The normal monthly sampling rate is 62 samples per commodity. For seasonal commodities such as cantaloupes, sampling rates are adjusted to reflect market availability, and sample collection is limited to the season when the commodity is available. This adjusted sampling rate ranges from half to double the normal sampling rate. Samples are randomly chosen without regard for commodity origin or variety and reflect what is typically available to the consumer throughout the year. PDP's sampling protocol takes into account the different volumes of product distributed annually from each sampling site.

In addition to routine program operations in 1999, PDP conducted two studies designed to provide data for acute (short-term) exposure assessments. These studies were performed on single servings of apples and pears, and followed special protocols developed in cooperation with EPA staff. The apple study was designed to examine the distribution of residues within units making up a composite sample. Sample collection was spread through the entire year to capture potential variabilities between fresh apples (1999 crop) and apples from previous crops released to the market from cold storage. By contrast, the pear study provides residue concentrations on single servings of pears, but does not allow direct correlation between single serving and composite results. PDP analyzed 1,463 single servings of apples and 352 single servings of pears. Overall, results of single serving apples and pears parallel composite samples. No significantly high values on single servings of apples or pears were found. For apples, single serving azinphos methyl results varied from 0.1 to 6.9 times the composite value and single serving chlorpyrifos results varied from 0.03 to 2.9 times the composite value. For pears, 51.8 percent of composite samples contained azinphos methyl residues ranging from 0.013-0.95 parts per million (ppm), while 43.2 percent of individual pears contained azinphos methyl residues ranging from 0.013-0.87 ppm.

PDP's routine program included fresh and processed fruit and vegetables, oats, and corn syrup which were tested for various insecticides, herbicides, fungi-cides, and growth regulators. Commodities sampled in 1999 were: apples, cantaloupe, cucumbers, grape juice, lettuce, oats (rolled and bran), pears (fresh and canned), spinach (frozen), strawberries (fresh and frozen), sweet bell peppers, tomatoes (fresh and canned), winter squash (fresh and frozen), and corn syrup.

PDP collected and analyzed a total of 9,125 samples in 1999--8,637 fruit and vegetables, 332 oats, and 156 corn syrup samples. Samples originated from 35 States and 21 foreign countries (includes processed products of mixed national origin). Approximately 79 percent of all samples were domestic, 20 percent were imported (including samples of mixed national origin) and less than one percent of unknown origin. Cantaloupes, cucumbers, sweet bell peppers, fresh tomatoes, and fresh winter squash accounted for most of the imports. All corn syrup samples were domestic. Oats are listed as imported from unknown country; however, according to market arrival figures, most of the oats are likely to be Canadian imports. Overall, about 36 percent of all samples contained no detectable residues, 29 percent contained one residue, and 35 percent contained more than one residue. Less residues were detected in processed products than in fresh commodities: 92 percent of oats, 96 percent of canned pears, and 100 percent of corn syrup samples were found to contain no detectable residues.

Residues exceeding the tolerance were detected in 0.3 percent of all composite samples tested during 1999. Residues with no tolerance listed in the Code of Federal Regulations (CFR), Title 40, Part 180, were found in 3.7 percent of all samples. These residues were detected at low levels and may be due to spray drift, crop rotations, or cross contamination at packing facilities. PDP reports these findings to FDA as soon as they are received. A tolerance is the maximum quantity of a pesticide residue allowable on a raw agricultural commodity. Violative residues are defined as residues exceeding the tolerance or residues at levels of regulatory significance for which no tolerance has been established for that particular crop.

PDP laboratories maintain an ongoing verification of limits of detection (LODs) for each compound screened. These data are used by EPA to calculate exposure contributed by samples reported as "non-detects," or not containing a residue above a stated LOD.

PDP continuously strives to improve methods for the collection, testing, and reporting of data. PDP data are available to EPA and other Federal and State agencies charged with regulating and setting policies on the use of pesticides. Copies of the summary may be obtained by calling the Pesticide Data Branch at (703) 330-2300 or by mailing the form provided at the end of the summary. The summary can also be downloaded from PDP's web site at http://www.ams.usda.gov/science/pdp.

Pesticide Data Program (PDP)
Annual Summary, Calendar Year 1999

This summary consists of the following sections: (I.) Introduction, (II.) Sampling Operations, (III.) Laboratory Operations, (IV.) Database Management, and (V.) Sample Results and Discussion

I. Introduction

This is the ninth annual summary of the USDA's PDP results. The previous summaries of PDP data for calendar years 1991-1998 are posted on PDP's web site at www.ams.usda.gov/science/pdp (1993-1998) or are available as hard copies (1991-1998) upon request.

PDP pools the expertise available in AMS, NASS, ERS, and ARS to achieve its goals and objectives. NASS provides statistically reliable data on chemical usage at the State level and collects economic input data that link chemical usage with economic characteristics. ERS analyzes AMS and NASS data to understand producer behavior and to determine the impact various production practices and policies might have on the Nation's agricultural production, food supply, and consumers. ARS conducts nationwide surveys of food intake by individuals and translates data on foods as consumed into portions of raw agricultural commodities that can be linked with pesticide residue data. AMS, through its Science and Technology program, oversees PDP's policies, planning, and daily operations.

Figure 1, Overview of PDP Management and Operations, describes the program's three major components -- sample collection, laboratory analysis, and database management. Except for corn syrup, all 1999 samples were collected by ten States (California, Colorado, Florida, Maryland, Michigan, New York, Ohio, Texas, Washington, and Wisconsin) through cooperative agreements with their respective agencies. Corn syrup samples were collected through the Corn Refiners Association. Laboratory services were provided by seven States (California, Florida, Michigan, New York, Ohio, Texas, and Washington) and three Federal laboratories (AMS Eastern Laboratory, GIPSA Kansas City Laboratory, and APHIS National Monitoring and Residue Analysis Laboratory). The central database is managed by PDP staff in Manassas, Virginia.

Figure 2 shows the ten States participating in the program and neighboring States (Alaska, Connecticut, Delaware, Hawaii, Idaho, Massachusetts, Nevada, New Jersey, New Mexico, Vermont, Virginia, and Wyoming) in their direct distribution network. Together, they represent about 50 percent of the Nation's population and all four Census Regions of the U.S. The participating States are also major producers of fruit and vegetables. Figure 3 shows the origin of commodities--domestic, imports, mixed, and unknown.

AMS works closely with EPA to select the commodities and pesticides to be placed in PDP. Commodities chosen for inclusion are those most often consumed by the American public, with emphasis on those consumed by infants and children. Seventeen commodities (apples, cantaloupe, corn syrup, cucumbers, grape juice, lettuce, fresh pears, canned pears, processed oats, frozen spinach, fresh strawberries, frozen strawberries, sweet bell peppers, fresh tomatoes, canned tomatoes, fresh winter squash, and frozen winter squash) were sampled and analyzed during 1999. Pesticides screened by PDP include compounds whose toxicities and preliminary estimates of dietary exposure indicate the need for more refined exposure estimates. The list is revised periodically to address EPA's data needs.

PDP plays an important role in the implementation of FQPA. This law, enacted by the U.S. Congress in 1996, directs the Secretary of Agriculture to collect pesticide residue data on commodities highly consumed by infants and children. PDP data are used by EPA to review the safety of existing tolerances (maximum residue limits) that were in effect when FQPA was passed. Other government agencies and industry have used PDP data to promote the export of American commodities to

Figure 1. Overview of PDP Management and Operations

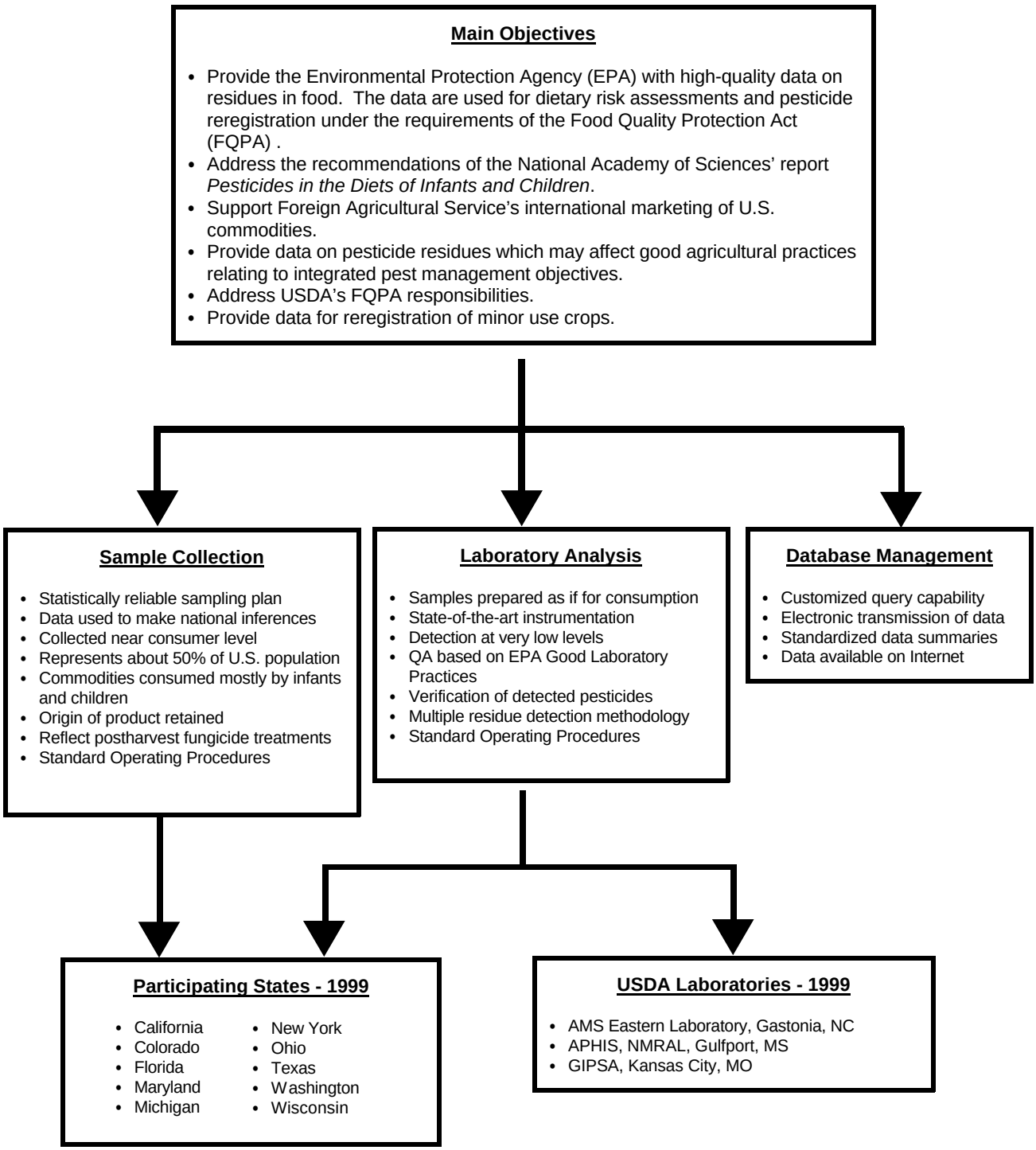
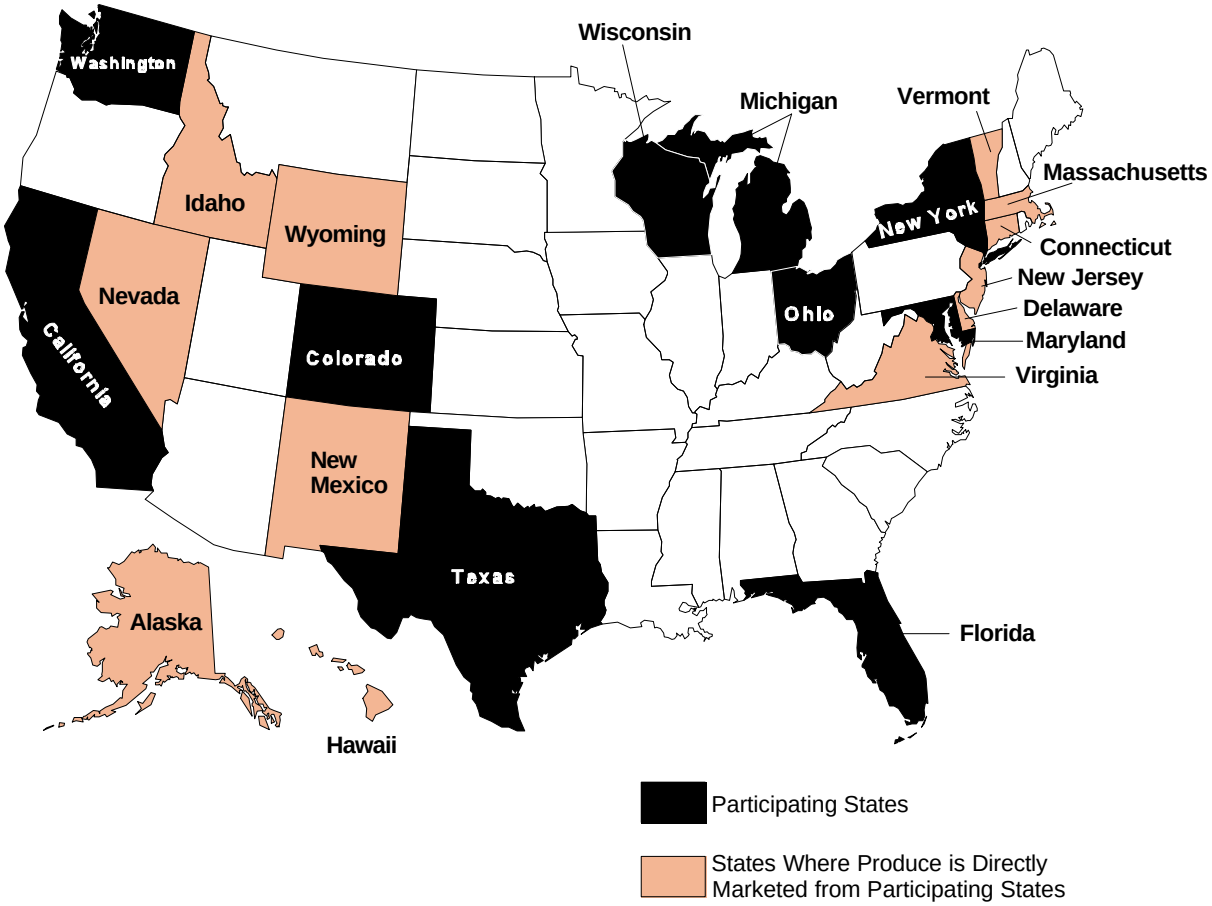


Figure 2. Participating States and Their Geographical Distribution Areas



international markets. Customized queries of USDA's PDP database were requested from various sources to support their risk assessment and pesticide information priorities. For example, PDP had generated customized datasets and reports for EPA, other Federal and State agencies, grower groups, chemical manufacturers, and universities to provide residue findings for specific commodity/compound pairs sorted by such data elements as sample origin, product type, and date of collection.

PDP has also provided information to the Codex Alimentarius Commission, European Union members, and the World Health Organization on extraneous residues in foods (environmental contaminants such as DDT and metabolites), methods of analysis, and PDP's Proficiency Evaluation Sample program.

Fruit and vegetable samples are collected at sites as close to the point of consumption as possible. These sites include terminal markets and large chain store distribution centers from which food commodities are released to supermarkets and grocery stores. Sampling at these locations allows for residue measurements that include pesticides applied during crop production and those applied after harvest (fungicides, growth regulators, etc.), and takes into account degradation of these chemicals while food commodities are in storage. Participation as a PDP sampling site is voluntary, which sets it apart from State and Federal enforcement programs. In 1999, a total of 476 sampling sites (including corn refineries) granted access and provided information to sample collectors. Their cooperation made it possible to adjust sampling protocols in response to fluctuations in food distribution and production.

Because PDP's main objective is to collect data for risk assessment evaluations, program operations differ markedly from those followed by regulatory monitoring programs (tolerance enforcement). PDP samples are collected close to the point of consumption and are prepared emulating consumer practices. Sampling is based on EPA data needs and does not interfere with commodity distribution. Laboratory operations are geared towards achieving the lowest detectable levels rather than quick sample turn around and pesticides tested are mainly those with registered uses in the commodity(ies) rather than screening for all potential illegal residues.) Appendix A is a chronological history of the commodities in PDP from program inception through 2000.

II. Sampling Operations

■ Background

The goal of PDP's sampling program is to randomly select samples from the Nation's food distribution system in such a manner that these samples provide the best possible representation of pesticide residues in the food supply. To accomplish this goal, PDP uses sampling protocols that are statistically reliable and adheres to Standard Operating Procedures (SOPs) to safeguard sample integrity. Samples are collected by trained inspectors as close to the point of consumption as possible at sites where sample identity is still available. Sampling at these locations takes into account pesticide degradation that occurs during transit and storage and also provides information on residues resulting from postharvest application of fungicides and growth regulators. PDP sampling operations are also adjusted according to product availability. For food commodities that are available throughout the year, the number of samples collected is determined by State population (fruit and vegetables) or commodity production figures (grains). For 1999 seasonal commodities, however, this number was adjusted to one-half, single, or double rates. This adjustment not only reflects market availability but also ensures that a significant number of samples is collected during the short periods the commodity is available. Fruit, vegetable, and oat samples were collected by State inspectors and corn syrup samples were collected by participating corn refineries. Because of commodity rotations and availability, some commodities were sampled only part of the calendar year (fresh pears, fresh and frozen winter squash, and fresh tomatoes collected January-June; canned pears, canned tomatoes, processed oats collected July-December, and lettuce collected October-December). Sample sizes for all fresh fruit and vegetables are 5-pounds. Processed commodities (canned and frozen) are 3-pounds. Corn syrup and juices are 1-quart (except for frozen concentrates where sample sizes are equivalent to 1-quart after dilution), and oats are 1-pound.

SOPs provide criteria for site selection and specific instructions for sample selection, shipping and handling, and chain-of-custody. These SOPs are updated as needed and serve as a technical reference in conducting program sampling reviews to ensure that program goals and objectives are met.

Chain-of-custody for PDP samples is documented on the Sample Information Form. The forms are used by sample collectors to record all available sample information, such as: (1) the State where the sample was collected; (2) the date of collection; (3) the four-digit code for the sampling site; (4) the commodity code; and (5) the testing laboratory code. These five pieces of information are combined to form a unique "sample identification number" for recording in the PDP database. Additional information includes: (1) whether the sample is domestic or imported and, if imported, the country of origin; (2) the name of the sampling site; (4) the grower, packer, or distributor; and (5) the potential or known postharvest applications. The forms are also used to keep track of any samples that are not collected, lost in transit, or damaged and unable to be analyzed when received at the laboratory.

Statistical support for all sampling operations is provided by USDA's NASS. Subsequent comparisons of PDP sample origin data with independent estimates of commodity production figures by State, as well as import data, indicate close correlations. Consequently, data collected under this sampling approach can be considered representative of actual pesticide residues in the U.S. food supply.

In 1999, PDP States participated in transshipment pools whereby all samples of a commodity that were collected by the States in the pool were sent to one or two laboratories for analysis. This arrangement created larger sample sets, increased productivity, and reduced quality control costs.

■ Fresh/Processed Fruit and Vegetables

Fruit and vegetables, including fresh and processed products, comprised about 95 percent of all samples collected. Fresh commodities collected in 1999 were apples, cantaloupes, cucumbers, lettuce, pears, strawberries, sweet bell peppers, tomatoes, and winter squash. Processed commodities included grape juice, canned pears, frozen spinach, frozen strawberries, canned tomatoes, and frozen winter squash. Samples were collected at either terminal markets or large chain store distribution centers. Participating State agencies were responsible for compiling and maintaining lists of sampling sites. After establishing their site lists, States were required to provide AMS and NASS with annual volume information for each site (quantity of commodity distributed in 1 year). This information is used to "weight" the site to determine the probability for selection. For example, a weight of "10" may be given to a site that distributes 100,000 pounds of produce annually and a weight of "1" may be given to a site that distributes 10,000 pounds of produce. The probability-proportionate-to-size method of site selection then results in the larger site (distributing 100,000 pounds) being 10 times more likely to be selected for sampling than the smaller site (distributing 10,000 pounds). Participating States are required to work with NASS to develop their statistical procedures for site weighting and selection. States are also given the option of having NASS perform their quarterly site selection for them. The number of sampling sites and the volume of produce distributed by the sites vary greatly from State to State. Sampling plans that included sampling dates, sites (primary and alternate), targeted commodities, and testing laboratories were prepared by States on a quarterly basis (3-month period). Collection of commodities was randomly assigned to various weeks of the month, prior to selecting specific sampling dates within the week. Since sampling sites were selected for the entire quarter, States were allowed to assign the sites to particular months based on geographic location.

State population figures were used to assign the number of fruit and vegetable samples scheduled for collection each month. These population-based numbers were: California-14, Colorado-2, Florida-7, Maryland-4, Michigan-6, New York-9, Ohio-6, Texas-8, Washington-4, and Wisconsin-2, for a monthly target of 62 samples per commodity (744/commodity/year). In addition to routine collection targets, an adjusted sample collection framework (weighted sampling scheme) was used to compensate for the seasonality of selected commodities. Under this weighted scheme, cantaloupe samples were collected at one-half, single, and double the routine monthly rate to reflect market availability. A similar approach was used for processed commodities where the ratio of fresh/ frozen and juice concentrate/ready-to-serve samples was adjusted to reflect consumption figures. The resulting data are expected to more accurately mirror U.S. changes in consumption patterns based on commodity availability.

A total of 8,637 fresh and frozen fruit and vegetable samples were collected during 1999 (see Table 1 for the number of samples collected per State). Figure 3 shows the total number of samples per commodity and the percentage of each that were either domestic, imported, mixed national, or of unknown origin. Appendix B provides a more detailed breakdown of sample origin by State or country. Fruit and vegetable samples originated from 35 States and 22 foreign countries (including mixed national origin).

■ Apple Single Serving Survey

PDP conducted a 1-year special survey on single servings of apples in response to an EPA request for residue data to estimate acute (short-term) dietary exposures to organophosphates and carbamates. Single servings are defined as large unit food items such as apples, oranges, pears, etc. in which one unit may comprise a serving on a single eating occasion. Data collected under PDP routine operations are for "composite samples", that is, each data point reflects residues detected in a 3-5 pound sample. Composite samples are ideal for estimating chronic (long-term) exposures. However, to estimate acute exposure on food commodities commonly consumed as single servings, EPA requested data where residues were measured on single portions.

Table 1. Samples Collected and Analyzed per Commodity by Each Participating State

Fresh Fruit and Vegetables

State	AP	AX	CN	CU	LT	PE	PX	PP	ST	TO	WS	Total Fresh
California	82	315	183	160	42	77	76	162	112	80	64	1353
Colorado	12	47	27	24	6	12	12	24	24	12	6	206
Florida	48	227	96	86	21	42	42	83	78	42	42	807
Maryland	24	88	54	48	12	23	23	48	32	24	19	395
Michigan	36	118	81	69	18	34	34	71	71	34	18	584
New York	59	250	119	107	27	53	47	108	108	54	14	946
Ohio	36	181	82	72	18	36	36	72	73	36	17	659
Texas	47	110	109	96	24	48	48	96	89	50	48	765
Washington	24	79	54	48	12	22	22	46	44	22	13	386
Wisconsin	11	48	26	24	5	12	12	23	19	12	5	197
TOTAL	379	1463	831	734	185	359	352	733	650	366	246	6298

Processed Fruit and Vegetables

State	CP	GJ	SP	SZ	TC	WZ	Total Processed	Total F&V	Grain Product OA
California	84	150	149	43	83	--	509	1862	71
Colorado	12	24	24	--	12	6	78	284	10
Florida	42	84	84	6	42	--	258	1065	41
Maryland	24	48	48	14	24	5	163	558	20
Michigan	36	68	71	--	35	17	227	811	38
New York	54	107	108	--	54	40	363	1309	50
Ohio	36	69	70	--	36	18	229	888	29
Texas	48	94	91	6	48	--	287	1052	41
Washington	24	46	48	--	24	10	152	538	21
Wisconsin	11	24	22	2	10	4	73	270	11
TOTAL	371	714	715	71	368	100	2339	8637	332

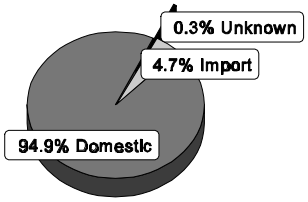
Commodities

AP - Apples (Composite)
AX - Apple (Single-Serving)
CN - Cantaloupe
CP - Pears (Canned)
CU - Cucumbers
GJ - Grape Juice (R/CO)
LT - Lettuce
OA - Oats (Rolled/Bran)
PE - Pears (Fresh Composite)
PX - Pear (Single-Serving)
PP - Sweet Bell Peppers
SP - Spinach (Frozen)
ST - Strawberries (Fresh)
SZ - Strawberries (Frozen)
TC - Tomatoes (Canned)
TO - Tomatoes (Fresh)
WS - Winter Squash (Fresh)
WZ - Winter Squash (Frozen)

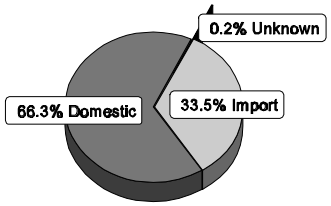
R/CO - Ready-to-Serve/Concentrate

Figure 3. Commodity Origin

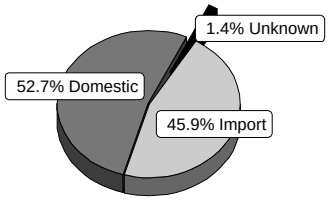
A. Fresh Commodities



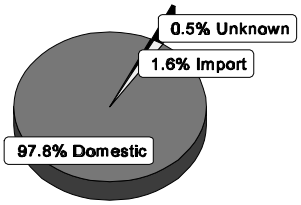
Apples
(379 Samples)



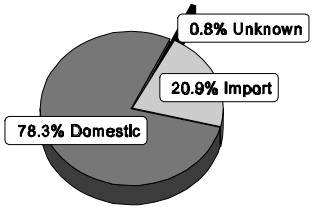
Cantaloupe
(831 Samples)



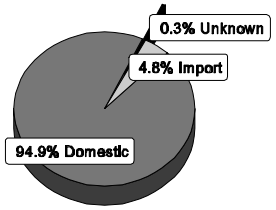
Cucumbers
(734 Samples)



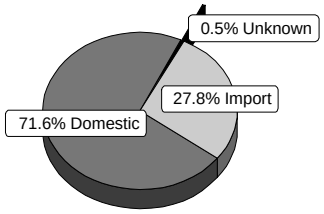
Lettuce
(185 Samples)



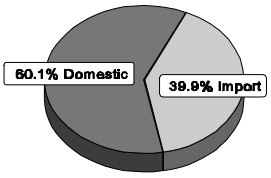
Pears, Fresh
(359 Samples)



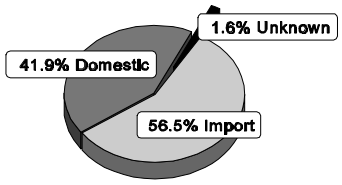
Strawberries, Fresh
(650 Samples)



Sweet Bell Peppers
(733 Samples)

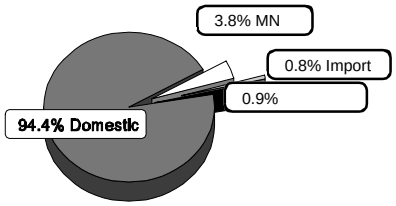


Tomatoes, Fresh
(366 Samples)

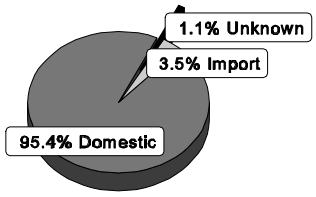


Winter Squash, Fresh
(246 Samples)

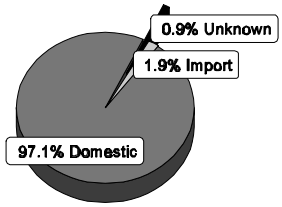
B. Processed Commodities (MN = Mixed National Origin)



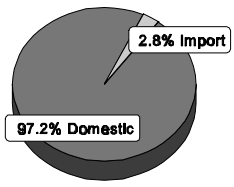
Grape Juice
(714 Samples)



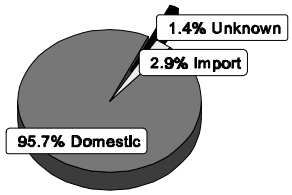
Pears, Canned
(371 Samples)



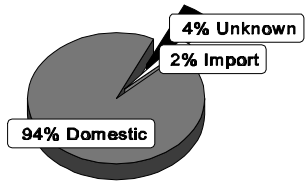
Spinach, Frozen
(715 Samples)



Strawberries, Frozen
(71 Samples)



Tomatoes, Canned
(368 Samples)



Winter Squash, Frozen
(100 Samples)

The objectives of this survey were two-fold: to provide data for direct use in probabilistic analysis techniques used in determining acute dietary exposure and to examine the distribution of residues within a composite sample. The survey was conducted utilizing the same sampling frame used for fruit and vegetables, but the testing protocol was modified with input from EPA staff to meet the objectives of the study. The resulting data were also used by EPA to evaluate the limitations of various statistical models in predicting concentration of residues in single servings from composite data. A detailed explanation of the testing protocol is given in Section III (Laboratory Operations). A total of 1,463 single serving apple samples were analyzed for organophosphates and carbamates with results presented in Appendix E and Appendix F.

■ Pear Single Serving Survey

The special survey on single servings of pears, which began in July 1998 in response to an EPA emergency request, was continued through June 1999 to complete a full year of data. The pear survey follows a much simpler protocol than the apple survey. Data from this survey was applied in probabilistic analysis to estimate acute (short-term) risk to organophosphates resulting from a single eating occasion. The survey was conducted using the same sampling frame used for fruit and vegetables, with one pear randomly selected for analysis from each 5-pound sample. The remaining sample was tested as a composite. A total of 352 single serving pear samples were analyzed for 26 organophosphates plus 8 metabolites and isomers. Results are shown in Appendix E.

■ Oat Sample Survey

PDP collected 332 oat samples (rolled and bran). Samples were collected from routine PDP sampling sites which include major distribution centers and terminal markets. Analysis was performed by GIPSA's Technical Services Division laboratory located in Kansas City, Missouri. About 95 percent of food-grade oats are imports (5% of domestic oats are food-grade, the remainder is used for forage), with most of the imports likely coming from Canada. Therefore, although origin could not be ascertained for any of the samples, for the purposes of this summary, it is safe to assume that nearly all processed oat samples are imports. Results are shown in Appendix G.

■ Corn Syrup Survey

Dextrose Equivalent corn syrup (DE-42/43) is a corn product used as an ingredient in chocolate, fruit syrups, ice cream, and candy bars. This sampling survey, analogous to the 1998 High-Fructose survey, was developed in cooperation with the Corn Refiners Association, whose membership represents virtually the entire U.S. corn syrup industry. Samples were collected at eight participating refineries four times per month. One-quart size samples were drawn from storage containers at the plants and sent to the New York State laboratory for analysis. A total of 156 samples of DE 42/43 were collected and analyzed. Results are shown in Appendix H.

III. Laboratory Operations

■ Overview

Eleven laboratories (8 State and 3 Federal) performed analyses for PDP during 1999. These laboratories are equipped with instrumentation capable of detecting residues at very low levels. The laboratory staff receive intensive training and must demonstrate analytical proficiency on an ongoing basis. Program scientists continuously test new technologies and develop new techniques to improve the levels of detection. Major changes in methodology are evaluated and their soundness demonstrated and documented in accordance with PDP SOPs.

■ Fresh/Processed Fruit and Vegetables

PDP participating laboratories analyzing fruit and vegetables monitored 104 pesticides plus 49 metabolites, degradates, and isomers using multiresidue methods (MRMs) and two (2) pesticides by single or selective residue methods (SRMs). Upon arrival at the testing facility, samples are visually examined for acceptability and discarded if determined to be inedible (decayed, extensively bruised, or spoiled). Accepted samples are then prepared emulating the practices of the average consumer to more closely represent actual exposure to residues.

Fresh samples are prepared as follows: (1) cantaloupes are cut in half and seeds and rind removed; (2) cucumbers, lettuce, and tomatoes are washed with inedibles removed; (3) pears are washed and cored; (4) sweet bell peppers are washed with stem, core, and seeds removed; (5) strawberries are washed with stem and leaves removed; and (6) winter squash is washed with stem and/or end pieces removed. Processed samples are prepared as follows: (1) fresh and reconstituted grape juices are mixed until homogeneous; (2) grape juice frozen concentrates are diluted according to label directions and mixed until homogeneous; and (3) canned and frozen fruit and vegetables are homogenized with their entire contents, including any liquid present.

Laboratories are permitted to refrigerate fresh incoming fruit and vegetable samples of the same commodity for up to 72 hours to allow for different sample arrival times from collection sites. Frozen and canned commodities can be held in storage (freezer or shelf) until the entire sample set is ready for analysis.

Samples (except grape juice) are homogenized using choppers and/or blenders and separated into analytical portions (aliquots) for analysis. If testing cannot be performed immediately, the entire analytical set is frozen at -40°C, or lower, according to PDP's Quality Assurance/Quality Control (QA/QC) requirements. Surplus aliquots, not used for the initial testing, are retained frozen in the event that replication of analysis or verification testing is required.

For analysis of fruit and vegetables, variations and combinations of the Luke I (Section 302 of PAM I) and Luke II (FDA's Laboratory Information Bulletin 3896) extraction procedures developed by FDA are used by Michigan, New York, Ohio, and Texas. California, Florida, and Washington utilize modifications of the MRM developed by the California Department of Food and Agriculture (CDFA). The Luke and CDFA methods and their variations were determined, through method validation procedures, to produce equivalent data for PDP analytical purposes. Residues are extracted from samples using organic solvents followed by various cleanup procedures. SRMs, when employed for abamectin and benomyl, were independently validated by the laboratory performing the analysis.

Various types of chromatography are used for the initial identification and quantitation of pesticides. All residues initially identified must be verified. Verification is accomplished by various forms of mass spectrometry, or by alternate detection systems, depending on the concentration reported. LODs for various selective detectors are generally lower than those achieved by mass spectrometry. Verification is deemed necessary due to the complexity of commodity matrices and the low concentration levels of detected residues. The verification process provides an extra measure of confidence in the identification of both the pesticide residue and its concentration.

■ Apple Single Serving Survey

The New York State laboratory analyzed composite and single serving apples for 38 identified organophosphate and carbamate pesticides plus 24 metabolites and isomers. The initial protocol required that 11 medium to large sized apples be chosen at random from each 5-pound sample. Ten of 11 apples were washed and cut into eighths. The eleventh apple was left whole to be washed and analyzed as a single serving. Four alternate eighths (or one-half apple) of each of the ten apples were combined as a composite. The remaining one-half portions of the ten apples were identified as subsamples and stored for further analysis if warranted. The composite and the eleventh apple were analyzed concurrently according to PDP procedures. If results for the composite sample exceeded established trigger points of 0.13 parts per million (ppm) azinphos methyl and/or 0.035 ppm chlorpyrifos, the remaining half apples were analyzed individually for all identified organophosphates and carbamates and designated metabolites and isomers.

During this survey, the protocol was revised to decrease trigger point concentrations to allow more rapid collection of single serving data needed to address dietary risk assessment. The protocol was also amended to discontinue analysis of the eleventh apple, substituting concurrent analysis of one of the subsamples. If results for the composite sample exceeded the Limit of Quantitation (LOQ) for azinphos methyl (0.020 ppm) and/or chlorpyrifos (0.010 ppm), the remaining nine half apples were then analyzed individually for identified organophosphate compounds

and designated metabolites and isomers. Figure 4 illustrates the revised protocol followed during this portion of the single serving apple survey.

Single serving and composite samples were extracted using established multiresidue procedures and analysis for selected organophosphates and carbamates and their corresponding metabolites and isomers performed using selective detectors and post-column derivatization, high-performance liquid chromato-graphy detection systems. Verification was accomplished by various forms of mass spectrometry or by alternate detection systems, depending on the concentration reported.

■ Pear Single Serving Pear Survey

Selected PDP participating State laboratories analyzed single serving pear samples for 26 identified organophosphate pesticides plus 8 metabolites and isomers, in addition to the corresponding composite samples undergoing multiresidue analysis. Upon receipt of composite pear samples for multiresidue analysis, an individual pear was randomly selected from each 5-pound sample, prepared, and analyzed according to PDP procedures. Single serving samples were extracted using established multiresidue procedures and analysis for selected organophosphates and their metabolites performed using selective detectors. Verification was accomplished by various forms of mass spectrometry or by alternate detection systems, depending on the concentration reported.

■ Processed Grain Products

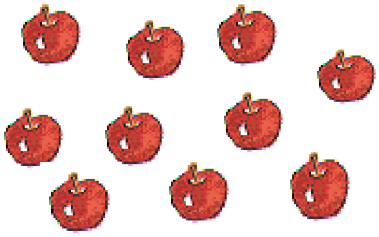
The New York State laboratory monitored Dextrose-Equivalent (DE) 42/43 corn syrup for 82 pesticides and 21 metabolites, degradates, and isomers. Upon arrival at the testing facility, samples were visually examined for acceptability and discarded if leaking or otherwise inedible. Corn syrup samples were stored at room temperature until ready for analysis and then mixed until homogeneous. Surplus sample aliquots, not used for the initial testing, were retained frozen in the event that replication of analysis or verification testing was required. Extraction of corn syrup samples was accomplished using a MRM developed by the New York State laboratory. Corn syrup samples were extracted with organic solvent and cleaned up using solid phase extraction procedures. Residues were analyzed utilizing tandem mass spectrometry technology or post-column derivatization, high-performance liquid chromatography detection systems.

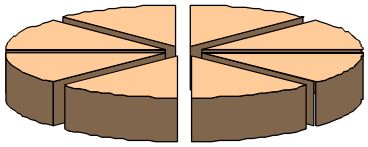
USDA's GIPSA laboratory monitored rolled oat and oat bran samples for 33 pesticides plus 11 metabolites and isomers. Upon arrival at the testing facility, samples were visually examined for acceptability and discarded if spoiled or otherwise inedible. Oats were refrigerated at 10°C, or lower, until homogenization, and then ground and analyzed. Surplus sample aliquots, not used for the initial testing, were retained refrigerated in the event that replication of analysis or verification testing was required. Extraction of oat samples was accomplished using supercritical fluid extraction (a solventless system) coupled with mass spectrometry detection or post-column derivatization, high-performance liquid chromatography detection systems.

■ Quality Assurance Program

The main objectives of the quality assurance/quality control (QA/QC) program are to ensure the reliability of PDP data and the performance equivalency of the participating laboratories. Direction for PDP's QA program is provided through SOPs based on EPA's Good Laboratory Practices (GLPs). A QA Committee, comprised of program Quality Assurance Officers (QAOs), is responsible for annually reviewing program SOPs and addressing QA issues. For day-to-day quality assurance oversight, PDP relies on the Quality Assurance Unit (QAU) at each participating facility. As required under EPA's GLPs, the QAU operates independently from the laboratory staff. Preliminary QA/QC review procedures are performed on-site by each laboratory's QAU. Final review procedures are performed by PDP staff who are responsible for collating and reviewing data for conformance with SOPs. Additionally, PDP staff also monitor the participants' performance through proficiency evaluation samples, QAU quarterly internal reviews, and on-site visits. Additional information on PDP's QA program is provided in Appendix C.

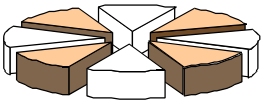
Figure 4. PDP Apple Single Serving Survey Flowchart





Select 10 apples from sample

Cut each apple into 8ths

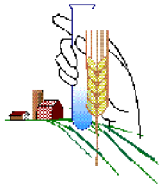


Choose four alternating 8ths from each apple and combine for composite (Code AP)

Choose four alternating 8ths of one apple and combined for single serving (Code AX, sub A)

Test for identified OPs

Test for identified OPs



Report results

Azinphos methyl >/= LOQ (0.020 ppm)

Chlorpyrifos >/= LOQ (0.010 ppm)

Analyze remaining four-8ths of each remaining nine half apples identified for OPs

Report results

IV. Database Management

PDP maintains an electronic database which serves as a central repository for its residue monitoring data. The central database resides at the PDP Staff Office in Manassas, Virginia. The data captured and stored in the PDP database include product information, residue findings, and process control recoveries for each sample collected and analyzed along with QA/QC recoveries for each group or set of samples. Each calendar year survey is stored in a separate database structure, allowing for easier administration and reporting of data. Figure 5 depicts the PDP data life-cycle.

■ Electronic Data Life-Cycle

In 1994, PDP implemented the Remote Data Entry (RDE) system, which is a customized software application that provides participating State and

Federal laboratories with the ability to enter the residue monitoring data using interactive data entry screens and then electronically transmit the data to the PDP Staff Office via modem and standard telephone lines. Prior to RDE implementation, all data collected from PDP laboratories arrived in paper format, requiring an exhausting data entry process at the PDP Staff Office.

The RDE data entry screens have extensive edits and cross-checks built in to ensure that valid values are entered for all critical data elements (fields). This task is made easier by the practice of capturing and storing standardized codes for all critical alphanumeric data elements rather than their complete names, meanings, or descriptions. This coding scheme allows for faster and more accurate data entry, saves disk storage space, and makes it very easy to perform ad-hoc queries (data searches) on the database. The data entry screens also perform edits on numeric fields, dates, and other character fields to ensure that entries are within prescribed boundaries.

Several methods of control are employed by the RDE system to protect the security and integrity of the data. At the laboratory, the system includes a check to ensure that a set of data (for 1 commodity for 1 month) has been reviewed and approved for release by a responsible reviewing officer. This greatly reduces the chance of receiving incomplete or invalid data. After one or more data sets are selected for electronic transfer to the PDP Staff Office, the data for those sets are written to separate files and those files are encrypted (scrambled). Also prior to electronic transfer, a digital signature file is created to accompany each of the data files. The digital signature file captures a "picture" of the data along with a private key code unique to the participating laboratory. After the digital data files are received at the PDP Staff Office and are moved to a secure network drive, the files are decrypted (unscrambled). The validation of the digital signature attached to the data files ensures that the sender is an authorized participating laboratory and that the data files have not been altered or corrupted intentionally or otherwise.

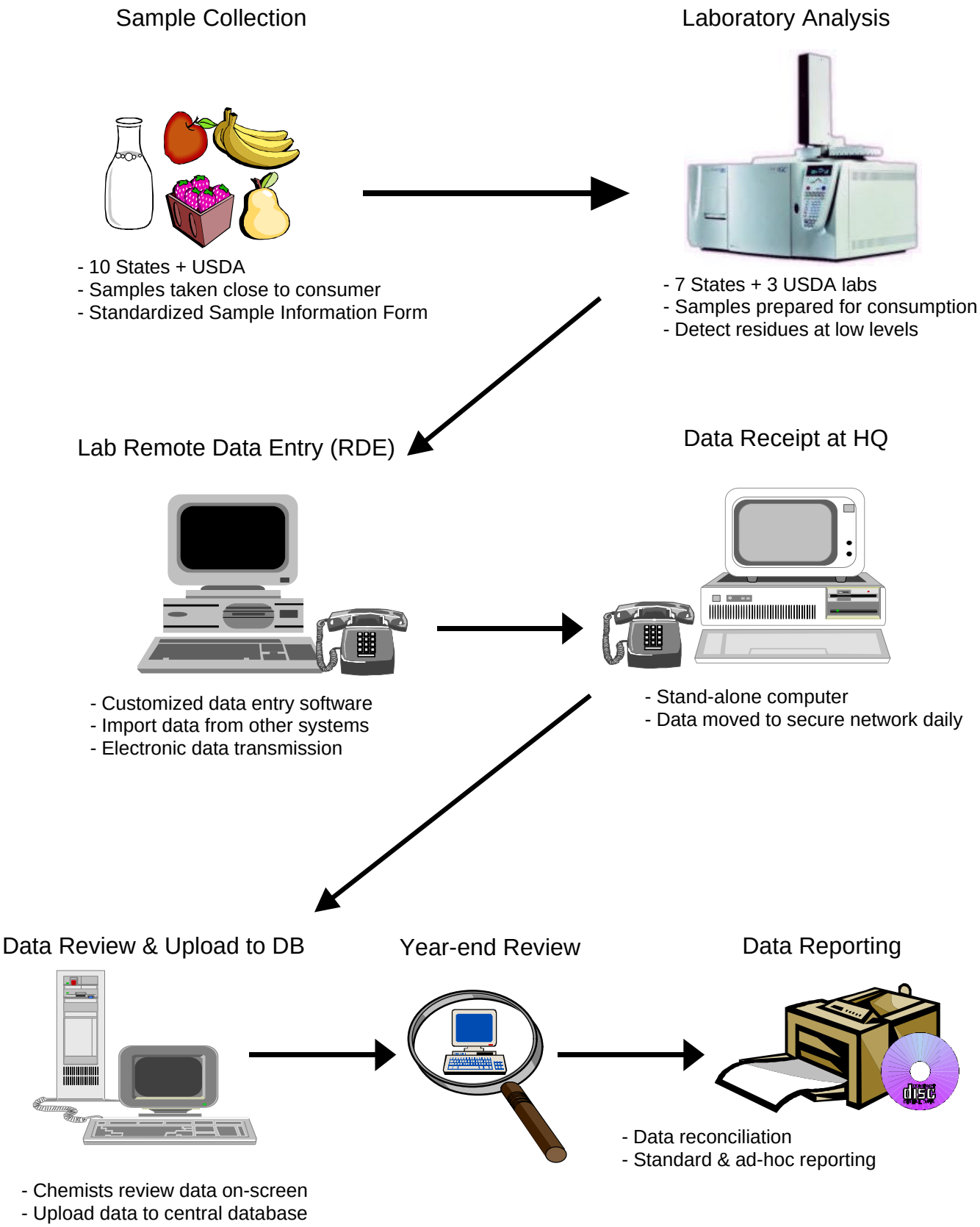
At the PDP Staff Office, the RDE system allows the staff chemists to review the data on-screen and then to mark the data as ready-for-upload to the central PDP database. The upload routine launched from the RDE system converts and passes the data to the PDP database. The database is presently maintained using Microsoft Access 97 facilities in a Windows 95/NT operating environment. Access to the central PDP database is limited to PDP staff personnel only and is controlled through password protection and user access rights. System back-ups are done each night and back-up tapes are sent to off-site storage once a week.

■ Data Reporting

The PDP staff receives and responds to requests for data from government agencies and interested outside parties. Ad-hoc queries and custom reports are generated to fill such data requests. An electronic library of data queries is maintained to generate standardized data summaries, including the data tables, charts, and appendices in this annual summary.

Subsets of the PDP calendar year databases are made available for download from the PDP Internet web site. The data files on the web site are fixed-length text files that contain a portion of the sampling data, all of the reported residue findings, and reference lists that can be used to interpret the standardized codes used in the PDP data. The data files can be imported into defined database

Figure 5. PDP Data Life Cycle



structures and manipulated using any database management software package.

Each PDP calendar year database is submitted for inclusion in the National Pesticide Residue Database (NPRD), which is managed by EPA. NPRD holds residue data from various sources, including Federal and State agencies, colleges and universities, and private companies.

V. Sample Results and Discussion

■ Sample Results

In 1999, PDP conducted surveys on various foods which included fresh and processed fruit and vegetables, oats (rolled/bran), and corn syrup. Of the 9,125 samples collected and analyzed, 8,637 were fruit and vegetable commodities, 332 were processed oats (rolled/bran), and 156 were corn syrup. Approximately 67 percent of the fruit and vegetable samples (domestic and imports) had detectable pesticide residues. Pesticide residues were also detected in 8 percent of the oat samples. No residues were found in any of the corn syrup samples tested. Approximately 79 percent of all samples were domestic and 20 percent were imports (less than 1% were of unknown origin). Imports were fruit and vegetable commodities and oats. Appendix D provides a comparison of residues for selected commodities with a significant import component.

Appendix E shows residue findings for fruit and vegetables including tolerance violations, minimum and maximum concentrations detected, LODs, EPA tolerances, and, where applicable, Codex Alimentarius maximum residue limits (MRLs) and extraneous maximum residue limits (EMRLs). Appendix F shows results of the apple single serving survey, including concentration detected in composite samples and their corresponding values detected in each of the units making up the composite. Appendices G and H depict similar information as Appendix E for oats and corn syrup. Table 2 gives an overview of the number of residue detections per commodity class.

The PDP data, as well as other monitoring data, are used to refine estimates of dietary exposure to pesticides. EPA uses all data reported by PDP including sample results reported as below the LOD. PDP laboratories are required to establish LODs and to report any instrumental response below the LOD as a non-detect. LODs are established experimentally for each pesticide/ commodity pair and are reported with each data set. Non-detects can be used in conjunction with percent crop treated data to determine what proportion of these values may be zeroes. Overall, 36 percent of the samples were reported as below the LOD (non-detects), and for samples with residues, most detections were below established tolerances.

■ National Estimates

As discussed in Section II, the PDP sampling frame incorporates population figures in participating States (representing approximately 50 percent of the Nation's population). There are little or no significant differences in residue estimates across these States and, we infer, across all States. More potentially critical are differences in the residue content of fresh commodities across months and differences across types of processed commodities (e.g., frozen vs. canned tomatoes). Data availability of food products (volumes of produce moving through wholesalers), when available, are used to compute nearly unbiased estimates of pesticide residues in PDP commodities at the National level.

Appendix I shows National estimates for selected pesticide/commodity pairs (including metabolites, degradates, and isomers of pesticides) with detectable residues in at least 10 percent of the samples tested. A range of values for the sample mean (average) residue concentration for each pair is provided. The lower value for the range was determined by treating a sample without detectable residues as if it had a residue concentration equal to zero. The upper value for the range was determined by treating such a sample as if it had a residue concentration equal to the LOD. Calculations for the 50th, 75th, and 90th percentiles for each of the pairs are shown. The ratio of the 90th percentile to the tolerance, as a normalization factor, is also provided.

Table 2. Number of Samples and Residues Detected, by Commodity

	Total Samples Analyzed	Samples with Residues Detected	% of Samples with Residues Detected	Different Residues Detected	Total Residue Detections
Fresh Fruit and Vegetables:					
Apples	379	314	83	12	490
Apples, Single Serving (O&C)	1,463	1,345	92	14	1,951
Cantaloupe	831	437	53	29	725
Cucumbers	734	535	73	39	1,425
Lettuce	185	69	37	16	117
Pears	359	347	97	29	762
Pears, Single Serving (OPs)	352	178	51	7	206
Strawberries	650	595	92	41	1,643
Sweet Bell Peppers	733	501	68	44	1,860
Tomatoes	366	246	67	33	681
Winter Squash	246	101	41	16	152
TOTAL	6,298	4,668	74	76	10,012
Processed Fruit and Vegetables:					
Grape Juice	714	300	42	14	328
Pears, Canned	371	15	4	3	15
Spinach, Frozen	715	607	85	42	1,706
Strawberries, Frozen	71	61	86	14	159
Tomatoes, Canned	368	95	26	22	143
Winter Squash, Frozen	100	63	63	6	68
TOTAL	2,339	1,141	49	60	2,419

Fruit and Vegetables:
Number of Samples Analyzed = 8,637
Number of Samples with Residues Detected = 5,809
Percent with Residue Detections = 67.3%
Total Number of Different Residues = 87
Total Number of Residue Detections = 12,431

Processed Grain Products:					
Corn Syrup	156	0	0	0	0
Oats, Rolled/Bran	332	28	8	6	29

All Commodities:
Number of Samples Analyzed = 9,125
Number of Samples with Residues Detected = 5,837
Percent with Residue Detections = 64.0%
Total Number of Different Residues = 90
Total Number of Residue Detections = 12,460

O&C = Organophosphates & Carbamates
OPs = Organophosphates

These ratios show that, in most cases, the levels of detected residues are a small fraction of the tolerances for the listed pesticide/commodity pairs. Percent detections and percentiles for fresh apples, cantaloupe, cucumbers, lettuce, pears, strawberries, and tomatoes were weighted to reflect 1998 marketing data. No weighting adjustments were made for frozen spinach, frozen strawberries, sweet bell peppers, canned tomatoes, and frozen winter squash because marketing data were not available. The residue detection percentiles for grape juice were also weighted to reflect sales volume data for canned, liquid, and/or frozen processed products.

Appendix J displays the estimated distributions of eight representative pesticide/commodity pairs in graphical form showing the range of values, the median at the 50th percentile, and the range in percentile representing the lower and upper bound for the sample mean. These pesticide/commodity pairs are: endosulfan sulfate/cantaloupe, dieldrin/ cucumbers, carbaryl/grape juice, thiabendazole/pears (fresh), DDE p,p'/spinach (frozen), iprodione/ strawberries (fresh), acephate/sweet bell peppers, and methamidophos/sweet bell peppers. In some cases, there is convergence of the upper and lower bound into a single line, because using zero or the LOD for non-detected values becomes insignificant. These graphs visually demonstrate that the overwhelming majority of pesticide testing results and the respective means (average values) are at low concentrations.

■ Fresh vs. Processed

The 1999 data show that residue profiles for fresh products are significantly different than for processed products. Pesticides reported in previous years as frequently used (i.e., with high detection rates) in fresh grapes, pears, and tomatoes were either not detected or detected at significantly different rates than grape juice, canned pears, and canned tomatoes. Various factors may explain these differences in residue profiles. In some cases, raw agricultural commodities, if specifically grown for processing, are likely to receive different chemical treatments than fresh market products; only a minor component of fresh market products is used for processing; or residue concentration or reduction may be a direct result of processing effects (heat, time, product preparation, etc.). Table 3 provides a comparison of residues for fresh and processed products which illustrates these findings. Data used for this table are the most recent data collected by PDP for the fresh product and 1999 data for the corresponding processed product. Captan was detected in 42 percent of fresh grapes in concentrations ranging from 0.010-1.0 parts per million (ppm), whereas no residues were detected in any of the grape juice samples. Similarly, chlorpyrifos and myclobutanil were reported in fresh grapes at 14 and 25 percent respectively, but were not detected in grape juice. In contrast, carbaryl was reported in 41 percent of grape juice samples, a much higher detection rate than the 6 percent detected in fresh grapes. For fresh pears, thiabendazole and azinphos methyl were detected at 80 and 52 percent of the samples respectively, whereas no detections were reported in any of the canned pears tested. Detection rates for chlorpyrifos, endosulfans, and permethrins in fresh tomatoes were also significantly higher than in the canned product.

■ Postharvest Applications

Pesticides can be applied before and after harvest depending on the crop and approved label use. PDP data captures both pre- and postharvest uses because samples are collected at points where all pesticide applications have already taken place. Pesticides with postharvest uses are fungicides and selected herbicides (plant growth regulators). According to USDA surveys (1996 NASS/ERS Agricultural Chemical Usage Report for Field Crops; 1996 NASS/ERS Agricultural Chemical Usage Report for Vegetables; and 1993 NASS/ERS Agricultural Chemical Usage Report for Fruits), use of fungicides comprised about 6 percent of total U.S. pesticide usage on PDP fruit and vegetable crops; however, about 18 percent of PDP detections in fruit and vegetables (fresh and processed) were for residues of fungicides. The inconsistency between usage and residue data may be due largely to fungicides applied after harvest to preserve crops during long term storage. These postharvest applications may result in higher detection rates because environmental factors (rainfall, sunlight, temperature, wind, etc.) which promote residue dissipation of pesticides applied before harvest have no effect on crops that are in storage. Detections reported by PDP in Appendix E that were most likely generated by postharvest applications in the raw agricultural commodity include residues of the fungicides diphenylamine (pears), o-phenylphenol (cantaloupe, cucumbers, pears, and

tomatoes), and thiabendazole (cantaloupe and pears).

■ Environmental Contaminants

DDT, DDD, and DDE

A total of 6,379 fruit and vegetables, 332 oats (rolled/bran), and 156 corn syrup samples were screened for DDE p,p', a metabolite of DDT. Other DDT metabolites tested include DDE o,p', DDD o,p', and DDD p,p'. Use of DDT has been prohibited in the United States since 1972. However, due to the persistence of this chemical in the environment, residues of the DDE p,p' metabolite were detected in 4.7 percent of the 6,867 samples tested. Residues of DDE p,p' were found primarily in 42.7 percent of frozen spinach and 2.7 percent of lettuce samples. No residues of DDT or its metabolites were detected in any of the corn syrup samples tested. All detections were below the established action levels.

OTHER EXTRANEOUS PESTICIDES

All aldrin, dieldrin (also a metabolite of aldrin), heptachlor, and chlordane uses (except termiticide uses) were canceled in the United States in 1974, 1978, and 1986, respectively. However, residues of chlordane, dieldrin, and heptachlor epoxide (metabolite of heptachlor) were detected in cucumber and winter squash samples.

Dieldrin was found in 60.0 percent of frozen winter squash, 7.8 percent of fresh winter squash, 13.7 percent of cucumbers, and 6.4 percent of cantaloupe samples. Heptachlor epoxide was detected in 2.1 percent of frozen winter squash and less than 1 percent of cantaloupe and cucumbers. Chlordane cis and trans were also detected in cucumbers at 12.5 and 4.3 percent respectively (see Appendix E). All detections were below the established action levels.

■ Single/Selective Residue Analyses

ABAMECTIN

A total of 364 tomato samples were tested for abamectin. Abamectin residues were detected in 0.5 percent of the samples tested (2 samples). Both detections were well below the established tolerance.

BENOMYL

A total of 2,757 samples (759 cantaloupe, 688 cucumbers, 638 fresh/frozen strawberries, and 672 sweet bell peppers) were tested for benomyl, as the carbendazim metabolite. Carbendazim residues were detected in 19 percent of the strawberries, in 0.3 percent of cantaloupe, 0.6 percent of cucumbers, and 11 percent of the sweet bell peppers. All detections were at levels below the established tolerances.

■ Multiple Residue Detections

The PDP database provides information that can be used by EPA in evaluating the incidence of multiple residue detections. Multiple residue detections may derive from various sources such as applications of more than one pesticide on a crop during a growing season, spray drift, transfer through crop rotation, cross contamination at packing facilities, or persistent environmental residues. The multiple residue information is particularly useful in responding to the 1993 NAS report, *Pesticides in the Diets of Infants and Children*, which recommended that coordinated recording of multiple residue scans would make possible more accurate evaluation of exposure distributions for multiple chemicals.

This information will be very useful in assessing the cumulative effects of pesticides with similar mechanisms of action such as cholinesterase inhibitors and endocrine disruptors. The distribution of multiple residues in PDP's database is given in Appendix K. These data indicate that more than one pesticide residue was detected in 37 percent of fruit and vegetable commodities. No correlation exists between the incidence of multiple residues and tolerance violations.

■ Import vs. Domestic Residue Comparisons

The data generated by PDP reflect pesticide residues in foods available to the U.S. consumer which include domestic and imported products. Most commodities are almost entirely of domestic origin with only a minor import component. Other crops, such as winter squash, cantaloupe, cucumbers, and sweet bell peppers, are domestic during warm weather months and imported during winter months. Appendix D shows a comparison of selected residues detected in fresh cucumbers, sweet bell peppers, and fresh winter squash grown in the U.S. and Mexico and residues detected in cantaloupe in the U.S., Mexico, and Central American countries (Costa Rica, Guatemala, and Honduras). The data indicate that for cucumbers, a much higher percent of Mexican cucumbers had

detectable residues and residue profiles are different. Eight percent of the Mexican samples had dieldrin residues, compared to 19 percent of the U.S. samples. Conversely, Mexican cucumbers were found to contain residues of endosulfan I, endosulfan II, and endosulfan sulfate at 67, 56, and 83 percent respectively, compared to 24, 22, and 36 percent detected in the U.S. product.

For sweet bell peppers, 94 percent of Mexican product had residues, compared to 64 percent of U.S. samples. The percent of Mexican sweet bell peppers containing residues of chlorpyrifos, endosulfans, methamidophos, omethoate, and oxamyl was higher than those for sweet bell peppers grown in the U.S. Detection rates for acephate, dicofol, metalaxyl, and methomyl were higher for the U.S. grown product.

For fresh winter squash, one percent of Mexican samples had dieldrin compared to 17 percent of the U.S. grown product. Conversely, 29 percent of Mexican winter squash had endosulfan sulfate residues, much higher than the 17 percent reported in U.S. grown winter squash.

For cantaloupe, imports from Costa Rica, Guatemala, and Honduras were combined to compare them with domestic product. This approach was taken because of the regional similarities shared by these Central American countries and to attain a larger number of samples to make a valid comparison. Domestic cantaloupe had less residues of endosulfan sulfate and methomyl than the Mexican and Central American imports.

■ Tolerance Violations

A tolerance is defined under Section 408 of the Federal Food, Drug, and Cosmetic Act as the maximum quantity of a pesticide residue allowable on a raw agricultural commodity and is applicable to processed foods. EPA is in the process of revising tolerances to ensure that they meet the new standards required by FQPA. [Under FQPA, the safety standard for a pesticide tolerance is defined as "a reasonable certainty that no harm will result from aggregate exposure to the chemical residue, including all anticipated dietary exposures for which there is reliable information."]

A tolerance violation occurs when a residue is found which exceeds the tolerance level or when a residue is found for which there is no tolerance for that particular crop. With the exception of meat, poultry, and egg products, for which USDA is responsible, tolerances for all other foods (imported and domestic foods moved through interstate commerce) are enforced by FDA at the National level and by the States at the local level. When agencies with regulatory enforcement authority collect samples for tolerance enforcement purposes, they must adhere to a quick turnaround time and chain-of-custody protocols which allow them to detain the sampled lot until test results are available. PDP is not an enforcement program. Consequently, sample analysis does not have to be completed quickly (emphasis is placed on searching for residues at the lowest detectable levels--not on quick turn-around time) and sample collection does not interfere with commodity distribution. Samples with residues exceeding the tolerance or samples with residues for which there was no tolerance listed under the Code of Federal Regulations (CFR), Title 40, Part 180 were reported to FDA regional and headquarters offices. This is done in accordance with a Memorandum of Understanding between USDA and FDA for the purpose of pinpointing areas where closer surveillance may be needed. FDA enforcement action on PDP samples generally is not a viable option due to the time lag from sample collection to data reporting.

Residues exceeding the established tolerance are noted as “x” in Appendices E, F, G, and H. Similarly, residues for which a tolerance could not be found in the 40 CFR, Part 180 are listed as “v”. A tolerance expression may cover more than one residue because pesticides may breakdown into one or more metabolites or contain more than one isomer. For example, the tolerance for endosulfans covers the combined residues of endosulfan I, endosulfan II, and endosulfan sulfate; organophosphate tolerances may cover the sulfone and sulfoxide metabolites, etc. Therefore, where applicable (i.e., if residues of metabolites were detected in the same sample), PDP combined residues of parent and metabolites of endosulfan, ethion, fenamiphos, and quintozene and isomers of lambda cyhalothrin and iprodione to count the total number of samples with tolerance violations.

Table 3. Selected Residue Comparisons, Fresh vs. Processed

	GRAPES (1996)			GRAPE JUICE (1999)		
Pesticide	% of Samples w/ Detections	Minimum Value Detected, ppm	Maximum Value Detected, ppm	% of Samples w/ Detections	Minimum Value Detected, ppm	Maximum Value Detected, ppm
Captan	41.6	0.010	1.0	0	0	0
Carbaryl	6.5	0.010	0.94	40.6	0.003	0.086
Chlorpyrifos	13.7	0.005	0.44	0	0	0
Dimethoate	16.6	0.003	0.66	0.4	0.003	0.005
Omethoate	19.3	0.005	0.23	0.3	0.015	0.015
Iprodione	45.3	0.014	2.4	0.4	0.052	0.052
Myclobutanil	25.0	0.014	0.54	0	0	0

	PEARS-Fresh (1999)			PEARS-Canned (1999)		
Pesticide	% of Samples w/ Detections	Minimum Value Detected, ppm	Maximum Value Detected, ppm	% of Samples w/ Detections	Minimum Value Detected, ppm	Maximum Value Detected, ppm
Azinphos methyl	51.8	0.013	0.95	0	0	0
Captan	15.0	0.018	1.1	0	0	0
Diphenylamine-DPA	14.8	0.013	0.69	1.6	0.013	0.050
o-Phenylphenol	20.0	0.013	7.6	2.5	0.013	0.013
Phosmet	13.3	0.008	1.0	0	0	0
Thiabendazole	79.7	0.05	5.2	0	0	0

	TOMATOES-Fresh (1999)			TOMATOES-Canned (1999)		
Pesticide	% of Samples w/ Detections	Minimum Value Detected, ppm	Maximum Value Detected, ppm	% of Samples w/ Detections	Minimum Value Detected, ppm	Maximum Value Detected, ppm
Chlorpyrifos	15.1	0.005	0.094	1.6	0.005	0.005
Endosulfan I	25.5	0.003	0.51	0.5	0.008	0.010
Endosulfan II	35.7	0.005	0.23	0.8	0.005	0.013
Endosulfan sulfate	34.6	0.005	0.13	0.3	0.017	0.017
Methamidophos	20.9	0.002	0.32	15.8	0.002	0.028
Permethrin cis	14.9	0.013	0.075	1.1	0.002	0.053
Permethrin trans	15.7	0.008	0.081	1.1	0.002	0.053

The "x" and "v" annotations are followed by a number indicating the number of samples reported to FDA.

Residues exceeding the tolerance were detected in 0.3 percent of all composite samples tested in 1999. Residues with no tolerance listed in 40 CFR, Part 180 were found in 3.7 percent of the samples (244 samples with 1 residue, 24 samples with 2 residues each, and 3 samples with 3 residues each). In most cases, these residues were detected at very low levels and may be due to spray drift or crop rotations. These residue findings are listed in Appendix L.

■ Synopsis

In 1999, a total of 8,637 fresh and processed fruit and vegetable samples, 332 oat samples, and 156 corn syrup samples were analyzed for various pesticides including insecticides, herbicides, and fungicides. Samples were analyzed using MRMs capable of detecting various organochlorines, organophosphates, organosulfurs, organonitrogens, and N-methyl carbamates. SRMs were used for abamectin in tomatoes and benomyl in cantaloupe, cucumbers, strawberries, and sweet bell peppers. In addition, 1,463 single servings of apples and 352 single servings of pears were collected and analyzed mainly for organophosphates and metabolites.

Approximately 79 percent of all samples tested were domestic, 20 percent were imported (including samples of mixed national origin), and less than 1 percent were of unknown origin.

Of all samples tested, 0.3 percent were reported as containing residues exceeding the tolerance and 3.7 percent as without tolerances listed in 40 CFR, Part 180.

About 36 percent of all samples had no detectable residues, 29 percent contained one residue, and 35 percent contained more than one residue. Most of the residues were detected in fruit and vegetable commodities. Data for single servings of apples and pears were not significantly different from composite data. Environmental contaminants were detected mainly in frozen spinach, cucumbers, and winter squash. Postharvest applications contributed significantly to the number of residues detected in cantaloupe, cucumbers, pears, and tomatoes. Overall, levels of residues detected were below tolerances.

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Appendix A

Commodity History
(A Chronological Listing)

Appendix A shows a chronological listing of all commodities sampled since the inception of the program through 2000.

APPENDIX A. COMMODITY HISTORY

Fresh Commodities

Start Date	End Date	Months in Program	Commodity
May-91	Dec-96	65*	Grapes
May-91	Dec-94	44	Lettuce
May-91	Dec-95	56	Potatoes
Aug-91	Dec-93	29	Grapefruit
Aug-91	Dec-96	62*	Oranges
Sep-91	Dec-96	61*	Apples
Sep-91	Sep-95	49	Bananas
Feb-92	Mar-94	26	Celery
Feb-92	Dec-95	47	Green Beans
Feb-92	Sep-96	55*	Peaches
Oct-92	Dec-94	27	Broccoli
Oct-92	Sep-96	48*	Carrots
Jan-95	Sep-97	30*	Spinach
Feb-95	Jan-98	3@	Wheat
Jan-96	Oct-98	31*	Milk
Jan-96	Jun-98	27*	Sweet Potatoes
Jul-96	Jun-99	33*	Tomatoes
Dec-96	Feb-98	2@	Soybeans
Jan-97	Jun-99	30	Pears
Jan-97	Jun-99	30	Winter Squash
Jan-98	Sep-00	33	Strawberries**
Jul-98	Jun-00	24	Cantaloupe
Jan-99	Dec-00	24	Cucumbers
Jan-99	Dec-00	24	Sweet Bell Peppers
May-00	Aug-00	3***	Cherries
Apr-00			Poultry-Young Chickens
Jul-00			Nectarines
Jul-00			Pineapples

* Excludes sampling hiatus September (partial) - November 1996
** Frozen collected when fresh unavailable
*** Sampling adjusted for market availability, including triple-rate sampling in July 2000
@ Crop Years

Reintroduced Fresh Commodities

Start Date	End Date	Months in Program	Commodity
Oct-99			Lettuce
Jan-00			Grapes
Jan-00			Green Beans
Jan-00			Oranges
Apr-00			Potatoes
Oct-00			Apples
Oct-00			Carrots

Processed Commodities

Start Date	End Date	Months in Program	Commodity	Type
Apr-94	Mar-96	24	Sweet Corn	Canned/Frozen
Apr-94	Jun-96	27	Peas	Canned/Frozen
Jan-96	Jun-98	27*	Green Beans	Canned/Frozen
Jul-96	Dec-98	27*	Apple Juice	Processed
Dec-96	Dec-97	13	Peaches	Canned
Jan-97	Dec-98	24	Orange Juice	Processed
Apr-97	Jun-99	27	Winter Squash	Frozen
Oct-97	Dec-98	15	Spinach	Canned
Jan-98	Jun-99	17***	Corn Syrup	Processed
Jan-98	Dec-99	24	Grape Juice	Processed
Jan-98	Sep-00	33	Strawberries	Frozen**
Jan-99	Dec-99	12	Spinach	Frozen
Jul-99	Jun-00	12	Pears	Canned
Jul-99	Jun-00	12	Tomatoes	Canned
Jul-99	Apr-00	9	Oats	Processed
Jan-00	Dec-00	12	Peanut Butter	Processed
Oct-00			Rice	Processed

* Excludes sampling hiatus September - November 1996
** Frozen collected when fresh unavailable
*** Excludes sampling hiatus January 1999

Special Projects (Single Serving Surveys)

Start Date	End Date	Months in Program	Commodity	Analyte(s)
Dec-96	Dec-97	13	Potatoes	Aldicarb
Jul-98	Jun-99	12	Pears	Organophosphates
Jan-99	Dec-99	12	Apples	Organophosphates
Jan-99	May-99	5	Apples	Carbamates
Jan-00	Sep-00	9	Peaches	Carbamates, Organochlorines, Organophosphates, Organonitrogens, Sulfur compounds

Appendix B

Sample Origin by Grower, Packer, or Distributor

Appendix B gives the number of fruit and vegetable and oat samples per State or country of origin and the number of samples of unknown origin. Where available, origin of fresh commodities is taken from the grower or packer information. For processed commodities, origin is determined primarily by packer or distributor.

As shown in Appendix B, fruit and vegetable samples originated from 35 States and 21 foreign countries (includes mixed national origin). All oat samples have been listed in Appendix B under the Imported Samples section as “Unknown Country.” About 95 percent of food-grade oats are imports (5 percent of domestic oats are food-grade, the remainder are used for forage), with most of the imports coming from Canada. Therefore, although origin could not be ascertained for any of the samples, for the purposes of this summary, it is safe to assume that nearly all processed oat samples are imports.

APPENDIX B. SAMPLE ORIGIN BY GROWER, PACKER, OR DISTRIBUTOR
(Number of Samples per State/Country)

Part 1. Domestic Samples

	Fresh F&V											Processed F&V						Grain	No. of	% of
	AP	AX	CN	CU	LT	PE	PX	PP	ST	TO	WS	CP	GJ	SP	SZ	TC	WZ	OA	Domestic	Total
States = 35																				
Arizona			35	6				5		4	18	1		1		1			71	0.8
Arkansas												1	6	1	2	3			13	0.1
California	24	96	328	67	170	7	7	203	514	15	26	198	37	163	29	180	14		2078	23.2
Colorado			1	2				1		9						1			14	0.2
Connecticut													2						2	<0.1
Delaware				2															2	<0.1
Florida			61	94	1			161	82	138	14	5	5	31	1	3			596	6.6
Georgia				47				42		1	2	6	2	11		13			124	1.4
Idaho	8	16									3	9	9	69	9	14	1		138	1.5
Illinois				1				1	1		2	11	14	41	4	18	11		104	1.2
Indiana			2							1						1			4	<0.1
Kentucky										1									1	<0.1
Maine												2	3	6		3	2		16	0.2
Maryland	1	1	1	4		1	1	2		4	1	8	5	19	4	11	1		64	0.7
Massachusetts													415						415	4.6
Michigan	4	4	4	49				8	2	4		14	26	18		12	6		151	1.7
Minnesota	4	32							1	1		2	7	33	3	5	3		91	1
Missouri	1	10																	11	0.1
Nevada			42																42	0.5
New Jersey			2	6	1			15		4	6	4	7	10		8	1		64	0.7
New Mexico					1														1	<0.1
New York	17	44	4	18				7	1	8	1	16	40	17		5	15		193	2.2
North Carolina	2	2	2	4				3			1			6	1	1			22	0.2
Ohio			1	11		1	1	12		1	1	8	12	23		9	1		81	0.9
Oklahoma	4	40									1	4	2	23	6	1			81	0.9
Oregon	5	14		3		111	109				3		7	34		2	10		298	3.3
Pennsylvania				3				3		9	1	5	3	8		16	4		52	0.6
South Carolina				2				3		1									6	0.1
Tennessee											6			16					22	0.2
Texas	5	33	55	17	3	1	1	9	6	10	3	28	42	66	6	24	11		320	3.6
Utah											1	3	3	1	1	5			14	0.2
Virginia	2	2		8				6				3		3		2			26	0.3
Washington	278	1054	1	9		154	152	8		3	1	14	8	18		6	2		1708	19
West Virginia	1	1																	2	<0.1
Wisconsin	1	1	1	1				3	2		4	4	9	64	3	3	12		108	1.2
Unknown State	3	4	11	33	5	6	6	33	8	6	8	8	10	12		5			158	1.8
No. of Domestics	360	1354	551	387	181	281	277	525	617	220	103	354	674	694	69	352	94	0	7093	
% of Total (nearest %)	95	93	66	53	98	78	79	72	95	60	42	95	94	97	97	96	94	0		79.1

Part 2. Imported Samples

	Fresh F&V											Processed F&V						Grain	No. of	% of
	AP	AX	CN	CU	LT	PE	PX	PP	ST	TO	WS	CP	GJ	SP	SZ	TC	WZ	OA	Imports	Total
Countries = 20																				
Argentina						34	34						5						73	0.8
Australia												9							9	0.1
Belize											2								2	<0.1
Canada				12	1			23		13						6			55	0.6
Chile	7	34				32	30								1				104	1.2
China												1							1	<0.1
Costa Rica			40																40	0.4
Denmark								1											1	<0.1
Dominican Republic			14																14	0.2
Ecuador			1																1	<0.1
Guatemala			62																62	0.7
Honduras			44	2							5								51	0.6
Israel								4		1									5	0.1
Italy																3			3	<0.1
Mexico			115	319	2			156	30	129	130			13	1		2		897	10
Netherlands								18		1									19	0.2
New Zealand	10	73				3	2		1										89	1
Nicaragua			1																1	<0.1
South Africa						6	6					3							15	0.2
Spain										2						1			3	<0.1
Unknown Country	1	1	1	4				2			2		1	1		1		332	346	3.9
No. of Imports	18	108	278	337	3	75	72	204	31	146	139	13	6	14	2	11	2	332	1791	
% of Total (nearest %)	5	7	33	46	2	21	20	28	5	40	57	4	1	2	3	3	2	100		20.0

Part 3. Mixed National Origin Samples

	Processed F&V						Grain	No. of	% of
	CP	GJ	SP	SZ	TC	WZ	OA	Mixed	Total
Argentina / Brazil / Chile / USA		1						1	<0.1
Argentina / Brazil / Spain / USA		4						4	<0.1
Argentina / Brazil / USA		2						2	<0.1
Argentina / USA		18						18	0.2
Brazil / USA		2						2	<0.1
No. of Mixed National Origin Samples		27						27	
% of Total (nearest %)		4							0.3

Part 4. Unknown Origin

	Fresh F&V											Processed F&V						Grain	No. of	% of
	AP	AX	CN	CU	LT	PE	PX	PP	ST	TO	WS	CP	GJ	SP	SZ	TC	WZ	OA	Unknown	Total
Unknown Origin	1	1	2	10	1	3	3	4	2		4	4	7	7		5	4		58	
% of Total	0.3	0.1	0.2	1.4	0.5	0.8	0.9	0.5	0.3		1.6	1.1	1	1		1.4	4			0.6
GRAND TOTALS	**379**	**1463**	**831**	**734**	**185**	**359**	**352**	**733**	**650**	**366**	**246**	**371**	**714**	**715**	**71**	**368**	**100**	**332**	**8969**	

COMMODITIES			
AP = Apples	GJ = Grape Juice, R/CO	PP = Sweet Bell Peppers	TO = Tomatoes, Fresh
AX = Apples, SS	LT = Lettuce	SP = Spinach, Frozen	WS = Winter Squash, Fresh
CN = Cantaloupe	OA = Oats, R/B	ST = Strawberries, Fresh	WZ = Winter Squash, Frozen
CP = Pears, Canned	PE = Pears, Fresh	SZ = Strawberries, Frozen	
CU = Cucumbers	PX = Pears, SS	TC = Tomatoes, Canned	

SS = Single Serving R/CO = Ready-to-Serve / Concentrate R/B = Rolled / Bran

Appendix C

Quality Assurance Program Elements

PDP's Quality Assurance (QA) program covers all aspects of data gathering, from sample collection to data reporting. QA protocols for sampling are designed to protect sample integrity from the time of collection to the time of delivery at the testing facilities. QA protocols for testing comprise all laboratory operations from the time of sample receipt to the time data are reported to PDP's central database. PDP laboratories guarantee reported results by adherence to strict QA requirements. In 1999, 99.8 percent of the data reported to the database met QA guidelines. Less than one-quarter of 1 percent of reported results were associated with either fortification and/or process control data which did not meet QA criteria and were rejected. As described in this appendix, the QA program has five elements: 1) Standard Operating Procedures; 2) On-site Reviews; 3) Proficiency Check Samples; 4) Quality Control Procedures; and 5) Method Performance and Verification Procedures.

APPENDIX C. QUALITY ASSURANCE PROGRAM ELEMENTS

1. Standard Operating Procedures (SOPs) - Written SOPs are in place to provide uniform administrative, sampling, and laboratory procedures. SOPs are revised annually to accommodate changes in the program. Before submission, data are reviewed by each Quality Assurance Unit (QAU) for completeness and adherence to PDP requirements.

2. On-site Reviews - On-site reviews are performed to determine compliance with PDP SOPs. Improvements in sampling, chain-of-custody, recordkeeping, laboratory, and electronic data transmission procedures are made as a result of on-site reviews.

3. Proficiency Check Samples - All facilities are required to participate in PDP's Check Sample program. Check samples are issued to laboratories performing analysis with multiresidue methods and/or single/selective residue methods. Periodically, one to three prepared commodities, containing pesticide(s) of known quantities, are sent to the participating laboratories and tested under the same conditions as routine samples. The resulting data are used to determine performance equivalency among the testing laboratories, and to evaluate individual laboratory performance. During 1999, PDP laboratories received 4 proficiency sample sets consisting of 12 fruit and vegetable samples for multiresidue screening, 3 sets consisting of 9 fruit and vegetable samples for single/selective residue screening, 1 oats multiresidue set consisting of 3 samples, and 1 single serving apple multiresidue set consisting of 3 samples. For fruit and vegetable multiresidue screening, a total of 96 samples covering 12 commodities were fortified with 46 compounds, with 3 repeated once, at levels generally 1-10 times the limit of quantitation (LOQ). Results yield an overall mean percent coefficient of variation (%C.V.) of 21 percent. Twelve incurred residues were present in these sets in five commodities, with two residues occurring three times, at levels less than 0.5 ppm, with reported results having an overall mean %C.V. of 27 percent.

4. Quality Control Procedures - PDP operating procedures for quality control (QC) are intended to assess method and analyst performance during sample preparation, clean-up, extraction, and, where applicable, derivatization. To maximize sample output and decrease the QC/sample ratio, samples are analyzed in analytical sets, not to exceed 20 samples per set, which include the sample set and the following components.

a. Reagent Blank: For analysis of fruit and vegetable and corn syrup products, an amount of distilled water, equivalent to the natural moisture content of the commodity, is run through the entire analytical process to determine glassware cleanliness and system integrity. For grain analysis, performed by supercritical fluid extraction, an empty extraction cell is run through the analytical procedure to demonstrate system integrity.

b. Matrix Blank: A previously analyzed sample of the same commodity, which contains either very low concentrations of known residues or no detectable residues, is divided into two portions. The first portion is used to give background information on naturally occurring chemicals, and the second is used to prepare a matrix spike.

c. Matrix Spike(s): Prior to extraction, a portion(s) of matrix blank is spiked with marker pesticides to determine the accuracy of the analyst and instrument performance. Marker pesticides are compounds selected from different pesticide classes (organochlorines, organophosphates, carbamates), which have physical and chemical characteristics similar to those in the class they represent. The use of marker pesticides to monitor recoveries is a modification of PDP's previous requirements that called for spiking with all pesticides. Because of the large number of pesticides in the program, spiking with all compounds required several

spike mixtures (to avert coelution problems), which, in turn, resulted in lengthy run times. During 1999, PDP laboratories quantitated a total of 22,510 matrix spikes, with an overall mean recovery of 91 percent, overall standard deviation of 25 percent, and overall %C.V. of 28 percent.

d. Process Control Spike: A compound of physical and chemical characteristics, similar to those of the pesticides being tested, is used to evaluate the analytical process on a sample-by-sample basis. Each of the analytical set components, except the reagent and matrix blanks, is spiked with process controls. During 1999, PDP laboratories quantitated a total of 34,855 process controls on 9,125 samples, with an overall mean recovery of 93 percent, overall standard deviation of 16 percent, and overall %C.V. of 18 percent. Of these process controls, 322 (0.9%) were rerun due to initial failure to meet PDP recovery criteria. These rerun values are not included in these statistics for illustrative purposes; however, reported data are those obtained from sample reanalysis.

5. Method Performance and Verification Procedures - Laboratories are required to determine and verify the limits of detection (LODs) and LOQs for each pesticide/commodity pair. LODs depend on matrix, analyte, and detector used, and range from 0.001 to 0.23 ppm, with the exception of fenvalerate, reported by one laboratory as total combined fenvalerate, or fenvalerate plus the esfenvalerate isomer. (*Information on specific LODs and LOQs is available upon request.*) Verification by mass spectrometry or a suitable alternate detection system, is required for all initial determinations. Verified residue amounts above LOD and below LOQ are reported as below quantifiable level and assigned values at ½ LOQ at the request of EPA for use in dietary risk assessment. If a detected residue exceeds the established tolerance, the sample is reanalyzed from the frozen homogenate, along with the appropriate blanks and a spike of the residue at the suspected level.

Appendix D

Import vs. Domestic Pesticide Residue Comparisons

PDP was designed to provide a comprehensive statistical picture of pesticide residues in the U.S. food supply, representing all sources including imports. Most commodities consumed are generally produced in the United States with import components which vary by commodity. However, several commodities tested over the past several years were cyclical; part of the year domestic and part import.

Appendix D compares residue data reported for cucumbers, sweet bell peppers, and fresh winter squash from the United States and Mexico for 1997-1999. Also reported are data for cantaloupe from the United States, combined Central American countries, and Mexico for 1998 and 1999. Only residues detected in more than 10 percent of the samples are included in this section of the appendix. All pesticides detected were registered in the United States. However, the profiles of residue findings were markedly different in the United States samples versus samples from these exporting countries. The National differences in residue findings were due to the pesticides used to sustain crop protection based on the environment, climate, and growing conditions.

1999 Distribution of Residues for Cucumbers
United States Samples vs. Samples Originating in Mexico

Origin	Year	# of Samples Analyzed	# of Samples w/ Detections	% of Samples w/ Detections	# of Residues Detected
United States	1999	387	225	58	504
Mexico	1999	319	291	91	863

NOTE: The Limits of Detection (LODs) for pesticide detections in cucumbers are listed in Appendix E.

1999 Distribution of Residues for Cucumber Samples
Originating in Mexico vs. United States
(Only Pesticides with Residue Detections in at least 10% of Samples)

Pesticide	Origin	# of Samples Analyzed	# of Samples w/ Detections	% of Samples w/ Detections
Dieldrin	United States	385	72	19
	Mexico	316	25	8
Endosulfan I	United States	385	93	24
	Mexico	317	213	67
Endosulfan II	United States	385	86	22
	Mexico	317	179	56
Endosulfan sulfate	United States	385	137	36
	Mexico	317	263	83
Methamidophos	United States	385	11	3
	Mexico	317	79	25

1999 Distribution of Residues for Sweet Bell Peppers
United States Samples vs. Samples Originating in Mexico

Origin	Year	# of Samples Analyzed	# of Samples w/ Detections	% of Samples w/ Detections	# of Residues Detected
United States	1999	525	335	64	959
Mexico	1999	156	146	94	855

NOTE: The Limits of Detection (LODs) for pesticide detections in sweet bell peppers are listed in Appendix E.

1999 Distribution of Residues for Sweet Bell Pepper Samples
Originating in Mexico vs. United States
(Only Pesticides with Residue Detections in at least 10% of Samples)

Pesticide	Origin	# of Samples Analyzed	# of Samples w/ Detections	% of Samples w/ Detections
Acephate	United States	514	145	28
	Mexico	153	25	16
Chlorpyrifos	United States	522	24	5
	Mexico	156	88	56
Dicofol p,p'	United States	510	66	13
	Mexico	156	17	11
Endosulfan I	United States	502	45	9
	Mexico	154	103	67
Endosulfan II	United States	503	53	11
	Mexico	154	107	69
Endosulfan sulfate	United States	503	46	9
	Mexico	154	106	69
Metalaxyl	United States	389	75	19
	Mexico	90	9	10
Methamidophos	United States	514	161	31
	Mexico	153	88	58
Methomyl	United States	522	78	15
	Mexico	156	7	4
Omethoate	United States	514	21	4
	Mexico	151	48	32
Oxamyl	United States	522	46	9
	Mexico	156	27	17

1997-1999 Distribution of Residues for Fresh Winter Squash
United States Samples vs. Samples Originating in Mexico

Origin	Year	# of Samples Analyzed	# of Samples w/ Detections	% of Samples w/ Detections	# of Residues Detected
United States	1997	258	90	35	173
	1998	347	146	42	208
	1999	103	51	50	78
	1997-1999	**708**	**287**	**41**	**459**
Mexico	1997	161	71	44	107
	1998	170	68	40	110
	1999	130	41	32	62
	1997-1999	**461**	**180**	**39**	**279**

NOTE: The Limits of Detection (LODs) for pesticide detections in fresh winter squash are listed in Appendix E.

1997-1999 Distribution of Residues for Fresh Winter Squash Samples Originating in Mexico vs. United States (Only Pesticides with Residue Detections in at least 10% of Samples)

Pesticide	Origin	# of Samples Analyzed	# of Samples w/ Detections	% of Samples w/ Detections
Dieldrin	United States	471	81	17
	Mexico	278	4	1
Endosulfan sulfate	United States	708	121	17
	Mexico	461	135	29

1998-1999 Distribution of Residues for Cantaloupe United States Samples vs. Samples Originating in Central America* and Mexico

Origin	Year	# of Samples Analyzed	# of Samples w/ Detections	% of Samples w/ Detections	# of Residues Detected
United States	1998**	382	144	38	183
	1999	551	217	39	302
	1998-1999	**933**	**361**	**39**	**485**
Central America*	1998**	5	5	100	7
	1999	146	122	84	243
	1998-1999	**151**	**127**	**84**	**250**
Mexico	1998**	26	17	65	23
	1999	115	80	70	135
	1998-1999	**141**	**97**	**69**	**158**

1998-1999 Distribution of Residues for Cantaloupe Samples Originating in Central America* and Mexico vs. United States (Only Pesticides with Residue Detections in at least 10% of Samples)

Pesticide	Origin	# of Samples Analyzed	# of Samples w/ Detections	% of Samples w/ Detections
Endosulfan sulfate	United States	929	113	12
	Central America*	149	85	57
	Mexico	136	71	52
Methomyl	United States	929	47	5
	Central America*	149	67	45
	Mexico	136	9	7

** Combined findings from Costa Rica, Guatemala, and Honduras.*

*** Samples collected for only 6 months in 1998 (July - December).*

NOTE: The Limits of Detection (LODs) for pesticide detections in cantaloupe are listed in Appendix E.

Appendix E

Distribution of Residues by Pesticide in Fruit and Vegetables

In 1999, 8,637 fruit and vegetable samples were analyzed, of which 6,822 were composite samples and 1,815 were single serving samples (apples and pears). Appendix E shows residue detections for all fruit and vegetable pesticide/commodity pairs tested, including range of values detected, range of Limits of Detection (LODs), and Environmental Protection Agency (EPA) and Codex Maximum Residue Limit/Extraneous Maximum Residue Limit (MRL/EMRL) tolerance references for each pair.

Appendix E lists results by compound in alphabetical order. Sample results for ready-to-serve and concentrate grape juice were combined.

Compounds that were required to be reported by all participating laboratories are underlined. Compounds not underlined are not required and may not be reported by all laboratories. All reported compounds, required and non-required, must be validated through PDP method validation procedures. Non-required compounds are not subject to the same daily quality assurance/quality control requirements as required compounds.

PDP also reports tolerance violations to the Food and Drug Administration (FDA) as part of an interagency Memorandum of Understanding between the U.S. Department of Agriculture and FDA. Residues reported to FDA are shown in the “Pesticide” column to the right of the compound and are annotated as “x” (if the residue exceeded the established tolerance) or “v” (if the residue did not have a tolerance listed in the Code of Federal Regulations (CFR), Title 40, Part 180). In both cases, these annotations are followed by a number indicating the number of samples reported to FDA.

Codex MRLs in commodities represent toxicological pesticide residue levels, based on Acceptable Daily Intakes (ADIs) permitted by the Joint (Food and Agriculture/World Health Organization) FAO/WHO Meeting on Pesticide Residues (JMPR). The JMPR is an independently appointed panel of expert scientists. Similarly, EMRLs represent acceptable levels of persistent pesticides in the environment which are no longer registered for use in agriculture.

MRLs/EMRLs used in this appendix are values of pesticides and their metabolites, for the commodities either individually or part of a commodity group as they appear in the second addition of Volume B of the Codex Alimentarius Publication.

APPENDIX E. DISTRIBUTION OF RESIDUES BY PESTICIDE IN FRUIT AND VEGETABLES

	Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
1	**1-Napthol (metabolite of Carbaryl)**							
	Cantaloupe	186	0			0.015 ^	10	-
	Grape Juice	149	3	2	0.025 ^	0.015 ^	10	-
	Sweet Bell Peppers	164	0			0.015 ^	10	-
	Tomatoes, Canned	81	0			0.015 ^	10	-
	Tomatoes, Fresh	80	1	1.3	0.025 ^	0.015 ^	10	-
	Winter Squash, Fresh	42	0			0.015 ^	10	-
	Winter Squash, Frozen	37	0			0.015 ^	10	-
	Total	**739**	**4**					
2	**3-Hydroxycarbofuran (metabolite of Carbofuran)**							
	Apples	379	0			0.010 ^	NT	-
	Apples, Single Serving	495	0			0.010 ^	NT	-
	Cantaloupe	826	0			0.003 - 0.076	0.2	0.2
	Cucumbers	730	0			0.010 - 0.020	0.2	0.3
	Grape Juice	714	0			0.003 - 0.076	0.2	-
	Lettuce	185	0			0.012 - 0.076	NT	-
	Pears, Canned	371	0			0.010 - 0.076	NT	-
	Pears, Fresh	359	0			0.010 - 0.076	NT	-
	Spinach, Frozen	715	0			0.010 - 0.020	NT	-
	Strawberries, Fresh	640	0			0.010 - 0.020	0.2	-
	Strawberries, Frozen	71	0			0.013 - 0.020	0.2	-
	Sweet Bell Peppers	730	5	0.7	0.005 - 0.018	0.003 - 0.020	0.2	-
	Tomatoes, Canned	368	0			0.003 - 0.020	NT	0.1
	Tomatoes, Fresh	364	0			0.003 - 0.020	NT	0.1
	Winter Squash, Fresh	246	0			0.003 - 0.076	0.6	-
	Winter Squash, Frozen	100	0			0.003 - 0.013	0.6	-
	Total	**7293**	**5**					
3	**Abamectin (insecticide)**							
	Tomatoes, Fresh	364	2	0.5	0.002 ^	0.001 ^	0.01	-
	Total	**364**	**2**					
4	**Acephate (insecticide)**							
	Apples	379	1	0.3	0.007 ^	0.004 ^	0.02	-
	Apples, Single Serving	1427	4	0.3	0.007 - 0.016	0.004 ^	0.02	-
	Cantaloupe (X-3)	826	12	1.5	0.003 - 0.099	0.002 - 0.006	0.02	-
	Cucumbers	730	2	0.3	0.003 ^	0.002 - 0.012	0.02	-
	Grape Juice	713	0			0.002 - 0.006	0.02	-
	Lettuce	185	29	15.7	0.003 - 0.25	0.002 - 0.005	10	5
	Pears, Canned	371	0			0.002 - 0.012	0.02	-
	Pears, Fresh	359	0			0.002 - 0.012	0.02	-
	Pears, Single Serving	352	0			0.002 - 0.012	0.02	-
	Spinach, Frozen	715	3	0.4	0.003 - 0.007	0.002 - 0.012	0.02	-
	Strawberries, Fresh	640	2	0.3	0.007 ^	0.002 - 0.012	0.02	-
	Strawberries, Frozen	71	0			0.002 - 0.012	0.02	-
	Sweet Bell Peppers	718	181	25.2	0.003 - 1.4	0.002 - 0.010	4.0	-
	Tomatoes, Canned	368	2	0.5	0.007 - 0.008	0.002 - 0.010	0.02	1
	Tomatoes, Fresh	364	1	0.3	0.008 ^	0.002 - 0.010	0.02	1
	Winter Squash, Fresh (X-1)	246	4	1.6	0.008 - 0.089	0.002 - 0.006	0.02	-
	Winter Squash, Frozen	100	0			0.002 - 0.006	0.02	-
	Total	**8564**	**241**					
5	**Aldicarb (insecticide)**							
	Apples	379	0			0.008 ^	NT	-
	Apples, Single Serving	495	0			0.008 ^	NT	-
	Cantaloupe	623	0			0.002 - 0.021	NT	-
	Cucumbers	730	0			0.012 - 0.021	NT	-
	Grape Juice	536	0			0.002 - 0.021	NT	0.2
	Lettuce	54	0			0.012 ^	NT	-
	Pears, Canned	281	0			0.012 - 0.021	NT	-
	Pears, Fresh	269	0			0.012 - 0.021	NT	-

Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
Spinach, Frozen	715	0			0.008 - 0.020	NT	-
Strawberries, Fresh	640	0			0.008 - 0.020	NT	-
Strawberries, Frozen	71	0			0.012 - 0.020	NT	-
Sweet Bell Peppers	730	0			0.002 - 0.020	NT	-
Tomatoes, Canned	368	0			0.002 - 0.020	NT	-
Tomatoes, Fresh	364	0			0.002 - 0.020	NT	-
Winter Squash, Fresh	156	0			0.002 - 0.021	NT	-
Winter Squash, Frozen	100	0			0.002 - 0.021	NT	-
Total	**3144**	**0**					
6 Aldicarb sulfone (metabolite of Aldicarb)							
Apples	379	0			0.010 ^	NT	-
Apples, Single Serving	495	0			0.010 ^	NT	-
Cantaloupe	826	0			0.004 - 0.075	NT	-
Cucumbers	730	0			0.020 - 0.041	NT	-
Grape Juice	714	0			0.004 - 0.075	NT	0.2
Lettuce	185	0			0.021 - 0.075	NT	-
Pears, Canned	371	0			0.021 - 0.075	NT	-
Pears, Fresh	359	0			0.021 - 0.075	NT	-
Spinach, Frozen	715	0			0.010 - 0.022	NT	-
Strawberries, Fresh	640	0			0.010 - 0.022	NT	-
Strawberries, Frozen	71	0			0.020 - 0.022	NT	-
Sweet Bell Peppers	730	0			0.004 - 0.021	NT	-
Tomatoes, Canned	368	0			0.004 - 0.021	NT	-
Tomatoes, Fresh	364	0			0.004 - 0.021	NT	-
Winter Squash, Fresh	246	0			0.004 - 0.075	NT	-
Winter Squash, Frozen	100	0			0.004 - 0.041	NT	-
Total	**7293**	**0**					
7 Aldicarb sulfoxide (metabolite of Aldicarb)							
Apples	379	0			0.010 ^	NT	-
Apples, Single Serving	495	0			0.010 ^	NT	-
Cantaloupe	826	0			0.004 - 0.076	NT	-
Cucumbers	730	0			0.017 - 0.036	NT	-
Grape Juice	714	0			0.004 - 0.076	NT	0.2
Lettuce	185	0			0.027 - 0.076	NT	-
Pears, Canned	371	0			0.017 - 0.076	NT	-
Pears, Fresh	359	0			0.017 - 0.076	NT	-
Spinach, Frozen	715	0			0.010 - 0.027	NT	-
Strawberries, Fresh	640	0			0.010 - 0.027	NT	-
Strawberries, Frozen	71	0			0.017 - 0.027	NT	-
Sweet Bell Peppers	730	0			0.004 - 0.027	NT	-
Tomatoes, Canned	368	0			0.004 - 0.027	NT	-
Tomatoes, Fresh	364	0			0.004 - 0.027	NT	-
Winter Squash, Fresh	246	0			0.004 - 0.076	NT	-
Winter Squash, Frozen	100	0			0.004 - 0.036	NT	-
Total	**7293**	**0**					
8 Aldrin (insecticide) (parent of Dieldrin)							
Cucumbers	180	0			0.003 ^	0.1 [AL]	0.1
Spinach, Frozen	353	0			0.001 - 0.003	0.05 [AL]	0.05
Strawberries, Fresh	338	0			0.001 - 0.003	0.05 [AL]	-
Strawberries, Frozen	12	0			0.003 ^	0.05 [AL]	-
Sweet Bell Peppers	356	0			0.001 - 0.003	0.05 [AL]	0.1
Tomatoes, Canned	180	0			0.001 - 0.003	0.05 [AL]	0.1
Tomatoes, Fresh	180	0			0.002 - 0.003	0.05 [AL]	0.1
Total	**1599**	**0**					-
9 Allidochlor (herbicide)							-
Spinach, Frozen	58	0			0.010 ^	NT	-
Strawberries, Fresh	74	0			0.010 ^	NT	-
Sweet Bell Peppers	75	0			0.010 ^	NT	-
Tomatoes, Canned	60	0			0.010 ^	NT	-
Total	**267**	**0**					

	Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
10	**Amitraz (insecticide)**							-
	Spinach, Frozen	58	0			0.020 ^	NT	-
	Strawberries, Fresh	59	0			0.020 ^	NT	-
	Sweet Bell Peppers	45	0			0.020 ^	NT	-
	Tomatoes, Canned	45	0			0.020 ^	NT	0.5
	Total	**207**	**0**					
11	**Anilazine (fungicide)**							-
	Cantaloupe	186	0			0.052 ^	NT	-
	Cucumbers	478	0			0.018 - 0.083	NT	-
	Grape Juice	134	0			0.052 ^	NT	-
	Pears, Canned	173	0			0.018 - 0.052	NT	-
	Pears, Fresh	139	0			0.018 - 0.052	NT	-
	Spinach, Frozen	445	0			0.018 - 0.083	NT	-
	Strawberries, Fresh (V-6)	425	6	1.4	0.097 - 0.73	0.018 - 0.083	NT	-
	Strawberries, Frozen	14	0			0.018 - 0.083	NT	-
	Sweet Bell Peppers	281	0			0.020 - 0.083	NT	-
	Tomatoes, Canned	105	0			0.020 - 0.083	NT	10
	Tomatoes, Fresh	180	0			0.020 - 0.083	NT	10
	Winter Squash, Fresh	11	0			0.052 ^	NT	-
	Winter Squash, Frozen	34	0			0.052 ^	NT	-
	Total	**2605**	**6**					
12	**Atrazine (herbicide)**							
	Cantaloupe	826	0			0.010 - 0.024	NT	-
	Cucumbers	730	0			0.010 - 0.020	NT	-
	Grape Juice	714	0			0.010 - 0.024	NT	-
	Lettuce	185	0			0.010 - 0.024	NT	-
	Pears, Canned	371	0			0.010 - 0.024	NT	-
	Pears, Fresh	359	0			0.010 - 0.024	NT	-
	Spinach, Frozen (V-1)	715	1	0.1	0.028 ^	0.002 - 0.020	NT	-
	Strawberries, Fresh	640	0			0.002 - 0.020	NT	-
	Strawberries, Frozen	71	0			0.010 - 0.020	NT	-
	Sweet Bell Peppers	730	0			0.002 - 0.020	NT	-
	Tomatoes, Canned	368	0			0.002 - 0.020	NT	-
	Tomatoes, Fresh	364	0			0.010 - 0.020	NT	-
	Winter Squash, Fresh	246	0			0.010 - 0.024	NT	-
	Winter Squash, Frozen	100	0			0.010 - 0.019	NT	-
	Total	**6419**	**1**					
13	**Azinphos (insecticide)**							
	Cantaloupe	237	0			0.006 ^	2.0	-
	Cucumbers	207	0			0.006 ^	2.0	-
	Grape Juice	198	0			0.006 ^	5.0	-
	Lettuce	54	0			0.006 ^	NT	-
	Pears, Canned	108	0			0.006 ^	2.0	-
	Pears, Fresh	100	0			0.006 ^	2.0	-
	Pears, Single Serving	99	0			0.006 ^	2.0	-
	Spinach, Frozen	197	0			0.006 ^	2.0	-
	Strawberries, Fresh	144	0			0.006 ^	2.0	-
	Strawberries, Frozen	57	0			0.006 ^	2.0	-
	Sweet Bell Peppers	210	0			0.006 ^	0.3	-
	Tomatoes, Canned	107	0			0.006 ^	2.0	-
	Tomatoes, Fresh	104	0			0.006 ^	2.0	-
	Winter Squash, Fresh	83	0			0.006 ^	NT	-
	Winter Squash, Frozen	5	0			0.006 ^	NT	-
	Total	**1910**	**0**					
14	**Azinphos methyl (insecticide)**							
	Apples	379	250	65.9	0.010 - 0.26	0.006 ^	2.0	2
	Apples, Single Serving	1427	1088	76.2	0.010 - 0.55	0.006 ^	2.0	2
	Cantaloupe	826	0			0.008 - 0.023	2.0	0.2
	Cucumbers	730	0			0.008 - 0.025	2.0	0.2
	Grape Juice	714	0			0.008 - 0.023	5.0	1
	Lettuce	185	0			0.008 - 0.012	NT	0.5

	Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
	Pears, Canned	371	0			0.008 - 0.013	2.0	2
	Pears, Fresh	359	186	51.8	0.013 - 0.95	0.008 - 0.013	2.0	2
	Pears, Single Serving	352	152	43.2	0.013 - 0.87	0.008 - 0.013	2.0	2
	Spinach, Frozen	714	1	0.1	0.013 ^	0.006 - 0.025	2.0	0.5
	Strawberries, Fresh	640	2	0.3	0.068 - 0.20	0.006 - 0.025	2.0	1
	Strawberries, Frozen	71	2	2.8	0.043 - 0.20	0.008 - 0.025	2.0	1
	Sweet Bell Peppers	730	6	0.8	0.013 - 0.11	0.006 - 0.025	0.3	1
	Tomatoes, Canned	368	2	0.5	0.010 - 0.013	0.006 - 0.025	2.0	1
	Tomatoes, Fresh	364	3	0.8	0.013 ^	0.006 - 0.025	2.0	1
	Winter Squash, Fresh	246	0			0.008 - 0.023	NT	0.5
	Winter Squash, Frozen	100	0			0.008 - 0.023	NT	0.5
	Total	**8576**	**1692**					
15	**Benomyl (fungicide) (analyzed as carbendazim)**							
	Cantaloupe	759	2	0.3	0.083 ^	0.050 ^	1.0	-
	Cucumbers	688	4	0.6	0.083 ^	0.050 ^	1.0	0.5
	Strawberries, Fresh	573	116	20.2	0.083 - 1.5	0.050 ^	5.0	-
	Strawberries, Frozen	65	7	10.8	0.083 - 0.26	0.050 ^	5.0	-
	Sweet Bell Peppers	672	7	1	0.083 - 0.31	0.050 ^	0.2	-
	Total	**2757**	**136**					
16	**BHC alpha (insecticide)**							
	Spinach, Frozen	178	0			0.001 - 0.003	0.05 ^AL	-
	Strawberries, Fresh	171	0			0.001 - 0.003	0.05 ^AL	-
	Sweet Bell Peppers	177	0			0.001 - 0.003	0.05 ^AL	-
	Tomatoes, Canned	90	0			0.001 - 0.003	0.05 ^AL	-
	Tomatoes, Fresh	90	0			0.003 ^	0.05 ^AL	-
	Total	**706**	**0**					
17	**BHC beta (isomer of BHC alpha)**							
	Spinach, Frozen	178	0			0.001 - 0.003	0.05 ^AL	-
	Strawberries, Fresh	171	0			0.001 - 0.003	0.05 ^AL	-
	Sweet Bell Peppers	177	0			0.001 - 0.003	0.05 ^AL	-
	Tomatoes, Canned	90	0			0.001 - 0.003	0.05 ^AL	-
	Tomatoes, Fresh	90	0			0.003 ^	0.05 ^AL	-
	Total	**706**	**0**					
18	**BHC delta (isomer of BHC alpha)**							
	Spinach, Frozen	120	0			0.003 ^	0.05 ^AL	-
	Strawberries, Fresh	97	0			0.003 ^	0.05 ^AL	-
	Sweet Bell Peppers	102	0			0.003 ^	0.05 ^AL	-
	Tomatoes, Canned	30	0			0.003 ^	0.05 ^AL	-
	Tomatoes, Fresh	90	0			0.003 ^	0.05 ^AL	-
	Total	**439**	**0**					
19	**Bifenthrin (insecticide)**							
	Cucumbers	180	0			0.025 ^	0.4	-
	Spinach, Frozen	353	0			0.006 - 0.025	NT	-
	Strawberries, Fresh	338	21	6.2	0.010 - 0.23	0.006 - 0.025	3.00	1
	Strawberries, Frozen	12	0			0.025 ^	3.00	1
	Sweet Bell Peppers	356	0			0.006 - 0.025	NT	-
	Tomatoes, Canned	180	0			0.006 - 0.025	NT	-
	Tomatoes, Fresh	180	0			0.016 - 0.025	NT	-
	Total	**1599**	**21**					
20	**Captafol (fungicide) (parent of THPI)**							
	Cucumbers	180	0			0.033 ^	NT	-
	Spinach, Frozen	175	0			0.033 ^	NT	-
	Strawberries, Fresh	126	0			0.030 ^	NT	-
	Strawberries, Frozen	8	0			0.030 ^	NT	-
	Sweet Bell Peppers	179	0			0.033 ^	NT	-
	Tomatoes, Canned	90	0			0.033 ^	15	-
	Tomatoes, Fresh	90	0			0.033 ^	15	-
	Total	**848**	**0**					

Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
21 Captan (fungicide) (parent of THPI)							
Cantaloupe	804	0			0.012 - 0.017	25	-
Cucumbers	566	4	0.7	0.018 - 0.020	0.011 - 0.017	25	-
Grape Juice	714	0			0.012 - 0.017	50	-
Lettuce	185	0			0.012 ^	100	-
Pears, Canned	371	0			0.011 - 0.017	25	25
Pears, Fresh	359	54	15	0.018 - 1.1	0.011 - 0.017	25	25
Spinach, Frozen	601	0			0.006 - 0.017	100	-
Strawberries, Fresh	640	400	62.5	0.010 - 19	0.006 - 0.017	25	20
Strawberries, Frozen	71	44	61.9	0.020 - 0.49	0.011 - 0.017	25	20
Sweet Bell Peppers	730	9	1.2	0.010 - 0.11	0.006 - 0.017	25	-
Tomatoes, Canned	353	0			0.006 - 0.017	25	15
Tomatoes, Fresh	341	1	0.3	0.028 ^	0.006 - 0.017	25	15
Winter Squash, Fresh	246	1	0.4	0.020 ^	0.012 - 0.017	25	-
Winter Squash, Frozen	100	0			0.012 - 0.017	25	-
Total	**6081**	**513**					
22 Carbaryl (insecticide)							
Apples	379	52	13.7	0.010 - 0.27	0.006 ^	10.0	5
Apples, Single Serving	495	39	7.9	0.010 - 0.42	0.006 ^	10.0	5
Cantaloupe	826	8	0.9	0.003 - 0.033	0.002 - 0.025	10	3
Cucumbers	730	13	1.8	0.013 - 0.14	0.008 - 0.021	10	3
Grape Juice	714	290	40.6	0.003 - 0.086	0.002 - 0.025	10	5
Lettuce	185	0			0.008 - 0.025	10	10
Pears, Canned	371	0			0.008 - 0.025	10.0	5
Pears, Fresh	359	13	3.6	0.013 - 0.68	0.008 - 0.025	10.0	5
Spinach, Frozen	715	1	0.1	0.027 ^	0.006 - 0.021	12	10
Strawberries, Fresh	640	97	15.2	0.010 - 4.7	0.006 - 0.021	10	7
Strawberries, Frozen	71	17	23.9	0.013 - 1.4	0.008 - 0.021	10	7
Sweet Bell Peppers	730	67	9.2	0.003 - 1.8	0.002 - 0.010	10	5
Tomatoes, Canned	368	5	1.4	0.003 - 0.013	0.002 - 0.010	10	5
Tomatoes, Fresh	364	0			0.002 - 0.010	10	5
Winter Squash, Fresh	246	0			0.002 - 0.025	10	3
Winter Squash, Frozen	100	0			0.002 - 0.010	10	3
Total	**7293**	**602**					
23 Carbofuran (insecticide) (parent of 3-Hydroxycarbofuran)							
Apples	379	0			0.010 ^	NT	-
Apples, Single Serving	495	0			0.010 ^	NT	-
Cantaloupe	826	0			0.003 - 0.025	0.2	0.2
Cucumbers	730	3	0.4	0.022 - 0.10	0.013 - 0.031	0.2	0.3
Grape Juice	713	0			0.003 - 0.025	0.2	-
Lettuce	185	0			0.008 - 0.025	NT	-
Pears, Canned	371	0			0.013 - 0.031	NT	-
Pears, Fresh	359	0			0.013 - 0.031	NT	-
Spinach, Frozen (V-1)	715	1	0.1	0.028 ^	0.010 - 0.031	NT	-
Strawberries, Fresh	640	0			0.010 - 0.031	0.2	-
Strawberries, Frozen	71	0			0.013 - 0.031	0.2	-
Sweet Bell Peppers	730	6	0.8	0.022 - 0.067	0.003 - 0.017	0.2	-
Tomatoes, Canned	368	0			0.003 - 0.017	NT	0.1
Tomatoes, Fresh	364	0			0.003 - 0.017	NT	0.1
Winter Squash, Fresh	246	0			0.003 - 0.025	0.6	-
Winter Squash, Frozen	100	0			0.003 - 0.015	0.6	-
Total	**7292**	**10**					
24 Carbophenothion (insecticide)							
Apples	379	0			0.003 ^	NT	-
Apples, Single Serving	1463	0			0.003 ^	NT	-
Spinach, Frozen	178	0			0.003 ^	NT	-
Strawberries, Fresh	171	0			0.003 ^	NT	-
Sweet Bell Peppers	177	0			0.003 ^	NT	-
Tomatoes, Canned	90	0			0.003 ^	NT	-
Tomatoes, Fresh	90	0			0.003 ^	NT	-
Total	**2548**	**0**					

	Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
25	**Chlordanes Total (insecticide)**							
	Cantaloupe	193	0			0.011 ^	0.1 [AL]	0.02
	Cucumbers	179	0			0.011 ^	0.1 [AL]	0.02
	Grape Juice	176	0			0.011 ^	0.1 [AL]	0.02
	Pears, Canned	90	0			0.011 ^	0.1 [AL]	0.02
	Pears, Fresh	74	0			0.011 ^	0.1 [AL]	0.02
	Winter Squash, Fresh	28	0			0.011 ^	0.1 [AL]	0.02
	Winter Squash, Frozen	47	0			0.011 ^	0.1 [AL]	0.02
	Total	**787**	**0**					
26	**Chlordane cis (chlordane isomer)**							
	Cucumbers	48	6	12.5	0.005 - 0.14	0.003 ^	0.1 [AL]	0.02
	Spinach, Frozen	222	0			0.001 - 0.003	0.1 [AL]	0.02
	Strawberries, Fresh	171	2	1.2	0.003 ^	0.001 - 0.002	0.1 [AL]	0.02
	Sweet Bell Peppers	207	0			0.001 - 0.003	0.1 [AL]	0.02
	Tomatoes, Canned	120	0			0.001 - 0.003	0.1 [AL]	0.02
	Tomatoes, Fresh	90	0			0.001 ^	0.1 [AL]	0.02
	Total	**858**	**8**					
27	**Chlordane trans (chlordane isomer)**							
	Cucumbers	47	2	4.3	0.005 ^	0.003 ^	0.1 [AL]	0.02
	Spinach, Frozen	222	0			0.001 - 0.003	0.1 [AL]	0.02
	Strawberries, Fresh	171	2	1.2	0.003 ^	0.001 - 0.002	0.1 [AL]	0.02
	Sweet Bell Peppers	222	0			0.001 - 0.003	0.1 [AL]	0.02
	Tomatoes, Canned	120	0			0.001 - 0.003	0.1 [AL]	0.02
	Tomatoes, Fresh	90	0			0.001 ^	0.1 [AL]	0.02
	Total	**872**	**4**					
28	**Chlorfenvinphos alpha/beta (insecticide)**							
	Apples	379	0			0.003 ^	NT	-
	Apples, Single Serving	1463	0			0.003 ^	NT	-
	Spinach, Frozen	178	0			0.003 ^	NT	-
	Strawberries, Fresh	171	0			0.003 ^	NT	-
	Sweet Bell Peppers	177	0			0.003 ^	NT	-
	Tomatoes, Canned	90	0			0.003 ^	NT	-
	Tomatoes, Fresh	90	0			0.003 ^	NT	-
	Total	**2548**	**0**					
29	**Chlorothalonil (fungicide)**							
	Cantaloupe	806	2	0.2	0.008 - 0.012	0.005 - 0.030	5	-
	Cucumbers	730	33	4.5	0.007 - 0.091	0.004 - 0.008	5	5
	Grape Juice	714	0			0.005 - 0.030	NT	0.5
	Lettuce	185	0			0.005 - 0.007	NT	-
	Pears, Canned	371	0			0.004 - 0.008	NT	-
	Pears, Fresh (V-1)	359	1	0.3	0.007 ^	0.004 - 0.008	NT	-
	Spinach, Frozen	519	0			0.004 - 0.005	NT	-
	Strawberries, Fresh	469	0			0.004 - 0.005	NT	-
	Strawberries, Frozen	71	0			0.004 - 0.005	NT	-
	Sweet Bell Peppers (V-4)	553	4	0.7	0.008 - 0.050	0.005 - 0.030	NT	7
	Tomatoes, Canned	278	0			0.005 - 0.030	5	5
	Tomatoes, Fresh	265	23	8.7	0.008 - 0.14	0.005 - 0.030	5	5
	Winter Squash, Fresh	219	20	9.1	0.008 - 0.17	0.005 - 0.030	5	5
	Winter Squash, Frozen	100	1	1	0.008 ^	0.005 - 0.030	5	5
	Total	**5639**	**84**					
30	**Chlorpropham (herbicide, growth regulator)**							
	Cantaloupe	826	0			0.010 - 0.020	NT	-
	Cucumbers	730	0			0.010 - 0.025	NT	-
	Grape Juice	714	0			0.010 - 0.020	NT	-
	Lettuce	185	0			0.010 - 0.017	NT	-
	Pears, Canned	371	0			0.010 - 0.023	NT	-
	Pears, Fresh	359	0			0.010 - 0.023	NT	-
	Spinach, Frozen	715	0			0.006 - 0.025	NT	-
	Strawberries, Fresh	640	0			0.006 - 0.025	NT	-
	Strawberries, Frozen	71	0			0.010 - 0.025	NT	-

	Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
	Sweet Bell Peppers (V-3)	730	3	0.4	0.010 ^	0.006 - 0.025	NT	-
	Tomatoes, Canned	368	0			0.006 - 0.025	NT	-
	Tomatoes, Fresh (V-1)	364	1	0.3	0.017 ^	0.010 - 0.025	NT	-
	Winter Squash, Fresh	246	0			0.010 - 0.020	NT	-
	Winter Squash, Frozen	100	0			0.010 - 0.020	NT	-
	Total	**6419**	**4**					
31	**Chlorpyrifos (insecticide)**							
	Apples	379	91	24	0.005 - 0.17	0.003 ^	1.5	1
	Apples, Single Serving	1463	503	34.4	0.005 - 0.54	0.003 ^	1.5	1
	Cantaloupe (V-10)	826	10	1.2	0.007 - 0.024	0.004 - 0.011	NT	-
	Cucumbers (X-1)	730	9	1.2	0.007 - 0.094	0.004 - 0.009	0.05	-
	Grape Juice	714	0			0.004 - 0.014	0.5	1
	Lettuce	185	0			0.004 ^	1	0.1
	Pears, Canned	371	0			0.004 - 0.009	0.05	0.5
	Pears, Fresh (X-1)	359	6	1.7	0.007 - 0.15	0.004 - 0.009	0.05	0.5
	Pears, Single Serving	352	4	1.1	0.007 - 0.23	0.004 - 0.009	0.05	0.5
	Spinach, Frozen (V-47)	715	47	6.6	0.005 - 0.11	0.003 - 0.008	NT	-
	Strawberries, Fresh	640	7	1.1	0.005 - 0.058	0.003 - 0.008	0.2	-
	Strawberries, Frozen	71	0			0.004 - 0.008	0.2	-
	Sweet Bell Peppers	730	113	15.5	0.004 - 0.49	0.003 - 0.011	1.0	0.5
	Tomatoes, Canned	368	6	1.6	0.005 ^	0.003 - 0.011	0.5	0.5
	Tomatoes, Fresh	364	55	15.1	0.005 - 0.094	0.003 - 0.011	0.5	0.5
	Winter Squash, Fresh	246	0			0.004 - 0.011	NT	-
	Winter Squash, Frozen	100	0			0.004 - 0.011	NT	-
	Total	**8613**	**851**					
32	**Chlorpyrifos methyl (insecticide)**							
	Apples	379	0			0.003 ^	NT	0.5
	Apples, Single Serving	1463	0			0.003 ^	NT	0.5
	Spinach, Frozen	178	0			0.003 ^	NT	-
	Strawberries, Fresh	171	0			0.003 ^	NT	-
	Sweet Bell Peppers	177	0			0.003 ^	NT	0.5
	Tomatoes, Canned	90	0			0.003 ^	NT	0.5
	Tomatoes, Fresh	90	0			0.003 ^	NT	0.5
	Total	**2548**	**0**					
33	**Coumaphos (insecticide)**							
	Apples	379	0			0.005 ^	NT	-
	Apples, Single Serving	1463	0			0.005 ^	NT	-
	Spinach, Frozen	178	0			0.005 ^	NT	-
	Strawberries, Fresh	171	0			0.005 ^	NT	-
	Sweet Bell Peppers	177	0			0.005 ^	NT	-
	Tomatoes, Canned	90	0			0.005 ^	NT	-
	Tomatoes, Fresh	90	0			0.005 ^	NT	-
	Total	**2548**	**0**					
34	**Coumaphos oxygen analog (metabolite of Coumaphos)**							
	Apples	379	0			0.008 ^	NT	-
	Apples, Single Serving	1463	0			0.008 ^	NT	-
	Spinach, Frozen	178	0			0.008 ^	NT	-
	Strawberries, Fresh	171	0			0.008 ^	NT	-
	Sweet Bell Peppers	177	0			0.008 ^	NT	-
	Tomatoes, Canned	90	0			0.008 ^	NT	-
	Tomatoes, Fresh	90	0			0.008 ^	NT	-
	Total	**2548**	**0**					
35	**Cyfluthrin (insecticide)**							
	Spinach, Frozen	178	0			0.025 - 0.050	NT	
	Strawberries, Fresh	171	0			0.025 - 0.050	NT	
	Sweet Bell Peppers	177	3	1.7	0.042 ^	0.025 - 0.050	0.50	0.2
	Tomatoes, Canned	75	0			0.025 - 0.050	0.20	0.5
	Tomatoes, Fresh	90	0			0.050 ^	0.20	0.5
	Total	**691**	**3**					

Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
36 Cypermethrin (insecticide)							
Cucumbers	344	0			0.043 - 0.050	NT	0.2
Pears, Canned	83	0			0.043 ^	NT	2
Pears, Fresh	80	0			0.043 ^	NT	2
Spinach, Frozen (V-14)	519	14	2.7	0.083 - 1.7	0.025 - 0.070	NT	2
Strawberries, Fresh	496	0			0.025 - 0.070	NT	-
Strawberries, Frozen	14	0			0.043 - 0.050	NT	-
Sweet Bell Peppers	356	0			0.025 - 0.070	NT	0.5
Tomatoes, Canned	180	0			0.025 - 0.070	NT	0.5
Tomatoes, Fresh	180	0			0.025 -	NT	0.5
Total	**2252**	**14**					
37 DCPA (herbicide)							
Cantaloupe	826	1	0.1	0.027 ^	0.006 - 0.007	1	-
Cucumbers	730	1	0.1	0.008 ^	0.005 - 0.006	1	-
Grape Juice	714	0			0.006 - 0.008	NT	-
Lettuce	185	3	1.6	0.010 - 0.012	0.006 - 0.007	2	-
Pears, Canned	371	0			0.005 - 0.007	NT	-
Pears, Fresh	359	0			0.005 - 0.007	NT	-
Spinach, Frozen (V-67)	715	67	9.4	0.002 - 0.065	0.001 - 0.006	NT	-
Strawberries, Fresh	640	2	0.3	0.002 ^	0.001 - 0.006	2	-
Strawberries, Frozen	71	0			0.005 - 0.006	2	-
Sweet Bell Peppers	730	0			0.001 - 0.007	2	-
Tomatoes, Canned	368	0			0.001 - 0.007	1	-
Tomatoes, Fresh	364	0			0.003 - 0.007	1	-
Winter Squash, Fresh	246	0			0.006 - 0.007	1	-
Winter Squash, Frozen	100	0			0.006 - 0.007	1	-
Total	**6419**	**74**					
38 DDD o,p' (metabolite of DDT)							
Spinach, Frozen	178	6	3.4	0.002 ^	0.001 - 0.003	0.5 AL	-
Strawberries, Fresh	171	0			0.001 - 0.003	0.1 AL	-
Sweet Bell Peppers	177	0			0.001 - 0.003	0.1 AL	-
Tomatoes, Canned	90	0			0.001 - 0.003	0.05 AL	-
Tomatoes, Fresh	90	0			0.003 ^	0.05 AL	-
Total	**706**	**6**					
39 DDD p,p' (metabolite of DDT)							
Cantaloupe	237	0			0.008 ^	0.1 AL	-
Cucumbers	499	0			0.008 - 0.021	0.1 AL	-
Grape Juice	198	0			0.008 ^	0.05 AL	-
Lettuce	54	0			0.008 ^	0.5 AL	-
Pears, Canned	191	0			0.008 - 0.021	0.1 AL	-
Pears, Fresh	114	0			0.008 - 0.021	0.1 AL	-
Spinach, Frozen	675	18	2.7	0.002 - 0.006	0.001 - 0.021	0.5 AL	-
Strawberries, Fresh	572	0			0.001 - 0.021	0.1 AL	-
Strawberries, Frozen	70	0			0.008 - 0.021	0.1 AL	-
Sweet Bell Peppers	566	0			0.001 - 0.010	0.1 AL	-
Tomatoes, Canned	287	0			0.001 - 0.010	0.05 AL	-
Tomatoes, Fresh	284	0			0.003 -	0.05 AL	-
Winter Squash, Fresh	83	0			0.008 ^	0.1 AL	-
Winter Squash, Frozen	5	0			0.008 ^	0.1 AL	-
Total	**3835**	**18**					
40 DDE o,p' (metabolite of DDT)							
Spinach, Frozen	178	0			0.001 - 0.003	0.5 AL	-
Strawberries, Fresh	171	0			0.001 - 0.003	0.1 AL	-
Sweet Bell Peppers	147	0			0.001 - 0.003	0.1 AL	-
Tomatoes, Canned	90	0			0.001 - 0.003	0.05 AL	-
Tomatoes, Fresh	90	0			0.003 ^	0.05 AL	-
Total	**676**	**0**					
41 DDE p,p' (metabolite of DDT)							
Cantaloupe	826	2	0.2	0.010 ^	0.006 - 0.007	0.1 AL	-
Cucumbers	716	2	0.3	0.005 ^	0.003 - 0.010	0.1 AL	-
Grape Juice	714	0			0.006 - 0.008	0.05 AL	-

	Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
	Lettuce	185	5	2.7	0.012 ^	0.007 ^	0.5 [AL]	-
	Pears, Canned	371	0			0.003 - 0.007	0.1 [AL]	-
	Pears, Fresh	346	0			0.003 - 0.007	0.1 [AL]	-
	Spinach, Frozen	715	305	42.7	0.003 - 0.070	0.002 - 0.010	0.5 [AL]	-
	Strawberries, Fresh	627	2	0.3	0.003 - 0.005	0.002 - 0.010	0.1 [AL]	-
	Strawberries, Frozen	71	0			0.003 - 0.010	0.1 [AL]	-
	Sweet Bell Peppers	730	2	0.3	0.003 - 0.010	0.002 - 0.010	0.1 [AL]	-
	Tomatoes, Canned	368	2	0.5	0.003 ^	0.002 - 0.010	0.05 [AL]	-
	Tomatoes, Fresh	364	0			0.003 - 0.010	0.05 [AL]	-
	Winter Squash, Fresh	246	1	0.4	0.046 ^	0.006 - 0.007	0.1 [AL]	-
	Winter Squash, Frozen	100	1	1	0.010 ^	0.006 - 0.007	0.1 [AL]	-
	Total	**6379**	**322**					
42	**DDT o,p' (insecticide)**							
	Cucumbers	164	3	1.8	0.002 ^	0.001 ^	0.1 [AL]	-
	Pears, Canned	83	0			0.001 ^	0.1 [AL]	-
	Pears, Fresh	80	0			0.001 ^	0.1 [AL]	-
	Spinach, Frozen	343	19	5.5	0.002 - 0.005	0.001 - 0.003	0.5 [AL]	-
	Strawberries, Fresh	329	0			0.001 - 0.003	0.1 [AL]	-
	Strawberries, Frozen	2	0			0.001 ^	0.1 [AL]	-
	Sweet Bell Peppers	177	0			0.001 - 0.003	0.1 [AL]	-
	Tomatoes, Canned	90	0			0.001 - 0.003	0.05 [AL]	-
	Tomatoes, Fresh	90	0			0.003 ^	0.05 [AL]	-
	Total	**1358**	**22**					
43	**DDT p,p'**							
	Cantaloupe	237	0			0.008 ^	0.1 [AL]	-
	Cucumbers	551	0			0.005 - 0.010	0.1 [AL]	-
	Grape Juice	198	0			0.008 ^	0.05 [AL]	-
	Lettuce	54	0			0.008 ^	0.5 [AL]	-
	Pears, Canned	191	0			0.005 - 0.008	0.1 [AL]	-
	Pears, Fresh	180	0			0.005 - 0.008	0.1 [AL]	-
	Spinach, Frozen	715	42	5.9	0.002 - 0.043	0.001 - 0.010	0.5 [AL]	-
	Strawberries, Fresh	640	1	0.2	0.002 ^	0.001 - 0.010	0.1 [AL]	-
	Strawberries, Frozen	71	0			0.005 - 0.010	0.1 [AL]	-
	Sweet Bell Peppers	566	0			0.001 - 0.010	0.1 [AL]	-
	Tomatoes, Canned	287	0			0.001 - 0.010	0.05 [AL]	-
	Tomatoes, Fresh	284	0			0.003 - 0.010	0.05 [AL]	-
	Winter Squash, Fresh	83	0			0.008 ^	0.1 [AL]	-
	Winter Squash, Frozen	5	0			0.008 ^	0.1 [AL]	-
	Total	**4062**	**43**					
44	**DEF - Tribufos (herbicide)**							
	Apples	379	0			0.002 ^	NT	-
	Apples, Single Serving	1463	0			0.002 ^	NT	-
	Spinach, Frozen	178	0			0.002 ^	NT	-
	Strawberries, Fresh	171	0			0.002 ^	NT	-
	Sweet Bell Peppers	177	0			0.002 ^	NT	-
	Tomatoes, Canned	90	0			0.002 ^	NT	-
	Tomatoes, Fresh	90	0			0.002 ^	NT	-
	Total	**2548**	**0**					
45	**Demeton (insecticide)**							
	Cucumbers	14	0			0.010 ^	NT	-
	Strawberries, Fresh	12	0			0.010 ^	NT	-
	Total	**26**	**0**					
46	**Demeton-S (insecticide)**							
	Cucumbers	14	0			0.019 ^	NT	-
	Strawberries, Fresh	12	0			0.019 ^	NT	-
	Total	**26**	**0**					
47	**Demeton-S sulfone (metabolite of Demeton-S)**							
	Apples	379	0			0.003 ^	NT	-
	Apples, Single Serving	1463	0			0.003 ^	NT	-
	Spinach, Frozen	178	0			0.003 ^	NT	-
	Strawberries, Fresh	171	0			0.003 ^	NT	-

	Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
	Sweet Bell Peppers	177	0			0.003 ^	NT	-
	Tomatoes, Canned	90	0			0.003 ^	NT	-
	Tomatoes, Fresh	90	0			0.003 ^	NT	-
	Total	**2548**	**0**					
48	**Diazinon (insecticide)**							
	Apples	378	2	0.5	0.007 ^	0.004 ^	0.5	2
	Apples, Single Serving	1445	8	0.6	0.007 ^	0.004 ^	0.5	2
	Cantaloupe	826	4	0.5	0.005 - 0.024	0.002 - 0.011	0.75	0.2
	Cucumbers	730	3	0.4	0.011 - 0.023	0.002 - 0.014	0.75	0.1
	Grape Juice	713	0			0.002 - 0.011	0.75	-
	Lettuce	185	2	1.1	0.003 - 0.012	0.002 - 0.007	0.7	0.5
	Pears, Canned	371	2	0.5	0.018 ^	0.002 - 0.014	0.5	2
	Pears, Fresh	359	2	0.6	0.003 - 0.024	0.002 - 0.014	0.5	2
	Pears, Single Serving	352	4	1.1	0.003 - 0.034	0.002 - 0.014	0.5	2
	Spinach, Frozen	715	8	1.1	0.003 - 0.024	0.002 - 0.014	0.7	0.5
	Strawberries, Fresh	640	7	1.1	0.003 - 0.049	0.002 - 0.014	0.5	0.1
	Strawberries, Frozen	71	0			0.002 - 0.014	0.5	0.1
	Sweet Bell Peppers	730	7	0.9	0.003 - 0.061	0.002 - 0.010	0.5	0.05
	Tomatoes, Canned	368	1	0.3	0.005 ^	0.002 - 0.010	0.75	0.5
	Tomatoes, Fresh	364	2	0.5	0.003 ^	0.002 - 0.010	0.75	0.5
	Winter Squash, Fresh	246	1	0.4	0.015 ^	0.002 - 0.011	0.75	-
	Winter Squash, Frozen	100	0			0.002 - 0.011	0.75	-
	Total	**8593**	**53**					
49	**Diazinon oxygen analog (metabolite of Diazinon)**							
	Apples	379	0			0.003 ^	0.5	-
	Apples, Single Serving	1463	0			0.003 ^	0.5	-
	Spinach, Frozen	178	1	0.6	0.005 ^	0.003 ^	0.7	-
	Strawberries, Fresh	171	0			0.003 ^	0.5	-
	Sweet Bell Peppers	177	0			0.003 ^	0.5	-
	Tomatoes, Canned	90	0			0.003 ^	0.75	-
	Tomatoes, Fresh	90	0			0.003 ^	0.75	-
	Total	**2548**	**1**					
50	**Dichlorvos - DDVP (insecticide) (also a metabolite of Naled)**							
	Apples	379	0			0.002 ^	0.5	-
	Apples, Single Serving	1463	0			0.002 ^	0.5	-
	Cantaloupe	826	0			0.002 - 0.007	0.5	-
	Cucumbers	730	1	0.1	0.047 ^	0.002 - 0.033	0.5	-
	Grape Juice	712	0			0.002 - 0.007	0.5	-
	Lettuce	185	0			0.002 - 0.003	0.5	-
	Pears, Canned	371	0			0.002 - 0.010	0.5	-
	Pears, Fresh	359	0			0.002 - 0.010	0.5	-
	Pears, Single Serving	352	0			0.002 - 0.010	0.5	-
	Spinach, Frozen	702	0			0.002 - 0.033	0.5	-
	Strawberries, Fresh (X-1)	640	9	1.4	0.003 - 0.68	0.002 - 0.017	0.5	-
	Strawberries, Frozen	71	1	1.4	0.003 ^	0.002 - 0.017	0.5	-
	Sweet Bell Peppers	715	0			0.002 - 0.033	0.5	-
	Tomatoes, Canned	368	0			0.002 - 0.033	0.5	-
	Tomatoes, Fresh	364	0			0.002 - 0.017	0.5	-
	Winter Squash, Fresh	246	0			0.002 - 0.007	0.5	-
	Winter Squash, Frozen	100	0			0.002 - 0.007	0.5	-
	Total	**8583**	**11**					
51	**Dicloran (fungicide)**							
	Cantaloupe	826	0			0.008 - 0.010	NT	-
	Cucumbers	730	3	0.4	0.002 - 0.015	0.001 - 0.009	5	-
	Grape Juice	714	0			0.008 - 0.012	10	10
	Lettuce	185	0			0.008 - 0.010	10	10
	Pears, Canned	371	0			0.001 - 0.010	NT	-
	Pears, Fresh (V-3)	359	3	0.8	0.002 - 0.013	0.001 - 0.010	NT	-
	Spinach, Frozen (V-12)	715	12	1.7	0.002 - 0.023	0.001 - 0.008	NT	-
	Strawberries, Fresh	640	0			0.001 - 0.008	NT	10
	Strawberries, Frozen	71	0			0.001 - 0.008	NT	10
	Sweet Bell Peppers	730	0			0.002 - 0.008	NT	-

	Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
	Tomatoes, Canned	368	0			0.002 - 0.008	5	0.5
	Tomatoes, Fresh	364	5	1.4	0.010 - 0.32	0.006 - 0.008	5	0.5
	Winter Squash, Fresh	246	0			0.008 - 0.010	NT	-
	Winter Squash, Frozen	100	0			0.008 - 0.009	NT	-
	Total	**6419**	**23**					
52	**Dicofol o,p' (insecticide)**							
	Cantaloupe	64	7	10.9	0.012 - 0.043	0.007 - 0.018	5	0.2
	Grape Juice	60	0			0.007 ^	5	5
	Lettuce	102	0			0.007 ^	NT	-
	Pears, Canned	45	0			0.007 ^	5	5
	Pears, Fresh	9	4	44.4	0.030 - 0.68	0.018 ^	5	5
	Spinach, Frozen	178	0			0.003 - 0.006	NT	-
	Strawberries, Fresh	171	1	0.6	0.012 ^	0.003 - 0.006	5	-
	Sweet Bell Peppers	162	11	6.8	0.010 - 0.11	0.003 - 0.006	5	1
	Tomatoes, Canned	90	0			0.003 - 0.006	5	1
	Tomatoes, Fresh	90	0			0.006 ^	5	1
	Total	**971**	**23**					
53	**Dicofol p,p' (isomer of dicofol o,p')**							
	Cantaloupe	826	48	5.8	0.017 - 0.048	0.010 - 0.018	5	0.2
	Cucumbers	730	2	0.3	0.017 - 0.034	0.010 - 0.033	5	0.5
	Grape Juice	714	0			0.010 - 0.022	5	5
	Lettuce	185	0			0.010 - 0.018	NT	-
	Pears, Canned	371	0			0.010 - 0.028	5	5
	Pears, Fresh	359	13	3.6	0.025 - 0.65	0.010 - 0.028	5	5
	Spinach, Frozen (V-5)	715	5	0.7	0.005 - 0.055	0.003 - 0.033	NT	-
	Strawberries, Fresh	640	13	2	0.005 - 2.2	0.003 - 0.033	5	-
	Strawberries, Frozen	71	1	1.4	0.017 ^	0.010 - 0.033	5	-
	Sweet Bell Peppers	716	83	11.6	0.005 - 0.61	0.003 - 0.033	5	1
	Tomatoes, Canned	368	0			0.003 - 0.033	5	1
	Tomatoes, Fresh	364	4	1.1	0.017 - 0.13	0.006 - 0.033	5	1
	Winter Squash, Fresh	246	0			0.010 - 0.018	5	-
	Winter Squash, Frozen	100	0			0.010 - 0.015	5	-
	Total	**6405**	**169**					
54	**Dieldrin (insecticide) (also a metabolite of Aldrin)**							
	Cantaloupe	818	52	6.4	0.005 - 0.034	0.003 - 0.018	0.1 [AL]	0.1
	Cucumbers	729	100	13.7	0.003 - 0.11	0.002 - 0.006	0.1 [AL]	0.1
	Grape Juice	701	0			0.003 - 0.018	NT	-
	Lettuce	185	0			0.006 - 0.018	0.03 [AL]	0.05
	Pears, Canned	371	0			0.002 - 0.018	0.03 [AL]	0.05
	Pears, Fresh	326	0			0.002 - 0.018	0.03 [AL]	0.05
	Spinach, Frozen	701	8	1.1	0.003 - 0.010	0.002 - 0.006	0.05 [AL]	0.05
	Strawberries, Fresh	631	2	0.3	0.003 - 0.004	0.002 - 0.006	0.05 [AL]	-
	Strawberries, Frozen	70	0			0.002 - 0.006	0.05 [AL]	-
	Sweet Bell Peppers	713	0			0.002 - 0.008	0.05 [AL]	0.1
	Tomatoes, Canned	368	1	0.3	0.013 ^	0.002 - 0.008	0.05 [AL]	0.1
	Tomatoes, Fresh	364	0			0.002 - 0.008	0.05 [AL]	0.1
	Winter Squash, Fresh	231	18	7.8	0.005 - 0.098	0.003 - 0.018	0.1 [AL]	0.1
	Winter Squash, Frozen	100	60	60	0.008 - 0.081	0.003 - 0.008	0.1 [AL]	0.1
	Total	**6308**	**241**					
55	**Dimethoate (insecticide) (parent of Omethoate)**							
	Apples	379	6	1.6	0.005 - 0.057	0.003 ^	2	1
	Apples, Single Serving	1463	10	0.7	0.005 - 0.087	0.003 ^	2	1
	Cantaloupe	826	11	1.3	0.003 - 0.013	0.002 - 0.009	1	-
	Cucumbers (V-5)	730	5	0.7	0.003 - 0.092	0.002 - 0.010	NT	-
	Grape Juice	714	3	0.4	0.003 - 0.005	0.002 - 0.009	1	1
	Lettuce	185	17	9.2	0.003 - 0.065	0.002 - 0.007	2	2
	Pears, Canned	371	0			0.002 - 0.009	2	1
	Pears, Fresh	359	0			0.002 - 0.009	2	1
	Pears, Single Serving	352	0			0.002 - 0.009	2	1
	Spinach, Frozen	715	33	4.6	0.003 - 1.4	0.002 - 0.010	2	1
	Strawberries, Fresh	640	0			0.002 - 0.010	NT	1
	Strawberries, Frozen	71	0			0.002 - 0.010	NT	1

	Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
	Sweet Bell Peppers	716	61	8.5	0.003 - 0.34	0.002 - 0.010	2	1
	Tomatoes, Canned	368	0			0.002 - 0.010	2	1
	Tomatoes, Fresh	364	5	1.4	0.003 - 0.042	0.002 - 0.010	2	1
	Winter Squash, Fresh (V-1)	246	1	0.4	0.003 ^	0.002 - 0.009	NT	-
	Winter Squash, Frozen	100	0			0.002 - 0.009	NT	-
	Total	**8599**	**152**					
56	**Dinocap (fungicide)**							
	Cucumbers	14	0			0.039 ^	NT	-
	Strawberries, Fresh	12	0			0.039 ^	NT	-
	Total	**26**	**0**					
57	**Diphenamid (herbicide)**							
	Cantaloupe	203	0			0.018 ^	NT	-
	Cucumbers	180	0			0.17 ^	NT	-
	Grape Juice	178	0			0.018 ^	NT	-
	Lettuce	131	0			0.018 ^	NT	-
	Pears, Canned	90	0			0.018 ^	NT	-
	Pears, Fresh	90	0			0.018 ^	NT	-
	Spinach, Frozen	175	0			0.17 ^	NT	-
	Strawberries, Fresh	167	0			0.17 ^	1	-
	Strawberries, Frozen	12	0			0.17 ^	1	-
	Sweet Bell Peppers	179	0			0.17 ^	0.1	-
	Tomatoes, Canned	90	0			0.17 ^	0.1	-
	Tomatoes, Fresh	90	0			0.17 ^	0.1	-
	Winter Squash, Fresh	90	0			0.018 ^	NT	-
	Total	**1675**	**0**					
58	**Diphenylamine (fungicide)**							
	Cantaloupe (V-4)	826	4	0.5	0.013 - 0.033	0.008 - 0.030	NT	-
	Cucumbers	730	0			0.008 - 0.17	NT	-
	Grape Juice	714	0			0.008 - 0.030	NT	-
	Lettuce	185	0			0.008 - 0.080	NT	-
	Pears, Canned	371	6	1.6	0.013 - 0.050	0.008 - 0.080	10	-
	Pears, Fresh	359	53	14.8	0.013 - 0.69	0.008 - 0.030	10	-
	Spinach, Frozen (V-1)	715	1	0.1	0.017 ^	0.008 - 0.17	NT	-
	Strawberries, Fresh (V-1)	640	1	0.2	0.025 ^	0.008 - 0.17	NT	-
	Strawberries, Frozen	71	0			0.008 - 0.17	NT	-
	Sweet Bell Peppers (V-10)	730	10	1.4	0.013 - 0.025	0.008 - 0.17	NT	-
	Tomatoes, Canned	368	0			0.008 - 0.17	NT	-
	Tomatoes, Fresh (V-4)	364	4	1.1	0.017 - 0.025	0.008 - 0.17	NT	-
	Winter Squash, Fresh (V-10)	246	10	4.1	0.013 ^	0.008 - 0.030	NT	-
	Winter Squash, Frozen (V-3)	100	3	3	0.013 ^	0.008 - 0.030	NT	-
	Total	**6419**	**92**					
59	**Disulfoton (insecticide)**							
	Apples	379	0			0.003 ^	NT	-
	Apples, Single Serving	1463	0			0.003 ^	NT	-
	Cantaloupe	826	0			0.003 - 0.010	NT	-
	Cucumbers	730	0			0.003 - 0.010	NT	0.5
	Grape Juice	714	0			0.003 - 0.010	NT	-
	Lettuce	185	0			0.003 - 0.007	0.75	0.5
	Pears, Canned	371	0			0.003 - 0.010	NT	-
	Pears, Fresh	359	0			0.003 - 0.010	NT	-
	Pears, Single Serving	352	0			0.003 - 0.010	NT	-
	Spinach, Frozen	715	0			0.003 - 0.010	0.75	0.5
	Strawberries, Fresh	640	0			0.003 - 0.010	NT	-
	Strawberries, Frozen	71	0			0.003 - 0.010	NT	-
	Sweet Bell Peppers	715	0			0.003 - 0.008	0.1	0.5
	Tomatoes, Canned	368	0			0.003 - 0.008	0.75	0.5
	Tomatoes, Fresh	364	0			0.003 - 0.008	0.75	0.5
	Winter Squash, Fresh	246	0			0.003 - 0.010	NT	0.5
	Winter Squash, Frozen	100	0			0.003 - 0.010	NT	0.5
	Total	**8598**	**0**					

	Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
60	**Disulfoton sulfone (metabolite of Disulfoton)**							
	Apples	379	0			0.005 ^	NT	-
	Apples, Single Serving	1463	0			0.005 ^	NT	-
	Cantaloupe	826	0			0.004 - 0.010	NT	-
	Cucumbers	730	0			0.004 - 0.010	NT	0.5
	Grape Juice	714	0			0.004 - 0.012	NT	-
	Lettuce	185	0			0.004 - 0.009	0.75	0.5
	Pears, Canned	371	0			0.004 - 0.010	NT	-
	Pears, Fresh	359	0			0.004 - 0.010	NT	-
	Pears, Single Serving	352	0			0.004 - 0.010	NT	-
	Spinach, Frozen	715	0			0.004 - 0.008	0.75	0.5
	Strawberries, Fresh	640	0			0.004 - 0.008	NT	-
	Strawberries, Frozen	71	0			0.004 - 0.008	NT	-
	Sweet Bell Peppers	715	0			0.004 - 0.008	0.1	0.5
	Tomatoes, Canned	368	0			0.004 - 0.008	0.75	0.5
	Tomatoes, Fresh	364	0			0.004 - 0.008	0.75	0.5
	Winter Squash, Fresh	246	0			0.004 - 0.010	NT	0.5
	Winter Squash, Frozen	100	0			0.004 - 0.010	NT	0.5
	Total	**8598**	**0**					
61	**Diuron (herbicide)**							
	Spinach, Frozen	105	0			0.030 ^	NT	-
	Strawberries, Fresh	96	0			0.030 ^	NT	-
	Sweet Bell Peppers	87	0			0.030 ^	1	-
	Tomatoes, Fresh	60	0			0.030 ^	NT	-
	Total	**348**	**0**					
62	**Endosulfan I (insecticide)**							
	Cantaloupe	826	7	0.8	0.010 - 0.018	0.004 - 0.007	2.0	2
	Cucumbers	730	320	43.8	0.005 - 0.16	0.003 - 0.005	2.0	2
	Grape Juice	714	0			0.004 - 0.008	2.0	2
	Lettuce	185	2	1.1	0.012 ^	0.005 - 0.007	2.0	1
	Pears, Canned	371	0			0.003 - 0.007	2.0	1
	Pears, Fresh	359	2	0.6	0.007 - 0.063	0.003 - 0.007	2.0	1
	Spinach, Frozen	715	12	1.7	0.003 - 0.037	0.002 - 0.005	2.0	2
	Strawberries, Fresh	640	29	4.5	0.003 - 0.68	0.002 - 0.005	2.0	2
	Strawberries, Frozen	71	1	1.4	0.008 ^	0.003 - 0.005	2.0	2
	Sweet Bell Peppers	705	149	21.1	0.003 - 0.31	0.002 - 0.006	2.0	2
	Tomatoes, Canned	368	2	0.5	0.008 - 0.010	0.002 - 0.006	2.0	2
	Tomatoes, Fresh	364	93	25.5	0.003 - 0.51	0.002 - 0.006	2.0	2
	Winter Squash, Fresh	246	18	7.3	0.010 - 0.044	0.004 - 0.007	2.0	2
	Winter Squash, Frozen	100	0			0.004 - 0.006	2.0	2
	Total	**6394**	**635**					
63	**Endosulfan II (isomer of Endosulfan)**							
	Cantaloupe	826	14	1.7	0.010 ^	0.004 - 0.007	2.0	2
	Cucumbers	730	277	37.9	0.003 - 0.12	0.002 - 0.008	2.0	2
	Grape Juice	714	0			0.004 - 0.011	2.0	2
	Lettuce	185	1	0.5	0.012 ^	0.006 - 0.007	2.0	1
	Pears, Canned	371	0			0.002 - 0.007	2.0	1
	Pears, Fresh	359	7	1.9	0.003 - 0.16	0.002 - 0.007	2.0	1
	Spinach, Frozen	715	12	1.7	0.003 - 0.16	0.002 - 0.008	2.0	2
	Strawberries, Fresh	640	38	5.9	0.005 - 0.45	0.002 - 0.008	2.0	2
	Strawberries, Frozen	71	2	2.8	0.003 - 0.039	0.002 - 0.008	2.0	2
	Sweet Bell Peppers	706	163	23.1	0.005 - 0.24	0.003 - 0.008	2.0	2
	Tomatoes, Canned	368	3	0.8	0.005 - 0.013	0.003 - 0.008	2.0	2
	Tomatoes, Fresh	364	130	35.7	0.005 - 0.23	0.003 - 0.008	2.0	2
	Winter Squash, Fresh	246	9	3.7	0.010 - 0.040	0.004 - 0.007	2.0	2
	Winter Squash, Frozen	100	0			0.004 - 0.006	2.0	2
	Total	**6395**	**656**					
64	**Endosulfan sulfate (metabolite of Endosulfan)**							
	Cantaloupe	826	247	29.9	0.008 - 0.063	0.005 - 0.010	2.0	2
	Cucumbers	730	415	56.8	0.008 - 0.10	0.005 - 0.008	2.0	2
	Grape Juice	714	0			0.005 - 0.015	2.0	2
	Lettuce	185	14	7.6	0.012 ^	0.007 ^	2.0	1

	Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
	Pears, Canned	371	0			0.005 - 0.007	2.0	1
	Pears, Fresh	359	9	2.5	0.008 - 0.053	0.005 - 0.007	2.0	1
	Spinach, Frozen	715	55	7.7	0.005 - 0.69	0.003 - 0.008	2.0	2
	Strawberries, Fresh	640	48	7.5	0.005 - 0.56	0.003 - 0.008	2.0	2
	Strawberries, Frozen	71	2	2.8	0.012 - 0.047	0.005 - 0.008	2.0	2
	Sweet Bell Peppers	706	155	21.9	0.005 - 0.38	0.003 - 0.010	2.0	2
	Tomatoes, Canned	368	1	0.3	0.017 ^	0.003 - 0.010	2.0	2
	Tomatoes, Fresh	356	123	34.6	0.005 - 0.13	0.003 - 0.010	2.0	2
	Winter Squash, Fresh	246	58	23.6	0.008 - 0.084	0.005 - 0.010	2.0	2
	Winter Squash, Frozen	100	1	1	0.012 ^	0.005 - 0.010	2.0	2
	Total	**6387**	**1128**					
65	**Endrin (insecticide)**							
	Cucumbers (V-2)	180	2	1.1	0.005 - 0.013	0.003 ^	NT	0.05
	Spinach, Frozen	175	0			0.003 ^	NT	-
	Strawberries, Fresh	167	0			0.003 ^	NT	-
	Strawberries, Frozen	12	0			0.003 ^	NT	-
	Sweet Bell Peppers	179	0			0.003 ^	NT	0.05
	Tomatoes, Canned	90	0			0.003 ^	NT	0.05
	Tomatoes, Fresh	90	0			0.003 ^	NT	0.05
	Total	**893**	**2**					
66	**Esfenvalerate (insecticide) (isomer of Fenvalerate)**							
	Cantaloupe	640	0			0.021 - 0.098	0.05	-
	Cucumbers	491	0			0.030 - 0.098	0.05	-
	Grape Juice	552	0			0.021 - 0.098	0.05	-
	Lettuce	185	1	0.5	0.19 ^	0.021 - 0.038	5.0	-
	Pears, Canned	288	0			0.021 - 0.098	0.05	-
	Pears, Fresh (X-1)	279	1	0.4	0.16 ^	0.021 - 0.098	0.05	-
	Spinach, Frozen	486	1	0.2	0.020 ^	0.002 - 0.038	0.05	-
	Strawberries, Fresh	441	0			0.002 - 0.038	0.05	-
	Strawberries, Frozen	65	0			0.038 ^	0.05	-
	Sweet Bell Peppers	507	23	4.5	0.003 - 0.050	0.002 - 0.038	0.05	-
	Tomatoes, Canned	287	3	1	0.003 - 0.050	0.002 - 0.038	0.05	-
	Tomatoes, Fresh	209	9	4.3	0.050 ^	0.030 - 0.038	0.05	-
	Winter Squash, Fresh	204	0			0.021 - 0.098	0.05	-
	Winter Squash, Frozen	63	0			0.038 - 0.098	0.05	-
	Total	**4697**	**38**					
67	**Ethalfluralin (herbicide)**							
	Spinach, Frozen	178	0			0.020 - 0.050	NT	-
	Strawberries, Fresh	171	0			0.020 - 0.050	NT	-
	Sweet Bell Peppers	162	0			0.020 - 0.050	NT	-
	Tomatoes, Canned	90	0			0.020 - 0.050	NT	-
	Tomatoes, Fresh	90	0			0.050 ^	NT	-
	Total	**691**	**0**					
68	**Ethiofencarb (insecticide)**							
	Spinach, Frozen	73	0			0.020 ^	NT	-
	Strawberries, Fresh	74	0			0.020 ^	NT	-
	Sweet Bell Peppers	75	0			0.020 ^	NT	-
	Tomatoes, Canned	75	0			0.020 ^	NT	-
	Total	**297**	**0**					
69	**Ethion (insecticide)**							
	Apples	379	0			0.001 ^	NT	-
	Apples, Single Serving	1463	0			0.001 ^	NT	-
	Cantaloupe	826	0			0.002 - 0.006	NT	-
	Cucumbers	729	0			0.002 - 0.010	NT	-
	Grape Juice (V-1)	714	1	0.1	0.005 ^	0.002 - 0.006	NT	-
	Lettuce	185	0			0.002 - 0.004	NT	-
	Pears, Canned	371	0			0.002 - 0.006	NT	-
	Pears, Fresh	359	0			0.002 - 0.006	NT	-
	Pears, Single Serving	352	0			0.002 - 0.006	NT	-
	Spinach, Frozen	715	0			0.001 - 0.010	NT	-
	Strawberries, Fresh	640	0			0.001 - 0.010	NT	-

	Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
	Strawberries, Frozen	71	0			0.002 - 0.010	NT	-
	Sweet Bell Peppers (V-24)	715	24	3.4	0.002 - 0.34	0.001 - 0.010	NT	-
	Tomatoes, Canned	368	0			0.001 - 0.010	NT	-
	Tomatoes, Fresh (V-3)	364	3	0.8	0.015 - 0.024	0.001 - 0.010	NT	-
	Winter Squash, Fresh (V-1)	246	1	0.4	0.007 ^	0.002 - 0.006	NT	-
	Winter Squash, Frozen	100	0			0.002 - 0.006	NT	-
	Total	**8597**	**29**					
70	**Ethion di oxon (metabolite of Ethion)**							
	Apples	379	0			0.004 ^	NT	-
	Apples, Single Serving	1463	0			0.004 ^	NT	-
	Spinach, Frozen	178	0			0.004 ^	NT	-
	Strawberries, Fresh	171	0			0.004 ^	NT	-
	Sweet Bell Peppers	177	0			0.004 ^	NT	-
	Tomatoes, Canned	90	0			0.004 ^	NT	-
	Tomatoes, Fresh	90	0			0.004 ^	NT	-
	Total	**2548**	**0**					
71	**Ethion mono oxon (metabolite of Ethion)**							
	Apples	379	0			0.004 ^	NT	-
	Apples, Single Serving	1463	0			0.004 ^	NT	-
	Spinach, Frozen	178	0			0.004 ^	NT	-
	Strawberries, Fresh	171	0			0.004 ^	NT	-
	Sweet Bell Peppers	177	2[+]	1.1	0.007 ^	0.004 ^	NT	-
	Tomatoes, Canned	90	0			0.004 ^	NT	-
	Tomatoes, Fresh	90	0			0.004 ^	NT	-
	Total	**2548**	**2**					
72	**Ethoprop (insecticide)**							
	Cucumbers	164	0			0.015 ^	0.02	0.02
	Pears, Canned	83	0			0.015 ^	NT	-
	Pears, Fresh	80	0			0.015 ^	NT	-
	Pears, Single Serving	80	0			0.015 ^	NT	-
	Spinach, Frozen	165	0			0.015 ^	NT	-
	Strawberries, Fresh	158	0			0.015 ^	NT	0.02
	Strawberries, Frozen	2	0			0.015 ^	NT	0.02
	Total	**732**	**0**					
73	**Fenamiphos (insecticide)**							
	Apples	379	0			0.002 ^	0.25	-
	Apples, Single Serving	1463	0			0.002 ^	0.25	-
	Cantaloupe	826	0			0.004 - 0.009	NT	-
	Cucumbers	730	0			0.004 - 0.012	NT	-
	Grape Juice	714	0			0.004 - 0.009	0.10	0.1
	Lettuce	185	0			0.004 - 0.006	NT	-
	Pears, Canned	371	0			0.004 - 0.012	NT	-
	Pears, Fresh	359	0			0.004 - 0.012	NT	-
	Pears, Single Serving	352	0			0.004 - 0.012	NT	-
	Spinach, Frozen	715	0			0.002 - 0.012	NT	-
	Strawberries, Fresh	640	0			0.002 - 0.012	0.6	-
	Strawberries, Frozen	71	0			0.004 - 0.012	0.6	-
	Sweet Bell Peppers	730	0			0.002 - 0.008	0.6	-
	Tomatoes, Canned	368	0			0.002 - 0.008	NT	0.2
	Tomatoes, Fresh	364	0			0.002 - 0.008	NT	0.2
	Winter Squash, Fresh	246	0			0.004 - 0.009	NT	-
	Winter Squash, Frozen	100	0			0.004 - 0.009	NT	-
	Total	**8613**	**0**					
74	**Fenamiphos sulfone (metabolite of Fenamiphos)**							
	Apples	379	0			0.005 ^	0.25	-
	Apples, Single Serving	1463	0			0.005 ^	0.25	-
	Cantaloupe	826	0			0.008 - 0.036	NT	-
	Cucumbers (V-1)	730	1	0.1	0.013 ^	0.008 - 0.020	NT	-
	Grape Juice	714	0			0.008 - 0.036	0.10	0.1
	Lettuce	185	0			0.008 - 0.036	NT	-
	Pears, Canned	371	0			0.008 - 0.036	NT	-

	Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
	Pears, Fresh	359	0			0.008 - 0.036	NT	-
	Pears, Single Serving	352	0			0.008 - 0.036	NT	-
	Spinach, Frozen	715	0			0.005 - 0.020	NT	-
	Strawberries, Fresh	640	0			0.005 - 0.020	0.6	-
	Strawberries, Frozen	71	0			0.008 - 0.020	0.6	-
	Sweet Bell Peppers	730	0			0.005 - 0.020	0.6	-
	Tomatoes, Canned	368	0			0.005 - 0.020	NT	0.2
	Tomatoes, Fresh	364	0			0.005 - 0.020	NT	0.2
	Winter Squash, Fresh	246	0			0.008 - 0.036	NT	-
	Winter Squash, Frozen	100	0			0.008 - 0.020	NT	-
	Total	**8613**	**1**					
75	**Fenamiphos sulfoxide (metabolite of Fenamiphos)**							
	Apples	379	0			0.005 ^	0.25	-
	Apples, Single Serving	1463	0			0.005 ^	0.25	-
	Cantaloupe	386	0			0.008 - 0.022	NT	-
	Cucumbers	194	1[+]	0.5	0.013 ^	0.008 - 0.022	NT	-
	Grape Juice	338	0			0.008 - 0.022	0.10	0.1
	Pears, Canned	90	0			0.022 ^	NT	-
	Pears, Fresh	89	0			0.022 ^	NT	-
	Spinach, Frozen	178	0			0.005 ^	NT	-
	Strawberries, Fresh	183	0			0.005 - 0.014	0.6	-
	Sweet Bell Peppers	341	0			0.005 - 0.008	0.6	-
	Tomatoes, Canned	171	0			0.005 - 0.008	NT	0.2
	Tomatoes, Fresh	170	0			0.005 - 0.008	NT	0.2
	Winter Squash, Fresh	73	0			0.008 - 0.022	NT	-
	Winter Squash, Frozen	95	0			0.008 - 0.022	NT	-
	Total	**4150**	**1**					
76	**Fenitrothion (insecticide)**							
	Apples	379	0			0.001 ^	NT	0.5
	Apples, Single Serving	1463	0			0.001 ^	NT	(N)
	Spinach, Frozen	178	0			0.001 ^	NT	-
	Strawberries, Fresh	171	0			0.001 ^	NT	0.5
	Sweet Bell Peppers	177	0			0.001 ^	NT	0.1
	Tomatoes, Canned	90	0			0.001 ^	NT	0.5
	Tomatoes, Fresh	90	0			0.001 ^	NT	0.5
	Total	**2548**	**0**					
77	**Fenitrothion oxygen analog (metabolite of Fenitrothion)**							
	Apples	379	0			0.002 ^	NT	-
	Apples, Single Serving	1463	0			0.002 ^	NT	-
	Spinach, Frozen	178	0			0.002 ^	NT	-
	Strawberries, Fresh	171	0			0.002 ^	NT	-
	Sweet Bell Peppers	177	0			0.002 ^	NT	-
	Tomatoes, Canned	90	0			0.002 ^	NT	-
	Tomatoes, Fresh	90	0			0.002 ^	NT	-
	Total	**2548**	**0**					
78	**Fenpropathrin (insecticide)**							
	Spinach, Frozen	178	0			0.025 ^	NT	-
	Strawberries, Fresh	310	17	5.5	0.042 - 0.47	0.025 ^	2.0	-
	Strawberries, Frozen	10	0			0.025 ^	2.0	-
	Sweet Bell Peppers	177	0			0.025 ^	NT	1
	Tomatoes, Canned	90	0			0.025 ^	0.6	1
	Tomatoes, Fresh	90	0			0.025 ^	0.6	1
	Total	**855**	**17**					
79	**Fenthion (insecticide)**							
	Apples	379	0			0.003 ^	NT	-
	Apples, Single Serving	1463	0			0.003 ^	NT	-
	Spinach, Frozen	178	0			0.003 ^	NT	-
	Strawberries, Fresh	171	0			0.003 ^	NT	-
	Sweet Bell Peppers	177	0			0.003 ^	NT	-
	Tomatoes, Canned	90	0			0.003 ^	NT	-
	Tomatoes, Fresh	90	0			0.003 ^	NT	-
	Total	**2548**	**0**					

Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
80 Fenvalerate (insecticide) (isomer of Esfenvalerate)							
Cantaloupe	826	0			0.042 - 0.33	1.0	-
Cucumbers	730	0			0.007 - 0.092	0.5	0.2
Grape Juice	714	0			0.042 - 0.40	0.05	-
Lettuce	185	0			0.042 - 0.057	0.05	2
Pears, Canned	371	0			0.007 - 0.092	2.0	2
Pears, Fresh	359	2	0.6	0.070 - 0.15	0.007 - 0.092	2.0	2
Spinach, Frozen (V-2)	715	2	0.3	0.041 - 0.15	0.002 - 0.083	NT	-
Strawberries, Fresh	640	0			0.002 - 0.076	0.05	-
Strawberries, Frozen	71	0			0.007 - 0.076	0.05	-
Sweet Bell Peppers	730	21	2.9	0.003 - 0.058	0.002 - 0.33	1.0	0.5
Tomatoes, Canned	368	3	0.8	0.005 - 0.050	0.002 - 0.33	1.0	1
Tomatoes, Fresh	364	9	2.5	0.050 ^	0.030 - 0.33	1.0	1
Winter Squash, Fresh	246	0			0.042 - 0.33	1.0	0.5
Winter Squash, Frozen	100	0			0.057 - 0.33	1.0	0.5
Total	**6419**	**37**					
81 Folpet (fungicide)							
Cantaloupe	792	0			0.010 - 0.021	15	-
Cucumbers	566	0			0.009 - 0.033	15	2
Grape Juice	714	4	0.6	0.035 - 0.083	0.010 - 0.021	25	2
Lettuce	185	0			0.019 - 0.020	50	-
Pears, Canned	371	0			0.009 - 0.020	NT	-
Pears, Fresh	359	0			0.009 - 0.020	NT	-
Spinach, Frozen	682	0			0.009 - 0.033	NT	-
Strawberries, Fresh	611	2	0.3	0.050 - 0.092	0.009 - 0.033	25	20
Strawberries, Frozen	71	0			0.009 - 0.033	25	20
Sweet Bell Peppers	701	0			0.019 - 0.033	NT	-
Tomatoes, Canned	278	0			0.019 - 0.033	25	-
Tomatoes, Fresh	319	0			0.019 - 0.033	25	-
Winter Squash, Fresh	246	0			0.010 - 0.021	NT	-
Winter Squash, Frozen	100	0			0.010 - 0.021	NT	-
Total	**5995**	**6**					
82 Fonofos (insecticide)							
Apples	379	0			0.002 ^	NT	-
Apples, Single Serving	1463	0			0.002 ^	NT	-
Cantaloupe	392	0			0.002 - 0.018	NT	-
Cucumbers	325	0			0.002 - 0.015	NT	-
Grape Juice	380	0			0.002 - 0.018	NT	-
Pears, Canned	36	0			0.002 ^	NT	-
Pears, Fresh	175	0			0.002 - 0.018	NT	-
Pears, Single Serving	254	0			0.002 - 0.018	NT	-
Spinach, Frozen	445	0			0.002 - 0.010	0.1	-
Strawberries, Fresh	409	0			0.002 - 0.010	0.1	-
Strawberries, Frozen	10	0			0.002 - 0.010	0.1	-
Sweet Bell Peppers	622	0			0.002 - 0.010	0.1	-
Tomatoes, Canned	261	0			0.002 - 0.010	0.1	-
Tomatoes, Fresh	364	0			0.002 - 0.010	0.1	-
Winter Squash, Fresh	175	0			0.002 - 0.018	NT	-
Winter Squash, Frozen	66	0			0.002 - 0.015	NT	-
Total	**5756**	**0**					

Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
83 Fonofos oxygen analog (metabolite of Fonofos)							
Apples	379	0			0.001 ^	NT	-
Apples, Single Serving	1463	0			0.001 ^	NT	-
Cantaloupe	392	0			0.004 - 0.019	NT	-
Cucumbers	325	0			0.006 - 0.019	NT	-
Grape Juice	379	0			0.004 - 0.019	NT	-
Pears, Canned	36	0			0.006 ^	NT	-
Pears, Fresh	175	0			0.006 - 0.019	NT	-
Pears, Single Serving	254	0			0.006 - 0.019	NT	-
Spinach, Frozen	445	0			0.001 - 0.010	0.1	-
Strawberries, Fresh	409	0			0.001 - 0.010	0.1	-
Strawberries, Frozen	10	0			0.006 - 0.010	0.1	-
Sweet Bell Peppers	622	0			0.001 - 0.010	0.1	-
Tomatoes, Canned	261	0			0.001 - 0.010	0.1	-
Tomatoes, Fresh	364	0			0.001 - 0.010	0.1	-
Winter Squash, Fresh	175	0			0.004 - 0.019	NT	-
Winter Squash, Frozen	66	0			0.004 - 0.019	NT	-
Total	**5755**	**0**					
84 Heptachlor (insecticide)							
Cantaloupe	613	0			0.003 - 0.006	0.02 [AL]	-
Cucumbers	585	0			0.002 - 0.006	0.02 [AL]	-
Grape Juice	456	0			0.003 - 0.006	0.01 [AL]	-
Lettuce	185	0			0.004 - 0.006	0.01 [AL]	-
Pears, Canned	335	0			0.003 - 0.006	0.01 [AL]	-
Pears, Fresh	199	0			0.003 - 0.004	0.01 [AL]	-
Spinach, Frozen	623	0			0.001 - 0.006	0.01 [AL]	-
Strawberries, Fresh	529	0			0.001 - 0.006	0.01 [AL]	-
Strawberries, Frozen	69	0			0.002 - 0.006	0.01 [AL]	-
Sweet Bell Peppers	574	0			0.001 - 0.006	0.01 [AL]	-
Tomatoes, Canned	368	0			0.001 - 0.006	0.01 [AL]	-
Tomatoes, Fresh	221	0			0.001 - 0.005	0.01 [AL]	-
Winter Squash, Fresh	86	0			0.003 - 0.005	0.01 [AL]	-
Winter Squash, Frozen	71	0			0.003 - 0.005	0.01 [AL]	-
Total	**4914**	**0**					
85 Heptachlor epoxide (metabolite of Heptachlor)							
Cantaloupe	627	1	0.2	0.008 ^	0.003 - 0.006	0.02 [AL]	-
Cucumbers	630	6	0.9	0.002 - 0.013	0.001 - 0.006	0.02 [AL]	-
Grape Juice	498	0			0.003 - 0.006	0.01 [AL]	-
Lettuce	185	0			0.004 - 0.006	0.01 [AL]	-
Pears, Canned	335	0			0.001 - 0.006	0.01 [AL]	-
Pears, Fresh	229	0			0.001 - 0.005	0.01 [AL]	-
Spinach, Frozen	623	0			0.001 - 0.006	0.01 [AL]	-
Strawberries, Fresh	529	1	0.2	0.002 ^	0.001 - 0.006	0.01 [AL]	-
Strawberries, Frozen	69	0			0.001 - 0.006	0.01 [AL]	-
Sweet Bell Peppers	574	0			0.001 - 0.006	0.01 [AL]	-
Tomatoes, Canned	368	0			0.001 - 0.006	0.01 [AL]	-
Tomatoes, Fresh	221	0			0.001 - 0.005	0.01 [AL]	-
Winter Squash, Fresh	106	0			0.003 - 0.005	0.01 [AL]	-
Winter Squash, Frozen	95	2	2.1	0.008 ^	0.003 - 0.005	0.01 [AL]	-
Total	**5089**	**10**					
86 Hexachlorobenzene - HCB (impurity of Quintozene)							
Cantaloupe	826	0			0.002 - 0.004	NT	-
Cucumbers	730	0			0.001 - 0.004	NT	-
Grape Juice	714	0			0.002 - 0.005	NT	-
Lettuce	185	0			0.002 - 0.003	NT	-
Pears, Canned	371	0			0.001 - 0.004	NT	-
Pears, Fresh	359	0			0.001 - 0.004	NT	-
Spinach, Frozen	702	0			0.001 - 0.003	NT	-
Strawberries, Fresh	640	0			0.001 - 0.003	NT	-
Strawberries, Frozen	71	0			0.001 - 0.002	NT	-
Sweet Bell Peppers	730	0			0.001 - 0.004	0.1	-
Tomatoes, Canned	368	0			0.001 - 0.004	0.1	-
Tomatoes, Fresh	364	0			0.002 - 0.004	0.1	-

	Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
	Winter Squash, Fresh	246	0			0.002 - 0.004	NT	-
	Winter Squash, Frozen	100	0			0.002 - 0.004	NT	-
	Total	**6406**	**0**					
87	**Imazalil (fungicide)**							
	Cantaloupe	826	0			0.030 - 0.070	NT	-
	Cucumbers	730	0			0.030 - 0.17	NT	0.5
	Grape Juice	538	0			0.030 - 0.070	NT	-
	Lettuce	185	0			0.030 ^	NT	-
	Pears, Canned	371	0			0.030 - 0.038	NT	5
	Pears, Fresh	359	0			0.030 - 0.038	NT	5
	Spinach, Frozen	715	0			0.010 - 0.17	NT	-
	Strawberries, Fresh	614	0			0.010 - 0.17	NT	2
	Strawberries, Frozen	71	0			0.030 - 0.17	NT	2
	Sweet Bell Peppers	730	0			0.010 - 0.17	NT	-
	Tomatoes, Canned	353	0			0.010 - 0.17	NT	-
	Tomatoes, Fresh	364	0			0.010 - 0.17	NT	-
	Winter Squash, Fresh	246	0			0.030 - 0.070	NT	-
	Winter Squash, Frozen	100	0			0.030 - 0.070	NT	-
	Total	**6202**	**0**					
88	**Iprodione (fungicide)**							
	Cantaloupe (V-1)	826	1	0.1	0.013 ^	0.008 - 0.031	NT	-
	Cucumbers	730	0			0.021 - 0.050	NT	2
	Grape Juice	714	3	0.4	0.052 ^	0.008 - 0.031	60.0	10
	Lettuce	185	0			0.008 - 0.021	25.0	10
	Pears, Canned	371	0			0.008 - 0.024	NT	5
	Pears, Fresh (V-7)	359	7	1.9	0.034 - 0.20	0.008 - 0.024	NT	5
	Spinach, Frozen (V-2)	714	2	0.3	0.025 - 0.083	0.015 - 0.050	NT	-
	Strawberries, Fresh	640	297	46.4	0.025 - 4.9	0.015 - 0.050	15	10
	Strawberries, Frozen	71	27	38	0.035 - 0.53	0.021 - 0.050	15	10
	Sweet Bell Peppers (V-2)	730	2	0.3	0.058 - 0.21	0.015 - 0.050	NT	-
	Tomatoes, Canned	368	0			0.015 - 0.050	NT	5
	Tomatoes, Fresh (V-1)	364	1	0.3	0.025 ^	0.015 - 0.050	NT	5
	Winter Squash, Fresh	246	0			0.008 - 0.031	NT	-
	Winter Squash, Frozen	100	0			0.021 - 0.031	NT	-
	Total	**6418**	**340**					
89	**Iprodione metobolite isomer (metabolite of Iprodione)**							
	Spinach, Frozen	58	0			0.025 ^	NT	-
	Strawberries, Fresh	88	26	29.5	0.020 - 0.40	0.012 - 0.025	15	-
	Sweet Bell Peppers	76	1[+]	1.3	0.020 ^	0.012 - 0.025	NT	-
	Tomatoes, Canned	60	0			0.025 ^	NT	-
	Total	**282**	**27**					
90	**Lambda cyhalothrin (insecticide)**							
	Cucumbers	45	0			0.033 ^	0.01	-
	Spinach, Frozen (X-2)	118	6	5.1	0.003 - 0.067	0.001 - 0.033	0.01	-
	Strawberries, Fresh	74	0			0.001 ^	0.01	-
	Sweet Bell Peppers (X-1)	122	3	2.5	0.002 - 0.015	0.001 - 0.033	0.01	-
	Tomatoes, Canned	105	0			0.001 - 0.033	0.1	-
	Tomatoes, Fresh	4	4	100	0.003 - 0.015	0.002 - 0.009	0.1	-
	Total	**468**	**13**					
91	**Lambda cyhalothrin isomer (isomer of Lambda cyhalothrin)**							
	Spinach, Frozen (X-1)	73	5	6.8	0.006 - 0.22	0.001 - 0.009	0.01	-
	Strawberries, Fresh	74	0			0.001 ^	0.01	-
	Sweet Bell Peppers	78	4	5.1	0.002 - 0.015	0.001 - 0.009	0.01	-
	Tomatoes, Canned	75	0			0.001 ^	0.1	-
	Tomatoes, Fresh	4	4	100	0.003 - 0.015	0.002 - 0.009	0.1	-
	Total	**304**	**13**					

	Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
92	**Lindane - BHC gamma (insecticide)**							
	Cantaloupe	826	0			0.002 - 0.006	3	-
	Cucumbers	730	1	0.1	0.003 ^	0.002 - 0.004	3	-
	Grape Juice	714	0			0.002 - 0.006	1	0.5
	Lettuce	185	0			0.002 - 0.006	3	2
	Pears, Canned	371	0			0.002 - 0.006	1	0.5
	Pears, Fresh	359	0			0.002 - 0.006	1	0.5
	Spinach, Frozen	715	0			0.002 - 0.003	1	2
	Strawberries, Fresh	640	0			0.002 - 0.003	1	3
	Strawberries, Frozen	71	0			0.002 - 0.003	1	3
	Sweet Bell Peppers	730	0			0.002 - 0.004	1	-
	Tomatoes, Canned	368	0			0.002 - 0.004	3	2
	Tomatoes, Fresh	364	0			0.002 - 0.004	3	2
	Winter Squash, Fresh	246	1	0.4	0.031 ^	0.002 - 0.006	3	-
	Winter Squash, Frozen	100	0			0.002 - 0.004	3	-
	Total	**6419**	**2**					
93	**Linuron (herbicide)**							
	Cucumbers	180	0			0.017 - 0.042	NT	-
	Spinach, Frozen (V-2)	338	2	0.6	0.028 - 0.070	0.003 - 0.042	NT	-
	Strawberries, Fresh	326	0			0.003 - 0.042	NT	-
	Strawberries, Frozen	12	0			0.042 ^	NT	-
	Sweet Bell Peppers	356	0			0.003 - 0.042	NT	-
	Tomatoes, Canned	180	0			0.003 - 0.042	NT	-
	Tomatoes, Fresh	180	0			0.003 - 0.042	NT	-
	Total	**1572**	**2**					
94	**Malathion (insecticide)**							
	Apples	379	0			0.002 ^	8	2
	Apples, Single Serving	1463	2	0.1	0.003 ^	0.002 ^	8	2
	Cantaloupe	826	0			0.004 - 0.018	8	-
	Cucumbers	730	0			0.004 - 0.018	8	-
	Grape Juice	714	4	0.6	0.007 ^	0.004 - 0.018	8	8
	Lettuce	185	1	0.5	0.007 ^	0.004 - 0.007	8	8
	Pears, Canned	371	0			0.004 - 0.018	8	0.5
	Pears, Fresh	359	1	0.3	0.064 ^	0.004 - 0.018	8	0.5
	Pears, Single Serving	352	1	0.3	0.053 ^	0.004 - 0.018	8	0.5
	Spinach, Frozen	715	14	1.9	0.003 - 1.1	0.002 - 0.009	8	8
	Strawberries, Fresh	640	79	12.3	0.003 - 0.24	0.002 - 0.009	8	1
	Strawberries, Frozen	71	17	23.9	0.007 - 0.092	0.004 - 0.009	8	1
	Sweet Bell Peppers	715	5	0.7	0.007 - 0.10	0.002 - 0.008	8	0.5
	Tomatoes, Canned	368	1	0.3	0.007 ^	0.002 - 0.008	8	3
	Tomatoes, Fresh	364	0			0.002 - 0.008	8	3
	Winter Squash, Fresh	246	0			0.004 - 0.018	8	-
	Winter Squash, Frozen	100	0			0.004 - 0.018	8	-
	Total	**8598**	**125**					
95	**Malathion oxygen analog (metabolite of Malathion)**							
	Apples	379	0			0.003 ^	8	-
	Apples, Single Serving	1463	0			0.003 ^	8	-
	Spinach, Frozen	178	0			0.003 ^	8	-
	Strawberries, Fresh	171	8	4.7	0.005 ^	0.003 ^	8	-
	Sweet Bell Peppers	177	0			0.003 ^	8	-
	Tomatoes, Canned	90	0			0.003 ^	8	-
	Tomatoes, Fresh	90	0			0.003 ^	8	-
	Total	**2548**	**8**					
96	**Metalaxyl (fungicide)**							
	Cantaloupe	389	17	4.4	0.013 - 0.030	0.008 - 0.018	1.0	-
	Cucumbers	180	0			0.17 ^	1.0	0.5
	Grape Juice	340	0			0.008 - 0.018	2.0	1
	Lettuce	131	0			0.008 ^	5.0	2
	Pears, Canned	90	0			0.008 ^	NT	1
	Pears, Fresh	90	0			0.008 ^	NT	1
	Spinach, Frozen	353	6	1.7	0.003 - 0.10	0.002 - 0.17	5.0	2
	Strawberries, Fresh	171	17	9.9	0.003 - 0.23	0.002 - 0.060	10.0	-

	Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
	Sweet Bell Peppers	520	85	16.3	0.003 - 0.75	0.002 - 0.17	1.0	1
	Tomatoes, Canned	261	2	0.8	0.003 - 0.10	0.002 - 0.17	1.0	0.5
	Tomatoes, Fresh	260	0			0.018 - 0.17	1.0	0.5
	Winter Squash, Fresh	132	5	3.8	0.013 - 0.030	0.008 - 0.018	1.0	0.2
	Winter Squash, Frozen	37	0			0.018 ^	1.0	0.2
	Total	**2954**	**132**					
97	**Methamidophos (insecticide) (also a metabolite of Acephate)**							
	Apples	379	0			0.003 ^	0.05	-
	Apples, Single Serving	1410	2	0.1	0.005 ^	0.003 ^	0.05	-
	Cantaloupe (X-1)	826	61	7.4	0.002 - 0.72	0.001 - 0.006	0.5	-
	Cucumbers	730	95	13	0.002 - 0.43	0.001 - 0.017	1.0	1
	Grape Juice	712	0			0.001 - 0.006	0.05	-
	Lettuce	185	14	7.6	0.002 - 0.022	0.001 - 0.004	1.0	1
	Pears, Canned	371	0			0.001 - 0.010	0.05	-
	Pears, Fresh	359	2	0.6	0.007 - 0.010	0.001 - 0.010	0.05	-
	Pears, Single Serving	352	1	0.3	0.010 ^	0.001 - 0.010	0.05	-
	Spinach, Frozen	715	1	0.1	0.005 ^	0.001 - 0.017	0.05	-
	Strawberries, Fresh (X-1)	640	1	0.2	0.25 ^	0.001 - 0.015	0.05	-
	Strawberries, Frozen	70	0			0.001 - 0.015	0.05	-
	Sweet Bell Peppers	718	261	36.4	0.002 - 0.75	0.001 - 0.017	1.0	1
	Tomatoes, Canned	368	58	15.8	0.002 - 0.028	0.001 - 0.017	1.0	-
	Tomatoes, Fresh	364	76	20.9	0.002 - 0.32	0.001 - 0.10	1.0	-
	Winter Squash, Fresh	246	3	1.2	0.005 - 0.035	0.001 - 0.006	0.05	-
	Winter Squash, Frozen	100	0			0.001 - 0.006	0.05	-
	Total	**8545**	**575**					
98	**Methidathion (insecticide)**							
	Apples	379	0			0.003 ^	0.05	0.5
	Apples, Single Serving	1463	0			0.003 ^	0.05	0.5
	Cantaloupe	826	0			0.003 - 0.010	NT	-
	Cucumbers	730	0			0.004 - 0.008	NT	0.05
	Grape Juice	714	0			0.003 - 0.010	NT	1
	Lettuce	185	0			0.004 - 0.010	NT	-
	Pears, Canned	371	0			0.004 - 0.010	0.05	1
	Pears, Fresh	359	2	0.6	0.013 ^	0.004 - 0.010	0.05	1
	Pears, Single Serving	352	0			0.004 - 0.010	0.05	1
	Spinach, Frozen	715	0			0.003 - 0.008	NT	-
	Strawberries, Fresh (V-1)	640	1	0.2	0.013 ^	0.003 - 0.008	NT	-
	Strawberries, Frozen	71	0			0.004 - 0.008	NT	-
	Sweet Bell Peppers	730	0			0.003 - 0.008	NT	-
	Tomatoes, Canned	368	0			0.003 - 0.008	NT	0.1
	Tomatoes, Fresh	364	0			0.003 - 0.008	NT	0.1
	Winter Squash, Fresh	246	0			0.003 - 0.010	NT	-
	Winter Squash, Frozen	100	0			0.003 - 0.008	NT	-
	Total	**8613**	**3**					
99	**Methiocarb (insecticide) (analyzed as sulfoxide)**							
	Cantaloupe	237	0			0.016 ^	NT	-
	Cucumbers	551	0			0.016 - 0.043	NT	-
	Grape Juice	198	0			0.016 ^	NT	-
	Lettuce	54	0			0.016 ^	NT	0.2
	Pears, Canned	191	0			0.016 - 0.043	NT	-
	Pears, Fresh	180	0			0.016 - 0.043	NT	-
	Spinach, Frozen	595	0			0.010 - 0.043	NT	-
	Strawberries, Fresh	543	0			0.010 - 0.043	NT	-
	Strawberries, Frozen	71	0			0.016 - 0.043	NT	-
	Sweet Bell Peppers	464	0			0.010 - 0.017	NT	-
	Tomatoes, Canned	257	0			0.010 - 0.017	NT	-
	Tomatoes, Fresh	194	0			0.016 - 0.017	NT	-
	Winter Squash, Fresh	83	0			0.016 ^	NT	-
	Winter Squash, Frozen	5	0			0.016 ^	NT	-
	Total	**3623**	**0**					
100	**Methomyl (insecticide)**							
	Apples	379	2	0.5	0.013 ^	0.008 ^	1	2

	Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
	Apples, Single Serving	495	2	0.4	0.013 ^	0.008 ^	1	2
	Cantaloupe (X-1)	826	100	12.1	0.007 - 0.62	0.004 - 0.032	0.2	-
	Cucumbers (X-1)	730	10	1.4	0.020 - 0.42	0.012 - 0.032	0.2	0.2
	Grape Juice	714	0			0.012 - 0.032	5	5
	Lettuce	185	11	5.9	0.020 - 0.11	0.012 - 0.025	5	5
	Pears, Canned	371	0			0.012 - 0.032	4.0	2
	Pears, Fresh	359	1	0.3	0.088 ^	0.012 - 0.032	4.0	2
	Spinach, Frozen	715	72	10.1	0.013 - 0.83	0.008 - 0.017	6	5
	Strawberries, Fresh (X-3)	639	160	25	0.013 - 5.4	0.008 - 0.017	2	-
	Strawberries, Frozen	71	5	7	0.020 - 0.051	0.012 - 0.017	2	-
	Sweet Bell Peppers	730	86	11.8	0.007 - 0.43	0.004 - 0.017	2	1
	Tomatoes, Canned	368	0			0.004 - 0.017	1	1
	Tomatoes, Fresh	364	0			0.004 - 0.017	1	1
	Winter Squash, Fresh	246	0			0.004 - 0.032	0.2	-
	Winter Squash, Frozen	100	0			0.004 - 0.032	0.2	-
	Total	**7292**	**449**					
101	**Methoxychlor Total (insecticide)**							
	Cantaloupe	237	0			0.020 ^	14	-
	Cucumbers	551	0			0.014 - 0.020	14	-
	Grape Juice	198	0			0.020 ^	14	-
	Lettuce	54	0			0.020 ^	14	-
	Pears, Canned	191	0			0.014 - 0.020	14	-
	Pears, Fresh	180	3	1.7	0.023 - 0.63	0.014 - 0.020	14	-
	Spinach, Frozen	715	0			0.002 - 0.020	14	-
	Strawberries, Fresh	640	0			0.002 - 0.020	14	-
	Strawberries, Frozen	71	0			0.014 - 0.020	14	-
	Sweet Bell Peppers	566	0			0.002 - 0.020	14	-
	Tomatoes, Canned	287	0			0.002 - 0.020	14	-
	Tomatoes, Fresh	284	0			0.006 - 0.020	14	-
	Winter Squash, Fresh	83	0			0.020 ^	14	-
	Winter Squash, Frozen	5	0			0.020 ^	14	-
	Total	**4062**	**3**					
102	**Methoxychlor olefin**							
	Spinach, Frozen	73	0			0.001 ^	14	-
	Strawberries, Fresh	74	0			0.001 ^	14	-
	Sweet Bell Peppers	75	0			0.001 ^	14	-
	Tomatoes, Canned	75	0			0.001 ^	14	-
	Total	**297**	**0**					
103	**Methoxychlor p,p'**							
	Cantaloupe	574	0			0.009 - 0.026	14	-
	Cucumbers	179	0			0.023 ^	14	-
	Grape Juice	516	0			0.009 - 0.026	14	-
	Lettuce	131	0			0.009 ^	14	-
	Pears, Canned	180	0			0.009 - 0.023	14	-
	Pears, Fresh	179	0			0.009 - 0.023	14	-
	Sweet Bell Peppers	164	0			0.026 ^	14	-
	Tomatoes, Canned	81	0			0.026 ^	14	-
	Tomatoes, Fresh	80	0			0.026 ^	14	-
	Winter Squash, Fresh	163	0			0.009 - 0.026	14	-
	Winter Squash, Frozen	95	0			0.023 - 0.026	14	-
	Total	**2342**	**0**					
104	**Mevinphos Total (insecticide)**							
	Cantaloupe	403	0			0.003 - 0.014	0.5	0.05
	Cucumbers	524	1	0.2	0.15 ^	0.003 - 0.017	0.2	0.2
	Grape Juice	354	0			0.003 - 0.014	0.5	0.5
	Lettuce	131	0			0.012 - 0.014	0.5	0.5
	Pears, Canned	263	0			0.003 - 0.014	NT	0.2
	Pears, Fresh	259	0			0.003 - 0.014	NT	0.2
	Pears, Single Serving	253	0			0.003 - 0.014	NT	0.2
	Spinach, Frozen	340	0			0.008 - 0.017	1.0	0.5
	Strawberries, Fresh	325	0			0.008 - 0.017	1.0	1
	Strawberries, Frozen	14	0			0.008 - 0.017	1.0	1

Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
Sweet Bell Peppers	164	0			0.017 ^	0.25	-
Tomatoes, Canned	90	0			0.017 ^	0.2	0.2
Tomatoes, Fresh	90	0			0.017 ^	0.2	0.2
Winter Squash, Fresh	121	0			0.003 - 0.014	NT	-
Winter Squash, Frozen	58	0			0.003 ^	NT	-
Total	**3389**	**1**					
105 Mevinphos E (isomer of Mevinphos)							
Apples	379	0			0.002 ^	NT	0.5
Apples, Single Serving	1463	0			0.002 ^	NT	0.5
Cantaloupe	423	0			0.002 - 0.006	0.5	0.05
Cucumbers	206	0			0.002 ^	0.2	0.2
Grape Juice	358	0			0.002 - 0.006	0.5	0.5
Lettuce	54	0			0.002 ^	0.5	0.5
Pears, Canned	108	0			0.002 ^	NT	0.2
Pears, Fresh	100	0			0.002 ^	NT	0.2
Pears, Single Serving	99	0			0.002 ^	NT	0.2
Spinach, Frozen	375	0			0.002 ^	1.0	0.5
Strawberries, Fresh	315	0			0.002 ^	1.0	1
Strawberries, Frozen	57	0			0.002 ^	1.0	1
Sweet Bell Peppers	551	0			0.002 - 0.006	0.25	-
Tomatoes, Canned	278	1	0.4	0.010 ^	0.002 - 0.006	0.2	0.2
Tomatoes, Fresh	274	0			0.002 - 0.006	0.2	0.2
Winter Squash, Fresh	125	0			0.002 - 0.006	NT	-
Winter Squash, Frozen	42	0			0.002 - 0.006	NT	-
Total	**5207**	**1**					
106 Mevinphos Z (isomer of Mevinphos)							
Apples	379	0			0.002 ^	NT	0.5
Apples, Single Serving	1463	0			0.002 ^	NT	0.5
Cantaloupe	423	0			0.002 - 0.006	0.5	0.05
Cucumbers	206	0			0.002 ^	0.2	0.2
Grape Juice	358	0			0.002 - 0.006	0.5	0.5
Lettuce	54	0			0.002 ^	0.5	0.5
Pears, Canned	108	0			0.002 ^	NT	0.2
Pears, Fresh	100	0			0.002 ^	NT	0.2
Pears, Single Serving	99	0			0.002 ^	NT	0.2
Spinach, Frozen	375	2	0.5	0.003 ^	0.002 ^	1.0	0.5
Strawberries, Fresh	315	0			0.002 ^	1.0	1
Strawberries, Frozen	57	0			0.002 ^	1.0	1
Sweet Bell Peppers	536	0			0.002 - 0.006	0.25	-
Tomatoes, Canned	278	0			0.002 - 0.006	0.2	0.2
Tomatoes, Fresh	259	0			0.002 - 0.006	0.2	0.2
Winter Squash, Fresh	125	0			0.002 - 0.006	NT	-
Winter Squash, Frozen	42	0			0.002 - 0.006	NT	-
Total	**5177**	**2**					
107 Myclobutanil (fungicide)							
Cantaloupe	826	1	0.1	0.040 ^	0.008 - 0.045	0.5	
Cucumbers	730	0			0.020 - 0.083	0.5	-
Grape Juice	714	0			0.008 - 0.045	1.0	1
Lettuce	185	0			0.008 - 0.020	NT	-
Pears, Canned	371	0			0.008 - 0.057	NT	0.5
Pears, Fresh	359	0			0.008 - 0.057	NT	0.5
Spinach, Frozen	715	0			0.005 - 0.083	NT	-
Strawberries, Fresh	640	142	22.2	0.008 - 0.42	0.005 - 0.083	0.5	-
Strawberries, Frozen	71	9	12.7	0.033 - 0.141	0.020 - 0.083	0.5	-
Sweet Bell Peppers	730	17	2.3	0.008 - 0.086	0.005 - 0.083	1.0	-
Tomatoes, Canned	368	0			0.005 - 0.083	0.3	0.3
Tomatoes, Fresh	364	0			0.015 - 0.083	0.3	0.3

Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
Winter Squash, Fresh	246	1	0.4	0.033 ^	0.008 - 0.045	0.3	-
Winter Squash, Frozen	100	0			0.020 - 0.045	0.3	-
Total	**6419**	**170**					
108 Norflurazon (herbicide)							
Cantaloupe	826	0			0.018 - 0.039	NT	-
Cucumbers	730	0			0.020 - 0.12	NT	-
Grape Juice	714	0			0.018 - 0.039	0.1	-
Lettuce	185	0			0.018 - 0.020	NT	-
Pears, Canned	371	0			0.018 - 0.12	0.1	-
Pears, Fresh	359	0			0.018 - 0.12	0.1	-
Spinach, Frozen	715	0			0.012 - 0.12	NT	-
Strawberries, Fresh	640	0			0.012 - 0.12	NT	-
Strawberries, Frozen	71	0			0.020 - 0.12	NT	-
Sweet Bell Peppers	730	0			0.012 - 0.042	NT	-
Tomatoes, Canned (V-1)	368	1	0.3	0.033 ^	0.012 - 0.042	NT	-
Tomatoes, Fresh	364	0			0.013 - 0.042	NT	-
Winter Squash, Fresh	246	0			0.018 - 0.039	NT	-
Winter Squash, Frozen	100	0			0.020 - 0.039	NT	-
Total	**6419**	**1**					
109 Norflurazon desmethyl (metabolite of Norflurazon)							
Cantaloupe	826	0			0.021 - 0.043	NT	-
Cucumbers	730	0			0.030 - 0.18	NT	-
Grape Juice	714	0			0.021 - 0.043	0.1	-
Lettuce	185	0			0.021 - 0.030	NT	-
Pears, Canned	371	0			0.021 - 0.18	0.1	-
Pears, Fresh	359	0			0.021 - 0.18	0.1	-
Spinach, Frozen	715	0			0.015 - 0.18	NT	-
Strawberries, Fresh	640	0			0.015 - 0.18	NT	-
Strawberries, Frozen	71	0			0.030 - 0.18	NT	-
Sweet Bell Peppers	730	0			0.015 - 0.043	NT	-
Tomatoes, Canned	368	0			0.015 - 0.043	NT	-
Tomatoes, Fresh	364	0			0.015 - 0.043	NT	-
Winter Squash, Fresh	246	0			0.021 - 0.043	NT	-
Winter Squash, Frozen	100	0			0.030 - 0.043	NT	-
Total	**6419**	**0**					
110 Omethoate (metabolite of Dimethoate)							
Apples	379	5	1.3	0.008 - 0.027	0.005 ^	2	1
Apples, Single Serving	1409	10	0.7	0.008 - 0.076	0.005 ^	2	1
Cantaloupe	826	10	1.2	0.007 - 0.015	0.004 - 0.018	1	-
Cucumbers	730	2+	0.3	0.007 - 0.023	0.004 - 0.017	NT	-
Grape Juice	713	2	0.3	0.015 ^	0.004 - 0.018	1	1
Lettuce	185	4	2.2	0.007 - 0.020	0.004 - 0.018	2	2
Pears, Canned	371	0			0.004 - 0.018	2	1
Pears, Fresh	359	1	0.3	0.007 ^	0.004 - 0.018	2	1
Pears, Single Serving	352	0			0.004 - 0.018	2	1
Spinach, Frozen	715	49	6.9	0.007 - 0.38	0.004 - 0.017	2	1
Strawberries, Fresh	640	0			0.004 - 0.017	NT	1
Strawberries, Frozen	71	0			0.004 - 0.017	NT	1
Sweet Bell Peppers	716	72	10.1	0.007 - 0.14	0.004 - 0.017	2	1
Tomatoes, Canned	368	0			0.004 - 0.017	2	1
Tomatoes, Fresh	364	12	3.3	0.007 - 0.032	0.004 - 0.017	2	1
Winter Squash, Fresh	246	0			0.004 - 0.018	NT	-
Winter Squash, Frozen	100	0			0.004 - 0.014	NT	-
Total	**8544**	**167**					
111 Ovex (insecticide)							
Cucumbers	14	0			0.006 ^	NT	-
Strawberries, Fresh	12	0			0.006 ^	NT	-
Total	**26**	**0**					
112 Oxamyl (insecticide)							
Apples	379	24	6.3	0.017 - 0.044	0.010 ^	2	2
Apples, Single Serving	495	39	7.9	0.017 - 0.056	0.010 ^	2	2

	Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
	Cantaloupe	826	4	0.5	0.008 ^	0.005 - 0.035	2.0	-
	Cucumbers	730	30	4.1	0.025 - 0.53	0.018 - 0.035	2.0	2
	Grape Juice	714	0			0.005 - 0.035	NT	-
	Lettuce	185	0			0.008 - 0.025	NT	-
	Pears, Canned	371	0			0.018 - 0.035	2.0	-
	Pears, Fresh	359	1	0.3	0.079 ^	0.018 - 0.035	2.0	-
	Spinach, Frozen	715	0			0.010 - 0.020	NT	-
	Strawberries, Fresh (V-1)	640	1	0.2	0.21 ^	0.010 - 0.020	NT	-
	Strawberries, Frozen	71	0			0.018 - 0.020	NT	-
	Sweet Bell Peppers	730	74	10.1	0.008 - 0.28	0.005 - 0.020	3	2
	Tomatoes, Canned	368	0			0.005 - 0.020	2	2
	Tomatoes, Fresh	364	1	0.3	0.008 ^	0.005 - 0.020	2	2
	Winter Squash, Fresh	246	0			0.005 - 0.035	2.0	-
	Winter Squash, Frozen	100	0			0.005 - 0.035	2.0	-
	Total	**7293**	**174**					
113	**Oxychlordane (metabolite of Chlordane)**							
	Spinach, Frozen	178	0			0.002 ^	0.1 [AL]	0.02
	Strawberries, Fresh	171	0			0.002 ^	0.1 [AL]	0.02
	Sweet Bell Peppers	177	0			0.002 ^	0.1 [AL]	0.02
	Tomatoes, Canned	90	0			0.002 ^	0.1 [AL]	0.02
	Tomatoes, Fresh	90	0			0.002 ^	0.1 [AL]	0.02
	Total	**706**	**0**					
114	**Oxydemeton methyl sulfone (insecticide) (metabolite of Oxydemeton methyl)**							
	Apples	379	0			0.003 ^	1	-
	Apples, Single Serving	1463	0			0.003 ^	1	-
	Cantaloupe	825	0			0.008 - 0.091	0.3	-
	Cucumbers	730	3	0.4	0.025 - 0.086	0.015 - 0.056	1	-
	Grape Juice	714	0			0.008 - 0.091	0.1	-
	Lettuce	185	0			0.015 - 0.091	2	-
	Pears, Canned	371	0			0.015 - 0.091	0.3	-
	Pears, Fresh	359	0			0.015 - 0.091	0.3	-
	Pears, Single Serving	352	0			0.015 - 0.091	0.3	-
	Spinach, Frozen	715	0			0.003 - 0.050	NT	-
	Strawberries, Fresh	640	0			0.003 - 0.050	2	-
	Strawberries, Frozen	71	0			0.015 - 0.050	2	-
	Sweet Bell Peppers	715	0			0.003 - 0.050	0.75	-
	Tomatoes, Canned	368	0			0.003 - 0.050	NT	-
	Tomatoes, Fresh	364	0			0.003 - 0.050	NT	-
	Winter Squash, Fresh	246	0			0.008 - 0.091	0.3	-
	Winter Squash, Frozen	100	0			0.008 - 0.056	0.3	-
	Total	**8597**	**3**					
115	**Oxyfluorfen (herbicide)**							
	Spinach, Frozen	178	0			0.009 - 0.010	NT	-
	Strawberries, Fresh	171	0			0.009 - 0.010	0.05	-
	Sweet Bell Peppers	177	0			0.009 - 0.010	NT	-
	Tomatoes, Canned	90	0			0.009 - 0.010	NT	-
	Tomatoes, Fresh	90	0			0.010 ^	NT	-
	Total	**706**	**0**					
116	**Parathion (insecticide)**							
	Apples	379	0			0.002 ^	1	0.05
	Apples, Single Serving	1463	0			0.002 ^	1	0.05
	Cantaloupe	626	1	0.2	0.005 ^	0.003 - 0.006	1	-
	Cucumbers	551	0			0.003 - 0.017	1	-
	Grape Juice	538	1	0.2	0.005 ^	0.003 - 0.006	1	-
	Lettuce	185	0			0.003 - 0.006	1	-
	Pears, Canned	281	0			0.003 - 0.010	1	-
	Pears, Fresh	270	0			0.003 - 0.010	1	-
	Pears, Single Serving	269	0			0.003 - 0.010	1	-
	Spinach, Frozen	715	1	0.1	0.017 ^	0.002 - 0.017	1	-
	Strawberries, Fresh	640	0			0.002 - 0.017	1	-
	Strawberries, Frozen	71	0			0.003 - 0.017	1	-
	Sweet Bell Peppers	730	0			0.002 - 0.017	1	-

Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
Tomatoes, Canned	368	0			0.002 - 0.017	1	-
Tomatoes, Fresh	364	1	0.3	0.005 ^	0.002 - 0.017	1	-
Winter Squash, Fresh	215	0			0.003 - 0.006	1	-
Winter Squash, Frozen	42	0			0.003 ^	1	-
Total	**7707**	**4**					
117 Parathion methyl (insecticide)							
Apples	379	20	5.3	0.005 - 0.034	0.003 ^	1	-
Apples, Single Serving	1463	91	6.2	0.005 - 0.041	0.003 ^	1	-
Cantaloupe	826	0			0.002 - 0.013	1	-
Cucumbers	730	0			0.002 - 0.013	1	-
Grape Juice	714	7	0.9	0.005 ^	0.002 - 0.013	1	-
Lettuce	185	0			0.002 - 0.006	1	0.05
Pears, Canned	371	0			0.002 - 0.013	1	-
Pears, Fresh	359	8	2.2	0.003 - 0.065	0.002 - 0.013	1	-
Pears, Single Serving	352	6	1.7	0.003 - 0.045	0.002 - 0.013	1	-
Spinach, Frozen	715	0			0.002 - 0.008	1	0.5
Strawberries, Fresh	640	3	0.5	0.003 ^	0.002 - 0.008	1	-
Strawberries, Frozen	71	0			0.002 - 0.008	1	-
Sweet Bell Peppers	730	6	0.8	0.003 - 0.054	0.002 - 0.008	1	-
Tomatoes, Canned	368	0			0.002 - 0.008	1	-
Tomatoes, Fresh	364	0			0.002 - 0.008	1	-
Winter Squash, Fresh	246	0			0.002 - 0.013	1	-
Winter Squash, Frozen	100	0			0.002 - 0.013	1	-
Total	**8613**	**141**					
118 Parathion methyl oxygen analog (metabolite of Parathion methyl)							
Apples	379	0			0.010 ^	1	-
Apples, Single Serving	1463	0			0.010 ^	1	-
Spinach, Frozen	178	0			0.010 ^	1	-
Strawberries, Fresh	171	0			0.010 ^	1	-
Sweet Bell Peppers	177	0			0.010 ^	1	-
Tomatoes, Canned	90	0			0.010 ^	1	-
Tomatoes, Fresh	90	0			0.010 ^	1	-
Total	**2548**	**0**					
119 Parathion oxygen analog (metabolite of Parathion)							
Apples	379	0			0.003 ^	1	-
Apples, Single Serving	1445	0			0.003 ^	1	-
Spinach, Frozen	178	0			0.003 ^	1	-
Strawberries, Fresh	171	0			0.003 ^	1	
Sweet Bell Peppers	177	0			0.003 ^	1	-
Tomatoes, Canned	90	0			0.003 ^	1	-
Tomatoes, Fresh	90	0			0.003 ^	1	-
Total	**2530**	**0**					
120 Pentachloroaniline - PCA (metabolite of Quintozene)							
Cucumbers	164	1+	0.6	0.002 ^	0.001 ^	NT	-
Pears, Canned	83	0			0.001 ^	NT	-
Pears, Fresh	80	0			0.001 ^	NT	-
Spinach, Frozen	165	0			0.001 ^	NT	-
Strawberries, Fresh	158	0			0.001 ^	NT	-
Strawberries, Frozen	2	0			0.001 ^	NT	-
Total	**652**	**1**					
121 Pentachlorobenzene - PCB (metabolite of Quintozene)							
Cantaloupe (V-1)	826	1	0.1	0.007 ^	0.002 - 0.004	NT	-
Cucumbers	730	0			0.002 - 0.003	NT	-
Grape Juice	714	0			0.002 - 0.005	NT	-
Lettuce	185	0			0.002 ^	NT	-
Pears, Canned	371	0			0.002 - 0.003	NT	-
Pears, Fresh	359	0			0.002 - 0.003	NT	-
Spinach, Frozen	714	0			0.001 - 0.003	NT	-
Strawberries, Fresh	640	0			0.001 - 0.003	0.1	-
Strawberries, Frozen	71	0			0.002 - 0.003	0.1	-
Sweet Bell Peppers	730	0			0.001 - 0.004	0.1	-

	Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
	Tomatoes, Canned	353	0			0.001 - 0.004	NT	-
	Tomatoes, Fresh	349	0			0.002 - 0.004	NT	-
	Winter Squash, Fresh	246	0			0.002 - 0.004	NT	-
	Winter Squash, Frozen	100	0			0.002 - 0.004	NT	-
	Total	**6388**	**1**					
122	**Permethrin Total (insecticide)**							
	Cucumbers	180	2	1.1	0.13 ^	0.076 - 0.083	3.0	0.5
	Spinach, Frozen	175	106	60.6	0.13 - 7.6	0.076 - 0.083	20.0	2
	Strawberries, Fresh	167	0			0.076 ^	NT	1
	Strawberries, Frozen	12	0			0.076 ^	NT	1
	Sweet Bell Peppers	179	10	5.6	0.13-0.14	0.076 - 0.083	1.0	1
	Tomatoes, Canned	90	0			0.076 - 0.083	2	1
	Tomatoes, Fresh	90	7	7.8	0.13^	0.076 ^	2	1
	Total	**893**	**125**					
123	**Permethrin cis (isomer of Permethrin)**							
	Cantaloupe	826	9	1.1	0.025 - 0.053	0.015 - 0.032	3.0	-
	Cucumbers	550	1	0.2	0.018 ^	0.011 - 0.030	3.0	0.5
	Grape Juice	714	0			0.015 - 0.032	NT	2
	Lettuce	185	7	3.8	0.040 - 0.92	0.015 - 0.024	20.0	2
	Pears, Canned	371	0			0.011 - 0.029	3.0	2
	Pears, Fresh	359	2	0.6	0.025 - 0.040	0.011 - 0.030	3.0	2
	Spinach, Frozen	540	364	67.4	0.002 - 8.3	0.001 - 0.030	20.0	2
	Strawberries, Fresh	473	0			0.001 - 0.030	NT	1
	Strawberries, Frozen	59	0			0.011 - 0.030	NT	1
	Sweet Bell Peppers	551	49	8.9	0.002 - 0.24	0.001 - 0.032	1.0	1
	Tomatoes, Canned	278	3	1.1	0.002 - 0.053	0.001 - 0.032	2	1
	Tomatoes, Fresh	274	41	14.9	0.013 - 0.075	0.008 - 0.032	2	1
	Winter Squash, Fresh	246	0			0.015 - 0.032	NT	0.5
	Winter Squash, Frozen	100	0			0.015 - 0.032	NT	0.5
	Total	**5526**	**476**					
124	**Permethrin trans (isomer of Permethrin)**							
	Cantaloupe	826	0			0.010 - 0.032	3.0	-
	Cucumbers	550	0			0.010 - 0.029	3.0	0.5
	Grape Juice	714	0			0.010 - 0.032	NT	2
	Lettuce	185	5	2.7	0.025 - 0.86	0.015 - 0.029	20.0	2
	Pears, Canned	371	0			0.011 - 0.029	3.0	2
	Pears, Fresh	359	2	0.6	0.025 - 0.048	0.010 - 0.029	3.0	2
	Spinach, Frozen	540	366	67.8	0.002 - 7.8	0.001 - 0.015	20.0	2
	Strawberries, Fresh	473	0			0.001 - 0.015	NT	1
	Strawberries, Frozen	59	0			0.010 - 0.015	NT	1
	Sweet Bell Peppers	551	54	9.8	0.003 - 0.25	0.001 - 0.032	1.0	1
	Tomatoes, Canned	278	3	1.1	0.002 - 0.053	0.001 - 0.032	2	1
	Tomatoes, Fresh	274	43	15.7	0.008 - 0.081	0.005 - 0.032	2	1
	Winter Squash, Fresh	246	0			0.010 - 0.032	NT	0.5
	Winter Squash, Frozen	100	0			0.010 - 0.032	NT	0.5
	Total	**5526**	**473**					
125	**Phenthoate (insecticide)**							
	Spinach, Frozen	73	0			0.010 ^	NT	-
	Strawberries, Fresh	74	0			0.010 ^	NT	-
	Sweet Bell Peppers	75	0			0.010 ^	NT	-
	Tomatoes, Canned	75	0			0.010 ^	NT	-
	Total	**297**	**0**					
126	**o-Phenylphenol (fungicide)**							
	Cantaloupe	626	25	3.9	0.007 - 0.16	0.004 - 0.010	10	-
	Cucumbers	551	44	7.9	0.017 - 4.7	0.010 - 0.020	10	-
	Grape Juice (V-7)	538	7	1.3	0.007 - 0.012	0.004 - 0.010	NT	-
	Lettuce	185	0			0.008 - 0.010	NT	-
	Pears, Canned	281	7	2.5	0.013 ^	0.008 - 0.010	25.0	25
	Pears, Fresh	270	54	20	0.013 - 7.6	0.008 - 0.010	25.0	25
	Spinach, Frozen	715	0			0.010 - 0.020	NT	-
	Strawberries, Fresh	640	0			0.010 - 0.020	NT	-

	Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
	Strawberries, Frozen	71	0			0.010 - 0.020	NT	-
	Sweet Bell Peppers	730	9	1.2	0.007 - 0.045	0.004 - 0.020	10	-
	Tomatoes, Canned	368	34	9.2	0.007 - 0.025	0.004 - 0.020	10	-
	Tomatoes, Fresh	364	4	1.1	0.017 - 0.059	0.004 - 0.020	10	-
	Winter Squash, Fresh	215	0			0.004 - 0.010	NT	-
	Winter Squash, Frozen	42	0			0.004 - 0.010	NT	-
	Total	**5596**	**184**					
127	**Phorate (insecticide)**							
	Apples	379	0			0.004 ^	NT	-
	Apples, Single Serving	1463	0			0.004 ^	NT	-
	Cantaloupe	826	0			0.003 - 0.012	NT	-
	Cucumbers	730	0			0.006 - 0.015	NT	-
	Grape Juice	713	0			0.003 - 0.012	NT	-
	Lettuce	185	0			0.011 - 0.012	NT	-
	Pears, Canned	371	0			0.006 - 0.015	NT	-
	Pears, Fresh	359	0			0.006 - 0.015	NT	-
	Pears, Single Serving	352	0			0.006 - 0.015	NT	-
	Spinach, Frozen	715	0			0.004 - 0.015	NT	-
	Strawberries, Fresh	640	0			0.004 - 0.015	NT	-
	Strawberries, Frozen	71	0			0.008 - 0.015	NT	-
	Sweet Bell Peppers	715	0			0.003 - 0.011	NT	-
	Tomatoes, Canned	368	0			0.003 - 0.011	NT	0.1
	Tomatoes, Fresh	364	0			0.003 - 0.011	NT	0.1
	Winter Squash, Fresh	246	0			0.003 - 0.012	NT	-
	Winter Squash, Frozen	100	0			0.003 - 0.011	NT	-
	Total	**8597**	**0**					
128	**Phorate oxygen analog (metabolite of Phorate)**							
	Apples	379	0			0.003 ^	NT	-
	Apples, Single Serving	1463	0			0.003 ^	NT	-
	Spinach, Frozen	178	0			0.003 ^	NT	-
	Strawberries, Fresh	171	0			0.003 ^	NT	-
	Sweet Bell Peppers	177	0			0.003 ^	NT	-
	Tomatoes, Canned	90	0			0.003 ^	NT	-
	Tomatoes, Fresh	90	0			0.003 ^	NT	-
	Total	**2548**	**0**					
129	**Phorate oxygen analog sulfone (metabolite of Phorate)**							
	Apples	379	0			0.003 ^	NT	-
	Apples, Single Serving	1463	0			0.003 ^	NT	-
	Spinach, Frozen	178	0			0.003 ^	NT	-
	Strawberries, Fresh	171	0			0.003 ^	NT	-
	Sweet Bell Peppers	177	0			0.003 ^	NT	-
	Tomatoes, Canned	90	0			0.003 ^	NT	-
	Tomatoes, Fresh	90	0			0.003 ^	NT	-
	Total	**2548**	**0**					
130	**Phorate sulfone (metabolite of Phorate)**							
	Apples	379	0			0.003 ^	NT	-
	Apples, Single Serving	1463	0			0.003 ^	NT	-
	Cantaloupe	826	0			0.003 - 0.024	NT	-
	Cucumbers	730	0			0.004 - 0.027	NT	-
	Grape Juice	714	0			0.003 - 0.024	NT	-
	Lettuce	185	0			0.004 - 0.024	NT	-
	Pears, Canned	371	0			0.004 - 0.024	NT	-
	Pears, Fresh	359	0			0.004 - 0.024	NT	-
	Pears, Single Serving	352	0			0.004 - 0.024	NT	-
	Spinach, Frozen	715	0			0.003 - 0.027	NT	-
	Strawberries, Fresh	640	0			0.003 - 0.027	NT	-
	Strawberries, Frozen	71	0			0.004 - 0.027	NT	-
	Sweet Bell Peppers	715	0			0.003 - 0.027	NT	-
	Tomatoes, Canned	368	0			0.003 - 0.027	NT	0.1
	Tomatoes, Fresh	364	0			0.003 - 0.027	NT	0.1
	Winter Squash, Fresh	246	0			0.003 - 0.024	NT	-
	Winter Squash, Frozen	100	0			0.003 - 0.016	NT	-
	Total	**8598**	**0**					

Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
131 Phorate sulfoxide (metabolite of Phorate)							
Apples	379	0			0.004 ^	NT	-
Apples, Single Serving	1463	0			0.004 ^	NT	-
Cantaloupe	200	0			0.030 ^	NT	-
Cucumbers	523	0			0.010 - 0.061	NT	-
Grape Juice	176	0			0.030 ^	NT	-
Pears, Canned	173	0			0.010 - 0.030	NT	-
Pears, Fresh	169	0			0.010 - 0.030	NT	-
Pears, Single Serving	80	0			0.010 ^	NT	-
Spinach, Frozen	518	0			0.004 - 0.061	NT	-
Strawberries, Fresh	329	0			0.004 - 0.010	NT	-
Strawberries, Frozen	2	0			0.010 ^	NT	-
Sweet Bell Peppers	341	0			0.004 - 0.061	NT	-
Tomatoes, Canned	180	0			0.004 - 0.061	NT	0.1
Tomatoes, Fresh	180	0			0.004 - 0.061	NT	0.1
Winter Squash, Fresh	31	0			0.030 ^	NT	-
Winter Squash, Frozen	58	0			0.030 ^	NT	-
Total	**4802**	**0**					
132 Phosalone (insecticide)							
Apples	379	0			0.006 ^	10.0	5
Apples, Single Serving	1463	0			0.006 ^	10.0	5
Cantaloupe	237	0			0.006 ^	NT	-
Cucumbers	551	0			0.006 - 0.033	NT	-
Grape Juice	198	0			0.006 ^	10.0	-
Lettuce	54	0			0.006 ^	NT	-
Pears, Canned	191	0			0.006 - 0.011	10.0	-
Pears, Fresh	180	0			0.006 - 0.011	10.0	-
Pears, Single Serving	179	0			0.006 - 0.011	10.0	-
Spinach, Frozen	715	0			0.006 - 0.033	NT	-
Strawberries, Fresh	640	0			0.006 - 0.033	NT	-
Strawberries, Frozen	71	0			0.006 - 0.033	NT	-
Sweet Bell Peppers	566	0			0.006 - 0.033	NT	-
Tomatoes, Canned	287	0			0.006 - 0.033	NT	-
Tomatoes, Fresh	284	0			0.006 - 0.033	NT	-
Winter Squash, Fresh	83	0			0.006 ^	NT	-
Winter Squash, Frozen	5	0			0.006 ^	NT	-
Total	**6083**	**0**					
133 Phosmet (insecticide)							
Apples	379	35	9.2	0.010 - 0.088	0.006 ^	10	10
Apples, Single Serving	1463	137	9.4	0.010 - 0.51	0.006 ^	10	10
Cantaloupe	619	0			0.005 - 0.015	NT	-
Cucumbers	551	0			0.005 - 0.017	NT	-
Grape Juice	538	1	0.2	0.025 ^	0.005 - 0.015	10	10
Lettuce	185	0			0.005 - 0.012	NT	-
Pears, Canned	281	0			0.005 - 0.012	10	10
Pears, Fresh	270	36	13.3	0.008 - 1.0	0.005 - 0.012	10	10
Pears, Single Serving	269	38	14.1	0.008 - 1.2	0.005 - 0.012	10	10
Spinach, Frozen	715	0			0.005 - 0.017	NT	-
Strawberries, Fresh	640	0			0.005 - 0.017	NT	-
Strawberries, Frozen	71	0			0.005 - 0.017	NT	-
Sweet Bell Peppers	730	0			0.005 - 0.017	NT	-
Tomatoes, Canned	368	0			0.005 - 0.017	NT	-
Tomatoes, Fresh	364	0			0.005 - 0.017	NT	-
Winter Squash, Fresh	215	0			0.005 - 0.015	NT	-
Winter Squash, Frozen	42	0			0.005 - 0.015	NT	-
Total	**7700**	**247**					
134 Phosphamidon (insecticide)							
Apples	379	2	0.5	0.003 - 0.006	0.002 ^	1	0.5
Apples, Single Serving	1463	16	1.1	0.003 - 0.034	0.002 ^	1	0.5
Cantaloupe	826	0			0.012 - 0.092	NT	-
Cucumbers (V-1)	730	1	0.1	0.055 ^	0.012 - 0.033	NT	0.1
Grape Juice	714	0			0.012 - 0.23	NT	-

	Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
	Lettuce	185	0			0.012 - 0.029	NT	0.1
	Pears, Canned	371	0			0.012 - 0.029	NT	0.5
	Pears, Fresh	359	0			0.012 - 0.029	NT	0.5
	Pears, Single Serving	352	0			0.012 - 0.029	NT	0.5
	Spinach, Frozen	715	0			0.002 - 0.033	NT	0.2
	Strawberries, Fresh	640	0			0.002 - 0.033	NT	0.2
	Strawberries, Frozen	71	0			0.012 - 0.033	NT	0.2
	Sweet Bell Peppers	715	0			0.002 - 0.092	NT	0.2
	Tomatoes, Canned	368	0			0.002 - 0.092	NT	0.1
	Tomatoes, Fresh	356	0			0.002 - 0.092	NT	0.1
	Winter Squash, Fresh	246	0			0.012 - 0.092	NT	-
	Winter Squash, Frozen	100	0			0.012 - 0.092	NT	-
	Total	**8590**	**19**					
135	**Piperonyl butoxide (insecticide)**							
	Cucumbers	180	0			0.050 ^	NT	-
	Spinach, Frozen (V-7)	353	7	1.9	0.067 - 4.0	0.040 - 0.050	NT	-
	Strawberries, Fresh (V-2)	338	2	0.6	0.058 - 0.067	0.040 - 0.050	NT	-
	Strawberries, Frozen	12	0			0.050 ^	NT	-
	Sweet Bell Peppers (V-2)	356	2	0.6	0.067 ^	0.040 - 0.050	NT	-
	Tomatoes, Canned	180	0			0.040 - 0.050	8	-
	Tomatoes, Fresh	180	10	5.6	0.053 - 0.35	0.040 - 0.050	8	-
	Total	**1599**	**21**					
136	**Pirimicarb (insecticide)**							
	Spinach, Frozen	73	0			0.020 ^	NT	1
	Strawberries, Fresh	74	0			0.020 ^	NT	0.5
	Sweet Bell Peppers	75	0			0.020 ^	NT	1
	Tomatoes, Canned	75	0			0.020 ^	NT	1
	Total	**297**	**0**					
137	**Pirimiphos methyl (insecticide)**							
	Apples	379	0			0.001 ^	NT	2
	Apples, Single Serving	1463	0			0.001 ^	NT	2
	Cantaloupe	186	0			0.005 ^	NT	-
	Cucumbers	180	0			0.008 ^	NT	1
	Grape Juice	162	0			0.005 ^	NT	-
	Spinach, Frozen	353	0			0.001 - 0.008	NT	5
	Strawberries, Fresh	338	0			0.001 - 0.008	NT	1
	Strawberries, Frozen	12	0			0.008 ^	NT	1
	Sweet Bell Peppers	520	0			0.001 - 0.008	NT	1
	Tomatoes, Canned	261	0			0.001 - 0.008	NT	1
	Tomatoes, Fresh	260	0			0.001 - 0.008	NT	1
	Winter Squash, Fresh	42	0			0.005 ^	NT	-
	Winter Squash, Frozen	37	0			0.005 ^	NT	-
	Total	**4193**	**0**					
138	**Procymidone (fungicide)**							
	Cucumbers	180	0			0.010 ^	NT	2
	Spinach, Frozen	175	0			0.010 ^	NT	-
	Strawberries, Fresh	167	0			0.010 ^	NT	10
	Strawberries, Frozen	12	0			0.010 ^	NT	10
	Sweet Bell Peppers	179	0			0.010 ^	NT	5
	Tomatoes, Canned	90	0			0.010 ^	NT	5
	Tomatoes, Fresh	90	0			0.010 ^	NT	5
	Total	**893**	**0**					

Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
139 Profenofos (insecticide)							
Apples	379	0			0.001 ^	NT	-
Apples, Single Serving	1463	0			0.001 ^	NT	-
Cucumbers	180	0			0.025 ^	NT	-
Spinach, Frozen	353	0			0.001 - 0.025	NT	-
Strawberries, Fresh	338	0			0.001 - 0.025	NT	-
Strawberries, Frozen	12	0			0.025 ^	NT	-
Sweet Bell Peppers	356	0			0.001 - 0.025	NT	0.5
Tomatoes, Canned	180	0			0.001 - 0.025	NT	2
Tomatoes, Fresh	180	0			0.001 - 0.025	NT	2
Total	**3441**	**0**					
140 Pronamide (herbicide)							
Cantaloupe	826	0			0.007 - 0.018	NT	-
Cucumbers	730	0			0.006 - 0.017	NT	-
Grape Juice	714	0			0.007 - 0.018	0.1	-
Lettuce	185	1	0.5	0.012 ^	0.007 - 0.018	1.0	-
Pears, Canned	371	0			0.006 - 0.018	0.1	-
Pears, Fresh	359	0			0.006 - 0.018	0.1	-
Spinach, Frozen	715	0			0.006 - 0.017	NT	-
Strawberries, Fresh	640	0			0.006 - 0.017	NT	-
Strawberries, Frozen	71	0			0.006 - 0.017	NT	-
Sweet Bell Peppers (V-1)	730	1	0.1	0.020 ^	0.007 - 0.017	NT	-
Tomatoes, Canned	368	0			0.007 - 0.017	NT	-
Tomatoes, Fresh	364	0			0.007 - 0.017	NT	-
Winter Squash, Fresh	246	0			0.007 - 0.018	NT	-
Winter Squash, Frozen	100	0			0.007 - 0.014	NT	-
Total	**6419**	**2**					
141 Propargite (insecticide)							
Cantaloupe	825	0			0.008 - 0.040	NT	-
Cucumbers	730	0			0.020 - 0.050	NT	0.5
Grape Juice	714	1	0.1	0.037 ^	0.008 - 0.040	10	10
Lettuce	185	0			0.008 - 0.020	NT	-
Pears, Canned	371	0			0.008 - 0.040	NT	5
Pears, Fresh	359	0			0.008 - 0.040	NT	5
Spinach, Frozen	715	0			0.020 - 0.050	NT	-
Strawberries, Fresh (V-2)	640	2	0.3	0.17 ^	0.020 - 0.050	NT	7
Strawberries, Frozen	71	0			0.020 - 0.050	NT	7
Sweet Bell Peppers	730	0			0.020 - 0.050	NT	-
Tomatoes, Canned	368	0			0.020 - 0.050	NT	2
Tomatoes, Fresh	364	0			0.020 - 0.050	NT	2
Winter Squash, Fresh	246	0			0.008 - 0.040	NT	-
Winter Squash, Frozen	100	0			0.020 - 0.040	NT	-
Total	**6418**	**3**					
142 Quintozene - PCNB (fungicide) (parent of HCB, PCA, and PCB)							
Cantaloupe	826	0			0.003 - 0.006	NT	-
Cucumbers (V-4)	729	4	0.5	0.002 - 0.005	0.001 - 0.006	NT	-
Grape Juice	714	0			0.003 - 0.006	NT	-
Lettuce	185	0			0.003 - 0.004	NT	3
Pears, Canned	371	0			0.001 - 0.006	NT	-
Pears, Fresh	359	0			0.001 - 0.006	NT	-
Spinach, Frozen	715	0			0.001 - 0.003	NT	-
Strawberries, Fresh	640	0			0.001 - 0.003	NT	-
Strawberries, Frozen	71	0			0.001 - 0.003	NT	-
Sweet Bell Peppers	730	0			0.003 - 0.006	0.1	0.01
Tomatoes, Canned	368	0			0.003 - 0.006	0.1	0.1
Tomatoes, Fresh	364	2	0.5	0.005 ^	0.003 - 0.006	0.1	0.1
Winter Squash, Fresh	246	0			0.003 - 0.006	NT	-
Winter Squash, Frozen	100	0			0.003 - 0.006	NT	-
Total	**6418**	**6**					

Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
143 Simazine (herbicide)							
Cantaloupe	826	0			0.010 - 0.031	NT	-
Cucumbers	730	0			0.010 - 0.030	NT	-
Grape Juice	714	0			0.010 - 0.031	0.25	-
Lettuce	185	0			0.010 - 0.018	NT	-
Pears, Canned	371	0			0.010 - 0.030	0.25	-
Pears, Fresh	359	0			0.010 - 0.030	0.25	-
Spinach, Frozen	715	0			0.004 - 0.030	NT	-
Strawberries, Fresh	640	0			0.004 - 0.030	0.25	-
Strawberries, Frozen	71	0			0.010 - 0.030	0.25	-
Sweet Bell Peppers	730	0			0.004 - 0.031	NT	-
Tomatoes, Canned	368	0			0.004 - 0.031	NT	-
Tomatoes, Fresh	364	0			0.010 - 0.031	NT	-
Winter Squash, Fresh	246	0			0.010 - 0.031	NT	-
Winter Squash, Frozen	100	0			0.010 - 0.031	NT	-
Total	**6419**	**0**					
144 Sulprofos (insecticide)							
Apples	379	0			0.003 ^	NT	-
Apples, Single Serving	1463	0			0.003 ^	NT	-
Spinach, Frozen	178	0			0.003 ^	NT	-
Strawberries, Fresh	171	0			0.003 ^	NT	-
Sweet Bell Peppers	177	0			0.003 ^	NT	-
Tomatoes, Canned	90	0			0.003 ^	NT	-
Tomatoes, Fresh	90	0			0.003 ^	NT	-
Total	**2548**	**0**					
145 Tecnazene (fungicide)							
Spinach, Frozen	178	0			0.002 - 0.006	NT	-
Strawberries, Fresh	171	0			0.002 - 0.006	NT	-
Sweet Bell Peppers	177	0			0.002 - 0.006	NT	-
Tomatoes, Canned	90	0			0.002 - 0.006	NT	-
Tomatoes, Fresh	90	0			0.006 ^	NT	-
Total	**706**	**0**					
146 Terbacil (herbicide)							
Cantaloupe	826	0			0.018 - 0.044	NT	-
Cucumbers	730	0			0.020 - 0.056	NT	-
Grape Juice	714	0			0.018 - 0.044	NT	-
Lettuce	185	0			0.018 - 0.020	NT	-
Pears, Canned	371	0			0.018 - 0.056	0.1	-
Pears, Fresh	359	0			0.018 - 0.056	0.1	-
Spinach, Frozen	715	0			0.020 - 0.056	NT	-
Strawberries, Fresh	640	0			0.020 - 0.056	0.1	-
Strawberries, Frozen	71	0			0.020 - 0.056	0.1	-
Sweet Bell Peppers	730	0			0.020 - 0.044	NT	-
Tomatoes, Canned	368	0			0.020 - 0.044	NT	-
Tomatoes, Fresh	364	0			0.020 - 0.044	NT	-
Winter Squash, Fresh	246	0			0.018 - 0.044	NT	-
Winter Squash, Frozen	100	0			0.020 - 0.044	NT	-
Total	**6419**	**0**					
147 Terbufos (insecticide)							
Apples	379	0			0.002 ^	NT	-
Apples, Single Serving	1463	0			0.002 ^	NT	-
Cantaloupe	826	0			0.004 - 0.025	NT	-
Cucumbers	730	0			0.010 - 0.025	NT	-
Grape Juice	713	0			0.004 - 0.025	NT	-
Lettuce	185	0			0.015 - 0.025	NT	-
Pears, Canned	371	0			0.011 - 0.025	NT	-
Pears, Fresh	359	0			0.011 - 0.025	NT	-
Pears, Single Serving	352	0			0.011 - 0.025	NT	-
Spinach, Frozen	715	0			0.002 - 0.025	NT	-
Strawberries, Fresh	640	0			0.002 - 0.025	NT	-
Strawberries, Frozen	71	0			0.010 - 0.025	NT	-
Sweet Bell Peppers	715	0			0.002 - 0.025	NT	-

	Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
	Tomatoes, Canned	368	0			0.002 - 0.025	NT	-
	Tomatoes, Fresh	364	0			0.002 - 0.025	NT	-
	Winter Squash, Fresh	246	0			0.004 - 0.025	NT	-
	Winter Squash, Frozen	100	0			0.004 - 0.025	NT	-
	Total	**8597**	**0**					
148	**Terbufos sulfone (metabolite of Terbufos)**							
	Apples	379	0			0.003 ^	NT	-
	Apples, Single Serving	1463	0			0.003 ^	NT	-
	Cantaloupe	826	0			0.004 - 0.048	NT	-
	Cucumbers	730	0			0.004 - 0.010	NT	-
	Grape Juice	714	0			0.004 - 0.048	NT	-
	Lettuce	185	0			0.004 - 0.048	NT	-
	Pears, Canned	371	0			0.004 - 0.048	NT	-
	Pears, Fresh	359	0			0.004 - 0.048	NT	-
	Pears, Single Serving	352	0			0.004 - 0.048	NT	-
	Spinach, Frozen	715	0			0.003 - 0.010	NT	-
	Strawberries, Fresh	640	0			0.003 - 0.010	NT	-
	Strawberries, Frozen	71	0			0.004 - 0.010	NT	-
	Sweet Bell Peppers	715	0			0.003 - 0.010	NT	-
	Tomatoes, Canned	368	0			0.003 - 0.010	NT	-
	Tomatoes, Fresh	364	0			0.003 - 0.010	NT	-
	Winter Squash, Fresh	246	0			0.004 - 0.048	NT	-
	Winter Squash, Frozen	100	0			0.004 - 0.006	NT	-
	Total	**8598**	**0**					
149	**Tetrachlorvinphos (insecticide)**							
	Apples	379	0			0.003 ^	NT	-
	Apples, Single Serving	1462	0			0.003 ^	NT	-
	Cantaloupe	826	0			0.004 - 0.016	NT	-
	Cucumbers	730	0			0.004 - 0.017	NT	-
	Grape Juice	714	0			0.004 - 0.016	NT	-
	Lettuce	185	0			0.004 - 0.008	NT	-
	Pears, Canned	371	0			0.004 - 0.016	NT	-
	Pears, Fresh	359	0			0.004 - 0.016	NT	-
	Pears, Single Serving	352	0			0.004 - 0.016	NT	-
	Spinach, Frozen	715	0			0.003 - 0.017	NT	-
	Strawberries, Fresh	640	0			0.003 - 0.017	NT	-
	Strawberries, Frozen	71	0			0.004 - 0.017	NT	-
	Sweet Bell Peppers	730	0			0.003 - 0.017	NT	-
	Tomatoes, Canned	368	0			0.003 - 0.017	NT	-
	Tomatoes, Fresh	364	0			0.003 - 0.017	NT	-
	Winter Squash, Fresh	246	0			0.004 - 0.016	NT	-
	Winter Squash, Frozen	100	0			0.004 - 0.016	NT	-
	Total	**8612**	**0**					
150	**Tetradifon (insecticide)**							
	Cantaloupe	826	0			0.008 - 0.028	1	-
	Cucumbers	730	0			0.008 - 0.019	1	-
	Grape Juice	714	0			0.008 - 0.028	5	-
	Lettuce	185	0			0.011 - 0.028	NT	-
	Pears, Canned	371	0			0.008 - 0.028	5	-
	Pears, Fresh	359	0			0.008 - 0.028	5	-
	Spinach, Frozen	715	0			0.006 - 0.019	NT	-
	Strawberries, Fresh	640	0			0.006 - 0.019	5	-
	Strawberries, Frozen	71	0			0.008 - 0.019	5	-
	Sweet Bell Peppers	730	0			0.006 - 0.011	NT	-
	Tomatoes, Canned	368	2	0.5	0.010 ^	0.006 - 0.011	1	-
	Tomatoes, Fresh	364	0			0.006 - 0.011	1	-
	Winter Squash, Fresh	246	0			0.008 - 0.028	1	-
	Winter Squash, Frozen	100	0			0.008 - 0.011	1	-
	Total	**6419**	**2**					

	Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
151	**Tetrahydrophthalimide - THPI (metabolite of Captafol and Captan)**							
	Spinach, Frozen	120	0			0.020 - 0.030	100	-
	Strawberries, Fresh	112	0			0.020 - 0.030	25	-
	Sweet Bell Peppers	117	0			0.020 - 0.030	25	-
	Tomatoes, Canned	30	0			0.020 - 0.030	25	-
	Tomatoes, Fresh	90	0			0.030 ^	25	-
	Total	**469**	**0**					
152	**Thiabendazole (fungicide)**							
	Cantaloupe	831	63	7.6	0.015 - 0.63	0.009 - 0.045	15.0	-
	Cucumbers	734	0			0.025 - 0.083	NT	-
	Grape Juice (V-1)	714	1	0.1	0.075 ^	0.009 - 0.045	NT	-
	Lettuce	185	0			0.030 - 0.045	NT	-
	Pears, Canned	371	0			0.030 - 0.061	10	10
	Pears, Fresh	359	286	79.7	0.050 - 5.2	0.030 - 0.061	10	10
	Spinach, Frozen	715	0			0.030 - 0.083	NT	-
	Strawberries, Fresh	650	3	0.5	0.050 ^	0.025 - 0.083	5.0	3
	Strawberries, Frozen	71	0			0.030 - 0.083	5.0	3
	Sweet Bell Peppers (V-3)	733	3	0.4	0.050 ^	0.009 - 0.083	NT	-
	Tomatoes, Canned	368	0			0.009 - 0.083	NT	2
	Tomatoes, Fresh (V-1)	364	1	0.3	0.050 ^	0.009 - 0.083	NT	2
	Winter Squash, Fresh	245	0			0.009 - 0.045	1	-
	Winter Squash, Frozen	100	0			0.009 - 0.030	1	-
	Total	**6440**	**357**					
153	**Triadimefon (fungicide)**							
	Cantaloupe	826	0			0.022 - 0.043	0.3	0.1
	Cucumbers	730	12	1.6	0.012 - 0.050	0.007 - 0.031	0.3	0.1
	Grape Juice	624	0			0.022 - 0.043	1.0	0.5
	Lettuce	185	0			0.023 - 0.025	NT	-
	Pears, Canned	371	0			0.007 - 0.030	1.0	0.5
	Pears, Fresh	359	0			0.007 - 0.031	1.0	0.5
	Spinach, Frozen (V-2)	715	2	0.3	0.020 ^	0.007 - 0.031	NT	-
	Strawberries, Fresh (V-1)	626	1	0.2	0.043 ^	0.007 - 0.031	NT	0.1
	Strawberries, Frozen	71	0			0.007 - 0.031	NT	0.1
	Sweet Bell Peppers	730	0			0.012 - 0.043	NT	0.1
	Tomatoes, Canned	353	0			0.012 - 0.043	NT	0.2
	Tomatoes, Fresh	364	0			0.012 - 0.043	NT	0.2
	Winter Squash, Fresh	246	0			0.022 - 0.043	NT	0.1
	Winter Squash, Frozen	100	0			0.022 - 0.043	NT	0.1
	Total	**6300**	**15**					
154	**Trifluralin (herbicide)**							
	Cantaloupe	826	0			0.008 - 0.068	0.05	-
	Cucumbers	730	0			0.002 - 0.030	0.05	-
	Grape Juice	700	0			0.008 - 0.068	0.05	-
	Lettuce	185	0			0.008 - 0.017	0.05	-
	Pears, Canned	371	0			0.002 - 0.030	NT	-
	Pears, Fresh	359	0			0.002 - 0.030	NT	-
	Spinach, Frozen	715	26	3.6	0.002 - 0.028	0.001 - 0.020	0.05	-
	Strawberries, Fresh	626	0			0.001 - 0.033	NT	-
	Strawberries, Frozen	71	0			0.002 - 0.033	NT	-
	Sweet Bell Peppers	715	0			0.001 - 0.068	0.05	-
	Tomatoes, Canned	368	7	1.9	0.002 - 0.025	0.001 - 0.068	0.05	-
	Tomatoes, Fresh	364	0			0.015 - 0.068	0.05	-
	Winter Squash, Fresh	246	0			0.008 - 0.068	NT	-
	Winter Squash, Frozen	100	0			0.017 - 0.068	NT	-
	Total	**6376**	**33**					
155	**Vinclozolin (fungicide)**							
	Cantaloupe	826	0			0.009 - 0.014	NT	-
	Cucumbers	730	0			0.002 - 0.010	1.0	1
	Grape Juice	714	0			0.009 - 0.019	NT	5
	Lettuce	185	0			0.010 - 0.014	10.0	5
	Pears, Canned	371	0			0.002 - 0.014	NT	1
	Pears, Fresh	359	0			0.002 - 0.014	NT	1

Pesticide / Commodity	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
Spinach, Frozen	688	0			0.002 - 0.010	NT	-
Strawberries, Fresh	640	72	11.3	0.003 - 2.6	0.002 - 0.010	10	10
Strawberries, Frozen	71	24	33.8	0.012 - 0.25	0.002 - 0.010	10	10
Sweet Bell Peppers	730	1	0.1	0.010 ^	0.002 - 0.010	3.0	3
Tomatoes, Canned	368	0			0.002 - 0.010	NT	3
Tomatoes, Fresh	364	0			0.006 - 0.010	NT	3
Winter Squash, Fresh	246	0			0.009 - 0.014	NT	-
Winter Squash, Frozen	100	0			0.009 - 0.010	NT	-
Total	**6392**	**97**					

KEY

Underlined compounds are subject to the full quality assurance program requirements.

^ Only one distinct detected concentration or LOD value was reported for the pair.

NT No tolerance level was set for that pesticide / commodity pair.

AL Numbers shown are Action Levels established by FDA and Codex Extraneous Maximum Residue Levels (EMRLs) for some pesticides. Under FQPA, responsibility for establishing tolerances in lieu of action levels has been transferred to EPA. In the interim, action levels are used.

(V) Residue was found where no tolerance was established by EPA. Following V are the number of occurrences.

(X) Residue was found which exceeds EPA tolerance or FDA action level. Following X are the number of occurrences.

\+ Metabolite (or isomer) detection in same sample as parent. Not noted as violation since it was claimed under the parent.

For those pesticide/commodity pairs where the minimum detected value is less than the limit of quantitation (3 times the limit of detection), the reported values are estimates. In a few cases, this may apply to the maximum detected value.

Appendix F

Distribution of Residues for Apple Single Serving Survey

A special survey to address acute dietary risk assessment needs was conducted in 1999. Composite and corresponding single serving apple samples were analyzed for identified organophosphates to provide data on the distribution of targeted residues within a sample.

Composite samples consisting of 10 half apples were analyzed for azinphos methyl and chlorpyrifos. If composite sample results exceeded established trigger concentrations for azinphos methyl and/or chlorpyrifos, the corresponding single serving portions, or half apples, were analyzed for each sample. During the early phase of this survey, a single whole apple was also analyzed for each sample. During the latter phase of the survey, half of the tenth apple comprising the composite was analyzed as a single serving for each sample.

Composite and corresponding triggered single serving residue results were used by EPA and private contractors to develop and evaluate sample decompositing models. When validated, these models may be used to translate composite to single serving data for use in acute dietary risk assessments.

Appendix F shows the distribution of residues for all apple composite and single serving samples analyzed. This appendix also lists residue findings for azinphos methyl and chlorpyrifos for the 120 samples that triggered single serving analysis based upon composite results. For samples analyzed during the early phase of this survey, a value for the single, whole apple is also given.

Refer to the Appendix E cover page for a definition of Codex MRLs/EMRLs.

Distribution of Residues for Apple Composite & Single-Serving Samples (Azinphos methyl & Chlorpyrifos only)

Pesticide	Commodity	Total Samples Screened	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	LOD, ppm	EPA Tolerance, ppm	CODEX MRL / EMRL, ppm
Azinphos methyl	Apples, Composite	379	250	65.9	0.010 - 0.26	0.006	2.0	2
	Apples, Single Whole	126	80	63.5	0.010 - 0.24	0.006		
	Apples, Single Portion	1301	1008	77.5	0.010 - 0.55	0.006		
Chlorpyrifos	Apples, Composite	379	91	24	0.005 - 0.17	0.003	1.5	1
	Apples, Single Whole	126	20	15.9	0.005 - 0.13	0.003		
	Apples, Single Portion	1337	483	36.1	0.005 - 0.54	0.003		

Residue Findings for Apple Composites & Associated Single-Serving Portions (Azinphos methyl & Chlorpyrifos only)

Sample # / Pesticide	Composite Value Detected, ppm	Single, Whole Value Detected, ppm	Single-Serving Portion Values Detected, ppm									
			1	2	3	4	5	6	7	8	9	10
1. Azinphos methyl	0.042	0.050	0.12	0.050	0.052	0.010	0.082	0.020	0.024	0.039	0.050	0.041
Chlorpyrifos	0.11	0.11	0.27	0.22	0.017	0.017	0.13	0.38	0.034	0.056	0.042	0.025
2. Azinphos methyl	0.026	0.026	0.010	0.048	0.059	0.025	0.025	0.010	0.010	0.031	0.010	0.010
Chlorpyrifos	0.037	0.052	0.073	0.18	0.017	0.038	0.017	0.023	0.019	0.14	0.014	0.23
3. Azinphos methyl	0.13	0.17	0.010	0.32	0.11	0.31	0.15	0.077	0.010	0.32	0.087	0.55
Chlorpyrifos	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4. Azinphos methyl	0.13	0.028	0.13	0.077	0.065	0.061	0.19	0.17	0.14	0.074	0.058	0.053
Chlorpyrifos	0.012	ND	0.005	0.005	0.005	0.005	0.036	0.076	0.005	0.005	0.005	0.005
5. Azinphos methyl	0.036	0.044	0.040	0.055	0.026	0.071	0.033	0.070	0.055	0.042	0.010	0.065
Chlorpyrifos	0.052	0.10	0.043	0.050	0.015	0.054	0.095	0.065	0.24	0.019	0.016	0.083
6. Azinphos methyl	0.14	0.063	0.031	0.11	0.13	0.15	0.089	0.12	0.14	0.067	0.067	0.025
Chlorpyrifos	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7. Azinphos methyl	0.17	0.035	0.063	0.033	0.12	0.16	0.14	0.063	0.14	0.070	0.040	0.024
Chlorpyrifos	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8. Azinphos methyl	0.067	0.073	0.040	0.11	0.078	0.27	0.20	0.077	0.044	0.029	0.021	0.039
Chlorpyrifos	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9. Azinphos methyl	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorpyrifos	0.059	0.13	0.070	0.050	0.13	0.065	0.023	0.005	0.053	0.020	0.11	0.12
10. Azinphos methyl	0.15	0.049	0.093	0.072	0.16	0.086	0.054	0.031	0.069	0.097	0.067	0.11
Chlorpyrifos	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
11. Azinphos methyl	0.010	X	0.010	0.010	0.010	0.082	0.010	0.010	0.010	0.022	0.010	0.010
Chlorpyrifos	0.019	X	0.020	0.034	0.055	0.061	0.018	0.005	0.058	0.10	0.005	0.023
12. Azinphos methyl	0.12	X	0.15	0.16	0.092	0.13	0.18	0.16	0.093	0.22	0.083	0.44
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
13. Azinphos methyl	ND	X	ND	ND	0.010	0.010	ND	ND	ND	ND	ND	ND
Chlorpyrifos	0.013	X	0.005	0.005	0.015	0.011	0.005	0.005	0.005	0.005	0.026	0.005

Sample # / Pesticide	Composite Value Detected, ppm	Single, Whole Value Detected, ppm	Single-Serving Portion Values Detected, ppm									
			1	2	3	4	5	6	7	8	9	10
14. Azinphos methyl	0.036	X	0.020	0.010	0.048	0.020	0.062	0.045	0.029	0.010	0.058	0.010
Chlorpyrifos	ND	X	ND	ND	ND	ND	0.005	ND	ND	ND	0.005	ND
15. Azinphos methyl	0.052	X	0.020	0.085	0.051	0.022	0.010	0.049	0.029	0.010	0.073	0.021
Chlorpyrifos	ND	X	ND	0.005	0.005	ND	ND	0.005	ND	0.005	0.005	ND
16. Azinphos methyl	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorpyrifos	0.026	X	0.046	0.018	0.046	0.012	0.016	0.020	0.025	0.005	0.032	0.005
17. Azinphos methyl	0.26	X	0.083	0.53	0.21	0.050	0.083	0.10	0.089	0.45	0.20	0.060
Chlorpyrifos	ND	X	ND	ND	ND	ND	0.005	0.005	0.005	0.005	0.005	ND
18. Azinphos methyl	0.024	X	ND	ND	ND	0.060	ND	0.022	0.040	0.12	0.027	0.048
Chlorpyrifos	0.005	X	ND	ND	0.005	ND	0.005	0.005	ND	ND	ND	ND
19. Azinphos methyl	0.039	X	0.032	0.062	0.077	0.033	0.091	X	0.093	0.023	0.031	0.010
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	X	ND	ND	ND	ND
20. Azinphos methyl	0.096	X	0.10	0.20	0.055	0.088	0.041	0.032	0.054	0.069	0.024	0.036
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
21. Azinphos methyl	0.053	X	0.010	0.010	0.089	0.021	0.12	0.069	0.028	0.064	0.056	0.010
Chlorpyrifos	0.032	X	0.015	0.013	0.028	0.005	0.023	0.020	0.021	0.015	0.017	0.005
22. Azinphos methyl	0.028	X	0.038	ND	0.031	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Chlorpyrifos	0.005	X	ND	0.005	0.005	ND	ND	ND	ND	ND	ND	0.005
23. Azinphos methyl	0.12	X	0.055	0.14	0.088	0.11	0.24	0.12	0.15	0.068	0.25	0.12
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
24. Azinphos methyl	0.049	X	0.044	0.010	0.010	0.010	0.058	0.010	0.067	0.030	0.031	0.098
Chlorpyrifos	0.042	X	0.018	0.033	0.010	0.012	0.026	0.005	0.091	0.028	0.025	0.020
25. Azinphos methyl	0.033	X	0.010	0.010	0.057	0.064	0.010	0.010	0.021	0.010	0.010	0.038
Chlorpyrifos	0.010	X	ND	ND	0.029	ND	ND	ND	ND	ND	ND	ND
26. Azinphos methyl	0.079	X	0.099	0.068	0.033	0.067	0.081	0.069	0.064	0.041	0.15	0.079
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
27. Azinphos methyl	0.063	X	0.14	0.14	0.12	0.030	0.093	0.084	0.092	0.088	0.044	0.12
Chlorpyrifos	0.12	X	0.54	0.43	0.075	0.039	0.18	0.063	0.13	0.071	0.058	0.36
28. Azinphos methyl	0.035	X	0.049	0.062	0.024	0.026	0.069	0.039	0.063	0.082	0.047	0.054
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
29. Azinphos methyl	0.024	X	0.051	0.042	0.038	0.043	0.028	0.037	0.021	0.024	0.041	0.010
Chlorpyrifos	0.066	X	0.35	0.005	0.064	0.079	0.060	0.005	0.005	0.005	0.16	0.005
30. Azinphos methyl	0.11	X	0.13	0.11	0.041	0.089	0.094	0.13	0.15	0.045	0.059	0.16
Chlorpyrifos	0.005	X	ND	ND	0.005	ND	ND	0.005	0.005	ND	0.005	ND
31. Azinphos methyl	0.039	X	0.034	0.010	0.051	0.041	0.036	0.030	0.032	0.030	0.010	0.010
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
32. Azinphos methyl	0.010	X	0.010	ND	0.010	0.021	0.010	ND	0.010	0.010	0.010	0.010
Chlorpyrifos	0.069	X	0.25	0.087	0.033	0.096	0.036	0.016	0.22	0.17	0.41	0.061
33. Azinphos methyl	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorpyrifos	0.036	X	0.080	0.042	0.018	0.032	0.035	0.017	0.036	0.005	0.060	0.053
34. Azinphos methyl	0.033	X	0.082	0.040	0.010	0.010	0.010	0.039	0.025	0.021	0.010	0.038
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
35. Azinphos methyl	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorpyrifos	0.032	X	0.039	0.029	0.014	0.033	0.11	0.017	0.042	0.015	0.058	0.060

Sample # / Pesticide	Composite Value Detected, ppm	Single, Whole Value Detected, ppm	Single-Serving Portion Values Detected, ppm									
			1	2	3	4	5	6	7	8	9	10
36. Azinphos methyl	0.045	X	0.028	0.021	0.053	0.059	0.080	0.076	0.072	0.049	0.079	0.066
Chlorpyrifos	0.005	X	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
37. Azinphos methyl	0.025	X	0.010	0.045	0.068	0.053	0.010	0.062	0.028	0.028	0.027	0.033
Chlorpyrifos	ND	X	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
38. Azinphos methyl	0.060	X	0.046	0.024	0.062	0.037	0.042	0.031	0.18	0.026	0.027	0.010
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
39. Azinphos methyl	0.027	X	0.010	0.010	0.031	0.038	0.020	0.034	0.010	0.029	0.031	0.041
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
40. Azinphos methyl	0.056	X	0.055	0.010	0.046	0.010	0.010	0.010	0.022	0.024	X	0.031
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	X	ND
41. Azinphos methyl	0.12	X	0.15	0.096	0.095	0.16	0.055	0.042	0.087	0.11	0.066	0.050
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
42. Azinphos methyl	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorpyrifos	0.037	X	0.081	0.043	0.005	0.057	0.061	0.033	0.005	0.005	0.040	0.005
43. Azinphos methyl	0.092	X	0.12	0.010	0.028	0.088	0.10	0.024	0.027	0.058	0.020	0.026
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
44. Azinphos methyl	0.059	X	0.026	0.010	0.010	0.033	0.060	0.065	0.010	0.026	0.021	0.010
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
45. Azinphos methyl	0.022	X	0.034	0.010	0.029	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
46. Azinphos methyl	0.054	X	0.15	0.033	0.026	0.034	0.10	0.024	0.010	0.037	0.084	0.010
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
47. Azinphos methyl	0.036	X	0.034	0.027	0.010	0.033	0.010	0.025	0.052	0.054	0.010	0.046
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
48. Azinphos methyl	0.089	X	0.010	0.066	0.078	0.044	0.034	0.13	0.010	0.036	0.064	0.057
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
49. Azinphos methyl	0.025	X	0.046	0.010	0.010	0.026	0.010	0.068	0.026	0.031	0.036	0.010
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
50. Azinphos methyl	0.010	X	ND	ND	0.010	0.010	0.010	ND	ND	0.010	ND	0.022
Chlorpyrifos	0.043	X	0.056	0.005	ND	0.005	0.005	0.044	0.005	0.19	0.005	0.005
51. Azinphos methyl	0.11	X	0.093	0.041	0.051	0.010	0.029	0.19	0.037	0.096	0.16	0.084
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
52. Azinphos methyl	0.044	X	0.10	0.071	0.053	0.040	0.051	0.033	0.076	0.042	0.033	0.065
Chlorpyrifos	0.012	X	0.005	0.005	0.005	0.005	0.005	0.005	0.019	0.005	0.043	0.017
53. Azinphos methyl	0.028	X	0.010	0.041	0.046	0.047	0.028	0.041	0.037	0.021	0.010	0.010
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.005
54. Azinphos methyl	0.040	X	0.037	0.050	0.16	0.042	0.010	0.050	0.029	0.064	0.026	0.079
Chlorpyrifos	ND	X	ND	ND	0.005	ND	ND	ND	ND	ND	ND	0.005
55. Azinphos methyl	0.023	X	0.044	0.010	0.039	0.010	0.010	0.010	0.010	0.010	0.010	0.034
Chlorpyrifos	0.17	X	0.13	0.026	0.18	0.073	0.052	0.005	0.020	0.015	0.005	0.067
56. Azinphos methyl	0.053	X	0.12	0.050	0.026	0.068	0.038	0.024	0.23	0.043	0.010	0.010
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
57. Azinphos methyl	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorpyrifos	0.012	X	0.005	0.005	0.005	0.011	0.005	0.018	0.032	0.005	0.041	0.035

Sample # / Pesticide	Composite Value Detected, ppm	Single, Whole Value Detected, ppm	Single-Serving Portion Values Detected, ppm									
			1	2	3	4	5	6	7	8	9	10
58. Azinphos methyl	0.033	X	0.040	0.038	0.031	0.042	0.022	0.063	0.12	0.062	0.063	0.034
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
59. Azinphos methyl	0.056	X	0.095	0.097	0.084	0.023	0.010	0.058	0.031	0.010	0.095	0.060
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
60. Azinphos methyl	0.010	X	ND	ND	ND	ND	0.010	0.010	0.010	ND	0.021	ND
Chlorpyrifos	0.018	X	0.043	0.021	0.020	0.005	0.005	0.005	0.005	0.053	0.005	0.023
61. Azinphos methyl	0.029	X	0.025	0.034	0.023	0.010	0.010	0.010	0.010	0.010	0.037	0.010
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
62. Azinphos methyl	0.042	X	0.032	0.010	0.010	0.020	0.010	0.068	0.071	0.033	0.010	0.039
Chlorpyrifos	0.028	X	0.028	0.005	0.005	0.043	0.026	0.049	0.032	0.025	0.020	0.057
63. Azinphos methyl	0.026	X	ND	0.052	0.021	ND	ND	0.010	ND	0.045	ND	0.031
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
64. Azinphos methyl	0.054	X	0.054	0.051	0.043	0.034	0.010	0.062	0.086	0.059	0.049	0.084
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
65. Azinphos methyl	0.010	X	0.010	ND	0.010	0.010	0.010	0.010	0.010	0.010	ND	0.010
Chlorpyrifos	0.014	X	0.025	ND	ND	0.005	0.016	0.005	ND	ND	0.011	0.027
66. Azinphos methyl	ND	X	ND	0.010	ND	ND	ND	ND	ND	ND	0.010	ND
Chlorpyrifos	0.035	X	0.040	ND	0.086	0.054	0.090	0.005	0.021	0.072	0.005	0.016
67. Azinphos methyl	0.027	X	0.010	0.010	0.032	0.021	0.010	0.010	ND	ND	0.047	ND
Chlorpyrifos	0.028	X	0.005	0.075	0.012	0.010	0.17	0.005	0.005	0.005	0.005	0.005
68. Azinphos methyl	0.067	X	0.042	0.027	0.010	0.044	0.020	0.024	0.037	0.050	0.063	0.029
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
69. Azinphos methyl	0.069	X	0.050	0.020	0.060	0.010	0.026	0.093	0.010	0.066	0.24	0.081
Chlorpyrifos	0.005	X	0.005	ND	0.015	ND	ND	0.005	0.005	ND	ND	0.005
70. Azinphos methyl	0.020	X	0.024	0.010	0.028	ND	0.010	ND	0.010	0.010	0.026	0.010
Chlorpyrifos	0.014	X	ND	ND	ND	ND	ND	0.016	ND	ND	ND	ND
71. Azinphos methyl	0.087	X	0.092	0.037	0.010	0.093	0.061	0.049	0.054	0.093	0.13	0.074
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
72. Azinphos methyl	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorpyrifos	0.047	X	0.027	0.005	0.038	0.005	0.078	0.043	0.043	0.027	0.011	0.049
73. Azinphos methyl	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorpyrifos	0.010	X	0.005	0.005	0.005	0.014	0.005	0.005	ND	0.005	0.005	ND
74. Azinphos methyl	0.023	X	0.010	ND	0.010	0.027	0.021	0.010	0.010	0.040	0.028	0.023
Chlorpyrifos	0.005	X	ND	ND	ND	ND	ND	0.023	ND	ND	ND	ND
75. Azinphos methyl	0.022	X	0.036	0.047	0.021	0.010	0.010	0.023	0.038	0.024	0.020	0.037
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	0.005	ND	ND	0.005
76. Azinphos methyl	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorpyrifos	0.027	X	0.014	0.044	0.005	0.012	0.020	0.031	0.016	0.005	0.037	0.012
77. Azinphos methyl	0.039	X	0.010	0.037	0.054	0.073	0.055	0.069	0.050	0.029	0.12	0.062
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
78. Azinphos methyl	0.035	X	X	0.060	0.037	0.10	0.10	0.040	0.010	0.010	0.010	0.030
Chlorpyrifos	ND	X	X	ND	ND	ND	ND	ND	ND	ND	ND	ND
79. Azinphos methyl	0.027	X	ND	ND	ND	0.038	ND	0.085	ND	ND	ND	ND
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Sample # / Pesticide	Composite Value Detected, ppm	Single, Whole Value Detected, ppm	Single-Serving Portion Values Detected, ppm									
			1	2	3	4	5	6	7	8	9	10
80. Azinphos methyl	0.033	X	0.010	0.010	0.010	0.010	0.010	0.010	0.060	0.070	0.029	0.033
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
81. Azinphos methyl	0.027	X	0.010	0.038	0.010	0.020	0.046	0.043	0.033	0.039	0.021	ND
Chlorpyrifos	0.005	X	ND	0.005	0.005	ND	0.005	ND	ND	ND	ND	ND
82. Azinphos methyl	0.12	X	0.10	0.032	0.084	0.10	0.044	0.16	0.14	0.097	0.072	0.11
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
83. Azinphos methyl	0.050	X	0.021	0.11	0.010	0.068	0.035	ND	ND	0.21	0.010	0.010
Chlorpyrifos	0.029	X	ND	0.036	0.005	0.086	0.005	0.054	0.032	0.022	0.080	0.089
84. Azinphos methyl	0.026	X	0.035	ND	0.010	0.010	0.010	ND	0.033	0.010	0.031	0.070
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
85. Azinphos methyl	0.043	X	0.021	0.010	0.010	0.010	0.010	0.020	0.029	0.010	0.010	0.010
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
86. Azinphos methyl	0.11	X	0.058	0.047	0.067	0.035	0.031	0.036	0.044	0.026	0.050	0.022
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
87. Azinphos methyl	0.060	X	0.051	0.074	0.010	0.071	0.027	0.010	0.073	0.025	0.046	0.010
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
88. Azinphos methyl	0.061	X	0.11	0.062	0.066	0.025	0.032	0.052	0.010	0.047	0.033	0.060
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	0.011	0.005	ND	ND
89. Azinphos methyl	0.081	X	0.12	0.030	0.061	0.077	0.020	0.020	0.051	0.020	0.026	0.010
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
90. Azinphos methyl	0.010	X	0.010	ND	ND	ND	0.010	0.022	0.010	ND	ND	ND
Chlorpyrifos	0.16	X	0.24	0.016	0.30	0.042	0.17	0.12	0.094	0.055	0.012	0.26
91. Azinphos methyl	0.032	X	0.023	0.031	0.032	0.037	0.039	0.010	0.020	0.010	0.010	0.036
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
92. Azinphos methyl	0.077	X	0.055	0.054	0.035	0.10	0.098	0.14	0.028	0.024	0.039	0.010
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
93. Azinphos methyl	0.067	X	0.075	0.11	0.19	0.17	0.099	0.23	0.060	0.099	0.084	0.050
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
94. Azinphos methyl	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorpyrifos	0.028	X	0.015	0.013	0.026	0.032	0.005	0.036	0.044	0.029	0.005	0.10
95. Azinphos methyl	0.021	X	ND	0.010	0.022	0.010	0.010	0.010	0.010	0.010	0.010	X
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	X
96. Azinphos methyl	0.010	X	0.020	0.010	0.024	0.010	0.010	0.010	0.022	0.010	0.010	0.010
Chlorpyrifos	0.011	X	0.010	0.018	0.038	0.021	0.005	0.014	0.005	0.017	0.033	0.053
97. Azinphos methyl	0.030	X	0.11	0.027	0.053	0.073	0.085	0.072	0.072	0.035	0.13	0.046
Chlorpyrifos	0.005	X	0.042	ND	0.011	0.005	0.005	0.005	0.005	0.005	0.005	0.005
98. Azinphos methyl	0.059	X	0.037	0.027	0.025	0.029	0.031	0.054	0.028	0.036	X	0.077
Chlorpyrifos	ND	X	ND	ND	0.005	ND	ND	0.005	ND	0.005	X	0.005
99. Azinphos methyl	0.029	X	0.020	0.032	0.022	0.010	0.069	0.042	0.026	0.044	0.024	0.010
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
100. Azinphos methyl	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorpyrifos	0.010	X	0.005	0.014	0.011	0.024	0.005	0.005	0.005	0.038	0.005	0.005
101. Azinphos methyl	ND	X	ND	X	X	X	X	X	X	X	X	X
Chlorpyrifos	0.012	X	0.010	0.005	0.005	0.018	0.005	0.005	0.005	0.014	0.013	0.014

Sample # / Pesticide	Composite Value Detected, ppm	Single, Whole Value Detected, ppm	Single-Serving Portion Values Detected, ppm									
			1	2	3	4	5	6	7	8	9	10
102. Azinphos methyl	0.060	X	0.039	X	X	X	X	X	X	X	X	X
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
103. Azinphos methyl	0.070	X	0.043	0.054	0.13	0.083	0.026	0.054	0.058	0.097	0.079	0.045
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
104. Azinphos methyl	0.029	X	0.035	0.010	0.023	0.062	0.010	0.010	0.051	0.064	0.010	0.025
Chlorpyrifos	0.027	X	0.011	0.005	0.014	0.038	0.045	0.018	0.027	0.079	0.005	0.012
105. Azinphos methyl	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorpyrifos	0.013	X	0.017	0.021	0.005	0.030	0.014	0.012	0.013	0.013	0.021	0.005
106. Azinphos methyl	0.033	X	0.010	0.041	0.010	0.010	0.045	0.010	0.010	0.023	0.010	0.12
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
107. Azinphos methyl	0.069	X	0.089	X	X	X	X	X	X	X	X	X
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
108. Azinphos methyl	0.010	X	0.010	X	X	X	X	X	X	X	X	X
Chlorpyrifos	0.014	X	0.020	0.014	0.005	0.005	0.005	0.015	0.031	0.005	0.049	0.017
109. Azinphos methyl	0.038	X	ND	0.010	0.029	ND	0.047	0.027	0.010	0.010	0.037	0.062
Chlorpyrifos	0.005	X	ND	ND	0.078	0.005	0.005	ND	ND	ND	ND	0.005
110. Azinphos methyl	0.15	X	0.094	0.071	0.034	0.14	0.081	0.12	0.11	0.060	0.15	0.028
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
111. Azinphos methyl	0.010	X	0.010	0.010	0.010	ND	ND	0.010	ND	ND	0.023	0.010
Chlorpyrifos	0.035	X	0.24	0.078	0.030	0.023	0.005	0.032	0.005	0.005	0.11	0.061
112. Azinphos methyl	0.031	X	0.010	0.031	0.034	0.064	0.010	0.010	0.020	0.010	0.010	0.010
Chlorpyrifos	0.005	X	0.005	0.005	0.022	0.005	0.013	0.005	0.005	ND	ND	0.005
113. Azinphos methyl	0.043	X	0.27	0.035	0.010	0.074	0.010	0.010	0.010	0.068	0.010	0.010
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
114. Azinphos methyl	0.044	X	0.010	0.022	0.14	0.022	0.021	0.088	0.060	0.010	0.031	0.010
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
115. Azinphos methyl	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorpyrifos	0.045	X	0.031	0.005	0.045	0.018	0.019	0.010	0.010	0.12	0.005	0.053
116. Azinphos methyl	0.061	X	0.022	0.010	0.010	0.010	0.010	0.010	0.074	0.030	0.010	0.049
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
117. Azinphos methyl	0.10	X	0.027	0.13	0.010	0.028	0.030	0.075	0.22	0.11	0.13	0.096
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
118. Azinphos methyl	0.036	X	0.029	0.010	0.010	0.036	0.25	0.030	0.040	0.010	0.033	0.010
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
119. Azinphos methyl	0.023	X	ND	0.010	0.010	0.020	0.010	0.010	0.010	0.010	0.032	0.062
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
120. Azinphos methyl	0.041	X	0.056	0.010	0.010	0.025	0.054	0.043	0.023	0.069	0.093	0.020
Chlorpyrifos	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND - Non-Detection
X - Not Analyzed

Appendix G

Distribution of Residues by Pesticide in Oats

Appendix G shows residue detections for all oat samples tested for pesticides, minimum and maximum concentrations reported, Limits of Detection (LODs), and whether a tolerance or Maximum Residue Limit/Extraneous Maximum Residue Limit (MRL/EMRL) is established for each pesticide in oats. Sample results for rolled and bran oats are combined. All pesticides analyzed in oats are included in the quality assurance program as required compounds.

In 1999, PDP analyzed 332 oat samples. A total of 28 samples (8%) were reported with residue detections. None of the residue detections exceeded the established tolerance.

Refer to the Appendix E cover page for a definition of Codex MRLs/EMRLs.

APPENDIX G. DISTRIBUTION OF RESIDUES BY PESTICIDE IN OATS

Pesticide	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
1 Naphthol	332				0.010 ^	NT	---
3-Hydroxycarbofuran	332				0.005 ^	0.1	0.1
Aldrin	332				0.003 ^	0.03[AL]	0.02
Allethrin (insecticide)	332				0.001 ^	2	---
Azinphos methyl	332				0.013 ^	0.2	---
BHC alpha	332				0.003 ^	0.05[AL]	---
BHC beta	312				0.003 ^	0.05[AL]	---
BHC delta	332				0.003 ^	0.05[AL]	---
Carbaryl	332				0.003 ^	0	5
Carbofuran	332				0.005 ^	0.1	0.1
Chlorpyrifos methyl	332	1	0.3	0.022 ^	0.001 ^	6.0	---
DDD p,p'	332				0.003 ^	0.05[AL]	0.1
DDE p,p'	332	2	0.6	0.005 ^	0.003 ^	0.05[AL]	0.1
DDT p,p'	332				0.004 ^	0.05[AL]	0.1
Dichlorvos - DDVP	332				0.003 ^	0.5	5
Dieldrin	332				0.003 ^	0.03[AL]	0.02
Disulfoton	332				0.006 ^	0.75	0.2
Disulfoton sulfone	332				0.015 ^	0.75	0.2
Diuron	292				0.003 ^	1	---
Endosulfan I	332				0.008 ^	0.1	---
Endosulfan II	332				0.010 ^	0.1	---
Endosulfan sulfate	332				0.003 ^	0.1	---
EPTC (herbicide)	332				0.003 ^	NT	---
Heptachlor	332				0.002 ^	0.01[AL]	0.02
Heptachlor epoxide	332				0.002 ^	0.01[AL]	0.02
Imidacloprid (insecticide)	332				0.008 ^	0.05	---
Lindane - BHC gamma	332				0.003 ^	0.1	0.5
Linuron	332				0.010 ^	NT	---

Pesticide	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL ppm
Malathion	332	18	5.4	0.005 - 0.011	0.003 ^	8	8
Malathion oxygen analog	332				0.003 ^	8	---
Metalaxyl	332				0.004 ^	0.2	0.05
Methomyl	332				0.005 ^	1	0.5
Methoxychlor p,p'	332				0.009 ^	2	---
Metolachlor (herbicide)	332	3	0.9	0.005 - 0.013	0.003 ^	0.1	---
Oxadixyl (fungicide)	332				0.002 ^	0.1	---
Parathion ethyl	332				0.013 ^	1	---
Parathion methyl	332				0.006 ^	1	---
Parathion methyl o-analog	332				0.017 ^	1	---
Parathion oxygen analog	332				0.008 ^	1	---
Piperonyl butoxide	332	4	1.2	0.020 ^	0.012 ^	8	---
Propiconazole (fungicide)	332	1	0.3	0.018 ^	0.005 ^	0.1	0.05
Tebuconazole (fungicide)	332				0.005 ^	0.05	---
Triadimenol (fungicide)	332				0.008 ^	0.05	0.2
Trifluralin	332				0.007 ^	0.05	---

^ = Only one distinct detected concentration or LOD value was reported for the pair.
NT = No tolerance level was set for that pesticide / commodity pair.
AL = Numbers shown are Action Levels established by FDA and Codex Extraneous Maximum Residue Levels (EMRLs) for some pesticides. Under FQPA, responsibility for establishing tolerances in lieu of action levels has been transferred to EPA. In the interim, action levels are used.

Appendix H

Distribution of Residues by Pesticide in Corn Syrup

Appendix H shows residue detections for all corn syrup samples tested for pesticides, minimum and maximum concentrations reported, and Limits of Detection (LODs) for each pesticide in corn syrup. All pesticides analyzed in corn syrup are included in the quality assurance program as required compounds.

In 1999, PDP analyzed 156 corn syrup samples (42/43 DE). There were no reported residue detections. The Environmental Protection Agency and Codex Maximum Residue Limit/Extraneous Maximum Residue Limit tolerance levels are not listed since there were no findings. The data indicate that residues which may have been present in the raw agricultural commodity were either eliminated or reduced to non-detectable levels by the process employed in manufacturing corn syrup.

APPENDIX H. DISTRIBUTION OF RESIDUES BY PESTICIDE IN CORN SYRUP

Pesticide	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	LODs, ppm
3-Hydroxycarbofuran	156				0.009 ^
Acetochlor (herbicide)	156				0.001 ^
Alachlor (herbicide)	156				0.002 ^
Aldicarb	78				0.007 ^
Aldicarb sulfone	156				0.009 ^
Aldicarb sulfoxide	156				0.009 ^
Ametryn (herbicide)	140				0.015 ^
Atrazine	156				0.002 ^
Azinphos methyl	125				0.20 ^
BHC alpha	156				0.001 ^
BHC beta	142				0.001 ^
Bifenthrin	156				0.001 ^
Captan	156				0.040 ^
Carbaryl	140				0.006 ^
Carbofuran	156				0.009 ^
Carbophenothion	156				0.038 ^
Chlordane cis	156				0.002 ^
Chlordane trans	156				0.002 ^
Chlorfenvinphos beta	156				0.001 ^
Chlorpropham	156				0.006 ^
Chlorpyrifos	156				0.001 ^
Chlorpyrifos methyl	156				0.002 ^
Coumaphos	156				0.009 ^
Coumaphos oxygen analog	156				0.063 ^
Cyanazine (herbicide)	156				0.008 ^
Cyfluthrin	156				0.025 ^
DCPA	156				0.001 ^
DDD o,p'	156				0.001 ^
DDD p,p'	156				0.001 ^
DDE o,p'	156				0.001 ^
DDE p,p'	156				0.002 ^
DDT o,p'	156				0.001 ^
DDT p,p'	156				0.001 ^
Demeton-S sulfone	142				0.010 ^

Pesticide	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	LODs, ppm
Diazinon	156				0.003 ^
Dichlorvos - DDVP	110				0.002 ^
Dicloran	156				0.002 ^
Dicofol p,p'	156				0.003 ^
Dieldrin	156				0.003 ^
Dimethoate	156				0.005 ^
Endosulfan I	156				0.013 ^
Endosulfan II	156				0.010 ^
Endosulfan sulfate	156				0.015 ^
Esfenvalerate	156				0.002 ^
Ethalfluralin	156				0.023 ^
Ethion	156				0.001 ^
Ethoprop	140				0.003 ^
Fenamiphos	126				0.010 ^
Fenamiphos sulfoxide	156				0.023 ^
Fenitrothion	156				0.009 ^
Fenthion	110				0.002 ^
Fenvalerate	156				0.002 ^
Fonofos	156				0.003 ^
Heptachlor	156				0.001 ^
Heptachlor epoxide	156				0.004 ^
Hexachlorobenzene - HCB	124				0.001 ^
Imazalil	156				0.020 ^
Iprodione	156				0.025 ^
Lambda cyhalothrin	124				0.001 ^
Lambda cyhalothrin isomer	156				0.001 ^
Lindane - BHC gamma	156				0.003 ^
Linuron	156				0.010 ^
Malathion	156				0.002 ^
Metalaxyl	140				0.002 ^
Methidathion	156				0.003 ^
Methomyl	156				0.007 ^
Methoxychlor olefin	155				0.001 - 0.002
Methoxychlor Total	155				0.001 - 0.002
Metolachlor	156				0.001 ^
Metribuzin (herbicide)	140				0.003 ^

Pesticide	Total Samples Screened	Samples with Detections	% of Samples w/ Detections	Range of Values Detected, ppm	LODs, ppm
Mevinphos E	156				0.005 ^
Myclobutanil	156				0.005 ^
Oxamyl	140				0.009 ^
Oxychlordane	156				0.006 ^
Oxyfluorfen	156				0.009 ^
Parathion ethyl	156				0.006 ^
Parathion methyl	156				0.008 ^
Pendimethalin (herbicide)	156				0.002 ^
Pentachlorobenzene - PCB	80				0.001 ^
Permethrin cis	156				0.001 ^
Permethrin trans	156				0.001 ^
Phorate	94				0.001 ^
Phosalone	156				0.020 ^
Phosmet	156				0.010 ^
Phosphamidon	156				0.015 ^
Piperonyl butoxide	156				0.001 ^
Pirimiphos methyl	110				0.001 ^
Profenofos	156				0.016 ^
Prometryn (herbicide)	156				0.002 ^
Propachlor (herbicide)	156				0.012 ^
Propargite	156				0.040 ^
Propiconazole	140				0.008 ^
Quintozene - PCNB	156				0.003 ^
Simazine	156				0.004 ^
Sulprofos	124				0.002 ^
Tecnazene	156				0.002 ^
Terbufos	156				0.001 ^
Terbufos sulfone	156				0.002 ^
Tetrachlorvinphos	156				0.006 ^
Thiabendazole	156				0.010 ^
Triadimenol (fungicide)	156				0.030 ^
Trifluralin	156				0.001 ^
Vinclozolin	156				0.002 ^

^ - Only one distinct detected concentration or LOD value was reported for the pair.

Appendix I

National Estimates for Concentration Percentiles vs. Tolerance

(Pairs With Residue Detections in at Least 10 Percent of Samples)

Appendix I shows 59 pesticide/commodity pairs (including metabolites, isomers, and degradates) with detections in at least 10 percent of the samples tested. Concentrations detected are arranged in percentiles. The 90th percentile is compared to the Environmental Protection Agency tolerance established for each pesticide/commodity pair.

The meaning of a percentile can be most easily explained through an example. For the azinphos methyl/pears pair, the 50th percentile, or median, is estimated to be 0.012 ppm. This means that PDP estimates that at least 50 percent of pears available to U.S. consumers had azinphos methyl residues of 0.012 ppm or less, while at least 50 percent had residues of 0.012 ppm or more. Similarly, the 75th percentile (or the upper quartile) for this pair is estimated to be 0.045 ppm, which means that at least 75 percent of pears had residues of 0.045 ppm or less, while at least 25 percent had residues of 0.045 ppm or more. Finally, the 90th percentile (or the last decile) is estimated to be 0.10 ppm, meaning that at least 90 percent of all pears had azinphos methyl residues of 0.10 ppm or less, while at least 10 percent had residues of 0.10 ppm or more.

Percent detections and percentiles for apples, cantaloupe, cucumbers, lettuce, fresh pears, fresh strawberries, and fresh tomatoes were weighted to reflect 1998 Agricultural Marketing Service marketing data. There were no marketing data available for sweet bell peppers, frozen spinach, frozen strawberries, canned tomatoes, and winter squash.

For processed grape juice, the percentile concentrations were weighted to reflect 1999 sales volume data provided by the Food Institute.

Commodity	Collected	Sales
GJ (Ready-to-serve:Concentrate)	1:1	3:1

APPENDIX I. NATIONAL ESTIMATES FOR CONCENTRATION PERCENTILES vs. TOLERANCE
(Pairs With Residue Detections in at Least 10 Percent of Samples)

	Commodity / Pesticide	% of Samples with Detections	Mean (ppm) ** Lower	Mean (ppm) ** Upper	Percentiles 50th	Percentiles 75th	Percentiles 90th	Ratio of 90th Percentile to Tolerance
1	**Apples (W)**							
	Azinphos methyl	65.6	0.024	0.026	0.015	0.033	0.061	0.031
	Carbaryl	13.9	0.009	0.014	*	*	0.015	0.002
	Chlorpyrifos	23.8	0.005	0.008	*	*	0.014	0.009
2	**Cantaloupe (W)**							
	Endosulfan sulfate	30.8	0.006	0.011	*	0.012	0.025	0.013
	Methomyl	11.9	0.005	0.022	*	*	0.008	0.038
3	**Cucumbers (W)**							
	Dieldrin	14.4	0.003	0.006	*	*	0.006	0.060
	Endosulfan I	41.6	0.010	0.012	*	0.014	0.030	0.015
	Endosulfan II	36.0	0.006	0.010	*	0.011	0.020	0.010
	Endosulfan sulfate	55.3	0.020	0.023	0.012	0.036	0.054	0.027
	Methamidophos	11.5	0.010	0.017	*	*	0.007	0.007
4	**Grape Juice (W)**							
	Carbaryl	42.3	0.012	0.019	*	0.019	0.036	0.004
5	**Lettuce (W)**							
	Acephate	15.1	0.007	0.010	*	*	0.009	0.001
6	**Pears (Fresh) (W)**							
	Azinphos methyl	52.0	0.042	0.047	0.012	0.045	0.10	0.050
	Captan	14.6	0.022	0.033	*	*	0.040	0.002
	Diphenylamine (DPA)	14.5	0.009	0.021	*	*	0.026	0.003
	o-Phenylphenol	20.6	0.17	0.18	*	*	0.032	0.001
	Phosmet	13.6	0.016	0.024	*	*	0.019	0.002
	Thiabendazole	79.7	0.51	0.52	0.36	0.64	1.1	0.11
7	**Spinach (Frozen)**							
	DDE p,p'	42.7	0.006	0.010	*	0.010	0.021	0.042
	Methomyl	10.1	0.013	0.024	*	*	0.009	0.002
	Permethrin cis	67.4	0.57	0.58	0.23	0.82	1.7	0.085
	Permethrin trans	67.8	0.67	0.68	0.25	0.99	2.0	0.10
	Permethrin Total	60.6	1.2	1.2	0.24	2.3	3.7	0.19
8	**Strawberries (Fresh) (W)**							
	Benomyl	17.3	0.060	0.10	*	*	0.16	0.032
	Captan	59.4	0.59	0.59	0.068	0.58	1.8	0.072
	Carbaryl	17.6	0.058	0.068	*	*	0.049	0.005
	Iprodione	49.2	0.30	0.31	*	0.42	0.84	0.056
	Malathion	16.1	0.005	0.010	*	*	0.014	0.002
	Methomyl	23.0	0.088	0.098	*	*	0.20	0.10
	Myclobutanil	22.4	0.022	0.059	*	*	0.080	0.16
	Vinclozolin	11.4	0.042	0.047	*	*	0.019	0.002

	Commodity / Pesticide	% of Samples with Detections	Mean (ppm) ** Lower	Mean (ppm) ** Upper	Percentiles 50th	Percentiles 75th	Percentiles 90th	Ratio of 90th Percentile to Tolerance
9	**Strawberries (Frozen)**							
	Benomyl	10.8	0.017	0.062	*	*	***	***
	Captan	62.0	0.076	0.080	0.038	0.099	***	***
	Carbaryl	23.9	0.047	0.054	*	*	***	***
	Iprodione	38.0	0.051	0.067	*	0.067	***	***
	Malathion	23.9	0.005	0.009	*	*	***	***
	Myclobutanil	12.7	0.010	0.038	*	*	***	***
	Vinclozolin	33.8	0.025	0.031	*	0.026	***	***
10	**Sweet Bell Peppers**							
	Acephate	25.2	0.061	0.064	*	0.005	0.21	0.053
	Chlorpyrifos	15.5	0.012	0.018	*	*	0.032	0.032
	Dicofol p,p'	11.6	0.011	0.025	*	*	0.015	0.003
	Endosulfan I	21.1	0.006	0.010	*	*	0.021	0.011
	Endosulfan II	23.1	0.010	0.014	*	*	0.036	0.018
	Endosulfan sulfate	21.9	0.007	0.012	*	*	0.026	0.013
	Metalaxyl	16.3	0.016	0.086	*	*	0.045	0.045
	Methamidophos	36.4	0.035	0.039	*	0.026	0.12	0.12
	Methomyl	11.8	0.009	0.019	*	*	0.014	0.007
	Omethoate	10.1	0.002	0.010	*	*	*	*
	Oxamyl	10.1	0.007	0.019	*	*	0.006	0.002
11	**Tomatoes (Canned)**							
	Methamidophos	15.8	0.001	0.006	*	*	0.004	0.004
12	**Tomatoes (Fresh) (W)**							
	Chlorpyrifos	15.2	0.003	0.009	*	*	0.011	0.021
	Endosulfan I	26.2	0.006	0.009	*	0.003	0.012	0.006
	Endosulfan II	36.0	0.007	0.011	*	0.010	0.020	0.010
	Endosulfan sulfate	35.4	0.006	0.011	*	0.010	0.022	0.011
	Methamidophos	21.6	0.011	0.019	*	*	0.036	0.036
	Permethrin cis	15.4	0.006	0.023	*	*	0.025	0.012
	Permethrin trans	16.1	0.006	0.020	*	*	0.018	0.009
13	**Winter Squash (Fresh)**							
	Endosulfan sulfate	23.6	0.005	0.010	*	*	0.019	0.009
14	**Winter Squash (Frozen)**							
	Dieldrin	60.0	0.015	0.017	0.011	0.023	0.042	0.42

* The percentile value is estimated to be below the Limit of Detection (LOD)

** The mean is estimated with a range of values. The lower bound is calculated with non-detections valued at zero. The upper bound is calculated using the LOD.

*** A sample size of at least 80 observations is needed before 90th percentiles can be estimated with publishable accuracy (see *Third Report on Nutrition Monitoring in the United States*, Volume 1, p. III-7, Interagency Board for Nutrition Monitoring and Related Research, 1995).

(W) - Weighted for utilization. The Percent of Samples with Detections was recalculated to reflect national estimates.

Appendix J

Cumulative Distributions of Residues for Selected Pesticide/Commodity Pairs

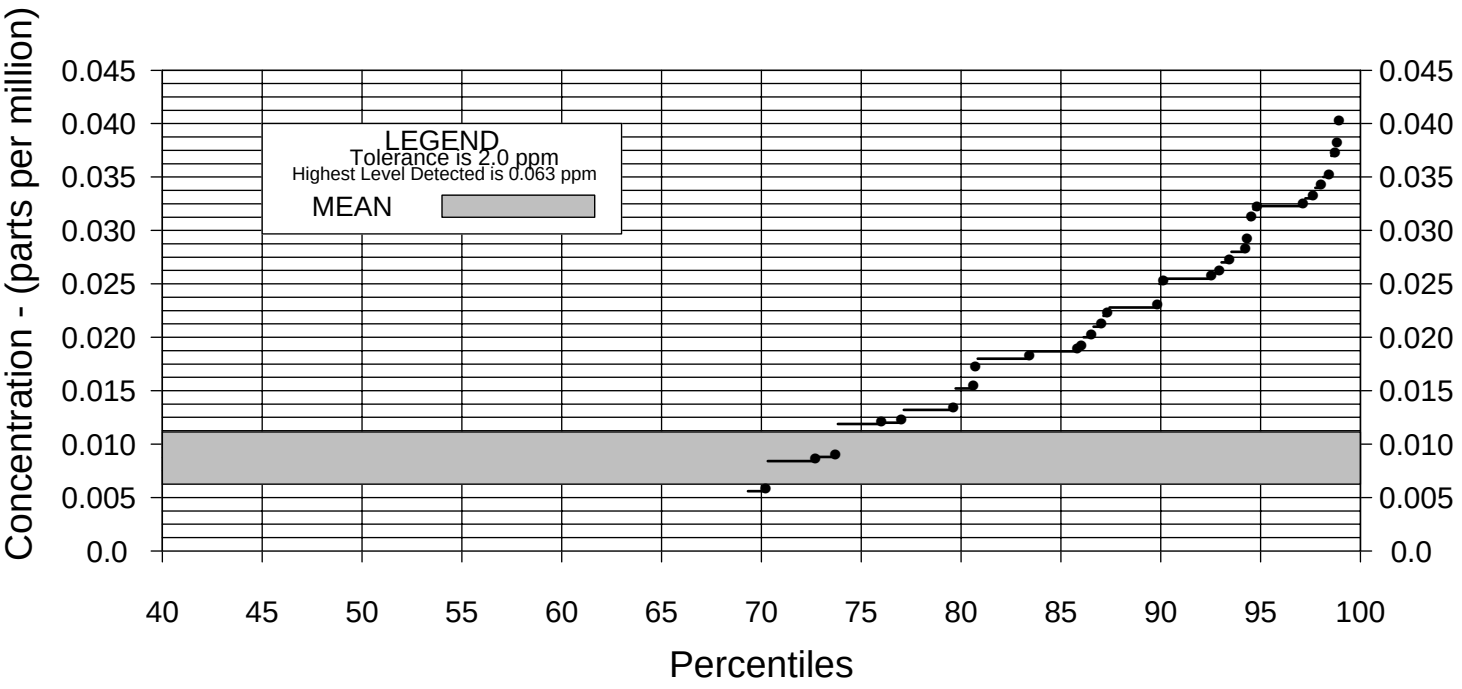
In Appendix J, the concentrations detected (in parts per million, except where otherwise noted) are plotted versus the calculated percentiles for the following eight pesticide/commodity pairs:

Endosulfan sulfate / Cantaloupe
Dieldrin / Cucumbers
Carbaryl / Grape Juice
Thiabendazole / Pears (Fresh)
DDE p,p' / Spinach (Frozen)
Iprodione / Strawberries (Fresh)
Acephate / Sweet Bell Peppers
Methamidophos / Sweet Bell Peppers

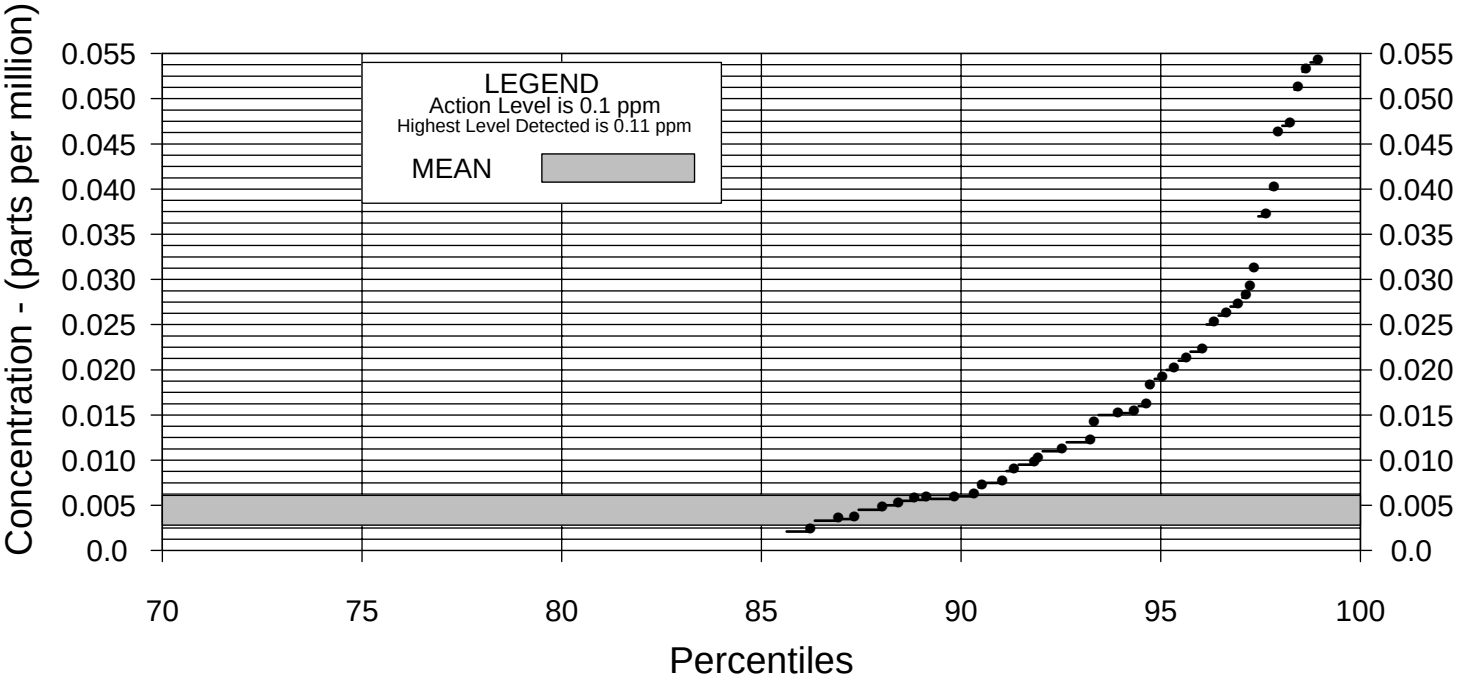
The distribution of residues for all of the PDP pesticide/commodity pairs has the same curved shape. The highest percentile graphed in the appendix is the 99th, which in each case is lower than the highest concentration detected in the sample (refer to the value shown in each graph's legend). Inclusion of the highest concentration would cause graph distortion, which would obscure concentrations in the low ranges. The tolerance for the pesticide/commodity pair is also indicated in the legend of each graph. The large dots show the percentage of the commodity at or below a given level of residue concentration. For example, an estimated 50 percent of fresh pears available to U.S. consumers in 1999 had thiabendazole residue concentrations of 0.36 ppm or less. The solid lines, tailing the large dots, depict percentage values. The lowest value of these solid lines indicates the estimated percentage of the commodity available to U.S. consumers with no detectable residues. For thiabendazole in fresh pears, this is 20 percent. The shaded bar denotes the range of values estimated for the mean. For thiabendazole/pears, the mean range is approximately 0.51-0.52 ppm, corresponding to the 63rd percentile.

APPENDIX J. CUMULATIVE DISTRIBUTIONS OF RESIDUES FOR SELECTED PESTICIDE/COMMODITY PAIRS

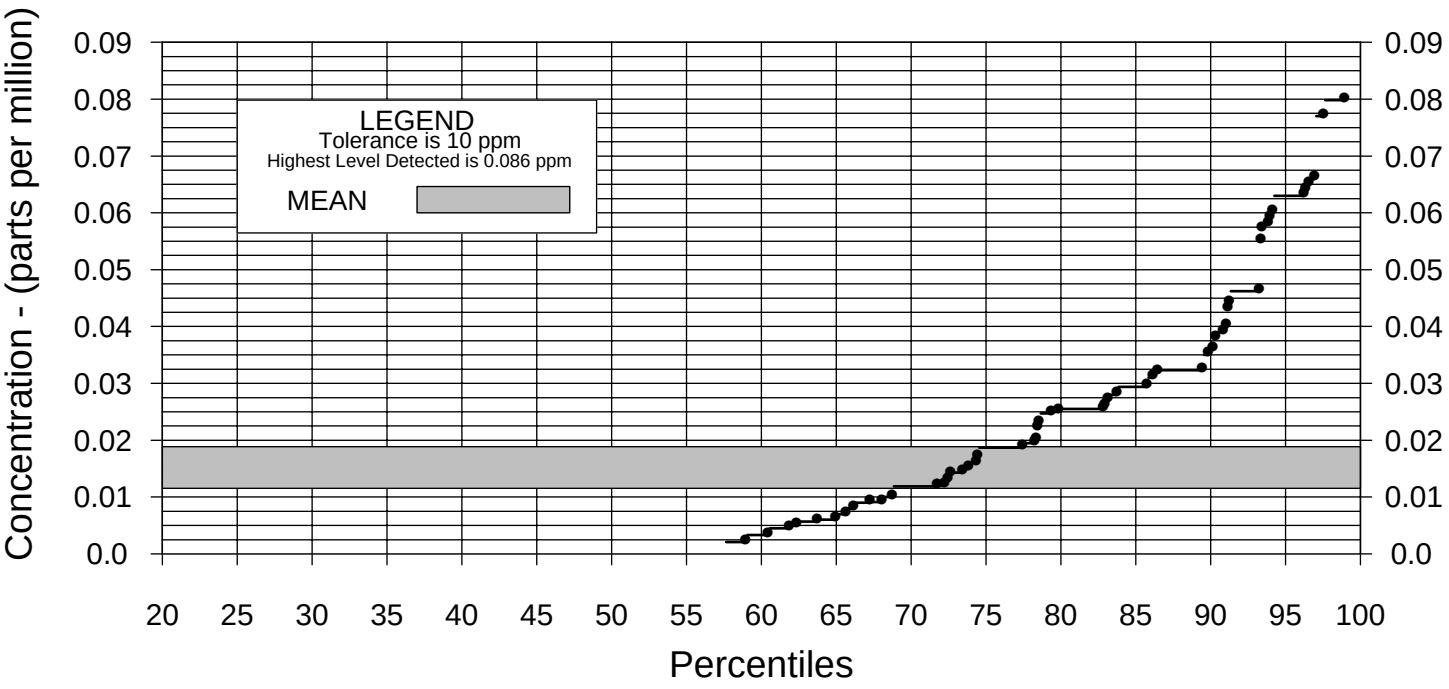
Endosulfan sulfate / Cantaloupe



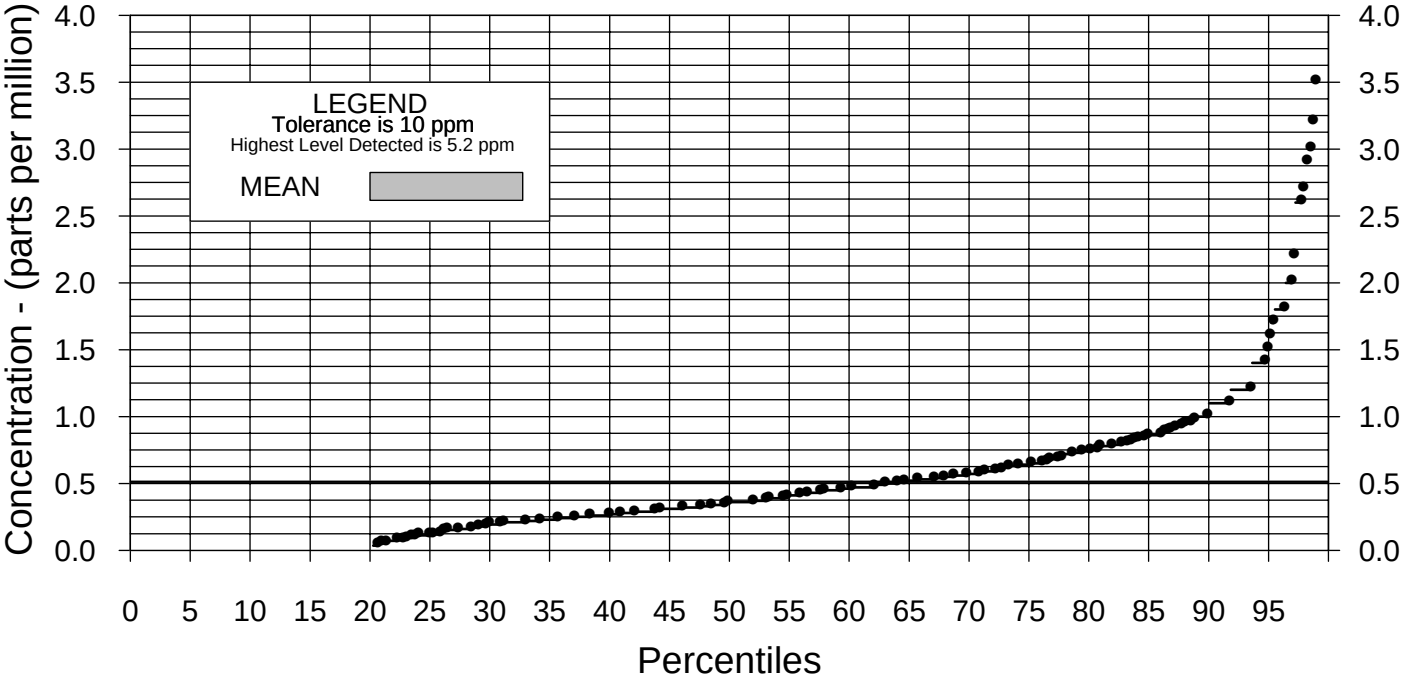
Dieldrin / Cucumbers



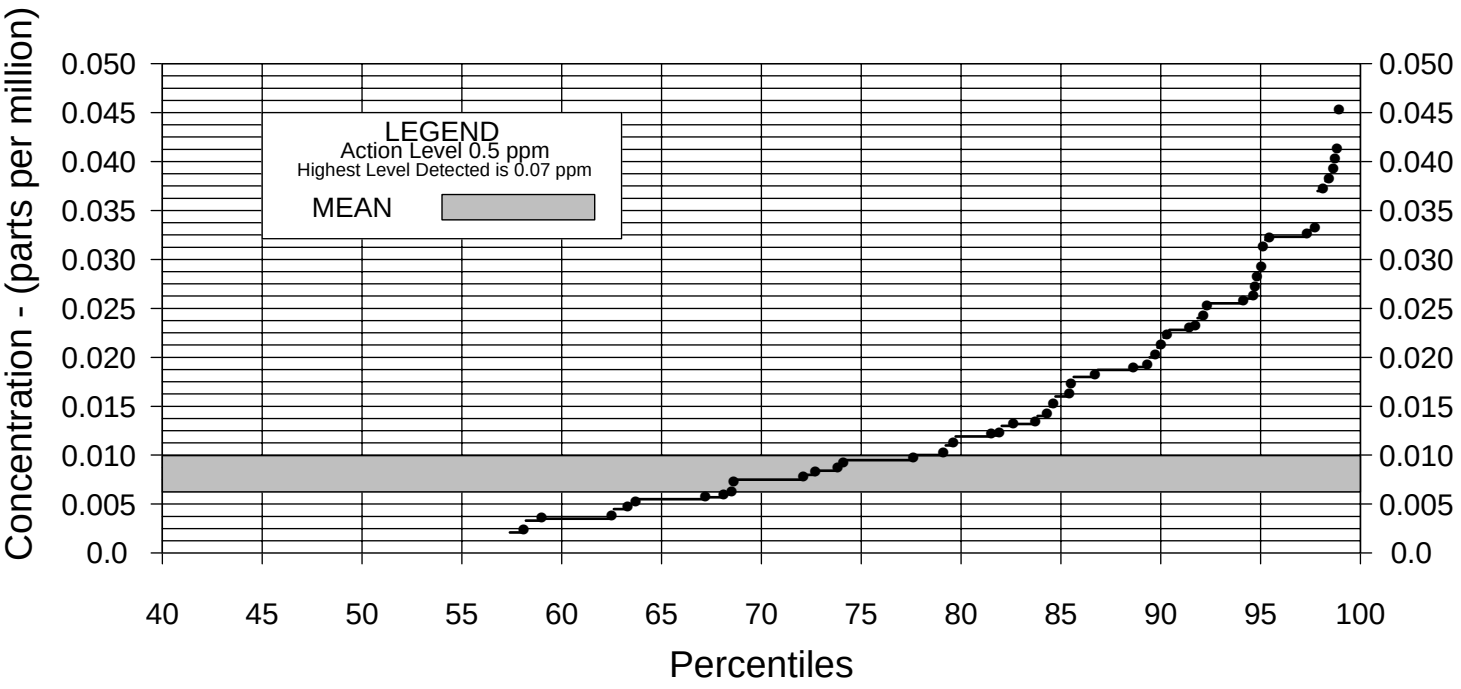
Carbaryl / Grape Juice



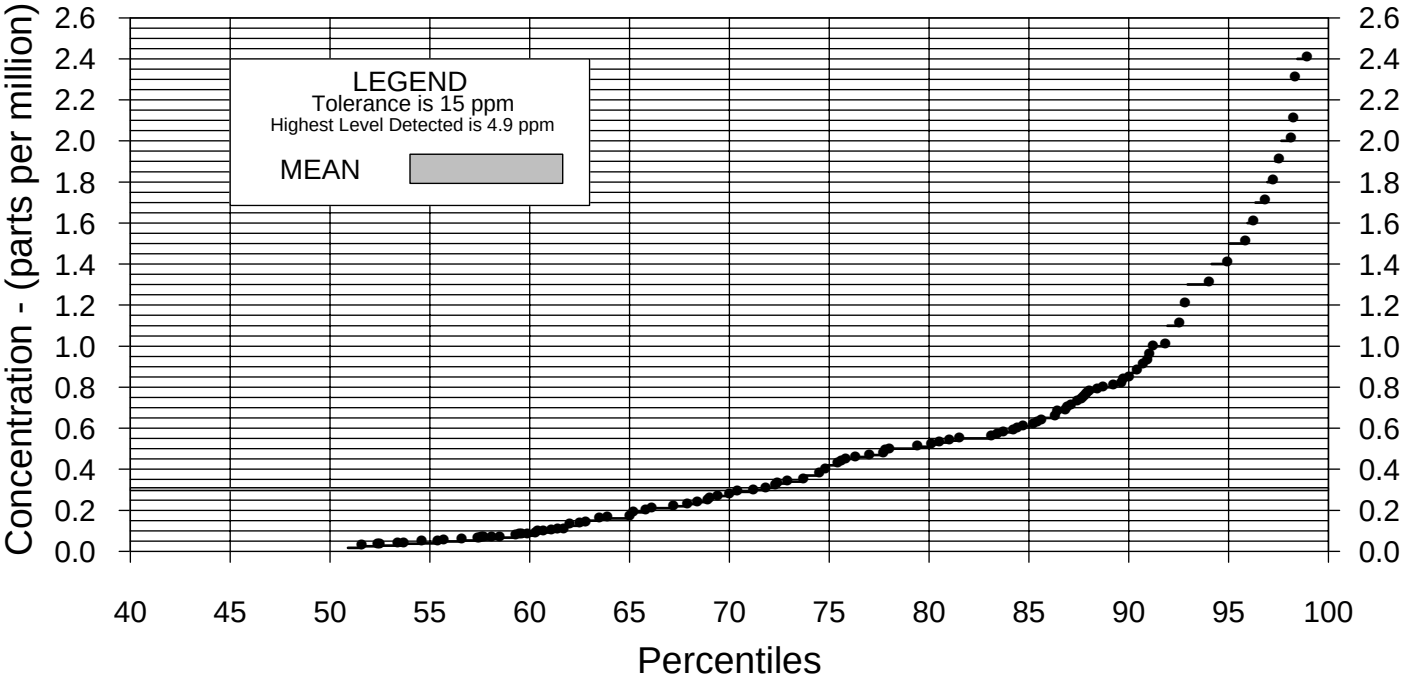
Thiabendazole / Pears (Fresh)



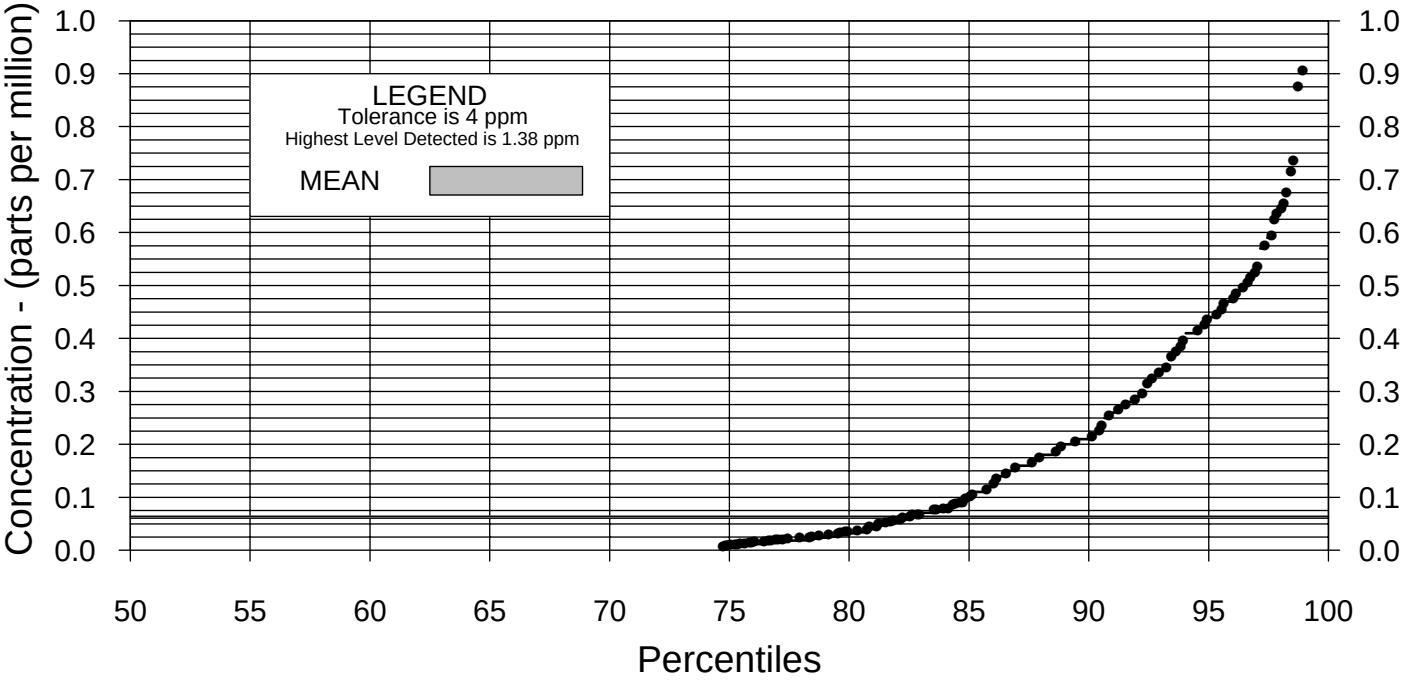
DDE p,p' / Spinach (Frozen)



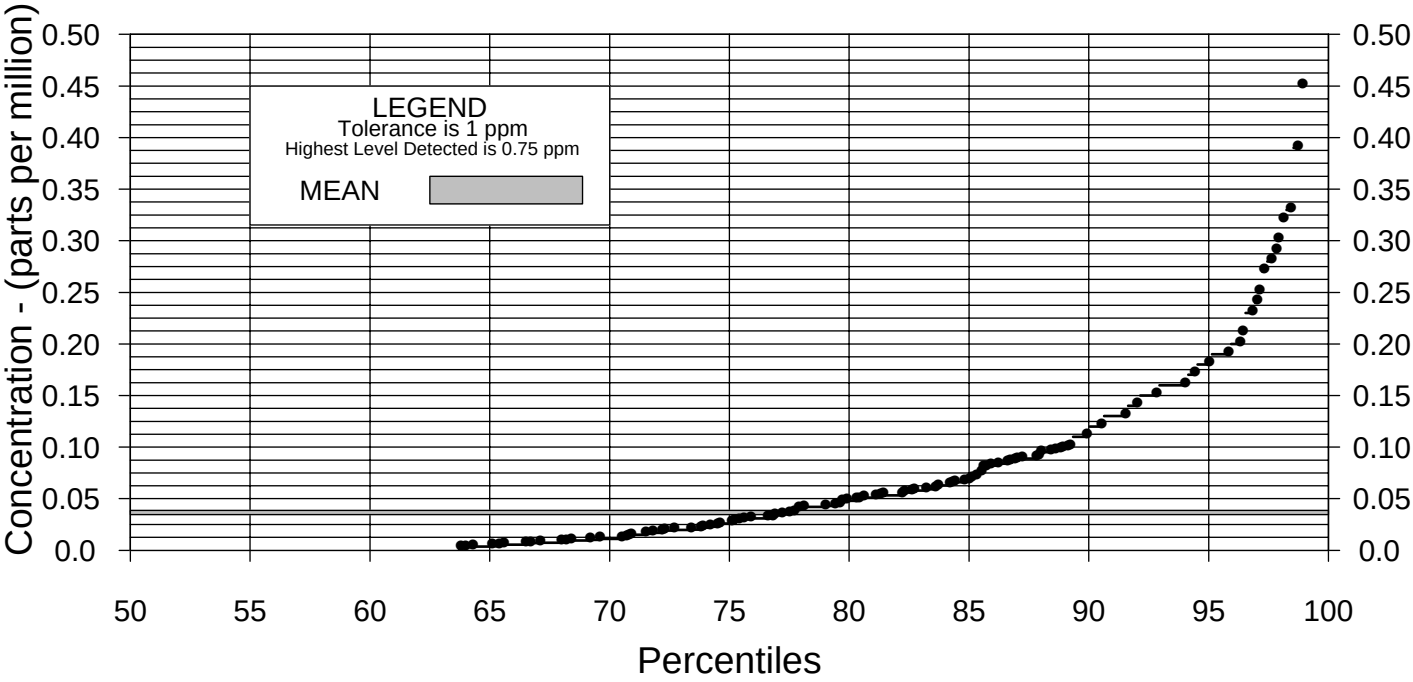
Iprodione / Strawberries (Fresh)



Acephate / Sweet Bell Peppers



Methamidophos / Sweet Bell Peppers



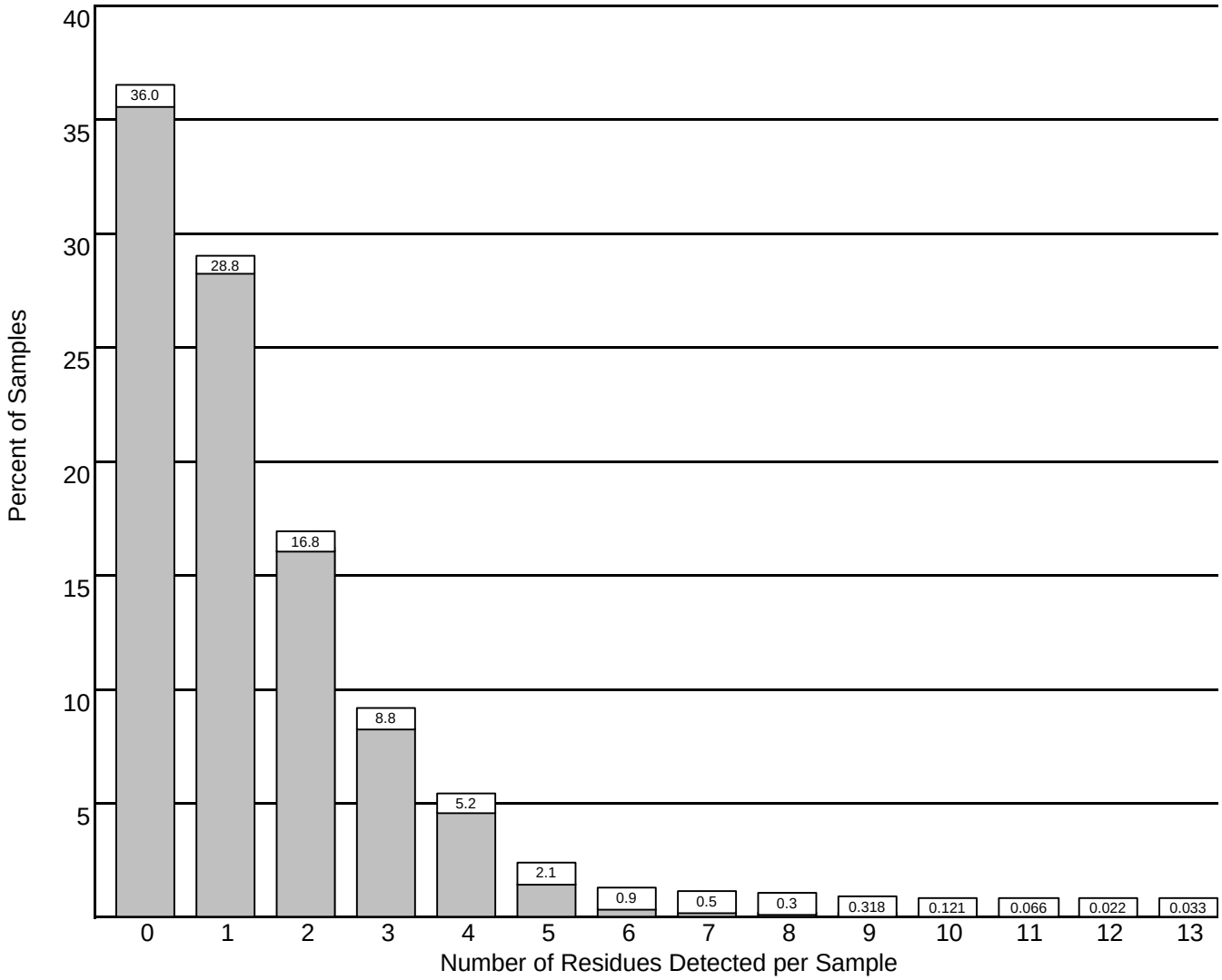
Appendix K

Number of Residues Detected per Sample

(Fresh and Processed Products)

Appendix K shows the percentage of samples versus the number of residues detected per sample. Page 1 shows the overall number of samples and percentages (of total number of samples analyzed) for each detection group across all commodities. Page 2 shows the number of residues detected by individual commodity. For the 9,125 samples tested, 36.0 percent of the samples had no detectable residues, 28.8 percent had one residue, and 35.2 percent of the samples had more than one residue.

APPENDIX K. SAMPLES vs. NUMBER OF RESIDUES DETECTED PER SAMPLE



Number of Residues Detected per Sample

	0	1	2	3	4	5	6	7	8	9	10	11	12	13
Number of Samples	3288	2632	1537	804	472	189	81	45	26	29	11	6	2	3
Percent of Total Samples	36.0	28.8	16.8	8.8	5.2	2.1	0.9	0.5	0.3	0.318	0.121	0.066	0.022	0.033

TOTAL NUMBER OF SAMPLES = 9,125

APPENDIX K. SAMPLES vs. NUMBER OF RESIDUES DETECTED PER SAMPLE

	Number of Residues Detected per Sample													
	0	1	2	3	4	5	6	7	8	9	10	11	12	13
Fresh Fruit and Vegetables:	Percent													
Apples (379)	17.2	47.0	27.4	6.9	1.1	0.5	--	--	--	--	--	--	--	--
Apples, Single-Serving (1,463)	8.1	56.2	31.0	3.8	0.8	0.1	--	--	--	--	--	--	--	--
Cantaloupe (831)	47.4	31.3	12.5	5.7	1.9	1.1	--	0.1	--	--	--	--	--	--
Cucumbers (734)	27.1	19.5	10.2	24.8	13.2	4.1	1.1	--	--	--	--	--	--	--
Lettuce (185)	62.7	19.5	13.0	2.2	2.2	0.5	--	--	--	--	--	--	--	--
Pears (359)	3.3	32.6	33.1	16.2	10.9	2.5	0.8	0.6	--	--	--	--	--	--
Pears, Single-Serving (352)	49.4	43.2	6.8	0.6	--	--	--	--	--	--	--	--	--	--
Strawberries (650)	8.5	17.7	29.2	22.5	11.8	5.4	2.3	0.9	0.9	0.6	--	0.2	--	--
Sweet Bell Peppers (733)	31.7	12.7	15.3	9.8	10.6	5.5	4.6	3.7	1.9	2.0	1.2	0.3	0.3	0.4
Tomatoes (366)	32.8	16.1	16.9	12.8	13.1	5.2	2.2	0.5	0.3	--	--	--	--	--
Winter Squash (246)	58.9	28.0	7.7	2.8	2.4	--	--	--	--	--	--	--	--	--
Processed Fruit and Vegetables:														
Grape Juice (714)	58.0	38.8	2.7	0.4	0.1	--	--	--	--	--	--	--	--	--
Pears, Canned (371)	96.0	4.0	--	--	--	--	--	--	--	--	--	--	--	--
Spinach, Frozen (715)	15.1	18.9	26.0	18.6	10.3	5.6	1.7	1.0	0.7	1.4	0.3	0.4	--	--
Strawberries, Frozen (71)	14.1	15.5	28.2	21.1	16.9	4.2	--	--	--	--	--	--	--	--
Tomatoes, Canned (368)	74.2	17.7	5.2	1.6	1.1	--	0.3	--	--	--	--	--	--	--
Winter Squash, Frozen (100)	37.0	58.0	5.0	--	--	--	--	--	--	--	--	--	--	--
Number of Samples	2828	2605	1536	804	472	189	81	45	26	29	11	6	2	3
Percent of Total Samples	32.7	30.2	17.8	9.3	5.5	2.2	0.9	0.5	0.3	0.336	0.127	0.069	0.023	0.035

TOTAL NUMBER OF FRUIT & VEGETABLE SAMPLES = 8,637

Processed Grain Products:														
Corn Syrup (156)	100	--	--	--	--	--	--	--	--	--	--	--	--	--
Oats, Rolled/Bran (332)	91.6	8.1	0.3	--	--	--	--	--	--	--	--	--	--	--
Number of Samples	460	27	1	--	--	--	--	--	--	--	--	--	--	--
Percent of Total Samples	94	5.5	0.2	--	--	--	--	--	--	--	--	--	--	--

Appendix L

Samples Reported to FDA as Exceeding the Tolerance or Without Established Tolerance

(per Code of Federal Regulations, Title 40, Part 180)

Appendix L shows residues reported to FDA as exceeding the tolerance or residues for which no established tolerance was listed under the Code of Federal Regulations (CFR), Title 40, Part 180. In 1999, 19 samples were found to have 19 residues at levels exceeding the established tolerance, with 5 each in cantaloupe and strawberries, 3 in spinach, 2 each in cucumbers and pears, and 1 in winter squash and sweet bell peppers. In addition, 301 residues were reported as without established tolerance as follows: 244 samples contained 1 residue without an established tolerance, 24 samples contained 2 residues without tolerances and 3 samples contained 3 residues without tolerances.

Appendix L also noted if metabolites (or isomers) were detected as part of the same sample. In instances where both parent and metabolite (or isomer) were detected, PDP accounted for both as part of the same tolerance expression.

APPENDIX L. SAMPLES REPORTED TO FDA AS EXCEEDING THE TOLERANCE OR WITHOUT ESTABLISHED TOLERANCE (per Code of Federal Regulations, Title 40, Part 180)

Residues Exceeding Established Tolerance

	Commodity / Pesticide	Limit of Detection, ppm	Concentration Detected, ppm	EPA Tolerance Level, ppm
1	Cantaloupe / Acephate	0.002	0.088	0.02
2	Cantaloupe / Acephate	0.002	0.099	0.02
3	Cantaloupe / Acephate	0.002	0.039	0.02
4	Cantaloupe / Methamidophos	0.004	0.72	0.5
5	Cantaloupe / Methomyl	0.025	0.62	0.2
6	Cucumbers / Chlorpyrifos	0.008	0.094	0.05
7	Cucumbers / Methomyl	0.017	0.42	0.2
8	Pears, Fresh / Chlorpyrifos	0.004	0.15	0.05
9	Pears, Fresh / Esfenvalerate	0.098	0.16	0.05
10	Spinach, Frozen (Lambda cyhalothrin + Isomer)	0.001	0.13	0.01
11	Spinach, Frozen (Lambda cyhalothrin + Isomer)	0.009	0.075	0.01
12	Spinach, Frozen / Lambda cyhalothrin isomer	0.001	0.22	0.01
13	Strawberries, Fresh / Dichlorvos (DDVP)	0.002	0.68	0.5
14	Strawberries, Fresh / Methamidophos	0.015	0.25	0.05
15	Strawberries, Fresh / Methomyl	0.017	2.5	2
16	Strawberries, Fresh / Methomyl	0.012	5.4	2
17	Strawberries, Fresh / Methomyl	0.008	3.1	2
18	Sweet Bell Peppers (Lambda cyhalothrin + Isomer)	0.009	0.030	0.01
19	Winter Squash, Fresh / Acephate	0.005	0.089	0.02

Distribution of Residues with No Tolerance Listed in 40 CFR, Part 180, by Commodity/Pesticide

(Includes Samples of Unknown Origin - Regional Tolerances May or May Not Apply)

	Commodity / Pesticide	Samples Screened	Samples Reported	% of Samples	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm
1	**Cantaloupe**						
	Chlorpyrifos	826	10	1.2	0.007 - 0.024	0.004 - 0.011	NT
	Diphenylamine (DPA)	826	4	0.5	0.013 - 0.033	0.008 - 0.030	NT
	Iprodione	826	1	0.1	0.013 ^	0.008 - 0.031	NT
	Pentachlorobenzene (PCB)	826	1	0.1	0.007 ^	0.002 - 0.004	NT
2	**Cucumbers**						
	Dimethoate	730	5	0.7	0.003 - 0.092	0.002 - 0.010	NT
	Omethoate [1]	730	2	0.3	0.007 - 0.023	0.004 - 0.017	NT
	Endrin	180	2	1.1	0.005 - 0.013	0.003 ^	NT
	Fenamiphos sulfone	730	1	0.1	0.013 ^	0.008 - 0.020	NT
	Fenamiphos sulfoxide [2]	194			0.013 ^	0.008 - 0.022	NT
	Phosphamidon	730	1	0.1	0.055 ^	0.012 - 0.033	NT
	Quintozene (PCNB)	729	4	0.5	0.002 - 0.005	0.001 - 0.006	NT
	Pentachloroaniline (PCA) [3]	164			0.002 ^	0.001 ^	NT

	Commodity / Pesticide	Samples Screened	Samples Reported	% of Samples	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm
3	**Grape Juice**						
	Ethion	714	1	0.1	0.005 ^	0.002 - 0.006	NT
	o-Phenylphenol	538	7	1.3	0.007 - 0.012	0.004 - 0.010	NT
	Thiabendazole	714	1	0.1	0.075 ^	0.009 - 0.045	NT
4	**Pears, Fresh**						
	Chlorothalonil	359	1	0.3	0.007 ^	0.004 - 0.008	NT
	Dicloran	359	3	0.8	0.002 - 0.013	0.001 - 0.010	NT
	Iprodione	359	7	1.9	0.034 - 0.20	0.008 - 0.024	NT
5	**Spinach, Frozen**						
	Atrazine	715	1	0.1	0.028 ^	0.002 - 0.020	NT
	Carbofuran	715	1	0.1	0.028 ^	0.010 - 0.031	NT
	Chlorpyrifos	715	47	6.6	0.005 - 0.11	0.003 - 0.008	NT
	Cypermethrin	519	14	2.7	0.083 - 1.7	0.025 - 0.070	NT
	DCPA	715	67	9.4	0.002 - 0.065	0.001 - 0.006	NT
	Dicloran	715	12	1.7	0.002 - 0.023	0.001 - 0.008	NT
	Dicofol p,p'	715	5	0.7	0.005 - 0.055	0.003 - 0.033	NT
	Diphenylamine (DPA)	715	1	0.1	0.017 ^	0.008 - 0.17	NT
	Fenvalerate	715	2	0.3	0.041 - 0.15	0.002 - 0.083	NT
	Iprodione	714	2	0.3	0.025 - 0.083	0.015 - 0.050	NT
	Linuron	338	2	0.6	0.028 - 0.070	0.003 - 0.042	NT
	Piperonyl butoxide	353	7	1.9	0.067 - 4.0	0.040 - 0.050	NT
	Triadimefon	715	2	0.3	0.020 ^	0.007 - 0.031	NT
6	**Strawberries, Fresh**						
	Anilazine	425	6	1.4	0.097 - 0.73	0.018 - 0.083	NT
	Diphenylamine (DPA)	640	1	0.2	0.025 ^	0.008 - 0.17	NT
	Methidathion	640	1	0.2	0.013 ^	0.003 - 0.008	NT
	Oxamyl	640	1	0.2	0.21 ^	0.010 - 0.020	NT
	Piperonyl butoxide	338	2	0.6	0.058 - 0.067	0.040 - 0.050	NT
	Propargite	640	2	0.3	0.17 ^	0.020 - 0.050	NT
	Triadimefon	626	1	0.2	0.043 ^	0.007 - 0.031	NT
7	**Sweet Bell Peppers**						
	Chlorothalonil	553	4	0.7	0.008 - 0.050	0.005 - 0.030	NT
	Chlorpropham	730	3	0.4	0.010 ^	0.006 - 0.025	NT
	Diphenylamine (DPA)	730	10	1.4	0.013 - 0.025	0.008 - 0.17	NT
	Ethion	715	24	3.4	0.002 - 0.34	0.001 - 0.010	NT
	Ethion mono oxon [4]	177			0.007 ^	0.004 ^	NT
	Iprodione	730	2	0.3	0.058 - 0.21	0.015 - 0.050	NT
	Iprodione isomer [5]	76			0.020 ^	0.012 - 0.025	NT
	Piperonyl butoxide	356	2	0.6	0.067 ^	0.040 - 0.050	NT
	Pronamide	730	1	0.1	0.020 ^	0.007 - 0.017	NT
	Thiabendazole	733	3	0.4	0.050 ^	0.009 - 0.083	NT
8	**Tomatoes, Canned**						
	Norflurazon	368	1	0.3	0.033 ^	0.012 - 0.042	NT
9	**Tomatoes, Fresh**						
	Chlorpropham	364	1	0.3	0.017 ^	0.010 - 0.025	NT
	Diphenylamine (DPA)	364	4	1.1	0.017 - 0.025	0.008 - 0.17	NT
	Ethion	364	3	0.8	0.015 - 0.024	0.001 - 0.010	NT
	Iprodione	364	1	0.3	0.025 ^	0.015 - 0.050	NT
	Thiabendazole	364	1	0.3	0.050 ^	0.009 - 0.083	NT

Commodity / Pesticide	Samples Screened	Samples Reported	% of Samples	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm
10 Winter Squash, Fresh						
Dimethoate	246	1	0.4	0.003 ^	0.002 - 0.009	NT
Diphenylamine (DPA)	246	10	4.1	0.013 ^	0.008 - 0.030	NT
Ethion	246	1	0.4	0.007 ^	0.002 - 0.006	NT
11 Winter Squash, Frozen						
Diphenylamine (DPA)	100	3	3	0.013 ^	0.008 - 0.030	NT

KEY

^ The same concentration was reported for all detections or LODs.

NT No tolerance level was set for that pesticide / commodity pair.

[1] Two detections within the same samples as Dimethoate.

[2] One detection within the same sample as Fenamiphos sulfone.

[3] One detection within the same sample as Quintozene.

[4] Two detections within the same samples as Ethion.

[5] One detection within the same sample as Iprodione.

Note:

For those pesticide/commodity pairs where the minimum detected value is less than the limit of quantitation (3 times the limit of detection), the reported values are estimates. In a few cases, this may apply to the maximum detected value.

PESTICIDE DATA PROGRAM

Annual Summary Calendar Year 1999

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