

# **2008 School IPM Outcome Program Report**

**School IPM Team:** Janet Hurley, Mike Merchant, and Don Rennie

## **Relevance**

There are currently 4.6 million students in 8,195 campuses and 1,031 school districts around the state, in the past year the student population rose by 100K students, merged two independent districts and closed over 600 campuses.

In 1991, the Texas Legislature passed a law requiring that pests in and around school buildings be managed using integrated pest management. This was one of the first laws in the U.S. requiring schools to implement integrated pest management (IPM) as part of their maintenance programs. In 2007, the Legislature updated the laws defining regulatory guidelines more definitively. Texas is one of the few states that mandate all IPM Coordinators attend a six-hour training course on the basics of IPM principles and specific state regulations. Starting in 2009 coordinators will be required to receive six continuing education credits every three years.

Texas AgriLife Extension is the only state agency that conducts the required training. IPM Coordinators are taught the defining principles of IPM, proper inspection methods, pest identification, use of non-chemical control tactics, and basic pesticide science. In addition, coordinators must become familiar with Texas school IPM regulations.

Potential benefits of school IPM programs include improved indoor air quality, reduction of pesticide exposures among students and staff, and improved pest control. The school IPM program team provides individual assistance with developing and improving the school IPM program when requested.

## **Response**

The school IPM team offered four two-day regional workshops, plus two other regional workshops hosted by the Extension Program Specialist in the Valley and El Paso. Starting in 2008 a hands-on exercise in which coordinators are provided an empty insecticide container and asked to provide the product trade name, active ingredient, and signal word was incorporated into our state required training (Day 1). The IPM Coordinators are asked to determine the category, based on Texas regulations, which the product falls into – green, yellow or red. This exercise serves multiple purposes: 1) the training is a hands-on training; 2) the training provides a quick assessment of coordinators' grasp of the training content and their ability to apply it in a practical situation; 3) the training assists coordinators in completing the needed paperwork for documenting pesticide use as required under the law.

For 2008, the school IPM team utilized the expertise and knowledge of Dr. James McAfee, AgriLife Extension turfgrass specialist. Dr. McAfee discussed turfgrass maintenance, specific diseases of turfgrass and weed maintenance. Dr. Merchant also

discussed insects associated with turf and landscapes, plus a very informational session on mosquito management for schools.

167 IPM Coordinators, School Maintenance Facility Directors, Pest Management Professionals were trained on the first day of IPM Coordinator training. The Houston, Dallas, San Antonio, and El Paso ISD were represented. Of the 160 school districts that attended our training in 2008, 1.48 million school children attend their schools. Coordinators learn how to prevent pests from entering their buildings so that the children will be safe.

Other educational methods offered by the school IPM team:

- Five issues of the *School Pest News*. Readership increased by 15% in 2008. The newsletter was expanded to the Southern Region EIPM grant so readership was expanded by 500.
- Maintaining an up to date website <http://schoolipm.tamu.edu>
- Attending state and regional conferences speaking about school IPM. The readership of the School Pest News continues to increase by 15% each year.

## Results

In an attempt to determine the programmatic impact of the School IPM Coordinator training, a retrospective post evaluation was provided at the end of the program for each day. A total of 139 participants responded to the survey on day one and 97 participants provided responses to the survey on day two. All results are below.

**Day 1 results.** The first section of results for day 1 asked participants for their perception of knowledge change based on the program. The results are in table 1.

**Table 1. Ranked mean value<sup>1</sup> of participants' perception of their level of knowledge as a result of the School IPM Program.**

Perceptual Knowledge Based Change	BEFORE - Mean	S.D.	AFTER - Mean	S.D.	Change <sup>2</sup>
I understand my role as IPM Coordinator.	3.06	1.36	4.58	.70	1.52
I understand the principles of IPM practices.	2.96	1.22	4.39	.65	1.43
I understand the paperwork requirements for pesticide applications for yellow and red list products.	2.66	1.36	4.37	.69	1.71
I feel comfortable that I have the skills I need to implement an IPM program within my district.	3.01	1.35	4.42	.77	1.41
I understand when you must notify building occupants about pesticide applications.	3.31	1.36	4.60	.69	1.29

<sup>1</sup>Likert scale was defined as: 1 = not at all, 2 = slightly, 3 = Somewhat, 4 = Mostly, and 5 = Completely.

<sup>2</sup>Mean change was determined by the following formula: After mean value – Before mean Value

Overall participant’s level of knowledge was increased in all areas of instruction.

The next set of questions asked items related to usefulness and satisfaction of the information provided for each topic. The results are as follows:

- **131 (94.2%)** said the information on Texas Laws and Regulations for School IPM was “very useful” or “highly useful.”
- **134 (96.4%)** said the information on IPM Principles and tactics was “very useful” or “highly useful.”
- **125 (91.2%)** said the information on understanding the difference between green, yellow, and red producers was “very useful” or “highly useful.”
- **126 (91.3%)** said the information presented on understanding pesticide labels was “very useful” or “highly useful.”

It is also worth noting that **131 (97%)** participants were “mostly” or completely satisfied with the program. Of the 139 respondents 42 of them were first time attendees to a school IPM Coordinator training.

**Day 2 results.** The first section of results for day 2 asked participants for their perception of knowledge change based on the program. The results are in table 2.

**Table 2. Ranked mean value<sup>1</sup> of participants perception of their level of knowledge as a result of the School IPM Program.**

Perceptual Knowledge Based Change	BEFORE - Mean	S.D.	AFTER - Mean	S.D.	Change <sup>2</sup>
I understand the IPM principles for healthy turfgrass growth.	2.79	1.26	4.38	.68	1.59
I can explain why it is important to select a herbicide that is appropriate for the types of weeds I have.	2.94	1.28	4.34	..70	1.40
I understand how the different types of diseases area associated with mosquitoes.	2.92	1.17	4.48	.66	1.56
I understand the treatment options for mosquito control under the school IPM program.	2.83	1.22	4.52	.62	1.69
I can identify the most common types of insect pests of turfgrass.	2.60	1.29	4.20	.80	1.60

<sup>1</sup>Likert scale was defined as: 1 = not at all, 2 = slightly, 3 = Somewhat, 4 = Mostly, and 5 = Completely.

<sup>2</sup>Mean change was determined by the following formula: After mean value – Before mean Value

The next set of questions asked items related to usefulness and satisfaction of the information provided for each topic. The results are as follows:

- **92 (93.8%)** said the information presented on Using IPM Principles for effective weed control was “very useful” or “highly useful.”
- **89 (91.8%)** said the information Using Plant Selection and control practices to reduce turfgrass disease activity was “very useful” or “highly useful.”
- **87 (92.6%)** said the information presented **Understanding Mosquitoes & Mosquito Control Options** was “very useful” or “highly useful.”
- **91 (94.8.%)** said the information on **Advances in Turfgrass Pest Management** was “very useful” or “highly useful.”

It is also worth noting that **84 (94%)** participants were “mostly” or completely satisfied with the program.

In 2008, the <http://schoolipm.tamu.edu> website received the following: **Successful requests for pages:** 338,716; **Distinct files requested:** 17,731; **Distinct hosts served:** 70,632; **Data transferred:** 14.14 gigabytes **Average data transferred per day:** 39.56 megabytes

In 2008 *School Pest News* was sent to average of 1,075 recipients this includes Texas IPM Coordinators, School Maintenance Directors, Pest Management Professionals, and other interested stakeholders throughout the country.

## 2008 School IPM Program Summary

### Background

Texas ranks as the second largest public school system in the country with over 4.6 million students in 8,195 campuses and 1,031 school districts around the state.

Since 1995, all Texas public schools are required by state law to conduct all indoor and outdoor pest control activities according to integrated pest management (IPM) principles. AgriLife Extension received grants to established the Southwest Technical Resource Center for IPM in Schools offers personal assistance to any school district in Texas and provides assistance to IPM Coordinators needing guidance about their program and specific pest problems.

### The Issue

- ✦ 6 hours of training on Structural Pest Control Laws and Regulations on school IPM is a minimum requirement and IPM Coordinators request more information
- ✦ IPM Coordinators can be a general maintenance worker, the facilities director, teacher, the superintendent, or anyone else.
- ✦ Children because of their size, needs additional protection from school leaders to exposure from pests and pesticides
  - More than 12.8 million school days are lost due to asthma
  - Exposure to pests and pesticides can both cause asthma and trigger attacks.
- ✦ “It’s just pest control” – Facility Directors are not familiar with IPM practices and how these practices can assist in overall building integrity.
- ✦ Turnover is relatively high in this area, as many of the original IPM Coordinators are retiring or moving on.

### The Educational Program

- ✦ The Texas School IPM Team offers four regional two-day IPM Coordinator trainings
- ✦ *An Introduction to IPM in Schools: A Manual for Facilities Maintenance Professionals* has been developed and is used with every training
- ✦ A newsletter – *School Pest News* is produced several times a year to disseminate information to school personnel throughout the year.
- ✦ An informational website – <http://schoolipm.tamu.edu> was developed to assist schools with a variety of forms and information.
- ✦ Offer on-site audits of school IPM programs and offer assistance to Coordinators on how to enhance their program.

### Results of the Program -

- ✦ 4 regional trainings were offered by the school IPM team, with 2 additional workshops
- ✦ 313 individuals attended either one or both days of training
- ✦ 167 attendees were affiliated with public schools, which resulted in affecting 1.48 million schoolchildren.
- ✦ 12 school site audits with 3 follow ups and an additional 3 school districts requesting in-service training for school employees
- ✦ 5 issues of *School Pest News* were sent out to approximately 1,075 individuals.
- ✦ The school IPM website averages 2,100 hits a month, with 1.4 GB of transferable data.
- ✦ In addition to Extension training, Specialist Hurley conducted IPM training for Texas Association of School Boards Onsite Division resulting in 113 people trained.
- ✦ Extension Program Specialist, J. Hurley gave 15 CEU presentations to the pest control industry

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resulting in 1,974 individuals trained.

- ✦ Four national/regional presentations on school IPM

### Success Stories

- ✦ Carrollton-Farmers Branch ISD and Plano ISD were awarded the IPM Star Certification by the IPM Institute of North America the first schools in Texas to receive this national recognition.
- ✦ *An Introduction to IPM in Schools: A Manual for Facilities Maintenance Professionals* is used across the nation

appreciated more than you could ever know. God bless you all!" Nicky Johnson, IPM Coordinator, Hudson ISD, Lufkin, TX

- ✦ "I want so much for our IPM program to be recognized. I am not sure everyone still recognizes the importance of a successful IPM program. I still feel resistance, but am determined to be successful. Thank you for your help." Dixie Mathews, IPM Coordinator, Customer Service Supervisor, Arlington ISD.

### Comments from clientele

- ✦ "You have opened up dialogue and provided much needed information to school districts. This is a much needed service." Chuck Edwards, Director M&O, Sherman ISD
- ✦ "I've enjoyed reading the newsletter because some of the articles relate to every day issues here at HISD. We pride ourselves on being proactive and the newsletter is a tool to insure we meet that objective". Terrance D. Ransfer, Executive General Manager, Facilities Management & Operations – Houston ISD
- ✦ "I want to go on record to state that the Center has been very helpful to our IPM program. Being able to share information with other districts, having an information source readily available (I would like to add, they have been most knowledgeable), and having a support group at my finger tips has been invaluable. My hat goes off to Janet and all of the staff at the Center. It is comforting to know that they are here to help, and I hope other districts throughout would utilize this great resource." R. Kelly Murphy, Custodial/Grounds Supervisor/IPM Coordinator, Calallen ISD, Corpus Christi, TX
- ✦ "Thank you for all help and the hard work that you do for us. It is

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