

EXECUTIVE SUMMARY
PESTICIDE SAFETY FOR THE 21ST CENTURY

CERTIFICATION & TRAINING ASSESSMENT GROUP
PROPOSALS FOR CHANGE TO THE PESTICIDE EDUCATION, SAFETY
TRAINING AND APPLICATOR CERTIFICATION PROGRAMS

January 1999

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AAPCO	Association of American Pest Control Officials
AAPSE	American Association of Pesticide Safety Educators
ASPCRO	Association of Structural Pest Control Regulatory Officials
C&T	Pesticide Applicator Certification & Training Program
CTAG	Certification & Training Assessment Group
CES	Cooperative Extension Service
FIFRA	Federal Insecticide, Fungicide and Rodenticide Act
FQPA	Food Quality Protection Act
NPOs	National Program Offices (EPA and USDA)
PAT	Pesticide Applicator Training
RUPs	Restricted Use Pesticides
SLA	Pesticide State Lead Agencies
40 CFR 171	National EPA regulations that guide the C&T program
✓	Indicates a long-term proposal that could result in significant change to the program
[]	Represents issues raised by CTAG members in their deliberations

Introduction

This executive summary of the draft Certification & Training Assessment Group (CTAG) report "Pesticide Safety for the 21st Century," is being released to all stakeholders for comment. CTAG would appreciate feedback on proposals by April 2, 1999 to Jeanne Heying/EPA at 401 M Street, S.W. (7506C), Washington, D.C. 20460, fax (703) 308-2962, or "heyjng.jeanne@epa.gov".

Although feedback is sought on all proposals, CTAG especially appreciates comments on proposals marked with "✓". These proposals would require extensive dialogue, would be accomplished over the long-term and could result in significant change. Proposals are subject to change or elimination as a result of stakeholder feedback. If further details of the proposals are desired, readers are encouraged to review the draft CTAG report that explains CTAG member deliberations. The report is available from EPA at 703-305-7666 or on the Internet at <http://aapse.ext.vt.edu>. Input from stakeholders will be added to the final report and will be presented at the National Pesticide Applicator Training Workshop, August 7 - 11, 1999 in Portland, Maine. (<http://pmo.umext.maine.edu/ct/CT.htm>)

Background

With the establishment of the national pesticide applicator certification and training program (C&T) 25 years ago, national requirements were set by which states, tribes or territories could determine the competency of an applicator to use Restricted Use Pesticides (RUPs). National standards for determining the competency of a private or commercial pesticide applicator are found in 40 CFR 171. EPA has cooperative agreements in place with state, tribes and territories to operate the pesticide applicator certification program. State, tribe or territorial programs have established standards, through an EPA-approved certification plan, that are equal to, or more stringent than, those standards required in the regulations.

CTAG was established in 1996 to review previous national program evaluations, explore proposals identified by previous task forces, determine changing needs and provide direction for the future of the national pesticide applicator certification and training program. CTAG is proposing changes to the national C&T program by way of changes to FIFRA, the regulations (40 CFR 171), EPA and USDA activities, or activities in conjunction with states, tribes and territories. Any national program changes ultimately made through FIFRA or the regulations would be long-term changes that would also result in similar changes to state, tribe and territorial laws and regulations. CTAG recognizes that some of these proposals would require difficult and long-term changes that require extensive dialogue and feedback with stakeholders as they are being considered. Proposals marked with a "✓" have been identified as long-term efforts that would result in significant changes. Comments enclosed in square brackets represent issues raised by CTAG members in their deliberations.

CTAG is co-chaired by EPA and USDA and consists of representatives from EPA Regional Offices, USDA, Pesticide State Lead Agencies (SLAs), Cooperative Extension Service (CES), Tribes, the Armed Forces Pest Management Board (AFPMB), the Association of American Pesticide Control Officials (AAPCO), the Association of Structural Pest Control Regulatory Officials (ASPCRO), and the American Association of Pesticide Safety Educators (AAPSE). In recent years, public needs and demands have begun to exceed the capabilities of the original

pesticide applicator certification and training programs established 25 years ago, such that the National Program Offices (NPOs, which are EPA and USDA) felt there was a need to assess the current program operation in order to sustain its future vitality.

A draft report on the results of the CTAG effort has been produced to present the findings of the group. The draft CTAG report is a result of discussions on national program information and other input provided by CTAG members on the strengths and weaknesses and use of resources for their programs. The draft CTAG report, entitled "Pesticide Safety for the 21st Century," includes more detail on the background of the CTAG effort as well as a full discussion of all the program issues identified and proposals. The report also includes appendices listing the individuals that participated in the CTAG effort and other supporting information. This executive summary provides a condensed presentation of the results of the CTAG effort, and includes a brief background on CTAG's mission, five major CTAG goals identified for the program, and a list of proposals to move the program forward and sustain the vitality of the program in the 21st century.

Proposals

Goal 1: Reduce the risks to the public from pesticide use.

Provide for the safe and effective use of pesticides by ensuring that all pesticide users, including homeowners, have access to appropriate pesticide safety education materials and/or pesticide safety training. Ensure that all pesticide applicators who apply pesticides as part of their occupational responsibilities or activities [that could result in pesticide exposures to the public through direct exposure/contact, residues on food or plant materials, or from drift] have received adequate pesticide education and safety training corresponding to their category/level of pesticide use.

Ü1.1 Initiate a National Consumer Education Initiative. Initiate a nationally organized pesticide education and safety training program targeted to consumers and/or homeowners that provides for safe and effective use of pesticides by this segment of the user community. The program should be comprised of an extensive outreach and education campaign and the development and distribution of appropriate pesticide safety education materials. It should be coordinated in partnership with USDA, industry and EPA's Consumer Labeling Initiative, in order to maximize acceptance and utility of educational materials and make the best use of EPA and industry resources.

Ü1.2 Expand the Regulatory Scope of the Program. Amend the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and revise 40 CFR Part 171 to expand the regulatory scope of the pesticide applicator certification & training program from its current focus on applicators of restricted use pesticides (RUPs) to include regulatory coverage of all pesticide applicators who apply pesticides as part of their occupational responsibilities or activities (that could result in pesticide exposures to the public through direct exposure/contact, residues on food or plant materials, or from drift). Revisions should allow for certain exemptions for small businesses and other situations, but would mandate specific training for applicators applying pesticides in places/areas that may result in high risk exposure (e.g., food processing and/or handling establishments, day care centers, schools, hospitals, etc.). The regulatory expansion would also include provisions for the certification of dealers of "occupational use" pesticides (see Proposal 1.4 below). [There is concern that official expansion of the program would overburden an already underfunded program. Additional funds would have to be appropriated, and USDA would have to contribute funds in order to cover an expanded regulatory scope. Also, in light of FQPA, there may be resistance to reopening FIFRA because other areas of the statute could be subject to revision in the process.]

Ü1.3 Integrate the Worker Protection Standard Training Requirements With the New Applicator Training Program. In the expansion of the scope of pesticide applicator training programs noted above, provide for integration with Worker Protection Standard training requirements/programs so that pesticide safety education and training is provided for the full continuum of the pesticide user communities, from agricultural workers and handlers to the full spectrum of pesticide applicators.

Ü1.4 Consider a Tiered Classification of Pesticides. Consider some method of classifying pesticides in tiers based on the toxicity and assessed risk of the active ingredient and/or uses (and possibly the amount of the product to be used), and aligning the requirements for pesticide education and safety training (and certification/licensing requirements) with the classification of the product. One example of a tiered classification would be:

- (1) consumer/homeowner use products;
- (2) general or unclassified pesticide products for occupational use;
- (3) restricted use pesticide products [based on current RUP criteria] for occupational use; and
- (4) restricted “prescription” use products for occupational use.

The “prescription use” category would be reserved for specific risk mitigation situations, and could be one possible approach to preserving certain minor-crop uses of “high risk” pesticide products. By only allowing specified uses based on a particular training and certification level of the applicator, this approach would mitigate the impacts of the Food Quality Protection Act and groundwater protection restrictions.

1.5 Change the Name of the Program. Change the name of the C&T program to reflect both the certification component and the scope and extent of pesticide education and safety training activities. A suggested name is the PESTAC Program (Pesticide Education and Safety Training and Applicator Certification Program). Suggestions are welcome.

Goal 2: Provide high quality pesticide education and safety training programs.

Ensure that all pesticide education and safety training programs meet national standards with regard to the content of the programs and the quality of training materials. Ensure that training coordinators for pesticide education and safety training programs possess the knowledge, skills and abilities to deliver effective training that meets the needs of pesticide users and keeps pace with evolving technological advancements and our changing understanding of pesticide risks.

Ü2.1 Update Core Training Requirements and Establish National Model

Curriculum. Update the core pesticide education and safety training requirements for certified applicators and service technicians (or for any training program considered in regulatory revisions) to reflect the current needs and desired competency standards for pesticide users, and establish a national model/standard curriculum for the updated core pesticide education and safety training requirements. In addition to existing and newly identified topics, the core requirements should, at a minimum, also include coverage of Integrated Pest Management (both agricultural and non-agricultural/urban IPM) and the ethics of pesticide use decisions and professionalism in dealing with the public. (The national model core curriculum could be mandatory or voluntary. If it were mandatory, the regulations at 40 CFR Part 171 would be officially revised to codify the updated core requirements. There are concerns with the feasibility of requiring a national model curriculum because programs are so varied.)

- 2.2 Provide Mechanisms for Coordinated Development and Review of Training Materials.** The NPOs, AAPSE, and AAPCO should form partnerships among states, tribes, territories, industry, professional organizations, and commodity groups to coordinate development of training materials to improve the quality of training materials in use and to offset the burden on programs of individual states (SLA/CES), tribes and territories. The NPOs and/or AAPSE should create a national review board for oversight and review of federally-funded/coordinated training materials to raise the standard of quality for all training materials and to eliminate the use of materials with erroneous information. The NPOs and/or AAPSE should also coordinate a mechanism/process for end-user reviews of such training materials to build quality control into the development process.
- 2.3 Provide Mechanisms to Improve the Skills of Trainers/Educators.** The NPOs and AAPSE should establish a mechanism to provide pesticide safety educators with opportunities to update skills and knowledge through periodic training workshops to promote an exchange between senior/junior educators. [Note: a feasibility study is being conducted to explore the feasibility of setting up regional/national “Pesticide Education and Safety Training Centers” for trainers/educators to provide a mechanism for accomplishing this objective. State, Tribe and Territory regulators may also benefit from similar training.]
- 2.4 Establish a Network or Resource Pool of Subject Matter and Technology Experts/Specialists.** The NPOs and AAPSE should coordinate identification and maintenance of a network of recognized subject matter specialists for different certification categories that could serve as coordinators for the development of new and/or updated training materials in each subject matter area. Additionally, a pool of experts familiar with new technology and precision agriculture and engineering should also be identified and tapped to serve as a resource for training other program coordinators and to provide training on program design and the appropriate use of advanced technology. [Each regional area, either by USDA or EPA region, could establish their own network of specialists. A land grant university could be designated as the base of operation. Expertise is especially needed in agricultural engineering. One state suggests establishing scholarships in needed disciplines.]
- 2.5 Develop Training Materials in an Electronic and Modular Format.** NPOs should assure that developers of training materials use a modular and electronic format to facilitate sharing, updating, or modifying information, as well as adding area, region, tribe, territory, or state-specific information (a modular format has standardized units that allow one or more units to be updated or modified without having to make changes to the whole document).
- 2.6 Establish National Web Site Directory of Training Materials.** NPOs and AAPSE should support development of a national web site to provide information on the existing pool of training materials (status, sources, availability, etc.). The web site would also facilitate the sharing of available materials while avoiding duplication of efforts, and would therefore reduce resources and costs associated with developing materials.

Goal 3: Maintain the consistency, integrity and validity of the certification and recertification programs and processes.

Ensure that all pesticide applicators being certified and/or recertified meet national competency standards and occupational prerequisites for applicators.

- Ü3.1 Establish Prerequisites for Certification.** Establish certification prerequisites for applicator certification such as a minimum age requirement, the ability to read and comprehend the English language and related job experience.
- Ü3.2 Require Continuing Education Program.** Require that all states, tribes and territories establish a continuing education program as part of an applicator recertification program. [One option would be to require recertification exams to applicators periodically or in the case of a violation, in addition to a continuing education program. Also, national standards could be set for continuing education credits, units or hours.]
- Ü3.3 Require Written Exam for All Applicators.** Change FIFRA and regulations to require that competency in the use and handling of pesticides be determined on the basis of written exams for all applicators who seek to be certified through a state, tribe, territory, or federal program to use restricted, general use, or unclassified pesticide products. [In addition, other possibilities would be to eliminate the oral examination option for private applicators and to establish a national limit for the number of times an applicator can retake an exam in a given time frame. Practical exams in which the applicator must show a proficiency in such topics as plant pest identification, and/or calibration techniques may also be required.]
- Ü3.4 Require Use of Validation Process for All Exams.** Require that all states, tribes, and territories use a validation process for all certified applicator exams. Exam validation is a process whereby exams are created to test knowledge in tasks necessary to perform an applicator's job. The process includes setting up an exam committee, conducting a survey of applicators, determining what skills and knowledge are necessary to do an applicator's job, determining the number and types of questions linked to each task area, writing questions, and establishing and using cut scores. EPA will be holding a workshop providing interested states, tribes, and territories with tools on how to use the exam validation process. [Use of the process could be made voluntary, or could become part of each program's performance partnership grant with EPA.]
- Ü3.5 Facilitate Establishment of Reciprocity Agreements.** The NPOs could coordinate workshops to promote discussion of reciprocal agreements across states, and establish a workgroup to focus on long-term program changes to facilitate reciprocity agreements. Some of the other CTAG proposals could help alleviate reciprocity issues. In addition, a coordinated Web site should include each state's program categories and definitions. [Reciprocity agreements in general are problematic due to differences in state law.]

- 3.6 *Establish a National 5-Year Maximum Recertification Period.*** Establish regulatory requirements for a national maximum certification period of five years for all certified applicators; develop regulatory requirements for recertification programs and options. States, tribes, and territories would be able to establish a certification period of five years or less.
- 3.7 *Upgrade Content of Certification Exam.*** Revise regulations to require states to upgrade the content of a certification exam to an accepted minimum standard. Exams should, at a minimum, be required to test the content of the subject matter listed in 40 CFR 171 under standards for private and commercial applicators. [The standards for private and commercial applicators could be revised and updated as well.]
- 3.8 *Update Exams Along With Materials.*** States should update examinations in a timely manner as training manuals and materials are being revised. This proposal requires close coordination among agencies involved in the education and certification programs.
- 3.9 *Establish an Exam Database.*** The NPOs could work with AAPCO and ASPCRO to coordinate the development of a national, voluntary, secure database of examination questions. It would be desirable to include only those questions that are a result of the exam validation process. [Security issues are a concern.]
- 3.10 *Provide Funding for Purchase of Electronic Grading Machines.*** EPA should consider providing a one-time increase in funding for the purchase of electronic grading machines so that applicator testers can receive exam feedback. [Alternatively, AAPCO and AAPSE could seek funds from industry sources for the purchase of software or scanners as needed.]
- 3.11 *Maintain Information on Licensing Software.*** The NPOs should collect and maintain information on licensing software and facilitate the adoption by states, tribes and territories of computerized tracking technology for certification. The NPOs should also work with states, tribes, and territories to develop a standard set of tracking fields for the licensing software to satisfy EPA reporting requirements.
- 3.12 *Develop or Improve Web Pages.*** The NPOs, with the assistance of AAPCO and AAPSE, should develop guidance and encourage each state, tribe, and territory to become part of, or develop their own, Web page on pesticide applicator certification program offerings. (Currently, two pesticide coordinators have received a grant to work with programs to update or create web pages.)
- 3.13 *Share Policies and Experiences on American Disabilities Act.*** States, tribes, and territories should share policies and experiences regarding accommodations provided to potential applicators with disabilities. The NPOs and AAPCO could facilitate the sharing of such information either informally or on a national Web page. The purpose is to assist states in establishing policies to provide accommodations for applicators determined to be eligible, while protecting the state from legal challenges. [Note: professional licensing organizations suggest that programs use their own attorneys to make decisions on a case-by-case basis.]

Goal 4: Ensure that adequate and equitable funding is available to education and training programs.

Ensure that pesticide education and safety training programs have adequate resources to meet the needs of the public and the clients being served by the program. Ensure that the distribution of federal funds which support the programs is equitable and based on factors that reflect true program workloads and outputs.

Ü4.1 Change the Federal Funding Formula for Distributing C&T Funds to State Lead Agencies (SLAs). EPA should pursue changing the federal funding formula that determines how C&T funds are distributed to SLAs. Although CTAG is interested in reviewing the entire formula with stakeholders, of particular concern is to replace the 5% factor based on the number of farms with a factor that more adequately reflects program workload and best serves all programs. The factor could be based on the number of all applicators including registered technicians, the number of commercial applicators or other combinations. [Note: The grant regulations at 40 CFR 35.115(k) require EPA to base the C&T funding formula on the number of applicators and farms, so implementing this proposal would most likely entail regulatory revision, although it is possible this proposal could be implemented in the short term by using a flexible definition of “farm” or by reducing the weight applied to number of farms.]

Current funding formula to SLAs:

EPA awards approximately \$3 million to pesticide State Lead Agencies each year. Funds are distributed to SLAs using the following formula:

\$23,000 to the Pacific Islands

\$17,000 to Colorado to administer the state commercial applicator certification program

\$57,000 to EPA Region 8 to administer the Colorado private applicator certification program

\$22,000 to each state (except Colorado and Wyoming), the District of Columbia, Puerto Rico and the Virgin Islands.

The remaining funds are awarded according to the following formula:

5% based on # of farms

40% based on # of private applicators

=10% # initially certified in the fiscal year

=10% # of private applicators holding a certification in the fiscal year

=20% # recertified in fiscal year

40% based on # of commercial applicators

=10% # initially certified in the fiscal year

=10% # of commercial applicators holding a certification in the fiscal year

=20% # recertified in fiscal year

15% for EPA Regional discretionary funds

Ü4.2 Change the Federal Funding Formula for Distributing C&T Funds to the Cooperative Extension Service (CES) Program Offices. USDA should pursue changing the federal funding formula that determines how C&T funds are distributed to CES program offices. Although CTAG is interested in reviewing the entire formula with stakeholders, of particular concern is replacing the 20% factor for farms with a factor based on the number of acres treated, agricultural acres, or pounds of active ingredient used. [It has been suggested that should be based on all applicators. Also, the factor based on the number of private and commercial applicators trained since the inception of

the program may be a disadvantage for those programs that began participating late in the federal program.]

EPA passes approximately \$2 million to USDA Cooperative State Research Education and Extension Service (CSREES) via an inter-agency agreement to support applicator training by Cooperative Extension Services. USDA does not contribute any funds for the same purpose. USDA distributes EPA funds to CES using the following formula:

- \$15,000 base for each state or territory
- 10% based on # of private applicators trained since inception of the program
- 10% based on # of commercial applicators trained since inception of the program
- 40% based on # of commercial applicators currently certified on record
- 20% based on # of private applicators currently certified on record
- 20% based on # of farms

- ✓ **4.3 Assess a Pesticide Registration Fee to Help Cover Program Costs.** EPA should pursue the establishment of a fee on pesticide registrations that would be used to cover part of the costs of the pesticide education and safety training and applicator certification programs. [The fee could be established on a tier system whereby restricted-use pesticide fees would be higher than for general or unrestricted pesticides.]
- ✓ **4.4 Explore Non-Traditional Sources for Program Funding.** States should explore non-traditional sources for funding their programs to reduce reliance on general revenue funds. States should consider “fee-for-service” options and industry and trade-association partnerships to help cover the cost of development of training materials, educational projects and/or advanced technology demonstrations.
- ✓ **4.5 USDA Should provide funding to the Cooperative Extension Service (CES) Program Offices.** USDA should expand its leadership role in coordinating administrative, technical and support roles related to pesticide management. It should provide funding, at least equivalent to EPA, for pesticide education and training programs, outside the scope of PAT. Farm worker training, pesticide record keeping programs and health care professionals would benefit from increased funding opportunities. Pesticide misuse in the urban and suburban setting can injure or kill homeowners and their pets, and cause environmental degradation as a result from lawns and gardens. Competitive research grants should be initiated for protective clothing and equipment (PPE) for applicators and farm workers. Safer methods of handling and disposing of pesticides should be investigated.
- 4.6 Provide Information on Use of EPA Regional Discretionary Funds.** The EPA regional and headquarters offices need to coordinate to provide information to states, tribes and territories on projects funded with regional discretionary funds.
- 4.7 Clarify and Adopt a Common Definition of Certified Applicators for Reporting Purposes.** The NPOs should clarify and adopt a common definition of “certified applicators” so that SLAs use a common definition of “certified” and “recertified” when reporting accomplishments. When conducting reviews, EPA regional offices need to verify reporting information and assure that SLAs are using these definitions appropriately since these reporting numbers affect future funding levels.

- 4.8 Share Information on Supplemental Funding.** The NPOs should facilitate the sharing of information on how various programs are successfully generating supplemental funds to support their certification programs. AAPCO and/or AAPSE could also facilitate this sharing of information by having sessions devoted to this topic at their national meetings.

Goal 5: Improve the efficiency of program organization and operations.

Assure that the operation of pesticide education and safety training and applicator certification programs are coordinated through the National Program Offices (NPOs) to insure cooperation between implementing agencies and to provide for consistent evaluation, management and marketing of the program.

Ü5.1 Develop National Tool/Process to Measure and Evaluate Program Success.

Develop a national survey instrument to enable states, tribes, and territories to evaluate their programs and measure applicator knowledge and behavioral change. A national survey instrument would avoid duplication across states, tribes, and territories, and could also be used to develop national program reports that capture program impacts and accomplishments. The NPOs and/or AAPSE could oversee development of the survey instrument, which would be developed with the technical assistance of state program coordinators, a statistician, and education specialists.

- Ü5.2 Improve Capabilities for Assessing Program Effectiveness.** Develop national program guidance for the C&T program that explicitly directs coordination between training coordinators, pesticide regulatory officials and appropriate insurance representatives to determine compliance issues that should be addressed in training, and also directs programs to use applicator feedback in evaluating program effectiveness.

- 5.3 Improve Program Cooperation Between Implementing Agencies.** The NPOs and EPA regional offices should work with states, tribes, and territories through the cooperative agreement oversight process and regional meetings to facilitate cooperation between implementing agencies. The NPOs and EPA regions should encourage regular meetings between SLAs and CES, provide programs with opportunities to learn how to improve communication and cooperation, and promote examples of success stories.

- 5.4 Fund Pilot Projects That Provide Program Evaluation Tools.** The national program should fund “pilot projects” that explore implementation of innovative evaluation mechanisms for C&T programs that could be used as models for other states to use in their programs.

- 5.5 Encourage Monitoring of Training Programs.** The NPOs should include language in national guidance that directs or at least encourages programs to monitor certification and recertification training meetings for content and delivery as part of the national effort to assure effective quality training.

- 5.6 *Require Annual Review of State Plans.*** The NPOs should include language in national guidance that directs EPA regional offices to conduct a review of State Plans with SLA and CES certification staff to assure that an annual program review and evaluation occurs in each program.
- 5.7 *Effectively Market the C&T Program and Promote Accomplishments.*** The NPOs should develop an explicit strategy and/or mechanism to adequately capture the C&T program accomplishments and highlights such that stakeholders (both internal and external) would have an improved understanding of the total scope and importance of the program and the range of accomplishments associated with the program. The NPOs should also explore options to effectively “market” the C&T program.

Conclusion

The overall objective of CTAG’s proposed program changes is to help EPA fulfill its mission of protecting human health and the environment, and adequately safeguard the public, especially children, from the risks resulting from pesticide application. On a day-to-day level, the intention is to ensure the quality and efficiency of pesticide education, safety training and applicator certification programs, offering pesticide users at every level the information and training they need to make environmentally responsible decisions. EPA welcomes comments from interested parties on the proposals presented in this document by April 2, 1999 to Jeanne Heying/EPA at 401 M Street, S.W. (7506C), Washington, D.C. 20460, fax (703) 308-2962, or “heyings.jeanne@epa.gov”.