

2010 Arizona Pesticide Training Proposal

Project Title: **Pesticide Applicator Training/Testing for Arizona Weed Management Personnel: Year 2**

Project Leaders: **Kai Umeda**, Area Extension Agent, ANR/Turfgrass, University of Arizona Cooperative Extension, Maricopa County; **Jeff Schalau**, Associate Agent, ANR, University of Arizona Cooperative Extension, Yavapai County.

Team Members: **Al Fournier**, Program Manager, Integrated Pest Management, University of Arizona, Dept. of Entomology

Rob Grumbles, Agent, ANR, University of Arizona Cooperative Extension, Mohave Co.

Benita Litson, Director, Dine College, Land Grant Institute, Tsaile, AZ

Bill McCloskey, Weed Specialist, Plant Sciences Department, University of Arizona

Kim McReynolds, Area Agent, ANR/Range, Univ. of Arizona Cooperative Extension, Cochise Co.

Gerald Moore, Coordinating Extension Agent, University of Arizona Cooperative Extension, Navajo Nation

Jack Peterson, Associate Director, ESD, Arizona Dept. of Agriculture.

Jennifer Weber, Pesticide Safety Field Consultant, Arizona Dept. of Agriculture.

Project Coordinator: **Ed Northam**, University of Arizona Cooperative Extension, Maricopa Co.

Specific Activities and Audience: **1.** Deliver Core Training and Testing Workshops in Tsaile (2 days), Flagstaff (1 day), Phoenix (1 day), and Safford (2 days);

2. Deliver continuing education unit (CEU) workshops in Phoenix, St. George, Flagstaff, and Wilcox (1 day each site);

3. Collate educational materials and prepare weed management curriculum for CEU workshops;

4. Target audience will be private, commercial and governmental agricultural applicators from federal, tribal, state, county, municipal, and private ranchers/farmers.

Areas Involved: The Navajo Nation (Apache, Coconino & Navajo Counties), plus Graham, Maricopa, Mohave, Pima, Yavapai Counties, and into Utah.

Critical Issues, Audiences and Benefits/Impacts to be Addressed: In northern and eastern Arizona, there is an ongoing need for pesticide applicator training and testing for agricultural producers and various federal, state, county, tribal, and local agency personnel. From 2000 to 2007, Yavapai County Extension Agent, Jeff Schalau, presented ten agricultural pesticide applicator training sessions to a total of 145 participants in Boulder City, Chinle, Fredonia, Ganado, Prescott (3), Flagstaff, Casa Grande, and Mesa. Currently, client requests for individualized basic pesticide applicator training/testing sessions exceed local Cooperative Extension personnel's time commitments to deliver these services. Severe budget constraints have reduced funds for personnel, travel, AV equipment and maintenance, and printed educational materials, for delivering training and testing or CEU workshops for licensed applicators.

2009 Applicator Training Review and Impacts Delivered. A consortium involving University of Arizona Cooperative Extension, University of Arizona Pest Management

Center, and Arizona Department of Agriculture (ADA) personnel developed a pesticide applicator safety training curriculum adapted for the State of Arizona. Since the AZ Department of Agriculture has adopted the National Pesticide Applicator Certification Core Exam, the curriculum was based on the National Pesticide Applicator Certification Core Manual. Workshops and applicator license testing were offered between September and November 2009 at four locations in northern and central Arizona. Licensed applicators also attended the workshops to receive CEU credit to maintain current licenses.

Thirty-nine of 50 trainees (78%) passed the core exam after attending the six-hour training workshops and received their agricultural applicators license. Ten licensed applicators attended and received CEUs; seven people attended to learn about pesticide safety and did not take the exam. Thirteen people passed exams for additional commercial categories (11 forestry and 2 aquatic).

Additional Impacts Delivered. 1.) Enhanced knowledge level of participants for specific pesticide safety topics in accordance with concepts contained in the National Pesticide Applicator Certification Core Manual. 2.) Delivered up-to-date integrated pest management training and established an outreach link for transferring technology between University of Arizona researchers and end-users. 3.) Provided education to certified applicators that will contribute to reducing human health risks and minimizing potential adverse environmental effects that may result from misuse of pesticides. 4.) An initial pesticide applicator training consortium (consisting of Cooperative Extension Agents and Specialists, Arizona Department of Agriculture trainers, tribal educators, and private organization members) will continue growing into an effective state-level pesticide safety advocacy program.

Proposed CEU Training Subject Matter. Many species of economically or environmentally destructive foreign weeds are established across Arizona's rangelands, pastures, forests, wildland preserves, agricultural croplands and urban landscapes. Pest plants that are declared as noxious weeds include: spotted knapweed (*Centaurea biebersteinii*), Russian knapweed (*Acroptilon repens*), yellow starthistle (*Centaurea solstitialis*), buffelgrass (*Pennisetum ciliare*), and camelthorn (*Alhagi maurorum*). Additionally, Russian olive (*Elaeagnus angustifolia*) and tree-of-heaven (*Ailanthus altissima*) are examples of aggressively colonizing, imported trees. Identification, biology, distribution, non-chemical management methods, herbicide control, pesticide safety and IPM planning will be the topics addressed during CEU workshops.

This proposal requests funding to continue and enhance the delivery of pesticide safety education that was started in 2009 by agents, specialists, and collaborating agencies. This consolidated series of workshops will efficiently deliver pesticide safety core training/testing and CEU workshops in the fall of 2010 and winter/spring 2011.

Inputs: The consortium will organize educational materials and deliver four core training and testing workshops as described above. Three pesticide safety trainings with respect to invasive weeds management will be offered for CEUs as described above. The project coordinator will adapt, modify, and enhance educational materials for workshop delivery.

Expected Outcomes/Impacts: Short-term impacts will be the increased knowledge of each participant in subjects related to integrated approaches for non-native weed management 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. Once certified, these Pesticide Applicators can effectively, safely, and legally use herbicides to manage undesirable vegetation.

Medium-term impacts from CEU workshops will be decreased spread and/or reduction in populations of noxious weeds, fewer pesticide-related injuries and pesticide applicators continually improving their knowledge as a result 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 interference for native vegetation and crop plants by 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. Evaluations will also gather information on how participants plan to use the knowledge they gain through the program. The percentage of participants that pass each exam category will also be tracked through the Arizona Department of Agriculture and will provide a measure of training efficacy. Evaluation summaries in 2009 demonstrated definite increases in basic pesticide safety education for all participants. (see 2009 final report).

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

2010 – 2011 Budget

Item	Costs
Lodging/meals for Instructors	\$4,000
Transportation (vehicle rental and gas)	\$2500
Reference Materials (National Applicator Training manuals)	\$1000
Printing/copying	\$500
Salary for project coordinator (Ed Northam) – 15 hours/week part-time for 30 weeks	\$12,614
Total	\$20,614
<p>Additional Anticipated Support: -- AZDA contributed \$8900.00 of staff salary as a participating instructor and test administrator during the 2009 workshops; --SW Veg. Mgmt. Assoc. provided a \$400.00 meeting room for the Nov2009 San Francisco Grande Hotel workshop; -- Dine College, US Forest Service Expm. Station – Flagstaff and Mohave Co. provided meeting rooms at no cost to the project; -- Dine College also contributed advertising and lunch for students and instructors during the Tsaile workshop.</p>	\$10,000+