

# 2010 School IPM Outcome Program Report

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## Relevance

The Texas public school system consists of 1,237 school districts and charters, 8,435 campuses and over 4.8 (4,824,778) million students. Of the 1,235 total numbers of districts, 1,030 are considered public school districts and are recognized by the Texas Department of Agriculture to adhere to the Texas school IPM rules. Texas has the second largest student base in the country, with more school systems currently than California.

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. The Texas Department of Agriculture released the new school IPM rules on July 7, 2009 requiring that all IPM Coordinators receive an additional six hours of school IPM training starting Sept. 1, 2009.

In FY 2010 the Texas Department of Agriculture implemented a new inspection process for schools and all end users. The TDA inspector uses a computer program to ask 63 questions based on the School IPM rules. The IPM coordinator for the school district should be able to answer yes to all of them, or they will be considered in non-compliance. During the 79<sup>th</sup> Legislative Session one of the rule revisions was to standardize school IPM inspections so that all schools would know what to expect and would be judged fairly. Both the rules and the inspections are in synch, in that anyone who can follow the rules and understands the principles of IPM can pass a TDA inspection. Unfortunately, many of the school IPM coordinators have little experience understanding the school IPM rules.

Texas AgriLife Extension is the only state agency that conducts the required training. Our Agency works closely with TDA to understand the rules, the inspection process and the educational requirements of IPM Coordinators. At AgriLife Extension classes, 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 and a large portion of the training covers materials needed to pass a TDA inspection.

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. Many school districts that attend our training request individual site visits afterwards to help them prepare for a TDA inspection.

## Response

The school IPM team offered six two-day regional workshops and 4 individual one-day workshops around the state. The Day 1 school IPM coordinator training has become standardized which allows the program to maintain an overall flow that allows the coordinator to learn by seeing, hearing, and saying

what they hear. The training covers a variety of material regarding the coordinator's role in the IPM program. The IPM coordinator must be able to identify pesticides so that they can keep up with records for use, justification purposes, posting and notifications to teachers and parents. In addition, the new rule requirements mandate that IPM coordinators oversee an active IPM monitoring program, understand the basics of IPM principles so that they can keep up on facility inspections, oversee that licensed applicators abide by the IPM policy and written program guidelines.

Two hundred twenty- nine IPM Coordinators, School Maintenance Facility Directors, Pest Management Professionals were trained at the Day 1 school IPM Coordinator training. One hundred fifty- five school districts attended our training in 2010. Some 983,817 students attend school in those districts. Coordinators learned how to prevent all types of pests from entering their buildings so that the children will be safe. School IPM impacts health and safety in many ways. It aids in keeping students and teachers safe from many threats like asthma and allergen triggers; it can even help prevent the flu.

Additional educational methods that are offered by the school IPM team:

- School Pest News newsletter - four major issues of *School Pest News* were written and distributed. Current readership is 1,416 individuals, with 823 being IPM coordinators
- The School IPM website, <http://schoolipm.tamu.edu>, was updated and maintained.
  - The website received the following for 2010: **Successful requests for pages:** 462,150; **Distinct files requested:** 4,076; **Distinct hosts served:** 38,149; **Data transferred:** 22.87 gigabytes **Average data transferred per day:** 64.73 megabytes
  - *Starting in Nov 2010 the school IPM website started going through upgrade modification, making some files unusable. In addition, the current server will also not allow for newsletter upload or other current information. So web numbers are slightly down from users not being able to access the website for all information.*
- Fifteen school site visits were performed; four were a result of a failed TDA inspection.
- School IPM training notebooks (3-ring binders with information about the TDA law and rules, necessary recordkeeping forms, written management plans, IPM program guidelines, inspection forms, and other educational handouts)

## 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. This survey was developed in conjunction with Organizational Development to help collect additional data. These new evaluations are now designed to collect customer satisfaction along with knowledge, skills, intent to adopt and behavioral change questions. All results are below.

### Number of Participants: 190

- Percentages based on 176 respondents to the survey (Response rate = 94%).
- 44% were first time attendees to an Extension program

### Overall:

- 97% of respondents were mostly or completely satisfied with the activity.

### Anticipated Changes & Economic Impact:

- 46.8% of respondents anticipate benefiting economically as a direct result of what they learned from this Extension activity. (*Results were from only 3 trainings*)

**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	AFTER - Mean	Change <sup>2</sup>	% of respondents who increased their understanding of
I understand the principles of IPM practices.	2.47	3.64	+1.17	77%
I understand the paperwork requirements for pesticide applications.	2.34	3.51	+1.17	80%
I understand when you must notify building occupants.	2.76	3.75	+0.99	59%
Skills needed to implement an IPM program.	2.26	3.47	+1.21	77%
I understand my role as IPM coordinator.	2.42	3.61	+1.19	70%
I understand the difference between sampling and monitoring.	2.34	3.56	+1.22	75%
I understand when I must notify parents each school year.	2.58	3.76	+1.18	63%
I understand the parts of a pesticide label.	2.58	3.57	+0.99	64%
Ability to identify the signal word on the pesticide label.	2.67	3.75	+1.08	65%
Ability to identify the active ingredient on the pesticide label.	2.77	3.65	+0.88	57%

<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

**Plans to Adopt: (% of respondents who definitely will adopt the following practices)**

- (63%) – Updating my IPM policy statement.
- (72%) – Will organize my IPM records according to new rules.
- (67%) – Will ensure that I have a current parent notification statement.
- (60%) – Will post outdoor notification signs for each application.
- (56%) – Will develop written thresholds for key pests in my IPM notebook.

- (58%) – Will update copies of my labels and MSDS book.
- (61%) – Will inspect buildings on an annual basis for IPM needs
- (65%) – Will give preference to pesticides with low risk.
- (52%) – Will only apply pesticides when pests are present.

**Already Adopted: (% of respondents who have adopted the following practices)**

- (17%) – Updating my IPM policy statement.
- (13%) – Will organize my IPM records according to new rules.
- (20%) – Will ensure that I have a current parent notification statement.
- (29%) – Will post outdoor notification signs for each application.
- (20%) – Will develop written thresholds for key pests in my IPM notebook.
- (26%) – Will update copies of my labels and MSDS book.
- (20%) – Will inspect buildings on an annual basis for IPM needs
- (24%) – Will give preference to pesticides with low risk.
- (30%) – Will only apply pesticides when pests are present.  
(20% did not report or replied not applicable)

**Discussion**

AgriLife Extension's school IPM Coordinator training has become standardized in that our results data has stayed consistent over the past five years. Our participants have an overall increase in knowledge in all areas that are measured by our retrospective post evaluation survey. Most notably is the increase in knowledge on understanding the difference between sampling and monitoring for the district's IPM program. One of the biggest behavior changes is to have the IPM coordinator and pest management professional monitor for pests and make pesticide applications based on achieved pest thresholds. Our results indicate that class participants understand this requirement by 75% with an average increase in knowledge before and after the training by 66%.

One of the major requirements of the new rules is the adoption of thresholds for most pests and inspecting facilities. 56% of the participants indicated that they would adopt new thresholds, while, 20% of the participants have already adopted this behavior. This is a gain from 2009 where only 50% of the participants indicated they would adopt. This could also be in relation to the increase number of new participants who attended our training.

Another indication that TDA inspections are having an impact on school IPM coordinators is the direct result of new school districts attending our trainings. We had an increase in new schools attending our training by 5%, four of which attended our training in the last quarter of the year. In addition to attending our training, Ms. Hurley performed school site audits. Between the training and site audits, Huckaby and Millsaps ISD have stated that their re-inspections went well and they passed without further non-compliance issues (email and phone response).