



# PEST SMART UPDATE

## EPA's Pesticide Environmental Stewardship Program #5

### ADMINISTRATOR BROWNER AWARDS PESP CHARTER PARTNERS

The Pesticide Environmental Stewardship Program (PESP) held its first workshop, *"Making A Difference...The Next Steps"*, on November 18 & 19 at the Doubletree Hotel in Crystal City. The highlight of the workshop was the Awards Luncheon on Monday, November 18. Administrator Carol M. Browner and Assistant Administrator for Pesticides, Pollution Prevention and Toxics, Lynn R. Goldman, MD, addressed the audience and presented plaques to the PESP Charter Partners. In attendance were PESP Partners and Supporters and their EPA Liaisons.

Charter Partner plaques were presented to the American Corn Growers Association; American Electric Power



[Administrator Browner (left) and Assistant Administrator Goldman (right) receiving PESP mug from Janet Andersen (center); Director of Biopesticides and Pollution Prevention Division.]

Service Corporation; California Pear Advisory Board; Carolina Power & Light; Delmarva Power; Duke Power; National Potato Council; New York State Gas & Electric; Pennsylvania Electric;

Pennsylvania Power & Light; Pennsylvania Rural Electric Association; **U.S. Apple Association**; VA, MD & DE Association of Electric Cooperatives; and **Wisconsin Public Service Corporation**. [The organizations listed in bold type had representatives in attendance to accept their award.] The PESP Management Team also presented PESP mugs to Administrator Browner and Assistant Administrator Goldman in appreciation for their support of the Stewardship Program.

During the workshop, four concurrent breakout sessions were held. The following issues were addressed:

- Food Quality Protection Act
- Stewardship Strategies
- PESP Grants
- Measuring and Monitoring

**"I have been pleased to see the progress of utility companies pursuing integrated pest management to control weeds on their property, federal agencies such as the Department of Defense committing to a 50 percent reduction of pesticide use, and the golf course associations educating their members about how to reduce pesticide risk and pesticide use."**

**Carol M. Browner, EPA Administrator**

The Partners and Supporters were accompanied by their Liaisons to all of the sessions. The workshop was a success according to many of the participants, who provided such comments as "Excellent, worthwhile, educational, informative workshop which should be held annually;" "Getting to know EPA and other industry people was very valuable;" and "It is good to gather





Liaisons together with their Partners more often to keep the energy levels high."

Workshop Proceedings were mailed in March to all Partners, Supporters, and other attendees. If you are interested in receiving a copy of the proceedings, please contact the National Foundation for IPM Education at 512-834-8762.

## PESP ANNOUNCES NEW PARTNERS/SUPPORTERS

Congratulations to the following organizations who have shown a genuine interest in promoting environmental stewardship by making a commitment as *Partners* in the Pesticide Environmental Stewardship Program.

*American Association of Nurserymen  
Environ "Pest Elimination" Inc.  
Global Integrated Pest Management  
Lodi-Woodbridge Wine Grape Commission  
New Orleans Mosquito Control Board  
New York Berry Growers Association  
Pacific Coast Producers  
Redi National Pest Elimination  
Reliable Pest Control  
Sanitary Exterminating  
South Texas Cotton and Grain Association, Inc.  
Sun-Maid Growers of California  
U.S. Public Health Service-Centers for Disease Control  
Winter Pear Control Committee  
Wisconsin Ginseng Growers Association*



We also welcome the *International Pest Management Institute* and the *Association of Applied Insect Ecologists* as new PESP Supporters.

## FOCUS ON:



## REGULATORY DECISIONS IN BPPD

EPA has registered six new biological pesticides in the first quarter of Fiscal Year 1997, which ended December 31, 1996. The new pesticides are aimed at controlling a wide variety of pests including cockroaches, plant diseases, borers, nematodes, aphids and other insects. These registrations reflect growing trends toward greater reliance on biological pesticides. Biopesticides are generally considered safer than conventional pesticides because they are often more specific to the target pests and pose little or no risk to other organisms. They also are valuable tools in integrated pest management programs. The following is a description of the new products:

Woodstream Corp. of Lititz, PA, was granted a registration for a pheromone (trade name: German Cockroach Pheromone) to control German cockroaches. It is used in boric acid bait stations as a cockroach attractant. Boric acid, on the body of the cockroach, causes dehydration and death. It is approved for indoor, non-food areas of homes, restaurants, health care facilities, educational institutions, factories, garages, transportation and recreational vehicles, zoos, kennels, utilities and sewers.

Agridyne Technologies of Columbia, MD, will produce dihydroazadirachtin (trade name: DAZA), a hydrogenated form of the naturally occurring azadirachtin obtained from the seeds of the neem tree, which is native to India and Burma. It was approved for use indoors against numerous pests including ants, aphids, beetles, caterpillars, crickets, sawflies, whiteflies, centipedes, and sowbugs. Outdoors, it is





approved for use on bedding plants, flowers, potted plants, foliage plants, plants grown hydroponically, ornamentals, trees, shrubs, turfgrass, fiber crops, forage and fodder crops.

Stine Microbial Products of Adel, IA was granted registration for *Burkholderia cepacia* isolate (trade name: Blue Circle) as a fungicide for controlling damping-off disease on the roots of vegetables, fruits, nuts, vine crops, spices, ornamentals, greenhouse crops, turfgrasses, flowers, bulbs and field crops. It may be applied through irrigation systems, by drenching roots of seedlings, or by incorporating into seedbeds at planting.

Monsanto Co. of St. Louis, MO was granted final registration for *Bacillus thuringiensis* CryIA(b) delta-endotoxin and the genetic material necessary for its production in corn (trade name: YieldGard), a plant-pesticide for controlling or suppressing the European corn borer, the Southwestern corn borer and the corn earworm. EPA has limited annual use to 100,000 acres in southern states. In addition, the acreage may not exceed five percent of the corn planted in any county with more than 1,000 acres of cotton. These limitations were imposed to mitigate the risk of corn earworm, a pest of corn, cotton, and other southern crops, developing resistance to Bt CryIA.

Ciba-Geigy Corp. of Greensboro, NC was granted registration for *Bacillus thuringiensis* *kurstaki* strain M-200 (trade name: Able) for controlling lepidopterous (larval moths and butterflies) pests in tree fruits, terrestrial small fruits and vegetables, tree nuts, alfalfa, corn, cotton, soybeans, peanuts, herbs and spices and cranberries. It may be applied aerially or by ground equipment.



Ecogen Inc. of Longhorne, PA was granted registration for *Bacillus thuringiensis* *kurstaki* strain EG7826 (trade name: Lepinox) for controlling lepidopterous pests of numerous terrestrial food crops, ornamental plants, turf, nursery stock, shade trees and forests. It may be applied aerially or by ground equipment. The Bt in

Lepinox has been genetically modified to produce an additional delta endotoxin.

## PARTNER & SUPPORTER GRANT AWARDS

On February 28th, the National Foundation for Integrated Pest Management Education awarded thirteen grants to PESP Partners and Supporters. The projects listed below involve IPM research, education and/or training. IPM is a sustainable approach to managing pests by combining biological, cultural, physical and chemical tools in a way that minimizes economic, health and environmental risks.



The following projects were funded:

- **New York Berry Growers Association:** Development and Implementation of IPM Marketing;
- **Sun-Maid Growers of California:** Alternatives in Preemergent Herbicides;
- **Monroe County Schools:** Implementation of IPM in Indiana Schools;
- **Gerber Food Products:** Mating Disruption of Oriental Fruit Moth;
- **Farm\*A\*Syst/Home\*A\*Syst:** Environmental Risk Assessments for Corn & Potato Pest Management;
- **NE Vegetable & Berry Growers Association:** Quantitative Pesticide Use Assessment;
- **Oregon Wheat Growers League:** Reducing Non-Target Risk from Pesticide Drift Through Grower Education;
- **Bay Area Stormwater Management Association:** IPM Demonstration Garden;
- **Wisconsin Ginseng Growers:** Disease Management Development;
- **Winter Pear Control Committee:** IPM Adoption in Pacific NW Pear Orchards;





- Glades Crop Care: IPM Adoption in Florida; and
- California Table Grape Commission: Grape IPM Web Site.

## PESP PARTNER/SUPPORTER NOTES

by Rocky Lundy, MIRC

The *Mint Industry Research Council* (MIRC) is a non-profit organization which represents the U.S. mint oil industry. It is comprised of mint growers, oil dealers, and major end users. There are approximately 150,000 acres of mint (80 percent peppermint, 20 percent spearmint) grown in the U.S. each year. Annual sales of mint oil are approximately 11 million pounds (8 peppermint, 3 spearmint), worth a farm gate value of over \$150 million. This translates into a \$4 billion domestic market and represents over 70 percent of the world's peppermint and spearmint supply. These 11 million pounds of mint oil are used mainly as flavoring. The percentage of oil used in mint-flavored products ranges from 1 - 10 percent. The majority (90 percent) of the mint oil produced is used for flavoring chewing gum and toothpaste with lesser amounts used in the confectionery, pharmaceutical, and liqueur-flavoring trades. One barrel of mint oil (55 gal.) weighs 400 pounds and can be used to flavor 5,200,000 sticks of chewing gum or up to 400,000 tubes of toothpaste.



The MIRC became aware and involved in EPA's Pesticide Environmental Stewardship Program in 1995. The reasons MIRC became a PESP Partner are numerous. One reason, of major importance to the industry, was strengthening and improving relationships with the EPA. PESP provides its Partners with an avenue and platform for effectively communicating important pesticide and food safety issues. The appointment of EPA Liaisons ensures these lines of communication remain open. The MIRC is also committed and dedicated to the implementation of integrated pest management (IPM) and an overall

reduction in pesticide use. The MIRC invests a large portion of its annual budget into IPM and alternative pest control research. This investment, over the last several decades, has paid for a solid IPM foundation from which to build and expand.

PESP provides the mint industry an opportunity to collectively exchange new ideas and information with EPA and other Partners. The objectives of PESP parallel the goals of the MIRC: implementation of IPM; reduction of conventional pesticide use; and registration of new, safer pesticides.

The MIRC believes that dedicated research, including economic feasibility, and the dissemination of information through education, are quintessential to successfully accomplishing these goals. The mint industry was awarded a \$30,000 grant to assist with the production and distribution of educational materials which illustrate the benefits of using certified planting material and biological pest control.

In addition to research on the biological control of weeds, nematodes, and insects, the MIRC is currently funding IPM-related and non-chemical (cultural) pest control studies. Other ongoing data collection projects include pesticide benefit and risk assessments, pest and pesticide use surveys, herbicide resistance management, and compilation studies. Industry agronomists are also rearing predator mites for mint IPM programs and screening all pesticides registered in mint, present and future, for their effects on beneficials and the environment.

To be active in research, education, pesticide surveys, IPM, and other PESP-related activities consumes a considerable amount of what is already a limited amount of time and resources from a commodity or pesticide user group. The mint industry is fortunate to have a membership dedicated to accomplishing PESP goals and objectives. Regardless of commodity or pesticide user group size and/or resources, the only requirement of PESP is that a Partner do their part to accomplish their goals.





There are many obstacles and barriers in the "real world." These obstacles and barriers are social and economic in nature and, at times, seem insurmountable. There are no easy solutions to many of them. Philosophies and attitudes towards IPM and pesticide use reduction must evolve. This change includes the research community. Research should also show when not to spray. Solutions to these complex problems require multi-year, in-depth, interdisciplinary, and systematically-approached studies. Biotechnology may offer solutions to many of these complex problems and issues. By working together as partners, we can take a concept and make it a reality.

## LIAISON NOTES

One of the greatest benefits of being a PESP Partner or Supporter is having an EPA Liaison. Liaisons are linked with the Partners/Supporters after they join PESP. The Liaisons work with their Partner/Supporter in developing an environmental stewardship strategy and/or a project working towards risk reduction. Being a Liaison provides an excellent opportunity for learning. This column will feature experiences from our Liaisons who represent our Partners and Supporters in PESP.

### *Jim Boland, Liaison to the Cranberry Institute*

They're "bogs" in Massachusetts and New Jersey, "marshes" in Wisconsin, and "fields" in the Pacific northwest. All are names for the places cranberries are grown. It just depends on where one happens to be when you are talking with growers about this uniquely American crop! There are only 30,000 acres of cranberry in the U.S. Water is essential to the successful cultivation of cranberry, it takes about 6 - 7 acre feet of water to support 1 acre of cranberry. They are not grown *in* water. They can be dry harvested like other crops, but the modern practice is to flood the field, causing the fruit to float, where it can be gently



beaten off the vine and corralled (using a flotation collar adopted from oil spill containment technology) and lifted into trucks for transport to either a storage or processing facility.

I am the Stewardship Program Liaison to the **Cranberry Institute**. As such, I have been fortunate to have the opportunity to see how cranberries are grown and processed. I also had the opportunity to visit with growers in New Jersey, Wisconsin and Massachusetts. All took time from their busy schedules to ensure my thorough education in the agriculture of cranberry production was balanced and complete. Cranberry is indeed a minor crop in every respect. As such, growers face some unique challenges in production (urban encroachment; wetlands issues) and pest management (registration, IPM). Hopefully, some of these issues can be addressed through the PESP partnership by fostering open communication and responsiveness to commodity needs.

I think one of the most memorable instances I had with this commodity was during a harvest tour in Wisconsin in the fall of 1996. I was taking a picture of cranberries being loaded from the "marsh" - remember, I was in Wisconsin! - when my hostess said to the workers and me, "Look! There's a bald eagle!" Wow!

### *Joan Karrie, Liaison to the Gerber Products Company*

On February 18th, 1997, I attended **Gerber Products Company's** Second Annual Agricultural Research Update at their headquarters in Fremont, Michigan. Gerber is a Supporter in EPA's Pesticide Environmental Stewardship Program. Nine scientists from Michigan, Wisconsin, and Illinois discussed ongoing research which is funded wholly or in part, by the Gerber Company. In addition, John Bakker explained the goals and processes of the Westcentral Michigan Crop Management Association (WMCMA). WMCMA is a non-profit partnership between growers, processors/packers, and Michigan State University Extension Agents with the primary goal of pesticide use reduction through methods such as spray timing, pest





identification, enhancement of beneficials, and pest threshold determination.

The researchers and their topics were: Mr. Philip Schwallier, Michigan State University, *Clarksville and the Scab-Resistant Apple*; Dr. Juwan Palta, University of Wisconsin, *The Ripening of Peaches Through the Use of LPE*; Mr. John Rodgers, Michigan State University, *De-acidification of Peaches*; Dr. Jun Song, Michigan State University, *Hexanal as a Post-Harvest Disease Control Agent*; Dr. John Masuinas, University of Illinois, *Weed Control in Processing Squash*; Dr. Schuyler Safi Korban, University of Illinois, *Genetic Advances in Disease Resistance of Apple*; Dr. Mark Whalon, Michigan State University, *The MSU Low Pesticide Input Apple Project*; Dr. John Wise, Michigan State University, *Mating Disruption Projects at the Trevor Nichols Station*; and Dr. Bill Shane, Michigan State University, *Tree Fruit Evaluation at the S.W.M.R.E.C.*

In addition to attendance at the Research Update, I was able to visit the research facilities at Gerber, and on February 19th, tour the apple and stone fruit producing areas of westcentral Michigan and meet a local farmer whose fruit crops are destined for Gerber babyfood products.

I appreciate the opportunity that attendance at the Research Update afforded me to better understand the foci of research and needs of the Gerber Company. I know that this will strengthen the partnership ties between Gerber and EPA as the information will allow me to better anticipate future needs and interests of Gerber with respect to my role as PESP Liaison. In addition, I could see how much the researchers themselves were interested in the work of the other speakers, and expect that some further discussion and cooperation may ensue. I believe this event was very worthwhile, and wish to express my thanks to the Gerber Company for their invitation.

**Kevin Costello Liaison to the Campbell Soup Company.**

On November 21, 1996, Kevin Costello joined Dennis Larsen of **Campbell Soup Company** and researchers from the Rutgers (NJ) Cooperative Extension Service in an IPM tour of local carrot fields. Dr. Don Prostak, Specialist in Pest Management at the Extension, led the group to three carrot fields to describe the effort to apply IPM to the control of carrot weevil, root nematodes and dodder. Southern New Jersey is one of several regions from which Campbell Soup buys carrots for processing.

Kristian Holmstrom of the Cooperative Extension demonstrated the use of wood-baffle traps to scout fields for carrot weevil. These traps, which were developed by a Canadian researcher, consist of a carrot placed within a housing of closely-spaced wood baffles. The traps are placed at the edges of a carrot field in the spring before the crop has emerged from the soil. If weevils are present at the field, they should be found between the wood baffles when the traps are collected and disassembled. The presence or absence of carrot weevils in these traps does not provide clues as to when the weevils might be a problem. Rather, if scouting with the traps indicates that there are no carrot weevils present that season, then the farmer can refrain from spraying the field with insecticides to control them. All three of the farms we visited have also instituted fall and early spring soil sampling to scout for root nematodes, which disfigure carrots and render them unfit for processing. As with the weevil program, if early scouting indicates that there are no nematodes at a specific field, there is no need to use pesticidal fumigants that season. One of the farmers routinely collects soil samples from more fields than he needs to grow carrots each year, in order to choose as many as possible that will not require pesticides for nematode control.



Finally, the Extension researchers are investigating the advantages of early scouting for the control of dodder in carrot fields. If left untreated, dodder can spread across carrot rows, harming the crop and spreading when cultivating machinery is dragged through the field. The researchers are hoping that through early scouting and





spot-treatment with herbicides, dodder can be eliminated in a field before it can produce seeds for the next growing season.

The Stewardship Program has already paid dividends for local carrot farmers by eliminating the expense of unnecessary pesticide applications. In addition, it offers companies like PESP Supporter Campbell Soup Company the promise of reduced pesticide use in the production of carrots they need for processing.

## WHAT'S NEW WITH FQPA?

In the last issue of the **PEST SMART UPDATE**, an announcement was made about the landmark pesticide food safety legislation called The Food Quality Protection Act (FQPA) of 1996. This article will recap the signing of the legislation and discuss major issues in FQPA.

**BACKGROUND:** On August 6, 1996, Congress unanimously passed landmark pesticide food safety legislation supported by the Administration and a broad coalition of environmental, public health, agricultural and industry groups.

President Clinton promptly signed the bill and the Food Quality Protection Act of 1996 is now law (P.L. 104-170, formerly known as H.R. 1627).



Pesticides in the U.S. are regulated under two major federal statutes. Under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), EPA registers pesticides for use in the United States and prescribes labeling and other regulatory requirements to prevent unreasonable adverse effects on health or the environment. Under the Federal Food, Drug, and Cosmetic Act (FFDCA), EPA establishes tolerances (maximum legally permissible levels) for pesticide residues in food. Tolerances are enforced by the Department of Health and Human Services/Food and Drug Administration (HHS/FDA) for most foods, and by the U.S. Department of Agriculture/Food Safety and Inspection Service (USDA/FSIS) for meat, poultry, and

some egg products. For over two decades, there have been efforts to update and resolve inconsistencies in the two major pesticide statutes, but consensus on necessary reforms has been elusive. The new law represents a major breakthrough, amending both major pesticide laws to establish a more consistent, protective regulatory scheme, grounded in sound science. It mandates a single, health-based standard for all pesticides in all foods; provides special protections for infants and children; expedites approval of safer pesticides; creates incentives for the development and maintenance of effective crop protection tools for American farmers; and requires periodic reevaluation of pesticide registrations and tolerances to ensure that the scientific data supporting pesticide registrations will remain up to date in the future.

While there has not been time for detailed or definitive analysis of the new law and its legislative history, below are brief descriptions of how major issues appear to be addressed in the new legislation and how they will likely impact current practices.

### FQPA: SUMMARY OF ISSUES

#### FEDERAL FOOD, DRUG, AND COSMETIC ACT PROVISIONS (FFDCA)

##### Issue: General Standards for Tolerances

**Previous Law and Practice:** Previous law generally required EPA to establish tolerances that will "protect the public health." With respect to chemicals that pose carcinogenic risks, EPA used a negligible risk standard, except in cases where the Delaney clause of the FFDCA applied, as described below. For effects determined to have a "threshold," EPA used safety factors to ensure that lifetime exposure would not exceed a safe level.

**New Legislation:** The new law requires that tolerances be "safe," defined as "a reasonable certainty that no harm will result from aggregate exposure," including all exposure through the diet and other non-occupational exposures, including drinking water, for which there is reliable information. It also distinguishes between "threshold" and "non-threshold" effects, consistent with





#### EPA practice.

**Implications:** The new law establishes a single, health-based standard for all pesticide residues in all types of food, replacing the sometimes conflicting standards in the old law. There are no differences in the standards applicable to tolerances set for raw and processed foods. Additional provisions ensure coordination with standards and actions under FIFRA, for a more consistent regulatory scheme.

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#### Issue: Resolution of the "Delaney Paradox"

**Previous Law and Practice:** If a pesticide that causes cancer in man or laboratory animals concentrates in ready-to-eat processed food at a level greater than the tolerance for the raw agricultural commodity, the Delaney clause of the FFDCA prohibited the setting of a tolerance. This had paradoxical effects in terms of food safety, since alternative pesticides could pose higher (non-cancer) risks and EPA allowed the same pesticide in other foods based on a determination that the risk was negligible.

**New Legislation:** The new law provides that tolerances for pesticide residues in all types of food (raw or processed) will be set under the same provisions of law. The standards apply to all risks, not just cancer risks.

**Implications:** This legislation eliminates the Delaney Paradox. The Delaney clause no longer applies to any tolerances set for pesticide residues in food. Rather, the EPA must determine that tolerances are "safe," defined as "a reasonable certainty that no harm will result from aggregate exposure" to the pesticide. EPA and others will be able to devote resources that have been consumed by Delaney-related activities to higher priority public health and environmental protection issues.

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#### Issue: Special Provisions for Infants and Children

**Previous and Law Practice:** EPA is currently addressing some of the high priority issues identified in the 1993

National Academy of Sciences (NAS) report on "Pesticides in the Diets of Infants and Children." The Agency routinely assesses risks by age group, ethnicity, and region when setting tolerances.



**New Legislation:** The new law explicitly requires EPA to address risks to infants and children and to publish a specific safety finding before a tolerance can be established. It also provides for an additional safety factor (up to tenfold, if necessary) to ensure that tolerances are safe for infants and children and requires collection of better data on food consumption patterns, pesticide residue levels, and pesticide use.

**Implications:** The potentially greater exposure and/or sensitivity of infants and children will be explicitly taken into account in all tolerance decisions. Placing these specific requirements in the statute will help EPA in its efforts to implement the NAS report and ensure that risks to infants and children are always considered in the future.

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#### Issue: Consideration of Pesticide Benefits

**Previous Law and Practice:** EPA used to set tolerances "to protect the public health" and to give appropriate consideration "to the necessity for the production of an adequate, wholesome and economical food supply."

**New Legislation:** Tolerances based on benefits considerations would be subject to a number of limitations on risk and more frequent reassessment than other tolerances. All tolerances would have to be consistent with the special provisions for infants and children. In certain narrow circumstances, the new law allows tolerances to remain in effect that would not otherwise meet the safety standard, based on the benefits afforded by the pesticide. Pesticide residues would only be "eligible" for such tolerances if use of the pesticide prevents even greater health risks to consumers or the lack of the pesticide would result in "a significant disruption in domestic production of an adequate, wholesome, and economical food supply."







**Implications:** This provision narrows the range of circumstances in which benefits may be considered and places limits on the maximum level of risk that could be justified by benefits considerations.

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**Issue: Endocrine Disruptors (Estrogenic Substances)**

**Previous Law and Practice:** No specific provision in law. EPA is working with others in the public and private sector to develop appropriate testing strategies.

**New Legislation:** The new law requires the development and implementation of a comprehensive screening program for estrogenic and other endocrine effects within three years of enactment.

**Implications:** EPA must develop a screening program within 2 years of enactment, implement it within 3 years of enactment, and report to Congress within 4 years. This is a very ambitious schedule. Little is known about mechanisms of endocrine disruption and possible synergistic effects. This is a high priority for EPA.

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**Issue: Other Factors to be Considered in Setting Tolerances**

**Previous Law and Practice:** EPA already considers many of the factors in the new law, although they were not all required under the previous law.

**New Legislation:** The new law requires EPA to consider the validity, completeness and reliability of available study data; the nature of potential toxic effects and available information on the relationship of study results to human risk; dietary consumption patterns and variations in the sensitivities of major identifiable subpopulations; cumulative and aggregate (dietary and nondietary) effects of exposure to the pesticide and other substances with common mechanisms of toxicity; effects on the endocrine system; and scientifically recognized appropriate safety factors. These considerations are in



addition to the special provisions for infants and children. In assessing potential risks, EPA may also consider exposure to actual residues expected on foods (which are often far lower than tolerances) and the percent of a crop treated with the pesticide, but these assessments must be re-evaluated periodically to ensure they are still valid. EPA is given new authority to require data under FFDCA, if the data cannot otherwise be obtained under FIFRA or the Toxic Substances Control Act. Finally, there must be a practical method for detecting residues in food before a tolerance can be granted.

**Implications:** As scientific understanding of potential cumulative and aggregate effects advances, it is likely that additional data will be required for EPA decisions, along with more information on subpopulation exposure and risk. In most cases, EPA will be able to use existing FIFRA authority to require this information. The additional data will enhance the scientific basis and protectiveness of pesticide regulations.

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**Issue: Consumer "Right to Know" Provisions**

**Previous Law and Practice:** No comparable law or practice at the federal level.

**New Legislation:** The new law requires EPA to publish a short pamphlet containing consumer-friendly information on the risks and benefits of pesticides, any tolerances that EPA has established based on benefits considerations, and recommendations for reducing exposure to pesticide residues and maintaining a healthy diet. This information would be distributed each year to "large retail grocers for public display." In addition, petitions for tolerances must include informative summaries that can be published and made publicly available.

**Implications:** EPA must coordinate with USDA and Health Human Services in order to accomplish this. While the Agency has general information materials that describe how to reduce pesticide exposure, developing materials to reach consumers at the supermarket level is a new departure, particularly with





respect to substitute foods.

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**Issue: Re-evaluation of Existing Tolerances**

**Previous Practices:** EPA has been reassessing tolerances in connection with its ongoing reregistration review of chemicals first registered before November, 1984. Pesticides approved after that were not subject to reregistration requirements.

**New Legislation:** While transitional provisions maintain existing tolerances in place upon enactment, the new law requires review of all tolerances on the following schedule:

- 33% within 3 years
- 66% within 6 years
- 100% within 10 years

Priority will be given to pesticides that may pose the greatest risk to public health.

**Implications:** All tolerances will be required to meet the new safety standards, which should increase assurance that they are protective of all American consumers, including infants and children. The magnitude of this task is considerable; well over 9000 tolerances are currently in place.

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**Issue: International Standards for Pesticide Residue Levels**

**Previous Law and Practice:** EPA considered international standards for maximum residue levels (MRLs) established by the Codex Alimentarius Commission as part of its reregistration tolerance reassessments for chemicals first registered before November, 1984. There is no presumption in favor of accepting international MRLs.



**New Legislation:** The new law requires EPA to publish for public comment whenever the Agency proposes a tolerance that differs from an established Codex MRL.

**Implications:** This requirement furthers the goal of international harmonization of pesticide residue limits, to the extent that international MRLs meet U.S. food safety standards.

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**Issue: National Uniformity of Tolerances**

**Previous Law and Practice:** Previous law allowed states to set tolerances that were stricter than EPA tolerances.

**New Legislation:** Generally, the new law preempts states from establishing tolerances that differ from EPA tolerances first established or reassessed after April 25, 1985. States may petition EPA for exemptions to this provision if there are compelling local conditions that justify the exemption.

**Implications:** As a practical matter, states have rarely set tolerances that differ from EPA's, and the protective safety standards in the new law will probably decrease the incentive to do so even further. States will continue to have authority to establish tolerances stricter than those EPA may set based on benefits considerations, and to require warning or other statements about the presence of pesticide residues (such as those required under California's Proposition 65).

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**Issue: Residue Monitoring and Civil Penalties**

**Previous Law and Practice:** No comparable provisions. FDA and USDA monitor pesticide residues as resources permit.

**New Legislation:** The new law provides an additional authorization of \$12 million for increased FDA monitoring in Fiscal Years 1997-1999. It also establishes substantial civil penalties for introducing foods with violative pesticide residues into interstate commerce. The penalties do not apply to growers.





**Implications:** If Congress were to appropriate additional funds under this authority, FDA would be able to increase monitoring. Penalty provisions should be a deterrent to violations.

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### FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT PROVISIONS (FIFRA)

#### **Issue: Periodic Review of Pesticide Registrations**

**Previous Law and Practice:** Under amendments to FIFRA 1988, EPA is in the process of conducting reregistration reviews for all pesticides first registered before November 1984 and their associated tolerances, although tolerance reviews were not specifically required by the law. This review would bring the science base supporting registrations and tolerances up to current standards, but on a one-time only basis.

**New Legislation:** In addition to requiring tolerance reassessments, the new law requires EPA to establish a system for periodic review of all pesticide registrations, aimed at updating them on a 15-year cycle. If new data are needed for these reviews, or for any other review, EPA may require them under FIFRA's "data call-in" authority in Section 3(c)(2)(B) or other statutory authority.

**Implications:** This ensures that all pesticides continue to meet up-to-date standards for safety testing and public health and environmental protection. EPA retains authority to require data and take action if needed in the interim, but at a minimum registrations should be updated on a 15 year cycle. Although other provisions of the new law provide for continuing fees to support the reregistration effort through 2001, additional resources may be needed to sustain periodic review efforts beyond that date.

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#### **Issue: Emergency Suspension Authority**

**Previous law and practice:** EPA could not suspend a pesticide's registration unless a proposed notice of intent

to cancel the registration had been issued or were issued simultaneously. This could delay suspensions when there is an emergency, imminent threat to public health or the environment.

**New Legislation:** The new law allows EPA to emergency suspend a pesticide registration immediately. A notice of intent to cancel must be issued within 90 days, or the emergency suspension would expire.

**Implications:** EPA can now move quickly in situations that warrant immediate and decisive action to prevent serious risks to human health and the environment, while preserving the rights of registrants in the cancellation process.

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#### **Issue: Extension of Reregistration Fee Authority**

**Previous Law and Practice:** EPA had authority to collect fees to implement the reregistration program (covering pesticides first registered before November, 1984) until September 30, 1997.



**New Legislation:** The new law extends fee collection authority through September 30, 2001. It provides for the collection of \$14 million/year to support the current reregistration program and the expedited processing of applications for substantially similar "me-too" pesticides, with an additional \$2 million per year to be collected in 1998, 1999 and 2000. It also requires a annual independent audit to ensure performance goals are met and specifies that tolerance fees will be available to carry out the requirements of the new law.

**Implications:** If fee authority had been allowed to expire in 1997, EPA would have completed only approximately one-half of its ongoing reregistration program. Many of the pesticides for which review would have been delayed are chemicals used on foods most often eaten by infants and children. The extension of fee authority will help EPA review these pesticides more quickly and keep the current reregistration program on track.





**Issue: Minor Use Pesticides, (including Public Health Uses)**

**Previous Law and Practice:** Minor uses of pesticides are generally defined as uses for which pesticide product sales do not justify the costs of developing and maintaining EPA registrations. In the aggregate, such "minor" crops are very important to a healthy diet, and include many fruits and vegetables. For agricultural pesticides, the Inter-regional Research Project No. 4 (IR-4), administered by USDA in cooperation with state land grant universities, has been working to develop needed data. There was no corresponding program for public health uses.

**New Legislation:** The new law enhances incentives for the development and maintenance of minor use registrations in a number of ways. These special provisions do not apply, however, if the minor use may pose unreasonable risks or the lack of data would significantly delay EPA decisions. The legislation also establishes a USDA revolving grant program and a program for support of public health pesticides, analogous to the IR-4 program for agricultural uses, to be implemented jointly by the Public Health Service and EPA.

**Implications:** While maintaining safeguards for public health and environmental protection, these provisions will enhance efforts to ensure that effective pest control products are available to growers and for public health purposes.

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**Issue: Review of Antimicrobial Pesticides**

**Previous Law and Practice:** There were no special provisions for antimicrobial pesticides under previous law. EPA and FDA shared responsibilities for some products, and EPA reviewed applications consistent with Agency priorities, resources, and the timing of submissions.

**New Legislation:** The new law amends the definition of pesticide under FIFRA to exclude liquid chemical sterilants, which are to be regulated exclusively by

FDA. It also reforms the antimicrobial registration process, with the goal of achieving significantly shorter EPA review times.

**Implications:** While the review times set out in the new law will be difficult to achieve, EPA believes they are attainable and will strive to develop a program to meet them. Ending dual regulation and establishing more specific regulatory requirements will benefit manufacturers.

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**Issue: Expediting Review of Safer Pesticides**

**Previous Law and Practice:** EPA had established policies that give priority to applications for pesticides that appear to meet reduced risk criteria.

**New Legislation:** The new law requires EPA to develop criteria for reduced-risk pesticides, and expedite review of applications that reasonably appear to meet the criteria.

**Implications:** These provisions give a statutory mandate for expedited consideration of applications for safer pesticides, thereby enhancing public health and environmental protection. EPA will develop formal criteria and procedures for expedited reviews.

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**Issue: Maintenance Applicator and Service Technician Training**

**Previous Law and Practice:** No specific comparable provisions.

**New Legislation:** The new law creates a category of "Maintenance Applicators" and "Service Technicians," to include janitors, sanitation personnel, general maintenance personnel, and grounds maintenance personnel who use or supervise the use of structural or lawn pest control agents (other than restricted use pesticides). States are





authorized to establish minimum training requirements for such individuals.

Implications: States have explicit authority to require training. EPA is authorized to make states understand these provisions on minimum training requirements.

**NOTE:** For more information on FQPA, see EPA's Office of Pesticide Program's website on the internet at <http://www.epa.gov/pesticides>

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## **EPA REGIONS: The Other Part of the Pesticide Program**

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It's easy for people that usually deal with the Office of Pesticide Programs in Washington to overlook an essential part of the program. There are small outposts of the Pesticide Program located in each of EPA's ten regional offices. These offices serve a function that cannot be handled from Washington.

Some of the most important functions of the program occur in almost all states and tribal territories in the U.S., and the EPA regional offices oversee these activities.

- The states and territories have primacy; they have accepted the responsibility of enforcing the use provisions of FIFRA.
- The states provide this function under a cooperative agreement (grant) with the EPA regions.
- The Regions manage these agreements and pass critical information to the grantees in support of their efforts.

Under the grants, the states and tribes:

- Enforce federal laws and, at the same time, enforce state laws; maintain pesticide laboratory operations; certify and train commercial and private applicators; implement worker protection standards which includes training and enforcement; write and implement ground water state management plans;

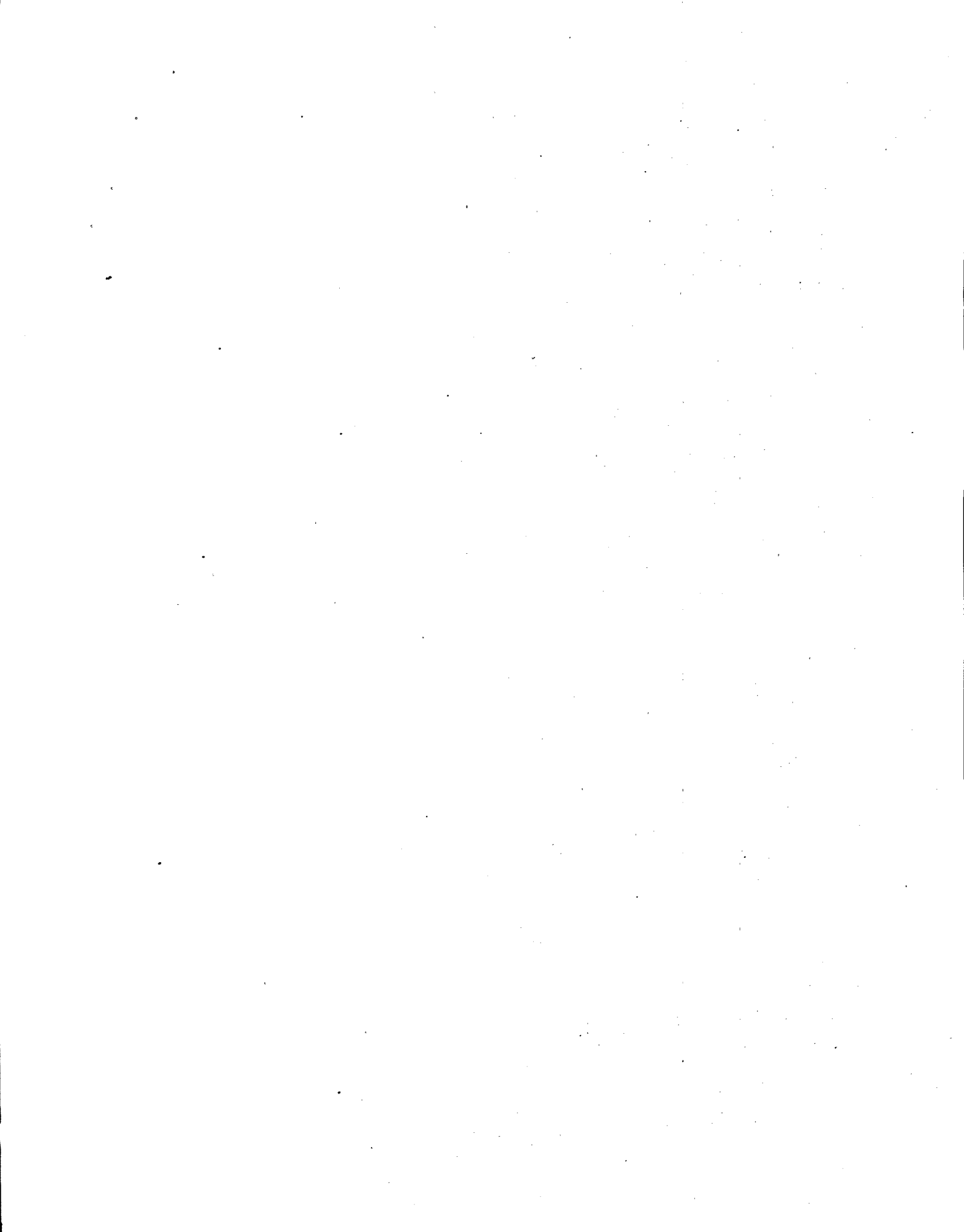
and negotiate and implement endangered species protection plans.

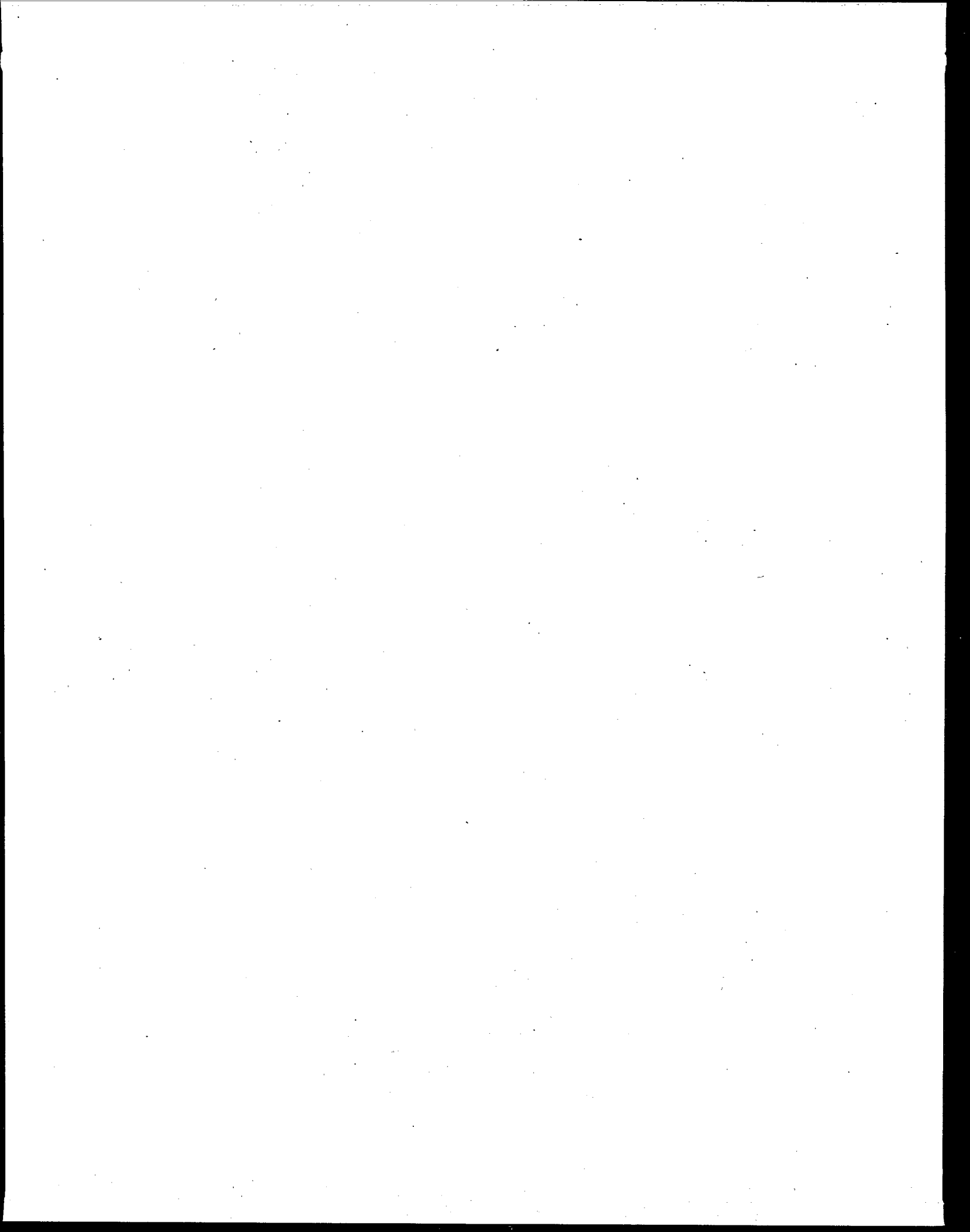
The Regions also work with the states and other partners to conduct programs and projects to reduce pesticide risk and promote safe handling and disposal of pesticides. These activities are all done in conjunction with the states. It may seem to the casual observer that the Regions have very little to do other than simple oversight. This is not the case. Not all work can be delegated to the states/tribes. Other activities include:

- Training federal and state/tribe inspectors that conduct the FIFRA inspections.
- Conducting laboratory audits to ensure that labs follow Good Laboratory Practice (GLP) procedures.
- Investigating and prosecuting high-profile or sensitive federal violations.
- Collecting and recording FIFRA Section 7 (pesticide production) data and enforcing this reporting requirement.
- Experiencing numerous encounters with the inquisitive public and, yes, responding to those Congressional inquiries.
- Assisting some wayward registrants and send others to Headquarters with problems.
- Dealing with the U.S. Customs Service and maintaining a pesticide import surveillance program.
- Holding workshops for states, tribes and the public to implement ground water strategies program and the worker protection programs.
- Continually providing Liaison between the public/state officials/regulate industry and Office of Pesticide Programs and EPA's Office of Enforcement and Compliance.
- Interacting with other EPA regional programs to provide a FIFRA-perspective to community-based environmental problems.
- Attending and speaking at public meetings to represent and explain the Program.

All of these activities, and more, are maintained with small staffs of dedicated, hard working individuals that care about the environment and want to see pesticides used correctly to ensure a safe and abundant food supply.







The activities in EPA's Regional Offices are moving toward a more multi-media approach. A team of Federal inspectors today are just as likely to inspect a facility for violations of the Water and Air Programs, as well as, programs that regulate the production and release of toxic chemicals. This trend is designed to save the federal government time and money and still maintain an enforcement presence. The regional pesticide programs have always been an integral part of the Program and have served the agricultural community and the general public well over the years.

| Region | Office Location   | General Phone                |
|--------|-------------------|------------------------------|
| I      | Boston, MA        | 617-565-3491                 |
| II     | Edison, NJ        | 908-321-6769                 |
| III    | Philadelphia, PA  | 215-566-2042                 |
| IV     | Atlanta, GA       | 404-562-8956                 |
| V      | Chicago, IL       | 312-353-2192                 |
| VI     | Dallas, TX        | 214-665-7240                 |
| VII    | Kansas City, KS   | 913-551-7033                 |
| VIII   | Denver, CO        | 303-312-6470                 |
| IX     | San Francisco, CA | 415-744-1087                 |
| X      | Seattle, WA       | 206-553-1091<br>800-424-4372 |

Note: Article written by *John Tice* in cooperation with PESP contacts in the Regions.

## PESP PARTICIPANTS RECEIVE IPM INNOVATORS AWARD

The Campbell Soup Company, Del Monte Foods and Sun-Maid Growers, along with two other groups, received the California Department of Pesticide Regulation's coveted "IPM Innovators" award.

Each of the organizations is proactive in leading the way for adopting IPM techniques and reducing the risk from pesticides. The awardees either effectively reduced the usage of pesticides, expanded application of pest monitoring, reduced worker exposure to pesticides, or, took other actions that earned recognition, according to the IPM Innovators Program.

To learn more about the IPM Innovators Program, visit their web site at: [html://cdpr.ca.gov](http://cdpr.ca.gov)

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