



May 6, 2005

Dear Colleagues,

As Director of the Office of Pesticide Programs, I am grateful to all who donated their time and energy to participate in the National Assessment of EPA's Pesticide Worker Safety Program. This effort was a large undertaking that combined an assessment of the implementation of the agricultural worker protection regulation, as well as an assessment of the pesticide applicator certification regulation and training program. It was a necessary process that advanced the Agency's mission to protect all pesticide workers and illustrated the value of public input in guiding our priorities.

The assessment has prompted many improvements in the Agency's pesticide worker safety program and has helped identify key activities for EPA to pursue in further improving the program. The assessment report findings can be grouped in broad areas, such as, the need to:

- expand and to upgrade applicator and worker competency*
- increase activities to promote safer work practices*
- improve worker training and communication with workers*
- focus on enforcement efforts and improve the training of inspectors*
- train health care providers and monitor pesticide incidents*
- focus on operational efficiencies*

The Agency has already responded to those suggestions that could be addressed in the near term. In addition, we have developed a long-term strategy, a post assessment action plan, to follow up on other findings. I hope that in our follow-up efforts, we can work together with the same positive spirit and energy that was so apparent in the assessment activities.

The pesticide worker safety program is a key component of EPA's efforts to protect human health and to safeguard the environment. I look forward to cooperating with program stakeholders as we initiate our post assessment action plan to continue to improve the pesticide worker safety program.

/s/

*Jim Jones, Director
Office of Pesticide Programs*



REPORT ON THE NATIONAL ASSESSMENT OF EPA'S PESTICIDE WORKER SAFETY PROGRAM



U.S. Environmental Protection Agency
Office of Pesticide Programs

Acknowledgement

As Director of the Office of Pesticide Programs, I am grateful to all who donated their time and energy to participate in the National Assessment of EPA's Pesticide Worker Safety Program. This effort was a large undertaking that combined an assessment of the implementation of the agricultural worker protection regulation, as well as an assessment of the pesticide applicator certification regulation and training program. It was a necessary process that advanced the Agency's mission to protect all pesticide workers and illustrated the value of public input in guiding our priorities. The assessment has prompted many improvements in the Agency's pesticide worker safety program and has helped identify key activities for EPA to pursue in further improving the program. The assessment would not have been successful without the dedication and contribution of the program's stakeholders and regulatory partners. Thank you.

***James J. Jones, Director
Office of Pesticide Programs***

U.S. Environmental Protection Agency
Office of Pesticide Programs
Washington, D.C.
www.epa.gov/pesticides



Table of Contents

Executive Summary	1
Introduction	3
Results of the Assessment	10
Agricultural Worker Protection Program Suggested Improvements	11
Certification and Training Program Suggested Improvements	19
Post-Assessment Action Plan	23
Conclusion	26
Appendix I: Summary of EPA Pesticide Worker Safety Projects.....	27



Executive Summary

“EPA is committed to assuring safe working conditions and adequate workplace protections for all pesticide workers in the United States. Pesticide worker safety is one of OPP’s highest priorities.”

*—Jim Jones
Director of the
Office of
Pesticide
Programs*

This report provides the findings from the national assessment of the United States Environmental Protection Agency’s (EPA) pesticide worker safety field program. EPA conducted an in-depth review of its pesticide worker safety field program to gauge the status of implementation and identify areas for improvement. The worker safety program assessment consisted of : 1) the national assessment of the agricultural worker protection regulation (WP) and supporting program activities; and 2) an assessment of the pesticide applicator certification regulation and training program by the Certification and Training Assessment Group (CTAG).

Attendees at the three agricultural worker assessment meetings numbered in the hundreds. Representatives from farmworker advocates, the cooperative extension service, commodity organizations, our state regulatory partners, other federal agency representatives, pesticide industry and individual growers met with EPA to voice their concerns and issues with the implementation of the WP. The certification program for pesticide applicators has been reviewed by the CTAG, whose membership includes our state and tribal partners, USDA, and cooperative extension.

The various individual opinions and suggestions made during the course of the assessment centered on a few broad improvement areas: the expansion and upgrade of applicator and worker competency and promotion of safer work practices, improved training of and communication with all pesticide workers, increased enforcement efforts and improved training of inspectors, training of health care providers and monitoring of pesticide incidents, and finally, program operation, efficiency and funding.

When feasible, the Agency has pursued some of the suggestions received before completion of the assessment. The following are complete or underway:

- Revision and development of improved outreach and compliance assistance materials , maintenance of a catalog of training resources and a central point of distribution for these materials
- Improved guidance and expanded training for enforcement inspectors, and increased oversight by EPA regional offices
- Improved training materials for train-the-trainer programs which will promote better worker training
- Continued funding of worker training
- Conducting research into appropriate methods for risk communication to workers
- Expanded funding of pesticide incident monitoring
- Revised grant guidance to states for improved enforcement tracking, incident monitoring and program reporting

- Pesticide worker safety train-the-trainer programs in Mexico and Central America
- Held and will continue to hold public pesticide worker safety forums for stakeholder input
- Developed a reporting template for state certification programs to facilitate improved program management
- Continued funding of the health care provider initiative

Additionally, the Agency plans to pursue:

- Development of training materials tailored to specific pesticide using sectors and the labor force employed by those sectors.
- Support of the development of diagnostic tools for health care providers to better care for individuals who work with or around pesticides.
- Revision of regulations which govern the prescribed work practices, training and competency gauges of pesticide workers, including applicators, mixers, loaders, handlers, crop advisors, and agricultural field workers.
- Improvement of methods to gather information on pesticide-related incidents to be used to improve regulation of pesticide products.

A number of the suggestions for improvement would require rule change in order to implement. The Agency is considering these and plans to initiate rule revisions to the Worker Protection, Certification of Pesticide Applicators and Labeling Requirements for Pesticides and Devices regulations. The Agency is considering:

- Strengthening the worker training provisions, including content, grace period, retraining interval, trainer requirements and verification system.
- Establishing a hazard communication program for workers including training and field notification and possible changes to the central posting requirements.
- Reconsidering the retaliation provisions of the worker protection regulation.
- Expanding the scope of the applicator rule to include all individuals that mix, load or apply any pesticide as part of their occupation, including handlers as currently defined in the worker protection regulation.
- Establishing minimum standards for all occupational users, including competency gauges and levels of licensing based on risk profiles.
- Standardizing applicator competency and licensing programs administered at the state, tribal, or federal level.
- Developed, with Canada, valid exams for core applicator competencies.

Over the next few years, the Agency will pursue the development of regulations that enable the improvements outlined here, improve the monitoring of pesticide incidents to better link to the pesticide regulatory system, develop improved pesticide occupational training materials and competency testing, as funding allows. The National Assessment of EPA's Pesticide Worker Safety Program has already led to improvements and has helped the Agency to identify key activities on which to focus for future improvement.





Introduction

The combined national assessment is the product of workshop sessions and workgroup meetings designed to assess the status of program implementation and to identify suggested areas of improvement, and involved a diverse collection of stakeholders.

This report summarizes the findings from the national assessment of the United States Environmental Protection Agency's (EPA) pesticide worker safety field program. The pesticide worker safety program at EPA consists of several elements, including: the worker safety regulations; the field programs, which complement the regulations; and the science policy, worker risk assessment and risk mitigation components. These elements are a critical component of EPA's mission to protect human health and the environment. This assessment is limited to the first two elements - the worker safety regulations and related field programs. The national assessment report provides the results of a review of the national pesticide worker safety program. The assessment was not designed to evaluate individual state programs.

EPA conducted the review of its pesticide worker safety regulations and field programs to gauge the status of implementation and identify areas for improvement. The worker safety field program assessment consisted of two parts: the national assessment of the agricultural worker protection regulation (WP) and its related field components, and an assessment of the pesticide applicator certification regulation and training program (C&T) by the Certification and Training Assessment Group (CTAG). For both parts of the program, the assessment process included representatives from a diverse set of interested parties.

The national assessment for the agricultural worker protection program was initiated based on issues brought forward by stakeholders, by a planned program evaluation, and by the Government Accountability Office (GAO) and Children's Health Protection Advisory Committee (CHPAC).

The national assessment for the agricultural worker protection program offered stakeholders and the interested public an opportunity to share their concerns in a workshop setting. Due to elevated and popular interest, the workshops were held in states with significant agricultural production and labor. Attendees at each of the three agricultural worker protection program assessment workshops numbered in the hundreds.

Representatives from farm worker advocacy groups, the cooperative extension service, commodity organizations, our state regulatory partners, and individual growers met in workshops with EPA in Texas, California, and Florida in 2000 and 2002 to voice their concerns and issues with the implementation of the agricultural worker protection regulation. From these sessions, workgroups were established to address the primary concerns. The Agency acted quickly to implement changes based on certain findings. At a meeting held in Washington, DC in 2003, the assessment workgroups and EPA presented the findings from the working sessions. The work groups' activity continued through 2004.

The certification regulation and training program for pesticide applicators was reviewed by the Certification and Training Assessment Group (CTAG). Established in 1996 to assess the status of the C&T program, CTAG meets twice a year; membership includes our state lead agency and tribal partners, USDA, and cooperative extension. Both the regulatory and the extension-led education and training aspects were examined as part of the process.

A wide array of stakeholders participated in several focused workgroup sessions to identify the full range of implementation issues and suggest strategies for improving the C&T program. The CTAG effort resulted in an extensive report entitled, “Pesticide Safety in the 21st Century.” For a copy of the CTAG report, or for more information about CTAG and its activities, visit the official CTAG website: <http://pep.wsu.edu/ctag>.

The process resulted in a variety of suggested improvements. The Agency moved quickly to implement certain critical changes, and began work on other suggestions which would contribute to continued program improvement. This report contains a description of the process, a listing of the key findings, an action plan, and supplementary information on EPA’s worker safety field program.

EPA’s Role in Pesticide Worker Safety

EPA’s Office of Pesticide Programs (OPP) evaluates data and information to ensure pesticides meet stringent federal safety standards designed to protect human health and the environment. In connection with its mandate to safeguard public health and the environment from the risks posed by pesticides, EPA is responsible for assuring the occupational safety of pesticide workers—those people whose jobs require them to work with or around pesticides. This includes private and commercial pesticide applicators, millions of agricultural farm workers, and other people that make or assist with pesticide applications as part of their job.

The task of protecting pesticide workers from occupational exposure to pesticides presents a challenge, given the complexity of the science and policy issues involving pesticide use, the variability of pesticide use patterns, and the diversity of the labor population being served. To meet this challenge, EPA has developed a robust pesticide worker safety program and is committed to assuring safe working conditions and adequate workplace protections for all pesticide workers in the United States. OPP has made pesticide worker safety one of its highest priorities.

As mentioned previously, the EPA pesticide worker safety program includes a sound science component that involves occupational risk assessment and risk management decision-making that culminate in product registration and labeling provisions for worker safety. This report, however, covers the pesticide worker safety field components of the program – the two major worker safety regulations - the agricultural worker protection regulation and the pesticide applicator certification regulation - and their complementary field components. These, along with a special initiative for health care providers, constitute the strategic framework for the pesticide worker safety field program. Together these elements provide a range of protections for pesticide workers. The major components of this program are described in detail in the following section.





The Role of States, Tribes, Territories, and State Cooperative Extension Services

EPA's strategic plan is to ensure healthy communities and ecosystems. Achieving this goal involves protecting human health and the environment from risks posed by pesticides and promoting safer means of pest control. To achieve this mission, EPA has developed a comprehensive strategy grounded in risk assessment and risk management principles. The states, tribes, territories, and state cooperative extension services play a critical role in risk management through their pesticide worker safety programs. The lead regulatory agencies, the safety training agencies, and EPA work cooperatively to minimize risk to the public and to those who work with and around pesticides. EPA helps support lead regulatory and safety training agency programs through grants and cooperative agreements. EPA and its grant and cooperator partners are responsible for assuring that programs implemented through these vehicles achieve the health and environmental objectives established in the Agency's strategic plan. These efforts include assuring that the programs make efficient use of resources and that agreed upon activities are appropriately conducted to reduce the risks associated with pesticide use.

The Major Components of EPA's Worker Safety Program

EPA's pesticide worker safety field program is made up of three major components: the certification of applicator competency, protections for agricultural labor, and a health care initiative, summarized below. OPP works with an extensive network of partners including EPA's Office of Enforcement and Compliance Assurance (OECA) and regional offices, state and tribal pesticide regulatory agencies, the US Department of Agriculture, and other stakeholders to implement the field program components of the pesticide worker safety program. To enhance its regulatory efforts, EPA funds a variety of collaborative field projects and activities through grants to governmental and non-governmental organizations.

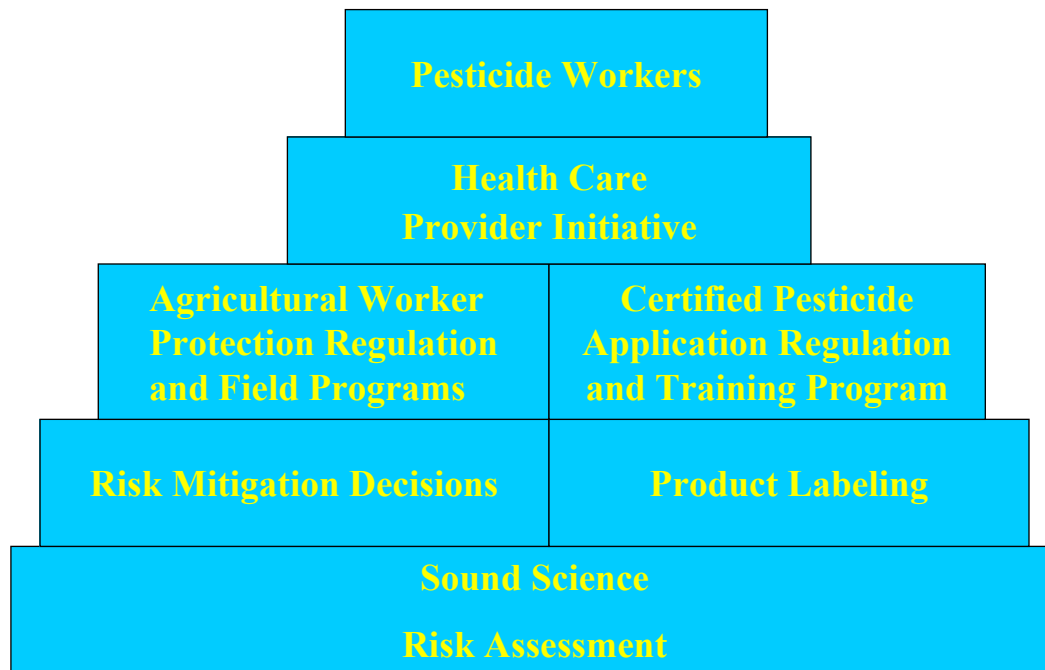
Agricultural Worker Protection. The agricultural worker protection regulation provides protections for people who enter fields after pesticide application to perform crop-related tasks, such as harvesting or pruning, as well as for those who mix, load, and handle pesticides. The regulation has provisions for training, treated area posting, entry restrictions and protective equipment. Ensuring compliance is the responsibility of the employer.

Pesticide Applicator Certification. The regulation for the certification of pesticide applicators requires those with intentions to apply restricted use products to demonstrate competency and become certified to use these pesticides. This requirement is designed to assure that certified applicators are adequately prepared to protect human health and/or the environment from misapplication and exposure to pesticides.

Health Care Providers Initiative. EPA and interested partners developed the National Strategies for Health Care Providers: Pesticides Initiative in response to a need for increased skills in the medical community in recognizing and treating pesticide poisoning. The initiative is a collaborative effort designed to raise the awareness of the medical community regarding proper diagnosis and effective treatment of pesticide-related illnesses.

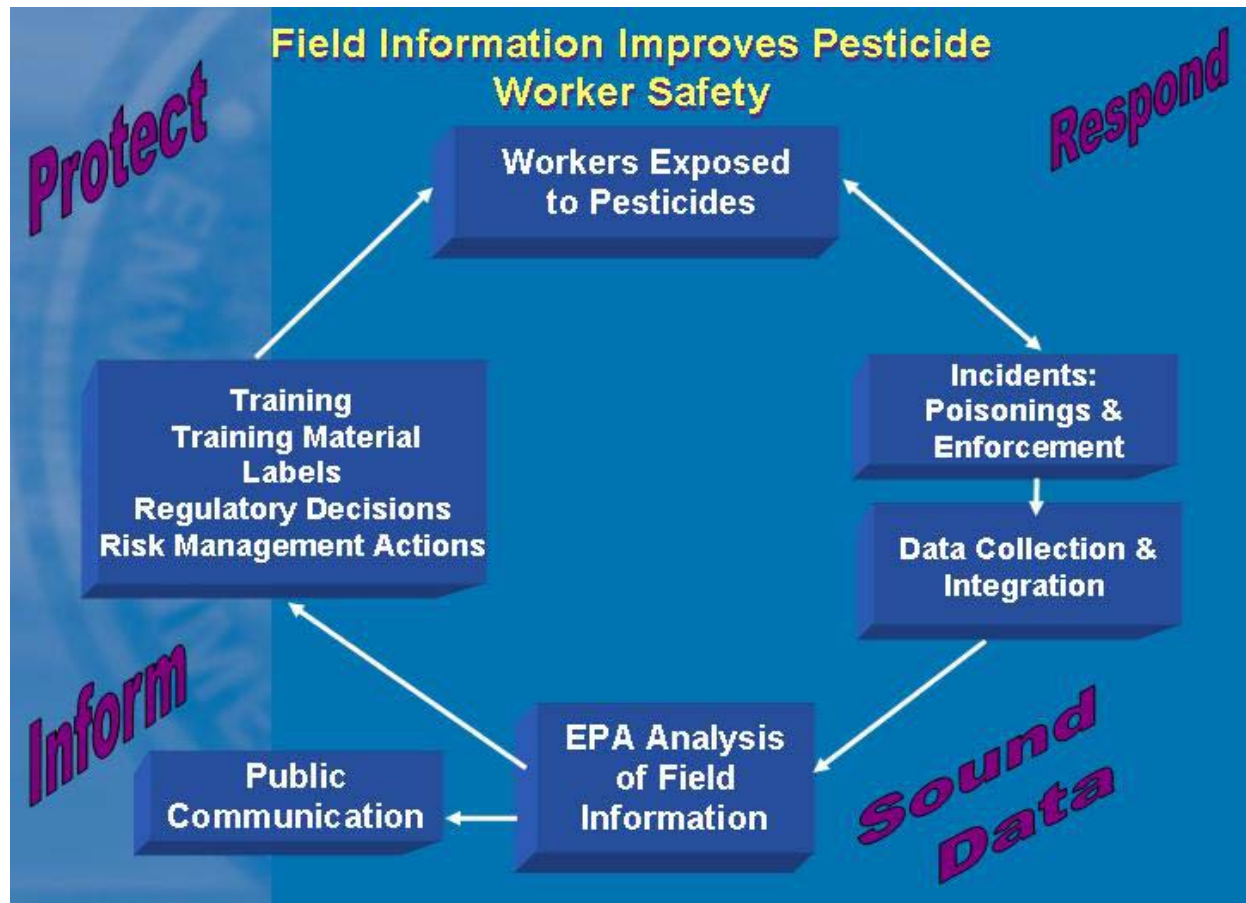
Strategic Framework for Pesticide Worker Safety Field Programs

The integration of the components described on the previous pages - the agricultural worker protection and applicator certification regulations, the respective field program components, and the health care provider initiative - creates the basic strategic framework for EPA's pesticide worker safety field program. When these elements are linked appropriately, they provide a comprehensive network of field-based protections that work in combination to protect America's pesticide workers.



The above diagram illustrates how regulatory and non-regulatory components integrate to create the strategic framework for EPA's pesticide worker safety program.





The above diagram illustrates the role and the importance of field data and tracking systems. They provide a means to allow pesticide field data to be incorporated into basic program functions, improving EPA's future science decisions, regulatory decisions, and training / outreach materials related to pesticide worker safety.

The Agricultural Worker Protection National Assessment

The worker protection assessment focused on the effectiveness of EPA's field implementation of the WP regulation. The worker protection assessment was initiated by OPP for the reasons described here:

EPA's Planned Program Evaluation. Early in the agricultural worker protection regulation's field implementation effort issues arose regarding of the regulation and conflicts with field realities. Although addressed at the time, EPA committed to re-evaluate its field implementation effort more completely after the regulation and the early revisions had been in full effect for a longer period of time.

The Government Accountability Office conducted a study of EPA's agricultural worker protection program and issued a report entitled, "Pesticides: Improvements Needed to Ensure the Safety of Farmworkers and their Children." The report identified several areas of concern regarding the program, and included recommendations for program improvements. In response, EPA committed to review the agricultural worker protection program and take steps to address the concerns that were raised.

Children's Health Protection Advisory Committee identified areas of concern with the agricultural worker protection program in its evaluation of the potential risks to farmworker children from pesticides. The Agency agreed to assess certain science aspects of its agricultural worker safety program to assure that its regulatory decisions were adequately protective of farmworker children that may be working in agricultural areas.

The WP assessment effort consisted of three EPA-led public workshops held in Austin, Texas; Sacramento, California; and Orlando, Florida. The workshops included broad stakeholder participation from all segments of the regulated and protected community, including EPA's regulatory partners. The workshops led to the formation of follow-up workgroups. The facilitated workgroups discussed the full range of issues identified during the first part of the process; identified key implementation issues and regulatory problems; and developed suggestions for program improvements. The worker protection assessment culminated in a final meeting held in Washington, DC where the various assessment workgroups presented their findings to EPA.





The Certification and Training Assessment Group

The Certification and Training Assessment Group (CTAG) was formed in response to the recognized need to assess the operation of the applicator certification regulation and training components of the worker safety program. The review encompassed the regulatory aspects of the program as well as the extension-led education and training aspects of the program.

A wide array of stakeholders participated in focused workgroup sessions to identify the full range of implementation issues and to suggest strategies for improving the C&T program and moving it forward. The CTAG effort resulted in an extensive report entitled, “Pesticide Safety in the 21st Century.” For a copy of the CTAG report, or for more information about CTAG and their activities, you can visit the official CTAG website:

<http://pep.wsu.edu/ctag>.

Results of the Assessment



The workshop and workgroup processes resulted in numerous suggestions and the identification of a number of important issues, as a result of the commitment of time and energy by stakeholders and agency staff. Conducting the national assessment required a substantial investment of resources by the Agency and participating stakeholders. Given the importance of the effort and the results, it was a valuable resource investment. Some of the immediate results from the assessment include:

- ❖ **Actions Taken** - Suggestions being addressed through workgroup efforts and workshops; funding provided where possible to support important initiatives; and programs developed to further improve the quality of worker protections.
- ❖ **Greater Transparency** – EPA made clear its approach to worker protections; involved stakeholders in workshops and in developing new materials; and has generally made its efforts and processes more accessible through meetings and public forums.
- ❖ **Increased Awareness** – The assessment raised awareness of the program and the array of activities associated with it, and focused attention on funding, the existing infrastructure, and the difficult issues faced by EPA and its state and tribal regulatory partners.
- ❖ **Better Program Coordination** – The assessment results indicated that an integrated approach to worker safety was needed. Efforts in this area have improved coordination across the pesticide enforcement and programmatic functions at EPA, and there is now better coordination with regulatory partners on field implementation.
- ❖ **Worker Safety Network** - The assessment process helped to establish a pesticide worker safety “network.” This network of interested and engaged stakeholders has strengthened the program and produced opportunities for partnership and collaboration.
- ❖ **Identification of Areas for Program Improvement** – The assessment highlighted problems with current methodologies and resulted in suggestions for program improvements and research. It also highlighted the need to more closely link risk assessment and risk management processes with field implementation realities. The assessment resulted in identification of specific field implementation concerns and weaknesses where operational improvements or regulatory changes might be considered.

“One of the goals of the assessment was to provide a forum for stakeholders in the program to come together and work collectively to find ways to improve the program. The broad coalition of partners that committed their time and effort to the assessment process was key to its successful outcome.”

*—Kevin Keane
Chief of the
Certification and
Worker Protection
Branch in OPP*

Agricultural Worker Protection Program Suggested Improvements



The assessment process helped to establish a pesticide worker safety network of interested and engaged stakeholders that has strengthened the program and produced new opportunities for partnership and collaboration.

One of the major products of the national assessment effort was the development of a set of suggested program improvements. The intent of the assessment meetings and subsequent workshops was not to reach consensus, but rather to capture the full range of suggestions from all stakeholders. This document contains a representative sample, highlighting the most important and pressing issues related to the continued improvement of the worker safety program. The suggestions are grouped according to key theme areas—highlighted below—that emerged over the course of the assessment process.

- Program Outreach and Communications
- Agricultural Worker Protection Training
- Agricultural Worker Protection and Label Regulations
- Incident Monitoring and Health Care
- Hazard Communication
- General Program Issues
- Compliance and Enforcement

Key of Status Terms:

Done: EPA has completed its actions on this suggestion.

Doing: Work is currently underway to address this suggested improvement and will be completed in the near future.

Ongoing: EPA is committed to maintaining continued efforts related to this suggested improvement.

Planned: EPA will address this suggested improvement in the future as program resources allow.

Considering: EPA will consider this suggested improvement in future decisions related to the program.

Program Outreach and Communications

Major Concern and Suggested Improvement	Status	Response
Develop worker outreach material with information about how to file complaints and how to get information about pesticides.	Ongoing	EPA will continue to work with state regulatory partners to develop and make outreach material available.
Develop a centralized resource center for training materials and compliance assistance information. Use the web to facilitate public access.	Ongoing	EPA is using the Office of Enforcement and Compliance Assistance's Ag Center as a central site for training materials and compliance assistance information. Ag Center materials are web accessible at http://www.epa.gov/agriculture/twor.html
Work with stakeholders to evaluate existing compliance assistance and outreach materials and to develop new materials where needed.	Ongoing	EPA is updating the How To Comply manual based on stakeholder input. EPA is working with its partners to identify other priorities for compliance assistance and outreach materials.
Alert the regulated community of worker protection label changes that result from re-registration decisions.	Ongoing	OPP's Communications Branch maintains a listserv to communicate pesticide program news to interested stakeholders.
Maintain a catalog of worker protection resources and training materials.	Ongoing	A list of EPA supported worker protection material is available on the Ag Center web site http://www.epa.gov/agriculture/twor.html
Develop outreach materials for both growers and workers in multiple languages.	Ongoing	EPA has supported translation of its materials and will continue to do so, as resources permit.
Develop focused outreach materials for different segments of the regulated community — employers, labor contractors, employees, health care providers, etc.	Planned	EPA will work to identify outreach priorities for different segments of the regulated community and will pursue projects as resources permit.

Agricultural Worker Protection Training

Develop and implement a national train-the-trainer (TTT) program.	Doing	As a result of the assessment, EPA and stakeholders developed and piloted a national TTT manual / program. EPA will promote the adoption of TTT programs and make curricula available. http://www.epa.gov/oppfead1/safety/workshops.htm
Support advocacy-based training programs for farmworkers.	Ongoing	EPA funds a farmworker service organization pesticide safety training program.
Encourage and promote interactive training programs	Ongoing	EPA supports activity designed to improve the quality of trainers and training programs.

Major Concern and Suggested Improvement	Status	Response
Develop better quality pesticide safety training materials that meet the needs of the different populations. [The general training workgroup report contains a list of suggested improvements.]	Ongoing	EPA will follow the suggestions of the general training assessment workgroup, as much as possible, when developing or reviewing training materials. http://www.epa.gov/oppfead1/safety/workshops.htm
Develop and showcase model training programs.	Ongoing	EPA piloted a national model train-the trainer program and will pursue similar projects, as resources permit.
Evaluate training programs to collect data on behavior change and risk reduction in order to determine outcome measures of program effectiveness.	Ongoing	EPA is developing program measures through the use of a variety of evaluation tools.
Develop training packages for specific agricultural sectors.	Planned	EPA is interested in piloting this in the future, as resources permit.

Agricultural Worker Protection & Label Regulations

Include additional information in worker training to improve the protection of workers. [See general training assessment workgroup report for details.]	Considering	Implementing these suggestions would require regulation change. EPA will consider these suggestions, and others, in the planned revisions of the pesticide worker safety program regulations.
Shorten the 5-year worker re-training interval to between 1-3 years.	Considering	
Eliminate the provisions which permit certified applicators and trained handlers to be trainers of workers.	Considering	
Eliminate grace period before workers must be trained.	Considering	
Require employers to document training of workers and handlers.	Considering	
Move handler training from the WP regulation to the applicator regulation.	Considering	
Implement a mandatory training verification system.	Considering	
Establish more specific standards for the content and delivery of training programs to assure the quality of training.	Considering	

Major Concern and Suggested Improvement	Status	Response
Require fit testing and medical monitoring for products with respirator requirements, consistent with OSHA and NIOSH requirements.	Considering	Implementing these suggestions would require regulation change. EPA will consider these suggestions, and others, in the planned revisions of the pesticide worker safety program regulations.
Impose label restrictions prohibiting children under the age of 16 from working in fields treated with pesticides that have high acute toxicity, or chronic or developmental concerns.	Considering	
Address pesticide labeling problems that allow commercial agricultural operations to avoid WP coverage by using non-WP labeled products.	Considering	
Consider changes to the warning sign, central information display, and field posting / notification provisions to find more effective ways to provide intended protections.	Considering	
Expand the scope of worker protection regulation to cover non-agricultural operations.	Considering	
Strengthen the retaliation provisions.	Considering	

Incident Monitoring and Health Care

Establish a national pesticide incident monitoring and reporting program, so that EPA will have accurate information on the occupational pesticide exposure and illness.	Ongoing	EPA is funding several efforts to expand pesticide incident monitoring and reporting and to better identify and use existing sources of data related to incident monitoring and reporting.
Develop worker outreach materials focusing on pesticide related illness. Coordinate with migrant clinics to provide these materials to workers seeking medical attention.	Ongoing	In grant guidance, EPA directs states and tribes to coordinate with migrant clinics to provide outreach to workers on how to contact the pesticide regulatory agency to report pesticide-related incidents.
Integrate the efforts of the National Strategy for Health Care Providers more closely with the worker safety program. Involve the migrant clinicians network to achieve better health care for pesticide workers.	Considering	EPA agrees that there is a need for such information and is considering sponsoring workshops on this topic area.

Major Concern and Suggested Improvement	Status	Response
Require that acute and chronic hazards and risks to workers and handlers be listed on pesticide labels.	Considering	EPA will consider this in its long term strategic planning efforts for the improvement of pesticide worker safety.
Develop guidance for the health care provider community on appropriate diagnostic tools and other types of documentation to improve the diagnosis of pesticide poisonings and illnesses.	Planned	EPA agrees that there is a need for such information and is considering sponsoring workshops on this topic area.

Hazard Communication

Conduct hazard communication pilot projects to evaluate different regulatory approaches for carrying out pesticide- and site-specific hazard communication.	Doing	EPA will conduct hazard communication pilots. The pilot designs will be based on the suggestions of the national assessment hazard communication pilot project workgroup.
Establish training requirements for hazard communication on site-specific pesticide hazards and address the stakeholder concerns identified in the hazard communication working sessions.	Considering	EPA agrees with the need for hazard communication training on site-specific pesticide hazards. Meeting this need will require regulation change. EPA will consider this suggestion in the planned amendments to the pesticide worker safety program regulations.

General Program

Convene periodic workshops on pesticide worker safety to provide a forum for the discussion of issues related to pesticide worker safety and occupational pesticide illness and exposure.	Ongoing	EPA plans to hold regular workshops with this focus.
Stress engineering controls as the primary risk management option for regulatory decisions that call for reducing exposure.	Ongoing	EPA agrees that engineering controls can mitigate the risks to workers and will strive to place greater emphasis on their use.
Address the lack of adequate resources to properly implement and enforce the worker protection program. Make pesticide worker safety a high priority by allocating more resources to the program.	Ongoing	EPA has identified pesticide worker safety as a high priority and funds generated by the Pesticide Registration Improvement Act have been allocated to enhance worker safety program activity.
Explore forming more collaborative partnerships and funding more innovative worker safety projects to help accomplish worker protection program goals.	Ongoing	EPA funds many innovative worker safety projects and activities through grants to governmental and non-governmental organizations. EPA collaborates on a wide variety of projects to enhance its core regulatory program and advance its objectives.

Compliance and Enforcement

Major Concern and Suggested Improvement	Status	Response
Assure workers get information on how to report tips or file complaints regarding pesticide incidents or retaliation.	Done	Through the annual grant guidance, EPA directed states and tribes to assure outreach to workers on how to report tips or file complaints regarding pesticide incidents or retaliation.
Improve national guidance to state and tribal enforcement programs on how to conduct effective worker protection inspections, including development of a national checklist to promote thorough inspections.	Done	EPA revised worker protection inspection guidance, which establishes clear national standards for conducting worker protection inspections, and addresses reporting criteria, worker interviews, and a range of other issues that had been identified by stakeholders and regulatory partners. EPA provides guidance for conducting worker interviews
Develop standard operating procedures for the complaint process to assure that complaints involving critical health effects are given priority response times.	Done	States and tribes agree to follow federal guidelines that dictate inspection and enforcement response times for investigations of significant pesticide misuse cases, such as complaints involving alleged health effects.
Establish clear reporting guidelines for states and tribes regarding the information needed by EPA on worker protection enforcement.	Done	EPA established clear reporting guidelines for states and tribes in the revised inspection guidance.
Place more emphasis on conducting interviews with workers and handlers during inspections. Develop material to help inspectors overcome cultural and language barriers when conducting interviews	Ongoing	EPA has made interviews with workers and handlers a required element of certain worker protection inspections, and encourages such interviews in other inspections as appropriate.
Involve farmworker groups in the development of inspector training in this area.	Ongoing	Where appropriate, EPA will consult with farmworkers, or their representatives, when developing new training material.
Develop a national inspection checklist to promote thorough inspections.	Ongoing	EPA is working with states to develop a national inspection checklist.
Develop material to help inspectors conduct interviews with workers such as how to overcome cultural and language barriers and how to work better with farmworkers on complaints to maximize cooperation and minimize retaliation potential.	Ongoing	EPA provides tips for conducting worker interviews in the revised inspection guidance. EPA is developing more guidance and a training manual to help inspectors conduct interviews with workers. This material will address stakeholder concerns.

Major Concern and Suggested Improvement	Status	Response
Produce an annual national report on the results of state / tribal worker protection enforcement activities.	Ongoing	EPA compiled recent state / tribal worker protection enforcement data in a national report, available on EPA's website at http://www.epa.gov/compliance/monitoring/programs/fifra/wpsreport.html . EPA will do this annually.
Reactivate the worker protection interpretive guidance workgroup (IGW) process to address worker protection enforcement policy issues.	Ongoing	EPA reactivated the IGW process in 2004. New IGW decisions will be posted to EPA OPP website.
Increase the field presence of EPA staff, so they can work with inspectors on worker protection inspections. Provide training to federal oversight personnel.	Ongoing	As resources permit, regional staff are encouraged to conduct more field visits with state / tribal inspectors on worker protection inspections. EPA staff train with state inspectors during annual training programs, national pesticide inspector residential training (PIRT) courses, and a worker safety case developer training.
Provide more worker protection inspection training opportunities for state and tribal inspectors.	Ongoing	Through the national pesticide inspector residential training (PIRT) program, EPA has provided several worker protection inspection focused trainings for state and tribal inspectors. State and tribal personnel attended a worker safety case developer training. Regions sponsor annual inspector training programs for state and tribal personnel. EPA will continue to work with states and tribes to provide training as needed, and as resources allow.
Collect information on the number and type of worker protection related complaints states receive and the results of state responses.	Ongoing	EPA is now requiring states and tribes to report information on the number of and results from occupational pesticide exposure or incident complaints received and investigated.
Establish a national toll free hot-line for workers to call to file worker protection complaints and / or report pesticide incidents.	Ongoing	EPA is exploring opportunities to use existing infrastructure to provide this service.
Compile information on state penalty policies for worker protection and make it publicly available.	Considering	EPA will consider this step as part of its oversight efforts. New performance measures for the pesticide state enforcement grants will look at effectiveness of state enforcement programs in preventing future violations, including worker safety.

Major Concern and Suggested Improvement	Status	Response
Establish an oversight committee, including farmworker representatives, to review state implementation of the worker protection program.	See Response	EPA has seen the overall assessment effort result in changes that address general oversight concerns, and will continue to work with stakeholders to address their specific concerns.
Assure that state complaint response procedures preserve worker confidentiality to the maximum extent possible.	See Response	States must follow state laws and procedures throughout the investigation process for a pesticide incident. EPA has no authority in this area, but encourages states to consider worker issues when responding to complaints.
Encourage appointment of worker advocates to state pesticide boards, so that consideration is given to worker issues in pesticide decisions.	See Response	EPA has no authority to direct states to include specific representatives on state pesticide boards. Through annual grant guidance, EPA does encourage states to meet with worker advocates.
Maintain stronger oversight of states and tribes, make the oversight process more transparent, define clear performance standards for enforcement programs, and establish a clear policy for dealing with states and tribes that fail to meet standards.	See response	EPA conducted a detailed review of the field enforcement of the worker protection program. OECA's report on the Program Element Review should address these issues.
Promote adoption of penalty policies and enforcement remedies directing that fines for worker protection violations be used to fund worker protection safety activities.	See Response	EPA has no authority to direct states on how to use revenue from fines. EPA does encourage innovative penalty policies that allow fines to be used for projects related to the nature of the violation.



Certification and Training Program Suggested Improvements

The Certification and Training Assessment Group (CTAG) conducted an extensive effort to evaluate the applicator certification regulation and training (C&T) program which resulted in the report “Pesticide Safety in the 21st Century.” The CTAG report does not reflect consensus by the participants, rather it identifies a wide range of issues with and suggestions for improving this portion of the worker safety program. This document does not capture each suggestion outlined in the report, but gives a sense of the critical areas and most important issues related to the C&T program.

The ongoing efforts of CTAG have resulted in a variety of reports and issue papers that contain suggestions for improving the operation and infrastructure of the pesticide applicator certification and training program. The full range of CTAG suggestions and issue papers is available on the CTAG website: <http://pep.wsu.edu/ctag>.

Assessment suggestions for the certification and training program are listed under the following goal areas:

- Provide Quality Training Programs
- Improve Applicator Competency
- Ensure Adequate and Equitable Program Funding
- Improve Program Operation and Efficiency

The component assessments were conducted concurrently and shared the basic common approach of having an emphasis on public participation and stakeholder involvement in the assessment process.

Provide Quality Training Programs

Major Concern and Suggested Improvement	Status	Response
Provide mechanisms to improve the skills of trainers (such as train-the-trainer programs).	Done	EPA has supported the development and operation of the southern region Pesticide Safety Education Center and will promote similar efforts in other regions.
Create a website as source of information about new and revised training materials.	Done	EPA supported the development of such a website by Washington State University. [http://pep.wsu.edu/psp/]
Develop a national core manual and training materials for categories that are nationally consistent. National materials should be developed in electronic and modular formats.	Doing	EPA collaborated with stakeholders to develop a new core manual in electronic and modular format. Category training materials are being considered.
Establish procedures for coordinating regional and / or national development and review of applicator training materials to make better use of program resources and to help assure national training quality and consistency.	Ongoing	EPA is working with stakeholders to identify areas where savings can be gained through this approach. Projects are being developed in these areas: fumigation, aerial, rights-of-way, and structural pest control. Others are being considered.
Establish a national network of subject matter and technology experts to meet scarce resource needs.	Ongoing	EPA has played an active role in the efforts of the American Association of Pesticide Safety Educators network to meet this need.
Update the national competency standards for pesticide applicators and develop a new national model curriculum for training.	Considering	EPA will consider this in the planned amendments of the pesticide worker safety program regulations.

Improve Applicator Competency

Develop program policy or guidance related to the American Disabilities Act and share this with program partners.	Done	EPA has developed guidance on the American Disabilities Act as it relates to applicator certification programs and made it available to our program partners.
Develop an updated, validated national core exam and manual for applicator training and certification.	Doing	The new core exam is being piloted by several states and the new core manual should be available in 2005.
Facilitate reciprocity agreements between states.	Ongoing	EPA plans to facilitate reciprocity using the state plan template.

Major Concern and Suggested Improvement	Status	Response
Require states to use accepted validation processes to develop certification exams.	Considering	EPA will consider these suggestions, and others, in the planned amendments of the pesticide worker safety program regulations.
Establish regulatory prerequisites for pesticide applicator certification (minimum age, English proficiency, job experience).	Considering	
Establish a national recertification period (maximum of five years), and require continuing education for applicators to get recertified.	Considering	
Require all certified applicators to pass proctored, closed-book, written exams to demonstrate competency.	Considering	
Expand the scope of the certification of pesticide applicators regulation to include all who apply pesticides as part of their occupation.	Considering	
Incorporate the agricultural worker protection regulation handler training requirements in an amended certification regulation.	Considering	
Develop and implement a tiered classification system for pesticides, instead of the current single restricted use classification system. Establish different competency standards and training levels for users of higher risk chemicals or for applications with high potential for public exposure.	Considering	

Ensure Adequate and Equitable Program Funding

Provide funds to buy electronic grading machines.	Ongoing	EPA has provided funds for such purchase, and will continue to do so as resources are available.
Provide information to program partners on certification and training projects funded through the EPA regional offices.	Ongoing	EPA is collecting this information and will make it available to interested program stakeholders.
Work with state programs to share information on successful, innovative funding strategies used to fund programs and activities related to applicator certification and training.	Ongoing	EPA is collaborating with CTAG to promote sharing such information through the development of model business plans for certification and training programs.

Major Concern and Suggested Improvement	Status	Response
Change the federal funding formula for distributing EPA's pesticide applicator certification and training grant funds to state regulatory agencies and state cooperative extension services.	Considering	EPA is evaluating potential changes to improve program operation and accountability, including funds distribution. EPA will consider this suggestion when making decisions on program changes.
Assess a fee on pesticide registrations to help cover the costs of the applicator certification and training. Explore other non-traditional sources of funding for the applicator training programs.	See Response	EPA has not been authorized by Congress to assess fees for this program.
USDA should provide consistent annual funding to state extension service programs for pesticide safety education program activities.	See Response	EPA continues to encourage the USDA to provide stable support to state extension service programs for pesticide safety education program activities.

Improve Program Operation and Efficiency

Encourage monitoring of applicator training programs to help assure national quality and consistency of training.	Done	EPA requires monitoring of applicator training programs as part of the conditions of the grants to the states for applicator certification and training programs.
Develop better tools and / or processes to evaluate the program and measure success so the Agency can improve its capability to demonstrate program outcomes.	Doing	EPA is working with stakeholders to develop reliable performance measures, including evaluation tools/strategies, for its field programs.
Fund pilot projects that focus on developing program evaluation tools and / or valid program measures.	Ongoing	EPA is funding grants to evaluate the applicator certification and training programs. EPA will continue to explore funding such projects.
Identify ways to improve cooperation between the implementing agencies involved in the pesticide applicator certification and training programs.	Ongoing	EPA is evaluating potential changes to improve program operation and accountability.
Require annual updating and review of state and tribal plans for the certification of pesticide applicators.	Ongoing	EPA requires this of all states and tribes. EPA has developed a national state plan database to facilitate this effort.



Post-Assessment Action Plan

Post-Assessment Response and Follow-up

EPA is committed to continued improvement of the worker safety program to assure the safety of all pesticide workers, and the Agency plans to undertake a variety of activities to enhance the existing program and further reduce the potential risks to workers from occupational pesticide exposure. In follow-up to the national assessment, OPP has developed a strategic plan that describes the worker safety program activities it intends to undertake in the coming years. The plan outlines both the short and long term goals for improving the program, and identifies specific priorities and annual critical outputs designed to enhance existing regulatory efforts to protect human health and the environment from pesticides and to contribute to the achievement of EPA's long term goals. The Agency's priorities for worker safety are a direct reflection of EPA's commitment to fully address the concerns identified during the assessment process. The post-assessment follow-up actions and the key elements of EPA's strategic plan for worker safety are discussed in this section.

Strategies for Program Improvements - Short Term Actions

EPA has already acted on many of the suggestions for improvements that were made during the assessment. The immediate post-assessment follow-up was aimed at taking actions to make program improvements that could be directly managed by the Agency and accomplished in the short term without additional resources. Some of these actions were relatively simple and easily accomplished, while other actions required more significant resource investments and/or extensive coordination with our regulatory partners. Some of the critical short term actions taken to improve the worker safety program are highlighted below.

Improved Program Coordination and Guidance. EPA developed updated guidance for the worker safety program field implementation that established clear program priorities and reporting requirements to promote national consistency. EPA also issued new inspection guidance that established national standards for worker protection inspections, clarified compliance and enforcement reporting requirements, and provided tools for inspectors to improve WP inspections.

In follow-up to the national assessment, OPP has developed a strategic plan to implement short- and long-term improvements to the worker safety program.

Improved Program Communication and Outreach. OPP has partnered with OECA's Agricultural Compliance Assistance Center (Ag Center) to serve as the centralized resource to obtain WP training materials and compliance assistance information. OPP is working with the Ag Center to produce an updated *WPS How To Comply* manual that should be available in 2005, and plans to collaborate on the development of new WP compliance assistance fact sheets. EPA also resumed operation of the WP Interpretive Guidance Workgroup (IGW) to address WP enforcement policy issues that have arisen over the last several years. The IGW has already provided policy decisions on a number of issues, which are available on EPA's website.

Better Coordination With Stakeholders. EPA has taken a number of steps to improve coordination with stakeholders in the program, including meeting regularly with stakeholders to review progress on key projects, and providing regular updates to the Pesticide Program Dialogue Committee (PPDC) on worker safety issues. The assessment process helped establish a solid network of interested and engaged stakeholders that has strengthened the program and produced new opportunities for collaboration.

National Train-the-Trainer Materials. With the help of stakeholders, EPA developed and piloted the national train-the-trainer manual/program. The draft train-the-trainer manual is currently being revised based on the outcomes of the pilot evaluation. It should be ready for release and use in late 2005. EPA will promote the adoption of these materials and the train-the-trainer concept to improve trainer skills.

Hazard Communication Program Development. OPP is collaborating with EPA's Office of Research and Development (ORD) to conduct several pilot projects and studies stemming from the proposals of the Hazard Communication Pilot Project Workgroup that arose out of the national assessment process. The pilot work will begin in 2005 and involve testing symbols, training approaches, and methods for conveying site-specific hazard information. EPA has also provided grant funding to the Florida Department of Agriculture and Consumer Services to support work to develop hazard communication tools for Florida's agricultural workers, and EPA's Region 9 has provided grant funding to Farmworker Justice Fund to carry out a hazard communication program for Arizona citrus and lettuce workers.

New National Core Exam and Manual for Pesticide Applicator Certification. EPA and Canada's Pest Management Regulatory Agency (PMRA) completed the development of a new national pesticide applicator core exam as part of a cooperative effort under NAFTA. The core exam addresses key tasks performed by all applicators, and was developed by a committee of pesticide applicators representing different regions of the U.S. and Canada and major applicator categories. The committee produced a scientifically validated exam of 90 questions that can be used by pesticide State Lead Agencies and Canadian provinces. Additionally, a team of U.S. pesticide safety educators and state pesticide regulatory staff are collaborating on the development of a new core manual for pesticide applicators, based on the outline for the exam, which should be available in late 2005.





Long Term Strategies for Program Improvement

Building on the improvements already in place, EPA's long-term strategies for continued improvement focus on three areas:

- Rule Revision
- Improved field data collection and use
- Worker Safety Workshops

A number of the suggested improvements from the assessments relate to changes that can only be accomplished through revisions to the rules related to worker protection. Changes to the rules are planned to address gaps in coverage, integrate the worker protection and applicator certification regulations, establish hazard communications requirements, and provide increased protections.

Improvements to field data collection and use are also underway. Occupational pesticide incident monitoring and enforcement data are important elements for identifying program strengths and weaknesses. These data can help measure the success of our field programs, and point to areas for improvement. Coupled with risk assessment, incident monitoring and compliance data can refine EPA's regulatory approaches to worker risk mitigation.

The final element of OPP's strategic plan for the worker safety program is the commitment to sponsor biennial workshops. These workshops will provide a public forum for discussion of pesticide safety issues, and will present information on emerging issues related to pesticide worker safety, occupational illness and exposure.

Conclusion



The national assessment of EPA's pesticide worker safety program was a large undertaking, but it was a necessary and extremely valuable effort that has advanced the Agency's mission to protect workers. It illustrated the value of public input in guiding our priorities. The national assessment has led to:

- ❖ increased awareness of the pesticide worker safety program and worker risk issues;
- ❖ greater transparency in EPA's science decisions and policies related to pesticide worker safety;
- ❖ better internal program coordination and communication, and better coordination with our regulatory partners on field program implementation;
- ❖ a solid network of interested and engaged stakeholders that has strengthened the program and produced greater opportunities for partnership and collaboration;
- ❖ and numerous suggestions for potential program improvements that have helped shape the Agency's long term strategic plan for improving the program.

The assessment has already led to many improvements in the Agency's pesticide worker safety program, and has helped EPA identify key activities to focus on in the future. The national assessment would not have been possible or successful without the dedication and contribution of all the EPA staff, program stakeholders, and regulatory partners who participated in the process and assisted the Agency in this effort. EPA appreciates everyone's contributions to the effort and looks forward to future opportunities for collaboration on this important program.

The national assessment would not have been possible or successful without the dedication and contribution of all the EPA staff, program stakeholders, and regulatory partners who participated in the process and assisted the Agency in this effort.



Appendix I: Summary of EPA Pesticide Worker Safety Projects

This section captures the breadth of programs supported by EPA to improve the pesticide worker safety program.

SENSOR

EPA has partnered with the National Institute for Occupational Safety and Health (NIOSH) to provide funding support for the Sentinel Event Notification System for Occupational Risk (SENSOR) program. Health departments in eight states (California, Massachusetts, Michigan, New Mexico, New York, Oregon, Texas, and Washington) receive NIOSH funding and technical support to bolster pesticide-related illness and injury surveillance. Four additional states are unfunded SENSOR partners (Arizona, Florida, Iowa, and Louisiana). Surveillance for occupational pesticide-related illness and injury is designed to protect workers by determining the magnitude and underlying causes of over-exposure to pesticides in the workplace. Surveillance also serves as an early warning system of any harmful effects not detected by manufacturer testing of pesticides.

Besides tabulating the number of acute occupational pesticide-related cases, these SENSOR-supported surveillance systems perform in-depth investigations for case confirmation, and develop preventive interventions aimed at particular industries or pesticide hazards. The SENSOR program is useful for timely identification of outbreaks and emerging pesticide problems.

Hispanic Radio Network

EPA has collaborated with the Self-Reliance Foundation and the Hispanic Radio Network to produce radio spots in Spanish that provide pesticide safety information targeted to Hispanic families. The radio spots use people from organizations recognized by farmworkers to reinforce key pesticide safety information concepts. Hispanic Radio Network provides a toll-free number for listeners to call for more information or if they have questions. EPA and the Self-Reliance Foundation are also collaborating on a public awareness campaign focusing on keeping pesticides away from children.

National Agricultural Worker Survey (NAWS)

The Department of Labor commissioned this survey in an effort to collect demographic information about migrant workers in response to the Immigration Reform and Control Act of 1986. Since then, several agencies, including EPA, have contributed funds to have questions pertinent to their programs included in the survey. NAWS has collected more than ten years of data with a large sample size. The NAWS survey includes a series of health- and pesticide- related questions regarding how often workers handle pesticides, if the worker was exposed, the type of exposure experienced, the type of personal protective equipment worn, etc.

AFOP/AmeriCorps

EPA has partnered with AmeriCorps and the Association of Farmworker Opportunity Programs (AFOP) to provide pesticide safety training for agricultural workers in 17 states. Participants volunteer under the AmeriCorps program for a 1 or a 2 year commitment, after which they are eligible to receive an education award. After receiving the AFOP/AmeriCorps orientation, participants are responsible for coordinating with the appropriate agency within their state to become a certified trainer under the worker protection regulation. Trainers then serve as resources to the farmworker community and farmworkers by providing pesticide safety training, as well as other community services. All training is conducted with the consent of the grower/outreach organization.

National Pesticide Information Center (NPIC)

The NPIC is a cooperative effort between the Extension Service at Oregon State University and EPA to operate a toll-free telephone service for callers in the United States, Puerto Rico, and the Virgin Islands. NPIC serves as a source of objective, science-based pesticide information on a wide variety of pesticide-related subjects including: recognition and management of pesticide poisoning; pesticide chemistry; toxicology; and environmental fate. NPIC is a free service, via toll-free telephone, email, and the web, and is open to the public and industry. NPIC also provides the medical community with diagnostic and crisis management assistance involving pesticide incidents.

Pesticide Safety Education Program (PSEP)

Through an inter-agency agreement with the USDA, EPA provides funding support to the state cooperative extension services (CES) to provide training to applicators seeking certification to use restricted use pesticides. PSEP conducted applicator training helps ensure the safe and effective use of pesticides. EPA has provided over \$45 million to state extension service programs since the inception of the program. This funding is in addition to the cooperative agreement monies that go directly to state, territory and tribal governments to carry out certification programs.

Southern Region Pesticide Safety Education Center

EPA has supported the operation of the Southern Region Pesticide Safety Education Center (SR-PSEC) project. The SR-PSEC is an important train-the-trainer program developed by the North Carolina Department of Agriculture and Consumer Services and the North Carolina Cooperative Extension Service, in cooperation with EPA and USDA, to update the training skills of pesticide safety education and inspection staff. The primary objective of the SR-PSEC is to improve the skills and capabilities of pesticide safety educators and applicator trainers through a train-the-trainer program.





Projects Supported by EPA Regional Offices

EPA Region 1 Pesticide Program worked with the Cambodian American League of Lowell, Massachusetts to translate two WP training documents, the "*WPS Worker Handbook*" and the "*Steps to Protect Yourself from Pesticides,*" into the Khmer language.

EPA Region 2 coordinated with the New Jersey Department of Environmental Protection (NJDEP) and EPA Headquarters, to sponsor a national Train the Trainer pilot that was instrumental in assisting the national Train the Trainer effort. NJDEP staff acted as a "Master Trainer" for the pilot, and NJDEP has been involved in the effort from the inception of the idea all the way through to the finished product that is expected out in 2005.

EPA Region 3 and the Pennsylvania Department of Agriculture, in cooperation with the Pennsylvania State University Pesticide Education Program and the American Mushroom Institute (AMI), developed a WP training video specific to mushroom workers. The video is designed to improve worker safety training in the mushroom industry.

EPA Region 4 has developed a training curriculum specifically designed for pesticide inspectors in Region 4's southern states. The curriculum focuses on culturally sensitive methods of approaching and interviewing workers and includes basic Spanish vocabulary that is specific to the agricultural worker protection regulation and pesticides. The aim of the project is to break down barriers which prevent effective communication between inspectors and farmworkers. The curriculum is being developed for national use as an inspection tool/resource.

EPA Region 5 utilized local expertise to translate the "WPS Protect Yourself from Pesticides - Guide for Agricultural Workers" into Chinese (Mandarin), Filipino (Tagalog), and Korean. Region 5 also worked with State regulators, cooperative extension, and industry to approve several popularly-used WPS Pesticide Safety Training Videos, including: (1) the "Greenhouse Pesticide Safety Training" video for Workers/Handlers (with the Floriculture Greenhouse Industry Alliance); (2) "Pesticide Handlers and the WPS" (with Michigan State University (MSU)); (3) "Pesticide Safety for You and Your Family's Health" (for Workers) (with MSU) and; (4) "Pesticides Safety - Help Workers Protect Themselves" (w/MSU). Region 5 worked with the Illinois WPS Stakeholder Committee, composed of advocates, State regulators, cooperative extension, and industry to produce the "WPS Training Resource Guide for Illinois Agricultural Employers". Region 5 cooperated with Michigan Department of Agriculture (MiDA) to produce the first WPS Pesticide Safety Train-the-Trainer program within the Region. Region 5 funded MiDA for four years consecutively in a Nationally unique project to provide WPS outreach and training to minority (African-American and Hispanic) agricultural farmers throughout the State. Region 5 funded and worked with the Community Health Partnership of Illinois (a prominent farmworker advocacy group) and Illinois cooperative extension to develop and implement a State-wide interactive Train-the-Trainer pesticide safety training program in Spanish.

EPA Region 7 partnered with and provided a grant to Harvest America Corporation to identify and educate migrant and seasonal farmworkers and their families about pesticide safety and exposure risks in Southwestern Kansas through a project known as Informing People on Pesticides (IPOP). The Harvest America project focused on providing educational workshops, and culturally sensitive pesticide safety information to the target population.

Region 8 Pesticide Program provided funding for the Migrant Farm Worker Drinking Water Demonstration Project. The purpose of this project was to identify the number and location of migrant farmworker communities in Colorado, determine the quality of the drinking water sources for each location, and provide a solution to improving the quality of the drinking water. The project led to the development of a state-wide database of 211 migrant farmworker camps in Colorado. It has also led to additional studies that are currently underway at select camps throughout the State.

Region 9 Worker Safety Team has developed a map of national WP inspection and enforcement data in relation to state farmworker populations, using the National Agricultural Statistics Service data. Presenting existing data in a geographic perspective has provided better context for the ongoing effort to determine reasonable 'measures' of program accomplishments and whether adequate WP monitoring is occurring nationwide. Region 9 also dedicated \$100,000 to launch the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) Special Project Grant, WP Stewardship Program. This program is intended to help strengthen industry compliance with the WP and minimize worker exposure to pesticides. The first projects will begin in Fiscal year 2005.

EPA Region 10 has worked with five Catholic parishes in the Diocese of Yakima (WA) to provide training for farmworkers on protecting themselves from pesticide exposure on farms and in the home. Churches in Royal City, Mattawa, Toppenish, Prosser and Yakima are participating in *Protegiendo Nuestro Futuro/ Protecting Our Future* which targets the education specifically towards women and teen Hispanic farmworkers. Over one hundred farmworkers have been reached using this venue since March. The training material for the effort was developed by a number of agencies and organizations, including Washington State Department of Agriculture, Washington Department of Health, Washington Labor & Industries, Radio Cadea, Fred Hutchinson Cancer Research Institute, and EPA Region 10. Parish volunteers are trained in the EPA Worker Protection Standard (WPS) and present the material in Spanish, accompanied by a visual slide show. A verbal questionnaire is conducted during the class and this provides opportunity for open discussion. Farmworkers attending the class receive a WPS card, which is a requirement for employment in areas where pesticides have been used. The National Religious Partnership on the Environment has provided funding for the project and receives in-kind assistance from agency and organization staff.

Pesticide worker safety program information: <http://www.epa.gov/pesticides/health/worker.htm>

Training materials & compliance assistance information for employers: <http://www.epa.gov/agriculture/twor.html>.

Thanks to Christine Cairns, Richard Pont, and Michelle DeVaux for this report's design.

