

2009 Pesticide Safety Education Program Proposal

Project Title: **Pesticide Applicator Training/Testing for Arizona Weed Management Personnel**

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Location: Apache, Coconino, LaPaz, Maricopa, Mohave, Navajo, Pima, and Yavapai Counties, and the Navajo Nation

Critical Issue/Situation to be Addressed

Many species of economically or environmentally destructive foreign weeds have established and continue spreading across Arizona's rangelands, cultivated pastures, forests, and non-grazed wildland preserves. Invasive weeds have also invaded agricultural croplands and urban landscapes. Examples of pest plants that are declared as noxious weeds include: Scotch thistle (*Onopordum acanthium*), musk thistle (*Carduus nutans*), spotted knapweed (*Centaurea biebersteinii*), Russian knapweed (*Acroptilon repens*), diffuse knapweed (*Centaurea diffusa*), yellow starthistle (*Centaurea solstitialis*), hoary cress (*Lepidium draba*), Dalmatian toadflax (*Linaria dalmatica*), buffelgrass (*Pennisetum ciliare*), and camelthorn (*Alhagi maurorum*). Russian olive (*Elaeagnus angustifolia*), tamarisk (*Tamarix ramosissima*), and tree-of-heaven (*Ailanthus altissima*) are examples of invasive weeds that are not designated as noxious species.

Successful integrated weed management programs combine cultural, mechanical, and biological management methods with the use of herbicides. Integrated noxious/invasive weed management may include the use of restricted use herbicides. In Arizona, agricultural producers and agency personnel must become Certified Pesticide Applicators before they can purchase and apply restricted use herbicides for weed control in any site. The Arizona Department of Agriculture is the authority that oversees this certification process. However, they focus their educational programs primarily on irrigated crop production agriculture in the central and southern areas of the state.

In Northern Arizona especially, there is a need for pesticide applicator training and testing for agricultural producers and various federal, state, county, tribal, and local agency personnel. Since

2000, Yavapai County Extension Agent, Jeff Schalaus, has provided ten Agricultural Pesticide Applicator training sessions to resource managers across Northern Arizona with a total of 145 total participants (Boulder City, Chinle, Fredonia, Ganado, Prescott (3), Flagstaff, and Casa Grande, and Mesa). These training sessions taught participants about safe pesticide handling practices, how to interpret label information, use personal protection equipment, and integrate weed management approaches that include non-chemical and herbicide control methods. Participants were also provided integrated forest pest management instruction to prepare them for the Forest Pest Control Category exam. Each five-hour training session was followed by the offering of the Core Pesticide Applicator Exam and the Forest Pest Control Category Exam. Upon passing these exams and paying appropriate fees (when applicable), participants are certified to purchase and apply restricted use herbicides.

Currently, client requests for basic weed management training/testing sessions exceed local Cooperative Extension personnel's budgets and time commitments to deliver these services. Conventional Cooperative Extension funding for travel, AV equipment and maintenance, printed educational materials, and for personnel such as a course development/delivery coordinator are less available to provide these training/testing programs compared to the past. This proposal requests funding to support a consolidated effort of agents, specialists, and collaborating agencies to efficiently conduct at least four testing/training sessions in the late spring through early fall of 2009. Proposed locations are: Kingman/St. George, UT, Flagstaff, Holbrook, and Phoenix areas. The consolidated delivery will be done by agents, specialists, other presenters and coordinators to travel during one or two selected weeks to reach remote northwestern and northeastern parts of Arizona. The target audience will be private, federal, state, county, local, and tribal land managers who need to apply for licensing for herbicide applicators. In the Phoenix and possibly Tucson urban areas, commercial landscape professionals would be provided an opportunity to participate in the offering.

Relevancy

This proposal specifically addresses the Pesticide Safety Education Program by training and supporting initial pesticide applicator licensing of agricultural producers, government agency, and non-governmental organizations personnel. Secondly, weed science education will be provided to help licensees maintain current certification. Per suggestion of the request for proposals, this project will defray costs of travel, personnel, supplies and materials.

Additionally, this request is consistent with identified pest management priorities in Arizona and with National IPM Program goals. This project specifically addresses the APMC priority by contributing to enhance noxious and invasive weed management efforts in Arizona. Having well-trained licensed applicators in place will enhance the capability to detect and respond to new threats. By delivering up-to-date integrated weed management training to newly certified pesticide applicators, an outreach link will be established between applied researchers transferring technology to end-users. At a recent meeting of UA and partner agency stakeholders on the topic of Pesticide Applicator Training, it was noted that pesticide applicator training for weed management in Northern Arizona counties was a critical need. Educating certified applicators through this project will contribute to reduce human health risks and minimize potential adverse environmental effects that may result from misuse of pesticides, two important goals of the National IPM Program.

Inputs

- Printing (educational/resource materials)
- Travel (lodging, meals, van rental)
- Coordinator salary

- Agents and specialists time will be contributed without cost

Outputs

- Minimum of four Agricultural Pesticide Applicator training/testing sessions (Kingman/St. George, UT, Holbrook, Flagstaff, and Phoenix area.
- Updated reference materials for weed control of invasive weeds to supplement presentations.

Expected Outcomes/Impacts

Short-term impacts will be the increased knowledge of the participants that relate to integrated approaches for non-native weed management and increased knowledge and understanding of pesticide labels, safe pesticide handling, pesticide application technology and pesticide regulations. Attendees will also have printed resource materials they can use as references and contact sources when on-the-job questions arise. Individuals passing the exams will be certified as Arizona Agricultural Pesticide Applicators and will be able to purchase and apply restricted use herbicides to lands they manage when warranted. These certified Pesticide Applicators can effectively, safely, and legally use herbicides to manage undesirable vegetation.

Medium-term impacts will be decreased spread and/or reduction in populations of noxious weeds; fewer pesticide-related injuries; and pesticide applicators continuing to improve their knowledge because of required periodic education updates.

Long-term impacts will be decreased impacts to non-target organisms from pesticides and a healthier environment due to wiser pesticide use and reduced competition for native and crop plants from non-native weeds.

Evaluation Plan

Course evaluations forms will be given to participants to measure participant's pre- and post-course knowledge of weed management principles, integrated methods, and pesticide safety. The evaluation will also gather information on how participants plan to use the knowledge gained. The percentage of participants that pass each of the two exams will also be tracked through the Arizona Department of Agriculture and will provide a measure of training efficacy.

A final report including a summary of outcomes and impacts will be provided to the Arizona Pest Management Center to facilitate reporting outcomes at the regional and federal levels.

Budget

Item	Costs
Travel and lodging for Pesticide Applicator Training (includes van rental for team of presenters)	\$3,000
Reference Materials	\$300
Printing	\$200
Salary for project coordinator (Ed Northam) – 15 hours/week part-time for 16 weeks	\$7,000
Total	\$10,500

Individual meetings will additionally incur meeting room and meal/refreshments costs that will be managed through participant cost recovery fees and/or in-kind support from allied industries and/or organizations.