

Pesticide Data Program Sampling and Testing to Support Bifenthrin Section 18 for BMSB Control

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Bifenthrin Sampling Project

- * PDP is collaborating with EPA to provide data in support of Section 18 emergency tolerance exemption for bifenthrin to combat the brown marmorated stink bug (BMSB) which has been decimating pome and stone fruit in the mid-Atlantic region.
- * PDP will coordinate the collection of approximately 100 samples each for apples, peaches, and pears.
- * The apple and peach samples will be collected at participating orchards/farms in Maryland, New Jersey, Pennsylvania, Virginia, and West Virginia by researchers.
- * Pear samples will be collected in NY at regular PDP sites.

Bifenthrin Sampling Project

- * The numbers of samples for the commodities from each State will be proportional to the totals for the entire region.
- * Testing will be performed by the NY Department of Agriculture and Markets Laboratory in Albany, NY (peaches and pears) and the EPA Analytical Chemistry Laboratory located in Fort Meade, MD (apples).

Bifenthrin Sampling Project

- * Samples will be tested for bifenthrin and other compounds using multi-residue methods.
 - * It is not cost efficient for PDP to conduct single analyte testing.
- * Data will be used by EPA in their dietary risk assessments to ensure that the bifenthrin Section 18 does not pose an unacceptable risk.

Peach Sampling Scheme

- * Peach sampling will take place over 4 weeks
 - * July 30th – 20 samples
 - * August 6th – 20 samples
 - * August 27th – 40 samples
 - * September 3rd – 20 samples
 - * Note: The week of September 3rd will also be used for any make-up samples that are required

Peach Sampling Scheme

- * By State the 100 peach samples will be as follows:
 - * MD – 6 samples
 - * NJ – 48 samples
 - * PA – 31 samples
 - * VA – 8 samples
 - * WV – 7 samples

PDP Background

Mission

- * PDP: Provide EPA with data for dietary risk assessments and pesticide reregistration decisions
- * Support marketing of U.S. commodities
- * Support USDA responsibility under the Food Quality Protection Act of 1996

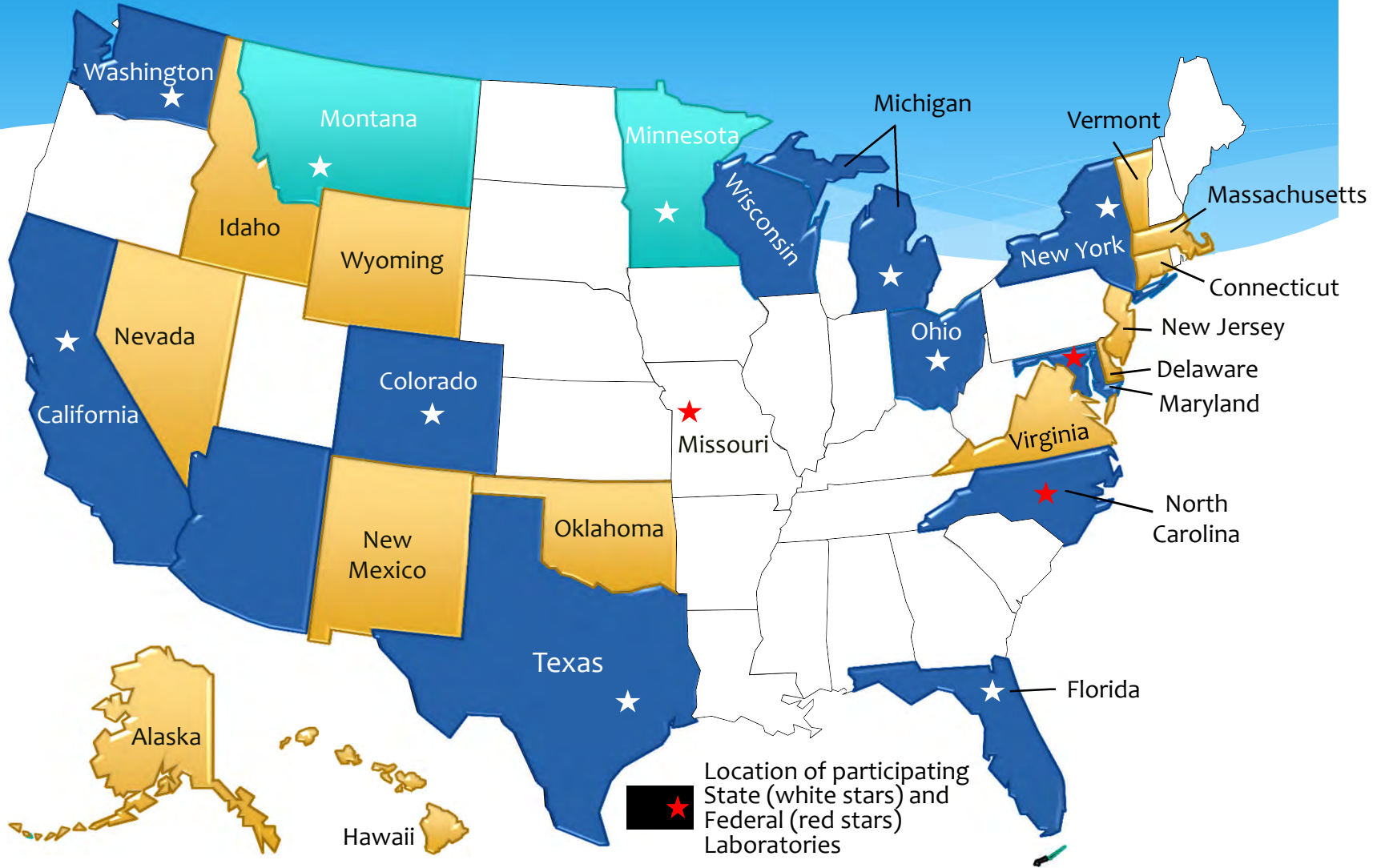
Pesticide Data Program (PDP)

- * Initiated in 1991 to collect pesticide residue data in fresh produce
- * Six States selected initially based on agricultural production and population
- * Six additional States joined the program to provide additional capacity and geographical representation
- * Has evolved over time to include dairy, grains, meats, honey, nuts, catfish and water
- * Data are used for risk assessment of pesticides, to evaluate pesticide registrations and verify tolerances
- * PDP is a critical component of the Food Quality Protection Act of 1996

Program Participants

- * PDP is a Federal-State partnership
- * Planning and Policy: AMS, EPA, FDA
- * States: CA, CO, FL, MD, MI, MN, MT, NC, NY, OH, TX, WA, WI
- * Federal laboratories: AMS National Science Laboratory, Grain Inspection, Packers and Stockyard Administration (GIPSA) Laboratory and EPA Analytical Chemistry Branch Laboratory
- * Other Participants: USDA National Agricultural Statistics Service (NASS), Food Safety and Inspection Service, Water Utilities

Program Participants



States participating in PDP

States where produce is directly marketed from participating States

Testing Services Only

How does it work?

- * AMS issues cooperative agreements annually
 - * Statements of Work provided through semi-annual plans
 - * Allocations of funding are based on workload
- * Participants follow PDP Standard Operating Procedures (SOPs)
 - * SOPs prepared with active State participation
 - * Technical Advisory Group
- * Planning sessions with EPA to determine data priorities
- * Output is highly dependent on funding

Sampling

PDP: Obtain statistically defensible representation of U.S. food supply so that PDP data reflect actual pesticide residue exposure from food

- * Rigorous statistical design
- * Random sampling
- * Reflects what is typically available to consumer
- * Sample collectors are trained in collection techniques
- * Special surveys to capture imports or regional data



Sampling

- * 62 samples/commodity/month
- * Sample information captured via handheld or laptop computers by inspectors on-site
- * Number of samples collected is apportioned according to population:

California	13	New York	9
Colorado	2	Ohio	6
Florida	7	Texas	9
Maryland	4	Washington	4
Michigan	6	Wisconsin	2



*North Carolina collecting 4 samples per month for some commodities

Sample Preparation

- * Samples are prepared emulating consumer practices
 - * e.g., apples are washed and cored
 - * Bananas are peeled
- * Commercial food processors used for homogenization



Sample Extraction

- * Samples extracted using multi-residue methods that have been independently validated and demonstrated to be equivalent
- * For fruit and vegetables, primary method is QuEChERS method
- * Methods for other foods are generally based on QuEChERS



PDP Testing

- * One or two laboratories analyze each commodity
- * Lists of required compounds are commodity-specific
- * Analysis performed using gas and liquid chromatography/tandem mass spectrometry

Pesticides Tested

- * Over 400 pesticides, metabolites, and isomers tested using multi-residue methods
- * A typical sample screen has anywhere from 70-240 residues included

How Are PDP Data Used?

- * Pesticide tolerances evaluated by EPA using PDP data
- * Pesticide uses reregistered or canceled based on outcome of tolerance evaluations
- * Examine impact of agricultural practices on human health and the environment
- * Monitor contaminants in drinking water and groundwater
- * Monitor compliance with U.S. EPA tolerances (MRLs)
- * Tolerance violations reported to FDA
- * Verify pesticide usage statistics
- * Facilitate export of U.S. commodities