OVERVIEW

The Oklahoma Department of Transportation (ODOT) uses an integrated roadside vegetation management (IRVM) program to provide cost-effective management for vegetation on roadside right-of-way. IRVM involves proper vegetation selection, installation and post-installation management. Generally post-installation vegetation management involves selective mowing and weed control.

Each year there is some turnover in ODOT roadside vegetation management field staff which necessitates an on-going pesticide applicator training and certification effort for new employees. Also, the vegetation management arena is ever changing. This fluidity in the vegetation management profession necessitates an on-going education effort to ODOT herbicide applicators. The ability to properly select and apply herbicides for right-of-way weed control is a technical skill that is not traditionally taught in primary or secondary school. The specialized training, which is not otherwise available to ODOT, was provided through this project.

RESULTS

This project developed the ODOT herbicide applicator training program that consists of initial pesticide applicator training schools followed by independent certification testing and on-going yearly continuing education (CEU) workshops. Participation in these workshops resulted in granting of CEU credit to ODOT participants. The ODOT participants also gained knowledge on various Integrated Pest Management (IPM) and Integrated Vegetation Management (IVM) products, topics and techniques. This increase or maintained operational knowledge of the participants should insure continued effective vegetation management skills.

Specifically, this effort delivered three pesticide applicator initial certification schools, which were conducted by Oklahoma State University (OSU) extension staff in fall of 2012, 2013 and mid-winter of 2014 to train a total of 231 ODOT participants. Most of the attendees at these workshops took the Core as well as Right of Way Certification exams administered by the Oklahoma Department of Agriculture, Food & Forestry (ODAFF). Seventy-nine percent of participants passed both the Core and Category 6 (Right-of-Way) examinations to become Oklahoma Certified Pesticide Applicators.

Fourteen Pesticide Applicator Continuing Education (CEU) Workshops were conducted by OSU extension staff across a total of eight ODOT Field Divisions in 2013 and 2014 to provide around 640 Certified Applicators with continuing education training. Records of participation in Oklahoma Department of Agriculture, Food and Forestry (ODAFF) approved CEU programs by ODOT personnel were furnished to ODAFF as well as the ODOT Field Divisions, the Maintenance Division Headquarters and the Planning and Research Division. Topics included in each of the three ODOT Certified Applicator Schools were:

- integrated pest management (IPM),
- IPM terminology,
state and federal rules and regulations,
- pest identification,
- mechanical and cultural pest management strategies,
- understanding pesticide labels and material safety data sheets (MSDS),
- personal protective equipment (PPE),
- pesticide selection,
- pesticide application techniques,
- spray system technologies,
- environmental protection,
- application recordkeeping,
- proper pesticide storage and disposal, and
- how to obtain pesticide applicator continuing education.

These topics were drawn from the three key training manuals that Division and/or Maintenance Engineers had acquired for their employees in advance of the training. The training included and was consistent with the presentation of information in the i) Applying Pesticides Correctly (Revised 2012), ii) the Category 6: Right-of-Way Study Guide (Revised 2009) and iii) the Oklahoma Pesticide Laws & Rules (Revised 2008). The Herbicide Applicator Continuing Education Workshops included the following sessions:

- Weighing and Measuring Herbicides Accurately
- Personal Protective Equipment and Herbicides
- Perspective® Herbicide Use Recommendations (new E-958)
- Updates on MSMA Roadside Use
- Updates on the Endangered Species Act and ODOT Herbicide Programs
- Introduction to the new OSU RVM Website
- Today’s Johnsongrass Control Options
- Broadleaf Weed Identification and Control Options
- Controlling Weeds with Wiper Applications
- Information Gathering Tools for a Successful Applicator
- Grass Type Weed Identification and Available Control Option
- EsplAnade™ 200 SC Herbicide Use Recommendations
- Managing the Development of Herbicide Resistant Weeds
- Proper Herbicide Mixing and Loading Techniques and Personal Protective Equipment

OSU personnel also provided supplemental information that would be useful to ODOT personnel as they assumed their role in ODOT vegetation management activities following initial certification as Oklahoma Pesticide Applicators.

Pesticide applicator testing was conducted by representatives of ODAFF. ODOT personnel first took the core exam; a 100 question multiple choice written exam. ODAFF representatives then scored the participants core exam. Personnel that passed the core exam were next allowed to take the 100 question multiple choice written category specific exam. The category specific exam of most interest to ODOT was the Category 6 (Right-of-Way) exam although in some years there are ODOT personnel that also take the Category 5 (Aquatic Weed Control) exam. Passing the core exam and category specific exam was required in order to become a Certified Pesticide Applicator in Oklahoma.

**POTENTIAL BENEFITS** The Pesticide Applicator Certification schools train participants to understand the basics of integrated pest management (IPM) as well as to become Certified Applicators by passing the designated tests. After gaining a fundamental understanding of IPM and becoming a Certified Applicator, the individual is usually ready to be given specific assignments by in-house ODOT mentors. Trainees are prepared to be successful at managing weeds on Oklahoma roadsides. The initial Pesticide Applicator Certification prepares the new Certified Applicators for participation in annual pesticide applicator continuing education (CEU Workshops) so that they can comply with ODOT policy as well as maintain their certification in Oklahoma.