

## **The Pesticide Safety Education Program (PSEP):**

Conducted by the State Cooperative Extension Services, in cooperation and support of USDA and EPA; data were compiled by James Parochetti, National Institute of Food and Agriculture (NIFA), USDA, Washington, DC.

### **A Report to the PPDC on Program Impacts and Sustainability**

**FOCUSING ON FY 2010**

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#### **Mission**

Pesticide Safety Education Programs (PSEP) develop, deliver, and distribute educational programs for certified pesticide applicators meeting federal and state pesticide regulations. PSEPs are part of each state's and 5 trusts' and territories' land-grant university Extension service. PSEPs also participate in other pesticide, integrated pest management (IPM), and health, safety and environmental educational programs for the public.

PSEPs focus on program outcomes for safe food, clean water, environmental protection and human health while enhancing the economy of producers and communities. These outcomes are accomplished through education programs designed to keep pesticide applicators, their co-workers and the general public safe, and using pesticides to effectively control pests while also protecting the environment.

State PSEPs enable almost 900,000 pesticide applicators to become certified. Additionally PSEP provides education to an additional 1.1 million other pesticide users (using non-EPA funds). Pesticide education for both certified and non-certified pesticide applicators is responsive to Congressional legislation and supports the goals of EPA, NIFA-USDA, land-grant universities, and state departments of agriculture. For specific examples see [Selected Examples of Innovative Teaching and Impacts of PSEP](#) documented by USDA below.

Table 1.FUNDING OF CERTIFICATION TRAINING FOR SELECTED FISCAL YEARS

**FUNDING SOURCE**

	<b>2002</b>	<b>2006</b>	<b>2010</b>
EPA(discretionary funds)	\$1,880,000	\$1,200,000	\$800,000 \$500,000 (PRIA funds via EPA)
Other *	\$7,200,000	\$7,800,000	\$6,885,000
<b>TOTALS</b>	<b>\$9,080,000</b>	<b>\$9,000,000</b>	<b>\$10,223,000</b>

“Other” includes, but not limited to, funds from state governments, USDA formula funds, and county governments.

Table 2. NUMBER OF CERTIFIED APPLICATORS

	<u>2002</u>	<u>2006</u>	<u>2010</u>
private	709,177	private 596,018	private 404,251
commercial	<u>419,581</u>	commercial <u>429,009</u>	commercial <u>487,071</u>
Total	1,128,758	1,025,027	892,140

The State Cooperative Extension Services reports that 642,214 people adopted at least one practice that decreased human health risk and/or decreased environmental risk as a result of their participation in a PSEP training session.

**Current Funding**

In FY 2010 total EPA federal funding shared by state PSEPs was \$1,300,000. Many states are also successful in generating additional funds through education fees, the sale of training materials, securing outside grants and contracts, and partnering with other organizations. While EPA federal funds ranges from 4-20% of any one state PSEP budget, the EPA funding remains a core and essential part of the PSEP program in every state.

**Historical Context of Federal Funding**

Following the publication of Rachel Carson’s *Silent Spring* in the early 1960’s Congress directed federal funds through USDA to support pesticide safety education programs through state land grant colleges and universities’ Extension services. After moving pesticide regulation from USDA to EPA in the 1970’s Congress directed EPA to “use the services of the State Cooperative Extension Service to inform and educate pesticide users about accepted uses and other regulations”. EPA and USDA developed an “*inter-agency agreement*” (IAG) for EPA to “*pass-through*” USDA funds to state Extension services to help support state PSEPs. Federal funding

for PSEP typically hovered around \$1.7 to \$1.8 million on an annual basis, more in early years and less in recent years.

### **Contemporary Funding Challenges**

Until 2007, all EPA PSEP funds were discretionary funds. In 2007 the Pesticide Registration Improvement Act was passed, known as PRIA II, which specifically earmarked \$500,000 annually through EPA for PSEPs for five years. (PRIA funds are derived from fees paid by pesticide registrants to obtain registrations for their products.) These funds were added to EPA's existing pass-through funds and were subsequently included in the EPA/USDA IAG. PRIA II funding for state PSEPs will end in 2012 unless renewed by Congress and authorized by EPA.

Due to declining EPA discretionary funding for PSEP the total federal funding for PSEP (PRIA II and EPA discretionary) declined two years ago to \$1.6 million. In 2010, total federal funding was further reduced to \$1.3 million. Given current federal budget pressures these funds could be drastically reduced or eliminated in future years.

Other federal budgets and almost all state budgets are strained at best and have resulted in funding reductions for most state land-grant universities and reduced grants opportunities that has also affected state PSEPs.

### **Selected Examples of Innovative Teaching and Impacts of PSEP**

The Pesticide Safety Education Program educates the majority of pesticide applicators in the US for initial certification and recertification. The following examples depict the breadth and impact of recent training conducted by PSEPs across the U.S.

North Dakota PSEP -- Each year, North Dakotans use thousands of pounds of extraordinarily toxic fumigants to control insect pests in grain and commodity structures. To combat complacency, a major effort was undertaken to explain what can happen when the body is exposed to aluminum phosphide (AP). ND PSEP produced "*Phosphine: The Damage it Can Do*" using compelling graphics, video, and descriptions from medical journals and autopsy reports.

- 900 ND applicators have viewed the presentation, and reactions have indicated a much better appreciation of the risks than with previous outreach on the topic.
- To date, 75 educators from 26 states and provinces have the presentation.
- Iowa, Colorado, Washington, Oregon, Montana, Oklahoma, Wyoming, and the Canadian Province of Alberta have reported they are using this tool.
- In Ohio, 4,500 private and 2,500 commercial applicators will see and hear about the damage AP can do.
- Kaci Buhl, with the National Pesticide Safety Information Center had this to say about the ND program: "Wow....Congratulations on this achievement! It was compelling, visual, visceral, and I learned several ways of communicating these risks. I plan to share it with our staff, and they will likely use the information when discussing risk with callers. We receive hundreds of calls each year about phosphide fumigants; some from

applicators who are concerned about risking their jobs, as you described. What a powerful example for using new technologies to make the case for pesticide safety.”

Washington PSEP – Assessed the net economic value for training by the core Urban Integrated Pest Management (UIPM) & Pesticide Safety Education Program (PSEP). The assessment looked at people seeking both first-time certification and recertification as certified applicators.

- Self-estimated annual economic values of this training ranged from \$6,787 to \$13,366 per trainee (from a largely non-ag sample) totaling \$27 million in annual benefits.
- Total program costs incurred by WSU UIPM&PSEP and by learners attending (travel, fees and foregone productivity costs) totaled \$1,338,560/year
- **The ratio of conservative trainee benefits to computed costs for the state-wide program was 18:1, suggesting strong justification for program continuation.**
- Among 300 survey respondents, 95% stated that the training improved their personal safety, 93% stated that it helped protect the environment, and 98% stated it increased their awareness of and compliance with pesticide regulations.

Iowa PSEP -- Evaluations showed that as a result of attending training, private pesticide applicators incorporated the following safety activities in their farming activities:

- 86% of the 6,141 applicators responded due to the 2008 training, they would now review the pesticide label of restricted use products to determine the particular hazards associated with each product.
- 84% of the 5005 applicators responded due to the 2009 training, they would now practice proper sprayer cleanup procedures.
- 88% of the 3213 applicators responded due to the 2010 training, they would now use pesticide resistant gloves and other PPE when handling pesticides.

North Dakota, South Dakota, Minnesota and Iowa PSEPs -- Collaborative work. Longstanding cross state efforts have created efficiencies and improved quality of programs. Just this past year these four states worked together to:

- Provide spray pattern testing to aerial applicators across ND/SD/MN. (over 40 planes were evaluated.)
- SD took the lead in developing a live web based training for pest control operators. Specialist from the ND/SD/MN provided subject matter expertise for the event. (About 150 applicators were recertified. )
- ND coordinated an agricultural pest training and an ornamental and turf training for ND/MN applicators. Specialist from both states provided subject matter expertise. As a result, 275 applicators were recertified.
- MN coordinated a training in Morton, MN for ND/SD/MN aerial applicators. (280 applicators were recertified.)
- ND provided presentations to SD so they could deliver their commercial fumigation trainings.
- ND produced and distributed PPT, video, and live delivery of a herbicide resistance program that was used in ND/SD/MN.
- MN provided expertise in seed treatment programming to ND to assist us in delivering content to our people needing recertification in the seed treatment category.

- New in the 2010-2011 training season, Iowa joined into the mix. ND provided expertise to conduct fumigation training videos for Iowa and in return they provided expertise in seed treatment to both ND and MN.

Texas PSEP – By request, designed a certification program for "Pesticide Residue Mitigation" for a major grocery chain.

- Since 2007, more than 250 produce growers/companies from 5 countries were trained during a two day required "Food Safety Training Course".
- During the most recent quarter, trained 20 participants who had crops valued at \$118,000,000.00 in sales directly to the grocery supply chain. These sales were secured because the growers/companies were brought into compliance with the grocery chains specifications as a result of their participation in the customized PSEP activity.