

Strategic Program Assessment of the Pesticide Safety Education Program



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Background

Purpose Statement

To determine the current status of the Pesticide Safety Education Program (PSEP) in its ability to support national goals and achieve safe use of pesticides in an effective and efficient manner; to use the information to affect future programmatic and policy decisions.

As part of this effort, EPA consulted with a number of interested experts to assemble their diverse perspectives on current programmatic and operational issues. It was timely to have this assessment during 2004 because:

- C Good government entails conducting periodic program assessments. Good management requires a regular assessment of program purpose, scope, performance and progress.
- C Increased client demands highlighted operational issues within the program, such as an inability to meet the demands of all clients and a lack of program efficiency. An evaluation of these issues by a wide representation of involved stakeholders was warranted and was recommended by stakeholder groups.
- C There is an increasing demand for accountability measures by the public, Congress and the Administration.
- C Budget pressure, and the resulting reduction in federal resources, increases the need to assess whether the current purpose and priorities of the pesticide safety education program are sufficiently focused to support the objectives of protecting human health and the environment.

Statutory and Regulatory Requirements

Amendments to the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) in 1972 and 1974 gave EPA the to regulate the manufacture, sale, distribution and use of pesticides, and to require that anyone purchasing, applying or supervising the use of restricted use pesticides (RUPs) be certified applicators. EPA classifies pesticides, or pesticide uses, as restricted because of a determination that the acute dermal or inhalation toxicity presents a hazard to the applicator, other people or the environment.

EPA, by regulation (40 CFR 171), established minimum standards of competency for private and commercial applicators, categories of commercial applicators, and provisions for program delegation to states, tribes, territories and federal agencies with an EPA-approved plan for implementation. EPA has delegated the pesticide applicator certification program to 50 states, two territories, four tribes and the District of Columbia. EPA is responsible for administering the private applicator certification program in Colorado.

Goals of the Certification Program

The goal of the certification program is to determine applicator minimum competency to safely, properly and effectively use restricted use pesticides. A number of means exist to achieve this goal, such as examinations, general education, training, and hands-on

experience. While minimum standards of competency for certification have been established by EPA through regulation, comparable standards of training are necessary to ensure that training is conducted efficiently and effectively.

Training

There is a broad range of activities involving the use of pesticides, from the application of general or unclassified use pesticides by farmers and home owners to the application of restricted use pesticides by certified applicators. Although risk mitigation is required through label directions, the label alone cannot ensure proper use. Misuse may occur regardless of whether the user is applying a less-harmful general or unclassified use pesticide, or a restricted use pesticide. Both EPA and USDA have the responsibility to ensure that collectively, training needs are being met as much as possible in order to ensure proper use. There is no clear distinction between training needs for the different uses. Ensuring that pesticide applicators seeking certification are well-prepared is a means to protect human health, the food supply, and the environment. As with any dynamic program, the needs change over time.

There are a number of training and educational resources available for pesticide applicators. The State Cooperative Extension Service (CES), associations, industry, non-profit organizations, private companies, and federal and state government all provide education, training and outreach materials. Only the State CES receives funding from EPA to provide training. EPA has the responsibility to ensure the best use of funds devoted to this purpose.

EPA and USDA Cooperation

Section 23 of FIFRA states that the EPA Administrator shall cooperate with the Secretary of Agriculture to “use the services of the State CES to inform and educate pesticide users about accepted uses and other regulations made under this Act.” The intent of the cooperation was to take advantage of an existing infrastructure and prevent the creation of a redundant system. In 1972, EPA and USDA established a memorandum of agreement to cooperate in the training of pesticide applicators seeking certification to use RUPs. The agreement was to use USDA’s existing educational arm, the State CES, whose mission was to ensure the safe use of pesticides through education and training. While not the only means of training, State Lead Agencies for pesticide regulation have taken advantage of the existing mechanism to train users of RUPs. The original intent was to reach a narrow audience of applicators of RUPs, not all audiences using any pesticides.

In 1975, EPA and USDA established an interagency agreement (IAG) as a mechanism for EPA to pass funds through USDA for distribution to the State CES to help support training activities for certified restricted use pesticide applicators. FIFRA does not contain a mandate to provide funding, and the IAG does not specify the amount to be transferred. However, since the inception of the agreement, EPA has allocated discretionary funds ranging from \$700,000 to \$5 million annually, depending on the level of Congressional appropriations. EPA has been the sole source of federal funding for the certified pesticide applicator training program, with the exception of \$425,000 contributed by USDA in FY 2003. EPA funding is provided to support CES training activities for the certification of restricted use pesticide applicators.

Role of the CES PSEP

Due in part to the inherent role of the CES as the educational arm of USDA, the evolution of training needs, and emerging needs (e.g. IPM, worker protection) the CES pesticide safety education program (PSEP) has expanded its role to include education of all pesticide users. Today, PSEP activities go beyond the training support of certified restricted use applicators as funded through the EPA - USDA IAG. The initial efforts focused on those applying RUPs, with no clear distinction in the training needs of all potential users. Though there might be less risk associated with general or unclassified use products, there is an inherent risk with all pesticide use. The pesticide label seeks to mitigate risks, but training is also a key component to risk mitigation and minimization in all avenues. The federal government does not have complete responsibility for training all pesticide users, but through coordination and cooperation should ensure that collectively all needs are met. As with any program, needs will change over time.

PSEP coordinators develop educational materials for the pesticide user and for the general public. Materials for the applicator seeking certification are generally self-study in the form of manuals or CD-ROMs, while materials for the public are often pamphlets, posters, or other media for pesticide safety messages. PSEP coordinators also develop teaching resources for use by county agents. Coordinators often take on the role of organizer for applicator recertification programs, working with commodity associations, community organizations, local government and health care providers. As the organizer, coordinators work with speakers, develop presentations, coordinate logistics and interact with the pesticide State Lead Agency to gain approval of their courses for recertification credit. In addition, PSEP coordinators are frequently called upon to serve as speakers for other organizations holding training or classes.

It continues to be a challenge for the PSEP to address its mission, as defined by USDA, and to account for the use of federal funding provided by EPA to help support a subset of PSEP activity, the training of certified restricted use applicators. It is important that all stakeholders work together to determine program goals and scope, as well as the most appropriate and efficient use of PSEP resources, in order to address critical national needs.

Previous Assessments

There have been several program assessments over the life of the pesticide applicator training program. Some have concentrated on training, while others have noted the increasing challenge of securing sufficient resources to conduct the program effectively. Below is a summary of recommendations from three significant assessments of the program.

- In 1985, the SFIREG (State FIFRA Inspection, Regulatory, Education Group) certification and training task force recommended a periodic assessment of the program by EPA, USDA, State CES and State Lead Agencies, the development of national educational materials in key areas, the evaluation of training materials, and a central point for the collection and distribution of materials. As a result, a periodic assessment has been conducted over the years, EPA developed and distributed a national core manual, and a central point was

established for the listing of materials only.

- In 1992, EPA created a task force to examine the certification and training program. The task force recommended establishing a C&T coordination group to help EPA make informed decisions, to develop common sense policy and to facilitate program implementation. In 1997, the Certification and Training Assessment Group (CTAG) was established for these reasons, with membership from EPA, USDA, State CES, State Lead Agencies and tribal programs. CTAG also serves to identify the changing needs of and to provide future direction for the program.
- In 1999, the CTAG recommended activities such as developing a national model curriculum, establishing a network of specialists, improving cooperation among program partners, stating the need for USDA funding and providing a mechanism to improve the skills of educators. The skills of educators are being improved through such means as the Pesticide Safety Education Center in North Carolina and professional development courses provided by and for members of the American Association of Pesticide Safety Educators (AAPSE).

2004 Assessment

Rationale and Process

To ensure program success, government agencies should maintain an ongoing assessment of program effectiveness and efficiency. Demands for program accountability and measurable program performance outcomes are increasing. The President's management agenda, statutory requirements such as the Government Performance and Results Act (GPRA), and the Office of Management and Budget's Program Assessment Rating Tool (PART), are intended to ensure maximum program productivity and accountability. PART uses performance outcome measures to identify program strengths and weaknesses that inform funding and management decisions.

Although previous assessments had been conducted on broad aspects of the certification and training programs related to pesticide applicators, the current intent was to conduct a more narrowly focused assessment than those conducted previously, specifically on the training component of the program. The coupling of the demands for program accountability and budget cuts prompted EPA to convene a group of stakeholder experts to give their informed perspectives on problems, opportunities for improvement and other issues related to the certified applicator training component of the PSEP, as described in the EPA - USDA IAG. The intention of the assessment was to gather informed perspectives for EPA to consider when deciding how to meet training needs and how to develop program accountability measures.

EPA developed an assessment process, a representative sample of stakeholders, and relevant materials, with input from IAG partner USDA, to guide the program assessment committee's evaluation of the program. To ensure a broad spectrum of perspectives, the following representatives of program providers, professional associations, and program customers participated in the assessment:

Stakeholder Groups Represented in this Assessment Process

Federal Program Representatives

- Bill Diamond – EPA, Office of Pesticide Programs, Director of Field and External Affairs Division
- Kevin Keaney – EPA, Chief of the Certification and Worker Protection Branch
- Jeaneanne Gettle – EPA, Region 4, Pesticides Branch Chief
- Ralph Otto – USDA, CSREES, Deputy Administrator of Plant and Animal Systems Division
- Monte Johnson – USDA, Cooperative State Research, Education, and Extension Service (CSREES)
- Brad Rein – USDA, CSREES

State Representatives

- Carl Martin – Arizona Structural Pest Control Commission
- Jack Peterson – Certification and Training Assessment Group, Arizona Department of Agriculture

Academic Representatives

- Paul Craig – Pennsylvania Cooperative Extension Service county agent
- Zane Helsel – PSEP liaison to Extension Committee on Policy
- Win Hock – American Association of Pesticide Safety Educators President
- Keith Smith – (and Joanne Kick-Raack substituting) Associate Director of Extension at the Ohio State University, representing Extension Directors

External Program Client Representatives

- Tom Delaney – Professional Lawn Care Association of America
- Rebeckah Freeman – American Farm Bureau Federation
- Tom Hall – CropLife America
- Andrew Moore – National Agricultural Aviation Association
- Bob Rosenberg – National Pest Management Association

2004 Assessment Meetings

The program assessment committee met on July 21-22 and on September 16-17, 2004. The committee discussed the five critical areas of:

- program goals,
- activities,
- measures,
- operation, and
- future direction.

Prior to each meeting, questions were distributed to ensure that stakeholders were focusing on the relevant issues and developing informed perspectives. The meetings were structured to allow the exchange of information and perspectives, an informed discussion of issues, and to eventually lead to written individual stakeholder perspectives. Stakeholders were asked to develop a written perspective representative of their organization or experience. Common threads from these perspectives are included under “Overview of Written Stakeholder Perspectives by Question Area.” The full text of each stakeholder perspective is attached at the end of this document.

Summary of Meeting Discussions

The following is a précis of the discussions held at both assessment meetings, intended to give a sense of the robustness of the discussion. There were both significant agreements and disagreements between the participants during these discussions. There was a general agreement on the importance of training as a component of program success, because without training, there is less risk mitigation benefit. Despite the historical involvement of the stakeholders in the program, participants did not understand its basic underpinnings, including the narrow program focus due to statutory constraints and the involved federal grant award process. Participants were aware of the need for improved accountability, recognizing the importance of measures of program success as well as the difficult nature of implementing measures without adding significant burden. There was a wide array of perspectives on the roles and responsibilities of different organizations to provide training.

The following captures some of the ideas and the range of suggestions advanced by different parties during the meeting discussions. While consensus was not reached on any points, meeting participants raised a number of important issues during the discussions.

Improve operations at the federal level

- Factors used in the formula to allocate IAG funds are: a base amount for each entity, the numbers of farms, private and commercial applicators trained since the inception of the program, and currently certified private and commercial applicators. The formula does not consider factors such as numbers of training sessions, category-specific training, or applicators trained in a given year. The federal funding formula should be changed to reflect the actual training burden.
- Although EPA and USDA have different missions, they should provide unified priorities, direction, guidance and oversight to PSEP through the interagency agreement.
- The current system of funds distribution provides the full amount of funding to the CES without imposing overhead.
- The current system lacks accountability for funds, is inefficient and has a cumbersome payment method. The payment/invoice system should be such that EPA has readily accessible information on the origin of invoices and the associated products or activities.
- State Lead Agencies and training providers should sign and submit a joint plan of work before receiving funds.

Promote efficient and effective use of resources

- The applicator training program needs a study on the effectiveness of training methods used to prepare applicators for exams. The results of a study could help set priorities for material development and change training program formats.
- When funds are limited, setting priorities becomes more important. PSEP coordinators need to establish priorities for the use of limited funds. Considerations for setting priorities should include: audience, changing categories, updating materials, balance between quality and quantity, new material development, and ongoing training programs.
- Some states may have regulations that impose priorities on the programs, restricting the programs from establishing different priorities.
- Eliminate redundancy in the development of training materials through intrastate, regional and national cooperation. Cooperation on projects that are similar would reduce duplicative efforts and make better use of resources.
- Regional and/or national collaboration on training material development may be an

efficient use of resources for subjects that are general in nature.

- Regional and/or national collaboration on training materials is difficult when materials need to address specific use patterns, environmental factors, state regulations and varying state categories/subcategories.
- Having various training providers compete for funds to conduct training programs would most likely encourage efficient use of government funds

Pursue various funding sources

- EPA should establish and maintain a base amount of funds that will provide for the basic needs of PSEP.
- USDA should provide funds to the program annually.
- EPA regulations require that applicators demonstrate competency to apply restricted use pesticides. Although not mandated at the federal level, training helps applicators achieve and maintain competence. Most states require some training for certification and/or recertification, and many groups (general public, pesticide registrants/manufacturers, pesticide applicators) benefit from training and the availability of restricted use pesticides. Given this situation, supporting funds should come from all sources that benefit from training.
- The applicator/student should pay higher fees to cover training expenses. There are few professions in which the expenses for demonstrating and maintaining competency are not borne by the professionals themselves.
- Increasing fees to cover expenses might drive down the demand for training, resulting in fewer certified applicators and potentially more users operating under the direct supervision of certified applicators. With fewer certified applicators and more uncertified pesticide users, the risk of injury or illness to users and the public increases.
- Most states have added applicator categories and subcategories beyond the federal requirements. Additional categories and subcategories result in an increased resource burden for PSEP certified applicator training. National funding decisions should be based on the 11 federal categories. States should provide funding for the burden caused by additional categories and subcategories.
- PSEP training is not limited to safe pesticide use and the standards of competency for each category. Developments in the areas of endangered species, water quality, West Nile Virus, and soybean rust need to be addressed in training. These topics do not relate specifically to EPA funding for applicator training, but are important to communicate to applicators and the general public. PSEP should seek additional funding from those programs that increase PSEP workload.

Evaluate training burden

- An increasingly diverse population adds a training and resource burden. Materials need to be developed in various languages. Also, certain audiences have particular resource needs. For example, educators are not able to give presentations with equipment that requires electricity when presenting to the Amish community.
- In order to reduce liability, a growing number of companies require employees to become certified applicators. An increase in the number of applicators causes an increased training burden on the PSEP. Generally, PSEP serves smaller businesses since larger businesses usually have their own trainers to prepare applicators for exams.
- Most states require that all commercial applicators become certified to use any pesticide. The rationale for broadening the requirement is to provide protection to the public, especially at-risk populations, such as children and the elderly. Mandating PSEP coordinators to devote EPA funds solely for the training of restricted use pesticide applicators means that other audiences are under-served.

More need to establish competency

- The provision in the federal regulations allowing non-certified users to work under the direct supervision of a certified applicator needs to be re-examined. Supervised, non-certified users are mixing, loading, and applying restricted use pesticides without demonstration of competency.
- Training for recertification is required in many states in lieu of re-examination. However, there is a need for some means (an exam) to gauge the continued competency of recertified applicators. Also, an exam may increase audience participation and interest in recertification courses.
- Applicators need to demonstrate a practical knowledge of pest control.

Improve accountability

- Collaboration between the State Lead Agency and the State CES varies greatly between states. There is tension between the interests of the regulatory agency (determine competency) and the State CES (provide education). Cooperation and communication are the keys to identifying and addressing the most critical audience and their needs. Accountability measures should mandate cooperation in order to reach the goal of providing relevant, sound training content to prepare applicators for certification and recertification.
- PSEP is just one component of the State CES. State CES coordinators should make PSEP a high-priority, high-profile program with adequate funding. State CES coordinators should provide guidance to PSEP coordinators and county agents, and should develop a system of accountability.

- Since the Interagency Agreement (IAG) was established in 1975, EPA has been passing funds through USDA to State CES for the training of applicators seeking certification to use restricted use pesticides. However, the State CES does not receive a copy of the terms and conditions of the IAG. PSEP continues to receive funds regardless of performance. The program evaluation should consider increased accountability.
- PSEP coordinators should receive a copy of the terms and conditions of the EPA-USDA Interagency agreement, and should return a signed copy stating that they will comply with the terms and conditions. Also, State Lead Agencies and training providers should be required to sign and submit a joint plan of work in order to receive funds.
- There needs to be a balance between the amount of funds received and time/resources spent to gather information to satisfy accountability measures. The burden spent satisfying accountability measures should not overwhelm program time and resources.
- Accountability measures need to be explored with stakeholders in order to get buy-in and to attain realistic and meaningful measures.

Critical Questions Used to Guide Written Stakeholder Perspectives

To have a productive program evaluation, it is essential to have a structure to frame the evaluation and to determine program strengths, problems and areas for improvement. There must be clarity in the areas of program goals, mission, activities, accountability, operations, direction, and future. Therefore, the following six questions were structured to elicit stakeholder feedback and to promote discussion on the interconnected topics of the program.

Critical Question #1: Program Goals

Mission: A clear mission statement is critical to shaping the priorities, dimensions and outcomes of a program. The current mission of the pesticide applicator training component of the national program should be to help ensure the initial and continued competence of all pesticide applicators to ensure the safe use of pesticides.

Does this statement capture the appropriate scope of the national pesticide applicator training program?

Does this statement cover the range of needs (audiences, program demands, and training activities) of the program?

Is it consistent with the specific statutory language and the broader program needs?

Is the scope of the mission fully understood by all critical stakeholders? If not, how could it be better communicated?

Is there a need to address within the mission and scope of the program the expanding demands (mission creep, e.g. spray drift, endangered species, globally harmonized system)?

Critical Question #2: Program Activities

To achieve our mission objectives requires a variety of activities by a number of critical participants.

Who should be considered the target audience?

What is the nature of training needs?

C Mechanism

C Contents

What are the gaps (over/under-emphasized)?

Who are potential or essential providers of this training?

What should be the roles of the various stakeholders in managing or providing these services (EPA, USDA, State CES, State Lead Agency, private sector, trade associations, scientific societies)?

In your opinion, what should be the most important training priorities (addressing unmet needs, maintaining core functions, satisfying short-term crises, preparing for long-term changes)?

What are, or should be, the mix of resources to fund the varying training needs?

Critical Question #3: Program Accountability

Accountability and meaningful program measures are key to the success and sustainability of any program.

What are your thoughts on the importance of accountability in the pesticide applicator training program?

Do current accountability measures accurately communicate the full range of activities and achievements of the pesticide applicator training program?

What are important considerations in developing a performance accountability system (few measures, meaningful measures, clear measures, measures capable of being implemented)?

What should be the balance between legitimate accountability and undue reporting burden?

Can you provide examples of appropriate accountability measures?

How should we work together to develop an improved performance measurement system?

Critical Question #4: Program Operations

In any system of limited resources, maximizing efficiency is critical.

What are your thoughts on how the current PSEP funds are managed and potential improvements?

What steps should be taken to improve the coordination between training providers and state lead agencies?

Are there other program operation activities that need improvement?

Have we fully explored all of the opportunities to tap into resources and leverage

funding?

Critical Question #5: Miscellaneous

Please provide input on other areas of the pesticide applicator training program not covered above, that EPA, USDA and others should consider.

Critical Question #6: Future Direction and Next Steps

Broadly, what should be the most important focus of the pesticide applicator training program in the short-term (up to 2 years)?

Broadly, what should be the most important focus of improving the pesticide applicator training program in the long-term (4-6 years)?

Procedurally, what are your suggestions on how we can work cooperatively to implement the input that comes out of this program assessment?

Overview of Written Stakeholder Perspectives by Question Area

In line with the questions provided to the stakeholders in order to elicit informed perspectives, this is a representative summary of the informed perspectives provided by the stakeholders. As with the discussion, the responses were thoughtful, representative of the expertise of the stakeholders and very robust. Although there is not consensus between the perspectives received on any of the questions, each response demonstrates the stakeholders' commitment to improving the substance and objectives of the program, and to better protecting human health and the environment. The full text of all stakeholder perspectives received is attached.

Question #1: Stakeholder Perspectives on Program Goals

Comment on Mission

- The training component of the national applicator certification program should be to help ensure initial and continued competence of all pesticide applicators so that pesticides can be applied safely and effectively

Comments on Scope

- Include general or unclassified use pesticides in program scope to achieve mission of protecting human health and the environment vs. retain existing scope
- Education is a means to achieve competency but is broader in scope than the regulatory determination of competency (through exams). Educational programs need more flexibility in terms of funding and reporting than regulatory programs do
- Have a flexible scope for states to address specific needs vs. national standard for consistency and state reciprocity
- No need to add extra initiatives such as endangered species since they are a result of other program activities

Comments on Statute / Regulation

- Expand beyond restricted use pesticide applicators to include other occupational users, handlers, retailers, health and school officials
- Eliminate the distinction between private and commercial applicators and change to "occupational users"
- Retain current statutory mandate for restricted use pesticides coverage
- Examination should be required to gauge continued competency of applicators
- Eliminate the "use under the direct supervision of a certified pesticide applicator" clause

Comments on Program Needs

- If EPA actions generate training needs, the Agency should be required to provide resources for and to support other training topics, such as drift reduction and endangered species
- Need outreach and training to reinforce that safe and proper pesticide applications benefit consumers and the environment
- Need applicator demonstration of practical knowledge of pest control

Question #2: Stakeholder Perspectives on Program Activities

Comments on Priorities

- Maintain core functions (variously defined) – status quo
- Focus on initial certification training
- Focus on recertification
- Target users with greatest number of misuse incidents
- Direct funds and effort to greatest need, not only to restricted use pesticide applicators
- Some states impose restrictions that preclude making a change in priorities and/or activities
- Mandating funds solely for use of training or RUP applicators means that other audiences are under-served

Comments on Mechanisms

- Need national training resources (on-line, etc.)
- Need most cost-effective methods for training delivery
- Need study on effectiveness of training methods to help set priorities

Comments on Content

- Stress best management practices
- Stress technologies for safer use

Question #3: Stakeholder Perspectives on Program Accountability

- Accountability is critical to program operations & success
- Measures should be meaningful, understandable, acceptable, and reasonable to implement
- Measures should be based on outcomes, not on outputs
- Current measures such as an increase in positive behavior change will not work unless everyone is using the same assumptions and process to gather data
- State CES coordinators should provide guidance to PSEP coordinators and county agents and develop a system of accountability
- Measures should not add an over-burdensome workload
- Current system lacks accountability for the use of funds
- PSEP coordinators should receive a copy of the terms and conditions of the EPA-USDA Interagency agreement, and should return a signed copy agreeing to comply with the terms and conditions
- PSEP currently receives funding regardless of whether or not performance or accountability are demonstrated while the government is requiring accountability from other programs
- Accountability measures need to be explored with stakeholders in order to get buy-in and to attain realistic and meaningful measures

Question #4: Stakeholder Perspectives on Program Operations

Comments on Management

- Maintain current system, but make it more efficient
- One of the benefits of the current system is that no overhead is taken by universities
- Develop alternate funding mechanism (through state regulatory agencies)
- Consider using a different system to improve accountability of funds, such as increased cooperation and efficiency between regulatory and education bodies
- EPA & USDA should give unified priorities, directions, guidance and oversight
- The payment/invoice system should be such that EPA has readily accessible information on the origin of invoices and the associated products or activities

Comments on Coordination

- Mandate State CES / State Lead Agency coordination through grants, assessments of annual reports, advisory boards
- Do not mandate State CES / State Lead Agency interaction
- State Lead Agencies and training providers should sign and submit a joint plan of work before receiving funds

Comments on Areas for Improvement

- Target training towards areas and populations with high percentage or numbers of violations
- Eliminate redundancy (coordinate training material development)
- Regionally or nationally developed materials may need to be restricted to subjects general in nature

Comments on Opportunities

- Seek funding from USDA, endangered species, water quality, homeland security
- EPA should not provide all funding

Comments on Resources

- USDA / CES should provide infrastructure and funding
- EPA should provide fixed amount as main source of funding
- Change the funding formula to reflect the actual burden
- State regulatory agencies should provide funding for material development, training to educators
- State CES should charge registration fees but should not have to rely on them
- Programs should be sustained by fees
- States have responsibility to fund program demands beyond federal regulations
- Non-restricted use pesticide training should be funded by industry and trade associations
- The receipt of government funds mandates that the recipient comply with reporting and accountability requirements, but PSEP coordinators are not currently adhering to the terms and conditions set forth in the IAG between EPA and USDA
- Public-private partnerships needed
- Applicators should pay more to cover expenses of training

- Increasing fees might drive down demand, resulting in fewer certified applicators, more users under the supervision of certified applicators, and ultimately more risk to human health and environment
- More employers are requiring that applicator/employees be certified, adding to resource burden on PSEP
- An increasingly diverse population adds to training and resource burden
- Setting priorities becomes more important when funds are limited
- Funding support should come from all parties that benefit
- Programs with new initiatives, requirements or activities that increase workload should contribute to funding
- Having various training providers compete for funds to conduct training programs would most likely encourage efficient use of government funds

Question # 5: Stakeholder Perspectives on Other Issues

Comments on Short-term Needs

- Stabilize funding at \$1.88M +
- Coordinate programs & materials nationally/regionally
- Develop accountability measures
- Seek a funding mechanism that promotes efficiency and accountability, and that operates in a clear and transparent manner

Comments on Long-term Needs

- Implement program evaluation studies
- Implement accountability measures
- Conduct needs assessment to focus training efforts

Comments on Process

- Need ongoing assessment groups (CTAG, non-CTAG)

Question #6: Stakeholder Perspectives on Future Direction & Next Steps

General Comments

- Government resources for training add strength and credibility to programs and save enforcement and regulatory costs.
- Outreach to the media and to the public is necessary to highlight the utility of education in protecting human health and the environment.

Conclusion and Next Steps

EPA would like to thank our stakeholders for their contribution and support of this assessment. We realize that it took time and energy out of their busy schedules to participate in meetings and to submit written perspectives.

EPA looks forward to working with stakeholders to address priority needs and implement changes that will enhance the efficiency and overall effectiveness of the program. Ultimately, all stakeholders have a part and an interest in making improvements so that together we can achieve our mission of protecting human health and safeguarding the environment.

When EPA asked for written perspectives from the stakeholders, 10 of 12 potential responses were received, ranging from brief to extensive. Conducting this assessment and requesting written perspectives from the stakeholders was not an attempt to reach consensus. The goal was to achieve an understanding of the issues and concerns about the ongoing educational program as it currently exists and to use the information received to help shape the future direction and priorities of the program. The input received met the objectives of the assessment. Stakeholder perspectives were thoughtful, representative, and reflected the expertise and commitment to improve the training program to meet the needs of pesticide users and to protect human health and the environment. EPA will use this input when considering future program priorities and in strengthening partnerships with training providers.

A review of the discussions and submissions makes it clear there are many valuable suggestions for improvement actions. Targeting certain priorities is essential to increase the potential for success. An initial review of the material indicates five areas emerged as common concerns that demand immediate attention. These areas are considered high priority because they address the need for near-term efficiency or offer the greatest potential for operational improvement of the program. All of these will require cooperative efforts by the full range of interested stakeholders.

Operational Efficiencies

1. Improve funding mechanism. During the course of the discussion and in the written perspectives, it became apparent that the current funds distribution process has some deficiencies and gaps, such as a lack of a clear mechanism to transfer funds and an inability to determine for what purpose funds are being used.

One remedy to this issue would be to tailor the terms and conditions of the IAG to mandate reporting on how funds are used, as well as working with USDA to simplify the funds distribution process. An alternate remedy would be to seek another funding mechanism. This could involve passing funds to the state regulatory agencies to distribute to training providers. This solution would encourage the alignment of the certification and training programs and their priorities.

2. Set training priorities. The nature of the need for training, outreach and education to ensure adequate health and environmental protection has evolved over time. There was general recognition by most participants that, to the extent possible, all

critical needs should be met, and that they are not being met currently.

The first step in addressing this problem is to work with stakeholders to prioritize training needs and to determine who has responsibility for providing training to various audiences. The goal of this process is the creation of an interconnected network of training providers that will maximize the ability to meet all critical needs.

3. Implement program efficiencies. No matter how well conducted evaluations of training needs are, constantly evolving training needs will always challenge the ability of training providers to meet them. Stakeholders recognized that this ever-changing training needs put a premium on establishing priorities. It also obligates training providers to look for ways to streamline the program to the fullest extent possible.

Once priorities for critical training needs have been developed, stakeholders can work together to develop strategies to meet them, such as jointly developing manuals and employing new technologies to maximize resources and efficiency. This also requires training providers to think beyond historical processes and practices. For example, regional approaches to meeting needs should be considered, rather than the traditional state by state methods.

Essential Program Improvements

4. Expand the scope of pesticide applicator certification regulations. As training needs have evolved over time, so has the need for applicators to demonstrate competency. The certification of pesticide applicators regulation needs to be updated to reflect the current situation, and should require a broader audience than those seeking to apply RUPs to obtain certification.

EPA recognizes the increased need for training of audiences beyond certified pesticide applicators using RUPs in order to protect human health and the environment. Training must be conducted to improve competency with the end result of increased safety. The scope of pesticide users requiring certification should be expanded beyond this narrow focus to include all occupational users of pesticides. The expansion of the certification program will require that those people using pesticides in or around sensitive populations have training to minimize the risk posed to health and the environment. EPA will consider changing the scope of pesticide users requiring certification when revising the regulations governing worker protection and applicator certification.

5. Establish accountability measures. Throughout the assessment process and in the written perspectives, there was general agreement on the lack of outcome measures to track program progress. Stakeholders also recognized that overly burdensome accountability systems can overwhelm providers.

Development of accountability measures is a high priority for EPA. In order to address this immediate need, EPA will work with a consortium of stakeholders to develop program accountability measures that are meaningful, understandable, acceptable, and implementable.

While these five areas emerged as priority areas for immediate action, identifying them does not exclude other points from being considered. As EPA conducts a more thorough review of the informed stakeholder perspectives, other issues will be identified for action. EPA will initiate actions to follow up on the five critical areas identified, which were raised as common themes needing attention by all stakeholders. As always, EPA will cooperate with stakeholders throughout the process, relying on their experience, energy, and commitment to the continual improvement of the program. Together, we can ensure that training continues to advance our strategic public health and environmental protection goals by enhancing applicator competence.

Attachment I: Individual Stakeholder Perspectives

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Critical Question #1: Program Goals

Mission statement needs to incorporate the word “proper use” in addition to safe use of pesticides.

In addition there was discussion regarding the word “competence” and the indication that competence is only minimal. It would be more desirable to reflect on benefits to consumers and environment as a result of a trained industry.

Critical Question #2: Program Activities

Target audience is licensed private and commercial pesticide applicators and any individual interested in becoming certified to apply pesticides.

Training need requirements include:

Core applicator training such as personal safety, pesticide poisoning, equipment operation, worker protection, storage, calibrating, mixing, spill cleanup, and disposal.

In addition there are category type instructions needed including: pest identification, scouting techniques, economic thresholds, life history.

Gaps in program activities include the fact that many areas of the country do not have sufficient numbers of applicators to justify local program events. In this case travel to conferences in other areas or states may be needed. In some areas there is limited availability of trainers or there might be scheduling conflicts.

Potential trainers include land grant university faculty and staff, state lead agency staff, industry professionals.

Roles for training vary by the size of the event and importance of the topic. Frequently pest control issues will be on a local need basis. In this instance a state or regional conference would not be applicable. It is probably most important that the SLA and the local educator are in direct communication regarding training needs. (That is what we do in PA). Education is only as good as the delivery and materials presented. Trained educators are needed to provide 21st century training.

Funding resources: State level funding is important for development of printed materials and to provide training to the educators. Locally funds can be generated using registration fees for programming but in Land Grant systems these fund generating issues need to be kept to a minimum.

Critical Question #3: Program Accountability

Most important accountability factor to me is that trainers are “certified”.

I do not know if present accountability measures accurately meet the needs. This is more an issue for the state lead agencies, EPA and PSEP. However I would suggest that key indicators be identified and then uniformly incorporated into educational programs in advance of the training season, December – April. Decide what is important to measure and then the educators can collect that information.

Critical Question #4: Program Operations

It seems like the existing funding arrangement works very well in regards to the fact that universities do not take out a cut of the funding prior to being put to use in programming. There also appears a long redundant process for payment of funds to the state but this did not appear to be unworkable.

What are the accountability measures for the funds? That would be a good question to perhaps look at a few state programs and see where the funds are reported spent.

To improve partnership coordination I think the idea of a state pesticide applicator advisory board such as in PA would be beneficial to all parties involved.

Critical Question #5: Miscellaneous

An issue not raised but a fact is that across the US the number of CES university based and county based educators is significantly decreasing due to funding cuts. This has the potential to greatly affect the amount of training opportunities available. Agricultural producers apply many different types and amounts of pesticides. They require the latest information on pest management and proper use of pesticides. Who will deliver this training if educators are not available??

Critical Question #6: Future Direction

Short term needs will vary by category but some better coordination of program development across a region or states would be beneficial. There is no benefit from Ohio and PA both working on developing applicator training in the same subject area. If needs were determined and then a strategic plan to address those needs developed over the course of 3 to 5 years then program development should progress to everyone’s advantage. Not sure who would be the coordinator but by having funds available then if program materials are not developed then funds could be shifted to states that are getting the job done.

I would think one area to work cooperatively would be to identify short term needs and then address who will coordinate completing these tasks.

Tom Delaney, Professional Lawn Care Association of America

Critical Question #1: Program Goals

Mission: A clear mission statement is critical to shaping the priorities, dimensions and outcomes of a program. The current mission of the pesticide applicator-training component of the national program should be to help ensure the initial and continued competence of pesticide applicators to demonstrate practical knowledge of the principles and practices of pest control and ensure the safe use of pesticides

(b) *General standards for all categories of certified commercial applicators.* (1) All commercial applicators shall demonstrate practical knowledge of the principles and practices of pest control and safe use of pesticides.

Does this statement capture the appropriate scope of the national pesticide applicator training program?

No, see edit.

Does this statement cover the range of needs (audiences, program demands, training activities) of the program?

I agree with leaving the reference to RUPs out. I believe the Food Quality Protection Act has changed the distinction of RUPs and non RUPs in fact putting them all in the same class of a reasonable certainty of no harm. I also think recertification should be included or understood in the mission.

Is it consistent with the specific statutory language and the broader program needs?

Is the scope of the mission fully understood by all critical stakeholders? If not, how could it be better communicated?

No say what it is and what it is not. (What is covered)?

Is there a need to address within the mission and scope of the program the expanding demands (mission creep, e.g. spray drift, endangered species, globally harmonized system)

I feel that since these are important activities (drift, etc.) they should be included in the mission as “additional training topics as required” with listed examples. Flexibility needs to be covered, built in.

Critical Question #2: Program Activities

To achieve our mission objectives requires a variety of activities by a number of critical participants.

Who should be considered the target audience?

I believe occupational private and commercial applicators are the audience. I do not believe EPA should fund homeowner training out of the normal funding.

What is the nature of training needs?

- Mechanism

There needs to be face-to-face training on line and a mix of other types to meet the needs of the very varied audience.

- Contents

We need national “innovative resources” to be used for the training so it is consistent and measurable. (PowerPoint interactive computer training)

What are the gaps (over/under-emphasized)?

I think case examples need to be included to cause an increases decision-making experience. (scenarios)

Who are potential or essential providers of this training?

I think University Cooperative Extension should be the main group to keep consistency and creditability and trust.

What should be the roles of the various stakeholders in managing or providing these services (EPA, USDA, SCES,SLA, private sector, trade associations, scientific societies)?

The present system is working and has the flexibility needed. Because of the broad locations, seasons and variety of applicators no private group or one single group can do it or should.

In your opinion, what should be the most important training priorities (addressing unmet needs, maintaining core functions, satisfying short-term crises, preparing for long-term changes)?

Maintaining core functions is number one priority but it need not take the majority of training time. Innovations should minimize time needed in the basics then add a method to improve how applicators pest control decisions are made.

What are, or should be, the mix of resources to fund the varying training needs?

First of all EPA with a reliable fixed funding amount in the budget as the main source for funding, then USDA should add some percent then the private sector with a way of banking the funds with carryover funding options.

Critical Question #3: Program Accountability

Accountability and meaningful program measures are key to the success and sustainability of any program.

What are your thoughts on the importance of accountability in the pesticide applicator training program?

Do current accountability measures accurately communicate the full range of activities and achievements of the pesticide applicator training program?

NO

What are important considerations in developing a performance accountability system (few measures, meaningful measures, clear measures, implementable measures)?

Accountability and meaningful program measures are necessary. Customer satisfaction is a key to go along with measuring test results for those taking training and those that so not taking training. You must take into account education and knowledge background of the applicator also. On line surveys to the applicator can be utilized. Any programs that become questionable should be audited by an agreed upon predetermined method.

What should be the balance between legitimate accountability and undue reporting burden?

Yes, you can have basic info and require more random inspection or from those that have poorer rating from those surveyed as the customers of the training.

Can you provide examples of appropriate accountability measures?

How should we work together to develop an improved performance measurement system?

Critical Question #4: Program Operations

In any system of limited resources, maximizing efficiency is critical.

What are your thoughts on how the current PSEP funds are managed and potential improvements?

What steps should be taken to improve the coordination between training providers and state lead agencies?

Any grants should include a required meeting and a few questions to jointly answer.

Are there other program operation activities that need improvement?

Make sure training meets the kinds of violation encountered by SLAs.

Have we fully explored all of the opportunities to tap into resources and leverage funding?

Critical Question #5: Miscellaneous

Please provide input on other areas of the pesticide applicator training program not covered above, that EPA, USDA and others should consider.

More and more misinformation gets circulated about pesticides. I think there should be a portion of pesticide education dedicated to informing the media and public about the entire pesticide program safeguards.

Critical Question #6: Future Direction and Next Steps

Broadly, what should be the most important focus of the pesticide applicator training program in the short-term (up to 2 years)?

A meeting of EPA and USDA at the top level to establish 2 million total funding as a line item in the budget. Establish an evaluation method to assure what is happening with a users being surveyed as to satisfaction.

Broadly, what should be the most important focus of improving the pesticide applicator training program in the long-term (4-6 years)?

More uniformity with state of the art training material to supplement and to be used with face-to-face training and utilization for web online training, which can be measured.

Procedurally, what are your suggestions on how we can work cooperatively to implement the input that comes out of this program review?

Have periodic meeting of this group with some oversight of the program.

Jeaneanne Gettle, EPA Region 4

Critical Question #1: Program Goals

The mission statement expands the scope from the certification of pesticide applicators of restricted use pesticides to the initial certification and continued competence of all pesticide applicators. Although this statement goes beyond the specific statutory language, it addresses the broader program needs by including all pesticide applicators. There is no need to address, within the mission and scope, expanding demands such as spray drift, endangered species, etc. Such demands are a result of other programs and activities.

Critical Question #2: Program Activities

Currently, the target audience is the pesticide applicator. If the scope of the program were to be expanded, the target audience would be all occupational users of pesticides. For all occupational users, training courses should include information on the core knowledge necessary for appropriate use of a pesticide.

Specific use-related information should be content for pesticide applicators. Training is provided by State Cooperative Extension Service (SCES), trade groups, industry, and pesticide State Lead Agencies (SLAs).

One gap exists in the need to determine the competency of the pesticide handler. Currently, handlers receive training on how to safely mix, load and apply pesticides. Based on the information currently available, I believe that handlers should be certified to use pesticides to minimize the potential for risk to themselves, the public and the environment.

Potential providers of training exist in the private sector. Competition for funds for training programs would most likely increase the efficient use of government resources. In addition, there is a need to increase emphasis on the appropriate selection of training programs and on using objective measures to determine their success. Providers and courses should be determined either by the SLA or after close consultation with the SLA, to compliment the needs of their certification program.

The most important training priorities are to satisfy short-term needs while also preparing for long-term changes. For example, one short-term need is to establish a funding mechanism that promotes efficiency and accountability, and operates in a clearly understood manner. Another short-term need is to establish program measures and accountability measures. While these measures may need to be adjusted for long-term consideration, there is an immediate need to be able to show program effectiveness.

Resources to fund training needs should include an equal amount of EPA and USDA funds, SLA funds, and fees charged to applicators for materials and

courses.

Critical Question #3: Program Accountability

Accountability in the pesticide applicator training program is imperative. Without accountability, federal funds could soon be non-existent for this program.

Current accountability measures need improvement. For example, behavior change is not reported by every SCES. When reported, it is not clear whether they are using the same assumptions or process. There needs to be some clear guidance, and requirements, for SCES reporting of behavior change. However, this type of information is imperative to show program effectiveness.

When developing a performance accountability system, care must be taken to ensure that the measures are meaningful, clear and reasonable to implement. There is a fine balance between legitimate accountability and an undue reporting burden. Accountability needs to be achieved without causing an overwhelming reporting burden. Measures must show that the program is not only effective, but efficient.

Measures should be developed in a manner which involves appropriate stakeholders.

Critical Question #4: Program Operations

The current system of funds management for the PSEP should be improved. The system of distribution and billing should be a clear and simple process. EPA should be able to readily determine the amount of funds drawn from the account at any given time. In addition, timeframes for billing and recouping costs should be set and monitored. Finally, in addition to understanding the amount of funds utilized, EPA should be able to track for what those funds were ultimately used. My view is the more complex the process and the number of parties involved, the less chance for real accountability.

SLAs and training providers should sign and submit a joint plan of work to EPA before training providers receive any funds. The plan of work needs to show the projects planned for the year. From this information, cooperative projects could develop.

Each training provider should receive information on the requirements of using federal funds – such as the terms of agreement. The training provider should sign and return the agreement to EPA before using any federal funds. A system needs to be in place that will encourage efficiency. For example, there have been projects developed within regions that were beneficial to all states involved, but no current mechanism exists to transfer those projects. This should be a fundamental requirement in the agreement with the states.

The payment/billing system should be such that EPA has readily accessible information on the origin of bills and their associated products or activities.

Critical Question #6: Future Direction and next steps

In the short-term, the most important focus of the pesticide applicator training program should be to explore mechanisms that are efficient, transparent and increase accountability. In the long-term, the most important focus should be to put in place tracking and accountability systems which enhance our short-term goal and to explore funding resources.

Tom Hall, CropLife America Stewardship Policy Leader

Critical Question #1: Program Goals

The mission, to ensure the safe use of pesticides may need to be expanded to convey the full scope covered by the pesticide applicator program. The term “safe use” is open to a wide range of interpretations that may simply be limiting pesticide exposure to the applicator. The mission needs to convey the full range of safety issues covered by the label including protecting the applicator, community, and environment.

Critical Question # 2: Program Activities

The target audiences for PSEP programs are private and commercial applicators preparing to become certified or participating in training to maintain their certification. The coordination of the training needs is best handled by the state extension service. The extension service is in the best position to leverage resources at the county and state level to provide training to meet a broad definition of pesticide safety.

All types of training should be utilized including meetings, workshop, manuals, and online. We continue to place a high value on bringing together in meetings, conferences or workshops applicators, extension and SLA personnel to identify new problems and evaluate the effectiveness of past training.

Roles:

- USEPA: Ensure accountability and quality control of state programs/funding
- USDA: Provide program support and assist in regional and interstate cooperation
- State Extension: Primary program provider
- Industry: Technical expertise from environmental professionals/fees from commercial applicators can help defer costs of training
- Trade Associations: Facilitate meetings

Important Training Priorities:

PSEP must maintain its core of function of worker safety when handling, mixing and applying pesticides. We believe the program must emphasize the importance of providing fundamental safety training to applicators applying for certification. We also believe that training provided to applicators to maintain their licenses must cover broader safety issues such as drift, endangered species, and protecting water quality.

Critical Question #3: Program Accountability

Accountability is essential to a successful training program. Accountability begins with setting clear expectations for each state program. One goal of accountability is to reduce the variability between state programs. State programs should be evaluated on publications, training activities, outreach, leveraging resources (extension specialists, county agents, state lead agency). Accountability is the key to ensure there are no large disparities between state programs or programs that are virtually inactive.

We must also ensure that there is accountability from each coordinator's home institution—does the university provide the necessary support for safety training such as allowing for training activities to be counted towards the coordinator's promotion and tenure? If the university extension is not supportive, alternative delivery should be considered for that state.

State coordinators need to ensure that the end users of training, both private and commercial applicators, are given the opportunity to evaluate the quality of the training available to them. Funds need to be made available to states to do outcome evaluation to help states judge the effectiveness of their training.

Critical Question #4: Program Operations

We would like to see more regional coordination of resources; we believe publications and activities from one state could rather easily be tailored to another state. Publications, workshops, web based programs while in the planning stages need to be shared within a region. Materials developed in a state are often in part EPA funded; EPA regions need to make sure they are communicating to headquarters' on-going projects.

Critical Question #6: Future Direction and Next Steps

The core focus of the pesticide applicator program is providing training so applicators have the knowledge and skills to effectively use the information on the pesticide label to safely mix and apply pesticides. However, the PSEPs must also work with professional applicators to improve and expand their skills over time. Training program content needs to reflect the current problems faced by the applicator in the field.

PSEP activities in states must maintain a balance of ensuring new applicators have the basic skills for mixing and application as well as providing experienced applicators training that refreshes basic safety and addresses emerging and evolving issues.

Zane Helsel, Keith Smith, Extension Committee on Policy

Critical Question #1: Program Goals

Mission: A clear mission statement is critical to shaping the priorities, dimensions and outcomes of a program. The current mission of the pesticide applicator training component of the national program should be to help ensure the initial and continued competence of all pesticide applicators to ensure the safe use of pesticides.

Does this statement capture the appropriate scope of the national pesticide applicator training program?

We agree that “the initial and continued competence of all pesticide applicators” is the appropriate scope. All users of RUPs and other pesticides including commercial, private, and homeowners alike should be educated in the safe use of pesticides and also to protect humans and the environment consistent with the broader mission of EPA. Pesticide safety education should address not only improving the competency of pesticide applicators but also educating those who come in direct contact with pesticides.

Does this statement cover the range of needs (audiences, program demands, training activities) of the program?

As noted above, the audience for all pesticide applicator safety education and training should be users and those who come in direct contact with their use (migrant workers) and those exposed to pesticide residues on the job, at home, in school and for health care providers. Issues of environmental justice and insuring the protection of humans and the environment are overarching needs.

Is it consistent with the specific statutory language and the broader program needs?

The mission stated above meets the statutory requirements of FIFRA but the “administrative intent” of the law should/could be changed to reflect the broader educational needs noted above which fits with EPA’s overall mission to protect the environment and those working and living therein.

Is the scope of the mission fully understood by all critical stakeholders? If not, how could it be better communicated?

The commercial applicators are well informed, however private applicators and particularly those secondarily associated (migrant workers, store handlers, health and school officials) are less knowledgeable and need the type of education PSEP can provide.

Is there a need to address within the mission and scope of the program the expanding demands (mission creep, e.g. spray drift, endangered species, globally harmonized system)

Yes. Going beyond the original legislation that narrowly related to education of users of RUPs to that noted above is appropriate. Addressing issues like endangered species, spray drift, and global harmonization systems could be considered "mission creep" but not if only the pesticide safety issues surrounding these were a part of the program. However, issues that have emerged since the original regulation such as those mentioned above have/can stress short resources. Often overlooked in mission creep is the fact that pesticide training programs are one of the primary mechanisms for delivering integrated pest management information.

Critical Question #2: Program Activities

To achieve our mission objectives requires a variety of activities by a number of critical participants.

Who should be considered the target audience?

All applicators/users and those who come in close proximity to broad use of pesticides (migrant workers, health and school officials, etc.)

What is the nature of the training needs?

- Mechanism
Mechanisms will vary by location, user groups, etc. but most, if not all, traditional Extension methods and new technology can be used. It is important to match the delivery mechanism to audience needs/learning styles, and ability to access training and the nature of the content.
- Content
The standards for commercial and private are well defined and a good basis for educating others. There also needs to be a balance between providing generic information that everyone needs to know and specific content that is necessary to provide meaningful guidance for applicators to be able to actually change practices.

What are the gaps (over/under-emphasized)?

EPA/PSEP/SLAs etc. should review/ concur on any changes and additions.

Who are the potential or essential providers of this training?

The Cooperative Extension System (CES) currently has the network established to most efficiently do the training but could establish a program to "train the trainers".

What should be the roles of the various stakeholders in managing or providing these services (EPA, USDA, SCES, SLA, private sector, trade associations, scientific societies)?

Where appropriate, CES could establish a certified trainer program to provide a set of secondary trainers. CES already works in partnership with the private sector and other agencies to sponsor and/or deliver the training. The credibility of this risk mitigation program and the maintenance of the public trust rely on the involvement of public personnel to reduce conflicts of interest and provide sound science behind the program.

In your opinion, what should be the most important training priorities (addressing unmet needs, maintaining core functions, satisfying short-term crises, preparing for long-term changes)?

Within addressing the mission as noted in question #1, training of commercial and private applicators for certification and recertification is the top priority of the program but should not be at the expense of the other education priorities within the scope of the mission.

What are, or should be, the mix of resources to fund the varying training needs?

USDA and CES have/are providing the infrastructure; EPA, SLAs and those directly being certified should be responsible for training costs (including personnel's direct time); Federal, state and local government will need to cover "consumer and general awareness."

Critical Question #3: Program Accountability

Accountability and meaningful program measures are key to the success and sustainability of any program.

What are your thoughts on the importance of accountability in the pesticide applicator training program?

All programs should be evaluated for accountability. The current PPRS system documents educational participation and certification.

Do current accountability measures accurately communicate the full range of activities and achievements of the pesticide applicator training program?

PPRS provides enumeration of training and related activities but does not measure impact of training. The variation in state regulatory requirements and resulting variation in program emphases present challenges. Further, regional differences and the variation in compliance problems with different applicator groups make it difficult to have a common reporting system that captures the achievements of all programs.

What are important considerations in developing a performance accountability system (few measures, meaningful measures, implementable measures)?

The system must be one that collects information needed by those requesting it and the system must provide for a low cost, efficient way of doing so. State/regional variability as mentioned should also be considered.

What should be the balance between legitimate accountability and undue reporting burden?

Accountability should never exceed 10% of the program time or resources and often no more than 3-5%. It must be a planned part of the program and not an afterthought.

Can you provide examples of appropriate accountability measures?

Participation / certification numbers; measures of acquired knowledge; measures of use of knowledge; effect on actual selective health parameters if feasible.

How should we work together to develop an improved performance measurement system?

Involve the parties that provide, receive and request the training and accountability, i.e. EPA, USDA, CES, OMB, Pesticide Applicators

Critical Question #4: Program Operations

In any system of limited resources, maximizing efficiency is critical.

What are your thoughts on how the current PSEP funds are managed and potential improvements?

The current system provides maximum use of the dollars appropriated to go to education (no overhead or other "indirect costs". From CES's standpoint, the only thing that needs to change is more timely allocation of adequate funds on a reasonably consistent basis each year. Any fiscal/audit hurdles at the federal level should be addressed directly by the financial folks at EPA and USDA working together.

What steps should be taken to improve the coordination between training providers and state lead agencies?

In most states there is good coordination among PSEP coordinators and SLAs. Providing SLAs with the opportunity to review Extension plans of work and annual reports each year could assure additional cooperation where this is not done already.

Winand K. Hock, American Association of Pesticide Safety Educators

Critical Question #1: Program Goals

Mission: A clear mission statement is critical to shaping the priorities, dimensions and outcomes of a program. The current mission of the pesticide applicator training component of the national program should be to help ensure the initial and continued competence of all pesticide applicators to ensure the safe use of pesticides

Does this statement capture the appropriate scope of the national pesticide applicator training program?

Yes, it does capture the scope by the statement “**the initial and continued competence of all pesticide applicators,**” not just users of RUPs, but suggest changing the last part of the above statement to “help **improve** the initial and continued competence of all pesticide applicators **by teaching risk minimization practices for pesticides.**”

It should be emphasized that pesticide safety education focuses on the relative improvement of competency of pesticide applicators. This is in direct contrast to ensure competency of applicators through measurements (examinations) and through enforcement.

Does this statement cover the range of needs (audiences, program demands, training activities) of the program?

The primary target audience for all pesticide applicator safety education and training should be all occupational users, not just those pesticide applicators who use RUPs. However, because of the PSEP infrastructure, connections to state and federal agencies as well as to stakeholders, and broad expertise, state PSEPs can effectively provide pesticide safety education to many audiences, including non-occupational users; consumers; those exposed to pesticide residues on the job, at home, or in school; and health care providers who need to know about pesticide poisoning and treatment. These groups, or a subset, may form secondary target audiences for the state PSEPs.

Is it consistent with the specific statutory language and the broader program needs?

NO! The statutory language in Section 11 of FIFRA should be changed to reflect that all occupational users of any pesticide should be required to be trained and subsequently certified. It is no longer enough to have only users of RUPs become trained and certified. The broader program needs to address the educational needs of all occupational users of pesticides for the national good.

Is the scope of the mission fully understood by all critical stakeholders? If not, how could it be better communicated?

I think the mission is fully understood and accepted by applicators in those states that have requirements above the federal minimum standards. In fact, applicators have endorsed and embraced the certification and training program in those states that have a high level of expectation of their pesticide applicators. Certification to many applicators is a sense of pride and a symbol of professionalism. I believe our stakeholder representatives already endorse a strong PSEP.

Is there a need to address within the mission and scope of the program the expanding demands (mission creep, e.g. spray drift, endangered species, globally harmonized system)?

YES!!!! PSEP coordinators and their regulatory colleagues cannot be expected to assume these new and additional responsibilities without appropriate compensation and support from EPA. These extra program activities are often very time consuming and often require specialized training by persons outside the scope of the PSEP Coordinator. For example, any educational programming on Endangered Species requires a wildlife expert who can relate to this critical program area. PSEPs are in a unique position to keep all applicators current on new science, technology, regulatory issues, and new policies and programs.

Critical Question #2: Program Activities

To achieve our mission objectives requires a variety of activities by a number of critical participants.

Who should be considered the target audience?

The target audience for all pesticide applicator safety education and training should be all occupational users, not just those pesticide applicators who use RUPs. Occupational users include all commercial and private applicators as defined in FIFRA. It should be noted that there is frequently a very fine line between RUPs and general/unclassified pesticides in terms of human and environmental hazards. For example, pesticides such as chlorothalonil, 2,4-D, dicamba, and the synthetic pyrethroids, while not necessarily classified as RUPs, often cause hypersensitive responses in humans and must therefore be used with extreme care around people. It is worth noting that many of these so-called general use pesticides are the same ones used by non-occupational users (homeowners).

Anyone who might become exposed on the job (WPS workers) should also be considered a prime target audience for pesticide safety education, assuming, of course, adequate funding is available. States should have the flexibility to direct pesticide safety training to those groups that have the greatest need, not just to those groups mandated by FIFRA.

What is the nature of training needs?

Mechanism – There is no single mechanism that fits all groups receiving pesticide safety education. The needs and resources within states differ considerably. Outreach education can include face-to-face (classroom) training, hands-on workshops, traditional conferences, manuals and other hard copy publications, audiovisual presentations, and new technology such as satellite downlinks, streaming video, on-line courses, etc.

Contents – The contents of the competency standards are addressed very well in 40CFR171.4, “Standards for certification of commercial applicators” and 40CFR171.5, “Standards for certification of private applicators.” The competency requirements are clearly described in these sections, both general and specific categories. If competency standards and examinations ascribe to these regulations, then the EPA, the USDA, the State Lead Agencies (SLA) and the state Cooperative Extension services still have a significant educational task facing them. While 40CFR171 doesn’t specifically mention training or education of pesticide users to demonstrate competency, then the overriding question becomes, how do we prepare applicators to demonstrate competency? The only way to improve the competency of applicators is through education. The Pesticide Safety Education Programs (PSEP) at the Land-Grant Universities have stepped up to address the educational needs of their applicator clientele with minimal fiscal resources.

What are the gaps (over/under-emphasized)?

Any gaps, specific needs, or possible weak links should be discussed jointly by the respective state PSEP Coordinators and their SLA counterparts. Specific program development needs are a state responsibility following established federal guidelines.

Who are potential or essential providers of this training?

Clearly the only national agency capable of meeting the educational needs of all users of pesticides is the USDA’s Cooperative Extension network through the state PSEPs. Although industry, the SLAs, grower associations, and certain federal agencies have contributed to the training needs of pesticide applicators, the only agency capable of developing a comprehensive and relevant national training standard is Cooperative Extension. It should be noted that even when industry and grower associations sponsor Educational opportunities for their members and guests, the bulk of the educators are usually affiliated with Cooperative Extension and the Land-Grant University.

What should be the roles of the various stakeholders in managing or providing these services (EPA, USDA, SCES, SLA, private sector, trade associations, scientific

societies)?

We all need to be cooperators in the national effort to educate and certify occupational users of pesticides. One agency alone can't do everything, but historically Cooperative Extension has been in the forefront of developing certification and recertification educational programs. If the aforementioned agencies and organizations expect quality educational programming on the part of Extension, then adequate resources must be made available to Extension by all groups and agencies that benefit from the pesticide safety education offered by Extension. EPA must take the lead in attempting to acquire adequate funding to support the PSEP.

In your opinion, what should be the most important training priorities (addressing unmet needs, maintaining core functions, satisfying short-term crises, preparing for long-term changes)?

I'm not sure you can separate these out. Pesticide applicator safety education is only as good as the support PSEP receives. Addressing unmet needs is a waste of valuable resources if the basic core function isn't operating effectively. Providing a short term fix just begs the question of what the program will look like next year or the following year. Without a long term perspective, the PSEP and its program personnel cannot function effectively. Given the opportunity, training personnel will leave their positions in the absence of stable funding and a firm future foundation.

What are, or should be, the mix of resources to fund the varying training needs?

No one argues that EPA should be the sole provider of funds for the PSEP and pesticide applicator training in general. This is clearly borne out in the AAPSE Financial Sustainability Position statement recently released by AAPSE. SLAs should take some of the responsibility for maintaining a pesticide education program, especially when the state has added significant additional requirements on top of 40CFR171. Recipients of the training should be expected to pay a nominal fee for the benefits they receive from their educational experience. But clearly, the USEPA and the USDA have a vested interest to support the PSEP in a manner which will not inhibit the program in any way. Adequate and stable long-term funding must be made available to support a continuing certification and recertification program as defined in FIFRA and 40CFR171. The EPA funding should form the backbone of the funding base, not the weakest link as has been the case recently.

Critical Question #3: Program Accountability

Accountability and meaningful program measures are key to the success and sustainability of any program.

What are your thoughts on the importance of accountability in the pesticide applicator training program?

Accountability is important in any program, whether in the public or private sector. There is no debate about the importance of collecting reliable and meaningful accountability information, but rather how is the accountability data collected in the first place. The effort to collect sound accountability data should not be so overwhelming and time consuming as to undermine the real purpose of the PSEP; that is, the education and certification of pesticide applicators. See my response to the next question.

Do current accountability measures accurately communicate the full range of activities and achievements of the pesticide applicator training program?

Probably not! In order to accumulate high quality accountability data, additional and currently unavailable resources would be required. I favor an approach where quality accountability measures are obtained on a rotating basis. For example, EPA could provide funding to the EPA Regions on a rotating basis to provide grants to states to implement a multi-state regional survey to obtain the best information currently available. In this way already limited resources by Extension and the SLAs wouldn't have to be used for expensive data gathering activities. At the same time, EPA would obtain quality accountability data without straining state resources. The exact specifics could be left to the regional PSEP coordinators, the SLAs, and the regional EPA office. EPA headquarters should recognize that best-practices accountability measures may not be identical for all states and regions. In other words, one size may not fit all.

What are important considerations in developing a performance accountability system (few measures, meaningful measures, clear measures, implementable measures)?

Please refer to the last question in this section.

What should be the balance between legitimate accountability and undue reporting burden?

See the answer in the last question in this section. No one person or agency has all the answers to what constitutes a "legitimate accountability burden." This is yet to be determined. Flexibility is the key to success.

Can you provide examples of appropriate accountability measures?

I think these should be determined as answered in the following question.

How should we work together to develop an improved performance measurement system?

The FEAD of OPP, the USDA/CSREES, the SLAs, the EPA Regions, and the PSEP Coordinators need to work together to develop a uniform and reliable system to generate meaningful accountability measures. This is something that no one group or agency can do on its own. It takes time and considerable resources to obtain the kind of data that OMB is expecting. My suggestion is, after this review is put to rest, the above mentioned agencies form an ad hoc committee (long term) to look into this issue keeping in mind that there will need to be funds to support such an effort. You cannot generate meaningful data if every group is making its own determination of what is important. A workable system has to have the support of all the agencies listed above. Only then will meaningful and reliable accountability data become available. Finally, whatever comes out of this proposed ad hoc committee should be considered a template for the EPA Regions, and the respective SLAs and PSEP Coordinators to develop specific accountability measures commensurate with the unique characteristics of the region.

Critical Question #4: Program Operations

In any system of limited resources, maximizing efficiency is critical.

What are your thoughts on how the current PSEP funds are managed and potential improvements?

While not a perfect system, the current pass-through process of moving funds from EPA to the USDA has some distinct advantages. Clearly the fact that no overhead can be taken out by the universities receiving these funds is a tremendous benefit for the PSEP. It is, however, unfortunate that the process of getting the funds from EPA to the PSEPs takes almost six months from the time EPA receives its budget. Also, I'm sure that EPA recognizes what a small portion of the actual educational effort is currently being supported by these pass-through funds. Considering this, the EPA should realize that in a majority of PSEPs, EPA is but one of a number of sources that provide funds and have a legitimate interest in the PSEP's outcomes and management. Better management and permanent improvements to the PSEP can only come about by providing stable and adequate funding.

What steps should be taken to improve the coordination between training providers and state lead agencies?

Joint progress reports to the EPA Regions should be required on an annual basis. The PPRS Report submitted to the USDA by the PSEP Coordinators should be shared with the SLA. Conversely, any reports submitted by the SLA to the EPA Regions should be shared with the PSEP Coordinator. Most importantly, the SLA and the PSEP should be required, in fact mandated, to establish a joint task force or advisory committee to review program accomplishments and/or problems on at least a semi-annual basis.

Communication must be improved in some states!!

Are there other program operation activities that need improvement?

AAPSE believes the most relevant issues facing the future of the PSEP have already been covered in this Q & A document.

Have we fully explored all of the opportunities to tap into resources and leverage funding?

I think the state PSEPs have done a marvelous job already of trying to leverage money to support the program. I think it would behoove the FEAD/OPP/EPA to look into leveraging additional funding for the PSEP by approaching Endangered Species, Water Quality, Homeland Security, and the USDA as well as other agencies for support.

Critical Question #5: Miscellaneous

Please provide input on other areas of the pesticide applicator training program not covered above, that EPA, USDA and others should consider.

Most importantly, the EPA and all agencies must recognize that pesticide safety education is a dynamic, revolving effort. New issues constantly come up which our clientele must become informed. Issues such as endangered species, worker protection training, GHS, drift management, etc. will all create new and costly program demands on the PSEP and the SLAs. The EPA and the USDA must ask themselves, how will the pesticide safety and regulatory information of the 21st Century get out to growers and other pesticide users without a strong and vibrant educational outreach arm?

Critical Question #6: Future Direction and Next Steps

Broadly, what should be the most important focus of the pesticide applicator training program in the short-term (up to 2 years)?

Create a stable base of funding. The PSEP cannot survive on uncertainty. Instability affects not only personnel, but also the quality of the educational programming. Funding has to be restored to be at least the traditional level of \$1.88 million nationally in order to maintain continuity in the program. There is a critical level of funding below which some individual states will not be able to function effectively based on their particular allocation. Over half of the states and territories receive \$30,000 or less to run their program. In some cases the pass-through funds constitute the only source of funding. Until other sources of funding such as state funding support, fees, grants, etc. can be secured by the states, the federal pass-through funds continue to be critically important for the survival of the PSEP.

Broadly, what should be the most important focus of improving the pesticide applicator training program in the long-term (4-6 years)?

Continue to create a stable base of funding at levels commensurate with the mission of the EPA and all affiliated groups and agencies. Funding levels must increase as additional responsibilities are directed to the PSEP coordinators (i.e. Endangered species, drift management, GHS). Program accountability measures must be determined and implemented. Communications between the FEAD/OPP/EPA and the SLAs, the USDA, and the PSEP Coordinators must improve. Neither the EPA, nor the USDA, nor the SLAs, nor the Pesticide Safety Education Program coordinators can operate this federal mandate in isolation. If we don't cooperate fully, then surely our efforts will fail separately.

Procedurally, what are your suggestions on how we can work cooperatively to implement the input that comes out of this program review?

An advisory committee comparable to the PSEP Review Committee should be established immediately to address critically important issues on a timely basis! This committee should be advisory to the Director of the FEAD, OPP, EPA, on all issues related to pesticide applicator education and training and SHOULD BE INDEPENDENT OF THE CTAG. It is imperative that stakeholders continue to be involved in the issue of quality and timely pesticide applicator education. Furthermore, the committee makeup should be more representative of all the USDA regions and not concentrated in a few states. Funding issues related to pesticide safety education need to be addressed immediately, not after a crisis has already developed. Based on what has happened over the past two years, we can ill afford to ignore training and educational issues in the future. This committee could devote considerably more time to discussions about generating more state support, how to expedite EPA pass-through funds in the future, and what is the role of our stakeholders in supporting the PSEP. These are but a few examples, but most importantly we must maintain a continuing dialogue on the mission, future, and support of pesticide applicator safety education. AAPSE needed to respond quickly because of an impending funding crisis situation, both in FY2003 and FY2004. This is not the way to accomplish the mission of providing quality pesticide safety education to our clientele. I must also remind the EPA, the very same people who are Extension's/PSEP's clientele are also EPA's clientele. We must work together on a continuing basis to be more effective in our common mission.

Carl John Martin, Arizona Structural Pest Control Commission

Critical Question #1: Program Goals

Mission: A clear mission statement is critical to shaping the priorities, dimensions and outcomes of a program. The current mission of the pesticide applicator training component of the national program should be to help ensure the initial and continued competence of all pesticide applicators to ensure the safe use of pesticides

Does this statement capture the appropriate scope of the national pesticide applicator training program?

While this statement does capture the consensus view, and can be firmly rooted in the regulatory language current extant, I would argue that the focus should be significantly narrowed in its practical, application if success is to be achieved. Therefore, I advocate for ensuring that initial competence training, prior to licensing, and excluding continuing education, is the appropriate focus. Currently, the pool of money is too small to adequately train pre-license candidates. It is inconceivable that the many, many times greater number of licensed applicators could be well served by a diffused focus which includes continued competency training. The argument is made that before licensure, competence **MUST** be ensured by the C&T program. After licensure, additional elements, such as enforcement, help to ensure continued competence.

Does this statement cover the range of needs (audiences, program demands, training activities) of the program?

Again, it is too broad. This is its fundamental flaw. Training within this program serves the public through transmitting essential knowledge, skills, and abilities (KSAs) to practitioners. It serves the licensing mission of agencies. No one could reasonably argue that training, absent assessment, is sufficient to ensure competence and protection. Likewise, increasing the audience simply dilutes the message and the impact, an impact the public counts on us ensuring happens.

Is it consistent with the specific statutory language and the broader program needs?

It is not consistent with statutory language. Section 11 of FIFRA is titled, "Use of Restricted Use Pesticides; Applicators". CFR 171.1 upon which all State programs are based, states "certification of applicators of restricted use pesticides". Note the limiting of this language to training to certify, and for RUPs.

As argued above, broader program needs are an impediment, not a virtue.

Is the scope of the mission fully understood by all critical stakeholders? If not, how could it be better communicated?

The scope of the program is nebulous, ethereal, and ever changing. It has become whatever those doing the training want it to be. It is cast about by every

political, ethical, and philosophy whim against which it bumps. Hence all participants see the same program, but in completely different ways. Participants have freely recreated the original program into whatever personal vision animated them. Sadly, that is, at least in part, why we are at this point of seeming impasse. Firm direction clears the mist and illuminates the corners. Do we have the will to cast away the imprecision and ambivalence?

Is there a need to address within the mission and scope of the program the expanding demands (mission creep, e.g. spray drift, endangered species, globally harmonized system)?

Mission creep is symptomatic of unclear direction and failed accountability. Yes, it has to be addressed, and eliminated. Decisions about program content cannot be left to individual educators, or worse, educational bureaucracies. Direction must be centralized, specific, and required.

Without additional funding the target audience should be considered only to be certified applicators as defined by FIFRA and CFR. The states will need to step up to their own responsibilities as far as they have further defined categories or required certification beyond that of federal requirements.

Critical Question #2: Program Activities

To achieve our mission objectives requires a variety of activities by a number of critical participants.

Who should be considered the target audience?

The primary audience, or customer as I like to term it, is the State Lead Agency (SLA). The training program MUST meet SLA needs, or it cannot legitimately claim to be a part of the public/worker protection program. Through the SLA the primary recipients of the training program are those persons seeking certification to use RUPs. Additional audiences could be identified for specific time periods and specific content as resources allow and demands require, such as users of only general use pesticides.

What is the nature of training needs?

- Mechanism
- Contents

The biggest need within pesticide training is training for initial certification. I believe actual training programs are of greater necessity than materials. It should cover the information that is needed to be competent to apply pesticides in the field. Ideally the training would include hands-on training so they have some practical experience or there should a requirement that some hands-on work experience be required prior to becoming certified. The educational materials production function must be centralized to reduce duplication and

waste.

What are the gaps (over/under-emphasized)?

One area is the need for training non-agricultural applicators of RUPs. This area is greatly underserved via the CES PSEP. Another gap is initial certification training. There are many recertification training opportunities, but very limited initial training. Finally, universities freely make appointments and assignments to staff that may not be well suited to, or have the knowledge about the training of adults in pesticide safety. Appoints to training posts involving federal grant dollars should meet criteria for trainer competence and also on-going learning established as part of the grant guidance.

Who are potential or essential providers of this training?

Anyone who has expertise, CES, industry representatives, SLAs, private consultants. By no means should it be understood that the repository of ability to do this work rest within the university or CES.

What should be the roles of the various stakeholders in managing or providing these services (EPA, USDA, SCES, SLA, private sector, trade associations, scientific societies)?

Initial certification should be done by persons possessing demonstrated expertise, again not tied exclusively to CES. USDA should share with EPA in providing funding for this basic function. Training for GUP use should be substantially funded by industry and the various trade associations. This is also consistent with the mission of the USDA and the EPA.

In your opinion, what should be the most important training priorities (addressing unmet needs, maintaining core functions, satisfying short-term crises, preparing for long-term changes)?

Redefining and accentuating core functions and then demanding accountability and compliance will immediately impact the current crisis, positively facilitate long-term changes, and ensure that all real, important needs are met.

What are, or should be, the mix of resources to fund the varying training needs?

A 25-25-25-25 split with EPA, USDA, land-grant universities and SLAs equally sharing the funding burden. No dollars without partnerships. Matching funding as the rule, not the odd exception. Why should EPA invest in a program that is not supported by the others?

Critical Question #3: Program Accountability

Accountability and meaningful program measures are key to the success and sustainability of any program.

What are your thoughts on the importance of accountability in the pesticide applicator training program?

There is nothing that will ruin a program faster than the perception that the money is not being used efficiently and for its intended purpose. If any amount of money, even as little as the minimum funding provided under the PSEP funding of \$15,000 is provided, something meaningful must be accomplished. If it cannot be, the money should not be accepted. As a taxpayer I think accountability is critical.

Do current accountability measures accurately communicate the full range of activities and achievements of the pesticide applicator training program?

After 4 days of discussion I am still uncertain as to what accountability measures, let alone standards, exist in this program. As I recall, some of the group argued that the funding was too little to justify accountability. I am forced to conclude that the measures currently in play are inadequate.

What are important considerations in developing a performance accountability system (few measures, meaningful measures, clear measures, implementable measures)?

I believe the measures need to address all the above items mentioned in the question, just as we discussed in the meeting. However, there needs to be a reasonable compromise in relation to the outcomes and outputs. The actual work of training people, creating training materials, presenting at seminars and similar will not count for anything under a program requiring only outcomes. There should always be an effort behind the scenes trying to determine whether the training has had an impact. This should be a normal part of any educational program.

What should be the balance between legitimate accountability and undue reporting burden?

The balance is in the essential nature of the reported data, not the effort required to report it! If it is necessary then it is necessary. Otherwise why do it. But, it is illegitimate to argue that because finding valuable measures is difficult we should skip the process and dismiss it as an exercise. Bull! We do the hard things because they validate and empower. Otherwise we are mercenary flaks, self-interested and self-fulfilled. A record of accomplishments, failures, completions and those items yet to be completed, measured against anticipated outcomes, and punctuated by planned changes, is rightly required.

Can you provide examples of appropriate accountability measures?

Yes, of course, but not here. I am happy to discuss this at length with any that wish to listen.

How should we work together to develop an improved performance measurement system?

In my view we cannot. As the granting agency it is fairly imposed by EPA. Get input, yes. But don't think that group can come to consensus about meaningful measures. In every exchange there are winners and losers, as perceived by the participants. Accountability measures must cut through this value-laden terrain to a clearer, cleaner position.

Critical Question #4: Program Operations

In any system of limited resources, maximizing efficiency is critical.

What are your thoughts on how the current PSEP funds are managed and potential improvements?

The mechanism in which the funds get to the CES is broken. This diagram was reviewed twice during the meeting and the only thing that became clearer was that the system was a complete disaster. The CES in attendance were very concerned about the ease in which the money could be obtained and the fact the universities did not charge an overhead fee. A new procedure, taking this into account needs to be developed, some options follow.

If there were a direct pass from the EPA to the universities this could help to ensure better coordination of the overall pesticide training program. Better yet, funds could be passed through the SLA. States have been able to negotiate pass-throughs with minimal or no overhead costs. This again would ensure better coordination of the overall program.

The funding formula needs to be changed. Why would the number of persons who have gone through the program since inception be important. What is important is the number of bodies going through the program. The number of training seminars put on. The number of tests administered. Something that is a true measure of work completed.

What steps should be taken to improve the coordination between training providers and state lead agencies?

Several states have good working relationships, or so we've heard. This has occurred even without SLA investment. Does it really work? How does it work? Why does it work? And, most critically, to what end? If we have cohesion without purpose how are we better off? Develop guidance accentuated necessary coordination elements. Requiring shared goals, means, and accountability will foster good relationships.

Are there other program operation activities that need improvement?

Training material coordination. What a waste in the cumulative sense. Thousands-upon-thousands of dollars expended (wasted) for provincial publications that, at the core, address universal themes and knowledge. Stop it. Now!

Have we fully explored all of the opportunities to tap into resources and leverage funding?

No, this program potentially impacts many others; water, endangered species, homeland security, food safety, and animal safety just to mention a few. However, the only funding comes from the EPA, OPP. However, as each recipient has been a free agent in the pursuit of funding, it is difficult to quantify or apportion the burden accurately. Resources outside of government funds must be exploited, or again, it begs the question about the true value of the program.

Critical Question #5: Miscellaneous

Please provide input on other areas of the pesticide applicator training program not covered above, that EPA, USDA and others should consider.

I'm still thinking about this. Certainly, any nod to crisis-management based expenditure is suspect (i.e. WNV, etc.). If we see training as preventative then it is in its essence proactive. Making reactive decisions about input placement counters this essential nature and betrays education's intrinsic value.

Critical Question #6: Future Direction and Next Steps

Broadly, what should be the most important focus of the pesticide applicator training program in the short-term (up to 2 years)?

Spending reduced dollars more wisely. We should also focus some effort on obtaining additional funding. However, switching from one source of money to another without correcting the fatal program flaws just wastes someone else's money and does nothing to improve the program. Imagine switching the obese from chocolate to cotton candy. It makes both the obese and the candy purveyor happy, but does nothing to cure the underlying cause of future mortification. Just so, new funding without fundamental reform leads to the same ends. EPA cannot be the lone supplier of money, especially within their current budgetary constraints. I stated earlier that everyone needs to be held accountable, so if a state's CES PSEP cannot do training as needed, they should not accept the funding. It should not be an entitlement.

As the program was initially implemented, USDA funded positions, EPA program funding. USDA needs to step up. Private industry has been receiving the benefit of this program and not paying for training. Secondarily because of the limited

resources, there needs to be better coordination of the training material development. As an example 7 states do not need to develop a fumigation manual. Let out a competitive bid allowing one state to take a lead and then smaller amounts to allow other states to adapt it to their state/region. The funding formula needs to be addressed. Better coordination of efforts between the SLAs and CES is needed in many states. We discussed that you can lose some of the information needed that is state specific. But, we don't need to write the core of the materials over and over again.

Broadly, what should be the most important focus of improving the pesticide applicator training program in the long-term (4-6 years)?

Assessing the real customer needs and developing mechanisms which will meet those needs. Through this review there have been documents circulated which show the importance people place on pesticide education. However, none of us were the ones meeting those unique needs or providing the unique service.

If funding has not been stabilized, it should be addressed. Ongoing coordination of training materials is a must.

Finally there needs to be an internal review of this program at the recipient level. We still go to meetings and people ask if they can I leave early, people trying to sleep, etc. If this program is important, we need to affect a mind change in all those involved and in those receiving the benefit. Would you like your doctor to skip out on the last hour of how to do an open heart surgery? No? Then why is it people feel they should be able to come late, leave the last portion of a pesticide training program, go in the hall and visit with someone, or any other idea to skip out that you can think of? Is spreading something that could be harmful in the environment and affect many, less important? The good ole boys network needs to be addressed throughout the United States and this starts from the top at the Director level. Industry must also step up on this and stress the real importance of the training.

Procedurally, what are your suggestions on how we can work cooperatively to implement the input that comes out of this program review?

I believe CTAG could take on the effort of finding out what is working in states and what isn't. This could be the start of the guidance on state cooperation. Outcomes, not outputs or funding, must stay in front of everyone. Industry has been supportive; this needs to be seized when the iron is hot.

Try inviting more SLAs to identify what they really get. The gap between what CES PSEPs perceive they are delivering, and what SLAs perceive they are receiving is staggering.

Andrew Moore, National Agricultural Aviation Association

The National Agricultural Aviation Association (NAAA) appreciates the opportunity to be part of the EPA-USDA Joint Program Review of the Pesticide Safety Education Program (PSEP) and to offer comments in response to questions on how to strengthen the program. Below are responses to questions that NAAA believes it has something substantive to offer. The responses will often times refer to a program NAAA's sister organization, the National Agricultural Aviation Research and Education Foundation, organizes known as the Professional Aerial Application Support System (PAASS). PAASS is a program that develops substantive educational materials on drift minimization, aviation safety and security issues. The PAASS program drift mitigation module, which is supported by EPA, teaches operators and pilots how to use the latest technology and best management practices available to reduce drift. Pilots can use these technologies for better spraying techniques to mitigate drift and make applications more efficacious. The program is taught by aerial applicators at state and regional agricultural aviation association conventions each year. About 2,000 ag pilots and operators attend the program each year. The PAASS curriculum is often an important part of State Lead Agencies' efforts to offer substantive educational program for commercial aerial application pesticide operators in which they can earn CEUs.

Critical Question #2: Program Activities

Who should be considered the target audience?

The larger the target audience of pesticide users, the greater the chances that pesticides will be used safely without incidence. One suggestion might be to ascertain information indicating the largest user communities of pesticides and to also determine what groups within those communities have the largest number of conclusive incidents that compromised pesticide application safety. Determining these groups would be an important group to target for education, particularly if a small percentage of the group were engaged in any type of pesticide safety programs.

What is the nature of training needs (mechanism, contents)?

Training should focus on the best management practices used by the different applicator communities. Furthermore, it should reiterate to participants the new technologies that have been developed that are effective in making pesticide applications safer. It is these technologies that will be instrumental in making applications safer. NAAA has developed professional operating standards for aerial applications and urges Congress to invest in aerial application research at the USDA's Agricultural Research Service. Specifics from our professional operating standards and new technologies invented to mitigate drift are highlighted in PAASS curriculum.

Who are potential or essential providers of this training?

The PAASS program receives high marks from its participants each year. The main reason for that is attributed to the fact that PAASS presenters are ag pilots and operators. The student is learning from the experience shared from one of his/her own peers. The presenters speak the same language as the PAASS attendees. The attendee is also more likely to share their own experiences on safe application practices because they are speaking to a peer, not a regulator.

What should be the roles of the various stakeholders in managing or providing these services (EPA, USDA, SCES, SLA, private sector trade associations, scientific societies)?

NAAREF has taken on the role of offering its own, substantive training programs for aerial applicators to mitigate drift and it has been a successful venture. The impetus for the PAASS program was to educate aerial applicators rather than be further regulated. The program's success stems from many different stakeholders. They include crop protection product manufacturers and their respective national association (Crop Life America), insurance companies, and federal agencies (EPA). This arrangement has worked well. It has led to an award winning education program that has strengthened the professionalism of the aerial application industry. The curriculum has been developed by those in the aerial application industry and in scientific organizations (USDA-ARS and university scientists involved in agricultural engineering), funding has been received by the government and related stakeholders (EPA, Crop Life America, insurance companies, etc.) and SLAs have been involved in offering CEUs for attending these programs. The national aerial application trade associations (NAAA, NAAREF) have coordinated all aspects of the development and implementation of the program. Because this model has worked well for the aerial application industry, the stakeholders of the PSEP Review Committee may want to study it as a sound model for developing strong and effective pesticide education programs.

In your opinion, what should be the most important training priorities (addressing unmet needs, maintaining core functions, satisfying short-term crises, preparing for long-term changes)?

The EPA should look at those successful areas of pesticide education that currently exist throughout the country and use them as potential models.

What are, or should be, the mix of resources to fund the varying training needs?

In terms of NAAREF and organizing the PAASS program, Federal resources are very important and needed. They certainly give the impression that the federal government is a stakeholder, not solely a regulator, in strengthening the professionalism in our industry. This is an important, necessary and effective

partnership. The overwhelming majority of funding for the PAASS program comes from participant fees and industry donations, but the Federal funding is also an integral part. It is also beneficial for the government as well because the success of the program in educating applicators in pesticide safety can significantly save the government in regulatory costs.

Critical Question #3: Program Accountability

What are your thoughts on the importance of accountability in the pesticide applicator training program?

Accountability is important. One-way to determine if pesticide education is working is to determine if incidents compromising safety are on the rise or on the decline. It is important that measures to determine accountability are meaningful, however. For example, an inadequate measure of determining whether the aerial application industry had a safe flying season would be to look solely at the number of accidents that occurred in that year. A more accurate and meaningful measure would be to see how many accidents there were related to the number of hours flown.

Critical Question #4: Program Operations

What are your thoughts on how the current PSEP funds are managed and potential improvements?

From the discussion at the PSEP Program Review meeting September 16th of how the funds are distributed, it seems like there are too many steps involved in getting the PSEP funds to their ultimate user. As a result it appeared that it took too long for funds to get to the entities that needed the funding and that some of the funds might have been wasted on supporting the bureaucratic distribution process.

Critical Question #6: Future Direction and Next Steps

Broadly, what should be the most important focus of the pesticide applicator training program in the short-term (up to 2 years) and long term (4-6) years?

Maintaining and/or developing education programs that mitigate pesticide misapplications resulting in economic and environmental harm.

Ralph Otto, USDA Deputy Administrator of Plant and Animal Systems Division; Monte Johnson, Brad Rein, USDA Cooperative State Research Education and Extension Service

Critical Question #1: Program Goals

The mission statement: to help ensure the initial and continued competence of all pesticide applicators to ensure the safe use of pesticides.

This statement captures the appropriate scope of the PSEP, addresses a broad audience and goes beyond restricted use pesticides. The phrase “all pesticide applicators” is inclusive enough to cover commercial, agricultural, and various classes of private users (homeowners, for example). In some states, addressing a very broad range of pesticide applicators may be appropriate; in others, the audience may be restricted to commercial and/or agricultural applicators. Federal agencies should be supportive of these efforts.

For example, if product labels approved by EPA encompass unique situations such as interior-scapes or greenhouses, then educational activities in these areas should be supported by USDA and EPA. Industry would also be expected to contribute (through registration fees?) to this effort.

The breadth of this mission statement would address the growing interest by the general public in pesticide issues, and the PSEP response to this expanding interest level. Consistent with the law, it is important to inform these many general use pesticide applicators about pesticide safety and ways to protect human health and the environment.

Critical Question #2: Program Activities

The target audience of PSEP should be all pesticide applicators (as stated above). PSEP Coordinators can recognize and prioritize the unique needs of their state clientele and address these areas in their programs. Trade associations, State Lead Agencies, private companies, and other entities can help satisfy needs for training in certain situations.

Where gaps appear in training coverage, they are usually due to insufficient resources to conduct the program. But even in rare instances where the resources seem sufficient, we lack information on what training methods and resources are most effective in preparing pesticide applicators for certification. Given the scarcity of dollars to support this program, it would behoove all of us to seek the most cost-effective modalities to deliver PSEP training.

In ecological parlance, it is axiomatic that “diversity breeds stability.” The same holds true with government supported projects. When the totality of resources arises from a single appropriation or allocation, an entire program can become

hostage to the viability of that allocation. PSEP is currently supported by a cash infusion from EPA, and significant in-kind contributions from USDA, the States, certain local governments, and other non-governmental sources. While it is effective to have a mix of resources for PSEPs, it is important to have a reliable 'base' of funds to give the programs continuity and consistency, and through which to leverage the other contributions.

Over the years, EPA has funded PSEP out of its discretionary accounts. The enabling legislation for PSEP arises with EPA, but the authorization is not accompanied by a legislated appropriation. Thus, in many respects, PSEP takes on the nature of an "unfunded mandate" for EPA. Although EPA has been able to deal with this in the past by tapping discretionary dollars, as budgets have tightened, the degrees of freedom allowing EPA to do this have been severely reduced. In essence, EPA now finds itself in the position of being asked to decide whether to devote limited discretionary resources to covering its own operating costs, or, taking these resources away from EPA and using them to support PSEP.

USDA, on the other hand, has numerous authorities in the broad areas of pest management, and most assuredly is authorized to develop and deliver educational outreach programs. Indeed, many of USDA's programs work closely with PSEP programs in the States. But USDA is not in a position to seek appropriations for a program that falls under authorities granted to EPA. CSREES, in particular, is already saddled with an extremely complex budget: in addition to more than 55 separate lines in the agency's Presidential Budget request, CSREES will also be the recipient of appropriations covering more than 350 Congressionally mandated programs. Neither OMB nor USDA's Office of Budget and Policy Analysis (OBPA) react warmly to requests for new lines of funding.

While CSREES is not in a position to seek funding for programs not under its mandate, it can, and will, seek to influence the State Cooperative Extension Services to continue to participate in PSEP on the most cost-effective basis possible.

Critical Question #3: Program Accountability

The PSEP has a web-based reporting system called the Performance Planning and Reporting System (PPRS) that was developed and approved by EPA and USDA. Implemented in 2002, the PPRS collects several measurements of individual state program activities along with narratives that typically explain in detail their accomplishments. Consequently, this program provides an excellent means of holding PSEPs accountable.

PSEPs are responsible for filing an update to their Plans of Work and an Annual Report. In those cases where an Annual Report is not filed, the given State

PSEP's funding for the following year may be withheld. Of course, it should be noted that as program resources have dwindled, so have program activities. Levels of accountability need to be linked to levels of funding.

Caution should be exercised when considering inclusion of outcome measures that can not be directly linked to PSEP's educational programs. An example would be data from a poison control center. Unless the person(s) involved in a poisoning incident has/have attended a PSEP training session, they should not be included in the data. In other words, it is difficult to document prevention. (Although if it turned out that over a two year period, no case of pesticide poisoning in a given state or region involved a PSEP trainee, this would be encouraging and suggestive.)

The legislative language states that pesticide applicators be 'informed and educated', but appropriately says nothing about changing behavior. The PPRS asks PSEP Coordinators to include data on how many trainees plan to adopt pesticide safety practices and how many actually do. A summary of this data for three years (2002 – 2004) will be available early next year.

Critical Question #4: Program Operations

PSEP funds are currently managed to the best abilities of EPA and USDA. Certain criticisms have been resolved that led to lapses in full funding in recent years. However, it would greatly benefit the program to have line-item funding instead of discretionary funding. The use of discretionary funding makes the critical core Federal funding for the PSEPs dependent on the dedication and support of a few career professionals in EPA and highly vulnerable to changes in staff and budget reductions. The line-item should reflect the fact that programs have been under funded for many years.

Cooperation between State Lead Agencies (SLA) and PSEP Coordinators should be encouraged but not forced upon them. PSEP Coordinators typically have to cooperate with SLAs to gain approval for training sessions. PSEPs often incorporate SLA participation in training sessions as well. There is a need for good communications between PSEP Coordinators and SLAs on how the PSEP coordinator intends to structure the PSEP program and why they have chosen the educational delivery methods they are using.

It appears that PSEPs continue to explore all avenues of support, including the use of fees to cover program expenses. A recent survey pointed out that 89% of the responding (44) PSEPs charge fees for training materials and 84% charge fees for training sessions. PSEP Coordinators have also used state appropriations and a variety of grants to support their programs. However, these sources can be unreliable and short-term.

Critical Question #5: Miscellaneous

The level of cooperation appears to vary considerably across the country between PSEP coordinators and SLAs. The level of cooperation appears to be the lowest where there are significant differences in how to deliver an education program most effectively with the resources available.

For example, in Arizona the perception of the SLA is the PSEP coordinator is not providing education while the PSEP annual report indicates that 28,357 people were involved in their programs. The vast majority of this involvement was through individual internet session. It appears the PSEP coordinator relies primarily on internet education rather than locally delivered face-to-face training sessions to reach the most people with the resources available. This highlights the need for ongoing evaluation of the effectiveness of various training approaches (see next section). We all need to think creatively on how to effectively deliver educational programs to applicators to prepare them for certification.

Critical Question #6: Future Direction and Next Steps

The most important short-term focus should be to return to the historic levels of funding (\$1.88 million per annum) to keep programs, especially smaller ones, from declining and essentially terminating (some already have).

Over the longer term, there is a lack of scientifically valid studies to support the future direction of the PSEP program. There have been no surveys to determine the most effective way for applicators to prepare for certification or recertification. There have been no studies to verify what educational methods are most cost effective in preparing applicators for certification. Conducting these studies and implementing the findings will become increasingly important in justifying resources for the PSEP program.

Jack Peterson, Arizona Department of Agriculture, Certification and Training Assessment Group

Critical Question #1: Program Goals

Mission: A clear mission statement is critical to shaping the priorities, dimensions and outcomes of a program. The current mission of the pesticide applicator training component of the national program should **be to help ensure the initial and continued competence of all pesticide applicators to ensure the safe use of pesticides.**

Does this statement capture the appropriate scope of the national pesticide applicator training program?

I feel the statement does represent how most people view the applicator training program. This is a very beneficial view of applicator training. From a SLA standpoint however, my view has always been that the training as addressed through the EPA funded program should be directed to that of certified applicators. To ensure the competency of those applicators who are using RUPs. So this statement although broader in scope than legislatively demanded, does represent what the program has evolved into. It would also be very difficult to differentiate training intended for RUPs vs. general use pesticides.

Does this statement cover the range of needs (audiences, program demands, training activities) of the program?

The statement does cover all these areas as it does state **all** pesticide applicators and the safe or competent use of **pesticides**, not limited to RUPs. I don't think it addresses program demands, but it doesn't need to as that is more of a work requirement.

Is it consistent with the specific statutory language and the broader program needs?

It is not consistent with statutory language. Section 11 of FIFRA is titled, "Use of Restricted Use Pesticides; Applicators". CFR 171.1 which all State programs are based, states "certification of applicators of restricted use pesticides". It is consistent with the broader program needs of ensuring the use of pesticides does not pose unreasonable adverse effects on the environment, whether the pesticide is RUP or general.

Is the scope of the mission fully understood by all critical stakeholders? If not, how could it be better communicated?

I do not think the scope is understood by all the stakeholders. The reason I state this is just as we discussed at the meetings. The applicator training program has evolved into a tremendous educational network. This is not as first was envisioned and established, where the USDA would fund the positions and the

EPA funding would be used for the program's operating. However, this has been lost as the historic perspective is lost. States have evolved the program to address specific concerns within the states. This is not the EPA's responsibility. As a state I know how as the budgetary constraints get tighter you get more imaginative to make things work. However, the original constraints are then left behind. The historical documents all together are a good piece of reference material. However, we hold the cards in our hands, states have evolved beyond this and I don't believe that any amount of information will get people to change their perspective. We all live in today and need to work cooperatively to make the program efficient and find ways to solve our problems.

Is there a need to address within the mission and scope of the program the expanding demands (mission creep, e.g. spray drift, endangered species, globally harmonized system)

I believe the mission is adequate but there is a need to address the many needs within the scope. To address the problem we must have a multi-fronted effort. It must involve all stakeholders, who must believe this is a big enough issue to push for more funding. We must reach critical mass. Or, we just need to let it go until such time as the SLAs, CES, EPA, USDA and industry all feel that they can be uniform and push to get additional funding.

Without additional funding the target audience should be considered only to be certified applicators as defined by FIFRA and CFR. The states will need to step up to their own responsibilities as far as they have further defined categories or required certification beyond that of federal requirements.

Critical Question #2: Program Activities

To achieve our mission objectives requires a variety of activities by a number of critical participants.

Who should be considered the target audience?

The primary audience is those individuals who come in the front door to be certified. Secondly should be those users of only general use pesticides.

What is the nature of training needs?

- Mechanism
- Contents

The biggest need within pesticide training is training for initial certification. I believe materials and then actual training programs are needed. It should cover the information that is needed to be competent to apply pesticides in the field. Ideally the training would include hands on training so they have some practical experience or there should a requirement that some hands-on work experience be required prior to becoming certified.

What are the gaps (over/under-emphasized)?

One area that appears was not envisioned when the program first began was the need for training non-agricultural applicators of RUPs. This is one area that is greatly underserved via the CES. Another gap appears to be that of initial certification training. There appears to be much recertification opportunities, but limited if any initial training.

Who are potential or essential providers of this training?

Anyone who has expertise, CES, industry representatives, SLAs, private consultants

What should be the roles of the various stakeholders in managing or providing these services (EPA, USDA, SCES, SLA, private sector, trade associations, scientific societies)?

Initial certification should be done in the area the expertise exists, with the CES. USDA should share in providing funding for this basic function. Training for general use pesticide use should be funded by industry and the various trade associations. This is also consistent with the mission of the USDA and the EPA.

In your opinion, what should be the most important training priorities (addressing unmet needs, maintaining core functions, satisfying short-term crises, preparing for long-term changes)?

Currently satisfying the short term crises is most important.

What are, or should be, the mix of resources to fund the varying training needs?

EPA and USDA should help fund certification and recertification training. USDA and the EPA should help fund training for general use pesticides. Industry should fund for training for all applicators.

Critical Question #3: Program Accountability

Accountability and meaningful program measures are key to the success and sustainability of any program.

What are your thoughts on the importance of accountability in the pesticide applicator training program?

There is nothing that will ruin a program faster than the perception that the money is not being used efficiently and for its intended purpose. If any amount of money, even as little as the minimum funding provided under the PSEP funding

of \$15,000, something for the program must be accomplished. If it cannot, the money should not be accepted. As a tax payer I think accountability is critical.

Do current accountability measures accurately communicate the full range of activities and achievements of the pesticide applicator training program?

Yes

What are important considerations in developing a performance accountability system (few measures, meaningful measures, clear measures, implementable measures)?

I believe the measures need to address all the above items mentioned in the question, just as we discussed in the meeting. However, there needs to be a reasonable compromise in relation to the outcomes and outputs. The actual work of training people, creating training materials, presenting at seminars and similar will not count for anything under a program requiring only outcomes. There should always be an effort behind the scenes trying to determine whether the training has had an impact. This should be a normal part of any educational program.

What should be the balance between legitimate accountability and undue reporting burden?

An annual report on the number of certified applicators reached through seminars, through training materials, testing etc. is very reasonable. There was much discussion on accountability; I think this got intermixed with monetary concerns. If the monetary pathway can be cleaned up then the program reporting should be held to the standard of all SLA cooperatively funded programs. A record of accomplishments, failures, completions and those yet to be completed.

Can you provide examples of appropriate accountability measures?

See above – annual reporting of numbers and plans addressing the need to determine the effectiveness of the program. Regional surveys, state surveys, pre-test/post tests, compliance rates in established areas through SLA coordination.

It would be appropriate for the SLA and CES to meet every year and share or develop their proposed work plan. It would also be appropriate that they meet at the end of the year to see how successful they both were. Every year, submitting a work plan, submitting a final report on what you accomplished from that work plan and spending the funding annually is not overly burdensome.

How should we work together to develop an improved performance measurement system?

Critical Question #4: Program Operations

In any system of limited resources, maximizing efficiency is critical.

What are your thoughts on how the current PSEP funds are managed and potential improvements?

The mechanism in which the funds get to the CES is broken. This diagram was reviewed twice during the meeting and the only thing that became clearer was that the system was a complete disaster. The CES in attendance were very concerned about the ease in which the money could be obtained and the fact the universities did not charge an overhead fee. A new procedure, taking this into account needs to be developed, some options follow.

If there were a direct pass from the EPA to the universities this could help to ensure better coordination of the overall pesticide training program. Funds could be passed through the SLA. States have been able to negotiate pass throughs with minimal or no overhead costs. This again would ensure better coordination of the overall program. The Dept of Health is the fiduciary agent for the money and it just mucks the whole process up. Could a law, policy, or rule be changed to allow the EPA to pass the money directly to the USDA? This way the accountability of the funding would be much cleaner.

The funding formula needs to be changed. Why would the number of persons who have gone through the program since inception be important. What is important is the number of bodies going through the program. The number of training seminars put on. The number of tests administered. Something that is a true measure of work completed.

What steps should be taken to improve the coordination between training providers and state lead agencies?

Several states have good working relationships. I believe some of them are even without the SLA passing money to the CES. (OH) How does it work? Why does it work? Let's create some guidance based off the information collected. It can be provided to both the CES and SLAs to begin implementing those things that make sense.

Are there other program operation activities that need improvement?

Training material coordination

Have we fully explored all of the opportunities to tap into resources and leverage funding?

No, this program potentially impacts many others; water, endangered species,

homeland security, food safety, and animal safety just to mention a few. However, the only funding comes from the EPA, OPP.

Critical Question #5: Miscellaneous

Please provide input on other areas of the pesticide applicator training program not covered above, that EPA, USDA and others should consider.

Critical Question #6: Future Direction and Next Steps

Broadly, what should be the most important focus of the pesticide applicator training program in the short-term (up to 2 years)?

I believe we all need to focus our efforts on obtaining additional funding. To lose the CES would be a shame. However, the EPA cannot be the lone supplier of money, especially within their current budgetary constraints. I stated earlier that everyone needs to be held accountable, so if a state cannot do training as needed, they should not accept the funding. It should not be an entitlement.

As the program was initially implemented, USDA funded positions, EPA program funding, the USDA needs to step up. Private industry has been receiving the benefit of this program and not paying for training. Secondarily because of the limited resources, there needs to be better coordination of the training material development. As an example 7 states do not need to develop a fumigation manual. Let out a competitive bid allowing one state to take a lead and then smaller amounts to allow other states to adapt it to their state/region. The funding formula needs to be addressed. Better coordination of efforts between the SLAs and CES is needed in many states. We discussed that you can lose some of the information needed that is state specific. But, we don't need to write the core of the materials over and over again.

Broadly, what should be the most important focus of improving the pesticide applicator training program in the long-term (4-6 years)?

Assessing the real customer needs and developing mechanisms in which we can meet the needs of the customers. Through this review there have been documents circulated which show the importance people place on pesticide education. However, none of us were the ones meeting those unique needs or providing the unique service.

If funding has not been stabilized, this needs to continue to be addressed. Ongoing coordination of training materials is a must.

Finally there needs to be an internal review of this program. We still go to meetings and people ask can I leave early, people trying to sleep etc. If this program is important, we need to affect a mind change in all those involved in the program and in those receiving the benefit of the program. Would you like your doctor to skip out on the last hour of how to do an open heart surgery? No, then

why is it people feel they should be able to come late, leave the last portion of a pesticide training program, go in the haul and visit with someone, or any other idea to skip out that you can think of. Is spreading something that could be harmful in the environment and affect many, less important? The good ole boys network needs to be addressed throughout the United States and this starts from the top at the Director level. Industry must also step up on this and stress the relative importance of the training.

Procedurally, what are your suggestions on how we can work cooperatively to implement the input that comes out of this program review?

I believe CTAG could take on the effort of finding out what is working in states and what isn't. This could be the start of the guidance on state cooperation. Funding must stay in front of everyone. Industry has been supportive; this needs to be seized when the iron is hot. This needs to get into supplemental budgets and future budgets to address the shortfall in this critical program.