OVERVIEW The Oklahoma Department of Transportation (ODOT) continues its use of an integrated roadside vegetation management (IRVM) program to provide cost-effective management for vegetation on roadside right-of-way. This effort involves proper vegetation selection, installation and post-installation management. After vegetation installment, management involves selective mowing and weed control and occasional re-establishment.

Because there is some turnover in ODOT roadside vegetation management field staff each year, an on-going pesticide applicator training and certification effort is necessary. This is due to changes in state and federal rules/regulations, new herbicide product development, new pesticide application equipment, product patent expiration and subsequent generic product offerings, changes in industry product marketing agreements, changes in products being awarded through the state competitive bid contract, and lastly, evolving weed problems. The dynamic nature of the vegetation management profession necessitates an on-going education effort to train ODOT herbicide applicators.

RESULTS This project developed the ODOT herbicide applicator training program, which consists of initial pesticide applicator training schools, independent certification testing, sprayer calibration workshops and on-going yearly continuing education sessions. Three Pesticide Applicator Certification Schools were presented to ODOT staff in FFY 2015. These schools provide timely initial training of ODOT personnel who want to become Oklahoma Certified Pesticide Applicators. FFY 2015 Schools were conducted on October 28-30 at the Caddo Kiowa Technology Center (Fort Cobb); November 18-19 at ODOT Division 8 Headquarters (Tulsa) with certification testing held on November 20 at Tulsa Community College; and December 9-11 at the Kiamichi Technology Center (McAlester). Participants included 23, 28, and 28, ODOT staff [79 total] in the three FFY2015 schools, respectively, compared to a total 128 and 103 ODOT participants in FFY2013 and FFY2014 respectively. Topics included 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 information in the three training manuals. OSU personnel also handed out
copies of 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.

The pesticide applicator testing was administered by representatives of the Oklahoma Department of Agriculture, Food and Forestry (ODAFF). Passing the core exam and category-specific exam is required to become a Certified Pesticide Applicator in Oklahoma. ODOT personnel first took the core exam. Personnel that passed the core exam were allowed to take the category-specific exam. The exam of most interest to ODOT was the Category 6 (Right-of-Way) exam, although some ODOT personnel also took the Category 5 (Aquatic Weed Control) exam. Of the 79 participants in the 3 certification schools, 76 people tested for certification and 52 passed both the core and Category 6 (Right-of-Way) exam to become Oklahoma Certified Pesticide Applicators in Category 6. Thus, the FFY2015 ODOT Certified Applicator School participants had an overall 68% pass rate for certification exams compared with an overall pass rate of 86% for participants in FFY2011, 93% in FFY2012, 79% in FFY2013 and 79% in FFY2014.

Fourteen Pesticide Applicator Continuing Education (CEU) Workshops were conducted by OSU extension staff across a total of eight ODOT Field Divisions in 2015 to provide 642 Certified Applicators with continuing education training, as shown in the following table. Records of participation in ODAFF approved CEU programs by ODOT personnel were furnished to ODAFF as well as the ODOT Field Divisions, the Maintenance Division Headquarters and the Materials and Research Division. Participation in CEU workshops resulted in granting of CEU credit to ODOT participants in the workshops. 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.

The agenda included the following topics:

- Equipment Selection and the Importance of Sprayer Equipment Care and Calibration,
- Combined Pesticide Laws and Rules Review and E-958 Updates,
- Broadleaf Weed Identification and Available Control Options,
- Grass Type Weed Identification and Available Control Options,
- How Treatments Can Fail and the Importance of Pre-Application Scouting and Post-Application Evaluation,
- Pesticide Effects on Pollinators and Endangered Species.

**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.