United States Department of Agriculture
Agricultural Marketing Service
Monitoring Programs Office
8609 Sudley Rd., Ste. 206
Manassas, VA 20110

June 13, 2005

Dear Reader:

In March 2005, the U.S. Department of Agriculture's Agricultural Marketing Service released the *Pesticide Data Program Annual Summary, Calendar Year 2003*. An incorrect data source was inadvertently used to populate the Codex Maximum Residue Limit (MRL)/Extraneous Maximum Residue Limit (EMRL) values presented in Appendices E, F, G, H, and I of the Annual Summary. The erroneous data which appeared under the "Codex MRL/EMRL ppm" column of these appendices have been corrected. Corrections were also made to the cover pages for the affected appendices.

The MRL/EMRL values listed were obtained from: *Proc. of Codex Alimentarius Commission, Codex Committee on Pesticide Residues*, 36th Session, April 19-24, 2004, New Delhi, India and *Proc. of Codex Alimentarius Commission, Codex Committee on Pesticide Residues*, 35th Session (ALINORM), March 31-April 5, 2003, Rotterdam, The Netherlands.

The MRL/EMRL information herein is only intended to be an initial reference. Recipients are reminded that international regulations and MRLs frequently change and that it is important that information obtained from this Summary be verified with knowledgeable parties in the market of interest prior to sale or shipment of exports.

If you have any questions, please contact the Monitoring Programs Office at (703) 330-2300x34.

Sincerely,

Martha Lamont

Martha Lamont
Director

Enclosures

Pesticide Data Program

Annual Summary Calendar Year 2003

United States Department of Agriculture

Agricultural Marketing Service

Science and Technology Programs

Visit our Web site at: www.ams.usda.gov/science/pdp/

United States Department of Agriculture

Marketing and Regulatory Programs

Agricultural Marketing Service

1400 Independence Ave.
Washington, DC
20250

February 2005

To the Reader:

I am pleased to present the Pesticide Data Program's (PDP) 13th Annual Summary, which includes data for calendar year 2003. PDP data continue to demonstrate that the Nation's food supply is among the safest in the world.

The U.S. Department of Agriculture implemented PDP in May 1991. Since then, PDP has tested a wide range of commodities in the U.S. food supply. Using a rigorous statistical approach and the most current laboratory methods, PDP has tested both fresh and processed fruit and vegetables, grains, milk, beef, and poultry. In 2001, PDP introduced testing of finished drinking water.

PDP data are essential for the implementation of the 1996 Food Quality Protection Act, which directs the Secretary of Agriculture to collect pesticide residue data on foods most likely consumed by infants and children. The Environmental Protection Agency uses PDP data as a critical component of pesticide dietary assessments. The extensive and reliable PDP results provide realistic exposure information to the EPA assessment process.

PDP is a partnership with cooperating State agencies responsible for sample collection and analysis. Ten States participated in 2003: California, Colorado, Florida, Maryland, Michigan, New York, Ohio, Texas, Washington, and Wisconsin. Reliable conclusions about our food supply can be drawn from PDP results because these States together represent all regions of the country and over half the Nation's population.

This Summary's format is intended to provide the reader with thorough and accurate information. A detachable form is included at the end of this report for your comments and suggestions on how we can further improve this report.

Sincerely,

Kenneth C. Clayton
Acting Administrator

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Participating Organizations

The States participating in the Pesticide Data program (PDP) deserve special recognition for their contributions to the program. The dedication and flexibility of sample collectors allow the Agricultural Marketing Service (AMS) to adjust sampling protocols to respond to changing trends in commodity distribution and availability. PDP acknowledges the contributions of the U.S. Department of Agriculture's (USDA) AMS National Science Laboratory and Grain Inspection, Packers and Stockyards Administration Laboratory in providing testing services to the program and the National Agricultural Statistics Service for providing statistical support. PDP also acknowledges the exceptional support of the Health Effects Division staff of the U.S. Environmental Protection Agency, Office of Pesticide Programs in helping set the direction for PDP.

USDA welcomes all comments on this summary and on the PDP. Comments may be submitted using the form provided on the final page of this report or electronically to amsmpo.data@usda.gov.

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

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Participating State Agencies

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California Department of Pesticide Regulation
Colorado Department of Agriculture
Florida Department of Agriculture and Consumer Services
Maryland Department of Agriculture
Michigan Department of Agriculture
New York Department of Agriculture and Markets
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Texas Department of Agriculture
Washington State Department of Agriculture
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Executive Summary

In 1991, the U.S. Department of Agriculture (USDA) was charged with designing and implementing a program to collect data on pesticide residues in food. The responsibility for this program was given to USDA's Agricultural Marketing Service (AMS).

This summary of results for 2003 is the 13th annual summary of the USDA Pesticide Data Program (PDP). This publication, the PDP database file for 2003, and annual summaries and database files for previous years are available on the Internet at www.ams.usda.gov/science/pdp. Printed copies of all previous summary reports are available on request from the AMS Monitoring Programs Office (MPO).

Many USDA offices work together to achieve the goals and objectives of PDP. The USDA National Agricultural Statistics Service (NASS) provides statistically reliable data on chemical usage at the State level and collects economic data that link chemical usage with economic characteristics. USDA's Economic Research Service (ERS) analyzes data from the USDA's AMS and NASS to understand producer behavior and to determine the impact various production practices, policies, and regulations might have on the Nation's agricultural production, food supply, and consumers. The nationwide food consumption surveys of USDA's Agricultural Research Service provide data about the diets of Americans of all ages. This survey data can be linked to PDP residue data in pesticide exposure assessments. AMS, through it's MPO, oversees the planning and policy development for PDP.

PDP data are used by the U.S. Environmental Protection Agency (EPA), the U.S. Food and Drug Administration (FDA), ERS and USDA's Foreign Agricultural Service (FAS), academic institutions, groups within the private sector representing food producers, chemical manufacturers, environmental interest groups, and food safety organizations. EPA uses PDP data to prepare realistic pesticide dietary exposure assessments as part of its ongoing effort to implement the 1996 Food Quality Protection Act. PDP data are also used by the Government and agricultural community to examine pesticide residue issues that may affect agricultural practices and U.S. trade. PDP data are valuable for use in addressing food safety issues and in promoting export of U.S. commodities, particularly in the competitive global market.

In estimating the potential risks of pesticide residues in food, EPA uses a step-wise tiered approach. As a first step, EPA may use a conservative, worst-case scenario and assume that a pesticide is applied to the fullest extent permitted by the pesticide label; that is, on every acre of each approved crop and at the maximum rate and frequency allowed. EPA may also assume that residues on treated crops are present at the maximum allowed level. Exposure estimates based on such assumptions are likely to significantly exceed actual exposure. When an initial assessment indicates potential risk of concern, EPA refines its assessment using realistic exposure data. Refinements may include the use of additional data such as: (1) the percent of a crop treated with a pesticide; (2) studies of the effects of washing, cooking, processing, and storage; and (3) residue monitoring data. At this point, PDP data can be pivotal. PDP sampling procedures were designed to capture actual residues in the food supply as close as possible to the time of consumption. PDP concentrates its efforts in providing better pesticide residue data on foods that are most consumed by children and incorporates recommendations made in 1993 by the National Academy of Sciences (NAS) in its report "*Pesticides in the Diets of Infants and Children.*"

In 2003, sampling and testing program operations were carried out with the support of 10 States: California, Colorado, Florida,

Maryland, Michigan, New York, Ohio, Texas, Washington, and Wisconsin. Federal laboratories providing testing services included USDA's AMS National Science Laboratory and the Grain Inspection, Packers and Stockyards Administration laboratory. Participating water utilities provided the drinking water samples, which were tested by the California, Colorado, and New York State laboratories. MPO is responsible for administering the program, coordinating sampling actions, directing technical performance issues and quality assurance measures, and managing database activities.

PDP food sampling is based on a rigorous statistical design ensuring that the data are reliable for use in exposure assessments and can be used to draw various conclusions about the Nation's food supply. Pesticides and commodities included each year in PDP are selected based on EPA data needs and on information about the types and amounts of food consumed by infants and children. Fruit and vegetable samples collected by each of the 10 participating States are apportioned according to that State's population. Samples are randomly chosen close to the time and point of consumption, and reflect what is typically available to the consumer throughout the year. Samples are selected without regard to country of origin or organic labeling. The monthly sampling rate is 62 samples per commodity, except for highly-seasonal commodities. For seasonal commodities, sampling rates are adjusted to reflect market availability.

During 2003, PDP tested fresh and processed fruit and vegetables, barley, wheat flour, butter, and drinking water for various insecticides, herbicides, fungicides, and growth regulators. In late 2002, EPA identified the triazole-derivative class of fungicides and their metabolites as a critical data need. PDP immediately responded by developing specialized methods of analysis for apples, peaches (fresh and canned), and wheat flour. These commodities were introduced for triazole and metabolite analyses in January 2003. Canned peaches and wheat flour were also analyzed using multi-residue methods for a number of additional pesticide residues.

Of the 12,316 total samples collected and analyzed, 9,732 were fruit and vegetable commodities including asparagus (fresh and canned), cantaloupe, corn (frozen, sweet), cucumbers, green beans (canned), mushrooms, onions, peaches (canned), pears, pear juice (concentrate and puree), peas (frozen, sweet), spinach, sweet bell peppers, sweet potatoes, and tomatoes; and apples and fresh peaches, which were analyzed only for triazoles. PDP also tested 452 barley, 606 wheat flour, 732 butter, and 794 drinking water samples.

Excluding drinking water, approximately 87 percent of all samples were domestic and 12 percent were imported. One percent was of unknown origin. Asparagus, cantaloupe, cucumbers, sweet bell peppers, and tomatoes accounted for most of the imported commodities.

Of the samples tested by multiresidue methods, 43 percent of the fruit and vegetable samples, 8 percent of barley samples, 45 percent of wheat flour samples, and 99 percent of the butter samples had detectable residues. Residues detected in wheat flour resulted primarily from low level detections of the triazole alanine and triazole acetic acid metabolites. Residue findings in butter were primarily low level residues of endosulfan sulfate and the environmental contaminants dieldrin and DDE p,p'.

Overall, approximately 54 percent of all samples tested by multiresidue methods contained no detectable pesticides (parent compound and metabolite(s) is combined), 22 percent contained one pesticide, and 24 percent contained more than one pesticide. Generally, fewer pesticides were found in processed products and grains than in fresh commodities. Low levels of environmental contaminants were detected in cantaloupe, cucumbers, spinach, and butter at concentrations below levels that trigger regulatory actions.

In finished drinking water, PDP detected low levels (measured in parts per trillion) of some pesticides, primarily widely used herbicides. None of the detections exceeded established EPA Maximum Contaminant Levels or Health Advisory levels.

PDP testing found residues exceeding an established tolerance in 0.3 percent of the 11,522 samples (excluding drinking water). A tolerance is the maximum amount of a pesticide residue allowable on a raw agricultural commodity. Established tolerances are listed in the Code of Federal Regulations, Title 40, Part 180. Residues with no established tolerance were found in 1.5 percent of all samples (excluding drinking water). These residues were detected at very low concentrations and may be the result of spray drift, crop rotations, or the use of sanitizers in food handling establishments. PDP communicates these findings to FDA when they are reported by testing laboratories.

PDP continuously strives to improve methods for the collection, testing, and reporting of data. These data are freely available to EPA and other Federal and State agencies charged with regulating and setting policies on the use of pesticides. They are also available to all stakeholders by hard copy, Internet, or custom reports generated by the office.

Additional copies of this summary report may be obtained by calling the Monitoring Programs Office at (703) 330-2300 or by mailing the form provided at the end of this report. This 2003 PDP Summary is also available on the PDP Web site at http://www.ams.usda.gov/science/pdp.

Acronyms

AMS	Agricultural Marketing Service
ARS	Agricultural Research Service
CCPR	Codex Committee on Pesticide Residues
CFR	Code of Federal Regulations
CV	Coefficient of Variation
EMRL	Extraneous Maximum Residue Limit
EPA	Environmental Protection Agency
ERS	Economic Research Service
ESA	Ethane Sulfonic Acid
eSIF	Electronic Sample Information Form
FAO	Fresh Aquatic Organism
FAPAS	Food Analysis Performance Assessment Scheme
FAS	Foreign Agricultural Service
FDA	Food and Drug Administration
FQPA	Food Quality Protection Act
GC	Gas Chromatography
GIPSA	Grain Inspections, Packers and Stockyards Administration
GLPs	Good Laboratory Practices
HA	Health Advisory
HPLC	High Performance Liquid Chromatography
LC	Liquid Chromatography
LIB	Laboratory Information Bulletin
LOD	Limit of Detection
LOQ	Limit of Quantitation
MCL	Maximum Contaminant Level
MRM	Multiresidue Method
MRL	Maximum Residue Limit
MS	Mass Spectrometry
NAS	National Academy of Sciences
NASS	National Agricultural Statistics Service
NSL	National Science Laboratory
OA	Oxanilic Acid
OPMP	Office of Pest Management Policy
PAM	Pesticide Analytical Manual
PDP	Pesticide Data Program
ppb	parts per billion
ppm	parts per million
ppt	parts per trillion
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
QAO	Quality Assurance Officer
QAU	Quality Assurance Unit
QuEChERS	Quick, Easy, Cheap, Effective, Rugged and Safe
SIF	Sample Information Form
SOP	Standard Operating Procedure

SPE	Solid Phase Extraction
SQL	Structured Query Language
SSL	Secure Sockets Layer
RDE	Remote Data Entry
T-D	Triazole-Derivative
USDA	United States Department of Agriculture
USGS	United States Geological Survey

Pesticide Data Program (PDP)
Annual Summary, Calendar Year 2003

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

The Pesticide Data Program (PDP) was initiated in 1991 to collect data on pesticide residues in food. As illustrated in Figure 1, there are three major components to this program: sample collection, laboratory analysis, and database management. In 2003, all samples except drinking water samples were collected by 10 States (California, Colorado, Florida, Maryland, Michigan, New York, Ohio, Texas, Washington, and Wisconsin) through cooperative agreements with their respective agencies. Water sampling was conducted by participating drinking water treatment facility personnel in five States (California, Colorado, Kansas, New York, and Texas). Laboratory services were provided by eight States (California, Colorado, Florida, Michigan, New York, Ohio, Texas, and Washington) and two Federal laboratories: the U.S. Department of Agriculture's (USDA) Agricultural Marketing Service (AMS) National Science Laboratory (NSL) and Grain Inspection, Packers, and Stockyards Administration (GIPSA) laboratory. The AMS Monitoring Programs Office (MPO) is responsible for administrative, sampling, technical, and database activities.

The 10 States participating in PDP are shown in Figure 2 as well as the 13 neighboring States that are in the direct distribution networks of the PDP participating States. These neighboring States are Alaska, Connecticut, Delaware, Hawaii, Idaho, Massachusetts, Nevada, New Jersey, New Mexico, Oklahoma, Vermont, Virginia, and Wyoming. Together, these States represent about 50 percent of the Nation's population and all 4 census regions of the United States. These States also represent the major producers of fruit and vegetables. Water sites are selected in collaboration with EPA based on data needs.

AMS works closely with the U.S. Environmental Protection Agency (EPA) to select commodities and pesticides for PDP testing. Commodities selected are those most often consumed by the U.S. consumers, with emphasis on foods consumed by infants and children. The 20 commodities sampled and analyzed this year were asparagus (fresh and canned), barley, butter, cantaloupe, sweet corn (frozen), cucumbers, green beans (canned), mushrooms, onions, peaches (canned), pears, pear juice (concentrate and puree), sweet peas (frozen), spinach, sweet bell peppers, sweet potatoes, tomatoes, water, and wheat flour; and apples and fresh peaches which were analyzed only for triazoles.

Fruit and vegetable samples are collected at sites as close to the time and point of consumption as possible. These sites include terminal markets and large chain store distribution centers from which food commodities are supplied 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 (such as fungicides and growth regulators) and takes into account residue degradation 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 2003, more than 500 sites granted access and provided information, including site volume data, to sample collectors. This voluntary cooperation is important to PDP and makes it possible to adjust sampling protocols in response to fluctuations in food distribution and production. Sampling sites are proprietary program information and specific site locations are not disclosed.

Figure 1. Overview of PDP Management and Operations

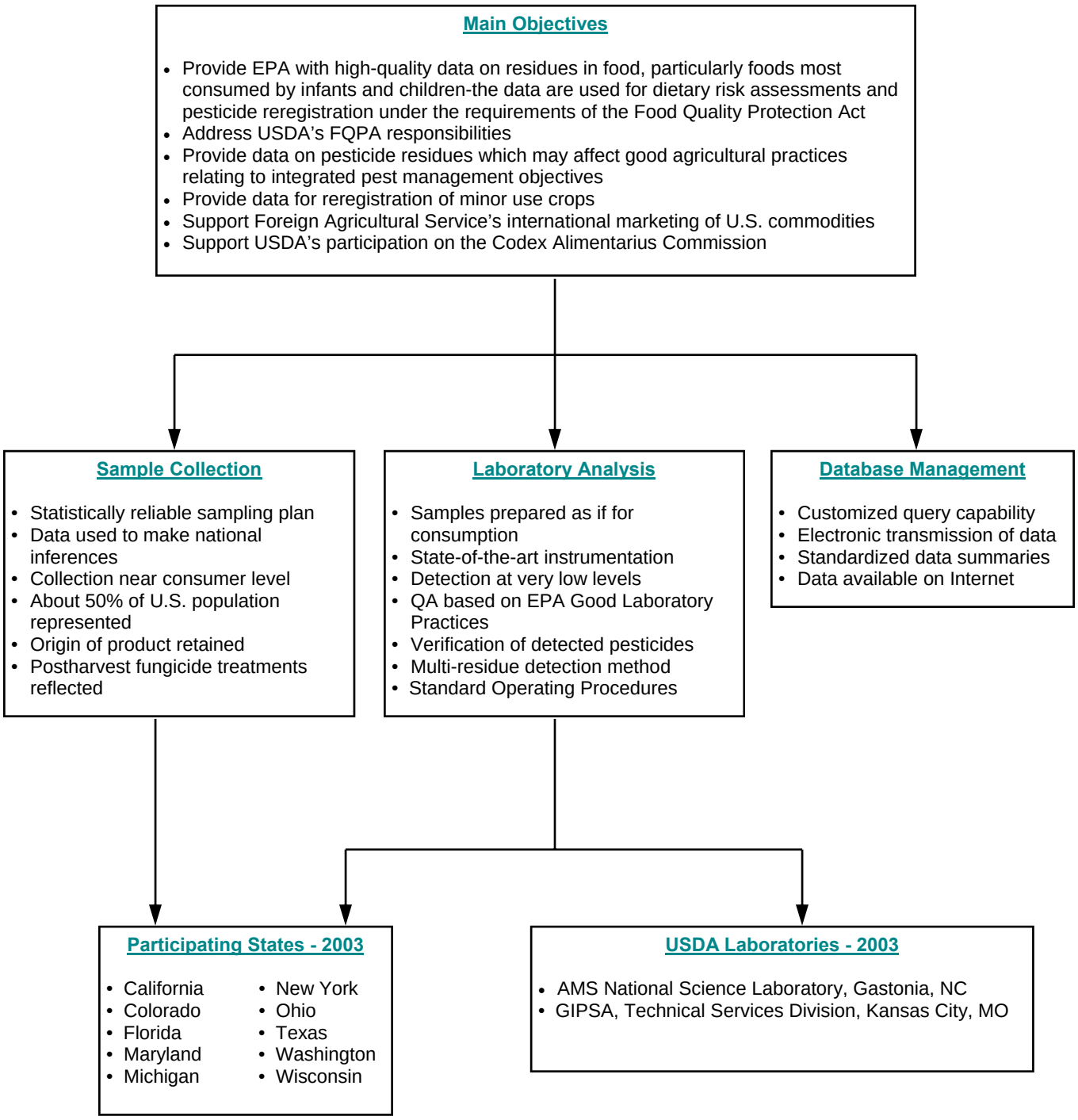
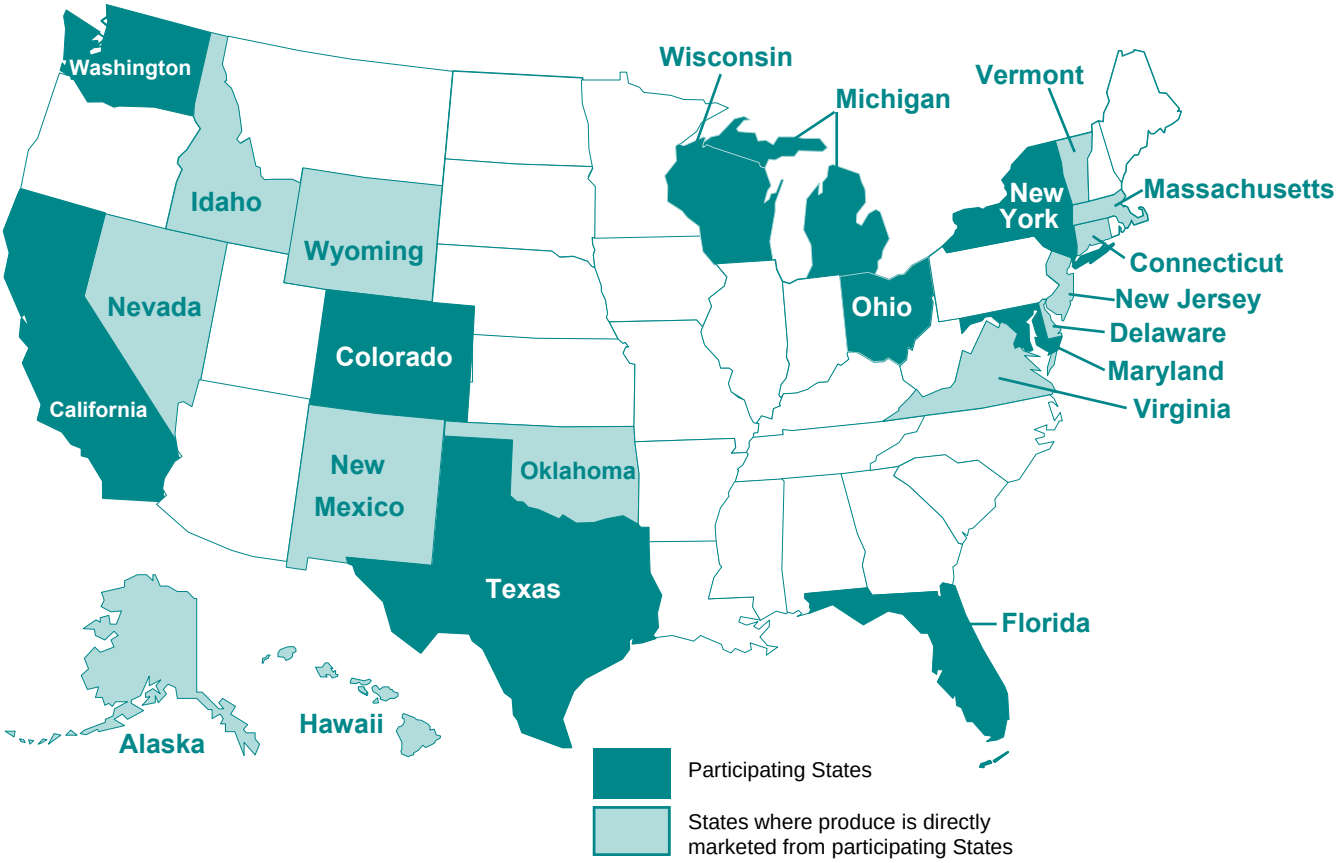


Figure 2. Participating States and their Geographical Distribution Areas



Pesticides screened by PDP include compounds for which toxicity data and preliminary estimates of dietary exposure indicate the need for more extensive residue data. PDP also monitored pesticides for which EPA had modified use directions (i.e., reduced application rates or frequency) as part of risk mitigation requirements. See appendices for a comprehensive list of pesticides in the program. PDP reviews and updates commodities and pesticides in the program to address EPA data needs.

During late 2002, EPA identified the triazole-derivative class of fungicides and their associated metabolites as a critical data need. PDP immediately responded by developing specialized methods of analysis for apples, peaches (fresh and canned), and wheat flour. These commodities were introduced for triazole and metabolite analyses in January 2003. In addition, canned peaches and wheat flour were analyzed using multiresidue methods for a number of additional pesticide residues.

PDP has an important role in the implementation of the 1996 Food Quality Protection Act (FQPA). This law 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). Other Government agencies and industry have used PDP data to promote the export of U.S. commodities to international markets.

Customized queries of the PDP database were requested from various sources to support risk assessment and pesticide information priorities. For example, PDP has 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/pesticide pairs. Data can be sorted by data elements such as sample origin, product type, and date of collection.

PDP has also provided data to the Codex Alimentarius Commission for use in the Codex Committee on Pesticide Residues (CCPR) method uncertainty trials. Data submitted included methods of analysis, residues detected, and recovery, replicate, and proficiency testing data.

Because PDP collects data on food commodities primarily for exposure assessment evaluations, program operations differ markedly from those followed by regulatory monitoring programs for 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 designed to achieve the lowest detectable levels rather than quick sample turn around. As a dietary risk assessment program, PDP's primary efforts are focused on testing registered uses for commodities in the program. PDP is not a regulatory program and screening for non-registered uses, although not required, is an added benefit. Appendix A identifies the commodity history in PDP from the beginning of the program in 1991 through 2004.

II. Sampling Operations

♦ Background

The goal of the PDP sampling program is to obtain a statistically defensible representation of the U.S. food supply. In this manner, PDP data reflect actual pesticide residue exposure from food. Using a rigorous statistical design, PDP has developed extensive procedures to ensure that samples are selected randomly from the National food distribution system and reflect what is typically available to the consumer. The Standard Operating Procedures (SOPs) for PDP sampling are available on the Internet at www.ams.usda.gov/science/pdp.

Fruit, vegetable, and grain samples were collected by trained State inspectors at terminal markets and large chain store distribution centers across the country. At these locations, information is usually available about the identity and origin of the sample. Water samples were collected by water treatment facility personnel. Information on all samples was captured for inclusion in PDP database files.

PDP sample origin data identify the State or country where the commodity was produced. A comparison of PDP sample origin data to State production and import data collected by USDA's National Agricultural Statistics Service (NASS) shows that PDP sampling is representative of the U.S. food supply. PDP sampling operations are adjusted according to product availability. The number of food samples collected in each participating State is determined by State population. The commodity collection schedule for 2003 is shown in Table 1.

SOPs provide criteria for site selection and specific instructions for sample selection, shipping and handling, and chain-of-custody. 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.

PDP Sample Information Forms (SIFs) are used for chain-of-custody and to capture necessary information needed to characterize the sample. Sample collectors use the forms to record information such as (1) the State of sample collection, (2) the collection date, (3) the sampling site (four-digit code), (4) the commodity code, and (5) the testing laboratory code. Information from these five data elements is combined to form a unique PDP sample identification number for each sample. Other information recorded about each sample includes the State or country of origin, product variety, production claims (such as organically grown), or any postharvest chemical applications. Commodities are shipped by overnight delivery and with the use of gel cold packs as appropriate to maintain sample integrity.

Table 1. Commodity Collection Schedule for 2003

Commodity	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
Apples*	X	X	X	X
Asparagus, Canned			X	X
Asparagus, Fresh	X	X		
Barley	X	X	X	
Butter	X	X	X	X
Cantaloupe				X
Cucumbers	X	X	X	X
Green Beans, Canned	X	X	X	X
Mushrooms	X	X	X	
Onions	X	X	X	X
Peaches, Canned	X	X	X	X
Peaches, Fresh*		X	X	
Pear Juice, Concentrate/Puree	X	X		
Pears, Fresh				X
Spinach	X	X	X	X
Sweet Bell Peppers	X	X	X	X
Sweet Corn, Frozen	X	X	X	
Sweet Peas, Frozen	X	X	X	
Sweet Potatoes	X	X	X	X
Tomatoes	X	X	X	X
Water, Finished Drinking	X	X	X	X
Wheat Flour	X	X	X	X

X = Sample Collection

* = Analyzed for triazole fungicides and metabolites only

♦ Fresh and Processed Fruit and Vegetables

Approximately 79 percent of all samples collected and analyzed were fruit and vegetables, including fresh and processed products. Fresh commodities were asparagus, cantaloupe, cucumbers, mushrooms, onions, pears, spinach, sweet bell peppers, sweet potatoes and tomatoes; and apples and peaches, which were analyzed only for triazoles. The processed commodities included asparagus (canned), butter, sweet corn (frozen), green beans (canned), peaches (canned), pear juice (concentrate and puree), and sweet peas (frozen). All fresh and frozen fruit and vegetable samples weigh either 3 or 5 pounds depending on commodity. The weight of samples of canned commodities may vary, but usually ranges from 1 to 3 pounds.

Samples were collected at either terminal markets or large chain store distribution centers. Participating State agencies compile and maintain lists of sampling sites. The States provide AMS and NASS with annual volume information for commodities distributed at each site. This information is used to weight the site to determine the probability for sample 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 given to a site that distributes 10,000 pounds. The

probability-proportionate-to-size method of site selection then results in the larger site being 10 times more likely to be selected for sampling than the smaller site. Participating States work with NASS to develop statistical procedures for site weighting and selection. States are also given the option of having NASS perform their quarterly site selection. The number of sampling sites and the volume of produce distributed by the sites vary greatly between States. Sampling plans, including sampling dates, sites (primary and alternate), targeted commodities, and testing laboratories, are prepared by each State on a quarterly basis. Collection of commodities is randomly assigned to weeks of the month, prior to selection of specific sampling dates within a week. Because sampling sites are selected for the entire quarter, States may assign the sites to particular months based on geographic location.

State population figures are used to assign the number of fruit and vegetable samples scheduled for collection each month. These population-based numbers are as follows: California, 14; Colorado, 2; Florida, 7; Maryland, 4; Michigan, 6; New York, 9; Ohio, 6; Texas, 8; Washington, 4; and Wisconsin, 2. This schedule results in a monthly target of 62 samples per commodity, or 744 samples of each commodity per year.

Commodities are transshipped to designated laboratories so that analytical efforts can target commodity-specific data needs according to agricultural uses. With the exception of samples collected in California and Maryland, all fruit and vegetable samples for a given commodity are assigned to one laboratory facility. For example, a facility may be assigned all canned peaches and tomatoes for the time that those commodities are in the program, generally two years.

The collection of pear juice concentrate/puree was a limited, specially focused survey conducted between July 2002 and June 2003. Sixty-six samples were collected and analyzed. Sample collection methods differed from those used for other produce. Because pear juice concentrate/puree is usually processed into 50-gallon drums for distribution and use in other food processing facilities, sampling was accomplished through the use of uniquely designed sampling kits that were supplied by contract to pear juice producers. Samples were collected by the producer and sent directly to a State laboratory for analysis.

Excluding pear juice, a total of 9,666 fresh and processed fruit and vegetable samples were collected and analyzed during 2003. The number of samples collected per State is shown in Table 2. The total number of samples per commodity, including pear juice, and the percentage of each that were of domestic, imported, or unknown origin, is shown in Figure 3. Fruit and vegetable samples originated from 41 States and 24 foreign countries (Appendix B).

♦ Barley and Wheat Flour

PDP collected and analyzed 452 samples of regular milled, pearl, pot, or scotch barley and 606 samples of bleached, white, enriched wheat flour. Barley originated from 19 States (97% of total) and 2 foreign countries (2% of total); wheat flour originated from 25 States (99% of total) and 1 foreign country (<1% of total). One percent of the barley samples and less than one percent of the wheat flour samples were of unknown origin. Refer to Appendix B for detailed sample origin information. Three-pound samples of barley and five-pound samples of wheat flour were collected from routine PDP sampling sites. Analysis was performed by the GIPSA laboratory in Kansas City, MO.

♦ Butter

PDP collected and analyzed 732 samples of butter. Target samples were one-pound varieties that included salted or unsalted sweet butter in cubes or sticks. Samples originating in 25 States and were collected and shipped to the AMS NSL in Gastonia, NC, for analysis. Sampling began January 2003 and ended December 2003.

Table 2. Samples Collected by Each Participating State

Fresh Fruit and Vegetables

State	AP	AS	CN	CU	MU	ON	PC	PE	PP	SP	SW	TO	Total Fresh
California	168	82	42	167	124	168	60	42	168	168	167	168	1,524
Colorado	24	12	6	24	18	22	10	6	24	22	24	24	216
Florida	84	42	21	84	63	84	31	21	84	84	84	84	766
Maryland	48	19	12	47	34	48	15	12	45	46	46	48	420
Michigan	72	34	18	72	53	72	25	18	72	72	71	71	650
New York	108	54	27	108	81	108	45	28	108	108	108	108	991
Ohio	72	28	18	71	54	72	21	18	72	71	71	72	640
Texas	96	45	24	94	71	95	35	24	96	94	92	95	861
Washington	48	23	12	48	36	48	18	12	48	47	47	48	435
Wisconsin	24	12	6	24	18	24	9	6	24	24	24	24	219
	744	351	186	739	552	741	269	187	741	736	734	742	6,722

Processed Fruit and Vegetables *

State	AA	CC	CS	GB	PS	Total Processed	Total F&V
California	84	168	124	167	125	668	2,192
Colorado	12	26	18	24	18	98	314
Florida	42	86	63	84	63	338	1,104
Maryland	17	48	29	48	29	171	591
Michigan	29	74	54	72	54	283	933
New York	54	110	81	108	81	434	1,425
Ohio	34	72	54	72	55	287	927
Texas	47	95	71	96	71	380	1,241
Washington	23	48	36	48	35	190	625
Wisconsin	12	24	17	24	18	95	314
	354	751	547	743	549	2,944	9,666

Grain Product

State	BY	WF
California	123	133
Colorado	17	19
Florida	29	81
Maryland	34	41
Michigan	50	59
New York	80	102
Ohio	38	69
Texas	33	43
Washington	36	46
Wisconsin	12	13
	452	606

Dairy Product

State	BU
California	166
Colorado	24
Florida	82
Maryland	48
Michigan	72
New York	108
Ohio	72
Texas	93
Washington	48
Wisconsin	19
	732

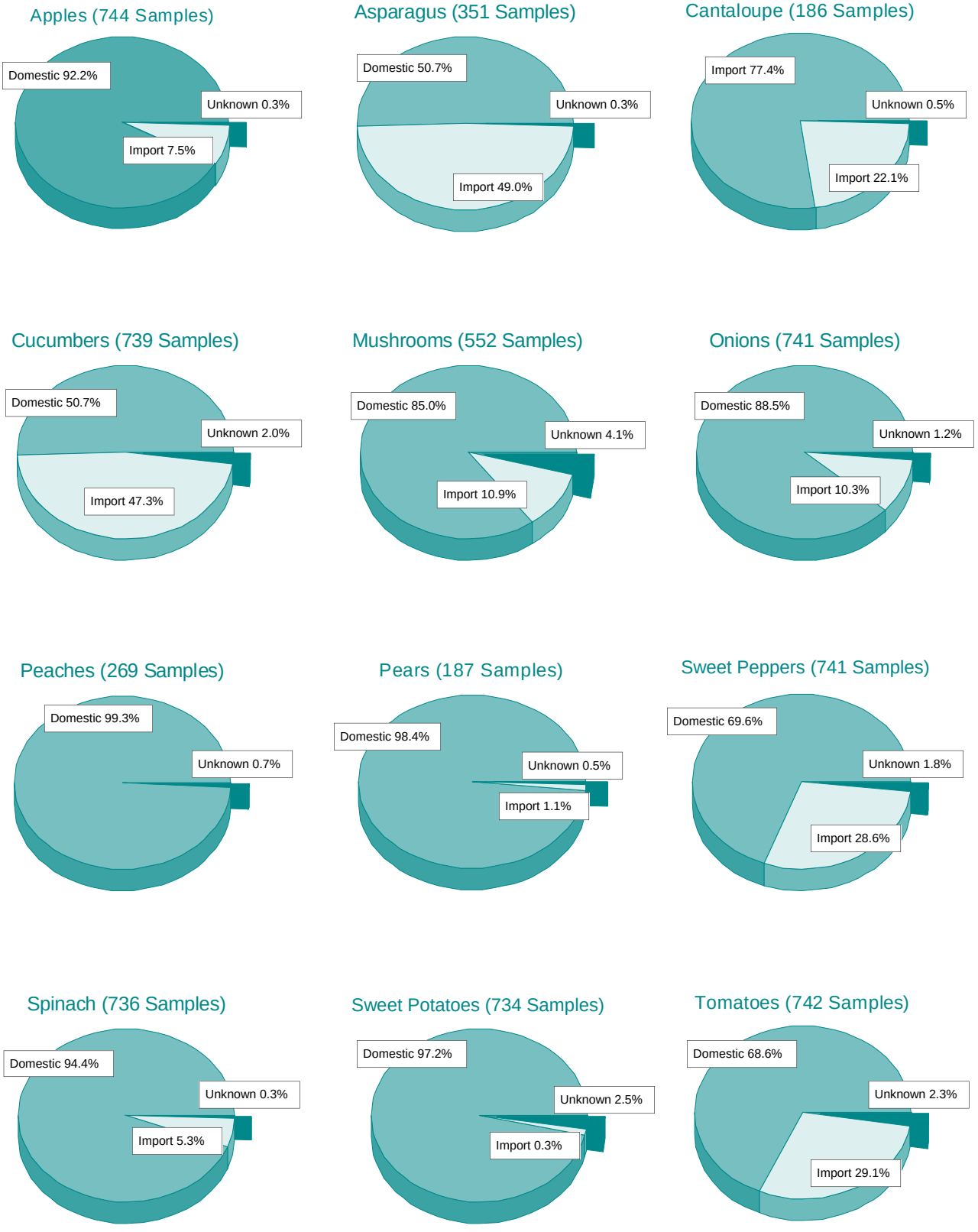
Commodities

AA = Asparagus (Canned)	CS = Sweet Corn (Frozen)	PS = Sweet Peas (Frozen)
AP = Apples	GB = Green Beans (Canned)	SP = Spinach
AS = Asparagus (Fresh)	MU = Mushrooms	SW = Sweet Potatoes
BU = Butter	ON = Onions	TO = Tomatoes
BY = Barley	PC = Peaches (Fresh)	WF = Wheat Flour
CC = Peaches (Canned)	PE = Pears (Fresh)	
CN = Cantaloupe	PP = Sweet Bell Peppers	

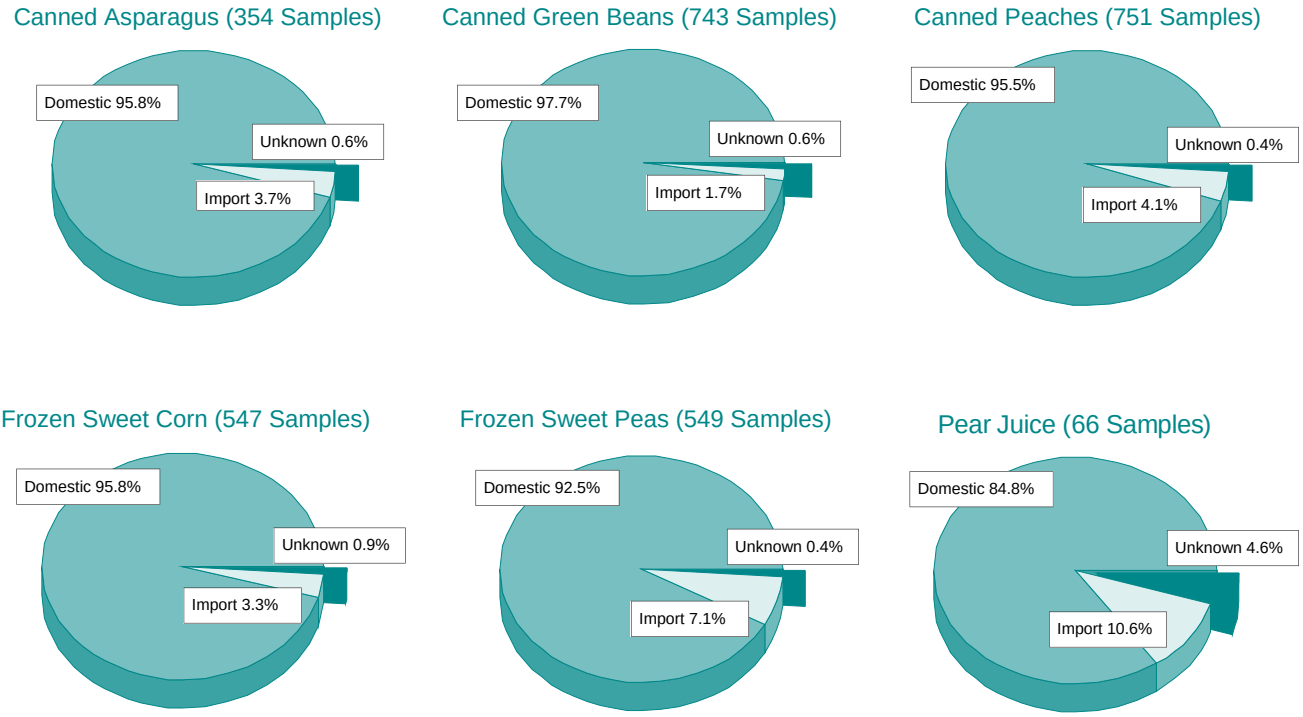
* Table 2 does not show the 66 pear juice concentrate/puree samples that were sent directly to a PDP laboratory for analysis from processing facilities in California, Florida, Oregon, and Washington.

Figure 3. Commodity Origin

A. Fresh Commodities



B. Processed Commodities



♦ Drinking Water

PDP collected 794 samples from community water systems in California, Colorado, Kansas, New York, and Texas. Samples were collected weekly by each treatment facility and sent to State laboratories for analysis. Water testing was started in 2001 starting with sites in California and New York. At that time, samples from these States were collected bi-monthly at 11 sites in California and 11 sites in New York. In 2002, five new sites were added in Colorado, Kansas, and Texas. The sites in California and New York reflect two highly populated regions with divergent climates and hydrogeological settings. These sites reflect the diversity of land uses within the two States and include metropolitan areas, agricultural regions, and protected watersheds.

The sites in Colorado (2 sites), Kansas (2 sites), and Texas (1 site) are small rural community water systems in regions where the U.S. Environmental Protection Agency (EPA) specifically requested monitoring data. These sites serve populations of fewer than 50,000 people, use surface water, and are regions for which EPA had ancillary data (such as agricultural pesticide usage). Treatment method was not part of the selection criteria.

♦ Triazole Sampling Project

In addition to routine apple, peach, and wheat flour sampling for multiresidue and triazole analyses, PDP conducted a special sampling project from July through December 2003. In response to an urgent EPA data request, PDP coordinated with industry to collect banana, egg, grape, milk, and peanut butter samples for triazole analysis. Approximately 1,850 samples were collected by PDP in 10 different States and shipped to private contract laboratories for analysis. Results of this special sampling project are not presented this summary.

Triazole alanine, triazole acetic acid, and 1,2,4-triazole are unregulated metabolites common to

many triazole compounds although their presence cannot be attributed to any one parent compound. EPA is presently evaluating the available data to determine if these compounds should be included in the tolerance expression (i.e. regulated) for some or all of the parent compounds. Because of possible human toxicity concerns, EPA has specifically requested that data be collected for these three compounds to help provide a comprehensive health risk assessment for the parent compounds.

III. Laboratory Operations

♦ Overview

Ten laboratories (8 State and 2 Federal) performed analyses for PDP. These laboratories are equipped with instrumentation capable of detecting residues at very low levels. The laboratory staff receives intensive training and must demonstrate analytical proficiency on a periodic 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 and Processed Fruit and Vegetables

PDP participating laboratories analyzing fruit and vegetables monitored 178 pesticides plus 60 metabolites, degradates, and isomers using multiresidue methods (MRMs). 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) apples are washed with stems and cores removed; (2) asparagus and spinach have inedible portions removed and are washed; (3) cantaloupes are cut in half and seeds and rinds are removed; (4) cucumbers, mushrooms and sweet potatoes are washed with inedible portions removed; (5) onions are peeled and washed; (6) peaches are washed, the stems and leaves removed, and pitted; (7) pears are washed with the stems and cores removed; (8) sweet bell peppers are washed with stems, cores and seeds removed; and (9) tomatoes are washed and stems removed. Processed samples (canned and frozen) of 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 may be held in storage (freezer or shelf) until the entire sample set is ready for analysis. Samples 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 FDA Luke I (Section 302 of Pesticide Analytical Manual (PAM) I) and Luke II (FDA Laboratory Information Bulletin (LIB) 3896) extraction procedures are used by PDP laboratories in Ohio and Texas. California and Washington use modifications of the MRM developed by the California Department of Food and Agriculture (CDFA). New York uses a method based on the Agriculture and Agri-Food Canada solid phase extraction (SPE) method with some modifications based on the Luke procedure. During the first portion of 2003, Florida used a variation of the CDFA MRM and Michigan used a variation of the Luke procedure. During the latter part of 2003, Florida and Michigan validated a new method, the QuEChERS method, developed and published in July 2003 by the USDA Agricultural Research Service

(ARS). They used this method to analyze PDP samples collected during late 2003. All MRMs are determined, through method validation procedures, to produce equivalent data for PDP analytical purposes. Residues are extracted from samples with the use of organic solvents followed by various cleanup procedures such as SPE.

Gas chromatography (GC) and liquid chromatography (LC), coupled with selective detectors and mass spectrometry (MS) systems, are used for the initial identification and quantitation of pesticides. Laboratories are increasing their use of GC and LC/MS-MS tandem systems and are specifically focusing on LC/MS techniques to broaden the scope of testing and keep pace with emerging analyte chemistries. All residues initially identified must be verified. Confirmation is accomplished by MS, alternate detection systems, or alternate chromatographic behavior. Verification is considered crucial 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.

♦ Barley and Wheat Flour

The USDA GIPSA laboratory in Kansas City, MO, analyzed barley samples for 43 pesticides plus 10 metabolites and isomers and wheat flour samples for 57 pesticides plus 13 metabolites and isomers. On arrival at the testing facility, samples are visually examined for acceptability and discarded if spoiled or otherwise inedible. Barley samples were ground before being 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 barley and wheat flour samples was accomplished using solvent extraction and SPE cleanup coupled with mass spectrometry (MS) detection or post-column derivatization, high performance liquid chromatography (HPLC) detection systems.

♦ Butter

The USDA AMS National Science Laboratory in Gastonia, NC, monitored butter samples for 89 pesticides plus 18 metabolites, degradates, and isomers. Upon arrival at the testing facility, samples were visually examined for acceptability and discarded if spoiled. Samples were refrigerated until homogenized. Generally, one-pound samples consisting of four one-quarter pound units were received. These one-quarter pound units were separated into roughly four equivalent pieces. Each piece was mixed with a piece from each of the other three portions to ensure homogeneity. The sample was then uniformly mixed and extracted using solvent extraction followed by SPE cleanup. Samples were analyzed using MS detection, selective detectors, or post-column derivatization HPLC.

♦ Drinking Water

The California, Colorado, and New York laboratories analyzed drinking water for approximately 169 pesticides plus 61 metabolites and isomers determined as compounds of interest based on consultations with EPA and multiresidue feasibility. Each sample consisted of three one-liter amber glass bottles collected at the water treatment facility. Upon arrival at the testing laboratory, samples were visually examined for acceptability and discarded if warm to the touch or leaking. Samples were refrigerated until time of analysis and extracted within 96 hours of collection. A one-liter bottle was extracted for compounds amenable to GC analysis and one for compounds amenable to HPLC analysis. The remaining bottle was held in reserve or extracted for specialty compounds requiring separate extraction/analytical procedures [e.g., ethane sulfonic acid (ESA) and oxanilic acid (OA) analogues of alachlor, acetochlor, and metolachlor]. Extraction methods used were based on SPE methods developed by the U.S. Geological Survey (USGS) and were independently validated by each testing laboratory. Samples were analyzed using MS detection (single and tandem GC and HPLC technologies), selective detectors, or

post-column derivatization HPLC detection systems.

♦ Triazole Project

Beginning in January 2003, State laboratories in New York and Washington and the USDA GIPSA laboratory in Kansas City, MO, participated in a full-year special monitoring study of the triazole-derivative class of fungicides including three metabolites, 1,2,4-triazole, triazole acetic acid, and triazole alanine. These laboratories performed the analyses using LC coupled with tandem MS in order to achieve the low parts per billion (ppb) detection limits required for dietary risk assessment. EPA and the State laboratories worked with chemists from the crop protection industry to develop and validate methods of analysis with the required low detection limits. The New York laboratory analyzed fresh and canned peaches, the Washington laboratory analyzed apples, and GIPSA analyzed wheat flour. Testing for the three common metabolites required development of special analytical techniques in addition to the more conventional PDP multiresidue methods. The remaining 19 target parent compounds, isomers, and other metabolites were determined by GC coupled with MS detection or LC/MS-MS.

Several commodities were tested for residues of triazole fungicides and their metabolites. Apples (744 samples) and fresh peaches (269 samples) were tested exclusively for triazole fungicides and their metabolites whereas canned peaches and wheat flour were also tested for other classes of pesticides. For canned peaches, 371 of the 751 samples were tested for triazole fungicides and their metabolites as well as other classes of pesticides. All 606 of the wheat flour samples were tested for triazole fungicides and their metabolites as well as other classes of pesticides.

♦ Quality Assurance Program

The primary 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 the PDP Quality Assurance (QA) program is provided through SOPs based on EPA 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 GLPs, the QAU operates independently from the laboratory staff. Preliminary data 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 monitors the participants' performance through proficiency testing samples, QAU quarterly internal reviews, and on-site visits. Additional information on the PDP QA program is provided in Appendix C.

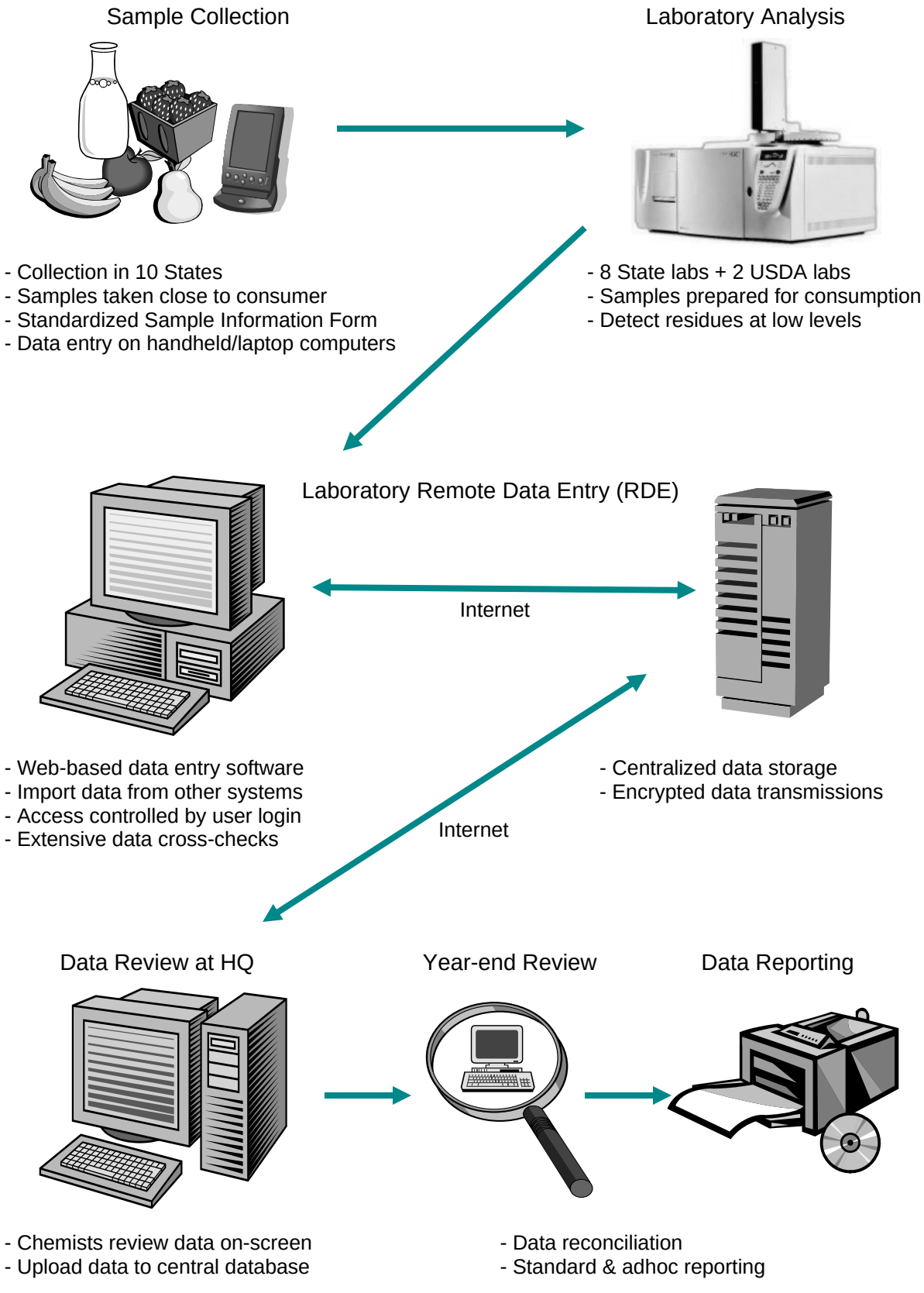
IV. Database Management

PDP maintains an electronic database residing at the MPO in Manassas, VA, that serves as a central data repository. The data captured and stored in the PDP database include product information, residue findings, and process control recoveries for each sample analyzed, in addition to QA/QC fortified recoveries for each set of samples. Each calendar year survey is stored in a separate database structure, allowing easier administration and data reporting. The PDP data life cycle is illustrated in Figure 4.

♦ Electronic Data Life Cycle

PDP utilizes a Remote Data Entry (RDE) system, a customized software application that allows participating State and Federal laboratories to enter and transmit data electronically. The RDE system is centralized with all user interface software and database files residing in Washington, DC. The laboratory users need only a Web browser to interface with the RDE system. Access is

Figure 4. PDP Data Life Cycle



controlled through separate user login/password accounts and user access rights for the various system functions based on position requirements. The RDE system utilizes Secure Sockets Layer (SSL) technology to encrypt all data passed between users' computers and the central Web server. A separate Windows-based system allows sample collectors to capture the standardized Sample Information Form electronically on handheld or laptop computers. The electronic Sample Information Form (e-SIF) system generates formatted text files containing sample information that are e-mailed to PDP headquarters and then imported into the Web-based RDE system.

The RDE data entry screens have extensive edits and cross-checks built into the software to ensure that valid values are entered for all critical data elements. 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 allows the user to easily perform adhoc 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.

At PDP headquarters, the RDE system allows staff chemists to review the data on-line and then to mark the data as ready-for-upload to the central PDP database. A separate upload application converts and passes the data to the PDP database which is presently maintained using Microsoft® Access in a Windows® 2000 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 performed 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. Adhoc queries and custom reports are generated to fill such 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 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 structures and manipulated with the use of most database management software packages.

V. Sample Results and Discussion

♦ Sample Results

In 2003, PDP conducted surveys on various foods including fresh and processed fruit and vegetables, barley, wheat flour, butter, and drinking water. Of the 12,316 samples collected and analyzed, 9,732 were fruit and vegetable commodities, 452 were barley samples, 606 were wheat flour samples, 732 were butter samples, and 794 were drinking water samples.

Of the samples tested by MRMs, 43 percent of the fruit and vegetable samples (fresh and processed) had detectable residues. Residues also were detected in 8 percent of the barley samples, 45 percent of the wheat flour samples, and 99 percent of the butter samples. Approximately 87 percent of all samples were domestic, 12 percent were imports, and 1 percent was of unknown origin. Appendix D includes a comparison of residues for selected commodities with a significant import component.

Of the samples tested for triazole fungicides and their metabolites, 16 percent of the apple samples, 36 percent of the fresh peach samples, and 100 percent of the wheat flour samples had detectable residues. No triazole fungicides or their metabolites were detected in canned peaches.

Appendix E shows the distribution of residues in fruit and vegetables. The results present the minimum and maximum concentrations detected; any tolerance violations; the analytical limits of detection (LODs); EPA tolerance levels; and when applicable, the corresponding Codex Alimentarius maximum residue limits (MRLs) and extraneous maximum residue limits (EMRLs). Appendix F shows the distribution of triazoles and triazole metabolites in apples, peaches, and wheat flour. Appendices G, H, I, and J provide the distribution of residues for barley, wheat flour, butter, and drinking water, respectively. Table 3A gives an overview of the number of residue detections for fresh and processed fruit and vegetables, grains, and dairy products. Table 3B provides residue detections by commodity for samples collected and analyzed in the triazole special survey.

Food monitoring data, together with dietary consumption surveys, are used by EPA to estimate dietary exposure to pesticides to ensure the safety of existing pesticides. EPA uses all data reported by PDP, including sample results reported as below the LOD. PDP laboratories are required to establish LODs and 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. The number of non-detects can be used in conjunction with percent crop treated data to determine what proportion of these values may be counted as zero towards the dietary exposure. Overall, 54 percent of the samples were reported as below the LOD (non-detects) and for samples with residues, the vast majority of the detections were well below established tolerances.

♦ National Estimates

The PDP sampling program incorporates participating States representing approximately 50 percent of the Nation's population. There are little or no significant differences across these States and, it can be inferred, across all states. Potentially more critical are differences in the residue content of fresh commodities across seasons. As in the past, sample data have been weighted to reflect the monthly distribution of product at the wholesale level. This method results in nearly unbiased estimates of pesticide residues in PDP commodities at the National level.

National estimates for selected pesticide/commodity pairs are shown in Appendix K. In most cases for each pair, the levels of detected residues are a small fraction of the tolerance level. A range of values for the sample mean (average) residue concentration for each pair is provided. The lower value for the range is determined by treating a sample without detectable residues as if it had a residue concentration equal to zero. The upper value is 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. Percent detections and percentiles for cantaloupe, cucumbers, mushrooms, peaches, pears, spinach, sweet bell peppers, sweet potatoes, and tomatoes were weighted to reflect monthly variations in marketing. No weighting adjustments were made for butter, canned green beans, canned peaches, pear juice concentrate or puree, frozen sweet peas, and wheat flour.

Appendix L displays the estimated distributions of 10 representative pesticide/commodity pairs. These graphs visually demonstrate that the overwhelming majority of pesticide testing results and the respective means (average values) are at low concentrations. 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 are shown. These pesticide/commodity pairs included in Appendix L are cyhalothrin/butter, DDE p,p'/butter, endosulfan sulfate/cucumbers, thiabendazole/mushrooms, thiabendazole/pears, imidacloprid/sweet bell peppers, dicloran/sweet potatoes, endosulfan II/tomatoes, triazole acetic acid/wheat flour, and triazole alanine/wheat flour. In some cases, there is convergence of the mean

Table 3A. Number of Samples and Residues Detected by Commodity
(Excludes Drinking Water and Triazole Special Survey Samples)

	Number of Samples Analyzed	Samples with Residues Detected	Percent of Samples with Detections	Different Pesticides Detected	Different Residues Detected	Total Residue Detections
Fresh Fruit and Vegetables:						
Asparagus	351	27	8	13	15	33
Cantaloupe	186	104	56	13	13	138
Cucumbers	739	515	70	28	33	1191
Mushrooms	552	322	58	11	15	477
Onions	741	2	<1	1	1	2
Pears	187	166	89	18	20	303
Spinach	736	510	69	19	22	824
Sweet Bell Peppers	741	626	84	42	48	2208
Sweet Potatoes	734	477	65	17	18	616
Tomatoes	742	349	47	15	18	678
TOTAL FRESH	5,709	3,098	54%			6,470
Processed Fruit and Vegetables:						
Asparagus, Canned	354	9	3	2	2	9
Green Beans, Canned	743	288	39	13	15	482
Peaches, Canned	742	171	23	4	5	178
Pear Juice, Concen./Puree	66	47	71	12	13	118
Sweet Corn, Frozen	547	19	3	2	2	19
Sweet Peas, Frozen	549	112	20	5	6	149
TOTAL PROCESSED	3,001	646	22%			955
Fruit and Vegetables Totals:						
Number of Samples Analyzed = 8,710						
Number of Samples with Residues Detected = 3,744						
Percent with Residue Detections = 43.0%						
Total Number of Different Pesticides Detected = 69						
Total Number of Different Residues Detected = 81						
Total Number of Residue Detections = 7,425						
Processed Grain Product:						
Barley	452	35	8	7	7	35
Wheat Flour	606	270	45	12	12	359
Dairy Product:						
Butter	732	725	99	10	11	2,072
All Commodities Totals:						
Number of Samples Analyzed = 10,500						
Number of Samples with Residues Detected = 4,774						
Percent with Residue Detections = 45.5%						
Total Number of Different Pesticides Detected = 75						
Total Number of Different Residues Detected = 113						
Total Number of Residue Detections = 9,891						

- A pesticide detection includes the parent compound and/or any isomer/metabolite(s) detected. For example, if endosulfan I, endosulfan II and endosulfan sulfate are detected, they are considered one pesticide.
- A residue detection includes any detection of a parent compound, isomer or metabolite. For example, if endosulfan I, endosulfan II and endosulfan sulfate are detected, they are considered three residues.

Table 3B. Triazole Special Survey — Number of Samples and Residues Detected by Commodity

	Number of Samples Analyzed	Samples with Residues Detected	Percent of Samples with Detections	Different Pesticides Detected	Different Residues Detected	Total Residue Detections
Apples	744	118	16	5	5	142
Peaches	269	98	36	6	7	118
Peaches, Canned	371	0	0	0	0	0
Wheat Flour	606	606	100	3	3	1,207

Triazole Special Survey Totals:

Number of Samples Analyzed = 1,990
Number of Samples with Residues Detected = 822
Percent with Residue Detections = 41.3%
Total Number of Different Pesticides Detected = 8
Total Number of Different Residues Detected = 10
Total Number of Residue Detections = 1,467

upper and lower bound into a single line due to the insignificant differences between them. Results for these compounds are expressed in parts per billion (ppb) or parts per trillion (ppt).

♦ Fresh vs. Processed

The 2003 data show that residue profiles for fresh products are significantly different than for processed products. Various factors may explain these differences in residue profiles. Raw agricultural commodities, if specifically grown for processing, are likely to receive different pest management treatments than fresh market products. Another factor affecting residue concentration or reduction may be a direct result of processing effects such as heat, time, and product preparation. A comparison of residues for fresh and processed products is shown in Table 4. Data used for this table are the most recent data collected by PDP for the processed product and the corresponding fresh product.

There were no detections of any triazole fungicides in canned peaches. In fresh peach samples, detection of triazole fungicides included fenbuconazole (13.8%), propiconazole (9.7%), and tebuconazole (12.6%). In fresh peach samples from 2002, detection of triazole fungicides included fenbuconazole (4.3%), propiconazole (6.2%), and tebuconazole (4.6%). The differences in detection frequency between fresh peaches collected in 2003 and 2002 can be attributed to the lower detection limits in the 2003 sample analyses. Azinphos methyl (46.5%), chlorpyrifos (34.5%), fludioxonil (30.6%), iprodione (54.8%), and phosmet (64.8%) were detected in fresh peach samples collected in 2002 but no residues for these compounds were detected in canned peach samples. Carbaryl was detected in 17.8 percent of canned peach samples and 32.3 percent of the fresh peach samples from 2002.

In Table 4, results for fresh tomatoes collected and analyzed in 2003 are compared to findings for canned tomato and tomato paste samples collected and analyzed in 2000 and 2001. Endosulfan I was detected in 11.3 percent of the fresh tomato samples, 0.5 percent of the canned tomato samples, and 10.3 percent of the tomato paste samples. Endosulfan II was detected in 19.8 percent of the fresh tomato samples and 20.3 percent of the tomato paste samples. No endosulfan II residues were detected in the canned tomato samples. Endosulfan sulfate was detected in 11.1 percent of the fresh tomato samples and 5.1 percent of the tomato paste samples. No endosulfan sulfate residues were detected in the canned tomato samples. Methamidophos was detected in 12.4 percent of the fresh tomato samples, 8.1 percent of the canned tomato samples, and 0.5 percent of the tomato paste samples.

Table 4. Selected Residue Comparisons, Fresh vs. Processed

Pesticide	PEACHES -- Fresh (2003*)			PEACHES -- Fresh (2002)			PEACHES -- Canned (2003)		
	% of Samples with Detects	Minimum Value Detected, ppm	Maximum Value Detected, ppm	% of Samples with Detects	Minimum Value Detected, ppm	Maximum Value Detected, ppm	% of Samples with Detects	Minimum Value Detected, ppm	Maximum Value Detected, ppm
Azinphos methyl	NA	NA	NA	46.5	0.005	0.52	--	--	--
Carbaryl	NA	NA	NA	32.3	0.002	3.2	17.8	0.017	0.38
Chlorpyrifos	NA	NA	NA	34.5	0.002	0.079	--	--	--
Fenbuconazole	13.8	0.015	0.45	4.3	0.024	0.083	--	--	--
Fludioxonil	NA	NA	NA	30.6	0.020	1.8	--	--	--
Iprodione	NA	NA	NA	54.8	0.014	33	--	--	--
Phosmet	NA	NA	NA	64.8	0.002	1.4	--	--	--
Propiconazole	9.7	0.015	0.19	6.2	0.024	0.085	--	--	--
Tebuconazole	12.6	0.015	0.078	4.6	0.032	0.97	--	--	--

Pesticide	TOMATOES--Fresh (2003)			TOMATOES--Canned (2000)			TOMATO PASTE (2001)		
	% of Samples with Detects	Minimum Value Detected, ppm	Maximum Value Detected, ppm	% of Samples with Detects	Minimum Value Detected, ppm	Maximum Value Detected, ppm	% of Samples with Detects	Minimum Value Detected, ppm	Maximum Value Detected, ppm
Endosulfan I	11.3	0.007	0.19	0.5	0.008	0.008	10.3	0.005	0.033
Endosulfan II	19.8	0.007	0.30	--	--	--	20.3	0.005	0.053
Endosulfan sulfate	11.1	0.010	0.071	--	--	--	5.1	0.005	0.005
Methamidophos	12.4	0.008	0.28	8.1	0.002	0.028	0.5	0.012	0.012

* Peach samples collected May-September 2003 only for special triazole survey. No imported peaches included.
-- No detections for commodity/pesticide pair.
NA No analysis performed for commodity/pesticide pair.

♦ Drinking Water Results

Appendix J lists results for the PDP testing of finished drinking water from monitoring sites in California, Colorado, Kansas, New York, and Texas. Each watershed reflects the local topography, watershed size, geomorphology, soil types, geology, land use, land management practices, crop varieties, pesticides applied, and application methods. Due to the complexities associated with water quality assessments, these data reflect the unique characteristics of the watersheds from which the samples were obtained.

PDP analyzed 794 samples using multiresidue methods to test for more than 200 pesticides and metabolites. Most of the treatment plants participating in the 2003 survey use surface water as their source waters. The data presented here are from the finished water, (post-disinfection) collected just before distribution to customers. The concentrations of pesticides found were very low, that is, at parts-per-trillion levels or 0.000000001 gram (g)/kilogram (Kg) or g/liter (L) of water. Thirty-three different residues were detected in 429 of the 794 samples tested (22 different pesticides + 11 metabolites). Most of the detections were of

herbicides and none of the detections exceeded EPA Maximum Contaminant Levels (MCLs). The majority of pesticides included in the PDP screens were not detected.

In the comprehensive list of pesticides, Appendix J, MCL or Health Advisory (HA) values are listed; however, many of the compounds PDP tests for do not have established regulatory standards. Therefore, EPA Freshwater Aquatic Organism (FAO) criteria, which are much lower than human MCLs or HAs, are also given. These criteria are lower than human levels due primarily to higher exposure, because aquatic organisms live all or most of their lives in water. There were no detections by PDP for any of the pesticides with FAO values. Additional information regarding EPA drinking water standards is available at http://www.epa.gov/safewater/standard/setting.html.

Reservoirs are the source waters for 10 of the 11 sites in New York as well as all of the sites in Colorado, Kansas, and Texas. Rivers are the predominant source waters for the sites in California. Reservoirs tend to accumulate pesticide residues over time; in larger reservoirs, pesticides can often be detected throughout the year. Rivers tend to distribute pesticide residues in discreet pulses, with most detections occurring soon after application.

Of the 27 community water systems surveyed, 7 sites had source water in protected watersheds, which are defined as source water in an area controlled for chemical applications and land use; 4 of the source water intakes were in urban regions, defined as less than 10 percent of the land around the source water used for agriculture; and 16 of the sites were located in predominantly agricultural areas, defined as regions where more than 20 percent of the land surrounding the source water is used for agriculture (Table 5). One of the six sites with source waters in protected watersheds had detections above the LOQ. Four of the five sites with source waters in urban regions had detections above the LOQ. Most of the sites in agricultural regions had multiple detections above the LOQ. These data reflect the uniqueness of each watershed and the land use and agricultural practices within that watershed. National inferences cannot be made from these data.

♦ Triazole Results

Appendix F shows the distribution of triazole fungicides and their metabolites in apple, peach, and wheat flour samples. For apples, myclobutanil was detected in 8.6 percent of the samples, triazole alanine in 8.6 percent, and triadimenol in 1.9 percent. Tebuconazole and RH 9130 (a metabolite of fenbuconazole) were detected in less than one percent of the apple samples. For fresh peaches, fenbuconazole was detected in 13.8 percent of the samples, tebuconazole in 12.6 percent, propiconazole in

Table 5. Watershed Classifications

Site Classification	Number of Sites	Sites with Detections Above LOQ	Number of Detects Above LOQ	Range of Detects Per Site
Protected[a]	6	1	5	0-5
Urban[b]	5	4	4	0-1
Agricultural[c]	16	13	905	0-185

[a] Source water for community water system is in area controlled for chemical applications and land use.
[b] Less than 10% of county in farmland.
[c] Greater than 20% of county in farmland.

9.7 percent, myclobutanil in 3.7 percent, triazole acetic acid in 2.2 percent, RH 9129 (a metabolite of fenbuconazole) in 1.1 percent, and triazole alanine in less than 1 percent of the samples. For wheat flour, triazole acetic acid was detected in 99.3 percent of the samples, triazole alanine in 99.2 percent, and 1,2,4-triazole in less than 1 percent of the samples.

♦ Import vs. Domestic Residue Comparisons

Information about the origin of each PDP sample is recorded when the sample is collected. Figure 3 illustrates the portion of domestic and import samples for each PDP commodity this year. The data generated by PDP reflect pesticide residues in foods available to the U.S. consumer, including both domestic and import products. Many commodities are almost entirely of domestic origin with only a minor import component. However, some fresh commodities, such as asparagus, cantaloupe, cucumbers, sweet peppers, and tomatoes are from domestic growers part of the year and imported the remaining months. Potential comparisons of selected residues detected in commodities can be found in Appendix D.

The cucumber data in Appendix D indicate that residues were detected in 57 percent of the domestic samples and 84 percent of the Mexican samples. Endosulfan I was detected in 21 percent of the domestic cucumber samples and 41 percent of the Mexican cucumber samples. Similarly, endosulfan II, endosulfan sulfate, metalaxyl, and methamidophos were all detected more often in Mexican cucumbers than in domestic cucumbers.

For sweet bell peppers, 85 percent of the domestic samples and 98 percent of the Mexican samples had residues detected. However, the distributions of pesticide types were not the same. For example, oxamyl residues were detected in 27 percent of the Mexican sweet bell pepper samples compared to 10 percent of the domestic samples. Conversely, acephate residues were detected in 10 percent of the Mexican samples compared to 25 percent of the domestic sweet bell pepper samples.

For asparagus, 6 percent of the domestic product had residues compared to 8 percent of the Mexican samples and 11 percent of the Peruvian samples. Asparagus samples from Peru had more residues of chlorpyrifos and methomyl than asparagus samples from the United States or Mexico. However, there were more metribuzin residues in Mexican asparagus samples than in those from the United States or Peru.

♦ Postharvest Applications

Pesticides can be applied before and after harvest depending on the crop and approved label use. PDP data capture both preharvest and postharvest uses because samples are collected at points when all pesticide applications have already occurred. Pesticides with postharvest application are used primarily as fungicides, but some insecticides and sprouting inhibitors are important crop treatments. Some detections reported by PDP in Appendix E were most likely generated by postharvest applications in the raw agricultural commodity.

♦ Environmental Contaminants

DDT, DDD, and DDE

A total of 8,666 fruit and vegetable (Appendix E), 393 barley (Appendix G), 606 wheat flour (Appendix H), and 732 butter samples (Appendix I), were screened for DDE p,p', a metabolite of DDT. Other DDT metabolites tested include DDD o,p', and DDD p,p'. Use of DDT has been prohibited in the U.S. since 1972. However, due to environmental persistence, residues of the DDE p,p' metabolite were detected in 2.2 percent of the fruit and vegetable samples tested. Residues of DDE p,p' were found in cantaloupe (2.7%), cucumbers (0.1%), green beans (0.1%), mushrooms (0.2%), spinach (24%), sweet bell peppers (0.9%), sweet potatoes (0.1%), and butter (81%). Residues of DDT o,p'

and DDT p,p' were detected in mushrooms (0.3% and 0.2%, respectively). No residues of DDT or its metabolites were detected in any barley samples and only one sample of wheat flour contained DDE p,p'. All detections of DDT and its metabolites were below the established action levels.

OTHER EXTRANEOUS PESTICIDES

In 1974, all aldrin and dieldrin uses were canceled in the United States, and in 1978, all heptachlor uses were canceled. In 1986, chlordane uses, except termiticide uses, were canceled. Despite this, residues of dieldrin were detected in cucumbers, green beans, and sweet potatoes in 2003. Dieldrin was found in 4.5 percent of cucumber samples and less than one percent of the green bean and sweet potato samples. No residues of dieldrin or heptachlor epoxide, a metabolite of heptachlor, were detected in barley or wheat flour. Heptachlor epoxide was not detected in butter, but dieldrin was detected in 55 percent of butter samples (Appendix I). All detections were below the established action levels. No residues of aldrin, chlordane or its metabolite, oxychlordane, were detected.

♦ Multiple Pesticide Residue Detections

PDP provides data that can be used by EPA in evaluating the incidence of multiple residue detections. The data are very useful in assessments that consider cumulative exposure to pesticides determined by EPA to have common mechanisms of toxicity. No correlation between the incidence of multiple residues and tolerance violations has been noted.

The distribution of multiple pesticides occurring in samples tested during 2003 is presented in Appendix M. This appendix reports the number of distinct pesticides rather than residues, as was reported in previous year's summaries. A parent compound and its metabolite(s) are reported as a single pesticide detection rather than separate residue detections. These data exclude samples from the triazole special survey. These data indicate that more than one pesticide was detected in 24 percent of all samples tested. Most multiple residue detections result from application of more than one pesticide on a crop during a growing season. However, other factors contribute to the number of multiple pesticide detections such as spray drift, transfer through crop rotation, cross contamination at packing facilities, or persistent environmental contaminants.

Where more than one residue resulted from a single pesticide, the parent and any isomers and/or metabolites are counted as a single detection. For example, a single application of the pesticide endosulfan may result in residues of the parent compound endosulfan I, its isomer, endosulfan II, and its metabolite, endosulfan sulfate. This would be shown as a single pesticide finding in Appendix M.

In most cases, results shown in Appendix M are for residues detected in samples analyzed by PDP as composites of 3 to 5 pounds, depending on the commodity. Therefore, the number of pesticides reported does not necessarily reflect the number of pesticides per individual sample or per single serving of a commodity.

♦ 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. Tolerances are also applicable to processed foods. EPA is in the process of reassessing tolerances to ensure that they meet FQPA standards which define pesticide tolerance 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 that exceeds the tolerance level or when a residue is found for which there is no established tolerance. With the exception of meat, poultry, and egg products, for which USDA is

responsible, FDA is responsible for enforcement of tolerances for all imported foods and domestic foods moved through interstate commerce. States are responsible at the local level. When agencies with enforcement authority collect samples for tolerance enforcement purposes, they must adhere to a quick turnaround time and chain-of-custody protocols which enable them to detain the sampled lot until test results are available.

Unlike these programs, PDP is not an enforcement program. Consequently, PDP emphasizes determination of residues at the lowest detectable levels rather than quick turnaround times. Also, PDP samples are collected without interfering in commodity distribution. When PDP identifies samples with residues exceeding the tolerance or with residues for which there is no established tolerance, these detections are reported to FDA regional and headquarters' offices. This notification is made 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 has not been a practical response to PDP analysis because of the time required between sample collection and data reporting.

Residues exceeding the established tolerance are noted with an "X" in Appendices E, F, G, H, and I. Similarly, residues for which a tolerance is not established are noted with a "V." The "X" and "V" annotations are followed by a number indicating the number of samples reported to FDA.

An established tolerance may apply to more than one residue because pesticides may break down into more than one metabolite or contain more than one isomer. For example, the tolerance for endosulfan combines residues of endosulfan I, endosulfan II, and endosulfan sulfate; and organophosphate tolerances may combine the parent compound and the sulfone and sulfoxide metabolites. 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, iprodione, and quintozene, and isomers of lambda cyhalothrin to count the total number of samples with tolerance violations.

Excluding water samples, residues exceeding the tolerance were detected in 0.3 percent of the 11,522 samples tested in 2003 – 35 samples with one residue each. Residues with no established tolerance were found in 1.5 percent of the samples (157 samples with one residue each and 13 samples with two residues each). In most cases, these residues were detected at very low levels and some residues may result from spray drift or crop rotations. These residue findings are listed in Appendix N.

No residues were detected that exceeded the established tolerance for triazole fungicides and regulated metabolites in apples, peaches, and wheat flour. A RH9130 triazole metabolite of fenbuconazole having no established tolerance was detected in one apple sample.

Normally, PDP reports the detection of a residue with no established tolerances as a tolerance violation. However, for the purposes of this summary, triazole alanine, triazole acetic acid, and 1,2,4-triazole detections were not considered tolerance violations.

♦ Synopsis

A total of 9,732 fresh and processed fruit and vegetable samples, 452 barley samples, 606 wheat flour samples, 732 butter samples, and 794 drinking water samples were analyzed for various pesticides including insecticides, herbicides, and fungicides. MRMs were used to detect a wide variety of compounds including carbamates, conazoles, imidazoles, pyrethroids, organochlorines, organophosphates, triazines, and strobilurins.

In 2003, analyses for triazole fungicides and their metabolites were performed on 744 apple samples, 269 fresh peach samples, 371 canned peach samples, and 606 wheat flour samples. Approximately 87 percent of all samples tested

were domestic, 12 percent imported, and one percent of unknown origin. Of all the samples tested, 0.3 percent were reported as containing residues exceeding the tolerance and 1.5 percent as without tolerances listed in 40 CFR, Part 180.

Fifty-four percent of all samples tested by MRMs had no detectable residues, 22 percent contained one residue, and 24 percent contained more than one residue. Most of the residues were detected in fruit and vegetable commodities. Environmental contaminants were detected mainly in butter and spinach. Overall, levels of residues detected were well below tolerances.

For more information on PDP, please contact the Monitoring Programs Office by telephone: (703) 330-2300; facsimile: (703) 369-0678; or electronic-mail: amsmpo.data@usda.gov.

Appendix A

Commodity History

Appendix A identifies commodities sampled by the Pesticide Data Program through December 2004. Updates to this list are posted on the PDP Web site at http://www.ams.usda.gov/science/pdp.

COMMODITY HISTORY AS OF DECEMBER 2004

Fresh Commodities

Commodity	Start Date	End Date
Apples [1]	Sep-91	Dec-96
Apples (S-1)	Jan-99	Dec-99
Apples (S-2)	Jan-99	May-99
Apples	Oct-00	Sep-02
Apples	Jan-04	Ongoing
Apples (T-1)	Jan-03	Dec-03
Asparagus	Jan-02	Jun-03
Bananas	Sep-91	Sep-95
Bananas	Jan-01	Dec-02
Bananas (TSP)	Jul-03	Dec-03
Broccoli	Oct-92	Dec-94
Broccoli	Jan-01	Dec-02
Cantaloupe	Jul-98	Jun-00
Cantaloupe	Oct-03	Ongoing
Carrots [1]	Oct-92	Sep-96
Carrots	Oct-00	Sep-02
Cauliflower	Oct-04	Ongoing
Celery	Feb-92	Mar-94
Celery	Jan-01	Dec-02
Cherries [2]	May-00	Aug-01
Cucumbers	Jan-99	Dec-00
Cucumbers	Oct-02	Sep-04
Eggs (TSP)	Jul-03	Dec-03
Grapefruit	Aug-91	Dec-93
Grapes [1]	May-91	Dec-96
Grapes	Jan-00	Dec-01
Grapes	Jan-04	Ongoing
Grapes (TSP)	Jul-03	Dec-03
Green Beans	Feb-92	Dec-95
Green Beans	Jan-00	Dec-01
Green Beans	Apr-04	Ongoing
Lettuce	May-91	Dec-94
Lettuce	Oct-99	Sep-01
Lettuce	Jan-04	Ongoing
Milk [1]	Jan-96	Oct-98
Milk	Jan-04	Ongoing
Milk (TSP)	Jul-03	Dec-03
Mushrooms	Oct-01	Sep-03
Nectarines [3]	Jul-00	Sep-01
Onions	Jan-02	Dec-03
Oranges [1]	Aug-91	Dec-96
Oranges	Jan-00	Dec-01

Commodity	Start Date	End Date
Oranges	Jan-04	Ongoing
Peaches	Feb-92	Sep-96
Peaches (S-3)	Jan-00	Sep-00
Peaches[4]	Jan-01	Sep-02
Peaches (T-1)	May-03	Sep-03
Pears	Jan-97	Jun-99
Pears (S-1)	Jul-98	Jun-99
Pears	Oct-03	Ongoing
Pineapples	Jul-00	Jun-02
Potatoes	May-91	Dec-95
Potatoes (S-4)	Dec-96	Dec-97
Potatoes	Jul-00	Jun-02
Spinach [1]	Jan-95	Sep-97
Spinach	Jul-02	Dec-03
Strawberries[5]	Jan-98	Sep-00
Strawberries	Jan-04	Ongoing
Sweet Bell Peppers	Jan-99	Dec-00
Sweet Bell Peppers	Oct-02	Sep-04
Sweet Potatoes [1]	Jan-96	Jun-98
Sweet Potatoes	Jan-03	Dec-04
Tomatoes [1]	Jul-96	Jun-99
Tomatoes	Jan-03	Dec-04
Winter Squash	Jan-97	Jun-99
Winter Squash	Jul-04	Ongoing

[1] Excludes sampling hiatus September - November 1996

[2] Sampling adjusted for market availability. Cherries were sampled for two years (May-00 - Aug-01) for a total of six months.

[3] Sampling adjusted for market availability. Nectarines were sampled for two years (Jul-00 - Sep-01) for a total of six months.

[4] Sampling adjusted for market availability. Peaches were sampled for two years (Jan-01 - Sep-02) for a total of sixteen months.

[5] Frozen collected when fresh unavailable

(S-1) Special single serving project testing for organophosphates.

(S-2) Special single serving project testing for carbamates.

(S-3) Special single serving project testing for carbamate, organochlorine, organophosphate, organonitrogen, and sulfur compounds.

(S-4) Special single serving project testing for aldicarb.

(T-1) Triazole parent and metabolite compounds only.

(TSP) Triazole Sampling Project. Samples sent to contract laboratory.

Processed Commodities

Commodity	Start Date	End Date
Apple Juice [1]	Jul-96	Dec-98
Apple Juice	Jan-02	Dec-02
Apple Sauce	Jul-02	Dec-02
Asparagus, Canned	Jul-03	Dec-03
Butter	Jan-03	Dec-03
Corn Syrup [2]	Jan-98	Jun-99
Grape Juice	Jan-98	Dec-99
Green Beans, Canned/Frozen [1]	Jan-96	Jun-98
Green Beans, Canned	Jan-03	Mar-04
Orange Juice	Jan-97	Dec-98
Orange Juice	Oct-04	Dec-04
Peaches, Canned	Dec-96	Dec-97
Peaches, Canned	Jan-03	Ongoing
Peaches, Canned (T-1)	Jan-03	Mar-03
Peaches, Canned (T-1)	Oct-03	Dec-03
Peanut Butter	Jan-00	Dec-00
Peanut Butter (TSP)	Jul-03	Dec-03
Pear Juice, Concentrate/Puree	Jul-02	Jun-03
Pears, Canned	Jul-99	Jun-00
Peas, Canned/Frozen	Apr-94	Jun-96
Peas, Canned/Frozen[3]	Oct-01	Sep-03
Spinach, Canned	Oct-97	Dec-98
Spinach, Frozen	Jan-99	Dec-99
Spinach, Canned	Jan-04	Jun-04
Strawberries, Frozen [4]	Jan-98	Sep-00
Sweet Corn, Canned/Frozen	Apr-94	Mar-96
Sweet Corn, Canned/Frozen [3]	Oct-01	Sep-03
Tomato Paste, Canned	Jan-01	Jun-01
Tomatoes, Canned	Jul-99	Jun-00
Winter Squash, Frozen	Jan-97	Jun-99

[1] Excludes sampling hiatus September - November 1996

[2] Excludes sampling hiatus January 1999

[3] Canned samples collected in first year and frozen samples in second year of testing.

[4] Frozen collected when fresh unavailable

(T-1) Triazole parent and metabolite compounds only.

(TSP) Triazole Sampling Project. Samples sent to contract laboratory.

Grains

Commodity	Start Date	End Date
Barley	Oct-01	Sep-03
Oats	Jul-99	Apr-00
Rice	Oct-00	Sep-02
Soybeans	Sep-96	Feb-98
Soybeans	Oct-03	Ongoing
Wheat	Feb-95	Jan-98
Wheat Flour	Jan-03	Dec-04
Wheat Flour (T-1)	Jan-03	Dec-03

Drinking Water

States	Start Date	End Date
California, New York	Mar-01	Dec-03
Colorado, Kansas, Texas	May-02	Dec-03
Oregon, Pennsylvania	Jan-04	Dec-04
Michigan, North Carolina, Ohio, Washington	Jan-04	Ongoing

Meat / Poultry Products

Commodity	Type	Start Date	End Date
Poultry	Young Chickens	Apr-00	Mar-01
Beef	Cows, Heifers, Steers	Jun-01	Jul-02

(T-1) Triazole parent and metabolite compounds only.

Appendix B

Sample Origin by State or Country
(Determined by Grower, Packer, or Distributor)

Appendix B gives the number of fruit and vegetables, grain, and butter 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, samples originated from 41 States plus Puerto Rico, Washington, DC, and 24 foreign countries. There were 328 domestic and 18 imported samples from unknown origins.

Drinking water samples are excluded from Appendix B. Origins for drinking water samples are described in Section II – Sampling Operations.

APPENDIX B. SAMPLE ORIGIN BY STATE OR COUNTRY *
(Determined by Grower, Packer, or Distributor)

Part 1. Domestic Samples

	Fresh F&V												Processed F&V						Grain		Dairy	No. of	% of
States = 41	AP	AS	CN	CU	MU	ON	PC	PE	PP	SP	SW	TO	AA	CC	CS	GB	PJ	PS	BY	WF	BU	Domestic	Total
Alabama											2											2	<0.1
Arizona			13	5					3	6		2		3	1	2		1			1	37	0.3
Arkansas											1	3	4	15	3	29		4		2	8	69	0.6
California	41	126	58	48	176	135	184	34	186	484	247	145	95	406	91	274	12	96	111	53	134	3136	27.2
Colorado	1	1			10	35				15	1	17				1			68		9	158	1.4
Connecticut					5																	5	<0.1
Delaware	1						1															2	<0.1
Florida	6		52	100	21	8	2	1	139	7	10	184	8	17	20	17		18	7	10	25	652	5.7
Georgia		1		52	2	22	21		42			3		3	3	14		1		1	2	167	1.4
Hawaii						1																1	<0.1
Idaho	8					44							16	25	54	26		54	39	20	29	315	2.7
Illinois													18	25	19	20		23	112	19	25	261	2.3
Kansas																				7		7	0.1
Kentucky				1		6		2	1	6		2									4	22	0.2
Louisiana	1										133	1										135	1.2
Maine													1	4	7	2		7		2	8	31	0.3
Maryland	9			3	5	6			1	8	1	11		26	33	22		25		6	25	181	1.6
Massachusetts	1	1				1			1	6										2		12	0.1
Michigan	23	7	1	6	30	34	3		15	24	7	10	7	37	25	34		28	17	23	28	359	3.1
Minnesota	5	1				9						1	122	6	42	73		42	2	299	122	724	6.3
Mississippi									1		37											38	0.3
Missouri															1	1						2	<0.1
Nebraska																			7	20		27	0.2
Nevada						32																32	0.3
New Jersey		5		12	2	2	10		11	5	5	13	2	4	4	4		1	8	4	2	94	0.8
New Mexico						21																21	0.2
New York	49	2		13	9	54	2		11	8	3	7	17	10	61	48		64	13	12	41	424	3.7
North Carolina			1	6					20	1	160	3										191	1.7
Ohio	3	1	13	5		6	7	1	12	1	10	7	7	29	18	28		13	8	20	34	223	1.9
Oklahoma	1				5					4			4	9	31	8		28	6	12	8	116	1.0
Oregon	5			3	4	60		35	1	4		3	8	7	23	14	11	20	14	21	25	258	2.2
Pennsylvania	5				128	2	3			49		8	1	3	4	4		5	3	4	36	255	2.2
South Carolina							11					9		3								23	<0.1
Tennessee					2						4	9		1	4	2		4		7		33	0.3
Texas	17		3	37	35	78	1	2	13	27	37	36	12	59	52	65		47	3	38	56	618	5.4
Utah						6																6	0.1
Vermont	1																				4	5	<0.1
Virginia	2			1				1	2	7		5	1	10	4	9		4	2	1	7	56	0.5
Washington	488	25		9	13	69	11	98	2	8		4		1	12	8	33	12	9	8	26	836	7.3
West Virginia							1															1	0.1
Wisconsin	5	3	1	8	5	14	1	1	4	12	4	7	13	8	6	18		6	4	1	35	156	1.4
Puerto Rico												1										1	<0.1
Washington D.C.												6										6	<0.1
Unknown State	14	5	2	66	17	11	9	9	51	13	52	12	3	6	6	3		5	4	5	35	328	2.8
No. of Domestics	686	178	144	375	469	656	267	184	516	695	714	509	339	717	524	726	56	508	437	597	729	10,026	
% of Total	92	51	77	51	85	89	99	98	70	94	97	69	96	95	96	98	85	93	97	99	100		87.0

Part 2. Imported Samples

	Fresh F&V												Processed F&V						Grain		Dai.	No. of	% of
Countries = 24	AP	AS	CN	CU	MU	ON	PC	PE	PP	SP	SW	TO	AA	CC	CS	GB	PJ	PS	BY	WF	BU	Imports	Total
Argentina	1													1			2					4	<0.1
Australia														1								1	<0.1
Belgium												1						5				6	0.1
Brazil											1											1	<0.1
Canada	6	1		16	55	13			23	15		48			18	13	1	19	7	5		240	2.1
Chile	21					7												3				31	0.3
China																	4					4	<0.1
Colombia		3																				3	<0.1
Costa Rica											1											1	<0.1
Dominican Republic			1																			1	<0.1
Ecuador						1																1	<0.1
Greece														14								14	0.1
Guatemala			35																			35	0.3
Honduras				9																		9	0.1
Israel									9													9	0.1
Korea, Republic of								1														1	<0.1
Mexico		99	5	324		32			152	24		163										799	6.9
Netherlands									13			1										14	0.1
New Zealand	26												1					2				29	0.3
Peru		69				23							12									104	0.9
Poland																		10	3			13	0.1
South Africa	2													10								12	0.1
Spain									3			3		1								7	0.1
Taiwan														4								4	<0.1
Unknown Country					5			1	12													18	0.2
No. of Imports	56	172	41	349	60	76	0	2	212	39	2	216	13	31	18	13	7	39	10	5	0	1361	
% of Total	8	49	22	47	11	10	0	1	29	5	<1	29	4	4	3	2	11	7	2	<1	0		11.8

Part 3. Unknown Origin

	Fresh F&V												Processed F&V						Grain		Dai.	No. of	% of
	AP	AS	CN	CU	MU	ON	PC	PE	PP	SP	SW	TO	AA	CC	CS	GB	PJ	PS	BY	WF	BU	Unknown	Total
Unknown Origin	2	1	1	15	23	9	2	1	13	2	18	17	2	3	5	4	3	2	5	4	3	135	
% of Total	<1	<1	1	2	4	1	1	1	2	<1	2	2	1	<1	1	1	5	<1	1	<1	<1		1.2

GRAND TOTALS	744	351	186	739	552	741	269	187	741	736	734	742	354	751	547	743	66	549	452	606	732	11,522

COMMODITIES		
AA = Asparagus, canned	CS = Sweet Corn, frozen	PP = Sweet Bell Peppers
AP = Apples	GB = Green Beans, canned	PS = Sweet Peas, frozen
AS = Asparagus	MU = Mushrooms	SP = Spinach
BU = Butter	ON = Onion	SW = Sweet Potatoes
BY = Barley	PC = Peaches	TO = Tomatoes
CC = Peaches, canned	PE = Pears	WF = Wheat Flour
CN = Cantaloupe	PJ = Pear Juice, concen./puree	

* = Excludes drinking water samples.

Appendix C

Quality Assurance Program Elements

PDP's Quality Assurance (QA) program covers all aspects of data gathering from the time of collection through 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. This appendix describes the QA program's 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 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 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 Testing Samples - All facilities are required to participate in PDP's Proficiency Testing program. For fresh and processed fruit and vegetables, grains, and dairy products, multiresidue test samples containing pesticide(s) of known quantities are periodically issued to the applicable 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 2003, PDP laboratories received 5 multiresidue proficiency testing sets consisting of 15 fruit and vegetable samples, 1 butter set consisting of 3 samples, 1 wheat flour set consisting of 3 samples, and 2 water sets consisting of 4 samples. For fruit and vegetable multiresidue screening, the 15 samples covered 5 commodities and were fortified with 53 compounds, with 5 repeated once, 2 repeated twice, and 1 repeated 3 times, at levels generally 1 to 10 times the limit of quantitation (LOQ). Results yield an overall mean recovery of 87 percent with a percent coefficient of variation (%C.V.) of 29 percent. One incurred residue was present at 0.011 ppm (average reported value).

Additionally, PDP laboratories participated in the international AOAC® and Food Analysis Performance Assessment Scheme (FAPAS) proficiency testing programs a total of three rounds consisting of apple, grape, lettuce, and spinach test samples. Laboratories were evaluated based on z-scores for reported compounds, as well as any false negatives or false positives reported. Laboratories were not held responsible for compounds not included in their routine screening method.

For water, a commercial vendor supplied proficiency test solutions based on common analytical profiles and detection limits. Test solutions were used for spiking due to stability concerns. For each proficiency testing set, the vendor supplied the laboratory's QAU with a custom GC mix and a custom LC mix. The QAU prepared the appropriate dilutions, fortifying one liter of tap water with the GC dilution and one liter of tap water with the LC dilution. The spiked samples were then presented to the laboratory staff for analysis.

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 that include the test samples and the following components.

   a. Reagent Blank: For analysis of fruit and vegetables, butter, barley, and wheat flour, 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.

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 (e.g., organochlorines, organophosphates, carbamates, conazoles, imidazolinones, pyrethroids, strobilurins, triazines), 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 multiple spike mixtures to avert coelution problems, which, in turn, resulted in lengthy run times. During 2003, PDP laboratories quantitated a total of 30,060 matrix spikes, with an overall mean recovery of 92 percent, overall standard deviation of 26 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 2003, PDP laboratories quantitated a total of 41,537 process controls on 12,316 samples, with an overall mean recovery of 96 percent, overall standard deviation of 19 percent, and overall %C.V. of 20 percent. Of these process controls, 341 (0.82 percent) 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 ranged from 0.001 to 0.91 ppm for fruit and vegetables, barley, and wheat flour; from 0.3 to 47 parts per billion (ppb) for butter; and from 0.41 parts per trillion (ppt) to 5.0 ppb for water. (*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 one-half 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 is 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 that vary by commodity. However, several commodities tested over the past several years were cyclical; that is, part of the year the commodity was produced domestically and part of the year it was imported.

Appendix D compares residue data reported for samples originating in the United States with those of the same commodity from major exporting countries. Residue data for domestic cucumbers and sweet bell peppers are compared with data for samples originating in Mexico for 2002 and 2003. Only residues detected in more than 10 percent of all samples are included in this comparison. Residue data for asparagus from the United States are compared with data for samples originating in Mexico and Peru for 2002 and 2003. Only residues detected in more than 10 individual samples are included in this comparison. 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 differences in residue detections between countries were likely due to the pesticides used in response to pest pressures based on differing environmental, climatic, and growing conditions.

Appendix D. Import vs. Domestic Pesticide Residue Comparisons

2002-2003 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	2002	76	42	55	89
	2003	375	216	58	423
	2002-2003	**451**	**258**	**57**	**512**
Mexico	2002	102	82	80	212
	2003	324	275	85	721
	2002-2003	**426**	**357**	**84**	**933**

2002-2003 Distribution of Residues for Cucumber Samples Originating in Mexico vs. United States
(Only Pesticides with Residue Detections in at least 10 Percent of all Samples)

Pesticide	Origin	# of Samples Analyzed	# of Samples w/ Detections	% of Samples w/ Detections
Endosulfan I	United States	451	95	21
	Mexico	426	175	41
Endosulfan II	United States	451	63	14
	Mexico	426	112	26
Endosulfan sulfate	United States	451	131	29
	Mexico	426	261	61
Metalaxyl	United States	451	58	13
	Mexico	426	140	33
Methamidophos	United States	451	18	4
	Mexico	426	83	19

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

2002-2003 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	2002	151	139	92	286
	2003	516	430	83	1272
	2002-2003	**667**	**569**	**85**	**1,558**
Mexico	2002	14	13	93	58
	2003	152	149	98	771
	2002-2003	**166**	**162**	**98**	**829**

2002-2003 Distribution of Residues for Sweet Bell Pepper Samples Originating in Mexico vs. United States

(Only Pesticides with Residue Detections in at least 10 Percent of all Samples)

Pesticide	Origin	# of Samples Analyzed	# of Samples w/ Detections	% of Samples w/ Detections
Acephate	United States	667	169	25
	Mexico	166	17	10
Bifenthrin	United States	667	76	11
	Mexico	166	20	12
Chlorpyrifos	United States	667	17	3
	Mexico	166	117	70
Dicofol p,p'	United States	667	94	14
	Mexico	166	35	21
Endosulfan II	United States	667	31	5
	Mexico	166	57	34
Imidacloprid	United States	203	162	80
	Mexico	10	6	60
Metalaxyl	United States	667	118	18
	Mexico	166	12	7
Methamidophos	United States	667	183	27
	Mexico	166	81	49
Methomyl	United States	667	111	17
	Mexico	166	20	12
Oxamyl	United States	667	66	10
	Mexico	166	45	27
Permethrin cis	United States	667	35	5
	Mexico	166	61	37
Permethrin trans	United States	667	38	6
	Mexico	166	64	39
Tebufenozide	United States	653	92	14
	Mexico	166	5	3

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

2002-2003 Distribution of Residues for Asparagus United States Samples vs. Samples Originating in Mexico and Peru

Origin	Year	# of Samples Analyzed	# of Samples w/ Detections	% of Samples w/ Detections	# of Residues Detected
United States	2002	212	8	4	10
	2003	178	14	8	20
	2002-2003	**390**	**22**	**6**	**30**
Mexico	2002	183	19	10	22
	2003	99	4	4	4
	2002-2003	**282**	**23**	**8**	**26**
Peru	2002	265	29	11	31
	2003	69	7	10	7
	2002-2003	**334**	**36**	**11**	**38**

2002 Distribution of Residues for Asparagus Samples Originating in Mexico and Peru vs. United States

(Only Pesticides with Residue Detections in at least 10 Samples)

Pesticide	Origin	# of Samples Analyzed	# of Samples w/ Detections	% of Samples w/ Detections
Chlorpyrifos	United States	390	4	1
	Mexico	282	3	1
	Peru	334	20	6
Methomyl	United States	390	2	<1
	Mexico	282	4	1
	Peru	334	10	3
Metribuzin	United States	390	0	0
	Mexico	282	9	3
	Peru	334	0	0

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

Appendix E

Distribution of Residues by Pesticide in Fruit and Vegetables

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), Environmental Protection Agency (EPA) tolerances, and Codex Maximum Residue Limit/Extraneous Maximum Residue Limit (MRL/EMRL) references for each pair.

Some LODs and values detected have been rounded up to 3 decimal places for reporting purposes. The 2003 database, available for download from the PDP Web site, contains the actual values.

In 2003, 8,710 fruit and vegetable samples were analyzed (excluding the triazole special survey), of which 5,709 were fresh product and 3,001 were processed product.

PDP 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/Commodity" column to the right of the commodity 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.

Data to establish Codex MRLs are evaluated by the Food and Agriculture/World Health Organization-sponsored Joint Meeting on Pesticide Residues (JMPR) based on toxicology, residue occurrence in crops determined by supervised field trials, and dietary exposure. The Codex Committee on Pesticide Residues meets annually to discuss proposed MRLs and recommends approval to the Codex Alimentarius Commission. This means that Codex MRLs represent levels that are considered safe to humans. MRLs/EMRLs shown in this appendix are from the Codex Alimentarius: *Proc. of Codex Committee on Pesticide Residues*, 36th Session, April 19-24, 2004, New Delhi, India, and *Proc. of Codex Committee on Pesticide Residues*, 35th Session (ALINORM), March 31-April 5, 2003, Rotterdam, The Netherlands. Only Codex MRLs (CXLs) are listed.

The information herein is only intended to be an initial reference. Readers are reminded that international regulations and MRLs may change and that it is important that information obtained from this table be verified with knowledgeable parties in the market of interest prior to sale or shipment of exports.

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

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Acephate (insecticide)							
Asparagus	101	0			0.002 ^	0.02	-
Asparagus, Canned	101	0			0.002 ^	0.02	-
Cantaloupe (X-1)	186	5	2.7	0.003 - 0.036	0.002 - 0.005	0.02	-
Cucumbers (X-5)	614	13	2.1	0.003 - 0.39	0.002 ^	0.02	-
Green Beans, Canned	743	136	18.3	0.003 - 0.090	0.002 - 0.005	3	-
Mushrooms	552	0			0.002 - 0.003	0.02	-
Pear Juice, Concen./Puree	3	3	100	0.003 - 0.007	0.002 ^	0.02	-
Pears	187	0			0.002 - 0.004	0.02	-
Spinach (X-1)	736	4	0.5	0.008 - 0.035	0.005 ^	0.02	-
Sweet Bell Peppers	741	160	21.6	0.004 - 0.60	0.003 ^	4.0	-
Sweet Corn, Frozen	547	0			0.002 - 0.005	0.02	-
Sweet Peas, Frozen	549	0			0.002 - 0.004	0.02	-
Sweet Potatoes	1	1	100	0.023 ^	0.002 ^	0.02	-
TOTAL	**5,061**	**322**					
Acibenzolar S methyl (plant activator)							
Tomatoes	742	0			0.018 ^	1.0	-
TOTAL	**742**	**0**					
Alachlor (herbicide)							
Cantaloupe	132	0			0.016 ^	NT	-
Spinach	674	0			0.016 ^	NT	-
Sweet Corn, Frozen	547	0			0.010 - 0.016	0.05	-
TOTAL	**1,353**	**0**					
Aldicarb (insecticide)							
Cantaloupe	132	0			0.020 ^	NT	-
Cucumbers	525	0			0.018 - 0.021	NT	-
Green Beans, Canned	528	0			0.020 ^	NT	-
Pears	133	0			0.010 ^	NT	-
Spinach	736	0			0.020 ^	NT	-
Sweet Bell Peppers	741	0			0.001 - 0.002	NT	-
Sweet Corn, Frozen (V-1)	350	1	0.3	0.033 ^	0.020 ^	NT	-
Sweet Potatoes	734	0			0.010 - 0.012	0.1	0.1
TOTAL	**3,879**	**1**					
Aldicarb sulfone (metabolite of Aldicarb)							
Cantaloupe	132	0			0.038 ^	NT	-
Cucumbers	525	0			0.021 ^	NT	-
Green Beans, Canned	528	0			0.020 ^	NT	-
Spinach	736	0			0.038 ^	NT	-
Sweet Bell Peppers	741	0			0.001 - 0.002	NT	-
Sweet Corn, Frozen	350	0			0.038 ^	NT	-
Sweet Potatoes	734	4	0.5	0.003 - 0.023	0.002 - 0.021	0.1	0.1
TOTAL	**3,746**	**4**					
Aldicarb sulfoxide (metabolite of Aldicarb)							
Cantaloupe	132	0			0.038 ^	NT	-
Cucumbers	525	0			0.026 ^	NT	-
Green Beans, Canned	528	0			0.020 ^	NT	-
Pears	133	0			0.010 ^	NT	-
Spinach	736	0			0.038 ^	NT	-
Sweet Bell Peppers	741	0			0.001 - 0.002	NT	-
Sweet Corn, Frozen	350	0			0.038 ^	NT	-
Sweet Potatoes	734	8	1.1	0.003 - 0.083	0.002 - 0.027	0.1	0.1
TOTAL	**3,879**	**8**					

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

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Acephate (insecticide)							
Asparagus	101	0			0.002 ^	0.02	-
Asparagus, Canned	101	0			0.002 ^	0.02	-
Cantaloupe (X-1)	186	5	2.7	0.003 - 0.036	0.002 - 0.005	0.02	-
Cucumbers (X-5)	614	13	2.1	0.003 - 0.39	0.002 ^	0.02	-
Green Beans, Canned	743	136	18.3	0.003 - 0.090	0.002 - 0.005	3	-
Mushrooms	552	0			0.002 - 0.003	0.02	-
Pear Juice, Concen./Puree	3	3	100	0.003 - 0.007	0.002 ^	0.02	-
Pears	187	0			0.002 - 0.004	0.02	-
Spinach (X-1)	736	4	0.5	0.008 - 0.035	0.005 ^	0.02	-
Sweet Bell Peppers	741	160	21.6	0.004 - 0.60	0.003 ^	4.0	-
Sweet Corn, Frozen	547	0			0.002 - 0.005	0.02	-
Sweet Peas, Frozen	549	0			0.002 - 0.004	0.02	-
Sweet Potatoes	1	1	100	0.023 ^	0.002 ^	0.02	-
TOTAL	**5,061**	**322**					
Acibenzolar S methyl (plant activator)							
Tomatoes	742	0			0.018 ^	1.0	-
TOTAL	**742**	**0**					
Alachlor (herbicide)							
Cantaloupe	132	0			0.016 ^	NT	-
Spinach	674	0			0.016 ^	NT	-
Sweet Corn, Frozen	547	0			0.010 - 0.016	0.05	-
TOTAL	**1,353**	**0**					
Aldicarb (insecticide)							
Cantaloupe	132	0			0.020 ^	NT	-
Cucumbers	525	0			0.018 - 0.021	NT	-
Green Beans, Canned	528	0			0.020 ^	NT	-
Pears	133	0			0.010 ^	NT	-
Spinach	736	0			0.020 ^	NT	-
Sweet Bell Peppers	741	0			0.001 - 0.002	NT	-
Sweet Corn, Frozen (V-1)	350	1	0.3	0.033 ^	0.020 ^	NT	-
Sweet Potatoes	734	0			0.010 - 0.012	0.1	0.1
TOTAL	**3,879**	**1**					
Aldicarb sulfone (metabolite of Aldicarb)							
Cantaloupe	132	0			0.038 ^	NT	-
Cucumbers	525	0			0.021 ^	NT	-
Green Beans, Canned	528	0			0.020 ^	NT	-
Spinach	736	0			0.038 ^	NT	-
Sweet Bell Peppers	741	0			0.001 - 0.002	NT	-
Sweet Corn, Frozen	350	0			0.038 ^	NT	-
Sweet Potatoes	734	4	0.5	0.003 - 0.023	0.002 - 0.021	0.1	0.1
TOTAL	**3,746**	**4**					
Aldicarb sulfoxide (metabolite of Aldicarb)							
Cantaloupe	132	0			0.038 ^	NT	-
Cucumbers	525	0			0.026 ^	NT	-
Green Beans, Canned	528	0			0.020 ^	NT	-
Pears	133	0			0.010 ^	NT	-
Spinach	736	0			0.038 ^	NT	-
Sweet Bell Peppers	741	0			0.001 - 0.002	NT	-
Sweet Corn, Frozen	350	0			0.038 ^	NT	-
Sweet Potatoes	734	8	1.1	0.003 - 0.083	0.002 - 0.027	0.1	0.1
TOTAL	**3,879**	**8**					

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Aldrin (insecticide) (parent of Dieldrin)							
Asparagus	250	0			0.002 ^	0.03 AL	-
Asparagus, Canned	253	0			0.002 ^	0.03 AL	-
Cantaloupe	54	0			0.008 ^	0.1 AL	0.1
Green Beans, Canned	743	0			0.002 - 0.008	0.05 AL	0.05
Peaches, Canned	742	0			0.006 ^	0.02 AL	-
Pears	187	0			0.002 - 0.008	0.05 AL	0.05
Sweet Bell Peppers	90	0			0.007 ^	0.05 AL	-
Sweet Peas, Frozen	449	0			0.002 - 0.008	0.03 AL	0.05
Sweet Potatoes	734	0			0.002 - 0.008	0.1 AL	0.1
Tomatoes	742	0			0.006 ^	0.05 AL	-
TOTAL	**4,244**	**0**					
Allethrin (insecticide)							
Asparagus	211	0			0.015 - 0.030	NT	-
Asparagus, Canned	42	0			0.015 ^	NT	-
Cantaloupe	186	0			0.010 - 0.016	4	-
Peaches, Canned	742	0			0.031 ^	EX	-
Pears	187	0			0.010 - 0.015	EX	-
Spinach	120	0			0.016 ^	EX	-
Sweet Bell Peppers	140	0			0.030 ^	EX	-
Sweet Peas, Frozen	373	0			0.015 ^	NT	-
Tomatoes	742	0			0.031 ^	EX	-
TOTAL	**2,743**	**0**					
Ametryn (herbicide)							
Cucumbers	525	0			0.011 ^	NT	-
Sweet Corn, Frozen	153	0			0.010 ^	0.25	-
TOTAL	**678**	**0**					
Anilazine (fungicide)							
Asparagus	228	0			0.011 ^	NT	-
Asparagus, Canned	231	0			0.011 ^	NT	-
Green Beans, Canned	528	0			0.023 ^	NT	-
Sweet Peas, Frozen	395	0			0.011 ^	NT	-
TOTAL	**1,382**	**0**					
Atrazine (herbicide)							
Asparagus	250	0			0.008 ^	NT	-
Asparagus, Canned	253	0			0.008 ^	NT	-
Cantaloupe	132	0			0.024 ^	NT	-
Cucumbers	525	0			0.011 ^	NT	-
Green Beans, Canned	528	0			0.015 ^	NT	-
Mushrooms	394	0			0.002 ^	NT	-
Pears	133	0			0.008 - 0.025	NT	-
Spinach (V-1)	736	1	0.1	0.040 ^	0.024 ^	NT	-
Sweet Bell Peppers	741	0			0.002 ^	NT	-
Sweet Corn, Frozen	547	0			0.010 - 0.024	0.25	-
Sweet Peas, Frozen	395	0			0.008 ^	NT	-
TOTAL	**4,634**	**1**					
Azinphos methyl (insecticide)							
Asparagus	250	0			0.011 ^	NT	0.5
Asparagus, Canned	233	0			0.011 ^	NT	0.5
Cantaloupe	186	0			0.008 - 0.012	2.0	0.2
Cucumbers	739	0			0.008 ^	2.0	0.2
Green Beans, Canned	743	2	0.3	0.013 - 0.037	0.005 - 0.008	2.0	0.5
Mushrooms	394	0			0.020 ^	NT	0.5
Peaches, Canned	742	0			0.023 ^	2.0	2
Pear Juice, Concen./Puree	66	14	21.2	0.013 - 0.24	0.008 ^	1.5	2
Pears	187	45	24.1	0.013 - 0.46	0.008 - 0.011	1.5	2
Spinach	736	0			0.012 ^	2.0	0.5

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Sweet Bell Peppers	741	0			0.012 - 0.020	0.3	1
Sweet Corn, Frozen	350	0			0.012 ^	NT	0.5
Sweet Peas, Frozen	449	0			0.008 - 0.011	NT	0.5
Tomatoes	742	0			0.023 ^	2.0	1
TOTAL	**6,558**	**61**					
Azoxystrobin (fungicide)							
Pears	133	0			0.002 ^	NT	-
Sweet Potatoes	43	0			0.007 ^	0.03	-
TOTAL	**176**	**0**					
Bendiocarb (insecticide)							
Cantaloupe	36	0			0.002 ^	SU	-
Pears	187	0			0.003 - 0.005	SU	-
TOTAL	**223**	**0**					
Benomyl (fungicide)							
Sweet Bell Peppers	246	24	9.8	0.001 - 0.002	0.001 ^	0.2	-
Sweet Potatoes	499	0			0.006 ^	0.2	-
TOTAL	**745**	**24**					
BHC alpha (insecticide)							
Cantaloupe	186	0			0.002 - 0.004	0.05 AL	-
Green Beans, Canned	528	0			0.001 ^	0.05 AL	-
Peaches, Canned	742	0			0.003 ^	0.05 AL	-
Pears	187	0			0.002 - 0.005	0.05 AL	-
Spinach	120	0			0.004 ^	0.05 AL	-
Sweet Bell Peppers	90	0			0.007 ^	0.05 AL	-
Sweet Potatoes	521	0			0.002 ^	0.05 AL	-
Tomatoes	742	0			0.003 ^	0.05 AL	-
TOTAL	**3,116**	**0**					
BHC beta (isomer of BHC alpha)							
Green Beans, Canned	528	0			0.001 ^	0.05 AL	-
Peaches, Canned	742	0			0.003 ^	0.05 AL	-
Sweet Potatoes	521	0			0.002 ^	0.05 AL	-
Tomatoes	742	0			0.003 ^	0.05 AL	-
TOTAL	**2,533**	**0**					
Bifenazate (acaricide)							
Pears	54	1	1.9	0.033 ^	0.020 ^	0.75	-
TOTAL	**54**	**1**					
Bifenthrin (insecticide)							
Asparagus	250	0			0.011 ^	0.05	-
Asparagus, Canned	253	0			0.011 ^	0.05	-
Cantaloupe	186	0			0.010 - 0.016	0.4	-
Cucumbers	739	5	0.7	0.018 ^	0.010 - 0.011	0.4	-
Green Beans, Canned	743	114	15.3	0.013 - 0.047	0.008 - 0.010	0.6	-
Mushrooms	394	0			0.003 ^	0.05	-
Pears	187	0			0.010 - 0.037	0.5	0.5
Spinach	674	0			0.016 ^	0.2	-
Sweet Bell Peppers	741	79	10.7	0.005 - 0.080	0.003 ^	0.5	-
Sweet Corn, Frozen	547	0			0.010 - 0.016	0.05	-
Sweet Peas, Frozen	549	0			0.010 - 0.011	0.05	-
Sweet Potatoes	734	2	0.3	0.027 ^	0.010 - 0.016	0.05	-
TOTAL	**5,997**	**200**					
Bromacil (herbicide)							
Cucumbers	525	0			0.015 ^	NT	-
TOTAL	**525**	**0**					

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Buprofezin (insecticide)							
Asparagus	229	0			0.015 - 0.075	NT	-
Asparagus, Canned	42	0			0.015 ^	NT	-
Cantaloupe	54	0			0.015 ^	0.50	-
Cucumbers	739	0			0.009 - 0.015	0.50	1
Pears	133	0			0.015 ^	NT	-
Sweet Peas, Frozen	395	0			0.015 ^	NT	-
TOTAL	**1,592**	**0**					
Butylate (herbicide)							
Cantaloupe	132	0			0.016 ^	NT	-
Spinach	674	0			0.016 ^	NT	-
Sweet Corn, Frozen	525	0			0.010 - 0.016	0.1	-
TOTAL	**1,331**	**0**					
Cadusafos (insecticide)							
Cucumbers	153	0			0.005 ^	NT	-
TOTAL	**153**	**0**					
Captafol (fungicide) (parent of THPI)							
Cantaloupe	132	0			0.017 ^	NT	-
Green Beans, Canned	528	0			0.030 ^	NT	-
Onion	719	0			0.018 - 0.035	0.1	-
Pears	111	0			0.015 - 0.050	NT	-
Spinach	736	0			0.017 ^	NT	-
Sweet Corn, Frozen	350	0			0.017 ^	NT	-
Sweet Peas, Frozen	395	0			0.015 ^	NT	-
Tomatoes	742	0			0.040 ^	15	-
TOTAL	**3,713**	**0**					
Captan (fungicide) (parent of THPI)							
Cantaloupe	168	0			0.012 ^	25	-
Cucumbers	596	0			0.012 ^	25	-
Green Beans, Canned	743	0			0.005 - 0.012	25	-
Mushrooms	394	0			0.019 - 0.064	NT	-
Onion	525	0			0.014 ^	25	-
Peaches, Canned	742	0			0.012 ^	50	15
Pear Juice, Concen./Puree	66	0			0.012 ^	25	25
Pears	187	3	1.6	0.020 - 0.92	0.008 - 0.025	25	25
Spinach	736	0			0.012 ^	100	-
Sweet Bell Peppers	741	58	7.8	0.032 - 1.3	0.019 ^	25	-
Sweet Corn, Frozen	408	0			0.012 ^	2	-
Sweet Peas, Frozen	30	0			0.012 ^	2	-
Tomatoes	742	0			0.012 ^	25	15
TOTAL	**6,078**	**61**					
Carbaryl (insecticide)							
Asparagus	351	5	1.4	0.013 - 2.5	0.008 - 0.010	10	10
Asparagus, Canned	354	0			0.008 - 0.010	10	10
Cantaloupe	186	4	2.2	0.013 - 0.032	0.002 - 0.008	10	3
Cucumbers	739	26	3.5	0.013 - 0.20	0.008 ^	10	3
Green Beans, Canned	743	0			0.008 - 0.010	10	5
Peaches, Canned	742	132	17.8	0.017 - 0.38	0.010 ^	10	10
Pear Juice, Concen./Puree	66	3	4.5	0.011 - 0.32	0.002 ^	10.0	5
Pears	187	3	1.6	0.003 - 0.021	0.002 - 0.010	10.0	5
Spinach	736	0			0.008 ^	12	10
Sweet Bell Peppers	741	54	7.3	0.002 - 0.65	0.001 ^	10	5
Sweet Corn, Frozen	547	0			0.008 ^	5	1
Sweet Peas, Frozen	54	0			0.008 ^	10	5
Sweet Potatoes	734	1	0.1	0.013 ^	0.002 - 0.008	0.2	-
Tomatoes	742	0			0.010 ^	10	5
TOTAL	**6,922**	**228**					

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Carbendazim - MBC (fungicide)							
Pears	133	0			0.010 ^	7.0	3
TOTAL	**133**	**0**					
Carbofuran (insecticide) (parent of 3-Hydroxycarbofuran)							
Cantaloupe	186	0			0.002 - 0.013	0.2	-
Cucumbers (X-2)	739	3	0.4	0.022 - 0.53	0.013 - 0.018	0.2	-
Green Beans, Canned	528	0			0.015 ^	NT	-
Pears	133	0			0.010 ^	NT	-
Spinach	736	0			0.008 ^	NT	-
Sweet Bell Peppers	725	10	1.4	0.003 - 0.088	0.001 - 0.004	0.2	-
Sweet Corn, Frozen	547	0			0.008 - 0.013	0.2	-
TOTAL	**3,594**	**13**					
Carbophenothion (insecticide)							
Mushrooms	394	0			0.002 ^	NT	-
Sweet Bell Peppers	741	0			0.002 ^	NT	-
TOTAL	**1,135**	**0**					
Carboxin (fungicide)							
Cantaloupe	132	0			0.016 ^	NT	-
Green Beans, Canned	215	0			0.008 ^	0.2	-
Spinach	674	0			0.016 ^	NT	-
Sweet Corn, Frozen	547	0			0.008 - 0.016	0.2	-
Sweet Peas, Frozen	54	0			0.008 ^	NT	-
TOTAL	**1,622**	**0**					
Carfentrazone ethyl (herbicide)							
Pears	133	0			0.008 ^	NT	-
Tomatoes	742	0			0.036 ^	0.10	-
TOTAL	**875**	**0**					
Chlordane cis (insecticide) (isomer of Chlordane)							
Asparagus	250	0			0.002 ^	0.1 AL	0.02
Asparagus, Canned	253	0			0.002 ^	0.1 AL	0.02
Cantaloupe	186	0			0.002 - 0.004	0.1 AL	0.02
Green Beans, Canned	636	0			0.001 - 0.002	0.1 AL	0.02
Mushrooms	394	0			0.001 ^	NT	0.02
Peaches, Canned	742	0			0.003 ^	0.1 AL	0.02
Pears	187	0			0.002 - 0.005	0.1 AL	0.02
Spinach	120	0			0.004 ^	0.1 AL	0.02
Sweet Bell Peppers	741	0			0.001 ^	0.1 AL	0.02
Sweet Peas, Frozen	395	0			0.010 ^	0.1 AL	0.02
Sweet Potatoes	627	0			0.002 - 0.019	0.1 AL	0.02
Tomatoes	742	0			0.003 ^	0.1 AL	0.02
TOTAL	**5,273**	**0**					
Chlordane trans (insecticide) (isomer of Chlordane)							
Asparagus	250	0			0.002 ^	0.1 AL	0.02
Asparagus, Canned	253	0			0.002 ^	0.1 AL	0.02
Cantaloupe	186	0			0.002 - 0.004	0.1 AL	0.02
Green Beans, Canned	636	0			0.001 - 0.002	0.1 AL	0.02
Peaches, Canned	742	0			0.003 ^	0.1 AL	0.02
Pears	187	0			0.002 - 0.005	0.1 AL	0.02
Spinach	120	0			0.004 ^	0.1 AL	0.02
Sweet Bell Peppers	741	0			0.001 ^	0.1 AL	0.02
Sweet Peas, Frozen	395	0			0.010 ^	0.1 AL	0.02

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Sweet Potatoes	627	0			0.002 - 0.020	0.1 AL	0.02
Tomatoes	742	0			0.003 ^	0.1 AL	0.02
TOTAL	**4,879**	**0**					
Chlorethoxyfos (insecticide)							
Cantaloupe	132	0			0.016 ^	NT	-
Spinach	674	0			0.016 ^	NT	-
Sweet Corn, Frozen	547	0			0.010 - 0.016	0.01	-
TOTAL	**1,353**	**0**					
Chlorfenvinphos total (insecticide)							
Sweet Bell Peppers	184	0			0.004 ^	NT	-
TOTAL	**184**	**0**					
Chlorfenvinphos beta (insecticide)							
Sweet Bell Peppers	557	0			0.003 ^	NT	-
TOTAL	**557**	**0**					
Chlorothalonil (fungicide)							
Asparagus	351	0			0.002 - 0.005	0.1	-
Asparagus, Canned	354	0			0.002 - 0.005	0.1	-
Cantaloupe	54	0			0.005 ^	5	2
Cucumbers	739	21	2.8	0.008 - 0.057	0.005 - 0.008	5	5
Green Beans, Canned	743	0			0.002 - 0.005	5	5
Mushrooms	158	1	0.6	0.008 ^	0.005 ^	1.0	-
Peaches, Canned	742	0			0.008 ^	0.5	0.2
Pears	133	0			0.002 - 0.008	NT	-
Spinach	62	0			0.007 ^	NT	-
Sweet Corn, Frozen	153	0			0.005 ^	1	0.01
Sweet Peas, Frozen	449	0			0.002 - 0.005	NT	-
Tomatoes	742	48	6.5	0.013 - 0.29	0.008 ^	5	5
TOTAL	**4,680**	**70**					
Chlorpropham (herbicide, growth regulator)							
Asparagus	250	0			0.011 ^	NT	-
Asparagus, Canned	253	0			0.011 ^	NT	-
Cantaloupe	132	0			0.017 ^	NT	-
Cucumbers	525	0			0.011 ^	NT	-
Green Beans, Canned	528	0			0.023 ^	NT	-
Mushrooms	394	0			0.006 ^	NT	-
Pears	133	0			0.011 - 0.037	NT	-
Spinach	736	0			0.017 ^	0.3	-
Sweet Bell Peppers (V-10)	741	10	1.3	0.010 ^	0.006 ^	NT	-
Sweet Corn, Frozen	350	0			0.017 ^	NT	-
Sweet Peas, Frozen	395	0			0.011 ^	NT	-
TOTAL	**4,437**	**10**					
Chlorpyrifos (insecticide)							
Asparagus	351	10	2.8	0.006 - 0.060	0.004 ^	5.0	-
Asparagus, Canned	354	6	1.7	0.006 - 0.025	0.004 ^	5.0	-
Cantaloupe	186	2	1.1	0.007 ^	0.004 ^	0.1	-
Cucumbers	739	11	1.5	0.007 - 0.038	0.004 ^	0.05	-
Green Beans, Canned	743	0			0.004 - 0.005	0.05	0.01
Mushrooms	552	1	0.2	0.007 ^	0.001 - 0.004	0.1	-
Onion	216	0			0.010 ^	0.5	0.2
Peaches, Canned	742	0			0.010 ^	0.05	0.5
Pear Juice, Concen./Puree	66	0			0.004 ^	0.05	1
Pears	187	0			0.004 ^	0.05	1
Spinach	736	18	2.4	0.007 - 0.035	0.004 ^	0.1	-
Sweet Bell Peppers	741	134	18.1	0.002 - 0.56	0.001 ^	1.0	2
Sweet Corn, Frozen	547	0			0.004 ^	0.1	0.01
Sweet Peas, Frozen	549	0			0.004 ^	0.05	0.01

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Sweet Potatoes (X-1)	734	111	15.1	0.002 - 0.084	0.001 - 0.004	0.05	-
Tomatoes	742	29	3.9	0.017 - 0.071	0.010 ^	0.5	0.5
TOTAL	**8,185**	**322**					
Clofentezine (insecticide)							
Pear Juice, Concen./Puree	66	0			0.006 ^	0.5	0.5
Pears	54	0			0.007 ^	0.5	0.5
TOTAL	**120**	**0**					
Clomazone (herbicide)							
Asparagus	250	0			0.015 ^	NT	-
Asparagus, Canned	253	0			0.015 ^	NT	-
Cantaloupe	186	0			0.004 - 0.008	0.05	-
Cucumbers	739	0			0.008 - 0.009	0.1	-
Green Beans, Canned	743	0			0.005 - 0.008	0.05	-
Pears	133	0			0.015 ^	NT	-
Spinach	120	0			0.004 ^	NT	-
Sweet Bell Peppers	725	0			0.004 - 0.014	0.05	-
Sweet Peas, Frozen	549	0			0.008 - 0.015	0.05	-
Sweet Potatoes	734	0			0.008 - 0.023	0.05	-
TOTAL	**4,432**	**0**					
Coumaphos (insecticide)							
Sweet Bell Peppers	741	0			0.006 - 0.009	NT	-
TOTAL	**741**	**0**					
Coumaphos oxygen analog (metabolite of Coumaphos)							
Mushrooms	394	0			0.012 ^	NT	-
Sweet Bell Peppers	741	0			0.008 - 0.012	NT	-
TOTAL	**1,135**	**0**					
Cyanazine (herbicide)							
Sweet Corn, Frozen	153	0			0.035 ^	0.05	-
TOTAL	**153**	**0**					
Cycloate (herbicide)							
Cantaloupe	132	0			0.016 ^	NT	-
Spinach	736	0			0.016 ^	0.05	-
Sweet Corn, Frozen	350	0			0.016 ^	NT	-
TOTAL	**1,218**	**0**					
Cyfluthrin (insecticide)							
Asparagus	351	0			0.023 - 0.060	0.05	-
Asparagus, Canned	354	0			0.023 - 0.060	0.05	-
Cantaloupe	186	0			0.030 ^	0.05	-
Cucumbers	525	0			0.060 ^	0.05	-
Green Beans, Canned	528	0			0.045 ^	0.05	-
Mushrooms	552	0			0.041 - 0.060	0.05	-
Onion	741	0			0.048 - 0.060	0.05	-
Pears	187	0			0.023 - 0.077	0.05	-
Spinach	736	0			0.030 ^	0.05	-
Sweet Bell Peppers	741	0			0.041 - 0.91	0.50	0.2
Sweet Corn, Frozen	547	0			0.030 - 0.060	0.05	-
Sweet Peas, Frozen	495	0			0.023 - 0.060	0.25	-
Tomatoes	742	0			0.079 ^	0.20	0.5
TOTAL	**6,685**	**0**					
Cyhalothrin, Total (Cyhalothrin-L + R157836 epimer) (insecticide) **							
Cantaloupe	132	0			0.016 ^	0.01	-
Mushrooms	394	0			0.003 ^	0.01	-
Onion	525	0			0.006 - 0.008	0.1	-
Spinach (X-12)	674	12	1.8	0.027 - 0.26	0.016 ^	0.01	-

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Sweet Bell Peppers	741	27	3.6	0.005 - 0.058	0.003 - 0.083	0.20	-
Sweet Corn, Frozen	394	0			0.016 ^	0.05	-
TOTAL	**2,860**	**39**					
Cyhalothrin, Lambda (insecticide)							
Asparagus (X-1)	250	1	0.4	0.052 ^	0.015 ^	0.01	-
Asparagus, Canned	253	0			0.015 ^	0.01	-
Cantaloupe	54	0			0.010 ^	0.01	-
Cucumbers	525	0			0.060 ^	0.01	-
Green Beans, Canned	743	0			0.010 - 0.060	0.20	-
Mushrooms	158	0			0.060 ^	0.01	-
Onion	216	0			0.060 ^	0.1	-
Pear Juice, Concen./Puree	53	0			0.060 ^	0.30	0.2
Pears	187	1	0.5	0.025 ^	0.010 - 0.050	0.30	0.2
Sweet Corn, Frozen	153	0			0.060 ^	0.05	-
Sweet Peas, Frozen	549	0			0.015 - 0.060	0.01	-
Sweet Potatoes	124	0			0.010 - 0.060	0.01	-
Tomatoes	742	0			0.047 ^	0.20	-
TOTAL	**4,007**	**2**					
Cypermethrin (insecticide)							
Asparagus	250	0			0.023 ^	NT	-
Asparagus, Canned	253	0			0.023 ^	NT	-
Cantaloupe	186	0			0.030 ^	NT	-
Cucumbers	525	0			0.036 ^	NT	0.2
Green Beans, Canned	528	44	8.3	0.025 ^	0.015 ^	0.5	0.5
Mushrooms	394	0			0.052 ^	NT	0.05
Onion	741	0			0.035 - 0.052	0.10	0.1
Pear Juice, Concen./Puree	53	0			0.035 ^	NT	2
Pears	187	0			0.023 - 0.077	NT	2
Spinach	736	110	14.9	0.050 - 2.9	0.030 ^	10.00	2
Sweet Bell Peppers	741	0			0.051 - 0.72	0.2	0.5
Sweet Corn, Frozen	503	0			0.030 - 0.035	0.05	0.05
Sweet Peas, Frozen	395	0			0.023 ^	0.1	0.05
Sweet Potatoes	734	0			0.025 - 0.035	NT	0.05
Tomatoes	742	0			0.057 ^	0.2	0.5
TOTAL	**6,968**	**154**					
Cyprodinil (fungicide)							
Peaches, Canned	742	12	1.6	0.017 ^	0.010 ^	2.0	-
Pear Juice, Concen./Puree	66	0			0.008 ^	0.1	-
Pears	187	0			0.008 ^	0.1	-
TOTAL	**995**	**12**					
Cyromazine (insect growth regulator)							
Mushrooms	26	26	100	0.18 - 0.93	0.11 ^	1.0	5
Sweet Bell Peppers	741	2	0.3	0.004 ^	0.002 - 0.11	1.0	1
TOTAL	**767**	**28**					
DCPA (herbicide)							
Asparagus (V-1)	250	1	0.4	0.004 ^	0.002 ^	NT	-
Asparagus, Canned	253	0			0.002 ^	NT	-
Cantaloupe	186	2	1.1	0.010 - 0.012	0.006 - 0.007	1	-
Cucumbers	739	0			0.006 ^	1	-
Green Beans, Canned	743	0			0.002 - 0.006	2	-
Mushrooms	394	0			0.001 ^	NT	-
Onion	741	0			0.006 - 0.007	1	-
Pears	133	0			0.002 - 0.008	NT	-
Spinach (V-3)	736	3	0.4	0.012 - 0.031	0.007 ^	NT	-
Sweet Bell Peppers	741	10	1.3	0.001 - 0.045	0.001 ^	2	-
Sweet Corn, Frozen	547	0			0.006 - 0.007	0.05	-
Sweet Peas, Frozen	449	0			0.002 - 0.006	NT	-

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Sweet Potatoes	734	0			0.003 - 0.006	2	-
Tomatoes	742	0			0.006 ^	1	-
TOTAL	**7,388**	**16**					
DDD o,p' (metabolite of DDT)							
Mushrooms	380	0			0.001 ^	0.5 AL	-
Sweet Bell Peppers	741	0			0.001 ^	0.1 AL	-
TOTAL	**1,121**	**0**					
DDD p,p' (metabolite of DDT)							
Asparagus	351	0			0.004 - 0.008	0.5 AL	-
Asparagus, Canned	354	0			0.004 - 0.008	0.5 AL	-
Cantaloupe	186	0			0.008 - 0.020	0.1 AL	-
Cucumbers	739	0			0.008 ^	0.1 AL	-
Green Beans, Canned	743	0			0.008 - 0.010	0.2 AL	-
Mushrooms	552	1	0.2	0.002 ^	0.001 - 0.008	0.5 AL	-
Pear Juice, Concen./Puree	66	0			0.008 ^	0.1 AL	-
Pears	187	0			0.004 - 0.015	0.1 AL	-
Spinach	120	0			0.020 ^	0.5 AL	-
Sweet Bell Peppers	741	0			0.001 ^	0.1 AL	-
Sweet Corn, Frozen	153	0			0.008 ^	0.1 AL	-
Sweet Peas, Frozen	549	0			0.004 - 0.008	0.2 AL	-
Sweet Potatoes	213	0			0.008 ^	1 AL	-
TOTAL	**4,954**	**1**					
DDE p,p' (metabolite of DDT)							
Asparagus	351	0			0.004 - 0.007	0.5 AL	-
Asparagus, Canned	354	0			0.004 - 0.007	0.5 AL	-
Cantaloupe	186	5	2.7	0.012 - 0.023	0.007 ^	0.1 AL	-
Cucumbers	739	1	0.1	0.012 ^	0.007 ^	0.1 AL	-
Green Beans, Canned	743	1	0.1	0.003 ^	0.002 - 0.007	0.2 AL	-
Mushrooms	552	1	0.2	0.003 ^	0.002 - 0.007	0.5 AL	-
Onion	741	0			0.005 - 0.007	0.2 AL	-
Peaches, Canned	742	0			0.005 ^	0.2 AL	-
Pear Juice, Concen./Puree	66	0			0.007 ^	0.1 AL	-
Pears	187	0			0.004 - 0.015	0.1 AL	-
Spinach	736	177	24	0.012 - 0.077	0.007 ^	0.5 AL	-
Sweet Bell Peppers	741	7	0.9	0.003 ^	0.002 ^	0.1 AL	-
Sweet Corn, Frozen	547	0			0.007 ^	0.1 AL	-
Sweet Peas, Frozen	505	0			0.004 - 0.007	0.2 AL	-
Sweet Potatoes	734	1	0.1	0.003 ^	0.002 - 0.007	1 AL	-
Tomatoes	742	0			0.005 ^	0.05 AL	-
TOTAL	**8,666**	**193**					
DDT o,p' (insecticide)							
Mushrooms	394	1	0.3	0.003 ^	0.002 ^	0.5 AL	-
Sweet Bell Peppers	741	0			0.001 - 0.002	0.1 AL	-
TOTAL	**1,135**	**1**					
DDT p,p' (insecticide)							
Asparagus	351	0			0.004 - 0.015	0.5 AL	-
Asparagus, Canned	354	0			0.004 - 0.008	0.5 AL	-
Cantaloupe	54	0			0.008 ^	0.1 AL	-
Cucumbers	739	0			0.008 ^	0.1 AL	-
Green Beans, Canned	743	0			0.008 - 0.010	0.2 AL	-
Mushrooms	552	1	0.2	0.003 ^	0.002 - 0.008	0.5 AL	-
Pear Juice, Concen./Puree	66	0			0.008 ^	0.1 AL	-
Pears	187	0			0.004 - 0.015	0.1 AL	-

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Sweet Bell Peppers	741	0			0.002 ^	0.1 AL	-
Sweet Corn, Frozen	153	0			0.008 ^	0.1 AL	-
Sweet Peas, Frozen	549	0			0.004 - 0.008	0.2 AL	-
Sweet Potatoes	213	0			0.008 ^	1 AL	-
TOTAL	**4,702**	**1**					
Deltamethrin (insecticide) (includes parent Tralomethrin)							
Asparagus	250	0			0.011 - 0.037	0.05	-
Asparagus, Canned	231	0			0.037 ^	0.05	-
Cantaloupe	186	0			0.015 - 0.24	0.05	0.01
Cucumbers	325	0			0.015 - 0.020	0.05	0.2
Mushrooms	394	0			0.024 ^	0.05	0.01
Onion	525	0			0.064 ^	0.05	0.1
Pears	187	0			0.015 - 0.077	0.05	0.1
Spinach	120	0			0.24 ^	0.05	0.5
Sweet Bell Peppers	741	0			0.024 - 0.53	0.05	0.2
Sweet Peas, Frozen	373	0			0.011 - 0.075	0.05	0.1
Sweet Potatoes	627	0			0.015 - 0.048	0.05	0.01
TOTAL	**3,959**	**0**					
Demeton-S sulfone (insecticide) (metabolite of Demeton-S)							
Sweet Bell Peppers	557	0			0.015 ^	NT	-
TOTAL	**557**	**0**					
Desmedipham (herbicide)							
Mushrooms (V-1)	1	1	100	0.092 ^	0.026 ^	NT	-
Sweet Bell Peppers	495	0			0.030 - 0.21	NT	-
TOTAL	**496**	**1**					
Diazinon (insecticide)							
Asparagus	249	0			0.004 ^	NT	-
Asparagus, Canned	253	0			0.004 ^	NT	-
Cantaloupe	186	0			0.002 - 0.007	0.75	0.2
Cucumbers	739	2	0.3	0.079 - 0.13	0.002 ^	0.75	0.1
Green Beans, Canned	743	0			0.002 - 0.005	0.5	0.2
Mushrooms	552	115	20.8	0.003 - 0.093	0.002 - 0.004	0.75	-
Onion	216	0			0.010 ^	0.75	0.05
Peaches, Canned	742	0			0.015 ^	0.7	0.2
Pear Juice, Concen./Puree	66	0			0.002 ^	0.5	2
Pears	187	0			0.002 - 0.004	0.5	2
Spinach	736	2	0.3	0.012 - 0.031	0.007 ^	0.7	0.5
Sweet Bell Peppers	741	2	0.3	0.015 - 0.025	0.004 ^	0.5	0.05
Sweet Corn, Frozen	547	0			0.002 - 0.007	0.7	0.02
Sweet Peas, Frozen	549	0			0.002 - 0.004	0.5	0.2
Sweet Potatoes	734	1	0.1	0.001 ^	0.001 - 0.002	0.1	-
Tomatoes	742	1	0.1	0.025 ^	0.015 ^	0.75	0.5
TOTAL	**7,982**	**123**					
Diazinon oxygen analog (metabolite of Diazinon)							
Cantaloupe	186	0			0.003 - 0.016	NT	-
Cucumbers	739	0			0.003 ^	0.75	-
Green Beans, Canned	743	0			0.003 - 0.005	0.5	-
Mushrooms	552	0			0.003 ^	NT	-
Onion	216	0			0.010 ^	0.75	-
Peaches, Canned	742	0			0.026 ^	NT	-
Pear Juice, Concen./Puree	66	0			0.003 ^	NT	-
Pears	187	0			0.001 - 0.003	NT	-
Spinach	736	0			0.016 ^	0.7	-
Sweet Bell Peppers	741	0			0.003 ^	0.5	-
Sweet Corn, Frozen	547	0			0.003 - 0.016	NT	-
Sweet Peas, Frozen	549	0			0.001 - 0.003	0.5	-

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Sweet Potatoes	734	0			0.001 - 0.003	0.1	-
Tomatoes	742	0			0.026 ^	0.75	-
TOTAL	**7,480**	**0**					
Dichlobenil (herbicide)							
Peaches, Canned	742	0			0.014 ^	0.15	-
Pear Juice, Concen./Puree	66	0			0.002 ^	0.5	-
Pears	187	0			0.005 - 0.013	0.5	-
Sweet Bell Peppers	741	0			0.019 ^	NT	-
TOTAL	**1,736**	**0**					
Dichlorvos - DDVP (insecticide) (also a metabolite of Naled)							
Asparagus	351	0			0.002 - 0.008	NT	-
Asparagus, Canned	354	0			0.002 - 0.008	NT	-
Cantaloupe	186	0			0.002 - 0.003	NT	-
Cucumbers	739	0			0.002 ^	NT	-
Green Beans, Canned	743	0			0.002 - 0.003	NT	-
Mushrooms	494	0			0.002 - 0.003	0.5	0.5
Onion	216	0			0.010 ^	NT	-
Peaches, Canned	742	0			0.005 ^	NT	-
Pears	133	0			0.002 - 0.005	NT	-
Spinach	736	0			0.003 ^	NT	-
Sweet Bell Peppers	727	0			0.003 ^	NT	-
Sweet Corn, Frozen	547	0			0.002 - 0.003	NT	-
Sweet Peas, Frozen	549	0			0.002 - 0.008	NT	-
Tomatoes	742	0			0.005 ^	0.05	-
TOTAL	**7,259**	**0**					
Dicloran (fungicide)							
Asparagus	250	0			0.004 ^	NT	-
Asparagus, Canned	253	0			0.004 ^	NT	-
Cantaloupe	132	0			0.010 ^	NT	-
Cucumbers	739	1	0.1	0.013 ^	0.008 ^	5	-
Green Beans, Canned	743	0			0.002 - 0.008	20	-
Mushrooms	394	0			0.002 - 0.006	NT	-
Onion	741	2	0.3	0.011 ^	0.007 - 0.022	10	0.2
Peaches, Canned	742	0			0.009 ^	20	15
Pears	133	0			0.004 - 0.013	NT	-
Spinach	736	0			0.010 ^	NT	-
Sweet Bell Peppers (V-2)	741	2	0.3	0.003 ^	0.002 ^	NT	-
Sweet Corn, Frozen	350	0			0.010 ^	NT	-
Sweet Peas, Frozen	449	0			0.004 - 0.008	NT	-
Sweet Potatoes	734	359	48.9	0.004 - 6.0	0.002 - 0.008	10	-
Tomatoes	742	20	2.7	0.015 - 0.23	0.009 ^	5	0.5
TOTAL	**7,879**	**384**					
Dicofol o,p' (insecticide)							
Mushrooms	394	0			0.003 - 0.010	NT	-
Sweet Bell Peppers	741	69	9.3	0.005 - 0.21	0.003 - 0.006	5	1
TOTAL	**1,135**	**69**					
Dicofol p,p' (isomer of Dicofol o,p')							
Asparagus	250	0			0.015 ^	NT	-
Asparagus, Canned	253	0			0.015 ^	NT	-
Cantaloupe	186	0			0.010 - 0.018	5	0.2
Cucumbers	739	9	1.2	0.017 - 0.16	0.010 - 0.020	5	0.5
Green Beans, Canned	743	1	0.1	0.013 ^	0.008 - 0.010	5	2
Mushrooms	394	0			0.003 ^	NT	-
Peaches, Canned	742	0			0.021 ^	10	5
Pear Juice, Concen./Puree	66	0			0.010 ^	5	-
Pears	187	2	1.1	0.025 - 0.20	0.010 - 0.050	5	-
Spinach	736	0			0.018 ^	NT	-

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Sweet Bell Peppers	741	103	13.9	0.005 - 1.1	0.003 ^	5	1
Sweet Corn, Frozen	350	0			0.018 ^	NT	-
Sweet Peas, Frozen	427	0			0.010 - 0.015	NT	-
Tomatoes	742	27	3.6	0.022 - 0.33	0.013 - 0.021	5	1
TOTAL	**6,556**	**142**					
Dieldrin (insecticide) (also a metabolite of Aldrin)							
Asparagus	351	0			0.002 - 0.006	0.03 AL	-
Asparagus, Canned	354	0			0.002 - 0.006	0.03 AL	-
Cantaloupe	186	0			0.006 - 0.018	0.1 AL	0.1
Cucumbers	739	33	4.5	0.010 - 0.038	0.006 ^	0.1 AL	0.1
Green Beans, Canned	743	1	0.1	0.002 ^	0.001 - 0.006	0.05 AL	0.05
Mushrooms	552	0			0.005 - 0.006	NT	-
Onion	741	0			0.006 ^	0.1 AL	0.05
Peaches, Canned	742	0			0.005 ^	0.02 AL	-
Pear Juice, Concen./Puree	66	0			0.006 ^	0.03 AL	0.05
Pears	187	0			0.002 - 0.006	0.03 AL	0.05
Spinach	736	0			0.018 ^	0.05 AL	0.05
Sweet Bell Peppers	741	0			0.005 ^	0.05 AL	-
Sweet Corn, Frozen	547	0			0.006 - 0.018	0.02 AL	-
Sweet Peas, Frozen	154	0			0.006 ^	0.03 AL	0.05
Sweet Potatoes	734	6	0.8	0.003 - 0.010	0.002 - 0.006	0.1 AL	0.1
Tomatoes	742	0			0.005 ^	0.05 AL	-
TOTAL	**8,315**	**40**					
Difenoconazole (fungicide)							
Cantaloupe	132	0			0.072 ^	NT	-
Spinach	674	0			0.072 ^	NT	-
Sweet Corn, Frozen	394	0			0.072 ^	0.1	-
TOTAL	**1,200**	**0**					
Diflubenzuron (insecticide)							
Mushrooms	394	6	1.5	0.011 - 0.037	0.006 - 0.007	0.2	0.1
Pear Juice, Concen./Puree	66	0			0.006 ^	0.50	1
Pears	54	0			0.007 ^	0.50	1
Sweet Bell Peppers	741	20	2.7	0.011 - 0.12	0.006 - 0.007	1.0	-
TOTAL	**1,255**	**26**					
Dimethenamid (herbicide)							
Cantaloupe	132	0			0.016 ^	NT	-
Spinach	674	0			0.016 ^	NT	-
Sweet Corn, Frozen	394	0			0.016 ^	0.01	-
TOTAL	**1,200**	**0**					
Dimethoate (insecticide) (parent of Omethoate)							
Asparagus	351	0			0.002 - 0.004	0.15	0.05
Asparagus, Canned	354	0			0.002 - 0.004	0.15	0.05
Cantaloupe	186	0			0.002 - 0.007	1	-
Cucumbers (V-10)	562	10	1.8	0.003 - 1.95	0.002 ^	NT	-
Green Beans, Canned	743	1	0.1	0.003 ^	0.002 - 0.005	2	-
Mushrooms	394	0			0.002 ^	NT	-
Pear Juice, Concen./Puree	66	2	3	0.003 ^	0.002 ^	2	1
Pears	187	0			0.002 - 0.004	2	1
Spinach (X-1)	736	8	1.1	0.012 - 2.6	0.007 ^	2	-
Sweet Bell Peppers	741	42	5.7	0.004 - 0.12	0.002 ^	2	1
Sweet Corn, Frozen	350	0			0.007 ^	NT	-
Sweet Peas, Frozen	549	93	16.9	0.003 - 0.093	0.002 - 0.004	2	0.5
Tomatoes	742	0			0.009 ^	2	1
TOTAL	**5,961**	**156**					

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Dimethomorph (fungicide)							
Cantaloupe	54	0			0.030 - 0.050	1.0	-
Cucumbers	739	0			0.030 - 0.060	1.0	-
Spinach	62	0			0.016 ^	NT	-
Sweet Bell Peppers	741	0			0.003 ^	NT	-
Sweet Corn, Frozen	136	0			0.030 ^	0.05	-
Sweet Peas, Frozen	16	0			0.030 ^	NT	-
TOTAL	**1,748**	**0**					
Diphenamid (herbicide)							
Asparagus	250	0			0.015 - 0.075	NT	-
Asparagus, Canned	253	0			0.015 ^	NT	-
Cantaloupe	132	0			0.018 ^	NT	-
Cucumbers	525	0			0.006 ^	NT	-
Green Beans, Canned	506	0			0.015 ^	NT	-
Mushrooms	394	0			0.010 ^	NT	-
Peaches, Canned	742	0			0.020 ^	NT	-
Spinach	736	0			0.018 ^	NT	-
Sweet Bell Peppers	741	0			0.010 ^	NT	-
Sweet Corn, Frozen	350	0			0.018 ^	NT	-
Sweet Peas, Frozen	395	0			0.015 ^	NT	-
Sweet Potatoes	734	0			0.006 ^	NT	-
Tomatoes	742	0			0.020 ^	NT	-
TOTAL	**6,500**	**0**					
Diphenylamine (fungicide)							
Asparagus	250	0			0.015 ^	NT	-
Asparagus, Canned	253	0			0.015 ^	NT	-
Cantaloupe	186	0			0.008 - 0.010	NT	-
Cucumbers	525	0			0.020 ^	NT	-
Green Beans, Canned	506	0			0.015 ^	NT	-
Mushrooms	394	0			0.003 ^	NT	-
Pear Juice, Conc/Puree (V-1)	66	1	1.5	0.017 ^	0.010 ^	NT	-
Pears (V-5)	187	5	2.7	0.016 - 0.022	0.010 - 0.015	NT	-
Spinach	736	0			0.008 ^	NT	-
Sweet Bell Peppers (V-2)	741	2	0.3	0.011 - 0.015	0.003 ^	NT	-
Sweet Corn, Frozen	350	0			0.008 ^	NT	-
Sweet Peas, Frozen	395	0			0.015 ^	NT	-
TOTAL	**4,589**	**8**					
Disulfoton (insecticide)							
Asparagus	351	0			0.003 - 0.004	0.1	0.02
Asparagus, Canned	354	0			0.003 - 0.004	0.1	0.02
Cantaloupe	132	0			0.007 ^	NT	0.5
Cucumbers	525	0			0.003 ^	NT	0.5
Green Beans, Canned	743	0			0.003 - 0.008	0.75	0.2
Mushrooms	394	0			0.002 ^	NT	0.5
Pears	133	0			0.004 ^	NT	-
Spinach	736	0			0.007 ^	0.75	0.5
Sweet Bell Peppers	741	0			0.002 ^	0.1	0.5
Sweet Corn, Frozen	547	0			0.003 - 0.007	0.3	0.02
Sweet Peas, Frozen	549	0			0.003 - 0.004	0.75	0.02
Tomatoes	742	0			0.021 ^	0.75	0.5
TOTAL	**5,947**	**0**					
Disulfoton sulfone (metabolite of Disulfoton)							
Asparagus	351	0			0.004 ^	0.1	0.02
Asparagus, Canned	354	0			0.004 ^	0.1	0.02
Cantaloupe	132	0			0.009 ^	NT	0.5
Cucumbers	525	0			0.004 ^	NT	0.5
Green Beans, Canned	743	0			0.004 - 0.005	0.75	0.2
Pears	133	0			0.004 ^	NT	-
Spinach	736	0			0.009 ^	0.75	0.5

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Sweet Bell Peppers	741	2	0.3	0.010 ^	0.006 - 0.009	0.1	0.5
Sweet Corn, Frozen	547	0			0.004 - 0.009	0.3	0.02
Sweet Peas, Frozen	549	0			0.004 ^	0.75	0.02
Tomatoes	742	0			0.008 ^	0.75	0.5
TOTAL	**5,553**	**2**					
Diuron (herbicide)							
Sweet Bell Peppers	246	0			0.008 ^	NT	-
TOTAL	**246**	**0**					
Endosulfan I (insecticide)							
Asparagus (V-1)	250	1	0.4	0.004 ^	0.002 ^	NT	-
Asparagus, Canned	253	0			0.002 ^	NT	-
Cantaloupe	186	0			0.005 - 0.007	2.0	0.5
Cucumbers	739	231	31.3	0.008 - 0.44	0.005 ^	2.0	0.5
Green Beans, Canned	743	1	0.1	0.021 ^	0.002 - 0.005	2.0	0.5
Mushrooms	394	0			0.006 - 0.020	NT	-
Onion	525	0			0.005 ^	NT	0.2
Peaches, Canned	742	0			0.004 ^	2.0	1
Pear Juice, Concen./Puree	66	0			0.005 ^	2.0	1
Pears	187	1	0.5	0.057 ^	0.002 - 0.008	2.0	1
Spinach	736	3	0.4	0.022 - 0.027	0.007 ^	2.0	2
Sweet Bell Peppers	741	63	8.5	0.010 - 0.086	0.006 ^	2.0	-
Sweet Corn, Frozen	547	0			0.005 - 0.007	0.2	-
Sweet Peas, Frozen	549	0			0.002 - 0.005	2.0	-
Sweet Potatoes	734	0			0.002 - 0.005	0.2	0.2
Tomatoes	742	84	11.3	0.007 - 0.19	0.004 ^	2.0	0.5
TOTAL	**8,134**	**384**					
Endosulfan II (metabolite of Endosulfan)							
Asparagus	250	0			0.004 ^	NT	-
Asparagus, Canned	253	0			0.004 ^	NT	-
Cantaloupe	186	0			0.006 - 0.007	2.0	0.5
Cucumbers	739	153	20.7	0.010 - 0.092	0.006 ^	2.0	0.5
Green Beans, Canned	743	1	0.1	0.028 ^	0.002 - 0.006	2.0	0.5
Mushrooms	394	0			0.006 ^	NT	-
Onion	525	0			0.005 ^	NT	0.2
Peaches, Canned	742	0			0.004 ^	2.0	1
Pear Juice, Concen./Puree	66	0			0.006 ^	2.0	1
Pears	187	1	0.5	0.099 ^	0.004 - 0.013	2.0	1
Spinach	736	2	0.3	0.012 - 0.027	0.007 ^	2.0	2
Sweet Bell Peppers	741	83	11.2	0.010 - 0.13	0.006 ^	2.0	-
Sweet Corn, Frozen	547	0			0.006 - 0.007	0.2	-
Sweet Peas, Frozen	549	0			0.004 - 0.006	2.0	-
Sweet Potatoes	734	0			0.002 - 0.006	0.2	0.2
Tomatoes	742	147	19.8	0.007 - 0.30	0.004 ^	2.0	0.5
TOTAL	**8,134**	**387**					
Endosulfan sulfate (metabolite of Endosulfan)							
Asparagus (V-1)	250	1	0.4	0.006 ^	0.004 ^	NT	-
Asparagus, Canned	253	0			0.004 ^	NT	-
Cantaloupe	186	85	45.7	0.012 - 0.065	0.007 ^	2.0	0.5
Cucumbers	739	331	44.8	0.010 - 0.10	0.006 - 0.007	2.0	0.5
Green Beans, Canned	743	3	0.4	0.003 - 0.020	0.002 - 0.007	2.0	0.5
Mushrooms	394	0			0.020 ^	NT	-
Onion	525	0			0.007 ^	NT	0.2
Peaches, Canned	742	1	0.1	0.010 ^	0.006 ^	2.0	1
Pear Juice, Concen./Puree	66	0			0.007 ^	2.0	1
Pears	187	3	1.6	0.006 - 0.051	0.004 - 0.013	2.0	1
Spinach	736	19	2.6	0.012 - 0.13	0.007 ^	2.0	2
Sweet Bell Peppers	741	29	3.9	0.032 - 0.10	0.020 ^	2.0	-

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Sweet Corn, Frozen	547	0			0.007 ^	0.2	-
Sweet Peas, Frozen	549	0			0.004 - 0.007	2.0	-
Sweet Potatoes	734	5	0.7	0.003 ^	0.002 - 0.007	0.2	0.2
Tomatoes	742	82	11.1	0.010 - 0.071	0.006 ^	2.0	0.5
TOTAL	**8,134**	**559**					
Endrin (insecticide)							
Asparagus	250	0			0.002 ^	0.05 AL	-
Asparagus, Canned	253	0			0.002 ^	0.05 AL	-
Cantaloupe	186	0			0.008 - 0.040	0.05 AL	0.05
Cucumbers	126	8	6.3	0.013 - 0.036	0.008 ^	0.05 AL	0.05
Green Beans, Canned	743	0			0.001 - 0.008	0.05 AL	-
Pears	133	0			0.002 - 0.005	NT	-
Spinach	120	0			0.040 ^	0.05 AL	-
Sweet Peas, Frozen	427	0			0.002 - 0.008	0.05 AL	-
Sweet Potatoes	734	0			0.002 - 0.008	0.05 AL	-
Tomatoes	742	0			0.005 ^	0.05 AL	-
TOTAL	**3,714**	**8**					
EPTC (herbicide)							
Mushrooms	351	0			0.063 ^	NT	-
Sweet Bell Peppers	619	0			0.063 ^	0.1	-
Tomatoes	742	0			0.018 ^	0.1	-
TOTAL	**1,712**	**0**					
Esfenvalerate (insecticide) (isomer of Fenvalerate)							
Asparagus	18	0			0.038 ^	0.05	-
Cucumbers	437	0			0.051 ^	0.05	-
Peaches, Canned	742	0			0.055 ^	0.05	-
Pear Juice, Concen./Puree	31	0			0.038 ^	0.05	-
Spinach	62	0			0.021 ^	0.05	-
Sweet Corn, Frozen	44	0			0.021 ^	0.05	-
Sweet Potatoes	521	0			0.005 ^	0.05	-
Tomatoes	742	0			0.055 ^	0.05	-
TOTAL	**2,597**	**0**					
Esfenvalerate+Fenvalerate Total (insecticide)							
Asparagus	333	0			0.038 - 0.057	0.05	-
Asparagus, Canned	354	0			0.038 - 0.057	0.05	-
Cantaloupe	168	0			0.015 - 0.042	1.0	0.2
Cucumbers	302	0			0.015 - 0.099	0.5	0.2
Green Beans, Canned	369	0			0.015 - 0.057	2.0	1
Mushrooms	552	0			0.003 - 0.057	0.05	-
Onion	741	0			0.014 - 0.057	0.05	-
Pear Juice, Concen./Puree	35	0			0.053 ^	2.0	2
Pears	18	0			0.050 ^	2.0	2
Spinach (X-1)	736	1	0.1	0.51 ^	0.042 ^	0.05	-
Sweet Corn, Frozen	547	0			0.042 - 0.057	0.1	0.1
Sweet Peas, Frozen	549	0			0.038 - 0.057	1.0	0.1
Sweet Potatoes	213	0			0.015 - 0.057	0.05	0.05
TOTAL	**4,917**	**1**					
Ethalfluralin (herbicide)							
Cantaloupe	186	0			0.015 - 0.040	0.05	-
Cucumbers	739	0			0.011 - 0.015	0.05	-
Mushrooms	379	0			0.017 ^	NT	-
Spinach	120	0			0.040 ^	NT	-
Sweet Bell Peppers	741	0			0.017 ^	NT	-
TOTAL	**2,165**	**0**					

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Ethiofencarb (insecticide)							
Mushrooms	394	0			0.016 ^	NT	-
Pears	133	0			0.010 ^	NT	-
Sweet Bell Peppers	741	0			0.015 - 0.016	NT	-
TOTAL	**1,268**	**0**					
Ethion (insecticide)							
Asparagus	250	0			0.004 ^	NT	-
Asparagus, Canned	253	0			0.004 ^	NT	-
Cantaloupe	132	0			0.004 ^	NT	-
Green Beans, Canned	528	0			0.010 ^	NT	-
Mushrooms	394	0			0.001 ^	NT	-
Pears	133	0			0.004 ^	NT	-
Spinach	736	0			0.004 ^	NT	-
Sweet Bell Peppers	741	0			0.001 ^	NT	-
Sweet Corn, Frozen	350	0			0.004 ^	NT	-
Sweet Peas, Frozen	395	0			0.004 ^	NT	-
TOTAL	**3,912**	**0**					
Ethion mono oxon (metabolite of Ethion)							
Mushrooms	394	0			0.002 ^	NT	-
Sweet Bell Peppers	741	0			0.002 ^	NT	-
TOTAL	**1,135**	**0**					
Ethoprop (insecticide)							
Cantaloupe	132	0			0.016 ^	NT	0.02
Cucumbers	739	0			0.002 ^	0.02	0.02
Green Beans, Canned	215	0			0.002 ^	0.02	-
Spinach	736	0			0.016 ^	NT	-
Sweet Bell Peppers	741	0			0.001 ^	NT	0.02
Sweet Corn, Frozen	547	0			0.002 - 0.016	0.02	-
Sweet Peas, Frozen	54	0			0.002 ^	NT	0.02
Sweet Potatoes	734	2	0.3	0.002 - 0.007	0.001 - 0.002	0.02	0.02
TOTAL	**3,898**	**2**					
Etridiazole (fungicide)							
Asparagus	250	0			0.002 ^	NT	-
Asparagus, Canned	253	0			0.002 ^	NT	-
Green Beans, Canned	528	0			0.003 ^	NT	-
Pears	133	0			0.002 - 0.005	NT	-
Sweet Peas, Frozen	395	0			0.002 ^	NT	-
Tomatoes	742	0			0.028 ^	0.15	-
TOTAL	**2,301**	**0**					
Fenamiphos (insecticide)							
Asparagus	351	0			0.001 - 0.004	0.02	-
Asparagus, Canned	354	0			0.001 - 0.004	0.02	-
Cantaloupe	132	0			0.006 ^	NT	0.05
Cucumbers	525	0			0.004 ^	NT	-
Green Beans, Canned	528	0			0.008 ^	NT	-
Mushrooms	394	0			0.002 ^	NT	-
Peaches, Canned	742	0			0.011 ^	0.25	-
Pears	133	0			0.001 ^	NT	-
Spinach	736	0			0.006 ^	NT	-
Sweet Bell Peppers	741	0			0.002 ^	NT	-
Sweet Corn, Frozen	350	0			0.006 ^	NT	-
Sweet Peas, Frozen	395	0			0.004 ^	NT	-
TOTAL	**5,381**	**0**					
Fenamiphos sulfone (metabolite of Fenamiphos)							
Asparagus	351	0			0.008 - 0.010	0.02	-
Asparagus, Canned	354	0			0.008 - 0.010	0.02	-

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Cantaloupe	132	0			0.012 ^	NT	0.05
Cucumbers (V-2)	525	2	0.4	0.013 ^	0.008 ^	NT	-
Green Beans, Canned	528	0			0.020 ^	NT	-
Mushrooms	394	0			0.002 ^	NT	-
Peaches, Canned	742	0			0.018 ^	0.25	-
Pears	133	0			0.001 ^	NT	-
Spinach	736	0			0.012 - 0.036	NT	-
Sweet Bell Peppers	741	0			0.002 ^	NT	-
Sweet Corn, Frozen	350	0			0.012 ^	NT	-
Sweet Peas, Frozen	395	0			0.009 ^	NT	-
TOTAL	**5,381**	**2**					
Fenamiphos sulfoxide (metabolite of Fenamiphos)							
Mushrooms	394	0			0.002 ^	NT	-
Peaches, Canned	742	0			0.023 ^	0.25	-
Pears	133	0			0.001 ^	NT	-
Sweet Bell Peppers	741	0			0.002 - 0.006	NT	-
TOTAL	**2,010**	**0**					
Fenarimol (fungicide)							
Mushrooms	394	0			0.010 ^	NT	-
Pears	187	0			0.015 - 0.025	0.1	0.3
Sweet Bell Peppers	725	0			0.010 - 0.064	NT	0.5
TOTAL	**1,306**	**0**					
Fenbuconazole (fungicide)							
Cucumbers	525	0			0.030 ^	NT	0.2
Mushrooms	394	0			0.014 ^	NT	-
Peaches, Canned	380	0			0.061 ^	2.0	0.5
Pears	133	0			0.005 ^	NT	0.1
Sweet Bell Peppers	266	0			0.001 - 0.014	NT	-
TOTAL	**1,698**	**0**					
Fenhexamid (fungicide)							
Peaches, Canned	742	0			0.039 ^	6.0	-
TOTAL	**742**	**0**					
Fenitrothion (insecticide)							
Sweet Bell Peppers	741	0			0.003 - 0.006	NT	-
TOTAL	**741**	**0**					
Fenpropathrin (insecticide)							
Asparagus	250	0			0.015 ^	NT	-
Asparagus, Canned	253	0			0.015 ^	NT	-
Cantaloupe	186	0			0.016 - 0.020	0.5	-
Cucumbers	739	1	0.1	0.033 ^	0.020 ^	0.5	-
Mushrooms	394	0			0.016 ^	NT	-
Pear Juice, Concen./Puree	66	5	7.6	0.033 - 0.15	0.020 ^	5.0	5
Pears	187	13	7	0.033 - 0.29	0.015 - 0.020	5.0	5
Spinach	120	0			0.016 ^	NT	-
Sweet Bell Peppers (V-1)	741	1	0.1	0.026 ^	0.016 ^	NT	1
Sweet Peas, Frozen	395	0			0.015 ^	NT	-
Tomatoes	742	31	4.2	0.052 - 0.40	0.031 ^	0.6	1
TOTAL	**4,073**	**51**					
Fenthion (insecticide)							
Mushrooms	394	0			0.002 ^	NT	-
Pears	133	0			0.008 ^	NT	-
Sweet Bell Peppers	741	0			0.002 ^	NT	-
TOTAL	**1,268**	**0**					

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Fenvalerate (insecticide) (isomer of Esfenvalerate)							
Asparagus	18	0			0.057 ^	0.05	-
Cantaloupe	18	0			0.015 ^	1.0	0.2
Cucumbers	437	0			0.099 ^	0.5	0.2
Green Beans, Canned	374	0			0.075 ^	2.0	1
Peaches, Canned	742	0			0.055 ^	10.0	5
Pear Juice, Concen./Puree	31	0			0.057 ^	2.0	2
Pears	169	0			0.015 - 0.13	2.0	2
Spinach	62	0			0.042 ^	0.05	-
Sweet Bell Peppers	741	39	5.3	0.012 - 0.16	0.009 - 0.29	1.0	0.5
Sweet Corn, Frozen	44	0			0.042 ^	0.1	0.1
Tomatoes	742	0			0.055 ^	1.0	1
TOTAL	**3,378**	**39**					
Fludioxonil (fungicide)							
Cantaloupe	132	0			0.036 ^	0.01	-
Cucumbers	525	0			0.015 ^	0.01	-
Green Beans, Canned	559	0			0.015 - 0.050	0.01	-
Mushrooms	394	0			0.012 ^	NT	-
Onion	216	0			0.015 ^	0.2	-
Peaches, Canned	742	0			0.11 ^	5.0	-
Pears	133	0			0.010 ^	NT	-
Spinach	736	0			0.036 ^	0.01	-
Sweet Bell Peppers (X-4)	741	4	0.5	0.020 - 0.045	0.012 ^	0.01	-
Sweet Corn, Frozen	475	0			0.015 - 0.036	0.02	-
Sweet Peas, Frozen	395	0			0.001 ^	0.01	-
TOTAL	**5,048**	**4**					
Fluridone (herbicide)							
Asparagus, Canned	211	0			0.015 ^	NT	-
Cantaloupe	186	0			0.016 - 0.050	0.1	-
Cucumbers	739	0			0.035 - 0.070	0.1	-
Green Beans, Canned	721	0			0.035 - 0.15	0.1	-
Pear Juice, Concen./Puree	66	0			0.035 ^	0.1	-
Pears	54	0			0.035 ^	0.1	-
Spinach	718	0			0.016 ^	0.1	-
Sweet Bell Peppers	647	0			0.024 - 0.80	0.1	-
Sweet Corn, Frozen	525	0			0.016 - 0.035	0.1	-
Sweet Peas, Frozen	263	0			0.015 - 0.050	0.1	-
Sweet Potatoes	734	0			0.002 - 0.035	0.1	-
TOTAL	**4,864**	**0**					
Folpet (fungicide)							
Asparagus	250	0			0.015 - 0.050	NT	-
Asparagus, Canned	253	0			0.015 ^	NT	-
Cantaloupe	186	0			0.017 - 0.066	15	3
Cucumbers	739	0			0.012 - 0.017	15	1
Pears	111	0			0.015 ^	NT	-
Spinach	736	0			0.066 ^	NT	-
Sweet Corn, Frozen	350	0			0.066 ^	NT	-
Tomatoes	742	0			0.010 ^	25	-
TOTAL	**3,367**	**0**					
Fonofos (insecticide)							
Asparagus	101	0			0.002 ^	NT	-
Asparagus, Canned	101	0			0.002 ^	NT	-
Cucumbers	525	0			0.002 ^	NT	-
Green Beans, Canned	743	0			0.002 - 0.005	NT	-
Mushrooms	394	0			0.002 ^	NT	-
Pears	133	0			0.004 ^	NT	-
Spinach	62	0			0.010 ^	NT	-
Sweet Bell Peppers	741	0			0.002 ^	NT	-
Sweet Corn, Frozen	197	0			0.002 - 0.010	NT	-

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Sweet Peas, Frozen	154	0			0.002 ^	NT	-
Sweet Potatoes	734	0			0.001 - 0.002	NT	-
Tomatoes	742	0			0.016 ^	NT	-
TOTAL	**4,627**	**0**					
Forchlorfenuron (plant growth regulator)							
Sweet Bell Peppers	230	0			0.001 ^	NT	-
TOTAL	**230**	**0**					
Heptachlor (insecticide)							
Asparagus	250	0			0.001 ^	0.05 AL	-
Asparagus, Canned	253	0			0.001 ^	0.05 AL	-
Cantaloupe	186	0			0.004 - 0.006	0.05 AL	-
Green Beans, Canned	528	0			0.002 ^	0.05 AL	-
Mushrooms	380	0			0.002 ^	NT	-
Pears	187	0			0.001 - 0.006	0.05 AL	-
Spinach	736	0			0.004 ^	0.05 AL	-
Sweet Bell Peppers	741	0			0.002 ^	NT	-
Sweet Corn, Frozen	350	0			0.004 ^	NT	-
Sweet Peas, Frozen	395	0			0.001 ^	NT	-
TOTAL	**4,006**	**0**					
Heptachlor epoxide (metabolite of Heptachlor)							
Asparagus	351	0			0.002 - 0.006	0.05 AL	-
Asparagus, Canned	354	0			0.002 - 0.006	0.05 AL	-
Cantaloupe	186	0			0.004 - 0.006	0.05 AL	-
Cucumbers	739	0			0.006 ^	0.05 AL	-
Green Beans, Canned	743	0			0.001 - 0.006	0.05 AL	-
Mushrooms	552	0			0.004 - 0.006	NT	-
Onion	741	0			0.004 - 0.006	NT	-
Peaches, Canned	742	0			0.004 ^	0.05 AL	-
Pear Juice, Concen./Puree	66	0			0.006 ^	0.05 AL	-
Pears	187	0			0.002 - 0.006	0.05 AL	-
Spinach	736	0			0.004 ^	0.05 AL	-
Sweet Bell Peppers	741	0			0.004 ^	NT	-
Sweet Corn, Frozen	547	0			0.004 - 0.006	NT	-
Sweet Peas, Frozen	549	0			0.002 - 0.006	NT	-
Tomatoes	742	0			0.004 ^	NT	-
TOTAL	**7,976**	**0**					
Hexachlorobenzene - HCB (impurity of Quintozene)							
Asparagus	250	0			0.001 ^	NT	-
Asparagus, Canned	253	0			0.001 ^	NT	-
Cantaloupe	132	0			0.003 ^	NT	-
Green Beans, Canned	725	0			0.002 ^	0.1	-
Pears	133	0			0.001 - 0.002	NT	-
Spinach	736	0			0.003 ^	NT	-
Sweet Corn, Frozen	350	0			0.003 ^	NT	-
Sweet Peas, Frozen	449	0			0.001 - 0.002	NT	-
Tomatoes	742	0			0.003 ^	0.1	-
TOTAL	**3,770**	**0**					
Hexaconazole (fungicide)							
Cucumbers	525	0			0.020 ^	NT	-
TOTAL	**525**	**0**					
3-Hydroxycarbofuran (metabolite of Carbofuran)							
Cantaloupe	186	0			0.004 - 0.013	0.2	-
Cucumbers	739	0			0.013 - 0.021	0.2	-
Green Beans, Canned	528	0			0.020 ^	NT	-
Pears	133	0			0.010 ^	NT	-

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Spinach	736	0			0.012 ^	NT	-
Sweet Bell Peppers	741	6	0.8	0.003 - 0.055	0.001 - 0.002	0.2	-
Sweet Corn, Frozen	547	0			0.012 - 0.013	0.2	-
TOTAL	**3,610**	**6**					
5-Hydroxythiabendazole (metabolite of Thiabendazole)							
Pears	133	0			0.010 ^	10	-
TOTAL	**133**	**0**					
Imazalil (fungicide)							
Cantaloupe	132	0			0.030 ^	NT	2
Cucumbers	525	0			0.030 ^	NT	0.5
Mushrooms	394	0			0.010 ^	NT	-
Pears	133	0			0.005 ^	NT	5
Spinach	736	0			0.030 ^	NT	-
Sweet Bell Peppers	741	0			0.010 ^	NT	-
Sweet Corn, Frozen	350	0			0.030 ^	NT	-
TOTAL	**3,011**	**0**					
Imidacloprid (insecticide)							-
Cantaloupe	36	10	27.8	0.017 - 0.056	0.010 ^	0.5	-
Pear Juice, Concen./Puree	66	5	7.6	0.015 - 0.045	0.009 ^	0.6	-
Pears	187	5	2.7	0.015 - 0.028	0.009 - 0.010	0.6	-
Sweet Bell Peppers	243	189	77.8	0.001 - 0.22	0.001 ^	1.0	-
Sweet Peas, Frozen	395	0			0.010 ^	NT	-
Sweet Potatoes	521	0			0.030 ^	0.40	-
TOTAL	**1,448**	**209**					
Indoxacarb (insecticide)							
Pears	133	1	0.8	0.016 ^	0.010 ^	0.20	-
Tomatoes	742	0			0.12 ^	0.50	-
TOTAL	**875**	**1**					
Iprodione (fungicide)							
Asparagus (V-1)	250	1	0.4	0.038 ^	0.023 ^	NT	-
Asparagus, Canned	253	0			0.023 ^	NT	-
Cantaloupe	132	0			0.008 ^	NT	-
Cucumbers (V-3)	525	3	0.6	0.035 ^	0.021 ^	NT	2
Green Beans, Canned	743	0			0.015 - 0.021	2.0	2
Mushrooms	394	0			0.008 ^	NT	-
Peaches, Canned	642	0			0.034 ^	20.0	10
Pears	133	0			0.023 - 0.077	NT	5
Spinach (V-1)	736	1	0.1	0.013 ^	0.008 ^	NT	-
Sweet Bell Peppers	741	0			0.028 ^	NT	-
Sweet Corn, Frozen	394	0			0.008 ^	NT	-
Sweet Peas, Frozen	449	0			0.021 - 0.023	NT	-
Tomatoes (V-7)	7	7	100	0.035 - 0.52	0.021 - 0.034	NT	5
TOTAL	**5,399**	**12**					
Iprodione metabolite isomer (metabolite of Iprodione)							
Mushrooms	394	0			0.096 ^	NT	-
Sweet Bell Peppers	741	0			0.096 - 0.098	NT	-
TOTAL	**1,135**	**0**					
Kresoxim-methyl (fungicide)							
Sweet Bell Peppers	200	0			0.010 ^	NT	-
TOTAL	**200**	**0**					
Lindane - BHC gamma (insecticide)							
Asparagus	351	0			0.002 ^	1	-
Asparagus, Canned	354	0			0.002 ^	1	-
Cantaloupe	186	0			0.002 - 0.006	3	-

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Cucumbers	739	0			0.002 ^	3	-
Green Beans, Canned	743	0			0.001 - 0.002	0.5 AL	-
Mushrooms	537	0			0.002 - 0.003	3	-
Onion	525	0			0.004 ^	1	-
Peaches, Canned	742	0			0.004 ^	1	-
Pear Juice, Concen./Puree	66	0			0.002 ^	1	-
Pears	187	0			0.002 - 0.005	1	-
Spinach	736	0			0.006 ^	1	-
Sweet Bell Peppers	741	0			0.003 ^	1	-
Sweet Corn, Frozen	547	0			0.002 - 0.006	0.5 AL	-
Sweet Peas, Frozen	549	0			0.002 ^	0.5 AL	-
Sweet Potatoes	734	0			0.002 ^	0.5 AL	-
Tomatoes	742	0			0.004 ^	3	-
TOTAL	**8,479**	**0**					
Linuron (herbicide)							
Asparagus	351	5	1.4	0.012 - 0.18	0.008 - 0.025	7.0	-
Asparagus, Canned	354	0			0.008 - 0.025	7.0	-
Green Beans, Canned	528	0			0.015 ^	NT	-
Pears	133	0			0.008 - 0.025	NT	-
Spinach	62	0			0.097 ^	NT	-
Sweet Bell Peppers	741	0			0.003 - 0.008	NT	-
Sweet Corn, Frozen	153	0			0.025 ^	0.25	-
Sweet Peas, Frozen	395	0			0.008 ^	NT	-
TOTAL	**2,717**	**5**					
Malathion (insecticide)							
Asparagus	351	0			0.004 ^	8	-
Asparagus, Canned	354	0			0.004 ^	8	-
Cantaloupe	186	0			0.004 - 0.007	8	-
Cucumbers	739	0			0.004 ^	8	-
Green Beans, Canned	743	0			0.004 - 0.008	8	-
Mushrooms	552	0			0.003 - 0.004	8	-
Onion	216	0			0.010 ^	8	-
Peaches, Canned	742	0			0.010 ^	8	6
Pear Juice, Concen./Puree	66	0			0.004 ^	8	-
Pears	187	0			0.004 ^	8	-
Spinach	736	0			0.007 ^	8	3
Sweet Bell Peppers	741	9	1.2	0.005 - 0.060	0.003 ^	8	0.1
Sweet Corn, Frozen	547	0			0.004 - 0.007	2	-
Sweet Peas, Frozen	549	0			0.004 ^	8	-
Sweet Potatoes	734	4	0.5	0.002 ^	0.001 - 0.004	1	0.5
Tomatoes	742	0			0.010 ^	8	0.5
TOTAL	**8,185**	**13**					
Malathion oxygen analog (metabolite of Malathion)							
Asparagus	101	0			0.003 ^	8	-
Asparagus, Canned	101	0			0.003 ^	8	-
Cantaloupe	186	0			0.003 - 0.007	8	-
Cucumbers	739	0			0.003 ^	8	-
Green Beans, Canned	743	0			0.003 - 0.005	8	-
Mushrooms	552	0			0.003 ^	8	-
Onion	216	0			0.010 ^	8	-
Peaches, Canned	742	0			0.012 ^	8	-
Pear Juice, Concen./Puree	66	0			0.003 ^	8	-
Pears	187	0			0.003 - 0.006	8	-
Spinach	736	0			0.007 ^	8	-
Sweet Bell Peppers	741	0			0.003 ^	8	-
Sweet Corn, Frozen	547	0			0.003 - 0.007	2	-
Sweet Peas, Frozen	549	0			0.003 - 0.006	8	-

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Sweet Potatoes	734	0			0.003 ^	1	-
Tomatoes	742	0			0.012 ^	8	-
TOTAL	**7,682**	**0**					
Metalaxyl (fungicide)							
Asparagus	351	0			0.010 - 0.015	7.0	0.05
Asparagus, Canned	354	0			0.010 - 0.015	7.0	0.05
Cantaloupe	186	1	0.5	0.035 ^	0.008 - 0.010	1.0	0.2
Cucumbers	739	157	21.2	0.017 - 0.21	0.010 - 0.011	1.0	0.5
Green Beans, Canned	721	0			0.010 - 0.015	0.2	-
Mushrooms	394	0			0.006 ^	NT	-
Peaches, Canned	742	0			0.033 ^	1.0	-
Pears	133	0			0.015 - 0.075	NT	1
Spinach	736	11	1.5	0.013 - 0.079	0.008 ^	10.0	2
Sweet Bell Peppers	741	120	16.2	0.010 - 0.33	0.006 ^	1.0	1
Sweet Corn, Frozen	547	0			0.008 - 0.010	0.1	-
Sweet Peas, Frozen	549	0			0.010 - 0.015	0.2	0.05
Sweet Potatoes	734	0			0.007 - 0.010	0.5	-
Tomatoes	742	0			0.033 ^	1.0	0.5
TOTAL	**7,669**	**289**					
Methamidophos (insecticide) (also a metabolite of Acephate)							
Asparagus	101	0			0.002 ^	0.02	-
Asparagus, Canned	101	0			0.002 ^	0.02	-
Cantaloupe	186	1	0.5	0.003 ^	0.002 - 0.004	0.5	-
Cucumbers	739	76	10.3	0.003 - 0.70	0.002 ^	1.0	1
Green Beans, Canned	743	168	22.6	0.003 - 0.11	0.002 - 0.005	1	-
Mushrooms	552	0			0.001 - 0.002	0.02	-
Peaches, Canned	1	1	100	0.008 ^	0.005 ^	0.02	-
Pear Juice, Conc./Puree (X-3)	4	4	100	0.009 - 0.057	0.002 ^	0.02	-
Pears	187	0			0.002 - 0.008	0.02	-
Spinach	736	2	0.3	0.007 - 0.019	0.004 ^	0.02	-
Sweet Bell Peppers	741	232	31.3	0.002 - 0.52	0.001 ^	1.0	1
Sweet Corn, Frozen	547	0			0.002 - 0.004	0.02	-
Sweet Peas, Frozen	549	0			0.002 - 0.008	0.02	-
Sweet Potatoes	1	1	100	0.012 ^	0.002 ^	0.02	-
Tomatoes	742	92	12.4	0.008 - 0.28	0.005 ^	1.0	-
TOTAL	**5,930**	**577**					
Methidathion (insecticide)							
Asparagus	250	0			0.004 ^	NT	-
Asparagus, Canned	253	0			0.004 ^	NT	-
Cantaloupe	132	0			0.010 ^	NT	-
Mushrooms	394	0			0.002 ^	NT	-
Peaches, Canned	742	0			0.010 ^	0.05	0.2
Pear Juice, Concen./Puree	53	0			0.004 ^	0.05	1
Pears	187	0			0.004 ^	0.05	1
Spinach	736	0			0.010 ^	NT	-
Sweet Bell Peppers	741	0			0.002 - 0.008	NT	-
Sweet Corn, Frozen	350	0			0.010 ^	NT	-
Sweet Peas, Frozen	395	0			0.004 ^	NT	0.1
TOTAL	**4,233**	**0**					
Methiocarb (insecticide) (analyzed as sulfoxide)							
Cucumbers	153	0			0.018 ^	NT	-
Green Beans, Canned	528	0			0.015 ^	NT	-
Pears	133	0			0.010 ^	NT	-
Sweet Bell Peppers (V-1)	741	1	0.1	0.008 ^	0.001 - 0.005	NT	-
TOTAL	**1,555**	**1**					
Methomyl (insecticide)							
Asparagus	351	2	0.6	0.012 - 0.027	0.010 - 0.012	2	2
Asparagus, Canned	354	0			0.010 - 0.012	2	2

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Cantaloupe	186	19	10.2	0.020 - 0.13	0.012 - 0.017	0.2	0.2
Cucumbers	739	13	1.8	0.020 - 0.15	0.012 ^	0.2	0.2
Green Beans, Canned	743	0			0.012 - 0.015	2	2
Peaches, Canned	742	0			0.012 ^	5	5
Pear Juice, Concen./Puree	66	0			0.014 ^	4	2
Pears	187	0			0.010 - 0.014	4	2
Spinach	736	41	5.6	0.020 - 4.2	0.012 ^	6	5
Sweet Bell Peppers	741	116	15.7	0.001 - 0.35	0.001 ^	2	1
Sweet Corn, Frozen	547	0			0.012 ^	0.1	2
Sweet Peas, Frozen	549	0			0.010 - 0.012	5	5
Sweet Potatoes	734	0			0.002 - 0.012	0.2	-
Tomatoes	742	0			0.012 ^	1	1
TOTAL	**7,417**	**191**					
Methoprene (insect growth regulator)							
Mushrooms	552	0			0.014 - 0.030	1.0	-
Sweet Bell Peppers	741	0			0.014 ^	NT	-
TOTAL	**1,293**	**0**					
Methoxychlor Total (insecticide)							
Cucumbers	88	0			0.020 ^	NT	-
Green Beans, Canned	528	0			0.005 - 0.008	NT	-
Mushrooms	394	0			0.002 ^	NT	-
Sweet Bell Peppers	741	0			0.002 ^	NT	-
Sweet Potatoes	521	0			0.004 ^	NT	-
TOTAL	**2,272**	**0**					
Methoxychlor olefin (metabolite of Methoxychlor)							
Mushrooms	394	0			0.001 ^	NT	-
Sweet Bell Peppers	741	0			0.001 ^	NT	-
TOTAL	**1,135**	**0**					
Methoxychlor p,p' (insecticide)							
Asparagus	351	0			0.008 - 0.020	NT	-
Asparagus, Canned	354	0			0.008 - 0.020	NT	-
Cantaloupe	132	0			0.009 ^	NT	-
Cucumbers	651	0			0.020 ^	NT	-
Green Beans, Canned	215	0			0.020 ^	NT	-
Mushrooms	158	0			0.020 ^	NT	-
Peaches, Canned	742	0			0.014 ^	NT	-
Pear Juice, Concen./Puree	66	0			0.020 ^	NT	-
Pears	133	0			0.008 - 0.025	NT	-
Spinach	736	0			0.009 ^	NT	-
Sweet Corn, Frozen	547	0			0.009 - 0.020	NT	-
Sweet Peas, Frozen	549	0			0.008 - 0.020	NT	-
Sweet Potatoes	213	0			0.020 ^	NT	-
Tomatoes	742	0			0.014 ^	NT	-
TOTAL	**5,589**	**0**					
Metolachlor (herbicide)							
Asparagus	250	0			0.015 ^	NT	-
Asparagus, Canned	189	0			0.015 ^	NT	-
Cantaloupe	132	0			0.016 ^	NT	-
Cucumbers	525	0			0.020 ^	NT	-
Green Beans, Canned	743	0			0.008 - 0.010	0.3	-
Mushrooms	394	0			0.001 ^	NT	-
Peaches, Canned	742	0			0.022 ^	0.1	-
Pears	133	0			0.015 ^	NT	-
Spinach	736	0			0.016 ^	0.5	-
Sweet Bell Peppers	741	0			0.001 ^	0.1	-

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Sweet Corn, Frozen	547	0			0.010 - 0.016	0.1	-
Sweet Peas, Frozen	549	0			0.010 - 0.015	0.3	-
Tomatoes	742	0			0.022 ^	0.1	-
TOTAL	**6,423**	**0**					
Metribuzin (herbicide)							
Asparagus	351	0			0.015 - 0.030	0.1	-
Asparagus, Canned	354	0			0.015 - 0.030	0.1	-
Cantaloupe	132	0			0.016 ^	NT	-
Cucumbers	525	0			0.030 ^	NT	-
Mushrooms	394	0			0.013 ^	NT	-
Pears	133	0			0.015 ^	NT	-
Spinach	736	0			0.016 ^	NT	-
Sweet Bell Peppers	712	0			0.013 ^	NT	-
Sweet Corn, Frozen	547	0			0.016 - 0.030	0.05	-
Sweet Peas, Frozen	495	0			0.015 - 0.075	0.1	-
Tomatoes	742	0			0.029 ^	0.1	-
TOTAL	**5,121**	**0**					
Mevinphos Total (insecticide)							
Cantaloupe	186	0			0.002 - 0.012	0.5	-
Cucumbers	739	0			0.002 - 0.004	0.2	-
Green Beans, Canned	528	0			0.017 ^	NT	D
Pears	133	0			0.008 ^	NT	-
Spinach	736	0			0.012 ^	1.0	-
Sweet Corn, Frozen	394	0			0.012 ^	NT	-
Sweet Peas, Frozen	477	0			0.002 - 0.008	0.25	-
Tomatoes	742	0			0.011 ^	0.2	-
TOTAL	**3,935**	**0**					
Mevinphos E (isomer of Mevinphos)							
Mushrooms	380	0			0.001 ^	NT	-
Sweet Bell Peppers	741	0			0.002 ^	0.25	-
TOTAL	**1,121**	**0**					
Monocrotophos (insecticide)							
Cantaloupe	132	0			0.007 ^	NT	-
Pears	133	0			0.008 ^	NT	-
Spinach	736	0			0.007 ^	NT	-
Sweet Corn, Frozen	350	0			0.007 ^	NT	-
TOTAL	**1,351**	**0**					
Myclobutanil (fungicide)							
Asparagus	351	0			0.020 - 0.023	0.02	-
Asparagus, Canned	354	0			0.020 - 0.023	0.02	-
Cantaloupe	186	0			0.008 - 0.020	0.20	-
Cucumbers	739	2	0.3	0.033 ^	0.020 ^	0.20	-
Green Beans, Canned	743	1	0.1	0.025 ^	0.015 - 0.020	1.0	-
Mushrooms	366	0			0.006 ^	NT	-
Peaches, Canned	380	0			0.046 ^	2.0	2
Pears	133	0			0.023 - 0.077	NT	0.5
Spinach	736	0			0.008 ^	0.03	-
Sweet Bell Peppers	741	66	8.9	0.002 - 0.064	0.001 - 0.040	1.0	-
Sweet Corn, Frozen	547	0			0.008 - 0.020	0.03	-
Sweet Peas, Frozen	549	0			0.020 - 0.023	0.03	-
Sweet Potatoes	734	0			0.012 - 0.020	0.03	-
Tomatoes	742	0			0.046 ^	0.30	0.3
TOTAL	**7,301**	**69**					
Napropamide (herbicide)							
Asparagus	101	0			0.020 ^	0.1	-
Asparagus, Canned	101	0			0.020 ^	0.1	-

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Cantaloupe	186	0			0.020 - 0.040	0.1	-
Cucumbers	739	0			0.020 ^	0.1	-
Mushrooms	394	0			0.007 ^	NT	-
Peaches, Canned	742	0			0.040 ^	0.1	-
Pear Juice, Concen./Puree	66	0			0.020 ^	0.1	-
Pears	54	0			0.020 ^	0.1	-
Spinach	120	0			0.040 ^	NT	-
Sweet Bell Peppers	741	0			0.007 ^	0.1	-
Sweet Potatoes	734	0			0.008 - 0.020	0.1	-
Tomatoes	742	0			0.040 ^	0.1	-
TOTAL	**4,720**	**0**					
Naptalam (herbicide)							
Cantaloupe	132	0			0.24 ^	0.1	-
Spinach	120	0			0.24 ^	NT	-
TOTAL	**252**	**0**					
1-Napthal (metabolite of Carbaryl)							
Cantaloupe	186	0			0.010 - 0.16	10	-
Cucumbers	1	1	100	0.017 ^	0.010 ^	10	-
Spinach	120	0			0.16 ^	12	-
TOTAL	**307**	**1**					
Nitrapyrin (bactericide)							
Cantaloupe	132	0			0.016 ^	NT	-
Spinach	718	0			0.016 ^	NT	-
Sweet Corn, Frozen	504	0			0.016 - 0.035	0.1	-
TOTAL	**1,354**	**0**					
Norflurazon (herbicide)							
Asparagus	351	0			0.010 - 0.020	0.05	-
Asparagus, Canned	354	0			0.010 - 0.020	0.05	-
Cantaloupe	132	0			0.018 ^	NT	-
Cucumbers	525	0			0.020 ^	NT	-
Mushrooms	394	0			0.005 ^	NT	-
Pear Juice, Concen./Puree	66	0			0.020 ^	0.1	-
Pears	187	0			0.010 - 0.020	0.1	-
Spinach	718	0			0.018 ^	NT	-
Sweet Bell Peppers	741	0			0.005 ^	NT	-
Sweet Corn, Frozen	328	0			0.018 ^	NT	-
TOTAL	**3,796**	**0**					
Norflurazon desmethyl (metabolite of Norflurazon)							
Asparagus	351	0			0.010 - 0.030	0.05	-
Asparagus, Canned	354	0			0.010 - 0.030	0.05	-
Cantaloupe	132	0			0.021 ^	NT	-
Cucumbers	525	0			0.030 ^	NT	-
Mushrooms	394	0			0.018 ^	NT	-
Peaches, Canned	742	0			0.041 ^	0.1	-
Pear Juice, Concen./Puree	66	0			0.030 ^	0.1	-
Pears	187	0			0.010 - 0.030	0.1	-
Spinach	718	0			0.021 ^	NT	-
Sweet Bell Peppers	741	0			0.018 ^	NT	-
Sweet Corn, Frozen	409	0			0.021 - 0.030	NT	-
TOTAL	**4,619**	**0**					
Omethoate (metabolite of Dimethoate)							
Asparagus	347	1	0.3	0.007 ^	0.004 - 0.008	0.15	0.05
Asparagus, Canned	354	0			0.004 - 0.008	0.15	0.05
Cantaloupe	186	1	0.5	0.007 ^	0.004 - 0.018	1	-
Cucumbers (V-9)	562	9	1.6	0.007 - 0.019	0.004 ^	NT	-
Green Beans, Canned	743	0			0.004 - 0.005	2	-
Mushrooms	394	0			0.002 ^	NT	-

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Pear Juice, Concen./Puree	66	4	6.1	0.007 ^	0.004 ^	2	1
Pears	187	0			0.004 - 0.008	2	1
Spinach	736	20	2.7	0.030 - 0.70	0.018 ^	2	-
Sweet Bell Peppers	741	32	4.3	0.004 - 0.035	0.002 - 0.008	2	1
Sweet Corn, Frozen	350	0			0.018 ^	NT	-
Sweet Peas, Frozen	549	25	4.6	0.007 - 0.016	0.004 - 0.008	2	0.5
Tomatoes	742	4	0.5	0.023 ^	0.014 ^	2	1
TOTAL	**5,957**	**96**					
Oryzalin (herbicide)							
Pears	133	0			0.010 ^	0.05	-
TOTAL	**133**	**0**					
Oxadixyl (fungicide)							
Asparagus, Canned	211	0			0.015 ^	NT	-
Cantaloupe	186	0			0.008 - 0.015	0.1	-
Cucumbers (X-1)	739	6	0.8	0.025 - 0.15	0.015 ^	0.1	-
Mushrooms	394	0			0.013 ^	NT	-
Spinach	736	0			0.008 ^	0.1	-
Sweet Bell Peppers	741	0			0.013 ^	0.1	-
Sweet Corn, Frozen	350	0			0.008 ^	0.1	-
Sweet Peas, Frozen	82	0			0.015 ^	0.1	-
Sweet Potatoes	734	0			0.013 - 0.015	0.1	-
TOTAL	**4,173**	**6**					
Oxamyl (insecticide)							
Cantaloupe	186	2	1.1	0.013 - 0.017	0.008 - 0.010	2.0	2
Cucumbers	739	46	6.2	0.030 - 0.79	0.018 - 0.021	2.0	2
Green Beans, Canned	528	0			0.020 ^	NT	0.2
Pear Juice, Concen./Puree	66	0			0.008 ^	2.0	-
Pears	187	0			0.008 - 0.010	2.0	-
Spinach (V-1)	736	1	0.1	0.013 ^	0.008 ^	NT	-
Sweet Bell Peppers	741	89	12	0.001 - 0.18	0.001 - 0.002	3	2
Sweet Corn, Frozen	350	0			0.008 ^	NT	-
Sweet Potatoes	734	0			0.001 - 0.018	0.1	0.1
Tomatoes	742	15	2	0.025 - 0.12	0.015 ^	2	2
TOTAL	**5,009**	**153**					
Oxamyl oxime (metabolite of Oxamyl)							
Pears	133	0			0.010 ^	2.0	-
TOTAL	**133**	**0**					
Oxychlordane (metabolite of Chlordane)							
Mushrooms	380	0			0.002 ^	NT	-
Sweet Bell Peppers	725	0			0.002 - 0.005	NT	-
TOTAL	**1,105**	**0**					
Oxydemeton methyl (insecticide)							
Asparagus	250	0			0.023 ^	NT	-
Asparagus, Canned	253	0			0.023 ^	NT	-
Sweet Peas, Frozen	395	0			0.023 ^	NT	-
TOTAL	**898**	**0**					
Oxydemeton methyl sulfone (metabolite of Oxydemeton methyl)							
Cantaloupe	54	0			0.015 ^	0.3	-
Cucumbers	739	1	0.1	0.025 ^	0.015 ^	1	-
Green Beans, Canned	743	0			0.010 - 0.015	0.5	-
Pear Juice, Concen./Puree	66	0			0.015 ^	0.3	-
Pears	187	0			0.015 - 0.023	0.3	-
Spinach	62	0			0.090 ^	NT	-
Sweet Bell Peppers	741	0			0.009 - 0.015	0.75	-

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Sweet Corn, Frozen	153	0			0.015 ^	0.5	-
Sweet Peas, Frozen	54	0			0.015 ^	NT	-
TOTAL	**2,799**	**1**					
Oxyfluorfen (herbicide)							
Cucumbers	525	0			0.030 ^	NT	-
Mushrooms	394	0			0.003 - 0.010	NT	-
Pear Juice, Concen./Puree	66	0			0.030 ^	0.05	-
Pears	187	0			0.025 - 0.030	0.05	-
Sweet Bell Peppers	651	0			0.003 - 0.010	NT	-
TOTAL	**1,823**	**0**					
Parathion (insecticide)							
Asparagus	250	0			0.008 ^	NT	-
Asparagus, Canned	253	0			0.008 ^	NT	-
Cantaloupe	132	0			0.006 ^	NT	-
Cucumbers	739	0			0.003 ^	NT	-
Green Beans, Canned	528	0			0.017 ^	NT	-
Mushrooms	394	0			0.010 ^	NT	-
Onion	216	0			0.010 ^	NT	-
Peaches, Canned	742	0			0.009 ^	NT	-
Pear Juice, Concen./Puree	66	0			0.003 ^	NT	-
Pears (V-1)	133	1	0.8	0.037 ^	0.008 ^	NT	-
Spinach (V-1)	736	1	0.1	0.10 ^	0.006 ^	NT	-
Sweet Bell Peppers	741	0			0.006 - 0.010	NT	-
Sweet Corn, Frozen	547	0			0.003 - 0.006	1.0	-
Sweet Peas, Frozen	395	0			0.008 ^	NT	-
Sweet Potatoes	734	0			0.001 - 0.003	NT	-
Tomatoes	742	0			0.009 ^	NT	-
TOTAL	**7,348**	**2**					
Parathion methyl (insecticide)							
Asparagus	250	0			0.004 ^	NT	-
Asparagus, Canned	253	0			0.004 ^	NT	-
Cantaloupe	132	0			0.006 ^	NT	-
Green Beans, Canned	528	0			0.008 ^	NT	-
Mushrooms	394	0			0.008 ^	NT	-
Pear Juice, Concen./Puree	66	0			0.002 ^	NT	-
Pears	133	0			0.004 ^	NT	-
Spinach	736	0			0.006 ^	NT	-
Sweet Bell Peppers	741	0			0.004 - 0.008	NT	-
Sweet Corn, Frozen	350	0			0.006 ^	1.0	-
Sweet Peas, Frozen	395	0			0.004 ^	NT	-
TOTAL	**3,978**	**0**					
Parathion methyl oxygen analog (metabolite of Parathion methyl)							
Mushrooms	394	0			0.016 ^	NT	-
Pear Juice, Concen./Puree	66	0			0.003 ^	NT	-
Sweet Bell Peppers	741	0			0.009 - 0.016	NT	-
TOTAL	**1,201**	**0**					
Parathion oxygen analog (metabolite of Parathion)							
Cantaloupe	132	0			0.016 ^	NT	-
Cucumbers	739	0			0.003 ^	NT	-
Mushrooms	394	0			0.003 ^	NT	-
Onion	216	0			0.010 ^	NT	-
Peaches, Canned	742	0			0.010 ^	NT	-
Pear Juice, Concen./Puree	66	0			0.002 ^	NT	-
Spinach	736	0			0.016 ^	NT	-
Sweet Bell Peppers	741	0			0.006 - 0.010	NT	-
Sweet Corn, Frozen	547	0			0.002 - 0.016	1.0	-

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Sweet Potatoes	734	0			0.001 - 0.002	NT	-
Tomatoes	742	0			0.010 ^	NT	-
TOTAL	**5,789**	**0**					
Pebulate (herbicide)							
Asparagus	250	0			0.015 ^	NT	-
Asparagus, Canned	253	0			0.015 ^	NT	-
Sweet Peas, Frozen	395	0			0.015 ^	NT	-
TOTAL	**898**	**0**					
Pendimethalin (herbicide)							
Asparagus	229	0			0.015 ^	NT	-
Asparagus, Canned	42	0			0.015 ^	NT	-
Cantaloupe	132	0			0.016 ^	NT	-
Cucumbers	525	0			0.020 ^	NT	-
Green Beans, Canned	721	0			0.015 - 0.020	NT	-
Pears	133	0			0.015 ^	NT	-
Spinach	736	0			0.016 ^	NT	-
Sweet Corn, Frozen	547	0			0.016 - 0.020	0.1	-
Sweet Peas, Frozen	549	0			0.015 - 0.020	0.1	-
TOTAL	**3,614**	**0**					
Pentachloroaniline - PCA (metabolite of Quintozene)							
Asparagus	250	0			0.004 ^	NT	-
Asparagus, Canned	253	0			0.004 ^	NT	-
Green Beans, Canned	528	0			0.010 ^	0.1	-
Pears	133	0			0.004 - 0.015	NT	-
Sweet Peas, Frozen	395	0			0.004 ^	NT	-
Tomatoes	742	0			0.005 ^	0.1	-
TOTAL	**2,301**	**0**					
Pentachlorobenzene - PCB (metabolite of Quintozene)							
Asparagus	250	0			0.002 ^	NT	-
Asparagus, Canned	253	0			0.002 ^	NT	-
Cantaloupe	132	0			0.002 ^	NT	-
Green Beans, Canned	725	0			0.002 - 0.003	0.1	-
Mushrooms	365	0			0.002 ^	NT	-
Pears	133	0			0.002 - 0.005	NT	-
Spinach	736	0			0.002 ^	NT	-
Sweet Bell Peppers	725	0			0.002 ^	0.1	-
Sweet Corn, Frozen	350	0			0.002 ^	NT	-
Sweet Peas, Frozen	449	0			0.002 ^	NT	-
Tomatoes	742	0			0.005 ^	0.1	-
TOTAL	**4,860**	**0**					
Pentachlorophenyl methyl sulfide (metabolite of Quintozene)							
Asparagus	250	0			0.004 ^	NT	-
Asparagus, Canned	253	0			0.004 ^	NT	-
Green Beans, Canned	528	0			0.010 ^	0.1	-
Pears	133	0			0.004 - 0.015	NT	-
Sweet Peas, Frozen	395	0			0.004 ^	NT	-
TOTAL	**395**	**0**					
Permethrin Total (insecticide)							
Asparagus	250	0			0.038 ^	1.0	1
Asparagus, Canned	253	0			0.038 ^	1.0	1
Cantaloupe	132	0			0.029 ^	3.0	0.1
Green Beans, Canned	528	0			0.075 ^	NT	1
Pears	133	0			0.038 - 0.13	3.0	2
Spinach	736	364	49.5	0.048 - 16	0.029 ^	20.0	2
Sweet Corn, Frozen	394	0			0.029 ^	0.1	0.1
Sweet Peas, Frozen	395	0			0.038 ^	NT	0.1
TOTAL	**2,821**	**364**					

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Permethrin cis (isomer of Permethrin)							
Asparagus	101	1	1	0.020 ^	0.012 ^	1.0	1
Asparagus, Canned	101	0			0.012 ^	1.0	1
Cantaloupe	54	0			0.012 ^	3.0	0.1
Cucumbers	739	1	0.1	0.025 ^	0.012 - 0.015	3.0	0.5
Mushrooms	552	19	3.4	0.007 - 0.20	0.004 - 0.012	6.0	0.1
Onion	525	0			0.019 ^	0.1	-
Peaches, Canned	742	0			0.023 ^	5.0	2
Pear Juice, Concen./Puree	66	0			0.015 ^	3.0	2
Pears	54	0			0.012 - 0.015	3.0	2
Sweet Bell Peppers	741	90	12.1	0.004 - 0.21	0.002 ^	1.0	1
Sweet Corn, Frozen	153	0			0.012 ^	0.1	0.1
Tomatoes	742	9	1.2	0.038 ^	0.023 ^	2	1
TOTAL	**4,570**	**120**					
Permethrin trans (isomer of Permethrin)							
Asparagus	101	1	1	0.020 ^	0.012 ^	1.0	1
Asparagus, Canned	101	0			0.012 ^	1.0	1
Cantaloupe	54	0			0.012 ^	3.0	0.1
Cucumbers	739	1	0.1	0.020 ^	0.012 ^	3.0	0.5
Mushrooms	552	16	2.9	0.020 - 0.17	0.004 - 0.012	6.0	0.1
Onion	525	0			0.019 ^	0.1	-
Peaches, Canned	742	0			0.023 ^	5.0	2
Pear Juice, Concen./Puree	66	0			0.015 ^	3.0	2
Pears	54	0			0.012 - 0.015	3.0	2
Sweet Bell Peppers	741	92	12.4	0.003 - 0.34	0.002 - 0.026	1.0	1
Sweet Corn, Frozen	153	0			0.012 ^	0.1	0.1
Tomatoes	742	12	1.6	0.038 ^	0.023 ^	2	1
TOTAL	**4,570**	**122**					
Phenmedipham (herbicide)							
Cantaloupe	132	0			0.097 ^	NT	-
Spinach	736	0			0.097 ^	0.5	-
Sweet Bell Peppers	495	0			0.016 - 0.11	NT	-
Sweet Corn, Frozen	350	0			0.097 ^	NT	-
TOTAL	**1,713**	**0**					
Phenothrin (insecticide)							
Asparagus	250	0			0.015 - 0.075	NT	-
Asparagus, Canned	253	0			0.015 ^	NT	-
Pears	133	0			0.015 ^	NT	-
Sweet Peas, Frozen	395	0			0.015 ^	NT	-
TOTAL	**1,031**	**0**					
Phenthoate (insecticide)							
Mushrooms	380	0			0.006 ^	NT	-
Sweet Bell Peppers	741	0			0.006 ^	NT	-
TOTAL	**1,121**	**0**					
o-Phenylphenol (fungicide)							
Asparagus	351	0			0.010 - 0.015	NT	-
Asparagus, Canned (V-3)	354	3	0.8	0.017 - 0.023	0.010 - 0.015	NT	-
Cantaloupe	186	0			0.008 - 0.010	10	-
Cucumbers	739	8	1.1	0.017 - 0.069	0.010 - 0.011	10	-
Green Beans, Canned (V-2)	37	2	5.4	0.017 ^	0.010 ^	NT	-
Mushrooms (V-35)	552	35	6.3	0.005 - 0.75	0.003 - 0.010	NT	-
Peaches, Canned	742	32	4.3	0.023 ^	0.014 ^	20	-
Pear Juice, Concen./Puree	66	15	22.7	0.017 - 3.7	0.010 ^	25.0	20
Pears	187	36	19.3	0.015 - 5.8	0.010 - 0.015	25.0	20
Spinach	736	0			0.008 ^	NT	-
Sweet Bell Peppers	741	25	3.4	0.005 - 0.072	0.003 ^	10	-
Sweet Corn, Frozen (V-18)	547	18	3.3	0.013 - 0.28	0.008 - 0.010	NT	-

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Sweet Peas, Frozen (V-20)	484	20	4.1	0.024 - 0.30	0.010 - 0.015	NT	-
Sweet Potatoes	734	21	2.9	0.015 - 2.0	0.009 - 0.030	15	-
Tomatoes	742	36	4.9	0.023 - 0.24	0.014 ^	10	-
TOTAL	**7,198**	**251**					
Phorate (insecticide)							
Asparagus	246	0			0.004 ^	NT	-
Asparagus, Canned	253	0			0.004 ^	NT	-
Cantaloupe	132	0			0.012 ^	NT	-
Cucumbers	437	0			0.005 ^	NT	-
Green Beans, Canned	743	0			0.008 - 0.011	0.1	0.1
Mushrooms	380	0			0.002 ^	NT	-
Pears	133	0			0.004 ^	NT	-
Spinach	736	0			0.012 ^	NT	-
Sweet Bell Peppers	741	0			0.002 ^	NT	-
Sweet Corn, Frozen	547	0			0.011 - 0.012	0.1	0.05
Sweet Peas, Frozen	449	0			0.004 - 0.011	NT	-
TOTAL	**4,797**	**0**					
Phorate oxygen analog (metabolite of Phorate)							
Mushrooms	394	0			0.001 ^	NT	-
Sweet Bell Peppers	741	0			0.001 ^	NT	-
TOTAL	**1,135**	**0**					
Phorate sulfone (metabolite of Phorate)							
Asparagus	250	0			0.012 ^	NT	-
Asparagus, Canned	253	0			0.012 ^	NT	-
Cantaloupe	132	0			0.012 ^	NT	-
Cucumbers	525	0			0.004 ^	NT	-
Green Beans, Canned	743	0			0.004 - 0.005	0.1	0.1
Mushrooms	394	0			0.003 ^	NT	-
Pears	133	0			0.012 ^	NT	-
Spinach	736	0			0.012 - 0.024	NT	-
Sweet Bell Peppers	741	0			0.003 ^	NT	-
Sweet Corn, Frozen	547	0			0.004 - 0.012	0.1	0.05
Sweet Peas, Frozen	449	0			0.004 - 0.012	NT	-
TOTAL	**4,903**	**0**					
Phorate sulfoxide (metabolite of Phorate)							
Mushrooms	394	0			0.009 ^	NT	-
Sweet Bell Peppers	741	0			0.009 ^	NT	-
TOTAL	**1,135**	**0**					
Phosalone (insecticide)							
Asparagus	250	0			0.015 ^	NT	-
Asparagus, Canned	253	0			0.015 ^	NT	-
Cucumbers	153	0			0.005 ^	NT	-
Green Beans, Canned	528	0			0.030 ^	NT	-
Mushrooms	394	0			0.002 ^	NT	-
Peaches, Canned	742	0			0.039 ^	15.0	2
Pear Juice, Concen./Puree	66	0			0.006 ^	10.0	2
Pears	187	0			0.006 - 0.050	10.0	2
Sweet Bell Peppers	741	0			0.002 - 0.008	NT	-
Sweet Peas, Frozen	395	0			0.015 ^	NT	-
TOTAL	**3,709**	**0**					
Phosmet (insecticide)							
Asparagus	250	0			0.008 ^	NT	-
Asparagus, Canned	253	0			0.008 ^	NT	-
Cantaloupe	132	0			0.012 ^	NT	-
Cucumbers	525	0			0.005 ^	NT	-
Green Beans, Canned	528	0			0.017 ^	NT	-

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Mushrooms	394	0			0.008 ^	NT	-
Peaches, Canned	742	0			0.018 ^	10	10
Pear Juice, Concen./Puree	66	25	37.9	0.008 - 0.082	0.005 ^	10	10
Pears	187	42	22.5	0.008 - 0.71	0.005 - 0.008	10	10
Spinach	736	0			0.012 ^	NT	-
Sweet Bell Peppers	741	0			0.005 - 0.008	NT	-
Sweet Corn, Frozen	547	0			0.005 - 0.012	NT	-
Sweet Peas, Frozen	495	7	1.4	0.008 - 0.047	0.005 - 0.008	0.5	-
Sweet Potatoes	734	39	5.3	0.003 - 0.40	0.002 - 0.005	10	-
TOTAL	**6,330**	**113**					
Phosphamidon (insecticide)							
Asparagus	250	0			0.015 ^	NT	-
Asparagus, Canned	253	0			0.015 ^	NT	-
Cantaloupe	132	0			0.029 ^	NT	-
Cucumbers	153	0			0.006 ^	NT	-
Green Beans, Canned	528	0			0.033 ^	NT	-
Mushrooms	394	0			0.002 ^	NT	-
Pears	133	0			0.015 ^	NT	-
Spinach	736	0			0.029 ^	NT	-
Sweet Bell Peppers	741	0			0.003 ^	NT	-
Sweet Corn, Frozen	350	0			0.029 ^	NT	-
Sweet Peas, Frozen	395	0			0.015 ^	NT	-
TOTAL	**4,065**	**0**					
Piperonyl butoxide (insecticide)							
Asparagus	230	0			0.015 - 0.075	EX	-
Asparagus, Canned	253	0			0.015 ^	EX	-
Cantaloupe	186	0			0.008 - 0.010	8	-
Cucumbers	525	0			0.011 ^	EX	-
Green Beans, Canned	721	0			0.010 - 0.015	8	-
Mushrooms	395	15	3.8	0.008 - 0.22	0.005 - 0.010	EX	-
Peaches, Canned	742	0			0.014 ^	8	-
Pear Juice, Concen./Puree	66	0			0.010 ^	8	-
Pears	187	0			0.010 - 0.015	8	-
Spinach	736	23	3.1	0.013 - 0.93	0.008 ^	EX	-
Sweet Bell Peppers	741	1	0.1	0.008 ^	0.005 ^	EX	-
Sweet Corn, Frozen	547	0			0.008 - 0.010	20	-
Sweet Peas, Frozen	549	0			0.010 - 0.015	8	-
Sweet Potatoes (X-2)	734	49	6.7	0.017 - 1.1	0.010 - 0.013	0.25	-
Tomatoes	742	32	4.3	0.023 - 0.37	0.014 ^	8	-
TOTAL	**7,354**	**120**					
Pirimicarb (insecticide)							
Mushrooms	394	0			0.010 ^	NT	-
Sweet Bell Peppers (V-2)	727	2	0.3	0.016 ^	0.010 ^	NT	1
TOTAL	**1,121**	**2**					
Pirimiphos methyl (insecticide)							
Asparagus	250	0			0.004 ^	NT	-
Asparagus, Canned	232	0			0.004 ^	NT	-
Cantaloupe	132	0			0.016 ^	NT	-
Cucumbers	525	0			0.003 ^	NT	1
Green Beans, Canned	528	0			0.008 ^	NT	0.5
Mushrooms	394	0			0.002 ^	NT	5
Pears	133	0			0.004 ^	NT	2
Spinach	674	0			0.016 ^	NT	5
Sweet Bell Peppers (V-3)	741	3	0.4	0.004 - 0.015	0.002 ^	NT	1
Sweet Corn, Frozen	547	0			0.003 - 0.016	8.0	-
Sweet Peas, Frozen	395	0			0.004 ^	NT	0.05
TOTAL	**4,551**	**3**					

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Prallethrin (insecticide)							
Asparagus, Canned	211	0			0.015 ^	1.0	-
Cantaloupe	186	0			0.010 - 0.024	1.0	-
Mushrooms	552	0			0.010 ^	1.0	-
Onion	741	0			0.010 - 0.064	1.0	-
Pears	54	0			0.010 ^	1.0	-
Spinach	120	0			0.024 ^	1.0	-
Sweet Bell Peppers	651	0			0.010 ^	1.0	-
Sweet Peas, Frozen	100	0			0.010 ^	1.0	-
TOTAL	**2,615**	**0**					
Prochloraz (fungicide)							
Green Beans, Canned	528	0			0.003 ^	NT	-
Pears	111	0			0.002 - 0.025	NT	-
TOTAL	**639**	**0**					
Procymidone (fungicide)							
Asparagus	250	0			0.004 ^	NT	-
Asparagus, Canned	253	0			0.004 ^	NT	-
Pears	111	0			0.004 ^	NT	1
Sweet Peas, Frozen (V-1)	395	1	0.3	0.14 ^	0.015 ^	NT	1
TOTAL	**1,009**	**1**					
Profenofos (insecticide)							
Asparagus	250	0			0.011 ^	NT	-
Asparagus, Canned	253	0			0.011 ^	NT	-
Pears	133	0			0.011 ^	NT	-
Sweet Bell Peppers	741	0			0.002 ^	NT	0.5
Sweet Peas, Frozen	395	0			0.011 ^	NT	-
TOTAL	**1,772**	**0**					
Prometryn (herbicide)							
Cantaloupe	132	0			0.049 ^	NT	-
Cucumbers	525	0			0.011 ^	NT	-
Mushrooms	379	0			0.007 ^	NT	-
Spinach	736	0			0.049 ^	NT	-
Sweet Bell Peppers	741	0			0.007 ^	NT	-
Sweet Corn, Frozen	350	0			0.049 ^	NT	-
TOTAL	**2,863**	**0**					
Pronamide (herbicide)							
Asparagus	250	0			0.008 ^	NT	-
Asparagus, Canned	253	0			0.008 ^	NT	-
Cantaloupe	132	0			0.018 ^	NT	-
Green Beans, Canned	528	0			0.015 ^	NT	-
Mushrooms	394	0			0.006 ^	NT	-
Peaches, Canned	742	0			0.014 ^	0.1	-
Pear Juice, Concen./Puree	66	0			0.007 ^	0.1	-
Pears	187	0			0.007 - 0.025	0.1	-
Spinach	736	0			0.018 ^	NT	-
Sweet Bell Peppers	741	0			0.006 ^	NT	-
Sweet Corn, Frozen	350	0			0.018 ^	NT	-
Sweet Peas, Frozen	395	0			0.008 ^	NT	-
TOTAL	**4,774**	**0**					
Propargite (insecticide)							
Cantaloupe	132	0			0.008 ^	NT	-
Cucumbers	525	0			0.020 ^	NT	0.5
Mushrooms	394	0			0.024 ^	NT	-
Pears	133	0			0.015 ^	NT	5
Spinach	714	0			0.008 ^	NT	-
Sweet Bell Peppers	741	0			0.024 - 0.026	NT	-

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Sweet Corn, Frozen	503	0			0.008 - 0.020	0.1	-
Sweet Peas, Frozen	395	0			0.015 ^	NT	-
TOTAL	**3,537**	**0**					
Propetamphos (insecticide)							
Cantaloupe	186	0			0.003 - 0.008	0.1	-
Cucumbers	525	0			0.003 ^	0.1	-
Onion	216	0			0.010 ^	0.1	-
Pears	187	0			0.003 - 0.004	0.1	-
Spinach	120	0			0.008 ^	0.1	-
Sweet Bell Peppers	168	0			0.002 ^	0.1	-
Sweet Peas, Frozen	100	0			0.003 ^	0.1	-
TOTAL	**1,502**	**0**					
Propiconazole (fungicide)							
Cantaloupe	132	0			0.016 ^	NT	-
Cucumbers	525	0			0.036 ^	NT	-
Mushrooms	394	0			0.014 ^	0.1	-
Onion	525	0			0.018 ^	NT	-
Peaches, Canned	380	0			0.035 ^	1.0	1
Spinach	674	0			0.016 ^	NT	-
Sweet Bell Peppers	663	0			0.002 - 0.014	NT	-
Sweet Corn, Frozen	394	0			0.016 ^	0.1	-
TOTAL	**3,687**	**0**					
Propiconazole I (isomer of Propiconazole)							
Mushrooms	158	0			0.015 ^	0.1	-
Sweet Corn, Frozen	153	0			0.015 ^	0.1	-
TOTAL	**311**	**0**					
Propiconazole II (isomer of Propiconazole)							
Mushrooms	158	0			0.020 ^	0.1	-
Sweet Corn, Frozen	153	0			0.020 ^	0.1	-
TOTAL	**311**	**0**					
Pymetrozine (insecticide)							
Sweet Bell Peppers	725	0			0.009 - 0.010	0.2	-
Sweet Potatoes	436	0			0.013 ^	0.02	-
TOTAL	**1,161**	**0**					
Pyridaben (insecticide)							
Peaches, Canned	742	0			0.041 ^	2.5	-
Pears	54	0			0.015 ^	0.75	-
TOTAL	**796**	**0**					
Pyriproxyfen (insecticide, growth regulator)							
Asparagus	250	0			0.015 ^	0.10	-
Asparagus, Canned	253	0			0.015 ^	0.10	-
Cantaloupe	54	0			0.005 ^	0.10	-
Green Beans, Canned	595	0			0.005 - 0.030	0.10	-
Peaches, Canned	742	0			0.014 ^	1.0	-
Pear Juice, Concen./Puree	66	0			0.005 ^	0.2	-
Pears	187	1	0.5	0.008 ^	0.005 - 0.015	0.2	-
Sweet Bell Peppers	90	1	1.1	0.022 ^	0.013 ^	0.2	-
Sweet Peas, Frozen	449	0			0.005 - 0.015	0.10	-
Tomatoes	742	2	0.3	0.023 - 0.084	0.014 ^	0.2	-
TOTAL	**3,428**	**4**					
Quintozene - PCNB (fungicide) (parent of HCB, PCA and PCB)							
Asparagus (V-1)	250	1	0.4	0.002 ^	0.002 ^	NT	-
Asparagus, Canned	253	0			0.002 ^	NT	-
Cantaloupe	132	0			0.004 ^	NT	-

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Cucumbers	525	0			0.003 ^	NT	-
Green Beans, Canned	743	0			0.001 - 0.003	0.1	0.1
Mushrooms	379	0			0.003 - 0.010	NT	-
Pears	133	0			0.002 - 0.005	NT	-
Spinach	736	0			0.004 ^	NT	-
Sweet Bell Peppers	741	0			0.003 ^	0.1	0.05
Sweet Corn, Frozen	350	0			0.004 ^	NT	-
Sweet Peas, Frozen	449	0			0.002 - 0.003	NT	-
Tomatoes	742	0			0.006 ^	0.1	0.02
TOTAL	**5,433**	**1**					
Resmethrin (insecticide)							
Asparagus	351	0			0.010 - 0.015	3.0	-
Asparagus, Canned	354	0			0.010 - 0.015	3.0	-
Cantaloupe	186	0			0.010 - 0.032	3.0	-
Mushrooms	552	0			0.007 - 0.010	3.0	-
Onion	216	0			0.010 ^	3.0	-
Pears	187	0			0.010 - 0.015	3.0	-
Spinach	674	0			0.032 ^	3.0	-
Sweet Bell Peppers	621	0			0.007 ^	3.0	-
Sweet Corn, Frozen	530	0			0.010 - 0.032	3.0	-
Sweet Peas, Frozen	478	0			0.010 - 0.015	3.0	-
Sweet Potatoes	1	1	100	0.017 ^	0.010 ^	3.0	-
TOTAL	**4,150**	**1**					
Resmethrin cis (isomer of Resmethrin)							
Sweet Bell Peppers	90	0			0.002 ^	3.0	-
TOTAL	**90**	**0**					
Resmethrin trans (isomer of Resmethrin)							
Sweet Bell Peppers	90	0			0.002 ^	3.0	-
TOTAL	**90**	**0**					
Simazine (herbicide)							
Asparagus	351	0			0.010 - 0.011	NT	-
Asparagus, Canned	354	0			0.010 - 0.011	NT	-
Cantaloupe	132	0			0.018 ^	NT	-
Cucumbers	525	0			0.011 ^	NT	-
Green Beans, Canned	528	0			0.023 ^	NT	-
Mushrooms	394	0			0.002 ^	NT	-
Peaches, Canned	692	0			0.036 ^	0.25	-
Pear Juice, Concen./Puree	66	0			0.010 ^	0.25	-
Pears	187	0			0.010 - 0.037	0.25	-
Spinach	736	0			0.018 ^	NT	-
Sweet Bell Peppers	741	0			0.002 ^	NT	-
Sweet Corn, Frozen	547	0			0.010 - 0.018	0.25	-
Sweet Peas, Frozen	395	0			0.011 ^	NT	-
TOTAL	**5,648**	**0**					
Spinosad A (insecticide)							
Sweet Potatoes	500	0			0.013 ^	0.10	-
TOTAL	**500**	**0**					
Spinosad D (insecticide)							
Sweet Potatoes	500	0			0.013 ^	0.10	-
TOTAL	**500**	**0**					
Sulprofos (insecticide)							
Mushrooms	394	0			0.002 ^	NT	-
Sweet Bell Peppers	741	0			0.002 ^	NT	-
TOTAL	**1,135**	**0**					

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Tebuconazole (fungicide)							
Asparagus	250	0			0.023 ^	NT	-
Asparagus, Canned	253	0			0.023 ^	NT	-
Cucumbers	525	0			0.020 ^	NT	0.2
Green Beans, Canned	528	0			0.045 ^	NT	-
Mushrooms	394	0			0.019 ^	NT	-
Peaches, Canned	380	0			0.066 ^	1.0	1
Pears	133	0			0.023 - 0.077	NT	0.5
Sweet Bell Peppers (V-2)	725	2	0.3	0.032 ^	0.002 - 0.019	NT	0.5
Sweet Peas, Frozen	395	0			0.023 ^	NT	-
TOTAL	**3,583**	**2**					
Tebufenozide (insecticide)							
Pear Juice, Concen./Puree	66	14	21.2	0.005 - 0.096	0.003 ^	1.5	1
Pears	187	16	8.6	0.001 - 0.087	0.001 - 0.003	1.5	1
Sweet Bell Peppers	725	81	11.2	0.005 - 0.049	0.003 - 0.006	1.0	-
Sweet Peas, Frozen	395	0			0.010 ^	NT	-
Sweet Potatoes	521	0			0.011 ^	0.25	-
TOTAL	**1,894**	**111**					
Tecnazene (fungicide)							
Asparagus	250	0			0.001 ^	NT	-
Asparagus, Canned	253	0			0.001 ^	NT	-
Green Beans, Canned	528	0			0.002 ^	NT	-
Mushrooms	346	0			0.005 ^	NT	-
Pears	133	0			0.001 - 0.004	NT	-
Sweet Bell Peppers	711	0			0.005 ^	NT	-
Sweet Peas, Frozen	395	0			0.001 ^	NT	-
TOTAL	**2,616**	**0**					
Tefluthrin (insecticide)							
Sweet Corn, Frozen	153	0			0.010 ^	0.06	-
TOTAL	**153**	**0**					
TEPP (insecticide)							
Sweet Bell Peppers	741	0			0.006 ^	NT	-
TOTAL	**741**	**0**					
Terbacil (herbicide)							
Asparagus	351	0			0.015 - 0.020	0.4	-
Asparagus, Canned	354	0			0.015 - 0.020	0.4	-
Cantaloupe	132	0			0.018 ^	NT	-
Cucumbers	525	0			0.020 ^	NT	-
Mushrooms	394	0			0.006 ^	NT	-
Peaches, Canned	692	0			0.039 ^	0.2	-
Pear Juice, Concen./Puree	66	0			0.020 ^	NT	-
Pears	133	0			0.015 - 0.050	NT	-
Spinach	736	0			0.018 ^	NT	-
Sweet Bell Peppers	741	0			0.006 ^	NT	-
Sweet Corn, Frozen	394	0			0.018 ^	NT	-
Sweet Peas, Frozen	395	0			0.015 ^	NT	-
TOTAL	**4,913**	**0**					
Terbufos (insecticide)							
Asparagus	249	0			0.004 ^	NT	-
Asparagus, Canned	253	0			0.004 ^	NT	-
Cantaloupe	132	0			0.015 ^	NT	-
Cucumbers	525	0			0.006 ^	NT	-
Mushrooms	394	0			0.002 ^	NT	-
Pears	133	0			0.004 ^	NT	-
Spinach	736	0			0.015 ^	NT	-
Sweet Bell Peppers	741	0			0.002 ^	NT	-
Sweet Corn, Frozen	547	0			0.006 - 0.015	0.05	0.01

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Sweet Peas, Frozen	395	0			0.004 ^	NT	-
TOTAL	**4,105**	**0**					
Terbufos sulfone (metabolite of Terbufos)							
Asparagus	250	0			0.004 ^	NT	-
Asparagus, Canned	253	0			0.004 ^	NT	-
Cantaloupe	132	0			0.018 ^	NT	-
Cucumbers	525	0			0.004 ^	NT	-
Green Beans, Canned	528	0			0.010 ^	NT	-
Mushrooms	394	0			0.002 ^	NT	-
Pears	133	0			0.004 ^	NT	-
Spinach	736	0			0.018 - 0.048	NT	-
Sweet Bell Peppers	741	0			0.002 ^	NT	-
Sweet Corn, Frozen	547	0			0.004 - 0.018	0.05	0.01
Sweet Peas, Frozen	395	0			0.004 ^	NT	-
TOTAL	**4,634**	**0**					
Tetrachlorvinphos (insecticide)							
Asparagus	250	0			0.004 ^	NT	-
Asparagus, Canned	253	0			0.004 ^	NT	-
Cantaloupe	132	0			0.008 ^	NT	-
Cucumbers	525	0			0.006 ^	NT	-
Mushrooms	394	0			0.003 ^	NT	-
Spinach	736	0			0.008 ^	NT	-
Sweet Bell Peppers	741	0			0.003 ^	NT	-
Sweet Corn, Frozen	350	0			0.008 ^	NT	-
TOTAL	**3,381**	**0**					
Tetradifon (insecticide)							
Asparagus	250	0			0.004 ^	NT	-
Asparagus, Canned	253	0			0.004 ^	NT	-
Cantaloupe	186	0			0.012 - 0.028	1	-
Cucumbers	739	0			0.006 - 0.012	1	-
Green Beans, Canned	528	0			0.008 ^	NT	-
Mushrooms	394	0			0.010 ^	NT	-
Peaches, Canned	742	0			0.012 ^	5	-
Pear Juice, Concen./Puree	66	0			0.011 ^	5	-
Pears	187	0			0.004 - 0.013	5	-
Spinach	736	0			0.028 - 0.029	NT	-
Sweet Bell Peppers	725	0			0.010 ^	NT	-
Sweet Corn, Frozen	350	0			0.028 ^	NT	-
Sweet Peas, Frozen	395	0			0.004 ^	NT	-
Tomatoes	742	0			0.012 ^	1	-
TOTAL	**6,293**	**0**					
Tetrahydrophthalimide - THPI (metabolite of Captafol and Captan)							
Asparagus (V-1)	250	1	0.4	0.57 ^	0.015 - 0.075	NT	-
Asparagus, Canned	253	0			0.015 - 0.075	NT	-
Cantaloupe	54	0			0.040 ^	25	-
Cucumbers	5	5	100	0.067 ^	0.040 ^	25	-
Pears	165	1	0.6	0.81 ^	0.040 - 0.38	25	-
Sweet Peas, Frozen	395	0			0.015 - 0.15	2	-
TOTAL	**1,122**	**7**					
Tetramethrin (insecticide)							
Asparagus	186	0			0.015 - 0.075	NT	-
Asparagus, Canned	253	0			0.015 ^	NT	-
Pears	133	0			0.015 ^	NT	-
Sweet Peas, Frozen	373	0			0.015 ^	NT	-
TOTAL	**945**	**0**					
Thiabendazole (fungicide)							
Asparagus (V-1)	1	1	100	0.050 ^	0.030 ^	NT	-

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Cantaloupe	186	1	0.5	0.20 ^	0.030 - 0.045	15.0	-
Cucumbers	525	0			0.030 ^	NT	-
Mushrooms	552	238	43.1	0.026 - 5.4	0.016 - 0.030	40.0	-
Pear Juice, Concen./Puree	66	23	34.8	0.050 - 0.86	0.030 ^	10	3
Pears	187	122	65.2	0.058 - 3.0	0.030 - 0.050	10	3
Spinach	736	0			0.045 ^	NT	-
Sweet Bell Peppers (V-4)	741	4	0.5	0.001 ^	0.001 - 0.016	NT	-
Sweet Corn, Frozen	350	0			0.045 ^	NT	-
Sweet Potatoes	256	0			0.006 - 0.030	0.02	-
TOTAL	**3,600**	**389**					
Thiamethoxam (insecticide)							
Sweet Bell Peppers	246	10	4.1	0.017 - 0.12	0.015 ^	0.25	-
Sweet Potatoes	521	0			0.006 ^	0.02	-
TOTAL	**767**	**10**					
Thiobencarb (herbicide)							
Cucumbers	525	0			0.011 ^	NT	-
TOTAL	**525**	**0**					
Tri-Allate (herbicide)							
Asparagus	250	0			0.015 ^	NT	-
Asparagus, Canned	253	0			0.015 ^	NT	-
Pears	133	0			0.015 ^	NT	-
Sweet Peas, Frozen	495	0			0.010 - 0.015	0.05	-
TOTAL	**1,131**	**0**					
Triadimefon (fungicide)							
Asparagus	250	0			0.011 ^	NT	-
Asparagus, Canned	253	0			0.011 ^	NT	-
Cantaloupe	186	0			0.023 - 0.025	0.3	0.1
Cucumbers	739	0			0.025 - 0.026	0.3	0.1
Green Beans, Canned	528	0			0.023 ^	NT	-
Mushrooms	394	0			0.006 ^	NT	-
Pear Juice, Concen./Puree	66	0			0.025 ^	1.0	0.5
Pears	187	0			0.011 - 0.037	1.0	0.5
Spinach	736	0			0.023 ^	NT	-
Sweet Bell Peppers	725	0			0.003 - 0.006	NT	0.1
Sweet Corn, Frozen	350	0			0.023 ^	NT	-
Sweet Peas, Frozen	395	0			0.011 ^	NT	0.05
TOTAL	**4,809**	**0**					
Triadimenol (metabolite of Triadimefon)							
Cantaloupe	54	0			0.015 ^	NT	2
Cucumbers (V-1)	1	1	100	0.025 ^	0.015 ^	NT	2
Pears	54	0			0.015 ^	NT	0.5
Sweet Corn, Frozen	153	0			0.015 ^	0.05	-
TOTAL	**262**	**1**					
Triflumizole (fungicide)							
Cantaloupe	186	0			0.040 - 0.050	0.5	-
Pears	187	0			0.020 - 0.050	0.5	-
Spinach	120	0			0.040 ^	NT	-
TOTAL	**493**	**0**					
Trifluralin (herbicide)							
Asparagus	351	0			0.015 - 0.017	0.05	-
Asparagus, Canned	354	0			0.015 - 0.017	0.05	-
Cantaloupe	186	0			0.008 - 0.017	0.05	-
Cucumbers	739	0			0.017 ^	0.05	-
Green Beans, Canned	721	0			0.015 - 0.017	0.05	-
Mushrooms	394	0			0.001 ^	NT	-
Peaches, Canned	742	0			0.024 ^	0.05	-

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Pears	133	0			0.015 ^	NT	-
Spinach	736	0			0.008 ^	0.05	-
Sweet Bell Peppers	741	0			0.001 ^	0.05	-
Sweet Corn, Frozen	350	0			0.008 ^	NT	-
Sweet Peas, Frozen	549	0			0.015 - 0.017	0.05	-
Sweet Potatoes	734	0			0.001 - 0.017	0.05	-
Tomatoes	742	0			0.024 ^	0.05	-
TOTAL	**7,472**	**0**					
Triforine (fungicide)							
Sweet Bell Peppers	246	0			0.003 ^	5.0	-
TOTAL	**246**	**0**					
Vernolate (herbicide)							
Cantaloupe	132	0			0.016 ^	NT	-
Spinach	736	0			0.016 ^	NT	-
Sweet Corn, Frozen	525	0			0.016 - 0.050	NT	-
Sweet Potatoes	734	0			0.008 - 0.050	NT	-
TOTAL	**2,127**	**0**					
Vinclozolin (fungicide)							
Asparagus	250	0			0.003 ^	NT	-
Asparagus, Canned	253	0			0.003 ^	NT	-
Cantaloupe	132	0			0.014 ^	NT	1
Cucumbers	739	0			0.002 - 0.010	NT	1
Green Beans, Canned	743	6	0.8	0.005 - 0.017	0.003 - 0.010	2.0	2
Mushrooms	394	0			0.004 ^	NT	-
Pears	133	0			0.003 - 0.010	NT	1
Spinach	736	0			0.014 ^	NT	-
Sweet Bell Peppers (V-1)	741	1	0.1	0.080 ^	0.004 ^	NT	3
Sweet Corn, Frozen	350	0			0.014 ^	NT	-
Sweet Peas, Frozen (V-3)	449	3	0.7	0.054 - 0.14	0.003 - 0.010	NT	1
TOTAL	**4,920**	**10**					
Zoxamide (fungicide)							
Cantaloupe	132	0			0.020 ^	1.0	-
Spinach	120	0			0.020 ^	NT	-
TOTAL	**252**	**0**					

^ 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.
EX Exempt from tolerance application.
SU Safe use in spot and/or crack and crevice treatments.
(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.

** Previously reported as lambda cyhalothrin total, which included lambda cyhalothrin (a 1:1 mixture of the cis-(1R,3R),S-enantiomer and the cis-(1S,3S),R-enantiomer) as well as R157836 (a 1:1 mixture of the cis-(1S,3S),S-enantiomer and the cis-(1R,3R), R-enantiomer).

- MRLs are for pesticides analyzed in PDP calendar year 2003 samples.

- MRLs are obtained from Codex publication of Codex Committee on Pesticide Residues (CCPR), 36th session, April 19-24, 2004, New Dehli, India.

- List excludes MRLs proposed for revocation according to Codex publication of CCPR (ALINORM), 03/24A, Appendix VI, March 31,2003, Rotterdam, The Netherlands.

- Metabolites are included in the expressions where applicable.

- D = MRL withdrawn in 2003.

Appendix F

Distribution of Residues for Triazole Special Survey

Appendix F shows residue detections for a special triazole survey, 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.

EPA identified triazole-derivative compounds and their associated metabolites as a critical data need. PDP responded by developing specialized methods of analysis for 19 triazole compounds, isomers, and metabolites as well as three common metabolites – 1,2,4-triazole, triazole alanine, and triazole acetic acid. PDP results for apples, peaches (fresh and canned), and wheat flour are being used to establish new registrations for the triazole fungicides, important tools for the agricultural industry.

In 2003, PDP analyzed 744 apple samples, 269 fresh peach samples, 371 canned peach samples, and 606 wheat flour samples for specific triazole-class compounds. A total of 118 apple samples (16 percent) were reported with residue detections. A total of 98 fresh peach samples (36 percent) were reported with residue detections. None of the canned peach samples were reported with residue detections. All 606 wheat flour samples (100 percent) were reported with residue detections.

MRLs/EMRLs shown in this appendix are from the Codex Alimentarius: *Proc. of Codex Committee on Pesticide Residues*, 36th Session, April 19-24, 2004, New Delhi, India, and *Proc. of Codex Committee on Pesticide Residues*, 35th Session (ALINORM), March 31-April 5, 2003, Rotterdam, The Netherlands. Only Codex MRLs (CXLs) are listed.

The information herein is only intended to be an initial reference. Readers are reminded that international regulations and MRLs may change and that it is important that information obtained from this table be verified with knowledgeable parties in the market of interest prior to sale or shipment of exports.

APPENDIX F. DISTRIBUTION OF RESIDUES FOR TRIAZOLE SPECIAL SURVEY

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Bromuconazole 46 (metabolite of Bromuconazole)							
Apples	744	0			0.005 ^	NT	-
Peaches	269	0			0.021 ^	NT	-
Peaches, Canned	371	0			0.021 ^	NT	-
Wheat Flour	586	0			0.006 ^	NT	-
TOTAL	**1,970**	**0**					
Bromuconazole 47 (metabolite of Bromuconazole)							
Apples	744	0			0.005 ^	NT	-
Peaches	269	0			0.009 ^	NT	-
Peaches, Canned	371	0			0.009 ^	NT	-
Wheat Flour	536	0			0.004 ^	NT	-
TOTAL	**1,920**	**0**					
Cyproconazole							
Apples	744	0			0.005 ^	NT	-
Peaches	269	0			0.009 ^	NT	-
Peaches, Canned	371	0			0.009 ^	NT	-
Wheat Flour	606	0			0.011 ^	NT	-
TOTAL	**1,990**	**0**					
Difenoconazole							
Peaches	269	0			0.009 ^	NT	-
Peaches, Canned	371	0			0.009 ^	NT	-
Wheat Flour	606	0			0.004 ^	0.1	-
TOTAL	**1,246**	**0**					
Epoxiconazole							
Apples	744	0			0.005 ^	NT	-
Peaches	269	0			0.009 ^	NT	-
Peaches, Canned	371	0			0.009 ^	NT	-
Wheat Flour	606	0			0.004 ^	NT	-
TOTAL	**1,990**	**0**					
Fenbuconazole							
Apples	744	0			0.001 ^	NT	0.1
Peaches	269	37	13.8	0.015 - 0.45	0.009 ^	2.0	0.5
Peaches, Canned	371	0			0.009 ^	2.0	0.5
Wheat Flour	575	0			0.009 ^	NT	-
TOTAL	**1,959**	**37**					
Hexaconazole							
Apples	744	0			0.001 ^	NT	0.1
Peaches	269	0			0.009 ^	NT	-
Peaches, Canned	371	0			0.009 ^	NT	-
Wheat Flour	606	0			0.004 ^	NT	-
TOTAL	**1,990**	**0**					
HWG 2061 (metabolite of Tebuconazole)							
Apples	744	0			0.001 ^	NT	-
Peaches	269	0			0.021 ^	1.0	-
Peaches, Canned	371	0			0.021 ^	1.0	-
TOTAL	**1,384**	**0**					

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Myclobutanil							
Apples	744	64	8.6	0.002 - 0.060	0.001 ^	0.5	0.5
Peaches	269	10	3.7	0.015 - 0.087	0.009 ^	2.0	2
Peaches, Canned	371	0			0.009 ^	2.0	2
Wheat Flour	606	0			0.013 ^	0.03	-
TOTAL	**1,990**	**74**					
Propiconazole							
Apples	744	0			0.005 ^	NT	-
Peaches	269	26	9.7	0.015 - 0.19	0.009 ^	1.0	1
Peaches, Canned	371	0			0.009 ^	1.0	1
Wheat Flour	606	0			0.011 ^	0.1	-
TOTAL	**1,990**	**26**					
RH 9129 (metabolite of Fenbuconazole)							
Apples	744	0			0.001 ^	NT	-
Peaches	269	3	1.1	0.015 - 0.041	0.009 ^	2.0	-
Peaches, Canned	371	0			0.009 ^	2.0	-
Wheat Flour	606	0			0.005 ^	NT	-
TOTAL	**1,990**	**3**					
RH 9130 (metabolite of Fenbuconazole)							
Apples (V-1)	744	1	0.1	0.010 ^	0.001 ^	NT	-
Peaches	269	0			0.009 ^	NT	-
Peaches, Canned	371	0			0.009 ^	NT	-
Wheat Flour	546	0			0.004 ^	NT	-
TOTAL	**1,930**	**1**					
RPA 404886 (metabolite of Triticonazole)							
Apples	744	0			0.001 ^	NT	-
Peaches	269	0			0.080 ^	NT	-
Peaches, Canned	371	0			0.080 ^	NT	-
TOTAL	**1,384**	**0**					
RPA 406341 (metabolite of Triticonazole)							
Apples	744	0			0.001 ^	NT	-
Peaches	269	0			0.080 ^	NT	-
Peaches, Canned	371	0			0.080 ^	NT	-
TOTAL	**1,384**	**0**					
Tebuconazole							
Apples	744	2	0.3	0.002 ^	0.001 ^	NT	0.5
Peaches	269	34	12.6	0.015 - 0.078	0.009 ^	1.0	1
Peaches, Canned	371	0			0.009 ^	1.0	1
Wheat Flour	606	0			0.010 ^	0.05	-
TOTAL	**1,990**	**36**					
Tetraconazole							
Peaches	89	0			0.018 ^	NT	-
Peaches, Canned	185	0			0.018 ^	NT	-
Wheat Flour	606	0			0.004 ^	NT	-
TOTAL	**880**	**0**					

Pesticide / Commodity	Number of Samples	Samples with Detections	% of Samples with Detections	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Triadimefon							
Apples	744	0			0.001 ^	1.0	0.5
Peaches	269	0			0.009 ^	NT	-
Peaches, Canned	371	0			0.009 ^	NT	-
Wheat Flour	606	0			0.003 ^	1.0	-
TOTAL	**1,990**	**0**					
Triadimenol (metabolite of Triadimefon)							
Apples	744	14	1.9	0.002 - 0.006	0.001 ^	1.0	0.5
Peaches	269	0			0.024 ^	NT	-
Peaches, Canned	371	0			0.024 ^	NT	-
Wheat Flour	594	0			0.006 ^	0.05	-
TOTAL	**1,978**	**14**					
1,2,4-Triazole (common metabolite of triazole compounds)							
Apples	712	0			0.020 ^	NT	-
Peaches	269	0			0.21 ^	NT	-
Peaches, Canned	371	0			0.21 ^	NT	-
Wheat Flour	606	4	0.7	0.005 ^	0.010	NT	-
TOTAL	**1,958**	**4**					
Triazole acetic acid - TAA (common metabolite of triazole compounds)							
Apples	714	0			0.020 ^	NT	-
Peaches	269	6	2.2	0.1 ^	0.060 ^	NT	-
Peaches, Canned	371	0			0.060 ^	NT	-
Wheat Flour	606	602	99.3	0.012 - 0.34	0.007 ^	NT	-
TOTAL	**1,960**	**608**					
Triazole alanine - TA (common metabolite of triazole compounds)							
Apples	713	61	8.6	0.033 - 0.23	0.020 ^	NT	-
Peaches	269	2	0.7	0.30 - 0.85	0.20 ^	NT	-
Peaches, Canned	371	0			0.20 ^	NT	-
Wheat Flour	606	601	99.2	0.018 - 0.21	0.011 ^	NT	-
TOTAL	**1,959**	**664**					
Triticonazole							
Apples	744	0			0.001 ^	NT	-
Peaches	269	0			0.024 ^	NT	-
Peaches, Canned	371	0			0.024 ^	NT	-
Wheat Flour	606	0			0.004 ^	0.05	-
TOTAL	**1,990**	**0**					

^ Only one distinct detected concentration or LOD value was reported for the pair.
NT No tolerance level was set for that pesticide/commodity pair.
(V) Residue was found where no tolerance was established by EPA. Following "V" are the number of occurrences.

- MRLs are for pesticides analyzed in PDP calendar year 2003 samples.
- MRLs are obtained from Codex publication of Codex Committee on Pesticide Residues (CCPR), 36th session, April 19-24, 2004, New Dehli, India.
- List excludes MRLs proposed for revocation according to Codex publication of CCPR (ALINORM), 03/24A, Appendix VI, March 31,2003, Rotterdam, The Netherlands.
- Metabolites are included in the expressions where applicable.

Appendix G

Distribution of Residues by Pesticide in Barley

Appendix G shows residue detections for all barley compounds 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.

In 2003, PDP analyzed 452 barley samples. A total of 35 samples (8 percent) were reported with residue detections. All residue detections were much lower than the established tolerances.

See Appendix E for definition of MRLs.

MRLs/EMRLs shown in this appendix are from the Codex Alimentarius: *Proc. of Codex Committee on Pesticide Residues*, 36th Session, April 19-24, 2004, New Delhi, India, and *Proc. of Codex Committee on Pesticide Residues*, 35th Session (ALINORM), March 31-April 5, 2003, Rotterdam, The Netherlands. Only Codex MRLs (CXLs) are listed.

The information herein is only intended to be an initial reference. Readers are reminded that international regulations and MRLs may change and that it is important that information obtained from this table be verified with knowledgeable parties in the market of interest prior to sale or shipment of exports.

APPENDIX G. DISTRIBUTION OF RESIDUES BY PESTICIDE IN BARLEY

Pesticide	Pest. Type	Number of Samples	Samples with Detections	% of Samples w/ Detects	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
3-Hydroxycarbofuran	IM	392				0.013 ^	0.1	-
Aldicarb	I	452				0.009 ^	NT	0.02
Aldicarb sulfone	IM	452				0.011 ^	NT	0.02
Aldicarb sulfoxide	IM	427				0.011 ^	NT	0.02
Allethrin	I	452				0.005 ^	2	-
Carbaryl	I	255				0.006 ^	0.2	5
Carbofuran	I	452				0.012 ^	0.1	-
Carboxin	F	432				0.020 ^	0.2	-
Chlorpyrifos methyl	I	452	1	0.2	0.008 ^	0.005 ^	6.0	-
Cyfluthrin	I	432				0.040 ^	4.0	-
Cyhalothrin, Lambda	I	432				0.003 ^	0.05	-
DDE p,p'	IM	393				0.003 ^	0.5	0.1
Deltamethrin - includes parent Tralomethrin	I	379				0.030 ^	0.05	1
Dichlorvos - DDVP	I	235	1	0.4	0.033 ^	0.020 ^	0.5	5
Diclofop methyl	H	447				0.003 ^	0.1	-
Dieldrin	I	411				0.010 ^	0.02	0.02
Difenoconazole	F	432				0.005 ^	0.1	-
Dimethomorph	F	398				0.003 ^	0.05	-
Disulfoton	I	452				0.003 ^	0.75	0.2
Disulfoton sulfone	IM	452				0.040 ^	0.75	0.2
Endosulfan I	I	442				0.010 ^	0.1	-
Endosulfan II	IM	452				0.020 ^	0.1	-
Endosulfan sulfate	IM	371				0.005 ^	0.1	-
Esfenvalerate+Fenvalerate Total	I	432				0.050 ^	0.05	2
Fludioxonil	F	358				0.010 ^	0.02	-
Fluridone	H	378				0.005 ^	0.1	-
Heptachlor epoxide	IM	452				0.005 ^	NT	0.02
Imazalil	F	397				0.015 ^	0.05	-
Imidacloprid	I	447				0.015 ^	0.05	-
Lindane - BHC gamma	I	79				0.010 ^	0.1	-
Malathion	I	238	3	1.3	0.010 - 0.12	0.005 ^	8	8
Malathion oxygen analog	IM	390				0.010 ^	8	-
Metalaxyl	F	430				0.005 ^	0.2	0.05
Methamidophos	IM	234				0.020 ^	0.02	-
Methomyl	I	452				0.009 ^	1	0.5

Pesticide	Pest. Type	Number of Samples	Samples with Detections	% of Samples w/ Detects	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Methoprene	R	430				0.25 ^	5.0	5
Methoxychlor p,p' (V-2)	I	432	2	0.5	0.008 ^	0.005 ^	NT	-
Metolachlor	H	452				0.005 ^	0.1	-
Metribuzin	H	430				0.010 ^	0.75	-
Myclobutanil	F	339				0.005 ^	0.03	-
Oxadixyl	F	452				0.010 ^	0.1	-
Oxamyl	I	452				0.018 ^	NT	-
Parathion ethyl	I	452				0.010 ^	1.0	-
Parathion oxygen analog	IM	452				0.010 ^	1.0	-
Piperonyl butoxide	I	452	6	1.3	0.017 ^	0.010 ^	20	-
Propanil	H	432				0.005 ^	0.2	-
Propiconazole	F	437				0.010 ^	0.1	0.05
Resmethrin	I	452	21	4.6	0.017 - 0.066	0.010 ^	3.0	-
TCMTB	F	393				0.020 ^	0.1	-
Tebuconazole	F	432				0.010 ^	2.0	0.2
Tri Allate	H	371				0.010 ^	0.05	-
Triadimenol	FM	397				0.060 ^	0.05	0.5
Trifluralin	H	452	1	0.2	0.005 ^	0.003 ^	0.05	-

^ = Only one distinct detected concentration or LOD value was reported.

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

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

Pesticide Types:

F = Fungicide, FM = Fungicide Metabolite

H = Herbicide

I = Insecticide, IM = Insecticide Metabolite

R = Insect Growth Regulator

- MRLs are for pesticides analyzed in PDP calendar year 2003 samples.
- MRLs are obtained from Codex publication of Codex Committee on Pesticide Residues (CCPR), 36th session, April 19-24, 2004, New Dehli, India.
- List excludes MRLs proposed for revocation according to Codex publication of CCPR (ALINORM), 03/24A, Appendix VI, March 31,2003, Rotterdam, The Netherlands.
- Metabolites are included in the expressions where applicable.

Appendix H

Distribution of Residues by Pesticide in Wheat Flour

Appendix H shows residue detections for all wheat flour compounds 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.

In 2003, PDP analyzed 606 wheat flour samples. A total of 270 samples (45 percent) were reported with residue detections, excluding the detections for triazole compounds that are reported in Appendix F. All residue detections were much lower than the established tolerances.

See Appendix E for definition of MRLs.

MRLs/EMRLs shown in this appendix are from the Codex Alimentarius: *Proc. of Codex Committee on Pesticide Residues*, 36th Session, April 19-24, 2004, New Delhi, India, and *Proc. of Codex Committee on Pesticide Residues*, 35th Session (ALINORM), March 31-April 5, 2003, Rotterdam, The Netherlands. Only Codex MRLs (CXLs) are listed.

The information herein is only intended to be an initial reference. Readers are reminded that international regulations and MRLs may change and that it is important that information obtained from this table be verified with knowledgeable parties in the market of interest prior to sale or shipment of exports.

APPENDIX H. DISTRIBUTION OF RESIDUES BY PESTICIDE IN WHEAT FLOUR

Pesticide	Pest. Type	Number of Samples	Samples with Detections	% of Samples w/ Detects	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
3-Hydroxycarbofuran	IM	594				0.006 ^	0.1	-
Acetochlor	H	559				0.003 ^	0.02	-
Allethrin	I	606				0.003 ^	2	-
Atrazine	H	606	1	0.2	0.005 ^	0.003 ^	0.25	-
Carbaryl	I	606				0.006 ^	3	0.2
Carbofuran	I	566				0.023 ^	0.1	-
Carboxin	F	467				0.003 ^	0.2	-
Carfentrazone ethyl	H	606				0.003 ^	0.10	-
Chlorpyrifos	I	606				0.006 ^	0.5	0.1
Chlorpyrifos methyl	I	606	95	15.7	0.032 - 0.18	0.019 ^	6.0	2
Cyanazine	H	546				0.005 ^	0.1	-
Cyfluthrin	I	598	2	0.3	0.038 - 0.077	0.023 ^	4.0	-
Cyhalothrin, Lambda	I	530				0.003 ^	0.05	-
DDE p,p'	IM	606	1	0.2	0.005 ^	0.003 ^	0.5	-
Diazinon	I	606	2	0.3	0.005 ^	0.003 ^	0.05	-
Diazinon oxygen analog	IM	606				0.006 ^	0.05	-
Diclofop methyl	H	586				0.003 ^	0.1	-
Dieldrin	I	606				0.006 ^	0.02	-
Dimethoate	I	606				0.028 ^	0.04	-
Dimethomorph	F	570				0.019 ^	0.05	-
Disulfoton	I	567				0.003 ^	0.3	-
Disulfoton sulfone	IM	606				0.013 ^	0.3	-
Endosulfan I	I	606				0.006 ^	0.1	-
Endosulfan II	IM	606				0.006 ^	0.1	-
Endosulfan sulfate	IM	606				0.003 ^	0.1	-
Etridiazole	F	509				0.010 ^	0.05	-
Fenitrothion	I	606				0.006 ^	NT	2
Fludioxonil	F	242				0.009 ^	0.02	-
Flufenacet	H	599				0.006 ^	1	-
Fluridone	H	541				0.003 ^	0.1	-
Heptachlor epoxide	IM	606				0.003 ^	NT	-
Imazalil	F	606				0.028 ^	0.05	-
Lindane - BHC gamma	I	606				0.006 ^	0.1	-

Pesticide	Pest. Type	Number of Samples	Samples with Detections	% of Samples w/ Detects	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm	Codex MRL/EMRL, ppm
Linuron	H	586				0.025 ^	0.25	-
Malathion	I	606	229	37.8	0.005 - 0.33	0.003 ^	8	2
Malathion oxygen analog	IM	606				0.005 ^	8	-
Metalaxyl	F	606				0.006 ^	1.0	-
Methoprene	R	506	1	0.2	0.054 ^	0.013 ^	5.0	2
Methoxychlor p,p' (V-8)	I	606	8	1.3	0.008 ^	0.005 ^	NT	-
Metolachlor	H	606				0.003 ^	0.1	-
Metribuzin	H	606				0.006 ^	0.75	-
Omethoate	IM	586				0.003 ^	0.04	-
Parathion ethyl	I	606				0.005 ^	1.0	-
Parathion oxygen analog	IM	606				0.019 ^	1.0	-
Phorate	I	426				0.008 ^	0.05	-
Phorate sulfone	IM	563				0.005 ^	0.05	-
Piperonyl butoxide	I	606	8	1.3	0.010 - 0.12	0.006 ^	20	-
Pirimiphos methyl (V-6)	I	606	6	1	0.005 - 0.013	0.003 ^	NT	2
Propanil	H	606				0.005 ^	0.2	-
TCMTB	F	606				0.025 ^	0.1	-
Thiabendazole	F	595	1	0.2	0.022 ^	0.013 ^	1.0	-
Thiamethoxam	I	566				0.003 ^	0.02	-
Tri Allate	H	605				0.006 ^	0.05	-
Trifluralin	H	606	5	0.8	0.010 ^	0.006 ^	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.

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

Pesticide Types:

F = Fungicide

H = Herbicide

I = Insecticide, IM = Insecticide Metabolite

R = Insect Growth Regulator

- MRLs are for pesticides analyzed in PDP calendar year 2003 samples.
- MRLs are obtained from Codex publication of Codex Committee on Pesticide Residues (CCPR), 36th session, April 19-24, 2004, New Dehli, India.
- List excludes MRLs proposed for revocation according to Codex publication of CCPR (ALINORM), 03/24A, Appendix VI, March 31,2003, Rotterdam, The Netherlands.
- Metabolites are included in the expressions where applicable.

Appendix I

Distribution of Residues by Pesticide in Butter

Appendix I shows residue detections for all butter compounds 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.

In 2003, PDP analyzed 732 butter samples. A total of 725 samples (99 percent) were reported with residue detections, all of which were much lower than the established tolerances.

See Appendix E for definition of MRLs.

MRLs/EMRLs shown in this appendix are from the Codex Alimentarius: *Proc. of Codex Committee on Pesticide Residues*, 36th Session, April 19-24, 2004, New Delhi, India, and *Proc. of Codex Committee on Pesticide Residues*, 35th Session (ALINORM), March 31-April 5, 2003, Rotterdam, The Netherlands. Only Codex MRLs (CXLs) are listed.

The information herein is only intended to be an initial reference. Readers are reminded that international regulations and MRLs may change and that it is important that information obtained from this table be verified with knowledgeable parties in the market of interest prior to sale or shipment of exports.

APPENDIX I. DISTRIBUTION OF RESIDUES BY PESTICIDE IN BUTTER

Pesticide	Pest. Type	Number of Samples	Samples with Detections	% of Samples w/ Detects	Range of Values Detected, ppb	Range of LODs, ppb	EPA Tolerance Level, ppb	Codex MRL/ERL ppm
3-Hydroxycarbofuran	IM	732				5.3 ^	NT	0.05
Acephate	I	732				0.70 ^	20	0.1
Alachlor	H	732				10.1 ^	NT	-
Aldicarb	I	732				4.1 ^	NT	0.01
Aldicarb sulfone	IM	732				3.8 ^	NT	0.01
Aldicarb sulfoxide	IM	732				4.4 ^	NT	0.01
Allethrin	I	732				47.1 ^	NT	-
Atrazine	H	732				3.4 ^	NT	-
Bifenthrin	I	732	63	8.6	3.0 ^	1.8 ^	1000	0.05
Bromuconazole 46	FM	732				3.5 ^	NT	-
Buprofezin	I	732				4.5 ^	NT	-
Carbaryl	I	732				3.4 ^	NT	0.1
Carbofuran	I	732				7.6 ^	NT	0.05
Carboxin	FM	732				3.6 ^	NT	-
Chlorfenapyr	I	732				0.60 ^	NT	-
Chlorpropham	H	732				4.1 ^	NT	-
Chlorpyrifos	I	732	1	0.1	2.7 ^	1.6 ^	250	0.02
Chlorpyrifos methyl	I	732				1.4 ^	1250	0.01
Chlorpyrifos methyl O-analog	IM	732				5.1 ^	1250	-
Coumaphos	I	732				1.8 ^	500	-
Coumaphos oxygen analog	IM	732				4.8 ^	500	-
Cyfluthrin	I	732	104	14.2	5.2 - 54.7	3.1 ^	30000	0.01
Cyhalothrin, Total - Cyhalothrin-Lambda + R157836 epimer	I	731	422	57.7	9.2 - 24.3	5.5 ^	5000	-
Cypermethrin	I	732	1	0.1	16 ^	4.6 ^	2500	0.05
Cyphenothrin	I	732				7.6 ^	NT	-
Cyproconazole	F	732				3.1 ^	NT	-
DDE p,p'	IM	732	590	80.6	2.7 - 80.5	1.6 ^	1250	0.02
DEF - Tribufos	H	732				1.8 ^	NT	-
Deltamethrin - includes parent Tralomethrin	I	732				8.7 ^	50	0.02
Dichlorvos - DDVP	I	732				0.40 ^	NT	0.02
Dieldrin	I	732	401	54.8	2.2 - 5.6	1.3 ^	300	0.006

Pesticide	Pest. Type	Number of Samples	Samples with Detections	% of Samples w/ Detects	Range of Values Detected, ppb	Range of LODs, ppb	EPA Tolerance Level, ppb	Codex MRL/ERL ppm
Difenoconazole	F	732				1.4 ^	NT	-
Dimethoate	I	732				1.1 ^	NT	0.05
Diphenamid	H	732				0.60 ^	NT	-
Endosulfan I	I	732				0.60 ^	500	0.004
Endosulfan II	IM	732	9	1.2	1.2 - 12	0.70 ^	500	0.004
Endosulfan sulfate	IM	732	460	62.8	2.0 - 36.6	1.0 ^	500	0.004
Epoxiconazole	F	732				0.30 ^	NT	-
Esfenvalerate+Fenvalerate Total	I	732				2.7 ^	7000	0.1
Ethion	I	732				1.0 ^	500	-
Ethion di oxon	IM	732				3.9 ^	500	-
Ethion mono oxon	IM	732				1.3 ^	500	-
Etofenprox	I	732				7.8 ^	NT	-
Etridiazole	F	732				2.1 ^	NT	-
Fenamiphos	I	732				3.9 ^	NT	-
Fenamiphos sulfone	IM	732				4.8 ^	NT	-
Fenamiphos sulfoxide	IM	732				8.1 ^	NT	-
Fenarimol	F	732				0.70 ^	NT	-
Fenoxaprop ethyl	H	732				1.3 ^	NT	-
Fenpropathrin	I	732				2.5 ^	2000	0.1
Fenthion	I	732				1.4 ^	NT	-
Fenthion sulfone	IM	732				2.6 ^	NT	-
Fipronil	I	732				0.80 ^	1250	-
Fluroxypyr 1-methylheptyl ester	H	731				0.50 ^	NT	-
Flutolanil	F	732				2.3 ^	NT	-
Fluvalinate	I	732				1.9 ^	NT	-
Heptachlor epoxide	IM	732				2.2 ^	NT	0.006
Hexaconazole	F	732				0.30 ^	NT	-
Iprodione	F	732				4.4 ^	NT	-
Isoxaflutole	H	732				4.1 ^	NT	-
Malathion	I	732				1.9 ^	500	-
Malathion oxygen analog	IM	732				2.0 ^	500	-
Metalaxyl (V-1)	F	732	1	0.1	15.5 ^	9.3 ^	NT	-
Methamidophos	IM	732				0.70 ^	20	0.01
Methidathion	I	732				1.9 ^	NT	0.001

Pesticide	Pest. Type	Number of Samples	Samples with Detections	% of Samples w/ Detects	Range of Values Detected, ppb	Range of LODs, ppb	EPA Tolerance Level, ppb	Codex MRL/ERL ppm
Methoprene	R	732				11.7 ^	NT	0.05
Methoxychlor p,p'	I	732				0.30 ^	NT	-
Metolachlor	H	732				4.0 ^	NT	-
Metribuzin	H	732				0.30 ^	NT	-
MGK-264	I	732				1.8 ^	300	-
MGK-326 - dipropyl isocinchomeronate	I	732				5.5 ^	NT	-
Myclobutanil	F	732				7.9 ^	NT	0.01
Norflurazon	H	732				5.4 ^	NT	-
Omethoate	IM	732				1.9 ^	NT	-
Oxadiazon	H	732				9.7 ^	NT	-
Oxyfluorfen	H	732				1.1 ^	NT	-
Permethrin Total	I	732	20	2.7	16.5 ^	9.9 ^	6250	0.1
Phenothrin	I	732				9.0 ^	NT	-
Phorate	I	732				1.0 ^	NT	0.05
Phorate oxygen analog sulfone	IM	732				1.0 ^	NT	0.05
Phorate sulfone	IM	732				1.9 ^	NT	0.05
Phorate sulfoxide	IM	732				10.5 ^	NT	0.05
Pirimiphos methyl	I	732				1.4 ^	NT	0.05
Prallethrin	I	732				15.1 ^	1000	-
Profenofos	I	732				2.3 ^	NT	0.01
Pronamide	H	731				1.6 ^	NT	-
Propachlor	H	732				2.1 ^	NT	-
Propanil	H	732				2.1 ^	NT	-
Propargite	I	732				32.7 ^	2000	0.1
Propham	H	732				3.5 ^	NT	-
Propiconazole	F	732				4.5 ^	NT	0.01
Resmethrin	I	732				21.7 ^	3000	-
Simazine	H	732				2.1 ^	NT	-
Tebuconazole	F	732				1.0 ^	NT	0.01
Tefluthrin	I	732				0.60 ^	NT	-
Terbacil	H	732				3.3 ^	NT	-
Tetrachlorvinphos	I	732				2.0 ^	500	-
Tetraconazole	F	732				0.60 ^	NT	-

Pesticide	Pest. Type	Number of Samples	Samples with Detections	% of Samples w/ Detects	Range of Values Detected, ppb	Range of LODs, ppb	EPA Tolerance Level, ppb	Codex MRL/ERL ppm
Tetradifon	I	732				0.70 ^	400	-
Tetramethrin	I	732				2.5 ^	NT	-
Thiabendazole	F	732				8.5 ^	NT	0.2
Thiobencarb	H	732				2.5 ^	NT	-
Triadimefon	F	732				2.2 ^	NT	0.05
Trifloxystrobin	F	732				0.80 ^	NT	-
Triflumizole	F	732				4.1 ^	NT	-
Triticonazole	F	732				6.1 ^	NT	-
Vinclozolin	F	732				2.4 ^	NT	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.

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

Pesticide Types:

F = Fungicide, FM = Fungicide Metabolite

H = Herbicide

I = Insecticide, IM = Insecticide Metabolite

R = Insect Growth Regulator

- MRLs are for pesticides analyzed in PDP calendar year 2003 samples.
- MRLs are obtained from Codex publication of Codex Committee on Pesticide Residues (CCPR), 36th session, April 19-24, 2004, New Dehli, India.
- List excludes MRLs proposed for revocation according to Codex publication of CCPR (ALINORM), 03/24A, Appendix VI, March 31,2003, Rotterdam, The Netherlands.
- Metabolites are included in the expressions where applicable.

Appendix J

Distribution of Residues by Pesticide in Drinking Water

Appendix J shows residue detections for all drinking water compounds tested, including range of values detected and range of Limits of Detection (LODs). The Environmental Protection Agency (EPA) National Primary Drinking Water Regulation (NPDWR) Maximum Contaminant Levels (MCLs), Health Advisory (HA) values, and Freshwater Aquatic Organism (FAOs) Criteria are also shown. Units for LODs, MCLs, HAs, and FAOs are shown in parts per trillion.

The MCLs are legally enforceable standards that apply to public water systems. The HAs are an estimate of acceptable drinking water levels for a chemical substance based on health effects information. The values published are for lifetime HA, which is the concentration of a chemical in drinking water that is not expected to cause any adverse noncarcinogenic effects for a lifetime of exposure. FAO criteria are set by EPA and are the concentration of a chemical in water at or below which aquatic life are protected from acute and chronic adverse effects of the chemical. Health Advisories and FAO criteria are not legally enforceable Federal standards, but serve as technical guidance to assist Federal, State, and local officials.

In 2003, PDP analyzed 794 drinking water samples. PDP detected 33 different pesticide residues in 429 samples; most of the detections were herbicides. None of the samples exceeded EPA MCLs for any pesticide detected. In fact, the majority of pesticides included in the PDP screens were not detected.

APPENDIX J. DISTRIBUTION OF RESIDUES BY PESTICIDE IN DRINKING WATER

Pesticide	Pest. Type	Number of Samples	Samples with Detects	% of Samples with Detects	Range of Values Detected, ppt	Range of LODs, ppt	EPA MCL, ppt	EPA HA*, ppt	EPA FAO, ppt
1 Naphthol	IM	10				1500 ^			
2 4 5 T	H	321				1.8 - 650	50,000		
2,4-D	H	321	78	24.3	6.0 - 24	3.6 - 1700	70,000	70,000	
2,4-DB	H	40				756 - 2300			
3,5-Dichloroaniline	FM	109				25 ^			
3-Hydroxycarbofuran	IM	572				6.0 - 68			
Acetochlor	H	522	16	3.1	17 - 145	10 - 49.5			
Acetochlor ethanesulfonic acid	HM	316	12	3.8	20 ^	12 - 1650			
Acetochlor oxanilic acid	HM	518	9	1.7	20 ^	12 - 100			
Acifluorfen	H	40				119 - 750			
Alachlor	H	685	5	0.7	16.3 ^	5.0 - 11	2000		
Alachlor ethanesulfonic acid	HM	409	76	18.6	20 - 1384	12 - 823			
Alachlor oxanilic acid	HM	514	26	5.1	20 - 356	12 - 100			
Aldrin	I	237				5.0 ^			3000
Atrazine	H	782	326	41.7	3.8 - 2679	2.3 - 5.0	3000		
Azinphos methyl	I	794				12 - 253			
Barban	H	237				5.0 ^			
Bendiocarb	I	545				3.0 - 18.8			
Benfluralin	H	607				2.0 - 13			
Benomyl	F	281				1.8 - 3.6			
Bensulfuron methyl	H	300				1.2 - 3.8			
Bentazon	H	321	30	9.3	2.0 - 8.4	1.2 - 210		200,000	
BHC alpha	I	237				2.0 ^			
Bifenthrin	I	509				5.0 - 13			
Bromacil	H	270				9.6 ^		90,000	
Bromoxynil	H	310				6.0 - 56			
Bromuconazole	F	179				10 ^			
Butachlor	H	273				5.3 ^			
Butylate	H	237				10 ^		400,000	
Captan	F	509				100 ^			
Carbaryl	I	553	3	0.5	5.0 - 18	3.0 - 12		700,000	
Carbofuran	I	583	8	1.4	5.0 - 20	0.60 - 16	40,000	40,000	
Carbophenothion	I	794				5.3 - 32			
Chloramben	H	280				60 - 1800		100,000	
Chlordane cis	I	618				2.3 - 10	2000		2400
Chlordane trans	I	794				2.3 - 10	2000		2400

Pesticide	Pest. Type	Number of Samples	Samples with Detects	% of Samples with Detects	Range of Values Detected, ppt	Range of LODs, ppt	EPA MCL, ppt	EPA HA*, ppt	EPA FAO, ppt
Chlorfenvinphos beta	I	77				4.1 ^			
Chlorfenvinphos total	I	509				12 - 18			
Chlorimuron ethyl	H	30				3.3 ^			
Chlorothalonil	F	237				50 ^			
Chlorpyrifos	I	794				6.0 - 27		20,000	83
Chlorpyrifos methyl	I	794				9.0 - 22			
Chlorpyrifos oxygen analog	IM	509				12 - 59			
Clopyralid	H	292				10.8 - 1400			
Coumaphos	I	794				3.8 - 121			
Coumaphos oxygen analog	IM	509				21 - 1400			
Cyanazine	H	522				24.8 - 25		1000	
Cycloate	H	195				6.0 ^			
Cyfluthrin	I	272				100 ^			
Cypermethrin	I	509				90 - 100			
Cyproconazole	F	179				15 ^			
Dalapon	H	10				2200 ^	200,000	200,000	
DCPA	H	794	4	0.5	1.3 ^	0.80 - 5.0		70,000	
DCPA monoacid	H	281				222 - 740			
DDD o,p'	IM	285				3.8 ^			
DDD p,p'	IM	262				3.8 ^			
DDE o,p'	IM	237				4.0 ^			
DDE p,p'	IM	783				2.5 - 10			
DDT o,p'	IM	262				3.8 ^			
DDT p,p'	IM	273				3.8 - 7.5			
DEF (Tribufos)	H	794				3.8 - 18			
Demeton-S sulfone	IM	3	3	100	20 ^	12 ^			
Desethyl Atrazine	HM	522	181	34.7	26 - 928	24.8 - 25			
Desisopropyl atrazine	HM	510	102	20	16.3 - 59	9.8 - 50			
Diazinon	I	794	1	0.1	133 ^	6.0 - 14		600	
Diazinon oxygen analog	IM	794	4	0.5	15 ^	6.0 - 70			
Dicamba	H	40				1200 - 1350		200,000	
Dichlobenil	H	499	7	1.4	11.2 ^	6.7 - 150			
Dichlorprop	H	281				4.2 - 6.0			
Dichlorvos (DDVP)	I	696				6.0 - 22.5			
Dicloran	F	273				7.5 ^			
Dicofol p,p'	I	782				5.0 - 25			
Dicrotophos	I	509				9.0 - 180			
Dieldrin	I	771				5.0 - 15		2000	240

Pesticide	Pest. Type	Number of Samples	Samples with Detects	% of Samples with Detects	Range of Values Detected, ppt	Range of LODs, ppt	EPA MCL, ppt	EPA HA*, ppt	EPA FAO, ppt
Difenoconazole	F	179				10 ^			
Dimethenamid/Dimethenamid P	H	128				5.0 ^			
Dimethoate	I	793				5.3 - 63			
Dinoseb	H	93	2	2.2	1.0 ^	0.60 - 500	7000	7000	
Diphenamid	H	394				24 - 25		200,000	
Disulfoton	I	794				6.0 - 150		300	
Disulfoton sulfone	IM	557				3.8 - 9.0			
Diuron	H	542	4	0.7	50 - 267	4.8 - 30		10,000	
Endosulfan I	I	674				5.0 - 22.5			220
Endosulfan II	IM	794				12 - 20			220
Endosulfan sulfate	IM	666				10 - 30			
Endrin	I	794				22 - 52.5	2000	2000	86
Epoxiconazole	F	179				10 ^			
EPTC	H	346				2.5 - 117.8			
Esfenvalerate	I	509				20 - 50			
Ethalfluralin	H	794				10 - 60			
Ethion	I	794				2.3 - 10			
Ethion di oxon	IM	237				5.3 - 53			
Ethion mono oxon	IM	794				3.8 - 30			
Ethoprop	I	794				3.0 - 10			
Fenamiphos	I	794				3.8 - 172		2000	
Fenamiphos sulfone	IM	509				15 - 384			
Fenarimol	F	285				37.5 ^			
Fenbuconazole	F	179				20 ^			
Fenitrothion	I	794				3.8 - 28			
Fenitrothion oxygen analog	IM	509				12 - 83			
Fenpropathrin	I	109				60 ^			
Fenthion	I	794				6.0 - 79			
Fenthion-O analog	IM	794				7.5 - 175			
Fenuron	H	583				2.6 - 20			
Fenvalerate	I	272				20 ^			
Fludioxonil	F	273				37.5 ^			
Flumetsulam	H	321	9	2.8	10 ^	6.0 - 200			
Fluometuron	H	518				1.2 - 10.5		90,000	
Fonofos	I	794				3.8 - 30		10,000	
Fonofos oxygen analog	IM	77				2.3 ^			
Heptachlor	I	237				5.0 ^	400		520
Heptachlor epoxide	IM	674				5.0 - 15	200		520

Pesticide	Pest. Type	Number of Samples	Samples with Detects	% of Samples with Detects	Range of Values Detected, ppt	Range of LODs, ppt	EPA MCL, ppt	EPA HA*, ppt	EPA FAO, ppt
Hexachlorobenzene (HCB)	O	237				10 ^	1000		
Hexaconazole	F	179				15 ^			
Imazalil	F	237				35 - 604			
Imazameth	H	272				10 ^			
Imazamethabenz methyl	H	583				0.40 - 10			
Imazamox	H	542				2.4 - 15			
Imazapic	H	270				2.4 ^			
Imazapyr	H	553	4	0.7	1.5 ^	0.90 - 15			
Imazaquin	H	574				2.4 - 20			
Imazethapyr	H	583				2.4 - 10			
Imidacloprid	I	583	2	0.3	2.5 ^	1.5 - 39			
Iprodione	F	382				30 - 100			
Isofenphos	I	794				4.5 - 18			
Isofenphos oxygen analog	IM	237				36 ^			
Lactofen	H	109				50 ^			
Lindane (BHC gamma)	I	522				10 - 11.3	200	200	980
Linuron	H	456				15 - 139			
Malathion	I	794	1	0.1	10 ^	6.0 - 22		100,000	
Malathion oxygen analog	IM	480				6.0 - 9.0			
MCPA	H	321				7.2 - 220		4000	
MCPB	H	321				21 - 228			
Mecoprop (MCPP)	H	30				78 ^			
Metalaxyl	F	510				22.5 - 25			
Methidathion	I	794				5.3 - 28			
Methidathion oxygen analog	IM	794				12 - 428			
Methiocarb	I	279				15 - 144			
Methomyl	I	542				1.8 - 23		200,000	
Methoxychlor olefin	IM	273				3.8 ^	40000 [a]	40,000	
Methoxychlor p,p'	I	272				10 ^	40000 [a]	40,000	
Methoxychlor Total	I	522				7.5 - 40	40000 [a]	40,000	
Metolachlor	H	782	322	41.2	5.0 - 276	3.0 - 5.0		100,000	
Metolachlor ethanesulfonic acid	HM	518	217	41.9	20 - 2065	12 - 150			
Metolachlor oxanilic acid	HM	518	190	36.7	20 - 619	12 - 100			
Metribuzin	H	782				25 - 45		200,000	
Metsulfuron methyl	H	204				8.4 ^			
Mevinphos E	I	283				2.6 - 3.4			
Mevinphos Total	I	509				9.0 - 42			
Molinate	H	510				9.8 - 12			

Pesticide	Pest. Type	Number of Samples	Samples with Detects	% of Samples with Detects	Range of Values Detected, ppt	Range of LODs, ppt	EPA MCL, ppt	EPA HA*, ppt	EPA FAO, ppt
Monuron	H	692				4.5 - 53			
Myclobutanil	F	782				5.0 - 20			
N-(3-hydroxy)propyl EPTC	HM	109				25 ^			
Napropamide	H	794				24 - 50			
Neburon	H	582				1.2 - 1300			
Niclosamide	O	10				1000 ^			
Nicosulfuron	H	281				4.8 - 16			
Norflurazon	H	303				18.8 - 23			
Norflurazon desmethyl	HM	315				37.5 - 55			
Oryzalin	H	40				57 - 350			
Oxadiazon	H	510				15 ^			
Oxadixyl	F	285				48.8 ^			
Oxamyl	I	542				6.0 - 12	200,000	200,000	
Oxychlordane	IM	794	2	0.3	7.0 ^	4.0 - 20			
Oxydemeton methyl	I	237				580 ^			
Oxydemeton methyl sulfone	IM	272				30 ^			
Oxyfluorfen	H	794				11.3 - 25			
Parathion ethyl	I	557				6.0 - 7.5			
Parathion methyl	I	557				4.5 - 6.0			
Parathion methyl oxygen analog	IM	794				9.0 - 130			
Parathion oxygen analog	IM	717				7.5 - 63			
Pebulate	H	345				7.5 - 25			
Pendimethalin	H	794	1	0.1	8.0 ^	4.5 - 20			
Pentachlorophenol	W	10				2200 ^			
Permethrin cis	I	509				8.0 - 25			
Permethrin trans	I	381				9.0 - 25			
Phenthoate	I	285				15 ^			
Phorate	I	794				6.0 - 121			
Phorate oxygen analog	IM	794				5.3 - 275			
Phorate sulfone	IM	794				6.0 - 36			
Phorate sulfoxide	IM	522				15 - 260			
Phosalone	I	794				4.5 - 33			
Phosalone oxygen analog	IM	509				15 - 303			
Phosmet	I	509				12 - 255			
Phosphamidon	I	794				10.5 - 197			
Picloram	H	321				30 - 5000	500,000	500,000	
Piperonyl butoxide	I	273				18.8 ^			
Pirimicarb	I	285				37.5 ^			

Pesticide	Pest. Type	Number of Samples	Samples with Detects	% of Samples with Detects	Range of Values Detected, ppt	Range of LODs, ppt	EPA MCL, ppt	EPA HA*, ppt	EPA FAO, ppt
Pirimiphos methyl	I	794				5.3 - 30			
Profenofos	I	794				2.3 - 9.0			
Prometon	H	773	42	5.4	2.5 - 5.7	1.5 - 50		100,000	
Prometryn	H	618				10 - 24			
Pronamide	H	545				13 - 22.5		50,000	
Propachlor	H	794				5.3 - 16		90,000	
Propanil	H	781	3	0.4	42 ^	24.8 - 25			
Propargite	I	794				90 - 180			
Propetamphos	I	794				3.0 - 16			
Propham	H	281				18 ^		100,000	
Propiconazole	F	303				37.5 - 55			
Propiconazole I	F	272				50 ^			
Propiconazole II	F	272				50 ^			
Propoxur	I	654				13 - 25			
Quintozene (PCNB)	F	285				11.3 ^			
RPA 406341 (triticonazole met.)	FM	179				10 ^			
S-(2-hydroxy)propyl EPTC	HM	237				125 ^			
Siduron	H	281				2.4 ^			
Simazine	H	794	139	17.5	6.3 - 128	3.8 - 15	4000	4000	
Sulfometuron methyl	H	30				1.1 ^			
Sulfotep	I	794				1.5 - 8.1			
Sulprofos	I	794				6.0 - 46			
Sulprofos oxygen analog	IM	509				12 - 98			
Tebuconazole	F	494				15 - 299			
Tebupirimfos	I	794				3.8 - 20			
Tebupirimfos oxygen analog	IM	794				4.5 - 32			
Tebuthiuron	H	583	28	4.8	1.0 ^	0.60 - 15		500,000	
Tecnazene	P	109				18.8 ^			
Tefluthrin	I	237				5.0 ^			
Terbacil	H	382				5.0 - 22.5		90,000	
Terbufos	I	509				6.0 - 100		900	
Terbufos sulfone	IM	794				4.5 - 18			
Terbufos-O analog	IM	794				3.0 - 93			
Tetrachlorvinphos	I	794				6.0 - 26			
Tetraconazole	F	179				10 ^			
Tetradifon	I	491				10 - 125			
Thiobencarb	H	557				10 - 24.8			
Tolclofos methyl	F	237				5.0 ^			

Pesticide	Pest. Type	Number of Samples	Samples with Detects	% of Samples with Detects	Range of Values Detected, ppt	Range of LODs, ppt	EPA MCL, ppt	EPA HA*, ppt	EPA FAO, ppt
Tralomethrin	I	237				300 ^			
Tri Allate	H	273				24.8 ^			
Triadimefon	F	782				5.0 - 50			
Triadimenol	F	179				25 ^			
Triclopyr	H	321				6.0 - 250			
Trifluralin	H	346				1.5 - 2.5		5000	
Triticonazole	F	179				10 ^			
Vinclozolin	F	617				5.0 - 6.0			

* = EPA Health Advisory values shown are for lifetime exposure.

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

[a] = Level shown is for combined concentration of parent compound and all fractions (including isomers, degradates, and metabolites).

Pesticide Types:

F = Fungicide, FM = Fungicide Metabolite

H = Herbicide, HM = Herbicide Metabolite

I = Insecticide, IM = Insecticide Metabolite

O = Molluscicide

P = Plant Growth Regulator

W = Wood Preservative

Appendix K

National Estimates for Concentration Percentiles vs. Tolerance

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

Appendix K shows 56 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 pears/thiabendazole pair, the 50th percentile, or median, is estimated to be 0.19 ppm. This means that PDP estimates that at least 50 percent of pears available to U.S. consumers had thiabendazole residues of 0.19 ppm or less, while at least 50 percent had residues of 0.19 ppm or more. Similarly, the 75th percentile (or the upper quartile) for this pair is estimated to be 0.45 ppm, which means that at least 75 percent of pears had thiabendazole residues of 0.45 ppm or less, while at least 25 percent had residues of 0.45 ppm or more. Finally, the 90th percentile (or the last decile) is estimated to be 0.76 ppm, meaning that at least 90 percent of all pears had thiabendazole residues of 0.76 ppm or less, while at least 10 percent had residues of 0.76 ppm or more.

Percent detections and percentiles for cantaloupe, cucumbers, mushrooms, peaches, pears, spinach, sweet bell peppers, sweet potatoes, and tomatoes were weighted based on marketing data.

APPENDIX K. NATIONAL ESTIMATES FOR CONCENTRATION PERCENTILES vs. TOLERANCE
(Pairs With Residue Detections in at Least 10 Percent of Samples [1])

	Commodity / Pesticide	% of Samples with Detections	Mean (ppm) [2] Lower	Mean (ppm) [2] Upper	Percentiles (ppm) 50th	Percentiles (ppm) 75th	Percentiles (ppm) 90th	Ratio of 90th Percentile to Tolerance
1	**Butter** (in parts per billion)							
	Cyfluthrin	14.2	1.101	3.761	*	*	5.72	< 0.001
	Cyhalothrin, Total	57.7	6.942	9.267	6.44	13.80	17.48	0.003
	DDE p,p'	80.6	13.901	14.212	11.60	22.00	30.40	0.024
	Dieldrin	54.8	1.576	2.163	1.54	3.30	4.18	0.014
	Endosulfan sulfate	62.8	2.506	2.878	2.20	3.80	5.70	0.011
2	**Cantaloupe (W) (October through December only)**							
	Endosulfan sulfate	36.9	0.008	0.012	*	0.010	0.024	0.012
	Methomyl	7.7	0.003	0.015	*	*	*	*
3	**Cucumbers (W)**							
	Endosulfan I	29.1	0.006	0.009	*	0.006	0.015	0.008
	Endosulfan II	19.4	0.003	0.008	*	*	0.015	0.008
	Endosulfan sulfate	43.6	0.011	0.014	*	0.019	0.032	0.016
	Metalaxyl	19.8	0.007	0.016	*	*	0.027	0.027
	Methamidophos	10.0	0.007	0.009	*	*	*	*
4	**Green Beans, Canned**							
	Acephate	18.3	0.003	0.006	*	*	0.010	0.003
	Bifenthrin	15.3	0.003	0.010	*	*	0.014	0.024
	Methamidophos	22.6	0.003	0.007	*	*	0.012	0.012
5	**Mushrooms (W)**							
	Diazinon	20.9	0.003	0.006	*	*	0.009	0.012
	Thiabendazole	43.2	0.182	0.192	*	0.190	0.590	0.015
6	**Peaches (W) (May through September only)**							
	Fenbuconazole	14.4	0.006	0.014	*	*	0.017	0.008
	Tebuconazole	13.8	0.004	0.012	*	*	0.017	0.017
7	**Peaches, Canned**							
	Carbaryl	17.8	0.012	0.020	*	*	0.032	0.003
8	**Pears (W) (October through December only)**							
	Azinphos methyl	24.2	0.020	0.028	*	*	0.063	0.042
	o-Phenylphenol	19.4	0.188	0.199	*	*	0.056	0.002
	Phosmet	22.7	0.022	0.028	*	*	0.070	0.007
	Thiabendazole	65.9	0.313	0.327	0.190	0.450	0.760	0.076
9	**Pear Juice**							
	Azinphos methyl	21.2	0.015	0.021	*	*	0.030	0.020
	o-Phenylphenol	22.7	0.082	0.090	*	*	0.061	0.002
	Phosmet	37.9	0.008	0.011	*	0.012	0.021	0.002
	Tebufenozide	21.2	0.009	0.011	*	*	0.043	0.029
	Thiabendazole	34.8	0.062	0.081	*	0.055	0.130	0.013

Commodity / Pesticide	% of Samples with Detections	Mean (ppm) [2] Lower	Mean (ppm) [2] Upper	Percentiles (ppm) 50th	Percentiles (ppm) 75th	Percentiles (ppm) 90th	Ratio of 90th Percentile to Tolerance
10 Spinach (W)							
Cypermethrin	15.4	0.066	0.091	*	*	0.170	0.017
DDE p,p'	24.3	0.005	0.010	*	*	0.022	0.044
Permethrin Total	50.6	0.841	0.855	0.034	0.890	2.700	0.135
11 Sweet Bell Peppers (W)							
Acephate	21.8	0.021	0.024	*	*	0.078	0.020
Bifenthrin	10.6	0.002	0.005	*	*	0.004	0.007
Chlorpyrifos	17.4	0.010	0.011	*	*	0.031	0.031
Dicofol p,p'	13.8	0.017	0.020	*	*	0.018	0.004
Endosulfan II	10.9	0.003	0.009	*	*	0.007	0.004
Imidacloprid	78.3	0.008	0.008	0.002	0.007	0.023	0.023
Metalaxyl	16.0	0.006	0.011	*	*	0.015	0.015
Methamidophos	31.3	0.014	0.014	*	0.006	0.038	0.038
Methomyl	15.8	0.007	0.008	*	*	0.010	0.005
Oxamyl	11.9	0.003	0.005	*	*	0.005	0.002
Permethrin cis	11.8	0.003	0.004	*	*	0.004	0.004
Permethrin trans	12.0	0.004	0.007	*	*	0.006	0.006
Tebufenozide	11.2	0.002	0.006	*	*	0.006	0.006
12 Sweet Peas, Frozen							
Dimethoate	16.9	0.003	0.007	*	*	0.012	0.006
13 Sweet Potatoes (W)							
Chlorpyrifos	16.1	0.001	0.003	*	*	0.003	0.060
Dicloran	47.3	0.203	0.206	*	0.250	0.640	0.064
14 Tomatoes (W)							
Endosulfan I	11.2	0.002	0.006	*	*	0.005	0.002
Endosulfan II	19.6	0.004	0.007	*	*	0.013	0.007
Endosulfan sulfate	10.8	0.002	0.007	*	*	0.007	0.004
Methamidophos	12.1	0.004	0.008	*	*	0.009	0.009
15 Wheat Flour (in parts per billion)							
Chlorpyrifos methyl	15.7	7.53	7.55	*	*	35.2	0.006
Malathion	37.8	7.71	7.71	*	9.5	20.0	0.003
Triazole acetic acid	99.3	27.76	27.76	27.0	33.0	40.0	NT
Triazole alanine	99.2	38.25	38.25	36.0	47.0	61.0	NT

KEY

[1] Includes some pairs with detections in less than 10 percent of the samples, but with estimated detections in over 10 percent of the population.

[2] 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.

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

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

NT No Tolerance established.

Appendix L

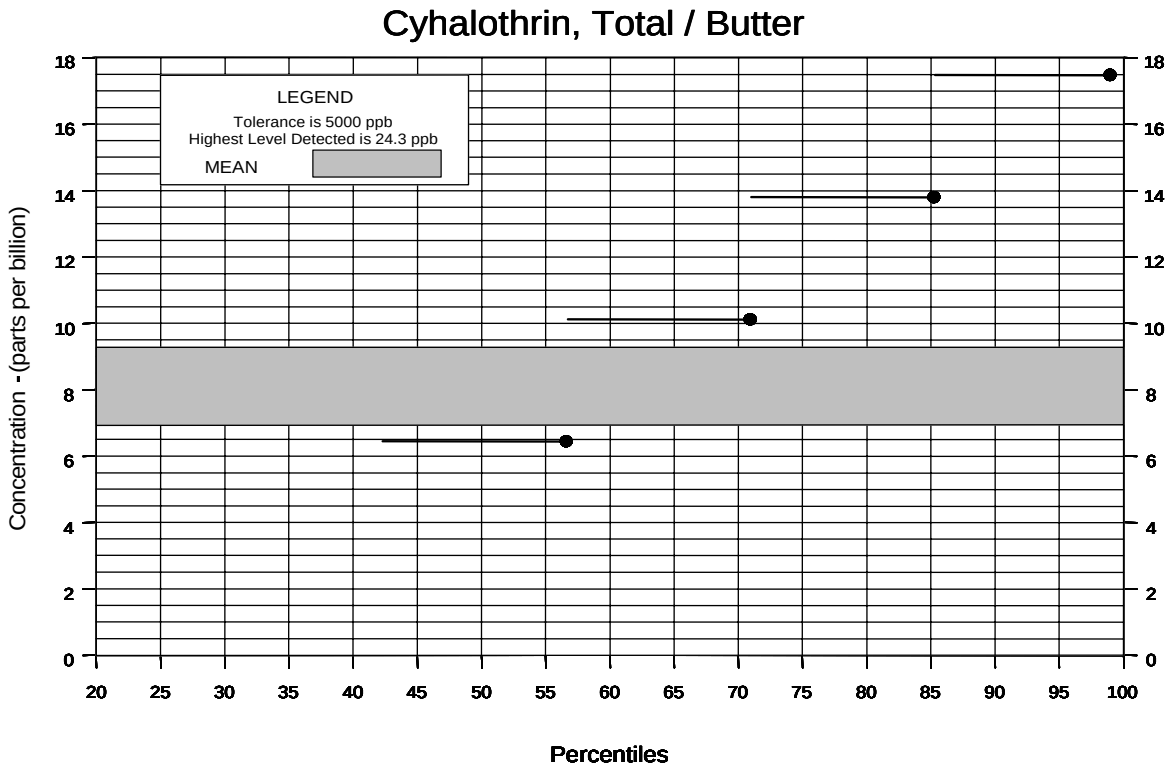
Cumulative Distributions of Residues for Selected Pesticide/Commodity Pairs

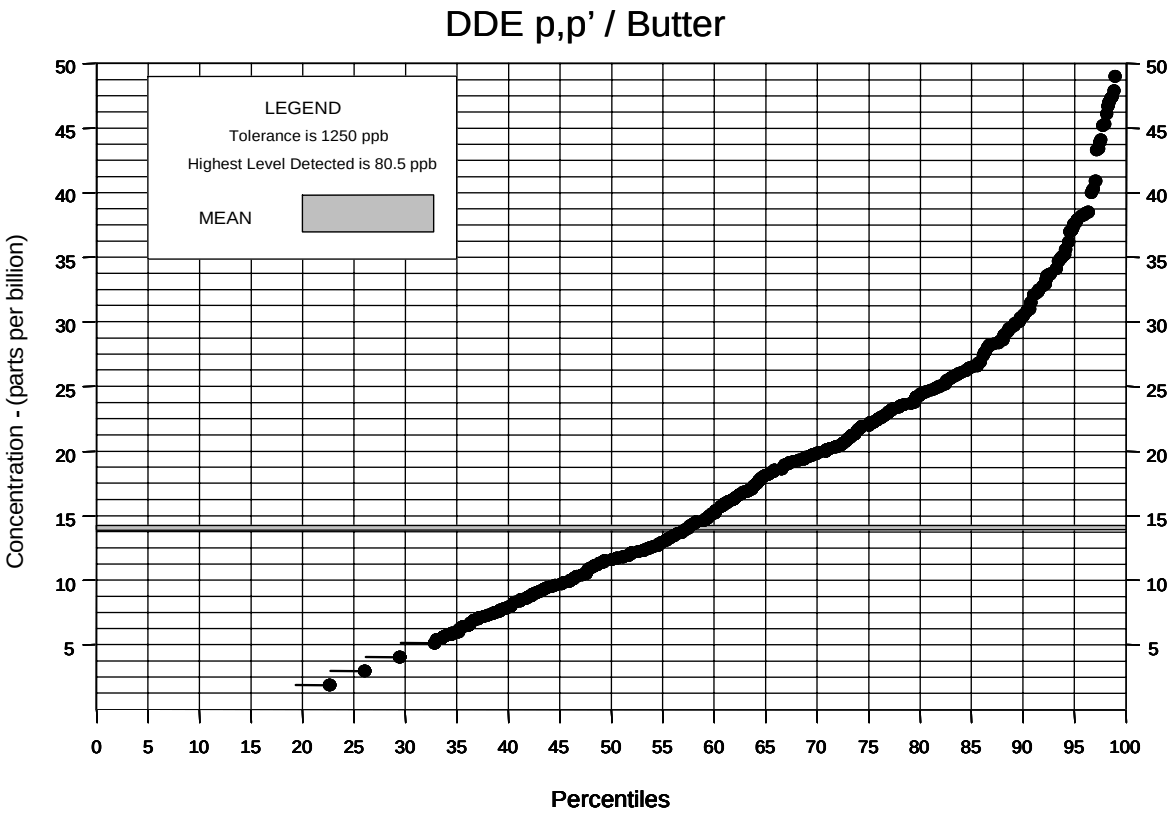
In Appendix L, the concentrations detected (in parts per million, except where otherwise noted) are plotted versus the calculated percentiles for the following 10 pesticide/commodity pairs:

Cyhalothrin, Total / Butter
DDE p,p' / Butter
Endosulfan sulfate / Cucumbers
Thiabendazole / Mushrooms
Thiabendazole / Pears
Imidacloprid / Sweet Bell Peppers
Dicloran / Sweet Potatoes
Endosulfan II / Tomatoes
Triazole acetic acid / Wheat Flour
Triazole alanine / Wheat Flour

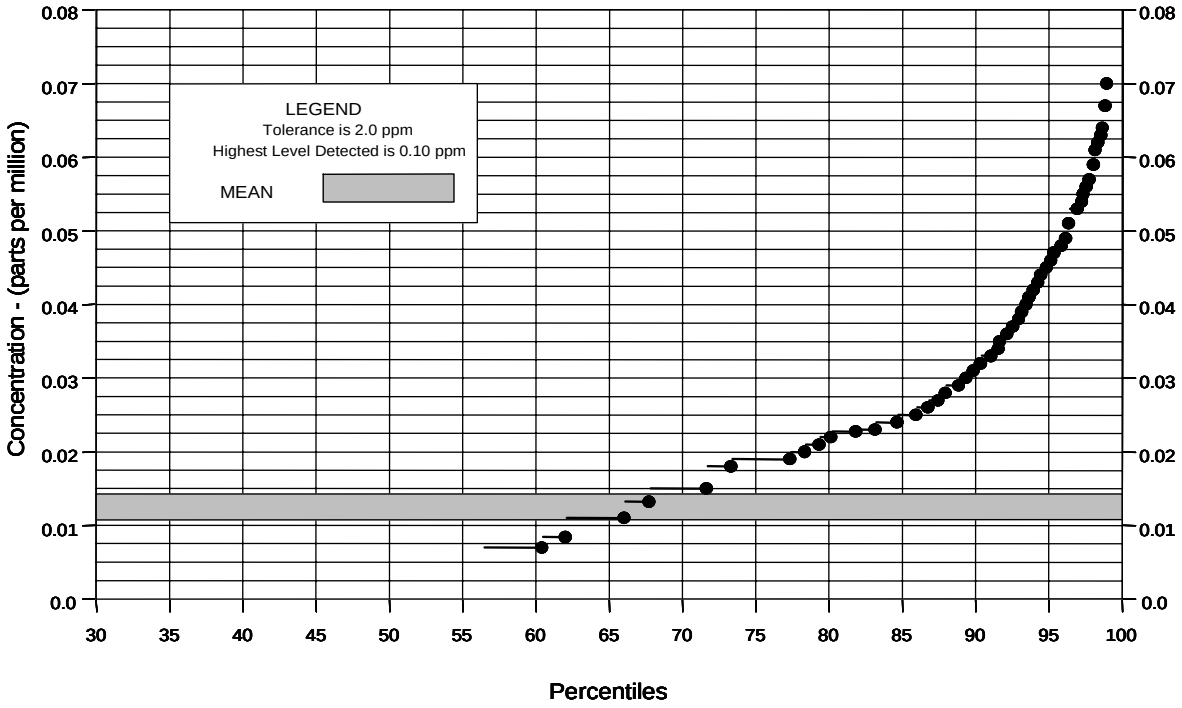
The distribution of residues for all of the PDP pesticide/commodity pairs has the same curved shape. The highest percentile graphed in the appendix is the 99th, which in each case is lower than the highest concentration detected in the sample (refer to the value shown in each graph's legend). Inclusion 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 sweet bell peppers available to U.S. consumers in 2003 had imidacloprid residue concentrations of 0.002 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 imidacloprid in sweet bell peppers, this is 22 percent. The shaded bar denotes the range of values estimated for the mean. For imidacloprid in sweet bell peppers, the mean range is approximately 0.008 ppm, corresponding to the 78th percentile.

Appendix L. Cumulative Distributions of Residues for Selected Pesticide/Commodity Pairs

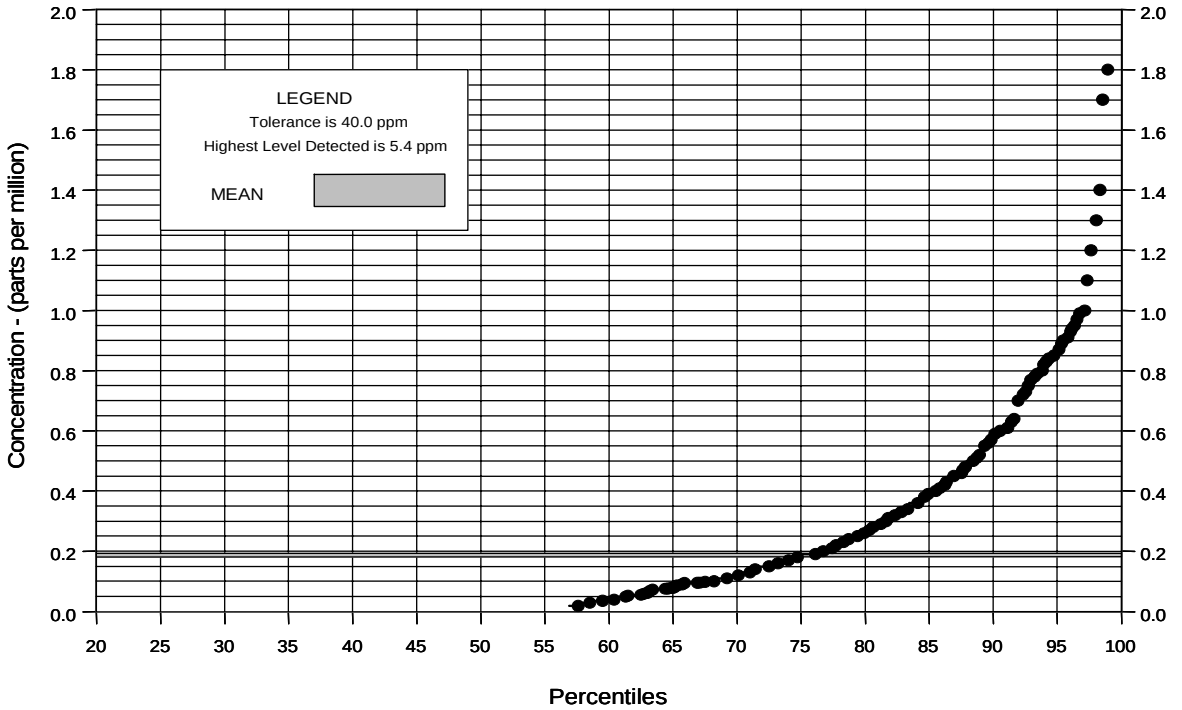




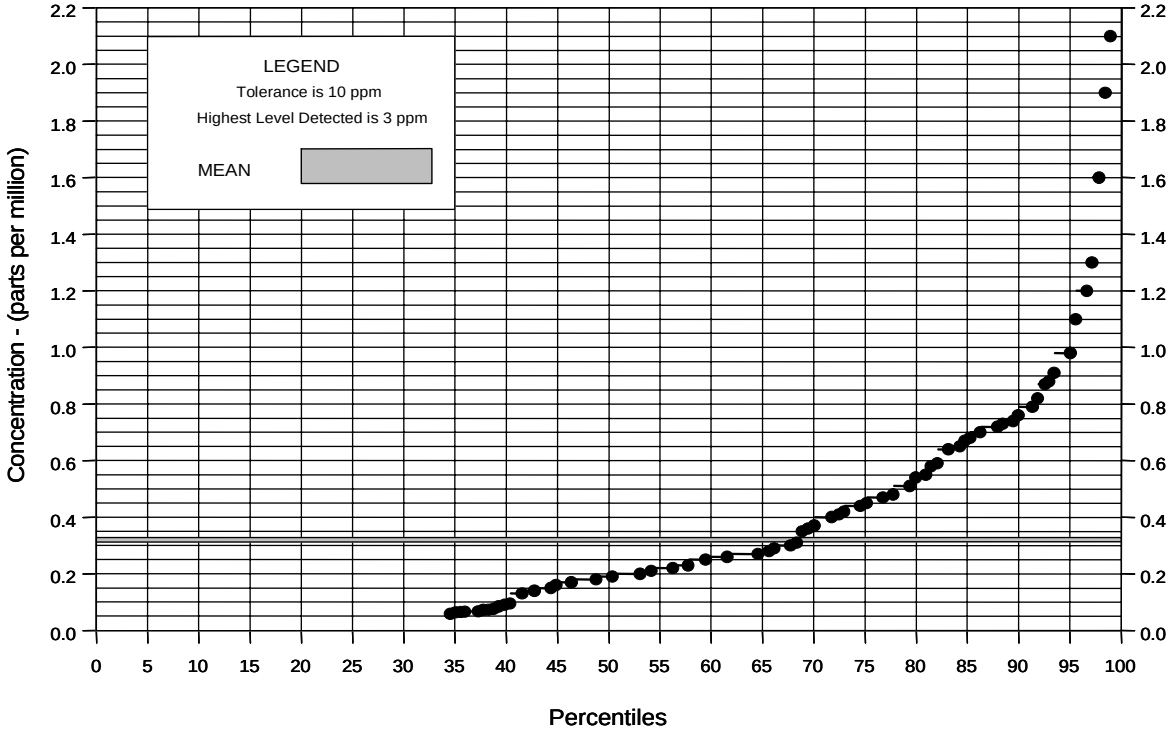
Endosulfan sulfate / Cucumbers



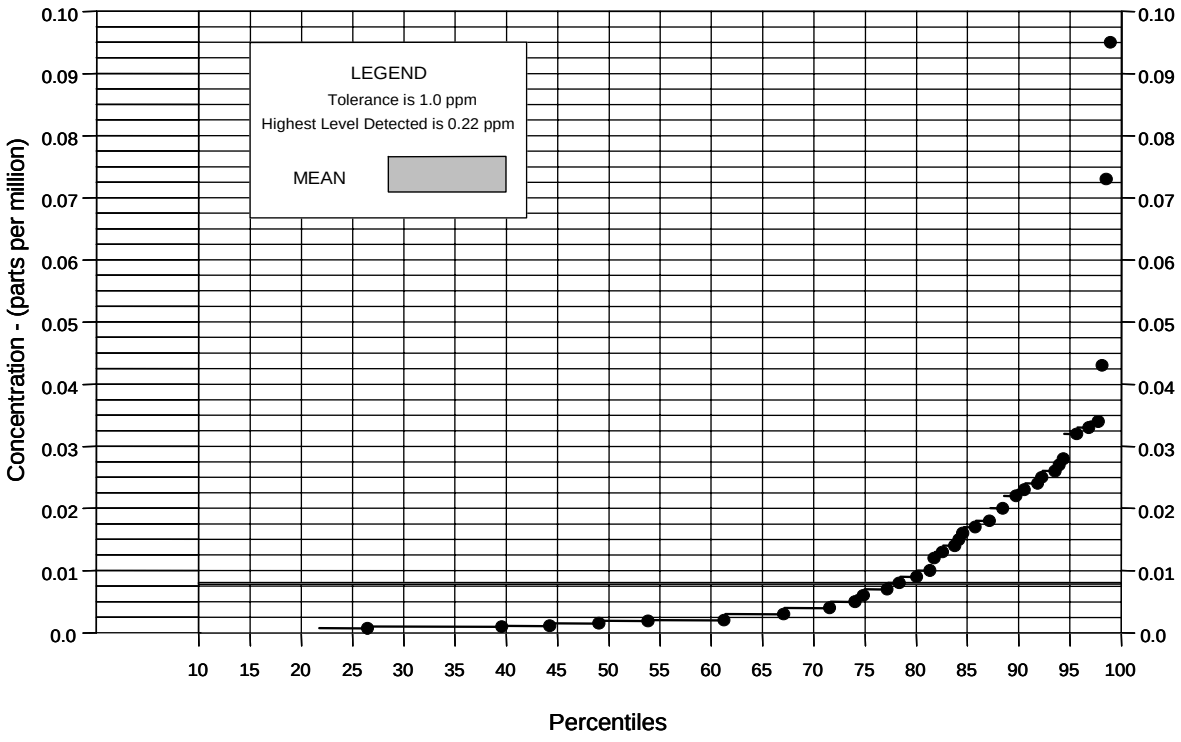
Thiabendazole / Mushrooms



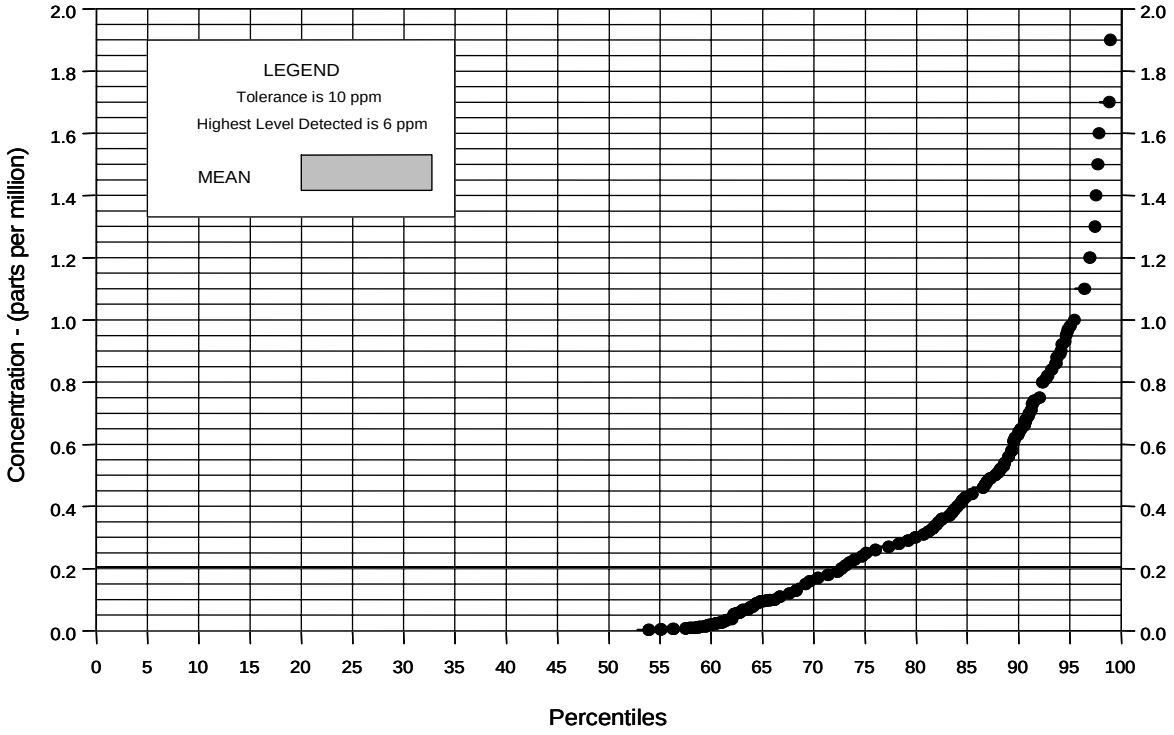
Thiabendazole / Pears



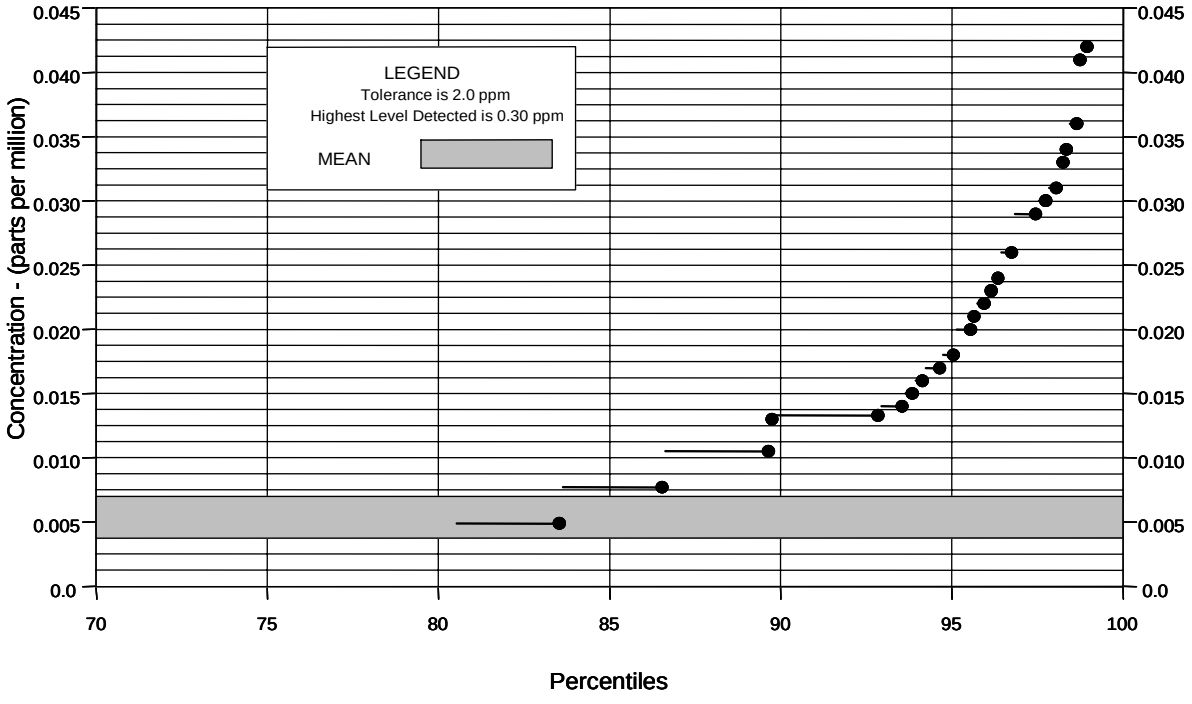
Imidacloprid / Sweet Bell Peppers



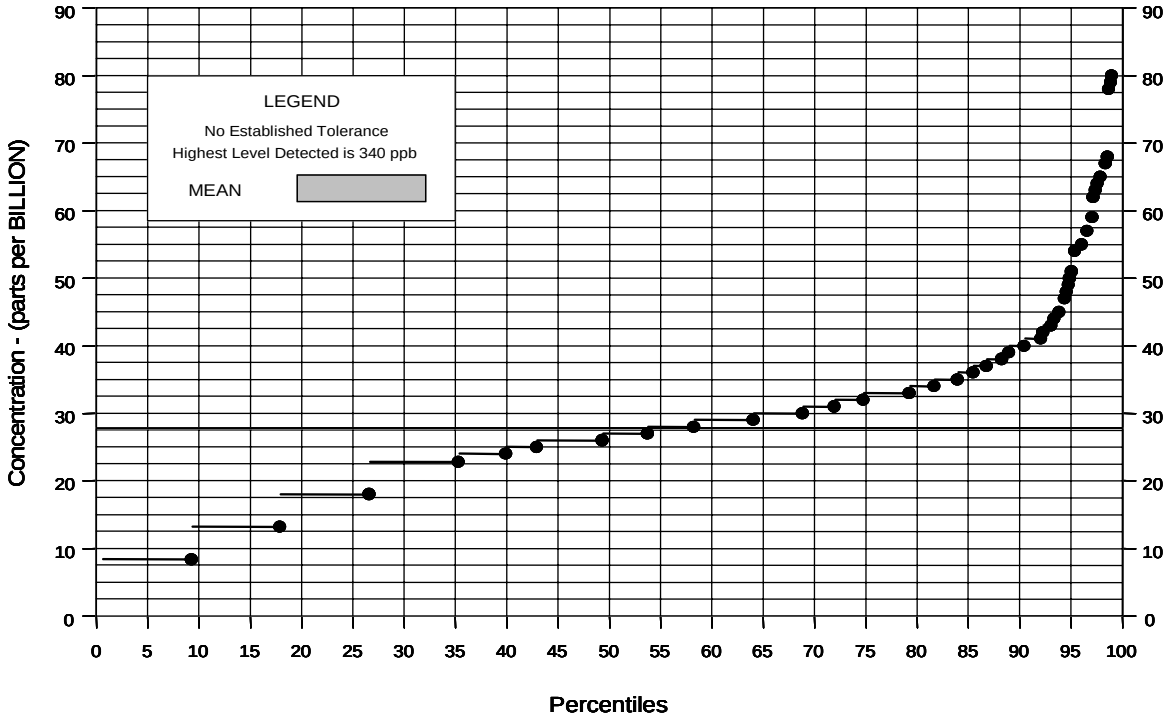
Dicloran / Sweet Potatoes



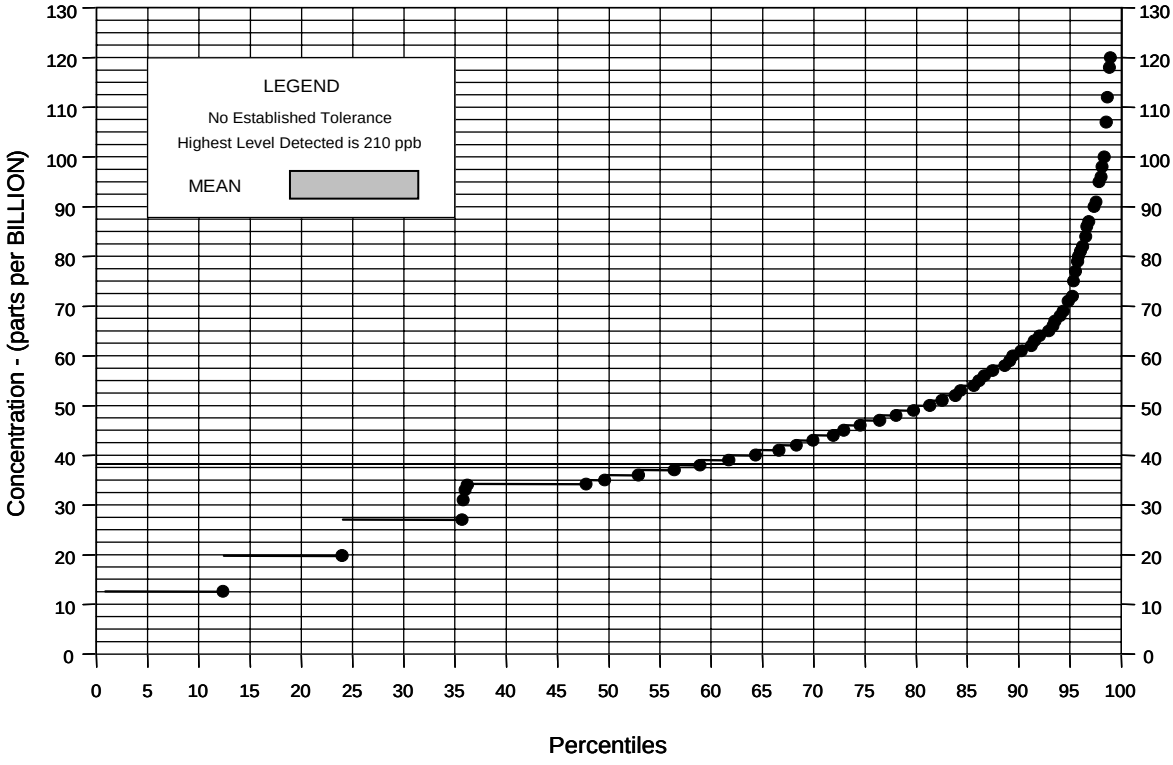
Endosulfan II / Tomatoes



Triazole acetic acid / Wheat Flour



Triazole alanine / Wheat Flour



Appendix M

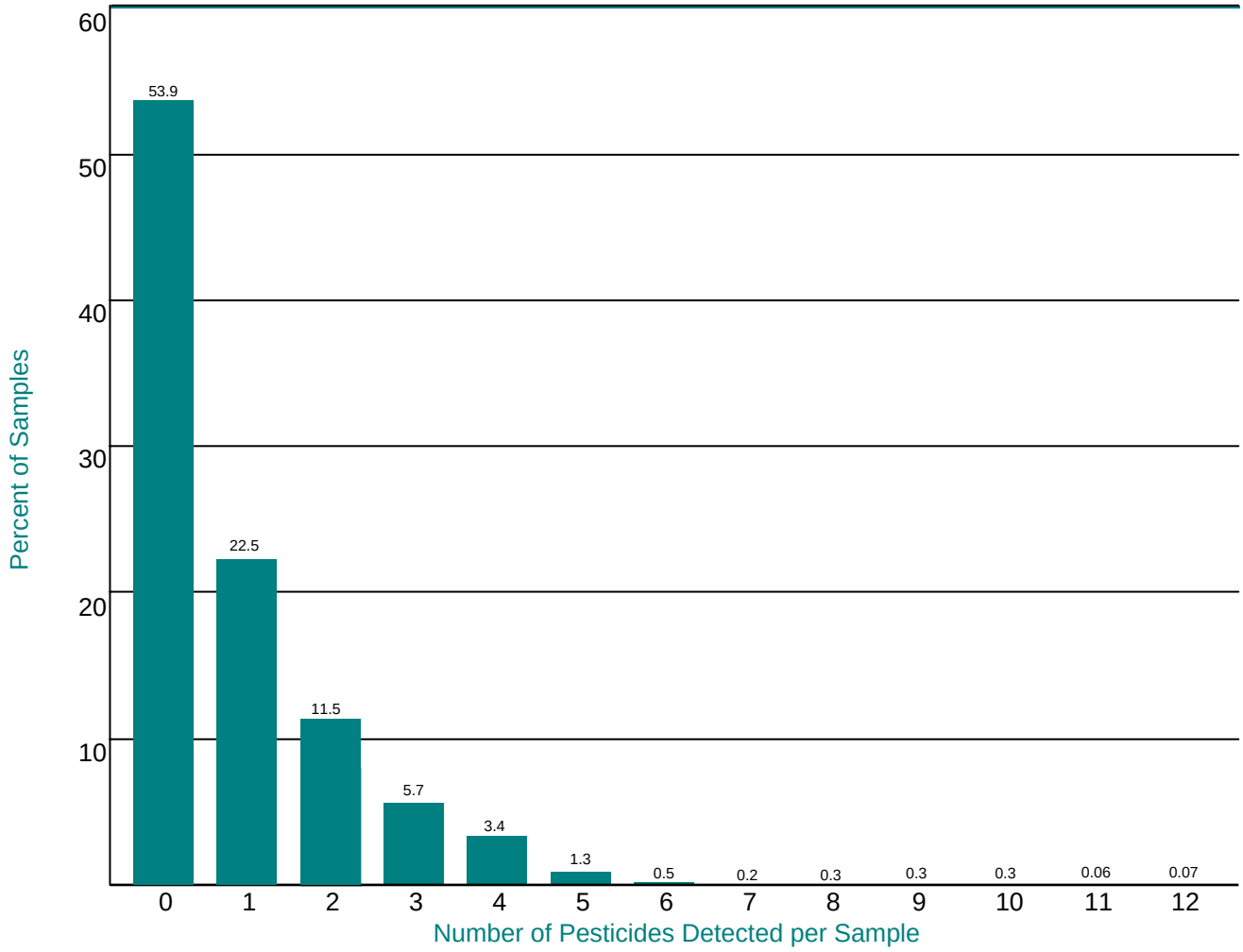
Number of Pesticides Detected per Sample

Appendix M shows the percentage of samples versus the number of pesticides 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 pesticides detected by individual commodity. For the 11,294 samples tested by multiresidue methods (excluding the triazole special survey), 53.9 percent of the samples had no detectable pesticides, 22.5 percent had 1 pesticide, and 23.6 percent of the samples had more than 1 pesticide.

This appendix reports the number of distinct pesticides rather than residues, as was reported in previous years' summaries. A parent compound and its metabolites are reported as a single pesticide. For example, a single application of the pesticide endosulfan may result in residues of the parent compound endosulfan I and metabolites endosulfan II and endosulfan sulfate. Thus, three residue detections could result from use of a single pesticide. In the 2002 summary, Appendix L would have counted that as three distinct residues, while this appendix counts it as just one distinct pesticide.

In most cases, results shown in this appendix are for pesticides detected in samples analyzed by PDP as composites of 3/5 pounds, depending on the commodity. Therefore, the number of pesticides reported does not necessarily reflect the number of pesticides per individual sample or per single serving of a commodity.

APPENDIX M. SAMPLES vs. NUMBER OF PESTICIDES* DETECTED PER SAMPLE
(Excludes Samples from the Triazole Special Survey)



Number of Pesticides Detected per Sample

	0	1	2	3	4	5	6	7	8	9	10	11	12
Number of Samples	6091	2542	1299	645	385	145	57	24	31	31	29	7	8
Percent of Total Samples	53.9	22.5	11.5	5.7	3.4	1.3	0.5	0.2	0.3	0.3	0.3	0.06	0.07

TOTAL NUMBER OF SAMPLES = 11,294

Parent compounds and their metabolites are combined to report the number of "pesticides" rather than the number of "residues", as was reported in previous years' summaries. For example, a sample with positive detections for Endosulfan I, II, and sulfate would have been counted as three residues detected in the 2002 Appendix L. That same sample would be counted as just one pesticide detected in this 2003 Appendix M.

APPENDIX M. SAMPLES vs. NUMBER OF PESTICIDES* DETECTED PER SAMPLE
(Excludes Samples from the Triazole Special Survey)

Commodity (# of samples)	Number of Pesticides Detected per Sample												
	0	1	2	3	4	5	6	7	8	9	10	11	12
Fresh Fruit and Vegetables:	Percent												
Asparagus (351)	92.3	6.6	1.1	--	--	--	--	--	--	--	--	--	--
Cantaloupe (186)	44.1	38.7	16.1	1.1	--	--	--	--	--	--	--	--	--
Cucumbers (739)	30.3	40.6	20.4	6.6	2.0	--	--	--	--	--	--	--	--
Mushrooms (552)	41.7	36.1	19.9	2.4	--	--	--	--	--	--	--	--	--
Onion (741)	99.7	0.3	--	--	--	--	--	--	--	--	--	--	--
Pears (187)	11.2	44.4	26.2	12.8	2.7	1.1	1.6	--	--	--	--	--	--
Spinach (736)	30.7	38.9	22.0	6.4	1.9	--	0.1	--	--	--	--	--	--
Sweet Bell Peppers (741)	15.5	18.5	19.8	16.2	13.8	7.8	3.8	2.0	1.8	0.3	0.5	--	--
Sweet Potatoes (734)	35.0	50.0	11.7	3.1	0.1	--	--	--	--	--	--	--	--
Tomatoes (742)	53.0	31.3	11.2	3.5	0.9	0.1	--	--	--	--	--	--	--
Processed Fruit and Vegetables:													
Asparagus, Canned (354)	97.5	2.5	--	--	--	--	--	--	--	--	--	--	--
Green Beans, Canned (743)	61.2	17.0	17.9	3.8	0.1	--	--	--	--	--	--	--	--
Peaches, Canned (742)	77.0	22.1	0.9	--	--	--	--	--	--	--	--	--	--
Pear Juice, Concen./Puree (66)	28.8	16.7	24.2	13.6	10.6	6.1	--	--	--	--	--	--	--
Sweet Corn, Frozen (547)	96.5	3.5	--	--	--	--	--	--	--	--	--	--	--
Sweet Peas, Frozen (549)	79.6	18.2	2.2	--	--	--	--	--	--	--	--	--	--
Number of Samples	4996	2130	990	341	152	65	32	15	13	2	4	--	--
Percent of Total Samples	57.0	24.5	11.4	3.9	1.7	0.7	0.4	0.2	0.1	0.02	0.05	--	--

TOTAL NUMBER OF FRUIT & VEGETABLE SAMPLES = 8,710

Processed Grain Product:													
Barley (452)	92.3	7.7	--	--	--	--	--	--	--	--	--	--	--
Wheat Flour (606)	55.4	30.4	13.7	0.5	--	--	--	--	--	--	--	--	--
Number of Samples	753	219	83	3	--	--	--	--	--	--	--	--	--
Percent of Total Samples	71.2	20.7	7.8	0.3	--	--	--	--	--	--	--	--	--
Dairy Product:													
Butter (732)	1.0	13.7	23.5	32.0	24.5	5.2	0.3	--	--	--	--	--	--
Number of Samples	7	100	172	234	179	38	2	--	--	--	--	--	--
Water:													
Water, Drinking (794)	46.0	11.7	6.8	8.4	6.8	5.3	2.9	1.1	2.3	3.7	3.1	0.9	1.0
Number of Samples	365	93	54	67	54	42	23	9	18	29	25	7	8

* Parent compounds and their metabolites are combined to report the number of "pesticides" rather than the number of "residues", as was reported in previous years' summaries. For example, a sample with positive detections for Endosulfan I, II, and sulfate would have been counted as three residues detected in the 2002 Appendix L. That same sample would be counted as just one pesticide detected in this 2003 Appendix M.

Appendix N

Fruit and Vegetable Samples Reported to FDA as Exceeding the Tolerance or Without Established Tolerance

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

Appendix N 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 2003, a total of 200 samples with 218 residues were reported to the FDA as Presumptive Tolerance Violations.

A total of 35 fruit and vegetable samples were found to have residues at levels exceeding the established tolerance. Samples containing a residue exceeding an established tolerance included 1 asparagus sample, 1 cantaloupe sample, 8 cucumber samples, 3 pear juice samples, 15 spinach samples, 4 sweet bell pepper samples, and 3 sweet potato samples.

In addition, 170 fruit and vegetable samples were found to have residues for which no tolerance was established.

- 157 samples contained 1 residue for which no tolerance was established.
- 13 samples contained 2 residues for which no tolerance was established.

Five of the 170 samples also contained one residue each that exceeded an established tolerance.

Appendix N also notes 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 N. 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	Asparagus / Cyhalothrin, Lambda	0.015	0.052	0.01
2	Cantaloupe / Acephate	0.002	0.036	0.02
3	Cucumbers / Acephate	0.002	0.39	0.02
4	Cucumbers / Acephate	0.002	0.18	0.02
5	Cucumbers / Acephate	0.002	0.13	0.02
6	Cucumbers / Acephate	0.002	0.081	0.02
7	Cucumbers / Acephate	0.002	0.036	0.02
8	Cucumbers / Carbofuran	0.013	0.53	0.2
9	Cucumbers / Carbofuran	0.013	0.43	0.2
10	Cucumbers / Oxadixyl	0.015	0.15	0.1
11	Pear Juice, Concen./Puree / Methamidophos	0.002	0.057	0.02
12	Pear Juice, Concen./Puree / Methamidophos	0.002	0.057	0.02
13	Pear Juice, Concen./Puree / Methamidophos	0.002	0.046	0.02
14	Spinach / Acephate	0.005	0.035	0.02
15	Spinach / Cyhalothrin, Total (Cyhalothrin-L + R157836 epimer) [1]	0.016	0.26	0.01
16	Spinach / Cyhalothrin, Total (Cyhalothrin-L + R157836 epimer) [1]	0.016	0.19	0.01
17	Spinach / Cyhalothrin, Total (Cyhalothrin-L + R157836 epimer) [1]	0.016	0.11	0.01
18	Spinach / Cyhalothrin, Total (Cyhalothrin-L + R157836 epimer) [1]	0.016	0.068	0.01
19	Spinach / Cyhalothrin, Total (Cyhalothrin-L + R157836 epimer) [1]	0.016	0.057	0.01
20	Spinach / Cyhalothrin, Total (Cyhalothrin-L + R157836 epimer) [1]	0.016	0.052	0.01
21	Spinach / Cyhalothrin, Total (Cyhalothrin-L + R157836 epimer) [1]	0.016	0.048	0.01
22	Spinach / Cyhalothrin, Total (Cyhalothrin-L + R157836 epimer) [1]	0.016	0.027	0.01
23	Spinach / Cyhalothrin, Total (Cyhalothrin-L + R157836 epimer) [1]	0.016	0.027	0.01
24	Spinach / Cyhalothrin, Total (Cyhalothrin-L + R157836 epimer) [1]	0.016	0.027	0.01
25	Spinach / Cyhalothrin, Total (Cyhalothrin-L + R157836 epimer) [1]	0.016	0.027	0.01
26	Spinach / Cyhalothrin, Total (Cyhalothrin-L + R157836 epimer) [1]	0.016	0.027	0.01
27	Spinach / Dimethoate	0.007	2.6	2
28	Spinach / Esfenvalerate+Fenvalerate Total	0.042	0.51	0.05
29	Sweet Bell Peppers / Fludioxonil	0.012	0.045	0.01
30	Sweet Bell Peppers / Fludioxonil	0.012	0.02	0.01
31	Sweet Bell Peppers / Fludioxonil	0.012	0.020	0.01
32	Sweet Bell Peppers / Fludioxonil	0.012	0.020	0.01
33	Sweet Potatoes / Chlorpyrifos	0.001	0.084	0.05
34	Sweet Potatoes / Piperonyl butoxide	0.013	1.1	0.25
35	Sweet Potatoes / Piperonyl butoxide	0.010	0.29	0.25

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

(Includes Samples of Unknown Origin)

	Commodity / Pesticide	Number of Samples	Samples Reported	% of Samples	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm
1	**Apples**						
	RH 9130 (fenbuconazole metab.)	744	1	0.1	0.010 ^	0.001 ^	NT
2	**Asparagus**						
	DCPA	250	1	0.4	0.004 ^	0.002 ^	NT
	Endosulfan I	250	1	0.4	0.004 ^	0.002 ^	NT
	Endosulfan sulfate	250	1	0.4	0.006 ^	0.004 ^	NT
	Iprodione	250	1	0.4	0.038 ^	0.023 ^	NT
	Quintozene (PCNB)	250	1	0.4	0.002 ^	0.002 ^	NT
	Tetrahydrophthalimide (THPI)	250	1	0.4	0.57 ^	0.015 - 0.075	NT
	Thiabendazole	1	1	100	0.050 ^	0.030 ^	NT
3	**Asparagus, Canned**						
	o-Phenylphenol [2]	354	3	0.8	0.017 - 0.023	0.010 - 0.015	NT
4	**Barley**						
	Methoxychlor p,p'	432	2	0.5	0.008 ^	0.005 ^	NT
5	**Butter**						
	Metalaxyl	732	1	0.1	15.5 ^	9.3 ^	NT
6	**Cucumbers**						
	Dimethoate	562	10	1.8	0.003 - 1.95	0.002 ^	NT
	Omethoate [3]	562	9	1.6	0.007 - 0.019	0.004 ^	NT
	Fenamiphos sulfone	525	2	0.4	0.013 ^	0.008 ^	NT
	Iprodione	525	3	0.6	0.035 ^	0.021 ^	NT
	Triadimenol	1	1	100	0.025 ^	0.015 ^	NT
7	**Green Beans, Canned**						
	o-Phenylphenol [2]	37	2	5.4	0.017 ^	0.010 ^	NT
8	**Mushrooms**						
	Desmedipham	1	1	100	0.092 ^	0.026 ^	NT
	o-Phenylphenol [2]	552	35	6.3	0.005 - 0.75	0.003 - 0.010	NT
9	**Pear Juice, Concen./Puree**						
	Diphenylamine (DPA)	66	1	1.5	0.017 ^	0.010 ^	NT
10	**Pears**						
	Diphenylamine (DPA)	187	5	2.7	0.016 - 0.022	0.010 - 0.015	NT
	Parathion ethyl	133	1	0.8	0.037 ^	0.008 ^	NT
11	**Spinach**						
	Atrazine	736	1	0.1	0.040 ^	0.024 ^	NT
	DCPA	736	3	0.4	0.012 - 0.031	0.007 ^	NT
	Iprodione	736	1	0.1	0.013 ^	0.008 ^	NT
	Oxamyl	736	1	0.1	0.013 ^	0.008 ^	NT
	Parathion ethyl	736	1	0.1	0.10 ^	0.006 ^	NT

Commodity / Pesticide	Number of Samples	Samples Reported	% of Samples	Range of Values Detected, ppm	Range of LODs, ppm	EPA Tolerance Level, ppm
12 Sweet Bell Peppers						
Chlorpropham	741	10	1.3	0.010 ^	0.006 ^	NT
Dicloran	741	2	0.3	0.003 ^	0.002 ^	NT
Diphenylamine (DPA)	741	2	0.3	0.011 - 0.015	0.003 ^	NT
Fenpropathrin	741	1	0.1	0.026 ^	0.016 ^	NT
Methiocarb	741	1	0.1	0.008 ^	0.001 - 0.005	NT
Pirimicarb	727	2	0.3	0.016 ^	0.010 ^	NT
Pirimiphos methyl	741	3	0.4	0.004 - 0.015	0.002 ^	NT
Tebuconazole	725	2	0.3	0.032 ^	0.002 - 0.019	NT
Thiabendazole	741	4	0.5	0.001 ^	0.001 - 0.016	NT
Vinclozolin	741	1	0.1	0.080 ^	0.004 ^	NT
13 Sweet Corn, Frozen						
Aldicarb	350	1	0.3	0.033 ^	0.020 ^	NT
o-Phenylphenol [2]	547	18	3.3	0.013 - 0.28	0.008 - 0.010	NT
14 Sweet Peas, Frozen						
o-Phenylphenol [2]	484	20	4.1	0.024 - 0.30	0.010 - 0.015	NT
Procymidone	395	1	0.3	0.14 ^	0.015 ^	NT
Vinclozolin	449	3	0.7	0.054 - 0.14	0.003 - 0.010	NT
15 Tomatoes						
Iprodione	7	7	100	0.035 - 0.52	0.021 - 0.034	NT
16 Wheat Flour						
Methoxychlor p,p'	606	8	1.3	0.008 ^	0.005 ^	NT
Pirimiphos methyl	606	6	1	0.005 - 0.013	0.003 ^	NT

KEY

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

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

[1] Previously reported as lambda cyhalothrin total, which included lambda cyhalothrin (a 1:1 mixture of the cis-(1R,3R), S-enantiomer and the cis-(1S,3S),R-enantiomer) as well as R157836 (a 1:1 mixture of the cis-(1S,3S),S-enantiomer and the cis-(1R,3R),R-enantiomer).

[2] o-Phenylphenol is a disinfectant approved for use in food handling establishments, including production facilities for commodities identified above.

[3] Nine detections within the same samples as Dimethoate.

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 2003

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