



CTAG

Certification & Training Assessment Group — National Partnerships for Safe & Effective Pesticide Management through Education, Training & Competency Assessment

Pesticide Applicator Recertification: Online Training – Course Design and Structure

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The question, “What makes a good recertification offering?” is a many-faceted question. The answer in large part depends on the responder. The primary goal of recertification offerings may differ for a trainer who provides information and education, a regulator who grants approval and uses recertification as a tool to qualify persons for a certification or license to apply pesticides and a consumer attending recertification.

While the criteria for proficiency of certified pesticide applicators are clearly specified in Title 40 of the Code of Federal Regulations sections 171.4 & 171.5 (Pesticide Applicator Certification), there are no criteria defined for the content and evaluation of pesticide applicator recertification programs. Effective training is very important to a pesticide recertification program, but what are the key elements to a sound and effective program? To assist those who provide and manage pesticide applicator recertification programs, CTAG developed the following guidance documents:

- *Pesticide Applicator Recertification: Verifying Attendance at Training Events*
- *Pesticide Applicator Recertification: Content Criteria*
- *Pesticide Applicator Recertification: Online Training – Course Design and Structure*
- *Pesticide Applicator Recertification: Evaluation of Recertification Programs*

These documents are intertwined and serve as the beginning to addressing some critical parts of producing a good recertification program. As CTAG develops more guidance documents, they will be added to this series.

Introduction

Approximately 25 states accept online recertification courses for pesticide applicator recertification credits. These courses are offered by state universities, state lead agencies, and private companies. With the continued growth of Internet training, it is reasonable to assume that most states will accept online recertification courses in the near future. The goal of this paper is to provide guidelines for elements of design and structure of online courses that are appropriate for recertification credits, including:

- Course access and technical assistance
- Applicator verification
- Course length and advancement
- Learning objectives
- Presentation style
- Transferring information to the State Lead Agency
- Other issues with online recertification trainings
 - Limiting the number of online credits
 - Testing applicator for information retention

There are many parts to an ideal online course, but what is the bare minimum? At the very least, the course needs to meet the State Lead Agency's (SLA's) requirements for pesticide recertification credits. With regard to content, refer to the CTAG paper entitled "Pesticide Applicator Recertification: Content Criteria." There should be a method for making sure the course is completed within the state's time constraints. Finally, the online course should have some manner of verifying applicator participation. We will discuss these and other aspects of an ideal online course in more detail.

Course Access and Technical Assistance

The ideal course starts by providing very clear and concise directions on how to purchase and complete a course. Some online courses require the user to have an email and password before purchasing a course. The most familiar method for purchasing a course involves the use of a "shopping cart." With this method, the courses are displayed on the computer screen and the user adds one or more selected courses to a virtual "shopping cart". After filling the cart, the user checks out and purchases the course(s) with a credit card. Private and personal information such as credit card number, phone number and address are exchanged during online transactions. The website must be secure to maintain the security of this information. The user should receive a receipt of purchase after completing the check out process that includes a reference number and clear contact instructions in case there are

questions. This is important in case there are problems with the course and the user is not able to complete the purchased courses.

Some courses are free of charge. Access to free courses should also be quick and easy. There should be a mechanism to easily select the course such as the shopping cart method mentioned above.

The ideal course should contain some mechanism that prevents the user from participating in more than one course at a time. For example, the user should not be able to have three windows open and take three different courses at once. Preventing one person from running multiple programs on multiple computers at one time is most likely impossible. However, time stamping each course and verifying that the user has not completed more than one course in a particular period is one way of doing this. A better way is to program the online course so that only one course can be running at a given time even if the user purchased several courses at once

After purchasing a course, the user follows the directions and proceeds with the course(s). Not everyone who takes an online course is familiar or comfortable with computers or the Internet. Therefore, having technical assistance available is important. This may be an email or phone number for someone who can assist the user in the technical aspects of completing the course including course purchase, running the course, and computer specifications. Also, the computer requirements for running the online course should be stated before the course is purchased. This includes any add-ins like Adobe Flash Player® or bandwidth speed that may be required to successfully participate in the online course.

Applicator Verification

Applicator verification is a large obstacle to overcome for online courses, as it is for in-person training. Unique to online courses is the difficulty of verifying that the person completing the course at a remote site is actually the applicator and not an office assistant, spouse, or other person. CTAG addressed the issue of verifying attendance at live trainings in a recent paper titled “Pesticide Applicator Recertification: Verifying Attendance at Pesticide Training Events”. That paper provided means of combining random ID checks with significant consequences for violators to verify attendance even when it was impossible to positively identify every attendee, and a similar approach could be used with online training.

One method is to have course sponsors or SLA (as appropriate in your state) contact randomly selected applicators sometime after the course is completed and ask them content-specific questions. If the applicator cannot answer the questions or provide any

detailed information about the course, credits could be denied and other penalties could be imposed as the State sees fit.

At the very least, the course should clearly state that anyone completing this course under someone else's name or applicator number is committing fraud and can be penalized accordingly. The user must read and agree to the terms of verification before proceeding with the course. If fraud is committed, the course sponsor has documentation of the user's acceptance of the course terms and can proceed with any penalties such as denying credits.

To reduce the possibility of a single applicator completing the course but multiple applicators receiving credit, a unique username and password for the course should be linked to the applicator license/certification number. Because of the link between the username and applicator license/certification number, credits for any completed course are assigned to only one license/certification number. This also helps deter applicators from sharing usernames and passwords.

Course Length and Advancement

A majority of the states that accept online courses for recertification have criteria that the course be 50 minutes in length for one recertification credit. To meet this requirement, courses should be locked so that users cannot advance through the course in less time. However, the user should be able to navigate backwards in the course to review course content. Also, the user should not be limited to 50-minutes because it may take longer for him/her to complete the course. The course should be developed to allow the user to pause or stop the course as needed.

Learning Objectives

Learning objectives should be stated at the beginning of each course. These objectives can then be repeated at the end of the course as part of a course review. Using pre- and post-tests may help the course sponsor gauge whether the learning objectives were met. If you want to analyze the pre- and post-tests the course sponsor must be able to save each individual test. This feature enables the course sponsor to improve the course if the majority of the users are not able to satisfy a particular learning objective.

Presentation Style

Online courses should be varied in their presentation style and engage three common learning styles: visual, auditory, and kinesthetic. Visual learners prefer to learn by seeing and like visual stimuli such as pictures, slides, video clips, and graphs. Auditory learners learn well with lectures and tend to remember and repeat ideas that have been verbally presented. Finally, kinesthetic learners need to be involved in the learning process by physical participation.

To incorporate these learning styles, courses should be clearly narrated; contain a mix of images, graphics, and/or movies; and be interactive. It is important to have the course narrated by someone who speaks slowly, clearly and with some inflection. Compliance with the Americans with Disabilities Act (ADA) may be required for the online course. For example, all state and federal government agencies including universities must comply if requested. One way of complying is to provide a script of the narration for those who are hearing impaired. Some users may desire to print the script of the course for reference or test taking.

Adding quizzes or games to the course requires the user to actively participate in the learning experience. The user should not be able to skip the activity but must complete it before advancing in the presentation. However, the course should not contain so many quiz questions that it becomes difficult to convey the course content. Also, there should be a method of changing the quiz questions each time the course is accessed.

Transferring Information to the State Lead Agency

After the user has completed the course, the necessary information must be made available for the SLA to process the credits. The method of credit transfer should be clearly communicated at the beginning of the course. Either the course sponsor or the applicator can send the information to the SLA. The transfer should be done in a timely manner. A course sponsor who sends in the credits earned on a yearly basis makes it difficult for the pesticide applicator and SLA to keep track of accumulated credits.

If the course sponsor is not responsible for transferring credit information then the pesticide applicator can complete a credit sheet upon completion of the course. This sheet can be printed only after the course is completed and contains course and applicator specific information such as; course title, date, time started and finished, applicator name and license/certification number, and the applicator's signature. The applicator is then responsible for sending this to the SLA. No matter what method is used for transferring the completed credits, there should be a system in place to double-check the applicator's name and completed course.

OTHER ISSUES WITH ONLINE RECERTIFICATION COURSE

Limiting the number of online credits

A few states limit the number of credits an applicator can receive online. This restriction requires applicators to complete more than one method for recertification if it is available. For example, the applicator would need to attend classes in order to fulfill the state's credit requirements. This is a decision to be made by the SLA and should not impact how the online courses are designed. The applicator or the SLA would be responsible for keeping track of this information.

Testing applicator for information retention

Evaluating an applicator's retention of course content is not an issue unique to online courses. By creating a pre- and post-test with the online course, the course sponsor is able to collect data on how well the course is delivering a message. However, it is difficult to know how much the applicator remembers from the course or if the course caused a behavioral change in the applicator's practices. This is true for live classroom style courses as well. One method is to follow up with the applicator a few weeks after he or she completed the course and ask a series of questions. This issue is a potential problem for all recertification courses and should be addressed in another paper.

Annual repeat of the same internet course

How often a course can be taken and the applicator still receives credit, depends on the policy of the State Lead Agency. Some states may allow the applicator to complete the course no more than once a year to receive credit. Other states may only allow the applicator to complete the course once for recertification credits. If the state has a policy on the number of times an online course can be taken for credit, there should also be a mechanism to track the course and/or the applicator.