Pesticide Applicator Recertification: Verifying Attendance at Training Events

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The question, "What makes a good recertification offering?" is a many-facetted 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

The purpose of any certification program is to verify that a person has successfully completed a course of study and passed some gauge of competency that demonstrates sufficient proficiency to perform a particular task. In the case of pesticide certification, this usually involves successfully passing one or more exams. Over the years, CTAG has laid out a considerable body of fact-sheets, guides, and position papers regarding how to best develop and administer pesticide certification exams. However, to date, CTAG has not addressed the process by which people maintain their certification status by means of recertification workshops, recertification through continuing education unit (CEU) systems, or recertification by on-line web-based

courses. Since this is a very broad area for discussion, the issue of verification of attendance at recertification workshops and CEU events will be addressed first. On-line web-based training will be addressed separately.

Why is this important?

Pesticide certification is a means by which the general public can be given some assurance that the people who use and sell pesticides have demonstrated a minimum level of competency before they distribute, apply, or supervise the application of a pesticide. For regulators it is a process to demonstrate that a pesticide applicator has proven some competency in understanding the regulations, complex environmental and health risks, and many other issues and important factors associated with conducting pesticide related activities. For pesticide manufacturers, it may be a means of mitigating risk and ensuring product performance. F Finally, for the applicator or dealer, it is a means of minimizing personal risk, ensuring compliance with federal and state pesticide laws and potentially reducing legal liability (in the event of an incident).

Regardless of the reasons why a person becomes certified, it should be evident that a pesticide certification must be legitimate and based on a sound and defensible process. A certification must not be granted or renewed if the applicant has not successfully completed a valid certification exam and/or actively participated in an accredited training program. If the certifying agency cannot verify either or both, the credibility of the entire certification process becomes compromised. In this case, the public is not assured that a pesticide applicator is competent, that a risk is adequately mitigated; for the applicant, the certification serves no purpose other than to maintain a bureaucracy.

On the surface, verifying that someone has participated in a training event seems likeit should be easy; when a person registers for an event, some form of identification is presented to the training organizer before admittance. Then, during the course of the training, the organizer of the event takes reasonable steps to ensure that the applicant fully participates in the training. In reality, this presents a series of challenges for the regulatory agency and/or the organizer of the event. Examples include but are not limited to:

- Sufficient staff resources and or time to verify identifications at admittance
- Sufficient staff resources to monitor training attendance
- Confidence by the regulatory authority that the (third-party) training organizer is following through with verifications and monitoring attendance
- Resistance by the applicant to producing identification on religious or privacy grounds
- Resistance by the applicant for the purpose of avoiding or circumventing the training requirement
- Limitations of technology in the case of participation in an on-line web based training

CTAG's Goal With Respect To Verification of Training Attendance

In previous papers, CTAG has argued that verification of who is taking an exam is essential. So too is verification of attendance, but that verification should be balanced against matters of practicality. So what CTAG will attempt to do, in this discussion paper, is describe methods by which certifying agencies can take **reasonable steps** to verify attendance at trainings.

Is this a significant issue?

Most of the evidence for non-compliance with respect to attendance at pesticide certification training events is difficult to quantify. Minnesota has levied fines to people who have falsified attendance signature records. Oregon has pursued a formal enforcement action against a supervisor in another state agency for falsifying names of training attendees. Finally, anecdotally, North Dakota has, on multiple occasions, observed instances where participants of a training session left the event prematurely when they observed identification being reviewed at the registration table. At the time of this writing, no high-profile incidents that have led to actual harm have been identified.

In other industries or institutions, fraudulent participation in trainings have resulted in disbarment for lawyers, loss of a medical license for doctors, demotions in the armed services, loss of certification status for computer technicians, and in a high-profile incident involving firefighters, lack of positive identification to demonstrate adequate training was thought to be a contributing factor in the death of nine firefighters in a June 2007 Charleston, SC furniture store fire.

CTAG is not indicting the existing initial pesticide certification system. It is believed that the certification system is a sound process. However, it is also believed that regulatory agencies may be underestimating abuse of recertification processes that sustain the initial certification purpose. Therefore, CTAG is advocating that a systematic and reasonable approach be employed to minimize fraudulent participation in mandatory recertification training events or activities.

Can you ask for identification prior to admittance to a training session?

Most states have in their statutes provisions that allow them to explicitly or implicitly ask for some form of personal identification. In very few situations the ability, or authority to ask for positive identification is an impediment. So, the next question is, if you ask to see identification, will a significant number of applicants resist on privacy, religious, or political philosophical grounds?

In the case of pesticide certification it has long been argued that some, especially farmers, would object to being challenged for identification. However, in the 2008 training season, Minnesota, for the first time, required that all Private Applicators seeking recertification through attendance at University of Minnesota and Minnesota Department of Agriculture sponsored trainings provide proof of identification prior to admittance. After thousands of requests, no one lodged a complaint. Apparently, since the terrorist attacks of 9/11 and/or concerns about identity

fraud, applicants have conceded that providing positive evidence of who they are to a government authority or the agent of a government authority is a reasonable request.

How practical is it to ask for proof of identification?

It depends. In a small training, 10 to 15 people or less, even a lone trainer operating without the benefit of additional staff can easily check identifications prior to the start of an event. However, as the numbers grow to dozens, hundreds, or even thousands of people, it becomes difficult to check all participants without undue inconvenience to both the organizers and the participants. When dealing with these larger numbers, the following methods have been employed by sponsoring agencies and/or other cooperating training sponsors:

- Applicators are notified ahead of time that positive proof of identification will be requested. (This is a forewarning that identification is important and the expectation is that it will be checked.)
- Mandatory pre-registration followed by a confirmation letter that is used to remind applicators of attendance expectations and laws pertaining to fraudulent claims.
- Collect the actual identification card and or certification card at the door and return them to the attendees at the conclusion of the training.
- Require applicators to place their identification on the table at which they are seated so that monitors can review credentials anytime during the training.
- Employ random identification checks before admittance. In this situation, identification may be checked for one in three, one in five, or one in ten applicators. While this introduces the possibility of slippage, if used in conjunction with pre-notification, it can provide sufficient deterrence to reduce abuse.
- If asking for identification at the door is not feasible, ask a sampling of the attendees to provide proof of identification later in the day. This not only helps verify attendance, but also can be used to identify people who may leave early.
- A sampling of the signatures obtained at registration can be compared to signatures on file after the training is completed.

Regardless of the method used to verify attendance, those who are found to be misrepresenting themselves, should be heavily sanctioned in order to discourage non-compliance.

Sampling, auditing, and deterrence

If asking every applicator to produce identification is not feasible for efficiency reasons, having a state lead agency monitor every third-party sponsored training is not realistic due to resource limitations, or finally, if technology limitations preclude verification of on-line training, using a sampling and auditing approach can be a reasonable alternative.

First, is sampling a valid means of verifying attendance? This is a question that goes to the heart of the science of statistical analysis. The answer is yes. Essentially, if the sample is representative of the population, then inferences and conclusions made from the sample can be extended to the population as a whole. The most difficult part of using sampling is how to determine what constitutes a representative sample.

Second, sampling is valid provided it is representative and there is a sufficient number of samples. The U.S. Internal Revenue Service (IRS) reviews taxpayer returns by sampling only a small number of filed returns. This is not just a random sample, but an adjusted sampling based on income level and "red flag" actions that are reported in returns. (Through IRS analysis these "red flag" actions more often result in non-compliance.) At a minimum, the IRS samples 0.8% of returns in low to middle income populations and then escalates the sample percentage to 1.66% in higher income groups. "Red flag" actions or people who have a history of non-compliance have a much greater chance of being selected for an audit.

Third, if sampling is to be employed to verify attendance, then the sanctions need to be stiff, not only to punish the offending person, but to send a message to the rest of the population that while you may be able to "get-away-with-it" for a while, eventually you will be caught. Going back to the IRS example: for people who willfully misrepresent their tax liability, the IRS of course collects the unpaid tax, collects an interest on the unpaid tax, levies penalties of 75% of the underpaid tax, and then can, and does ask the courts to implement fines and even jail time.

Using a sampling and auditing approach with verification of attendance for pesticide certification would have the following elements:

- Fair warning—the applicant community must know and understand that abuses of the system will not be tolerated. Failure to comply will result in sanctions.
- A sample number needs to be determined. Finding that number should take into consideration:
    - Resources of the regulatory agency
    - Number of people in the population
    - "Red flag" actions (i.e., pesticide complaint history) in the population
    - Deferential sampling based perhaps on the degree of risk associated with non-compliance
- Subjecting the sampled population to an audit could include, but is not limited to:
    - Asking for photo identification at a training event
    - Reviewing signatures on training verification forms after a training event
    - Reviewing computer logs to determine if time stamp records are unrealistic
    - Asking for comprehensive post training evaluations or surveys
- Sanctions for non-compliance for the violator could include:
    - Public condemnation via publishing names in newsletters
    - Invalidation of the actual training
    - Limitations on recertification options
    - Suspension or invalidation of a certification
    - Fines or criminal liability
- Deterrence—whatever the sanction, the rest of the applicator population needs to understand that people who circumvent the system are caught and suffer legitimate consequences.

Determining a sample size

There are a host of factors to consider when determining sample size. They are beyond the scope of this paper, but generally the following might be considered:

The first factor is level of confidence desired. Do you want to be 99% sure your sample is an accurate predictor of your population or are you willing to accept 95% or even 90%? Researchers in the social sciences usually aim for 95% or better, but people who do marketing or very rough estimating for sales purposes might accept 90% or better. The higher the number you have (level of confidence), the larger the sample size you will need.

Another important factor is estimating what percentage of the population has the desired trait or circumstance that you are sampling for. This factor is based on what you know about your population. If you believe that 50% of your clients falsify attendance records, you would not need a very large sample to discover this. On the other hand, if you estimate that only 2% of your applicators skip recertification trainings, then a much larger sample is needed to discover a problem.

Finally, determine the accuracy level of your sampling process. If you have a college work-study student doing the sampling who likes to listen to their iPod and does not pay attention to details, your error rate could be very high. In this case, you would need a significantly larger sample size to compensate for the high error rate. On the other hand, a conscientious employee who is reviewing records may seldom make errors so a much smaller sample size could be used.

An example of how this would play out :

A. Define the size of the population you want sampled. (An example would be all the people who participate in a recertification program in a particular year.)
B. Determine what level of confidence you want to target. Under most circumstances, a 90 to 95% number should be acceptable since your goal is to verify attendance, not to publish the results in an academic journal.
C. Estimate how many people falsify attendance. The best way to determine this is to visit with inspection staff, training staff, and people in the regulated community. The more estimates you have the better, but you need to begin somewhere. So ask people with good judgment and experience and thus you should be able to agree upon a number.
D. Accurately predict what your error rate would likely be when sampling. Generally a conscientious employee will make errors less than 5% of the time if what they are looking for is clearly defined.
E. Once these variables are put together consult a statistician to run the numbers and come up with a sample number. Most land grant universities have departments that will do consulting for a very modest fee. Other sources of help are actual state statistics agencies or state agencies that have statisticians on staff. Examples would be: state revenue agencies, insurance regulators, and worker’s compensation bureaus. Additionally, private consultants may be found in the yellow pages or business resource directories in larger communities and many also advertise on the internet.

While it may not be possible to determine ahead of time your population size for a given program, it is possible to determine the sample size needed for an estimated total annual attendance at training sessions. Base your confidence level on the estimated total annual population at training sessions to determine the sample size needed for the confidence level you desire. Then find what percent of the total population the sample represents. Example: If your total annual attendance at training sessions is 10,000 and you want a 95% confidence level, find the size of the sample necessary to assure the 95% confidence level for the total population, 10,000. Then determine what percentage the sample size needed is of the total 10,000. Use this percentage to determine the sample size needed at each individual training session.

Relationship & Expectations Between the Certifying Agency & Third-Party Sponsors

Over 50% of all pesticide certifying agencies (CA) in the US use third-party sponsors (TPS) to conduct recertification trainings. In some situations the relationship and expectations between the CA and the TPS is tightly controlled. This is the case in Minnesota where the Department of Agriculture (MDA) and the University of Minnesota (UM) has strict requirements for agenda development, speaker approval, event operation, attendance verification, and follow-up evaluation. In addition, even though a TPS may bear responsibility for organizing the training, the MDA/UM always have representatives on-site at each training and they are usually part of the program. While this is not a foolproof system, it is perhaps one of the most tightly regulated recertification systems in the country, especially with respect to verification of attendance.

Often this relationship is not as formal as in Minnesota. Instead, the CA basically implements a memorandum of agreement with the TPS. Below is Michigan's approach to this. They approve approximately 900 training events per year using this system:

> ***Guidelines for Conducting Training Sessions for Pesticide Recertification Credits***
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> *Pesticide applicators in Michigan may obtain pesticide recertification credits to renew their applicator certification credential in lieu of retaking the certification examinations. Currently the Michigan department of Agriculture (MDA) approves one credit for every two hours of pesticide related training. The MDA requires that the training programs include updated educational information essential to ensure the competence of certified/registered pesticide applicators. The recertification credits are an extension of the public trust that applicator trainees are meeting requirements set by U.S. EPA.*
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> *Hands-on activities are approved for one credit for each hour of training, with two credits maximum. Hands-on training may include actual calibration of equipment, problem solving utilizing charts, specimen I.D., tools, and scenario-type training. This action oriented training must be interactive between the trainer and applicators.*
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> *To support the recertification effort by seminar attendance, MDA reserve the right to monitor any seminar approved for credits. This ensures program integrity with EPA.*

Program Requestors/Hosts: You must check and initial the Request for Seminar Credits form. This will acknowledge that you the requestor/host agree to the following stipulations:

- *You agree to submit the Request for Seminar Credits form at least 30 days prior to the date of the seminar.*
- *You agree to monitor attendance and proctor MDA recertification form.*
- *You agree to collect, edit and initial all completed recertification forms from attendees and mail them to the assigned MDA regional office within two weeks after the seminar.*
- *You agree to return all unused forms to MDA unless permission is granted to keep them for future seminars.*
- *You must agree to allow MDA staff to monitor any portion of a seminar approved for recertification credits free of charge. Refusal to do so will cause MDA to deny or revoke application for recertification credits.*

Oregon has similar expectations for TPS trainings as Michigan. Nearly 89% of all recertification trainings in Oregon are conducted by third-party sponsors. Below is Oregon's specific statement on verification of training attendance:

What are the sponsor's responsibilities for the course?

Sponsors must make sure attendees who intend to sign the sign-up sheet are present for the entire course. Attendees who are loitering outside the presentation room, reading newspapers, talking on cell phones or otherwise not engaged in the course, must not be allowed to sign the recertification sign-up sheets. Attendees leaving a session early should not be allowed to sign the sign-up sheets. Each attendee must sign the sign-up sheet to receive credit. No attendee should sign for any other attendee. Course sponsors must return completed original sign-up sheets to ODA within 15 days after course completion for timely posting of attendees' credit hours. Sponsors should keep a copy of the sign-up sheets for their records.

Sponsors who do not adhere to these requirements, continually submit course information late, do not monitor attendees, or whose courses deviate substantially from the submitted agenda may have credits reduced and risk the denial of accreditation of future courses.

Ohio established similar requirements and expectations with their TPS, but adds a couple of interesting highlights. One is that the sponsoring organization must become pre-approved and the second is transparency. Highlights are listed below:

Guidelines for Program Sponsors of Ohio Applicators

…..Because recertification credits are in lieu of testing, the Ohio Department of Agriculture requires that the recertification credits are offered in a credible, educational program that updates the applicator in responsible use of pesticide products. The recertification credits are an extension of the public trust that applicators are meeting requirements set by U.S. EPA for risk mitigation of pesticide products.

The Ohio Department of Agriculture will require potential vendors of recertification credits to register as a program sponsor. Once approved as a program sponsor, the vendor may submit programs for recertification credit.

In-house training for the purpose of this document is training conducted for a place of business for example a pest control distributor or company, a WDI Inspection company, a lawn care distributor or company. All in-house training must be conducted at a neutral site not at the place of business and must be open to the general public, including competitors. The speakers must all follow the recertification criteria.

In order to not only verify and monitor attendance on-site, but to also do follow up on quality control, the **New York** State Continuing Legal Education Board requires sponsoring organizations to submit mandatory evaluations of their trainings. This approach could be used in pesticide applicator certification programs as well to validate attendance and assess comprehension of recertification training. Below is the Westchester County Bar Association's statement about this to lawyers participating in their events:

You will receive an Evaluation Form at the registration desk. If you don't have a form handed to you, please pick one up at the registration table. It is your responsibility to fill out the form, and hand it back to the staff at the registration table, at the conclusion of the program. Return of the Evaluation Form is a PREREQUISITE to your receipt of a Certificate of Attendance at the meeting. (WCBA is required, by NYS CLE rules, to obtain these evaluations from ALL participants attending EVERY CLE program.)

Summary

This paper has focused on the reasons why verification of attendance primarily at face-to-face recertification events is essential to maintaining the integrity and credibility of the pesticide certification system. Verification of attendance is equally important for on-line trainings, but due to the nature of the technology, this issue will be addressed in a separate discussion paper.

Ultimately, it would be most desirable if a CA or a TPS checked identification for all proctored events, but in very few instances would this be practicable. In lieu of implementing 100% identification verification methods, the concept of sampling and auditing is presented as a reasonable substitute. Regardless of the exact methods employed to verify attendance, the agency responsible for certification of pesticide applicators should develop a systematic approach to minimize abuse in the recertification process. Without effective checks and balances in a program, confidence and the integrity of the entire system could be dramatically undermined.