2007 IPM/PAT Report

Project Title: **Pesticide Applicator Training/Testing for Noxious/Invasive Weed Management in Northern Arizona**

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Training Overview

Three six-hour agricultural pesticide applicator training sessions were offered: June 13, 2007 in Flagstaff, AZ; June 14, 2007 in Fredonia, AZ; and August 29, 2007 in Tsaile, AZ. Following each training, the Arizona Department of Agriculture (ADA) Core and Forest Pest Exams were administered. A total of 30 participants attended the three training sessions (see table 1). Sixty three percent of the participants were Native Americans. Participants were affiliated with Tribal governments, Bureau of Indian Affairs, Natural Resource Conservation Districts, U.S. Forest Service. National Park Service, and Cooperative Extension. The Arizona Pesticide Applicator Training Manual and the Utah Department of Agriculture and Food Forest Pest Control Notes were used as texts for the course and participants were encouraged to read these materials before attending the training.

Table 1. Pesticide applicator training attendees by sex and ethnicity.

Flagstaff		Fredonia		Tsaile		
White	Native American	White	Native American	White	Native American	Total
3 male	8 male	2 male	0 male	2 male	10 male	25 male
4 female	0 female	0 female	0 female	0 female	1 female	5 female
7	8	2	0	2	11	30

Evaluation Methods

Evaluations were administered after the training at each site. Participants were asked to rate their knowledge before and after the workshop based on a six-step scale. Increases in knowledge were transformed into knowledge gained based on the number of steps each increased. This was done for six topic areas covered during the training: introduction and IPM, pesticide labeling, pesticide types and formulations, pesticide toxicity and exposure, pesticide laws and regulations, and forest pest control. Additional evaluation questions were: *What were the strengths of the training?; What could have been improved?;* and *Is there a safer pesticide application practice you will use because of information presented in this training? If so, what is it?* The Arizona Department of Agriculture also provided test scores for each exam.

Evaluation Results

Participants indicated that they had gained 2.85 points overall across locations and topic areas using the six step scale. Knowledge gained on individual topics is shown in Table 2. Knowledge gained was somewhat consistent for all subject areas and locations with the greatest increase being in the pesticide laws and regulations area. Comments were largely positive. Safer pesticide practices that will be used in the future included PPEs, mixing, washing hands, application rates, risks/hazards, and general safety. Passing test grades of 75% or greater were attained by 13 (43%) for the Core and 10 (33%) for the Forest Pest Exams.

Other Observations
While measurable knowledge was gained, many participants did not pass the ADA exams. This may in part be due to language barriers, differences in educational level, and cultural factors.

Future Training/Testing Planned
The Lake Mead National Recreation Area Salt Cedar Team has requested a training for January 2008. Tribal entities also expressed a need for continuing education on the Navajo and Hopi Reservations.

Table 2. Knowledge gained by participants based on a six-point scale by location.

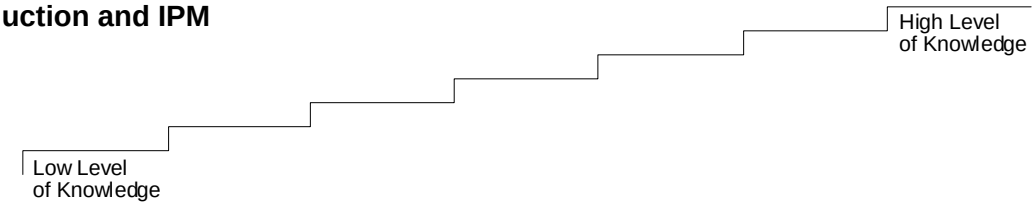
Topic	Flagstaff	Fredonia	Tsaile	Overall
Introduction and IPM	2.19	2.50	3.09	2.59
Pesticide Labeling	2.69	2.00	2.91	2.53
Pesticide Types and Formulations	2.44	3.00	2.82	2.75
Pesticide Toxicity and Exposure	2.06	3.50	3.18	2.91
Pesticide Laws and Regulations	2.63	4.00	3.18	3.27
Forest Pest Control	2.25	4.00	2.90	3.05
Overall	2.38	3.17	3.01	2.85

Arizona Agricultural Pesticide Applicator Training Evaluation

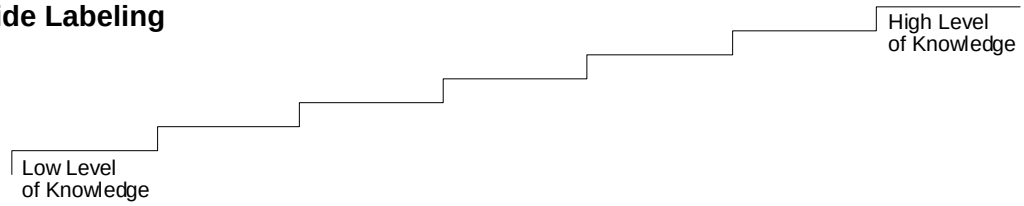
Flagstaff – June 13, 2007

1. Please think back to your knowledge before this workshop and what it is now at the end of the workshop. For each topic listed below, place a B at the point where your knowledge was at *before* the workshop and an A where your knowledge is now, *after* the workshop.

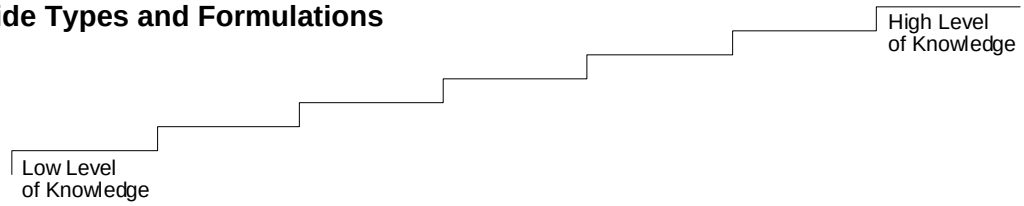
Introduction and IPM



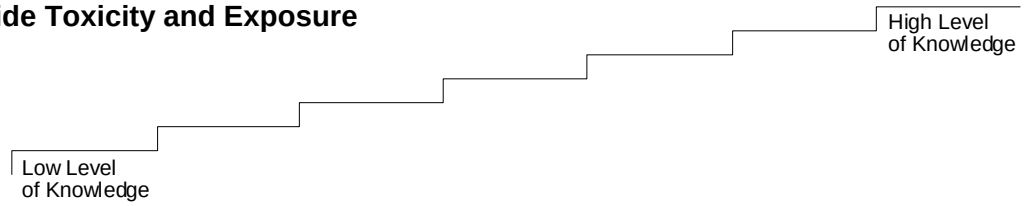
Pesticide Labeling



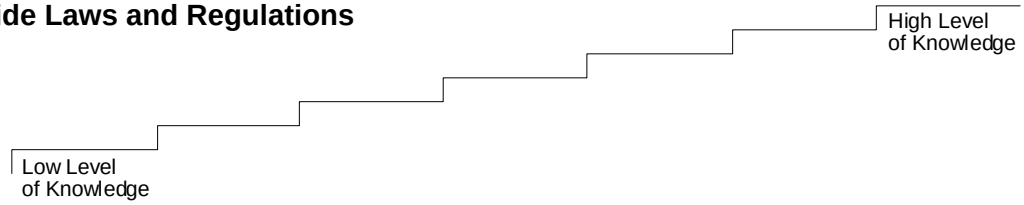
Pesticide Types and Formulations



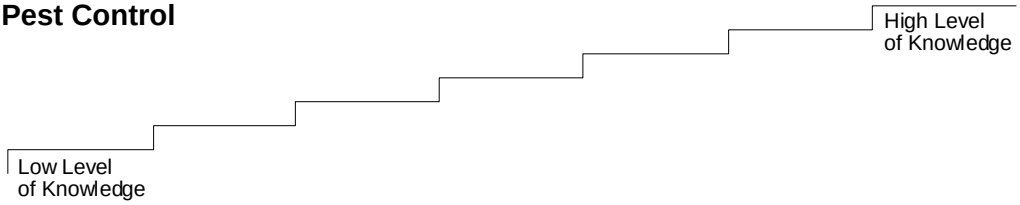
Pesticide Toxicity and Exposure



Pesticide Laws and Regulations



Forest Pest Control



2. What were the strengths of the training?

3. What could have been improved?

4. Is there a safer pesticide application practice you will use because of information presented in this training? If so, what is it?