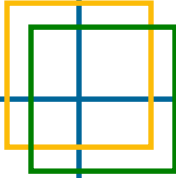
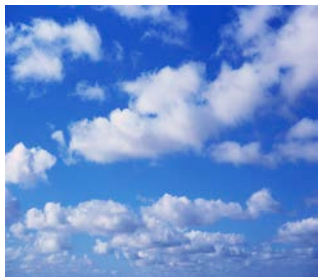




July 2004



# Evaluation of the EPA's Pesticide Environmental Stewardship Program



Promoting Environmental Results



Through Evaluation

**EVALUATION OF EPA'S  
OFFICE OF PESTICIDE PROGRAMS'  
PESTICIDE ENVIRONMENTAL STEWARDSHIP PROGRAM**

**\*\*\* FINAL \*\*\***

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## EXECUTIVE SUMMARY

Initiated in 1994 by the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Agriculture, the Pesticide Environmental Stewardship Program (PESP) brings together Federal agencies and 135 member organizations representing pesticide users in agricultural and non-agricultural settings. The goal of PESP is to encourage member organizations to voluntarily adopt strategies and management practices to achieve pollution prevention and reduce risk posed by pesticides to human health and the environment beyond that which could be achieved through regulatory compliance. PESP Partners are provided an EPA liaison who provides information and assists in developing and implementing their strategies. Partners receive public recognition for their actions through the *PESP Update* newsletter, the EPA website, and PESP press releases.

After ten years of PESP activity, EPA's Office of Pesticide Programs (OPP), seeking to maximize the program's value to EPA and participants, decided to conduct a formal program evaluation. OPP received evaluation funding from EPA's Office of Planning, Analysis, and Accountability (OPAA) and Office of Policy, Economics, and Innovation (OPEI) through the "Improving Results Competition," an Agency-wide effort to competitively fund program evaluation grants. To oversee the evaluation, EPA established a workgroup comprising representatives from OPP and OPAA; the workgroup includes Agency evaluation experts as well as individuals familiar with PESP. OPAA used competition funds to secure contractor support from Industrial Economics, Inc. (IEc) of Cambridge, Massachusetts. This evaluation seeks to determine which program elements have made the PESP partnership successful and which elements may need improvement or redesign to further the program's goals. In addition, OPP hopes to determine how well PESP's activities have supported the Office's strategic goals.

The evaluation relies primarily upon discussions with PESP participants and stakeholders from within the Agency. Working closely with EPA, IEc reviewed background materials and met with ESB staff to develop a program logic model and frame the evaluation according to three objectives:

- Assess the effectiveness of the PESP member strategy development process
- Evaluate the capacity of the PESP liaison program to support members and further PESP's goals
- Determine how to facilitate implementation of effective strategies

IEc also worked collaboratively with EPA to identify stakeholders and develop discussion guides. IEc convened discussions with OPP management; ESB staff; PESP liaisons (including EPA Regional and Strategic Agricultural Initiative staff); and PESP members varying by industry sector (i.e. agriculture vs. non-agriculture), degree of program participation (i.e., active vs. inactive), and potential for member operations to affect human health and the environment. IEc covered a range of topics across stakeholder groups. Discussions with OPP management focused on broad topics (e.g., means of ensuring measurable pesticide risk reductions on a national level), while discussions with ESB staff and PESP liaisons yielded information on the operational aspects of PESP (e.g., factors affecting quality of member risk

reduction strategies). Discussions with PESP members focused on the motivation for joining PESP and the logistics and challenges of program participation.

IEc designed a Microsoft Access database to house discussion results and allow for the synthesis of findings from qualitative discussion data. In analyzing the results, IEC looked to define themes within each stakeholder group as well as synthesize cross-cutting findings in cases where topics were covered across multiple stakeholder groups. From these themes and findings, IEC developed evaluation findings and the following recommendations for future program direction:

### **Effectiveness of PESP Strategy Development Process**

With assistance from EPA liaisons, participants create annual environmental stewardship strategies that include specific goals for achieving pollution prevention and pesticide risk reduction, as well as performance measures for each goal. Ideally PESP strategies should outline specific long-term risk-reduction goals and describe a proposed approach for attaining those goals; strategy updates would ideally use quantitative performance measures to report on annual progress. In reality, many strategies (and strategy updates) are lacking in detail and make ineffective use of performance measures. EPA should consider the following with respect to improving the quality of PESP strategies and strategy updates:

- **Provide comprehensive assistance to members in the development of a PESP strategy.** Given that strategy development and performance measurement are such important challenges, liaisons are called upon to play a critical role in helping each member identify, develop, and carry out the pesticide risk reduction activities outlined in its strategy. Both members and EPA staff praised liaisons for their role in introducing members to new risk-reduction technologies and serving as a "sounding board" for members' risk-reduction ideas. Note that not all members need this support, but for those that do, it may be necessary to increase training to EPA staff to provide such services.
- **Align PESP Grants to Support EPA's Risk Reduction Priorities.** PESP disburses grants indirectly through cooperative agreements each year to fund innovative pesticide risk-reduction projects. Through the PESP strategy development process, EPA and PESP members frequently identify priorities for risk reduction and specific strategies and projects to address those priorities. EPA could use these grants to better target resources to address risk reduction priorities identified in the strategy development process and to fund projects dedicated to measuring the performance of *existing* risk-reduction techniques (i.e., those in-practice at member sites). While these grants are not exclusively available to PESP members, such a grant might provide members with an excellent opportunity to develop a "fundable" project directly related to their own and PESP's strategic goals.
- **Create an OPP Performance Measurement Clearinghouse.** By gleaning best practices from PESP Champions and capturing new ideas stemming from a potential refocusing of PESP grants (described above), PESP would be in the position to create a

one-stop source for information related to members' greatest challenge: measuring the performance of risk-reduction activities. As new performance measurement tools become available -- or as existing tools are modified -- EPA could take the lead in keeping members apprised and supporting their performance measurement efforts. PESP liaisons might even play an outreach and technical support role as members adopt new tools and build in-house capacity to measure and report the end outcomes of their risk-reduction activities. Importantly, such improvement in members' ability to quantify risk reductions would help PESP to quantitatively demonstrate the program's alignment with OPP's strategic goals.

### **Capacity of PESP Liaison Program**

Liaisons are the linchpin of PESP, working at the nexus of the Agency's goals for the program and the reality of members' abilities to meet those goals. Adding focus and strength to the liaison program may help bridge the gap between Agency goals and member capacity. EPA should consider the following with respect to the PESP liaison program:

- **Complement the Liaison Guidance with Training Seminars.** Especially for Regional and Non-BPPD liaisons (i.e., those with less day-to-day contact with PESP staff), it is critical that EPA clarify the specific functions fulfilled by liaisons, review BPPD topics, and suggest tangible ways in which liaisons can better serve PESP members. While a liaison's relationship with his or her partner will depend upon the characteristics of the organization, it would be useful for liaisons to receive targeted training on strategy development and measurement methods. These issues are relevant to all liaisons and require an in-depth understanding of these processes to enable liaisons to apply them across a range of organizational structures.

In addition to offering help with strategy development, liaisons may want to customize their support for partners based on the size and nature of the organization. To support larger members, liaisons may want to spend more time understanding the member's industry so that he or she may assume the task of filtering out "noise" in the stream of PESP communications -- which overwhelmed some members -- to make targeted recommendations based upon a member's sector or strategic goals and objectives. For smaller organizations, liaisons may need to focus on playing a broader advocacy role (e.g., gaining Agency "buy-in" for key legislation) and offering more technical assistance to help members identify action items for their strategies and develop "fundable" grant proposals. Finally, a liaison working with an industry association may want to concentrate his or her efforts on helping the partner to successfully secure association members' adherence to its PESP strategy. Acting as an umbrella for smaller entities, the association can facilitate the spread of environmental stewardship and progress measurement among its membership. A more active liaison might engage inactive members who claim to be satisfied with their liaisons despite speaking only infrequently. By giving inactive members a *reason* to speak with their liaison (e.g., to discuss a liaison's targeted suggestion), PESP may be able to bring them back into the program.

- **Enhance Liaison Participation through Increased Program Support.** PESP faces unique challenges because it is a voluntary program for all involved. Members join voluntarily, submit strategies voluntarily, and make voluntary risk reductions. With the exception of several full-time employees (FTEs), PESP is voluntary on EPA's part as well. PESP liaisons generally assume added responsibility by volunteering to participate, and the time spent on PESP may detract from liaisons' official roles within their respective Division or Branch. Moreover, liaisons rarely have direct contact with their partners, a factor which frustrates liaisons. PESP's resultant priority (i.e., not always on the top of the list) hinders the program's ability to gain substantial momentum. By allocating a portion of the PESP budget to liaison travel, EPA would allow liaisons to fulfill a broader and more valuable role for members. With the opportunity to attend growers' meetings, conferences, or conventions, liaisons would not only be able to address partners' need for sector-specific information, but also find greater professional fulfillment in the PESP work. The Agency stands to realize substantial benefits from such a budget allocation in the form of more engaged members submitting more comprehensive strategies that yield more quantifiable reductions in pesticide risk.

### **Facilitating Implementation of Effective Strategies**

#### **Communications**

PESP communications, including the PESP Update Newsletter, Bi-Weekly Information Exchange Email, Program and Strategy Guidance, and the PESP Annual Report, can help members achieve measurable risk reductions by facilitating information flow and technology transfer between members (and ideally, influencing the behavior of non-members). EPA should consider the following with respect to PESP communications:

- **Reinstate the PESP Annual Meeting.** The annual meeting brings members and Agency representatives together in a collaborative and informative atmosphere, and offers an opportunity to convey success stories and facilitate sharing of best practices. Cost was an issue in the decision to discontinue the Annual Meeting. However, this event's ability to energize both members and liaisons makes it critical to PESP's goals. EPA should explore means of reinstating the Annual Meeting that are more cost effective, such as scheduling the PESP meeting to coincide with a related meeting (e.g., National IPM Symposium).
- **Promote PESP Through Trade Journals.** By advertising PESP in trade journals accompanied by member testimonials about the importance of PESP as a trusted information source for growers, EPA can gain visibility and improve credibility with a large pool of potential members.
- **Create Searchable Database of Reduced-Risk Grant Projects.** For nearly two decades, OPP grants have funded growers' projects related to the development and implementation of risk-reduction techniques and technologies. By recording and sharing the successes of PESP and Strategic Agricultural Initiative (SAI) grants, EPA may foster

technology transfer and improve communication among regulators, researchers, and pesticide end-users. Such a database would also further transparency within OPP's grant programs and provide an improved recordkeeping mechanism for disbursements and accomplishments.

## **PESP Member Benefits**

PESP member benefits can help to achieve risk reductions by providing value sufficient to (in turn) require substantial effort on the part of members. Valuable benefits may also help in recruitment of new members, and thus, achievement of risk reductions. At present, PESP members are given a personal point-of-contact at the Agency (i.e., through the liaison program) and receive public recognition for their commitment to reduce pesticide risk. In order to better reward current PESP members and attract new applicants, EPA should consider the following:

- **Enhance the Publicity of the PESP Champion Awards.** OPP should consider using other EPA award programs (e.g., Green Chemistry Awards, WasteWise Awards) as a model for a meaningful and highly visible PESP promotional tool. If members are interested in publicity, OPP might consider giving the PESP award winners a photo opportunity with the EPA administrator or a headline on the "front page" of EPA's website. By enhancing the publicity of the PESP Champion awards, members for whom such publicity is important might find it worth their while to invest the resources necessary to become Champions, and as a result, have more members contending for Champion awards each year.
- **Assist Members with PESP Grant Applications.** Several members expressed dissatisfaction with EPA's decision to open PESP grants to non-PESP applicants. PESP members were left to compete with professional grant writers at major research institutions, and fewer grants have gone to PESP members as a result. Acknowledging this state of affairs, OPP management emphasized that their decision was grounded in the legal ramifications of an exclusive grant program rather than any desire to broaden the applicant pool. To reconcile member concerns with legal requirements, EPA should consider helping members to better tailor their applications to the existing (i.e., non-exclusive) grant program. A refined PESP liaison program could designate liaisons as on-demand technical editors for members seeking to develop "fundable" grant projects. While such assistance is currently occurring on a small scale, making a formal designation -- and publicizing it within the PESP membership -- may help allay member concerns about the non-exclusive grant program while concurrently building member capacity in recognizing innovative risk-reduction opportunities. In order to offer such assistance, PESP would need to train a core group of interested liaisons, helping them to become familiar with the grant writing process as well as the award process. These individuals can become the program's grant writing resources, to whom other liaisons with less experience can refer their partners.
- **Address the Problem of Inactive Members.** The problem of inactive members who fail to communicate with their liaison and/or submit and update their strategy is an important

issue facing PESP at present. Inactive, non-responsive members do not bring any value to the PESP program, though they enjoy the benefits of being associated with it. OPP management stressed that, while removing inactive members from PESP could help abate the free rider problem, it would also remove EPA's benefits of having even inactive members in the program (e.g., two-way communication, participatory regulatory process, misinformation control). PESP has recently moved to address the problem of non-responsive members by sending them "goodbye" letters. Members that are in touch with PESP, but have failed to submit a strategy, will remain connected to PESP in order to preserve the avenues of communication this relationship opens for EPA. However, as EPA develops new incentives (e.g., those suggested below), only active members should be eligible.

- **Develop Additional Incentives for Members.** PESP should consider adding value to program benefits by developing additional member-exclusive incentives. Other EPA voluntary programs (e.g., National Environmental Performance Track) have successfully employed member incentives to help participants make real improvements to their bottom line, and by extension, fuel program growth by attracting more applicants seeking such incentives. EPA should consider several potentially valuable incentives (as suggested by PESP members): facilitated approval for special use permits for new materials; priority attention for product re-registrations; and support for members' existing outreach or certification programs (e.g., IPM Institute of North America's IPM Star Program; National Pest Management Association's QualityPro certification program). The addition of new incentives would also allow PESP to ask more of its members: a more valuable program could reasonably demand more involvement in return.
- **Consider "Umbrella" Memberships for Trade Associations.** EPA should consider granting trade associations an "umbrella" membership that includes all of the organization's members. The association, and each member, would sign a pledge that affirms their commitment to pesticide risk reduction. Members would submit individual PESP strategies to the association; the association would submit an overarching strategy. EPA could recognize those associations making the most progress (e.g., as measured by aggregate risk reduction among members). Associations, in turn, could reward those members making the greatest contributions to the association's overall risk reductions. All parties would stand to benefit from umbrella memberships. To the extent that they would increase PESP's overall membership (and thus, the program's bottom-line risk reductions), umbrella memberships would help PESP meet its programmatic goals. Trade associations would gain public recognition for their efforts, and (pending EPA approval) could use the PESP logo on brochures and other outreach materials. Members would gain public recognition and liaison support for their participation in the program.



## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	ES-1
INTRODUCTION AND PROGRAM OVERVIEW .....	1
METHODOLOGY .....	5
Discussion Logistics .....	6
Review of PESP Champion Strategies .....	7
Data Analysis .....	7
FINDINGS .....	8
Member Motivations and Benefits Conferred to Members .....	8
PESP Strategy Development and Outcomes.....	10
Common Characteristics of Successful PESP Strategies.....	11
Strengths and Limitations of PESP Liaison Program .....	13
Utility of PESP Communication Materials.....	15
PESP's Alignment with OPP's Strategic Goals.....	17
LESSONS LEARNED.....	19
Overall Success.....	19
Most Effective Aspects of PESP.....	19
Least Effective Aspects of PESP .....	20
RECOMMENDATIONS.....	21
Effectiveness of PESP Strategy Development Process .....	21
Capacity of PESP Liaison Program .....	22
Facilitating Implementation of Effective Strategies .....	23
APPENDIX A: Discussion Questions .....	A-1
APPENDIX B: Summary of Evaluation Discussions.....	A-6
APPENDIX C: Review of PESP Champion Strategies.....	A-18

## INTRODUCTION AND PROGRAM OVERVIEW

Initiated in 1994 by the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Agriculture, the Pesticide Environmental Stewardship Program (PESP) brings together Federal agencies and 135 member organizations representing pesticide users in agricultural and non-agricultural settings. The goal of PESP is to encourage member organizations to voluntarily adopt strategies and management practices to achieve pollution prevention and reduce the risks posed by pesticides to human health and the environment beyond that which could be achieved through regulatory compliance. PESP Partners are provided an EPA liaison who provides information and assists in developing and implementing their strategies. Partners receive public recognition through the *PESP Update* newsletter, the EPA website, and PESP press releases.

PESP has been active for ten years. EPA's Office of Pesticide Programs (OPP), seeking to maximize the program's value to EPA and participants, decided to conduct a formal program evaluation. OPP received evaluation funding from EPA's Office of Planning, Analysis, and Accountability (OPAA) and Office of Policy, Economics, and Innovation (OPEI) through the "Improving Results Competition," an Agency-wide effort to competitively fund program evaluation grants. To oversee the evaluation, EPA established a workgroup comprising representatives from OPP and OPAA; the workgroup includes Agency evaluation experts as well as individuals familiar with PESP. OPAA used competition funds to secure contractor support from Industrial Economics, Inc. (IEc) of Cambridge, Massachusetts. This evaluation seeks to determine which program elements have made the PESP partnership successful and which elements may need improvement or redesign to further the program's goals. In addition, OPP hopes to determine how well PESP's activities have supported the Office's strategic goals.

The National Integrated Pest Management Forum, sponsored by EPA in June 1992, identified the lack of a national commitment to IPM as the number one constraint to its further adoption. EPA held a stakeholder workshop in February 1994 to gather ideas, suggestions, and concerns about reducing pesticide use; PESP was designed to implement the workshop's recommendations. EPA launched PESP in 1994 to encourage pesticide users to voluntarily adopt integrated pest management (IPM) plans that reduce pesticide-related risk to human health and the environment. Joining PESP allows organizations to demonstrate and act upon their commitment to responsible environmental stewardship. By participating in PESP, organizations also develop mutually beneficial relationships with EPA liaisons at OPP or within EPA's Regional offices.

PESP has two levels of membership. "Partners" are organizations that use pesticides (e.g., Pebble Beach Golf Resort) or represent pesticide users (e.g., National Potato Council). "Supporters" are organizations that do not use pesticides, but have significant influence over the pest management practices of pesticide users (e.g., Gerber Products Company). Supporters may also include public interest groups whose constituencies have a strong interest in pesticide risk reduction (e.g., IPM Institute of North America). Both partners and supporters must make a commitment to reduce pesticide risk and develop activities to achieve risk reduction.

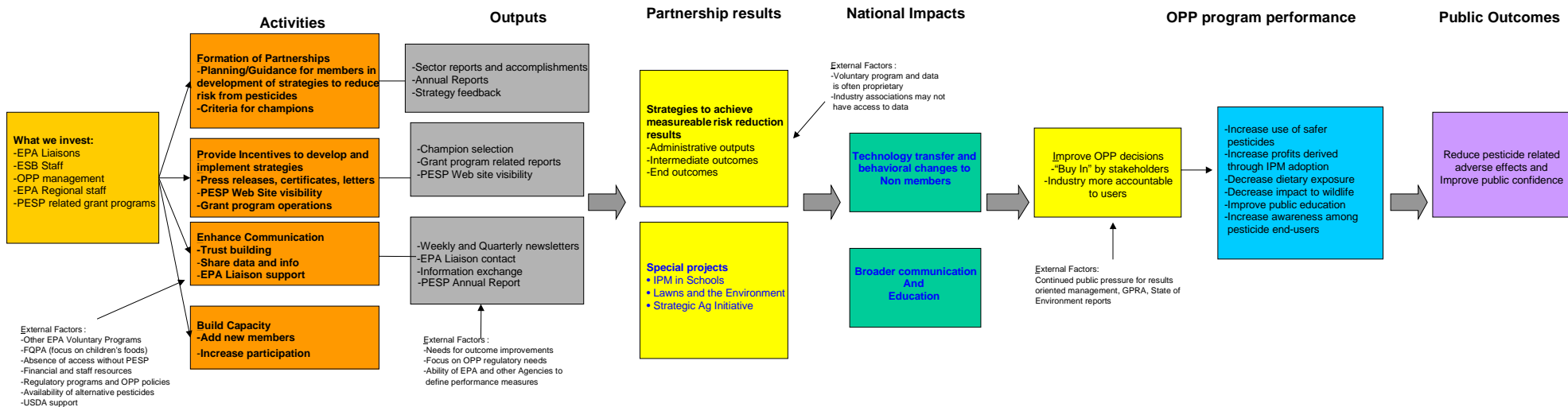
With assistance from EPA liaisons, participants create annual environmental stewardship strategies that include specific goals for achieving pollution prevention and pesticide risk reduction, as well as performance measures for each goal. Liaisons, in turn, support strategy development and help maintain open and regular channels of communication between PESP partners and the Agency.

To illustrate how PESP is designed to work, EPA developed a logic model, i.e., a graphical representation of the relationships between program inputs, outputs, and intended outcomes. Key components include the following:

- **What we invest** identifies EPA inputs to the program. EPA's contributions include liaisons who facilitate interaction between EPA and program participants; ESB staff; management in the Office of Pesticide Programs; EPA Regional staff; and PESP-related grant programs.
- **Activities/Outputs** are the specific actions taken to achieve program goals and the immediate products that result. Under the PESP partnership, these products include sector reports and accomplishments, feedback on strategies, selection of "champion" partners, reports related to grants, the PESP website, annual report, and newsletters, and contact between EPA liaisons and partners.
- **Partnership results** are the changes in the behavior of pesticide users caused by participation in PESP, such as the adoption of risk reduction strategies by program partners.
- **National impacts** assesses the effect of the partnership on patterns of pesticide use throughout the entire regulated community. For example, PESP partners may pioneer new technologies that are then adopted by pesticide users outside the partnership, leading to an overall reduction in risk throughout the country.
- **OPP program performance** outlines how PESP, by increasing contact between EPA and the regulated community, improves the decision-making capabilities of the Office of Pesticide Programs.
- **Public Outcomes** identifies PESP's effects on the general public, such as a reduction in pesticide-related adverse health effects.
- **External Factors** are variables not directly controlled by PESP that may affect how the program performs. For example, the program's voluntary nature and the lack of easy access to proprietary data may impede the development of risk reduction strategies.

Exhibit 1 presents the logic model for PESP.

### Exhibit 1: PESP Logic Model



This logic model helps describe the series of activities and outcomes that ideally occur during the course of program operations. IEC used the logic model to frame the evaluation in the context of PESP's structure, activities, and impacts. The logic model also advised the development of the evaluation objectives, which include:

- **Assess the effectiveness of the PESP member strategy development process.** Specifically, how has PESP helped members identify, develop, and carry out pesticide risk reduction activities? How effective has this assistance been in terms of risk reduction? Why are some PESP members able to develop and implement sound pesticide risk-reduction strategies while some are unable to do so? What can EPA do to help members succeed?
- **Evaluate the capacity of EPA liaisons.** Have liaisons helped with the logistics of developing a PESP strategy? Have they provided members with a valuable EPA contact to assist with fact finding and to discuss strategic plans? How could liaisons be more effective?
- **Determine how to facilitate implementation of effective strategies.** What actions can EPA take to ensure that PESP results in a measurable risk reduction on the national level? How can EPA encourage non-members to adopt member successes in pesticide risk reductions?

By using the logic model to frame the evaluation, IEC ensured that the evaluation's objectives are consistent with how PESP is intended to operate.

This study will likely appeal to several different audiences. First, it will help the Office of Pesticide Programs to better understand PESP's areas of strength and weakness, and may guide future program direction. Second, PESP liaisons may be able to use the report to reassess their activities and improve their members' strategy development process. Third, PESP members may turn to the report for guidance on the criteria that most often constitute successful pesticide risk reduction strategies. Finally, to the extent that the report's findings objectively describe program benefits and shortcomings, it may be a useful tool in recruiting additional members of the regulated community to join PESP.

### **Report Organization**

The results of our evaluation are detailed in the following sections:

- First, we outline the evaluation methodology.
- Next, we describe in detail the key findings of the program evaluation.
- Finally, we make recommendations for future program direction.

## METHODOLOGY

The evaluation relies primarily upon discussions with PESP participants and stakeholders from within the Agency. Working closely with EPA, IEC reviewed background materials and met with Environmental Stewardship Branch (ESB) staff to frame the evaluation and develop a discussion guide. IEC conducted discussions with OPP management; ESB staff; PESP liaisons (including EPA Regional and Strategic Agricultural Initiative staff); and PESP members varying by industry sector (i.e. agriculture vs. non-agriculture), degree of program participation (i.e., active vs. inactive), and potential for member operations to affect human health and the environment. Exhibit 2 identifies the specific stakeholders with whom IEC held discussions.

<b>Exhibit 2</b>	
<b>PESP Stakeholders</b>	
<b>Stakeholder Group</b>	<b>Interviewees</b>
OPP Management <sup>1</sup>	Jim Jones, Office Director, OPP Kathleen Knox, Special Assistant to the Director, OPP Ann Lindsay, Deputy Director, OPP Marty Monell, Deputy Director, OPP Bill Diamond, OPP/FEAD Tina Levine, OPP/BEAD Steve Bradbury, OPP/EFED Margaret Stasakowski, OPP/HED Lois Rossi, Director, OPP/RD Debbie Edwards, OPP/SRRD
ESB Staff	Frank Ellis, Food Processors Sherry Glick, Schools Diana Horne, Non-tree Fruits Glen Williams, Government / Rights of Way / Technology Transfer
PESP Liaisons <sup>2</sup> <ul style="list-style-type: none"> <li>• Strategic Agricultural Initiative (SAI) Staff</li> <li>• EPA Regional Staff</li> </ul>	Tom Brennan, OPP/BEAD Susanne Cerrelli, OPP/BPPD Kathy Davis, OPP/FEAD Ronald Kendall, OPP/FEAD Michael McDavitt, OPP/FEAD Jack Arthur, OPP/HED Christina Swartz, OPP/HED Stephen Schiable, OPP/RD Venus Eagle OPP/SRRD Katie Hall, OPP/SRRD Lora Lee Schroeder, Region 4 / Strategic Agricultural Initiative Barbara VanTill, Region 5 / Strategic Agricultural Initiative Paul Feder, Region 9 Mary Grisier, Region 9

<b>Exhibit 2</b>	
<b>PESP Stakeholders</b>	
<b>Stakeholder Group</b>	<b>Interviewees</b>
PESP Members <sup>3</sup>	American Mosquito Control Association Del Monte* Edison Electric Institute General Mills, Inc.* IPM Institute of North America* Lodi-Woodbridge Wine Grape Commission National Pest Management Association National Potato Council New England Vegetable & Berry Growers Association Pebble Beach Company Sun-Maid Growers of California
<b>TABLE NOTES</b>	
<p><sup>1</sup> IEC conducted a focus group with OPP management on the topics outlined in Appendix A. The remainder of the discussions were conducted by telephone.</p> <p><sup>2</sup> PESP liaisons functioning in multiple stakeholder groups (i.e., also serving as Regional staff or SAI staff) discussed topics related to all applicable groups (see Appendix A for discussion topics organized by stakeholder group).</p> <p><sup>3</sup> PESP members marked with an asterisk (*) participate at the PESP Supporter level.</p>	

IEC covered a range of topics across stakeholder groups. Discussions with OPP management focused on broad topics (e.g., means of ensuring measurable pesticide risk reductions on a national level), while discussions with ESB staff and PESP liaisons yielded information on the operational aspects of PESP (e.g., factors affecting quality of member risk reduction strategies). Discussions with PESP members focused on the motivation for joining PESP and the logistics and challenges of program participation. Appendix A presents the specific subjects discussed with each stakeholder group.

### **Discussion Logistics**

EPA made initial contact with the stakeholders through an introductory e-mail that explained the purpose of the evaluation and requested each respondent's assistance. One week after the initial correspondence, IEC made phone contacts to schedule discussions. IEC also coordinated with ESB staff to arrange for and conduct a focus group among OPP management; the remainder of the discussions were conducted by telephone. In all cases, respondents were assured that their responses would be kept confidential.

Although IEC made numerous attempts to contact stakeholders, there were several candidates that failed to respond to requests for participation. Of the 33 individuals contacted, we were able to secure interviews with 29. In one instance, the original contact referred us to a colleague whom she indicated was more familiar with the program. We followed up with this individual and secured his participation.

## **Review of PESP Champion Strategies**

In order to supplement the discussions, IEC conducted a secondary analysis of the Strategies of several PESP members. Careful examination of three PESP Champion strategies (as named by EPA) supported findings regarding the common elements of successful Strategies; and the relative utility of various performance measure types.

## **Data Analysis**

IEC designed a Microsoft Access database to house discussion results and allow for the synthesis of findings from qualitative discussion data. In analyzing the results, IEC looked to define themes within each stakeholder group as well as synthesize cross-cutting findings in cases where topics were covered across multiple stakeholder groups (See Appendix B). From these themes and findings, and in the context of a review of PESP Champion Strategies, IEC developed overarching findings and recommendations for future program direction.



## **FINDINGS**

The findings are presented according to the structure of the discussion guide developed by the evaluation team; some topics (e.g., liaisons' job satisfaction ), while ancillary to the evaluation objectives, are included to provide context for the activities and outcomes outlined in the program's logic model. The sections below discuss findings related to:

- Members' motivations for joining PESP and the benefits conferred to members
- PESP strategy development and outcomes
- Common characteristics of successful PESP strategies
- Strengths and limitations of the PESP liaison program
- Utility of PESP communication materials
- PESP's alignment with OPP's strategic goals

Please refer to Appendix B for detailed findings organized by discussion topic.

### **Member Motivations and Benefits Conferred to Members**

Members most often joined PESP to improve their relationship with EPA. Developing contacts was especially important for smaller members (e.g., individual pesticide applicators) who did not have pre-existing contacts at the Agency. For larger members (e.g., growers' associations) that already had "the ear of the Agency" and a solid foundation in IPM, PESP's public recognition opportunities emerged as the most important motivating factor. Among other motivations, members cited the potential for PESP grant dollars and the value of improved networking and technology transfer (e.g., member-to-member and EPA-to-member).

In general, members are satisfied with the benefits they have enjoyed as a result of program participation; there is close alignment between the potential benefits that attracted members to join PESP and the benefits members have actually realized through the program. Members most frequently cited an improved relationship with EPA among PESP's benefits. Public recognition was another important benefit; members with an IPM program in place were pleased to gain recognition for activities already underway prior to PESP (i.e., at little additional member cost), and members building an IPM program from scratch were able to get credit for their efforts. While the PESP Grant program (i.e., for specific risk-reduction projects) was beneficial in some cases, several members questioned what they described as EPA's mid-course decision to offer the grants to non-PESP members. Members were left to compete with professional university grant writers for limited funds, and as a result, fewer PESP members have received grant dollars.

In terms of member networking and technology transfer, several members cited cases where they had shared best practices with another PESP member; others called on the Agency to take further steps to facilitate information sharing among members (e.g., reinstate annual PESP member meeting). Finally, several PESP members stressed that PESP participation *had not* resulted in improved market performance, because consumers often place more weight on a product's quality than on its environmental footprint.

Several respondents (National Pest Management Association and EPA) discussed the potential for trade associations to have an "umbrella" membership that includes all of the organization's members. The association, and each member, would sign a pledge that affirms their commitment to pesticide risk reduction. Members would submit individual PESP strategies to the association; the association would submit an overarching strategy. EPA could recognize those associations making the most progress (e.g., as measured by aggregate risk reduction among members). Associations, in turn, could reward those members making the greatest contributions to the association's overall risk reductions. All parties would stand to benefit from umbrella memberships. To the extent that they would increase PESP's overall membership (and thus, the program's bottom-line risk reductions), umbrella memberships would help PESP meet its programmatic goals. Trade associations would gain public recognition for their efforts, and (pending EPA approval) could use the PESP logo on brochures and other outreach materials. Members would gain public recognition and liaison support for their participation in the program.

While there was a strong sentiment among members that PESP is doing as much as it can for members with previous IPM experience and broad connections at the Agency, several larger members proposed that PESP could support members' efforts to promote risk reduction activities. For example:

- IPM Institute of North America promotes IPM certification for schools through its IPM Star Program; PESP could support this program through its communications and outreach efforts.
- National Pest Management Association's QualityPro certification recognizes Pest Control Operators (PCOs) that adhere to a set of strict operating standards, including comprehensive training of service technicians and mandatory IPM practices. To the extent that consumer preferences among PCOs are affected by the use of "green" practices, formal EPA recognition of this program could be an important market incentive for QualityPro PCOs. However, it is important to note that actions that may constitute an EPA endorsement of a product or service must first gain formal Agency approval.
- Similarly, Professional Lawn Care Association of America proposed that its member PCOs, by virtue of their "green" practices, be granted the right to use the PESP logo on lawn posting signs. The same caveat exists: while market incentives involving EPA endorsements may seem promising, they may face substantial barriers to implementation.

Additionally, several smaller members suggested additional benefits that would add to the program's value:

- EPA could improve advocacy for members, both within OPP (i.e., among the Office's Divisions) and among EPA's various Offices (e.g., program offices, OECA, etc.) on issues of particular importance to their business or organization.

- OPP could design and implement registration incentives (e.g., facilitated approval for special use permits for new materials; priority attention for product re-registrations) available only to PESP members.

Members felt that these additional incentives would serve to reward current members and attract additional members to the program, serving EPA's ultimate goal of pesticide risk reduction.

### **PESP Strategy Development and Outcomes**

As part of their participation in the program, new PESP members are required to develop and submit a formal strategy document that outlines specific long-term risk-reduction goals and describes a proposed approach for attaining those goals. On an annual basis, continuing PESP members update their strategies, report on progress made towards goals, and outline steps for future pesticide risk reduction. Each strategy consists of four major sections: Strategic Approach, Activities, Progress, and Background Document. The Activities and Progress sections are required annually; PESP recommends that members revisit the Strategic Approach and Background Document regularly, but the program does not specify a timeframe.

The strategy document is intended to encourage members to think about risk reduction in a consistent, goal-oriented way and to facilitate the measurement of their progress towards significant risk reduction. For PESP staff and liaisons, these strategies highlight the areas of critical interest to the members and better position the Agency to support members' risk reduction goals. While strategies are generally developed and updated in-house by members, the program intends for PESP liaisons to support members' strategy development and strategy update processes. Members noted that while the strategy development process did not substantially affect the their organizations' existing programmatic goals, it often focused pre-existing efforts and organized them under a single umbrella.

Both members and Agency staff identified issues associated with strategy development (and annual updates) as the program's major challenge. Some larger members (who had already employed IPM before joining PESP) viewed strategy development and updating as more of a "paperwork exercise" that codified pre-existing activities without having a substantive effect on risk reduction. Smaller members, however, viewed strategy development as a useful tool in framing their initial efforts toward pesticide risk reduction. Members most frequently cited performance measurement (specifically the quantification of end outcomes) as the most challenging aspect of the strategic planning process. EPA staff sentiment was consistent with member responses: members often lack the time or desire to update their strategy annually, and submitted strategies are frequently lacking in detail (specifically performance measurement) sufficient to adequately evaluate progress towards strategic goals. While there was general agreement among members and staff that PESP-related activities do result in risk reduction, members can only infrequently quantify end outcomes; most annual reports include intermediate outcomes (e.g., acres under IPM) without extrapolating to actual risk reductions.

Given that strategy development and performance measurement are such important challenges, liaisons are called upon to play a critical role in helping each member identify,

develop, and carry out the pesticide risk reduction activities outlined in its strategy. Both members and EPA staff praised liaisons for their role in introducing members to new risk-reduction technologies and serving as a "sounding board" for members' risk-reduction ideas. In addition, to the extent that liaisons play a limited role in advising members in developing the content of "fundable" proposals for new projects, they may also help members to develop and carry out risk-reduction activities. Several members, however, noted that liaisons sometime concern themselves too much with timeframe (i.e., continually reminding members to submit their strategies).

### **Common Characteristics of Successful PESP Strategies**

Each year, PESP recognizes several members who have implemented particularly effective pesticide risk reduction strategies. These members, denoted as "PESP Champions," demonstrate a strong commitment to reducing reliance on high-risk pesticides and to preventing their release (and thus, the potential for human or ecological exposure). Most importantly, PESP Champions are committed to implementing practical and economical solutions that reduce pesticide risks while maintaining or improving economic competitiveness. According to ESB staff, successful strategies tend to be ambitious. They incorporate new technologies and seek to use performance measures to assess their impact on risk reduction. Successful strategies are well thought-out documents that clearly convey the long- and short-term objectives of the member's risk reduction strategy.

IEc conducted a review of the 2003 strategies submitted by three PESP Champions: Gerber Products Company; Almond Board of California; and U.S. Department of Defense Armed Forces Pest Management Board (See Appendix C for summaries). In reviewing these strategies, IEC sought to define themes and elements common to PESP's most ambitious strategies; and evaluate the relative utility of the various performance measure types (e.g., administrative outputs vs. intermediate outcomes vs. end outcomes) included in PESP strategies.

### **Common Themes**

Several themes emerged among the Champion strategies reviewed. First, each strategy focuses on research that may help establish viable alternatives to conventional pesticides or conventional pest-control techniques. In some cases, PESP Champions are conducting primary research (e.g., Armed Forces Pest Management Board's research into new personal mosquito repellants as an alternative to widespread spraying); in others, PESP Champions fund university research (e.g., Gerber's sponsorship of a Clemson University professor's research into alternatives to organophosphate pesticides for control of peach pests). In addition to demonstrating the efficacy of alternative pest-control methods, PESP Champions are interested in establishing their cost effectiveness. For example, the Almond Board of California developed an online calculator to allow growers to evaluate the economic viability of a conversion to alternative pest management techniques.

PESP Champions often employ innovative measures to report progress toward their risk-reduction goals. Almond Board of California uses data collected by the California Department of Pesticide Regulation to compare the use of conventional and alternative products and technologies as they vary over time. These state-collected data allow the Almond Board to evaluate the extent to which alternative practices are gaining traction among California almond growers. Almond Board of California also monitors pesticide concentration in the runoff of several test plots with differing runoff-mitigation methods in place (e.g., cover crops, border strips). Gerber analyzes the spray histories required of its growers as a means of documenting the reduction (and eventual elimination) of organophosphate pesticides. Armed Forces Pest Management Board collects data on all Department of Defense property, and documents pesticide-use reductions against a 1993 baseline. It is important to note that none of these three organizations has undergone major operational overhauls to document progress; performance measures do not need to be expensive or complex. Instead, these Champions leverage information collected independent of PESP (e.g., state data, grower reports, etc.) for use in their PESP strategies. This model may be transferable to PESP members concerned about the cost burden of developing effective performance measures.

## Performance Measures

PESP defines three types of measurements to encompass the sorts of indicators used by members to report progress on their strategies:

- **Administrative Outputs** track and measure member responses to the program's administrative requirements and requests (e.g., strategies completed, grant proposals submitted).
- **Intermediate Outcomes** track and measure actions taken by PESP members as part of their strategies (e.g., demonstration projects for alternative pest-control methods).
- **End Outcomes** track and measure the environmental results that fulfill members' goals for environmental stewardship (e.g., reductions in pesticide use or pesticide residues).

IEC's review found PESP Champion strategies to be comprehensive in their use of all three measurement types. By contrast, most PESP members (i.e., Champions aside) are able to report administrative outputs and intermediate outcomes only, and fall short of being able to report end outcomes of their risk-reduction activities. Through educational efforts to build member capacity to develop performance measures and increased effort on EPA's part to recognize opportunities to aggregate members' performance measures (e.g., number of growers adopting alternative practices; acres under IPM; number of applications of high-risk pesticides), the Agency should gain increasingly compelling measures of PESP's success.

## **Variability in Strategy Content and Quality**

PESP strategies have varied in content over the course of the program because of variations in EPA's requested focus for the document. Initially, members were asked to submit a lengthy background document, which provided detailed information about the company, its pesticide use, and its industry in general. Currently, the background document is recommended, but not required. Members submit an "activity based strategy," which according to some staff members is too "bare bones." In some cases, the efficacy of strategies have varied because of factors entirely unrelated to PESP. For example, in a poor growing season, the alternative measures implemented by the member may prove less effective.

## **Strengths and Limitations of the PESP Liaison Program**

### **Liaisons' Views on the PESP Liaison Program**

PESP liaisons are an instrumental part of PESP, acting as the key contact at EPA for members and providing guidance and support, from the development to the implementation of their risk reduction strategies. Most liaisons were enthusiastic about the program, but expressed frustration with several program elements. Liaisons were generally interested in participating in the program because of the professional and personal opportunities it affords:

- Professionally, liaisons were interested in having contact with the regulated community and pesticide user groups. Liaisons anticipated that their work would benefit from a better understanding of pesticide use, application techniques, and risk thresholds.
- Liaisons were also eager to work for PESP to pursue professional interests not currently used in their role at EPA. For example, one liaison had professional training in ornamental lawn care, while another had a background in horticulture. They believed that the position of liaison would enable them to stay connected to this field.
- Several liaisons noted that they had a personal interest in the work of their partner.

The majority of liaisons interviewed felt that the program had met their expectations overall. However, further discussion revealed that their initial expectations were not necessarily met, but that other aspects of their involvement with PESP satisfied professional or personal goals. Several liaisons indicated that PESP provided insufficient opportunities for interaction with their members. For example, in some cases the liaisons felt that their partners did not need their assistance to develop a strategy or to access EPA. Given time constraints, members were not interested in collaborating with their liaison. In other cases, liaisons indicated that their partners were inactive members of PESP or confused PESP with a grant program and became disinterested once they learned that grant money was not guaranteed.

Liaisons felt that their managers in OPP supported their work with PESP. Some liaisons qualified this, adding that the PESP work was supported as long as it did not detract substantially from their official duties. Liaisons in EPA's Regional offices expressed less certainty about the

support they received from management. Further, Regional liaisons felt they lacked support from HQ, either in the form of communication, workflow, or management. Regionally-based liaisons felt disconnected from HQ and indicated that they wanted more direction about their role as a liaison. Regional liaisons indicated that they received little feedback from HQ and "little recognition in the management chain."

From the perspective of the OPP managers, the liaison program acted as a great morale booster for the EPA employees who participated. The fact that liaisons enjoy working with PESP is important because OPP management wants to encourage liaisons to remain with the program for a substantial period of time. Managers noted that it has become harder to recruit liaisons because candidates are unaware of management's support of the program and their participation.

### **Members' Views on Liaisons**

The majority of members with whom IEc spoke were satisfied with the level of communication they have with their liaisons. Nine of the eleven members interviewed indicated that the frequency of communication with their liaison was sufficient. Members speak with their liaisons anywhere from weekly to three times yearly. The majority of members indicated that they spoke to their liaison once per month, but the frequency of contact depends heavily on the needs of the member and the dynamic that is established between the liaison and the member organization.

Overall, members rated the performance of their liaison highly. Six members indicated that their liaison's performance was "excellent" and four rated their liaison's performance "good." Only one member indicated that the performance of its liaison was "fair." Members reported that liaisons acted as a "sounding board" and found that the liaisons' feedback was important in that it promoted the success of new risk-reduction projects. In addition, members appreciated the value of having a personal point-of-contact at EPA; they praised liaisons' responsiveness and availability to answer questions, and valued the willingness of liaisons to share information on newly-registered bio-pesticides and chemicals.

Some members, however, felt that liaisons focus too narrowly on strategy, and that the program could be more useful if the scope of the liaisons' duties was more diverse. Several larger member organizations indicated that because they have institutionalized IPM, their contact with their liaison served only to ensure that they submitted their strategy.

When asked how their liaison could ideally serve their organizations, a number of larger institutions expressed that there was little more that the liaison could do for them. These organizations were already well-connected within EPA and had sufficient resources in-house to keep abreast of technological developments. Smaller organizations, however, felt that there was an advocacy role for the liaison to play. They were interested in having an EPA contact that would secure EPA "buy in" for them on important issues such as key legislation. These members also felt the liaison should secure intra-Agency recognition on their behalf. In addition, smaller members wanted the liaison to provide risk-reduction information tailored to their

organization, and participate in face-to-face meetings. They expressed interest in learning about actions they could take on a day-to-day basis to improve performance. Members wanted the liaison to help them secure grant money by guiding them through the development of a "fundable" grant proposal.

### **Utility of PESP Communication Materials**

Both liaisons and members found the PESP publications useful. Respondents were asked to rate the publications from 1 (highest rating) to 5 (lowest rating) based on their value, ease of use, and frequency of use. The average scores in Exhibit 3 reflects the mean score given by those members who responded. Several interviewees declined to comment on a publication because they were not familiar with it; respondents were particularly confused about the bi-weekly information exchange email. Of 13 liaisons, only five were able to indicate the value of the bi-weekly information exchange email. Only half of the members commented on this publication.

Although liaisons found most publications valuable, they felt that their content was directed to the members (i.e., to the exclusion of liaisons). Corresponding to these sentiments, members made use of publications more frequently than did liaisons, and found the publications more valuable.

<b>Exhibit 3</b>							
<b>Mean Publication Ratings Among Members and Liaisons</b>							
<b>Publication</b>	<b>Liaison Mean Rating (n=14) (Ranked from 1 (highest) to 5 (lowest))</b>			<b>Member Mean Rating (n=11) (Ranked from 1 (highest) to 5 (lowest))</b>			<b>Average Overall Rating</b>
	<i>Value</i>	<i>Ease of Use</i>	<i>Frequency</i>	<i>Value</i>	<i>Ease of Use</i>	<i>Frequency</i>	
PESP Website	2.1	1.6	3.1	1.9	2.0	2.9	2.3
PESP Update Newsletter	2.4	1.8	2.8	2.0	1.8	2.1	2.2
Program and Strategy Guidance	2.5	2.4	3.9	2.3	2.0	3.0	2.7
PESP Annual Report	2.6	3.0	3.6	2.1	2.1	2.6	2.7
Bi-weekly Information Exchange Email	4.2	3.0	3.3	2.8	2.4	2.3	3
<b>Notes:</b> Based upon discussions with PESP members and liaisons; respondents were asked to rate the publications from 1 (highest) to 5 (lowest) based on their value, ease of use, and frequency of use. Small sample size does not provide the statistical power for these results to be interpreted as statistically valid.							

OPP management, while not asked to provide numerical rankings for the specific communication mechanisms here, stressed the importance of these materials in providing accurate and timely information to members. Management views the notion of "misinformation control" as one of the most important functions of PESP communication and outreach materials.



## Sharing Best Practices to Increase Risk Reduction

The primary goal of PESP's communication materials is to share best practices as a means of facilitating risk reduction. OPP management, ESB staff, and PESP liaisons stressed the importance of improving information sharing among PESP members and between EPA and PESP. Each stakeholder group also noted that PESP should ideally encourage non-members to adopt member best practices in pesticide risk reduction and generate measurable risk reductions on a national scale. When asked the best methods for encouraging information transfer and risk reductions, respondents overwhelmingly discussed the importance of communication and offered several suggestions for improving the flows of information:

- Hold demonstrations to spotlight alternative risk-reduction approaches that work.
- Hold conference calls and workshops to develop synergies and foster information sharing.
- Convene meetings: annual, sector, regional, or in-person. Meetings are a more direct means of transferring information to partners and/or non-members. EPA's air and water Offices have large annual meetings focusing on what industries are doing to improve air and water quality. PESP might consider holding an annual meeting in conjunction with the National IPM Symposium in order to reach members and non-members.
- Enhance the publicity and benefits of the PESP Champion awards. When the awards have been given to associations, the Champion program has helped get growers on board. To increase the momentum, PESP could enhance the benefits of awards. One ESB staff member expressed interest in involving the EPA Administrator in an event to recognize PESP champions. The Green Chemistry Award program, which spotlights innovative technologies that prevent pollution and are broadly applicable to the chemical industry, was cited as a good model for PESP to follow.
- Hold trainings for pesticide users, particularly non-English speaking applicators. These are the individuals that face the greatest risk. It is critical to provide them with information on how they can protect themselves.
- Leverage trade associations and journals. PESP could advertise in trade journals to improve its visibility to growers, offering testimonials from members about their positive experiences working with PESP.
- Reach out within OPP and EPA to publicize PESP internally. Publicizing PESP internally will help promote it externally.
- Quantify the benefits of alternative pest management and highlight the impact on pest maintenance costs. Consider having members submit records to researchers as opposed to the government in order to track reductions in use and cost savings. California, which collects such data, could serve as a model.

- Work with industry to identify effective and feasible best practices. Office of Water worked with industry to come up with alternatives to regulation. These organizations identified ways to use existing equipment to achieve reductions greater than those that would have been achieved by potential EPA-mandated pollution controls.

Through improved communication, EPA strives for program growth and improvements in aggregate risk-reductions among members. As successes and best practices are publicized among members and non-members, risk-reduction techniques may gain acceptance and become standard practice. Non-members may learn of PESP-endorsed techniques through trade association meetings or media outlets and adopt best practices or, better yet, join PESP and contribute ideas of their own to the growing body of risk-reduction practices. Improved communication lays the essential groundwork such a bottom-up approach to growth and improvement.

### **PESP's Alignment with OPP's Strategic Goals**

According to the majority of liaisons interviewed, PESP activities help liaisons meet Regional or Divisional goals in a variety of ways.

- PESP duties enable liaisons to gain a broader perspective on their work, offering them contact with the regulated community as well as user groups. In several instances, liaisons have been able to leverage their contacts within these organizations to make their risk assessments more accurate. Members have occasionally provided liaisons with feedback on the toxicity estimates and risk calculations used in risk assessments.
- Working with PESP directly supported the Regional goal of increasing the use of IPM strategies.
- Enhancing partnerships and fostering collaboration are an important goal supported by PESP.

OPP management acknowledged that, despite PESP's alignment with the broadest goals of the Office, many of OPP's Divisions view PESP as being BPPD's program, and thus only infrequently support liaisons' activities (e.g., travel funding) in their annual budget planning. Thus, it may be important to convey PESP's alignment with OPP goals (i.e., and not just BPPD's) in order to promote a broader sense of ownership across Divisions.

Although the majority of liaisons said that PESP activities help them achieve Regional or Divisional goals, several felt it was not well coordinated with Divisional or Regional activities.

- A Regional liaison expended significant effort to get information on the active PESP activities in her Region (other than those in which she herself had been involved).

- One liaison indicated that PESP was not well integrated into OPP. This respondent felt that PESP was internally directed and focused too heavily on a single area of pesticide use. According to this interviewee, PESP doesn't take mainstream issues into account.

OPP management, however, indicated that in general PESP's impact and its goals are well coordinated with those of OPP. PESP increases OPP's level of communication with the regulated community and user organizations, which ultimately leads to improvements in risk management as EPA employees become more familiar with usage trends and exposure. Members tend to use liaisons as a communication medium, giving OPP an opportunity to generate greater awareness of its activities and foster a more participatory regulatory environment. As a result, PESP provides a good testing ground for new techniques. The success of these pilots enables EPA to use PESP members as an example to non-PESP members across the country as having successfully implemented reduced-risk projects without compromising quality or profit. Finally, to the extent that PESP broadens or improves risk-reducing IPM activities at member organizations, PESP activities are certainly in line with OPP's strategic goals.

## **LESSONS LEARNED**

This section presents the overarching lessons learned stemming from the evaluation, including: overall success; most effective aspects of PESP; and least effective aspects of PESP.

### **Overall Success**

OPP management is generally pleased with PESP. In addition to the successes with respect to addressing OPP and Divisional goals, PESP has helped OPP's image outside the Agency. OPP's critics identify the Office with the licensing of dangerous chemicals as opposed to its contributions to a cleaner environment. OPP management indicated that PESP has achieved "good political mileage" and helped to "green" the Office by serving as a counterweight to some of the activities critics have taken aim at. Moreover, PESP encourages the Division and its Branches to think about working with the regulated community in different ways.

OPP management generally feels confident that the successes that PESP has achieved are commensurate with the funding it has been given. Terming PESP a "smart investment," OPP management considers the relatively minor investment in FTEs and grant dollars to be well worth its return, not only to PESP and BPPD, but also to other OPP Divisions. "The benefits of PESP come to the whole organization" in the form of an improved knowledge base among employees; an ability to solve problems through non-adversarial means; a mechanism for misinformation control (i.e., info direct from liaisons rather than from rumor mill); and a more participatory decisionmaking process for the Agency.

One EPA manager, however, commented that in order to justify the six full time employees and the \$300,000 in grants, PESP needs more than just "feel good" anecdotes: quantitative performance measures are necessary. However, other managers pointed out that the PESP strategies provide a framework for measuring outcomes. PESP needs to follow through on its commitment to collect data on program progress by ensuring that members complete their strategies and fulfill the performance measurement requirement.

### **Most Effective Aspects of PESP**

ESB staff and OPP management pointed out several aspects of PESP that they felt were particularly effective:

- PESP fosters a trusting and open relationship between EPA and the regulated community. This element is particularly important for smaller members who do not have regular contact with EPA.
- PESP's member relationships have opened two-way channels of communication. Various OPP processes have benefited from the liaisons' contact with knowledgeable users and members of the regulated community. Liaisons help the Agency keep the regulated

community involved in the registration process, which leads to more informed registration decisions and reduced frustration among regulated entities.

- PESP has also been successful in encouraging members to use specific reduced-risk pesticides and increasing the acreage under IPM. PESP is very effective in encouraging organizations to think about pest management on a larger scale (i.e., in terms of safety and health).

### **Least Effective Aspects of PESP**

ESB staff and OPP management also named areas where PESP stands to make improvements:

- Although improved communication has been one of PESP's most positive aspects, there was general agreement PESP stands to improve the way it shares information with members. ESB staff, liaisons, and members alike were interested in improving information sharing between PESP partners, either within their sector or outside of it. Although five of the 10 members interviewed indicated that they shared best practices with other members, and five indicated that they learned of and implemented ideas shared by other members, members indicated that they did not receive enough information from EPA.
- With respect to member participation, ESB staff and OPP management pointed to several programmatic weaknesses. Some members were not clear about what program offered or what function the liaisons are intended to fulfill. Many organizations joined to secure grant money; however, once these members realized that grant money was not guaranteed to PESP members, they chose not to stay active in the program.
- There was general agreement that PESP needs to raise the standards to which it holds its members. Although members are required to submit strategies, there are a number of members that fail to do so, and many more who fail to submit an annual update. Such "free riders" devalue program incentives and may encourage further free riding as other members grow frustrated by the fact that their investments in strategies yield no further reward (i.e., why should active members invest effort in strategies when inactive members receive the same benefits?).
- In one context or another, almost all members mentioned the fact that grant money was once earmarked for PESP participants. These grants are now open to all, not just PESP members. Participants in the program were disappointed when they learned that this benefit of membership no longer existed. This misunderstanding signals an opportunity for PESP to improve communication with prospective and current members as to the benefits received from membership.

## RECOMMENDATIONS

This section presents IEC's recommendations for future program direction. We present our recommendations as they parallel the objectives of the evaluation:

- Assess the effectiveness of the PESP strategy development process
- Evaluate the capacity of the PESP liaison program
- Determine how to facilitate implementation of effective strategies

It is important to note that some of these recommendations would make changes to financial and staff resources, identified as external factors in the program logic model. To the extent that OPP and PESP staff cannot modify external factors, certain recommendations may be more difficult to implement than others.

### Effectiveness of PESP Strategy Development Process

PESP strategies should ideally outline specific long-term risk-reduction goals and describe a proposed approach for attaining those goals; strategy updates would ideally use quantitative performance measures to report on annual progress. In reality, many strategies (and strategy updates) are lacking in detail and make ineffective use of performance measures. EPA should consider the following with respect to improving the quality of PESP strategies and strategy updates:

- **Align PESP Grants to Support EPA's Risk Reduction Priorities.** PESP disburses grants indirectly through cooperative agreements each year to fund innovative pesticide risk-reduction projects. Through the PESP strategy development process, EPA and PESP members frequently identify priorities for risk reduction and specific strategies and projects to address those priorities. EPA could use these grants to better target resources to address risk reduction priorities identified in the strategy development process and to fund projects dedicated to measuring the performance of *existing* risk-reduction techniques (i.e., those in-practice at member sites). While these grants are not exclusively available to PESP members, such a grant might provide members with an excellent opportunity to develop a "fundable" project directly related to their own and PESP's strategic goals.
- **Create an OPP Performance Measurement Clearinghouse.** By gleaning best practices from PESP Champions and capturing new ideas stemming from a potential refocusing of PESP grants (described above), PESP would be in the position to create a one-stop source for information related to members' greatest challenge: measuring the performance of risk-reduction activities. As new performance measurement tools become available -- or as existing tools are modified -- EPA could take the lead in keeping members apprised and supporting their performance measurement efforts. PESP liaisons might even play an outreach and technical support role as members adopt new tools and build in-house capacity to measure and report the end outcomes of their risk-reduction activities. Importantly, such improvement in members' ability to quantify risk

reductions would help PESP to quantitatively demonstrate the program's alignment with OPP's strategic goals.

### **Capacity of PESP Liaison Program**

PESP liaisons are the linchpins of PESP, working at the intersection of the Agency's goals for the program and the reality of members' abilities to meet those goals. Adding focus and strength to the liaison program may help bridge the gap between Agency goals and member capacity. EPA should consider the following recommendations for improving the PESP liaison program:

- **Complement the Liaison Guidance with Training Seminars.** Especially for Regional and Non-BPPD liaisons (i.e., those with less day-to-day contact with PESP staff), it is critical that EPA clarify the specific functions fulfilled by liaisons, review BPPD topics, and suggest tangible ways in which liaisons can better serve PESP members. While a liaison's relationship with his or her partner will depend upon the characteristics of the organization, it would be useful for liaisons to receive targeted training on strategy development and measurement methods. These issues are relevant to all liaisons and require an in-depth understanding of these processes to enable liaisons to apply them across a range of organizational structures.

In addition to offering help with strategy development, liaisons may want to customize their support for partners based on the size and nature of the organization. To support larger members, liaisons may want to spend more time understanding the member's industry so that he or she may assume the task of filtering out "noise" in the stream of PESP communications -- which overwhelmed some members -- to make targeted recommendations based upon a member's sector or strategic goals and objectives. For smaller organizations, liaisons may need to focus on playing a broader advocacy role (e.g., gaining Agency "buy-in" for key legislation) and offer more technical assistance to help members identify action items for their strategies and develop "fundable" grant proposals. Finally, a liaison working with an industry association may want to concentrate his or her efforts on helping the partner to successfully secure association members' adherence to its PESP strategy. Acting as an umbrella for smaller entities, the association can facilitate the spread of environmental stewardship and progress measurement among its membership. A more active liaison might engage inactive members who claim to be satisfied with their liaisons despite speaking only infrequently. By giving inactive members a *reason* to speak with their liaison (e.g., to discuss a liaison's targeted suggestion), PESP may be able to bring them back into the program.

- **Enhance Liaison Participation through Increased Program Support.** PESP faces unique challenges because it is a voluntary program for all involved. Members join voluntarily, submit strategies voluntarily, and make voluntary risk reductions. With the exception of several full-time employees (FTEs), PESP is voluntary on EPA's part as well. PESP liaisons generally assume added responsibility by volunteering to participate, and the time spent on PESP may detract from liaisons' official roles within their

respective Division or Branch. Moreover, liaisons rarely have direct contact with their partners, a factor which frustrates liaisons. PESP's resultant priority (i.e., not always at the top of the list) hinders the program's ability to gain substantial momentum. By allocating a portion of the PESP budget to liaison travel, EPA would allow liaisons to fulfill a broader and more valuable role for members. With the opportunity to attend growers' meetings, conferences, or conventions, liaisons would not only be able to address partners' need for sector-specific information, but also find greater professional fulfillment in the PESP work. The Agency stands to realize substantial benefits from such a budget allocation in the form of more engaged members submitting more comprehensive strategies that yield more quantifiable reductions in pesticide risk.

## **Facilitating Implementation of Effective Strategies**

### **Communications**

PESP communications can help members achieve measurable risk reductions by facilitating information flow and technology transfer between members (and ideally, influencing the behavior of non-members). EPA should consider the following recommendations for improving PESP communications:

- **Reinstate the PESP Annual Meeting.** The annual meeting brings members and Agency representatives together in a collaborative and informative atmosphere, and offers an opportunity to convey success stories and facilitate sharing of best practices. Cost was an issue in the decision to discontinue the Annual Meeting. However, this event's ability to energize both members and liaisons makes it critical to PESP's goals. EPA should explore means of reinstating the Annual Meeting that are more cost effective, such as scheduling the PESP meeting to coincide with a related meeting (e.g., National IPM Symposium).
- **Promote PESP Through Trade Journals.** By advertising PESP in trade journal accompanied by member testimonials about the importance of PESP as a trusted information source for growers, EPA can gain visibility and improve credibility with a large pool of potential members.
- **Create Searchable Database of Reduced-Risk Grant Projects.** For nearly two decades, OPP grants have funded growers' projects related to the development and implementation of risk-reduction techniques and technologies. By recording and sharing the successes of PESP and Strategic Agricultural Initiative (SAI) grants, EPA may foster technology transfer and improve communication among regulators, researchers, and pesticide end-users. Such a database would also further transparency within OPP's grant programs and provide an improved recordkeeping mechanism for disbursements and accomplishments.



## PESP Member Benefits

PESP member benefits can help to achieve risk reductions by providing value sufficient to (in turn) require substantial effort on the part of members. Valuable benefits may also help in recruitment of new members, and thus, achievement of risk reductions. At present, PESP members are given a personal point-of-contact at the Agency (i.e., through the liaison program) and receive public recognition for their commitment to reduce pesticide risk. In order to better reward current PESP members and attract new applicants, IEc recommends the following:

- **Enhance the Publicity of the PESP Champion Awards.** OPP should consider using other EPA award programs (e.g., Green Chemistry Awards, WasteWise Awards) as a model for a meaningful and highly visible PESP promotional tool. For members interested in securing a wider audience for PESP recognition, OPP might consider giving PESP award winners a photo opportunity with the EPA administrator or a headline on the "front page" of EPA's website. By enhancing the publicity of the PESP Champion awards, EPA may make it more worthwhile for members interested in publicity to invest the resources necessary to become Champions, and as a result, have more members contending for Champion awards each year.
- **Assist Members with PESP Grant Applications.** Several members expressed dissatisfaction with EPA's decision to open PESP grants to non-PESP applicants. PESP members were left to compete with professional grant writers at major research institutions, and fewer grants have gone to PESP members as a result. Acknowledging this state of affairs, OPP management emphasized that their decision was grounded in the legal ramifications of an exclusive grant program rather than any desire to broaden the applicant pool. To reconcile member concerns with legal requirements, EPA should consider helping members to better tailor their applications to the existing (i.e., non-exclusive) grant program. A refined PESP liaison program could designate liaisons as on-demand technical editors for members seeking to develop "fundable" grant projects. While such assistance is currently occurring on a small scale, making a formal designation -- and publicizing it within the PESP membership -- may help allay member concerns about the non-exclusive grant program while concurrently building member capacity in recognizing innovative risk-reduction opportunities. In order to offer such assistance, PESP would need to train a core group of interested liaisons, helping them to become familiar with the grant writing process as well as the award process. These individuals can become the program's grant writing resources, to whom other liaisons with less experience can refer their partners.
- **Address the Problem of Inactive Members.** The problem of free riders (i.e., inactive members who fail to submit and/or update their respective strategy) is an important issue facing PESP at present. Inactive, non-responsive members do not bring any value to the PESP program, though they enjoy the benefits of being associated with it. In fact, free riders devalue program incentives by diminishing the meaning of being a PESP member. Their presence may encourage additional members to lapse into inactivity. OPP management stressed that, while removing inactive members from PESP could help abate the free rider problem, it would also remove EPA's benefits of having even inactive

members in the program (e.g., two-way communication, participatory regulatory process, misinformation control). PESP has recently moved to address the problem of non-responsive members by sending them “goodbye” letters. Members that are in touch with PESP, but have failed to submit a strategy, should remain connected to PESP in order to preserve the avenues of communication this relationship opens for EPA. However, as EPA develops new incentives (e.g., those suggested below), only active members should be eligible.

- **Develop Additional Incentives for Members.** PESP should consider adding value to program benefits by developing additional member-exclusive incentives. Other EPA voluntary programs (e.g., National Environmental Performance Track) have successfully employed member incentives to help participants make real improvements to their bottom line, and by extension, fuel program growth by attracting more applicants seeking such incentives. EPA should consider several potentially valuable incentives (as suggested by PESP members): facilitated approval for special use permits for new materials; priority attention for product re-registrations; and support for members' existing outreach or certification programs (e.g., IPM Institute of North America's IPM Star Program; National Pest Management Association's QualityPro certification program). The addition of new incentives would also allow PESP to ask more of its members: a more valuable program could reasonably demand more involvement in return.
- **Consider "Umbrella" Memberships for Trade Associations.** EPA should consider granting trade associations an "umbrella" membership that includes all of the organization's members. The association, and each member, would sign a pledge that affirms their commitment to pesticide risk reduction. Members would submit individual PESP strategies to the association; the association would submit an overarching strategy. EPA could recognize those associations making the most progress (e.g., as measured by aggregate risk reduction among members). Associations, in turn, could reward those members making the greatest contributions to the association's overall risk reductions. All parties would stand to benefit from umbrella memberships. To the extent that they would increase PESP's overall membership (and thus, the program's bottom-line risk reductions), umbrella memberships would help PESP meet its programmatic goals. Trade associations would gain public recognition for their efforts, and (pending EPA approval) could use the PESP logo on brochures and other outreach materials. Members would gain public recognition and liaison support for their participation in the program.

**APPENDIX A**  
**Discussion Questions**

<b>Appendix A</b>		
<b>DISCUSSION QUESTIONS</b>		
<b>Stakeholder Group</b>	<b>Topic Area</b>	<b>Discussion Questions</b>
OPP Management	Lessons Learned	<ul style="list-style-type: none"> <li>• What are your overall impressions of PESP?</li> <li>• Has PESP realized success commensurate with its funding?</li> <li>• Which aspects of PESP have been most effective? Least effective?</li> <li>• How can EPA encourage non-members to adopt member successes in pesticide risk reductions? (e.g., technology transfer)</li> <li>• What actions can EPA take to ensure measurable reductions in pesticide risk on a national scale?</li> <li>• To what extent does PESP (and its outcomes) align with OPP's strategic goals?</li> </ul>
	PESP Liaisons	<ul style="list-style-type: none"> <li>• How are the activities of your Division's PESP Liaison(s) valuable in helping to meet Divisional goals? OPP goals?</li> <li>• Do you think your Liaison(s) receive(s) adequate support from your Division? Why or why not?</li> </ul>
ESB Staff	PESP Strategy Development and Outcomes	<ul style="list-style-type: none"> <li>• In what ways has PESP helped members to identify, develop, and carry out pesticide risk reduction activities?</li> <li>• What are the most common challenges encountered during PESP strategy development?</li> <li>• Have strategies resulted in measurable reductions to pesticide-related human health and environmental risk?</li> <li>• What sorts of benefits have PESP members derived as a result of participation?</li> </ul>
	Characteristics of Successful PESP Strategies	<ul style="list-style-type: none"> <li>• What are the characteristics of successful (and unsuccessful) PESP strategies?</li> <li>• To what extent has the quality of PESP strategies varied over the course of the program? (i.e., any improvement or decline over time?)</li> <li>• Have well-written strategies generally resulted in greater reductions to human health and environmental risk? (i.e., can a well-written strategy still fail during implementation?)</li> </ul>
	Lessons Learned	<ul style="list-style-type: none"> <li>• Which aspects of PESP have been most effective? Least effective?</li> <li>• How can EPA encourage non-members to adopt member successes in pesticide risk reductions? (e.g., technology transfer)</li> <li>• What actions can EPA take to ensure measurable reductions in pesticide risk on a national scale?</li> </ul>

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<b>DISCUSSION QUESTIONS</b>		
<b>Stakeholder Group</b>	<b>Topic Area</b>	<b>Discussion Questions</b>
Strategic Agricultural Initiative (SAI) Staff	Lessons Learned	<ul style="list-style-type: none"> <li>• What has been the impact of regional SAI grants?</li> <li>• How effective is are the workflow and management structure within PESP?</li> <li>• Are you satisfied with your level of communication with OPP Headquarters?</li> <li>• Has PESP helped you to address regional goals?</li> </ul>
EPA Regional Staff	Lessons Learned	<ul style="list-style-type: none"> <li>• What has been the impact of regional PESP grants?</li> <li>• How effective is are the workflow and management structure within PESP?</li> <li>• Are you satisfied with your level of communication with OPP Headquarters?</li> <li>• Has PESP helped you to address regional goals?</li> <li>• How can EPA encourage non-members to adopt member successes in pesticide risk reductions?</li> <li>• What actions can EPA take to ensure measurable reductions in pesticide risk on a national scale?</li> </ul>
PESP Liaisons	Communications	<p><i>PESP Update Newsletter</i></p> <ul style="list-style-type: none"> <li>• How would you rate its value?</li> <li>• How would you rate the user-friendliness of its format?</li> <li>• How often do you use its contents?</li> </ul> <p><i>Bi-Weekly Information Exchange Email</i></p> <ul style="list-style-type: none"> <li>• How would you rate its value?</li> <li>• How would you rate the user-friendliness of its format?</li> <li>• How often do you use its contents?</li> </ul> <p><i>PESP Website</i></p> <ul style="list-style-type: none"> <li>• How would you rate its value?</li> <li>• How would you rate the user-friendliness of its format?</li> <li>• How often do you use its contents?</li> </ul> <p><i>PESP Program and Strategy Guidance</i></p> <ul style="list-style-type: none"> <li>• How would you rate their value?</li> <li>• How would you rate the user-friendliness of their format?</li> <li>• How instrumental were they during program enrollment and the formulation of your members' PESP strategies?</li> </ul> <p><i>PESP Annual Report</i></p> <ul style="list-style-type: none"> <li>• How would you rate its value?</li> <li>• How would you rate the user-friendliness of its format?</li> <li>• How often do you use its contents?</li> </ul>

<b>Appendix A</b>		
<b>DISCUSSION QUESTIONS</b>		
<b>Stakeholder Group</b>	<b>Topic Area</b>	<b>Sample Questions</b>
	Lessons Learned	<ul style="list-style-type: none"> <li>• What were your initial motivations for becoming a PESP Liaison?</li> <li>• Has the Liaison program met your expectations?</li> <li>• Do you receive adequate support from management in your Division within OPP?</li> <li>• Do you feel that your work with PESP is valuable to your Division?</li> <li>• How can EPA encourage non-members to adopt member successes in pesticide risk reductions?</li> <li>• What actions can EPA take to ensure measurable reductions in pesticide risk on a national scale?</li> </ul>
PESP Members	PESP Strategy Development and Outcomes	<ul style="list-style-type: none"> <li>• What factors initially motivated you to participate in PESP?</li> <li>• What has been the most challenging aspect of your membership?</li> <li>• What sorts of benefits has your organization derived as a result of PESP participation?</li> <li>• What additional benefits would your organization ideally realize as a result of PESP participation?</li> <li>• How effectively did PESP help you to identify, develop, and carry out pesticide risk reduction activities?</li> <li>• Did the strategy process enhance the existing programmatic goals of your organization?</li> <li>• Did PESP provide a feasible timeframe for submitting your strategy?</li> <li>• Can you quantify the environmental and/or human health impact of your PESP strategy? (e.g., total acreage now under IPM)</li> </ul>
	PESP Liaisons	<ul style="list-style-type: none"> <li>• What role did your PESP liaison play in facilitating the development of PESP strategies? (e.g., in serving as an accessible EPA contact; in assisting with fact finding; in reviewing and troubleshooting draft strategies)</li> <li>• How would your PESP liaison ideally serve your organization?</li> <li>• How frequently do you speak with your PESP liaison?</li> <li>• Are you satisfied with the level of communication you have with your PESP liaison?</li> <li>• How would you rate the overall performance of your liaison?</li> <li>• In what respect(s) was your liaison's performance most valuable? Least valuable?</li> </ul>

<b>Appendix A</b>		
<b>DISCUSSION QUESTIONS</b>		
<b>Stakeholder Group</b>	<b>Topic Area</b>	<b>Sample Questions</b>
	Communications	<p><i>PESP Update Newsletter</i></p> <ul style="list-style-type: none"> <li>• How would you rate its value?</li> <li>• How would you rate the user-friendliness of its format?</li> <li>• How often do you use its contents?</li> </ul> <p><i>Bi-Weekly Information Exchange Email</i></p> <ul style="list-style-type: none"> <li>• How would you rate its value?</li> <li>• How would you rate the user-friendliness of its format?</li> <li>• How often do you use its contents?</li> </ul> <p><i>PESP Website</i></p> <ul style="list-style-type: none"> <li>• How would you rate its value?</li> <li>• How would you rate the user-friendliness of its format?</li> <li>• How often do you use its contents?</li> </ul> <p><i>PESP Program and Strategy Guidance</i></p> <ul style="list-style-type: none"> <li>• How would you rate their value?</li> <li>• How would you rate the user-friendliness of their format?</li> <li>• How instrumental were they during program enrollment and the formulation of your PESP strategy?</li> </ul> <p><i>PESP Annual Report</i></p> <ul style="list-style-type: none"> <li>• How would you rate its value?</li> <li>• How would you rate the user-friendliness of its format?</li> <li>• How often do you use its contents?</li> </ul>
	Lessons Learned	<ul style="list-style-type: none"> <li>• Have you shared best practices with other PESP members?</li> <li>• Have you implemented best practices gained from other PESP members?</li> </ul>

**APPENDIX B**  
**Summary of Evaluation Discussions**



<b>SUMMARY OF EVALUATION DISCUSSIONS</b>					
<b>Indicator/Measure</b>	<b>Stakeholders Discussing Topic</b>				<b>Finding/Result</b>
	<b>OPP Mgmt.</b>	<b>ESB Staff</b>	<b>PESP Liaisons</b>	<b>PESP Members</b>	
<b>PESP Strategy Development and Outcomes</b>					
What are the most common challenges encountered during PESP strategy development?		x			<u>ESB Staff</u> <ul style="list-style-type: none"> <li>• Devoting sufficient time to strategy development.</li> <li>• Getting members to address strategy on an annual basis.</li> <li>• Incorporation of measurement.</li> <li>• Incorporation of sufficient level of detail.</li> </ul>
What are the most challenging aspects of PESP membership?				x	<u>Members Only</u> <ul style="list-style-type: none"> <li>• Strategy development and annual strategy updates.</li> <li>• Quantifying end outcomes.</li> <li>• Several members described strategy development and update as a "paperwork exercise."</li> </ul>
What factors initially motivated members to participate in PESP?				x	<u>Members Only</u> <ul style="list-style-type: none"> <li>• Improved relations with EPA.</li> <li>• Public recognition, often for activities underway prior to PESP involvement.</li> <li>• Opportunity for grant dollars</li> <li>• Technology transfer through member networking and EPA dissemination of information on new technologies, new product registrations, etc.</li> </ul>
What additional benefits do PESP members desire?				x	<u>Members Only</u> <ul style="list-style-type: none"> <li>• None: PESP is doing everything it can for members with previous IPM experience and broad connections at the Agency.</li> <li>• Member advocacy within EPA and with public.</li> <li>• Registration incentives (e.g., fast-track registration; facilitated approval for special use permits for new materials; special attention for re-registrations).</li> </ul>
Does PESP provide a feasible timeframe for submitting member strategies?				x	<u>Members Only</u> <ul style="list-style-type: none"> <li>• Yes, and EPA was flexible in cases where members needed additional time.</li> </ul>
Does the strategy development process enhance the existing programmatic goals of member organizations?				x	<u>Members Only</u> <ul style="list-style-type: none"> <li>• Most strategies were internally developed prior to PESP; the program most often helped to "focus" existing programmatic goals and activities and formalize ongoing efforts.</li> </ul>

SUMMARY OF EVALUATION DISCUSSIONS						
Indicator/Measure	Stakeholders Discussing Topic				Finding/Result	
	OPP Mgmt.	ESB Staff	PESP Liaisons	PESP Members		
How does PESP help members to identify, develop, and carry out pesticide risk reduction activities?		x		x	<u>Members</u> <ul style="list-style-type: none"> <li>Liaisons bring new ideas and technologies, and help members develop "fundable" projects.</li> </ul>	<u>ESB Staff</u> <ul style="list-style-type: none"> <li>Identify new technologies.</li> <li>Provide additional resources.</li> </ul>
Have strategies resulted in measurable reductions to pesticide-related human health and environmental risk?		x		x	<u>Members</u> <ul style="list-style-type: none"> <li>Yes, but not easily quantified. Members most often get to intermediate outcome stage, quantifying acres under IPM but not the related risk reduction.</li> </ul>	<u>ESB Staff</u> <ul style="list-style-type: none"> <li>Little quantitative information. Believe PESP has caused decrease, but cannot determine its contribution.</li> <li>DOD and schools able to quantify because of IPM. DOD achieve a 50% decrease in herbicide use.</li> </ul>
What sorts of benefits have PESP members derived as a result of participation?		x		x	<u>Members</u> <ul style="list-style-type: none"> <li>Improved relationship w/ EPA.</li> <li>Public recognition, often for activities underway prior to PESP involvement.</li> <li>Networking opportunities with other members</li> <li>Grant dollars (though PESP grants were later made non-exclusive).</li> <li>Several members cited that increased sales were <i>not</i> a benefit because consumers care more about product quality than environmental footprint.</li> </ul>	<u>ESB Staff</u> <ul style="list-style-type: none"> <li>Public recognition.</li> <li>Improved EPA relations.</li> <li>Grant money.</li> </ul>
<b>Characteristics of Successful PESP Strategies</b>						
What makes one PESP strategy more successful than another?		x			<u>ESB Staff</u> <ul style="list-style-type: none"> <li>Identify issues clearly and communicate them to EPA;</li> <li>Include measurement;</li> <li>Are detailed and innovative.</li> </ul>	

<b>SUMMARY OF EVALUATION DISCUSSIONS</b>					
<b>Indicator/Measure</b>	<b>Stakeholders Discussing Topic</b>				<b>Finding/Result</b>
	<b>OPP Mgmt.</b>	<b>ESB Staff</b>	<b>PESP Liaisons</b>	<b>PESP Members</b>	
To what extent has the quality of PESP strategies varied over the course of the program?		x			<u>ESB Staff</u> <ul style="list-style-type: none"> <li>• Originally "background" document required, but have streamlined, now less detail;</li> <li>• Former requirement too much, but current not enough, affects PESP's impact.</li> <li>• Those strategies that were well written have remained so, those that were bad, remain so.</li> <li>• Significant variation in quality, ranges from "Did not get grant money, so no strategy" to thesis.</li> </ul>
How often have well-written strategies failed during implementation (i.e., failed to achieve acceptable environmental results)?		x			<u>ESB Staff</u> <ul style="list-style-type: none"> <li>• Respondents hesitant to say that any failed as PESP is a voluntary program.</li> <li>• Indicate that impact varies based on growing season and crop quality, alternative pest control mechanism may prove inappropriate.</li> <li>• If strategy does not accomplish what set out to do, it may have been too ambitious, goals not achieved, but progress made.</li> </ul>

<b>SUMMARY OF EVALUATION DISCUSSIONS</b>					
<b>Indicator/Measure</b>	<b>Stakeholders Discussing Topic</b>				<b>Finding/Result</b>
	<b>OPP Mgmt.</b>	<b>ESB Staff</b>	<b>PESP Liaisons</b>	<b>PESP Members</b>	
<b>PESP Liaisons</b>					
<p>How are the activities of an OPP Division's PESP liaison(s) valuable in helping to meet Divisional goals? OPP goals?</p>	x		x		<p><u>Liaisons</u></p> <ul style="list-style-type: none"> <li>• Majority of liaisons said program did address divisional goals.</li> <li>• Provides good example of alternative strategy to regulation.</li> <li>• Opens dialog, 2 way conversation with regulated community. One respondent stated that partner gave feedback on standard value used in a risk assessment.</li> <li>• Gives broader view of the world, world in which regulated community operates.</li> <li>• Several respondents did not find that it meshed well with divisional goals.</li> <li>• Needs to be better integrated with OPP.</li> </ul> <p><b><u>OPP Management</u></b></p> <ul style="list-style-type: none"> <li>• Supports participatory regulatory process; gives regulated community access to decision-makers.</li> <li>• Keeps misinformation under control by giving members a direct line to Agency information.</li> <li>• Use liaison as communication tool for other activities (i.e., non-PESP), make use of two-way communication.</li> <li>• Helps get members to sign up: members like having someone within EPA to facilitate information sharing.</li> <li>• Test outcome measures and specific projects/activities through PESP, use as an example to non-members/in national arena of something that works.</li> <li>• PESP good place for agency to pilot new techniques.</li> <li>• Routine PESP work is related to goals, risk reduction is in strategic plan.</li> </ul>

<b>SUMMARY OF EVALUATION DISCUSSIONS</b>					
<b>Indicator/Measure</b>	<b>Stakeholders Discussing Topic</b>				<b>Finding/Result</b>
	<b>OPP Mgmt.</b>	<b>ESB Staff</b>	<b>PESP Liaisons</b>	<b>PESP Members</b>	
Do Liaisons receive adequate support from OPP Division management?	x		x		<p><u>Liaisons</u></p> <ul style="list-style-type: none"> <li>• Yes, but some liaisons caveat their response with statements like "as long as it doesn't take too much time."</li> </ul> <p><b><u>OPP Management</u></b></p> <ul style="list-style-type: none"> <li>• Some divisions view PESP as being BPPD's program and not OPP's as a whole, and thus don't support PESP activities (e.g., liaison travel) in their budget planning.</li> <li>• Great morale booster.</li> <li>• Not aware of people saying that they aren't getting support.</li> <li>• Serve as liaison for as long as want, want consistency, takes liaison a while to understand partner's issues.</li> <li>• Harder to recruit liaisons now than before, potentially because staff are unaware of management's support of the program.</li> </ul>
What role do liaisons play in facilitating the development of PESP strategies?				x	<p><u>Members Only</u></p> <ul style="list-style-type: none"> <li>• "Sounding board" for ideas.</li> <li>• Provide info on new products and technologies.</li> <li>• Very little substantive participation in strategy writing.</li> </ul>
How would members like liaisons to ideally serve their organizations?				x	<p><u>Members Only</u></p> <ul style="list-style-type: none"> <li>• Nothing More: liaisons are doing everything they can for members with previous IPM experience and broad connections at the Agency.</li> <li>• Advocate for specific member needs.</li> <li>• Take on role broader than merely reminding members to submit strategy.</li> </ul>
How frequently do members speak with their liaison?				x	<p><u>Members Only</u></p> <ul style="list-style-type: none"> <li>• Ranges from weekly to quarterly, though most are closer to quarterly.</li> </ul>
Are members satisfied with the level of communication they have with their liaison?				x	<p><u>Members Only</u></p> <ul style="list-style-type: none"> <li>• Most members are satisfied, though this may be due a feeling that liaisons don't have enough to offer for members to want more communication.</li> </ul>

<b>SUMMARY OF EVALUATION DISCUSSIONS</b>					
<b>Indicator/Measure</b>	<b>Stakeholders Discussing Topic</b>				<b>Finding/Result</b>
	<b>OPP Mgmt.</b>	<b>ESB Staff</b>	<b>PESP Liaisons</b>	<b>PESP Members</b>	
How do members rate the overall performance of their liaison?				x	<u>Members Only</u> <ul style="list-style-type: none"> <li>• Good/Excellent in all but one case (which rated "fair").</li> </ul>
In what respect(s) were members' liaisons performance most valuable? Least valuable?				x	<u>Members Only</u> <ul style="list-style-type: none"> <li>• "Sounding board" for ideas.</li> <li>• Provide info on new products and technologies.</li> <li>• Personal point-of-contact at Agency.</li> </ul>
<b>Communications</b>					
PESP Update Newsletter			x	x	<u>Members and Liaisons</u> <ul style="list-style-type: none"> <li>• In general, materials well received, but members and Agency staff do not use frequently. They read materials when they arrive and reference them as needed later on.</li> <li>• Notable exception was bi-weekly emails. Majority of liaisons and many members were unfamiliar with it.</li> <li>• Newsletter and website received better ratings than Annual report and Strategy Guidance.</li> </ul>
Bi-Weekly Information Exchange Email			x	x	
PESP Website			x	x	
PESP Program and Strategy Guidance			x	x	
PESP Annual Report			x	x	
<b>Lessons Learned</b>					
What are management's overall impressions of PESP?	x				<u>OPP Management</u> <ul style="list-style-type: none"> <li>• "Good political mileage" in the sense that it's something OPP can point to as "green and voluntary." Serves as counterweight to OPP's other activities, which (in its critics' eyes) simply license products that cause harm.</li> <li>• Great idea, never hear anything negative.</li> <li>• Case specific success. Depends on member and liaison.</li> <li>• Need good screening. At this time, the hurdle is low.</li> <li>• Many organizations joined for grant \$, once realize not guaranteed money, they did not participate in full.</li> <li>• Voluntary internally and externally.</li> <li>• Relationship between liaison and partner can be risk because could sour relations, reduce trust in EPA.</li> </ul>

<b>SUMMARY OF EVALUATION DISCUSSIONS</b>					
<b>Indicator/Measure</b>	<b>Stakeholders Discussing Topic</b>				<b>Finding/Result</b>
	<b>OPP Mgmt.</b>	<b>ESB Staff</b>	<b>PESP Liaisons</b>	<b>PESP Members</b>	
Has PESP realized success commensurate with its funding?	x				<p><u>OPP Management</u></p> <ul style="list-style-type: none"> <li>• "Smart investment" -- few FTE and substantial (though largely non-quantifiable) benefits: helps with morale and knowledge base by giving opportunities to do work outside of normal areas of responsibility (i.e., through liaison program); "can count on two hands the number of times a problem has been solved because a member has a professional relationship with someone at Agency;" minimizes fighting fights because of miscommunication or misinformation.</li> <li>• Should be some means to measure whether success commensurate with funding, but difficult. In order to justify the 6 FTE and \$300k in grants, PESP needs more than just "feel good" anecdotes and claims of improved communication.</li> <li>• In future, will need to demonstrate relationship so need to get folks thinking about measures. Framework exists through strategies, but need to be thinking in advance, ask right questions, have discussions between members and liaisons.</li> </ul>
Which aspects of PESP have been most effective? Least effective?	x	x			<p><u>ESB Staff</u></p> <ul style="list-style-type: none"> <li>• Most successful elements are the liaison program and ability to increase awareness of new technologies for pest management.</li> <li>• Least successful elements are the liaison program, communication with members, and funding.</li> </ul> <p><u>OPP Management</u></p> <ul style="list-style-type: none"> <li>• Most successful elements are the two-way information exchange (and misinformation control), giving <i>users</i> (i.e., instead of just registrants) empowerment and access to Agency, increased openness and trust between partners and EPA, increased awareness of specific reduced risk pesticides. Also keeps the regulated community involved, which results in better decisions and less complaining after the fact.</li> <li>• Least successful elements: lack of shared lessons learned and lack information to members about what program offers, what commodities represented, who the liaisons represent. EPA could be more effective in marketing good models from PESP (i.e., through regional offices).</li> </ul>

<b>SUMMARY OF EVALUATION DISCUSSIONS</b>					
<b>Indicator/Measure</b>	<b>Stakeholders Discussing Topic</b>				<b>Finding/Result</b>
	<b>OPP Mgmt.</b>	<b>ESB Staff</b>	<b>PESP Liaisons</b>	<b>PESP Members</b>	
How can EPA encourage non-members to adopt member successes in pesticide risk reductions? (e.g., technology transfer)	x	x	x		<p><u>Liaisons and ESB Staff</u></p> <ul style="list-style-type: none"> <li>● Need to increase communication, need to tout successes more visibly in communities similar to those of more successful partners.</li> <li>● Need to have testimonials from partners about the impact PESP has had on them, successes they have achieved.</li> <li>● Need EPA to incorporate PESP internally, it will help with publicity externally.</li> <li>● Offer more funding.</li> <li>● Need to address the free rider problem.</li> </ul> <p><u>OPP Management</u></p> <ul style="list-style-type: none"> <li>● Face to face meetings are most effective.</li> <li>● Need to have annual meetings again, or piggyback onto existing meetings (e.g., National IPM Symposium).</li> <li>● Depend on crop consultants, national IPM associations, etc. to get word out. Use trade journals to get messages out to growers and improve credibility.</li> <li>● Awards: Champions, add Green Chemistry-like program</li> </ul>



<b>SUMMARY OF EVALUATION DISCUSSIONS</b>					
<b>Indicator/Measure</b>	<b>Stakeholders Discussing Topic</b>				<b>Finding/Result</b>
	<b>OPP Mgmt.</b>	<b>ESB Staff</b>	<b>PESP Liaisons</b>	<b>PESP Members</b>	
What actions can EPA take to ensure measurable reductions in pesticide risk on a national scale?	x	x	x		<p><u>Liaisons and ESB Staff</u></p> <ul style="list-style-type: none"> <li>• Share information more effectively, better communication and documentation.</li> <li>• Increased outreach, to include training for applicators and conferences by sector.</li> <li>• Increase activities to facilitate information sharing.</li> <li>• Need to highlight synergies between regulation and voluntary programs of this nature within EPA.</li> <li>• Look to other federal agencies like the Dept of Agriculture.</li> <li>• Measurement of usage.</li> </ul> <p><b><u>OPP Management</u></b></p> <ul style="list-style-type: none"> <li>• Have those that know industry identify means that would be most effective. Office of water, worked with industry to come up with alternative to regulation, EPA rolled industry's accomplishments/solutions into regulation.</li> <li>• We can encourage, but we can't push too hard because we're voluntary. Kicking-out members who don't make measurable reductions has the effect of removing EPA's primary benefits--a more participatory decisionmaking process, and misinformation control.</li> </ul>
To what extent does PESP (and its outcomes) align with OPP's strategic goals?	x				<p><u>OPP Management</u></p> <ul style="list-style-type: none"> <li>• Some members aren't initiating new behavior because they joined (i.e., they already had IPM), but to the extent that PESP broadens or improves IPM at member organizations, PESP activities are certainly in line with OPP's strategic goals.</li> <li>• See OPP goals/Divisional goals question above.</li> <li>• Do not use PESP to collect data for performance.</li> <li>• Willing to implement alternatives.</li> </ul>
Has PESP helped to address regional goals?			x		<p><u>Liaisons</u></p> <ul style="list-style-type: none"> <li>• Two respondents stated that PESP helped them indirectly, learn about EMS use and pest management at theme park.</li> <li>• One respondent stated that IPM was a formal goal in the region.</li> </ul>

<b>SUMMARY OF EVALUATION DISCUSSIONS</b>					
<b>Indicator/Measure</b>	<b>Stakeholders Discussing Topic</b>				<b>Finding/Result</b>
	<b>OPP Mgmt.</b>	<b>ESB Staff</b>	<b>PESP Liaisons</b>	<b>PESP Members</b>	
What has been the impact of regional SAI and PESP grants?			x		<u>Liaisons</u> <ul style="list-style-type: none"> <li>• Did not get substantive feedback on this issue.</li> <li>• One respondent said very successful, another said very little money and makes little difference.</li> <li>• Inconclusive.</li> </ul>
How effective are the workflow and management structure within PESP?			x		<u>Liaisons</u> <ul style="list-style-type: none"> <li>• Have not had much interaction beyond Glick and Ellis.</li> <li>• Little recognition in management chain.</li> </ul>
Are liaisons satisfied with their level of communication with OPP Headquarters?			x		<u>Liaisons</u> <ul style="list-style-type: none"> <li>• Two respondents stated that they were, one interviewee responded in the negative.</li> </ul>
What were liaisons' initial motivations for joining the liaison program?			x		<u>Liaisons</u> Professional development <ul style="list-style-type: none"> <li>• Partner's work relates to my work at EPA;</li> <li>• Want to connect with industry I am involved in regulating, see how use pesticides;</li> <li>• Want to maintain involvement in professional area in which not currently active.</li> </ul> Personal Interest <ul style="list-style-type: none"> <li>• Committed to voluntary programs;</li> <li>• Interested in partner's line of work (e.g., Golf).</li> </ul>
Has the liaison program met liaisons' expectations?			x		<u>Liaisons</u> <ul style="list-style-type: none"> <li>• Responses were mixed. Many said yes and no.</li> <li>• Often fell short with respect to initial motivations for joining, but liaisons were satisfied in unexpected ways.</li> <li>• Disappointed by level interaction with partners. Partner often not interested in collaborating. In some cases, interviewee indicated it was a function of organizational turnover or fear of bad PR.</li> <li>• A few liaisons indicated that they were satisfied initially, now less so; or that their job function had changed and they are less involved than once were.</li> <li>• Partner was established and needed less help, so less interaction.</li> </ul>

<b>SUMMARY OF EVALUATION DISCUSSIONS</b>					
<b>Indicator/Measure</b>	<b>Stakeholders Discussing Topic</b>				<b>Finding/Result</b>
	<b>OPP Mgmt.</b>	<b>ESB Staff</b>	<b>PESP Liaisons</b>	<b>PESP Members</b>	
To what extent are best practices shared and implemented among PESP members?				x	<u>Members Only</u> <ul style="list-style-type: none"> <li>• Some cross-fertilization, but some members noted opportunities for more (e.g., piggyback PESP Annual Meeting with National IPM Symposium). This may get more member participation, as well as provide opportunities for technology transfer to non-members.</li> </ul>

**APPENDIX C**  
**Review of PESP Champion Strategies**

**Member:** Almond Board of California

**Strategic Approach:** Research and develop IPM strategies while educating growers in IPM and other risk-reduction strategies.

**Activities:**

- (i.) Research and develop IPM methods.
- (ii.) Research conventional versus reduced-risk orchard management systems (through partnership with California Department of Pesticide Regulation's (CDPR's) Pest Management Alliance Program); grower outreach to disseminate best practices.
- (iii.) Conduct outreach to growers through California Certified Pest Control Advisors (CACPCA).
- (iv.) Develop online calculator to evaluate costs/benefits of alternatives to conventional organophosphate pesticide sprays.
- (v.) Distribute and publicize two critical IPM documents: USDA's *Crop Profile on Almonds* (1999) and the Almond Board's *Pest Management Strategic Plan* (2000).
- (vi.) Build alliances with growers, academics, and government agencies.
- (vii.) Conduct grower survey to assess level of adoption of IPM growing practices.

**Performance Measures:**

- (i.) CDPR's pesticide-use reports; number of growers adopting reduced-risk practices.
- (ii.) Number of growers attending Pest Management Alliance Program meetings.
- (iii.) Level of pesticide runoff from test plots with alternative management practices in place.
- (iv.) Frequency of reference for two critical IPM documents.

**Member:** Gerber Products Company

**Strategic Approach:** Fund agricultural research for IPM with the goal of eliminating all detectable pesticide residues Gerber products.

**Activities:**

- (i.) Fund research aimed at eliminating organophosphate pesticides from Gerber-purchased sweet potatoes and peaches.
- (ii.) Fund research into use of new reduced-risk pesticides with conventional spray techniques; new spray technologies; and disease forecasting as a means of pesticide use reduction.
- (iii.) Fund behavioral research on apple pests (to advise targeted pesticide use).
- (iv.) Support Gerber grower in pilot to convert part of orchard to certified organic methods.
- (v.) Fund research that establishes efficacy of reduced-risk pesticides by subjecting them to the same tests performed on conventional pesticides.

**Performance Measures:**

- (i.) Spray histories required of Gerber growers; document reduction/elimination of organophosphate pesticides and adoption of IPM practices.
- (ii.) Toxicity rating program to evaluate alternative against conventional spray programs.
- (iii.) Number of orchards certified organic.

**Member:** U.S. Department of Defense, Armed Forces Pest Management Board

**Strategic Approach:** Incorporate IPM into all aspects of DoD's planning, training, and operations.

**Activities:**

- (i.) Work with Invasive Species Council to prevent introduction of non-native species attributable to DoD.
- (ii.) Adopt practices to reduce DoD pesticide use against a 1993 baseline.
- (iii.) Field pathogen test kits to test mosquitoes for human pathogens; reduce insecticide applications in areas where mosquitoes pose little danger as vectors for serious disease.
- (iv.) Develop insect repellents for personal protection (i.e., as alternative to widespread insecticide sprays).
- (v.) Participate in inter-agency workgroup to develop reduced-risk methods of aircraft disinsection.

**Performance Measures:**

- (i.) Number of introduced non-natives attributable to DoD; budget planning to continue involvement with Invasive Species Council.
- (ii.) Reductions in pesticide use against 1993 baseline.
- (iii.) Progression of research (field pathogen test kits; new insect repellants) through DoD-established testing/evaluation/implementation milestones.
- (iv.) Track inter-agency workgroup meeting minutes to document development and implementation of alternative aircraft disinsection methods.