

History of School IPM Program in Texas

The Texas Model: A historical account of how school IPM is done in Texas.

Background

In 1991, the Texas Legislature passed a law mandating that all public schools adopt integrated pest management (IPM). This was one of the first state mandated programs requiring schools to adopt IPM. This requirement was brought about by a misapplication of pesticides for the treatment of head lice on a school campus. One of the parents became a Texas State Representative and during the 72nd Legislative Session, Representative Hershi introduced HB 2751 outlining that public schools use integrated pest management principals so no further incidences of pesticide misapplications. During this same legislative session, the Texas Structural Pest Control Board (SPCB) was undergoing Sunset review. HB 2751 was folded into the bill to keep SPCB alive and school IPM was adopted into law.

Once the mandate was adopted the Structural Board sought help and assistance from the Texas Agricultural Extension Service. This new mandate required that a committee be formed through the Structural Pest Control Board to develop regulations guiding schools to implement IPM. The chair of this committee was Dr. Michael Merchant, Assistant Professor, Texas Agricultural Extension Service. While Dr. Merchant was working with SPCB to develop the rules, Dr. Don Renchie, Assistant Professor, Texas Agricultural Extension Service was working with SPCB and leaders from the Texas Association of School Boards (TASB) and Texas Association of School Administrators (TASA) to develop a comprehensive training for school employees designated as IPM Coordinators.

The law, which took effect in 1995, required all Texas public schools to use less toxic pesticides and to require licensing of all pesticide applicators on school district property. In addition, the law required all schools in Texas to adopt a school board-approved integrated pest management policy and to appoint and train a school district IPM coordinator. Furthermore, pesticides would be categorized by Green, Yellow and Red – the original intent of the law was to have the Board develop a list of allowable products; however, the committee felt that would be too narrow of a requirement and burdensome as someone would have to maintain this list. The training requirements for IPM coordinators was similar to other pesticide safety course requirements. IPM Coordinators had to become familiar with the laws and rules associated with the school IPM program, but also the requirements for persons who are required to secure a license to apply pesticides. This training course also had to make individuals aware of pesticide safety and what the difference between the green, yellow and red list categories.

Extension's approach to these new requirements was to enlist the PSEP coordinator and the urban entomologist to work together to develop a training program and training materials, as the mandate would go into effect in 1995. Drs. Renchie and Merchant developed the first school IPM manual for Texas, this manual was based on the U.S. Environmental Protection Agencies school IPM book that they developed in 1993. Dr. Merchant with the aid of an EPA grant developed an award winning video series that aimed at educating school employees about integrated pest management. Drs. Renchie and Merchant offered regional trainings, as well as offered support to the various school organizations that assist schools with facility needs. The Texas Association of School Boards (TASB), the Texas Association of School Administrators (TASA), and the Texas Association of School Business Officials (TASBO) all offered

ways to assist schools with IPM. TASB oversees policy adoption and offers regional trainings on IPM, as well as other environmental issues. TASA had a person dedicated to IPM training, which use to work with the regional educational service centers to offer IPM trainings all across the state of Texas. At the same time, TASBO assisted facility directors and maintenance supervisors through peer education to develop best management practices for IPM.

While Texas was developing their school IPM program, the U.S. EPA was also trying to get states and the federal government to adopt rules governing the adoption of IPM as well. During the 1990s, several other states adopted school IPM rules, some were mandated, while others were a voluntary requirement. However, Texas was the leader in that they not only mandated the rule, but also enforced the rule. EPA through various outlets was funding IPM projects throughout the country. In 2000, Texas A&M University along with Oklahoma State University and New Mexico State University submitted a proposal to EPA to house one of two regional technical resource centers for school IPM. This proposal would allow Texas to expand their school IPM program by hiring one person to develop to the education and outreach needs for all 1,044 public schools in the state.

At the same time that this grant was funded, the Structural Pest Control Board hired a new Executive Director who was charged with changing the enforcement actions of the agency. The Board was required under the Legislative Budget Board to inspect 20% of the Texas public schools for the school IPM rules each year. However, for FY 2002 this requirement was changed to inspect 20% of the schools each quarter. This enforcement action coupled with the hiring of the program coordinator for the Southwest Technical Resource Center for IPM Schools resulted in a better school IPM program offered by Texas Cooperative Extension.

Program Development

In, 2001 a joint venture between EPA, Extension and State Regulatory (SLA) embarked upon an establishment of statewide guidelines to assist schools with their needs to implement school IPM. In doing this, Texas has learned how states can implement a very large program with very little resources. When Texas became the leader of school IPM adoption, they also put some emphasis on total adoption. No funds were associated with this program, only grant funds supported this mandate and the little involvement from schools and their community was minimal, as people often believe IPM is just pest management. With the aid of EPA and the state SLA, Texas AgriLife Extension committed themselves to taking on the task of educating school IPM Coordinators through any means possible. The opening of the Southwest Technical Resource Center for IPM in Schools and Child Care Centers (SWTRC) was a unique opportunity to focus resources on one group, using three people and their staff to implement a very large program. Geographically, Texas is a large state to deliver regional training materials to. Thankfully, the state has good resources to deliver materials to schools via regional education service centers. Professional groups like TASB, TASBO, and TASA also offer ways to deliver information.

The most instrumental investment Texas AgriLife Extension Service did for the schools of Texas was to hire a dedicated person to oversee the SWTRC. The hiring of Janet Hurley to complete the team of Dr. Mike Merchant and Dr. Don Renchie was the opening of a new way of doing school IPM. Having a sole person totally dedicated to focusing on the needs and the requests of Texas school IPM coordinators is a unique situation. Texas is the only state with more total focus on school IPM, than any other state. Texas

has people within in the State Lead Agency, Extension, Educational (TASB, TEA) agencies who sole purpose is to help assist with school IPM. For the SLA, TASB, and Texas Education Agency (TEA) these individuals help oversee state compliance requirements, plus educate and disseminate information.

The seed grant used to establish the resource center required that the Center develop a website, produce a newsletter, report on the regional trainings, develop a recognition program, and assist the needs of schools who wanted to implement IPM. Understanding the needs of any group is difficult. In public health, one is taught to listen to the audience. In the beginning, the program coordinator contacted schools to interview them about their program. Site assessments became a learning tool as to how the Center could meet the needs of IPM coordinators. The Center used web-based polls to obtain data about common needs about training locations, web based materials, recognition programs and what to place on the training agendas. In the meantime, the Center also worked with regulatory and TASB to establish unified program guidelines to educate coordinators. The original school IPM Law was not well written; as a result, the rules promulgating them were hard to interpret.

During the 2002 inspections 832 independent schools were inspected – a large percent were found in noncompliance of the school IPM rules. This non-compliance was mostly found to lack of education and dissemination of information. There was no real database of IPM coordinators and the Center had to work hard to obtain the list we use today. Noncompliance issues were a direct result in lack of education on the part of the IPM coordinator. The original mandate required that the IPM coordinator be trained once after they were appointed. In 2002, that meant that the coordinator might have only been trained once. If IPM is about education then education should be more frequent than once.

In 2002, AgriLife Extension changed how they offered IPM Coordinator training. With the addition of Hurley to the school IPM team, Extension was able to offer two-day IPM coordinator trainings on a regional basis. By adding the second day, coordinators who had been through the first day, did not have to repeat the day, but could attend a day for educational purposes. Continuing education credits for SPCB were offered for those who were also licensed with the board as a non-commercial applicator. According to state requirements, the first day of training must cover the law and school IPM rules, this includes sections on posting, notification and becoming a licensed applicator. The school IPM section of the rules covers, the responsibilities of the IPM coordinator, the certified applicator, the district's role and what the IPM program should look like. In addition to the rules section, the instructor must also cover general IPM principals like inspection, thresholds, multiple control practices, and other IPM tactics. AgriLife Extension also includes a section on pesticide safety that helps cover basic pesticide safety practices as well as instruction on the Green, Yellow and Red category principle Texas adopted into the rules.

The two-day training program has evolved into a program that allows AgriLife Extension to self-support the efforts of the program. Extension agencies across the country often don't charge enough for the educational programs they offer. AgriLife Extension with the encouragement of SPCS, TASB, TASBO, and attendees charges \$135 per person for one-day or \$210 for two-days of training. This figure has held constant for the past four years and will remain the same for the next few years.

Money is not the sole purpose of the IPM coordinator trainings. Disseminating information to IPM coordinators is ongoing; schools are in constant need of information to help them overcome one problem or another. As long as there are insects, vertebrates, weeds, and public health problems, there will always

been a need for information. The trainings allow the school IPM team of Hurley, Merchant, and Renchie to bring in experts to assist with additional educational programming. Dr. James McAfee, Turfgrass Specialist, Texas AgriLife Extension has assisted the program over the years with educational programs for athletic and playing fields.

The training program has become the standard for others to measure against. IPM Coordinators attend AgriLife Extension trainings for the high level of educational knowledge given, rather than to just fulfill a state mandate. In 2005, a retrospective post evaluation was developed and adopted by the school IPM team, to give to the class participants, after each training. Over the past four years the evaluation numbers have been consistent. Students who attend an AgriLife Extension training gain a 52% of knowledge and 62% skills adopted.

The regional trainings also rely heavily on the cooperation of Texas schools that allow our team to come in and “take-over” for two days of training. Our agreement with the schools is that they give us a room large enough to set up classroom style for 30 to 50 people and tour a campus kitchen and perimeter at least on day one. In return for the use of the school facilities, the district can send up to three people free to the training.

As stated above we utilize a classroom type instruction that allows us to educate through lectures. However, for IPM education to be successful we also offer an exercise whereby students can actually see the practices discussed during lecture. Our IPM inspection covers what to look for inside school kitchens, as well as what to look for at the perimeter location. This portion of the class involves about 1 hour of total time walking around the campus pointing out potential pest problems and/or finding pest problems. The walk-throughs are the most spontaneous portion of the day; we never know what we will see. In the cases of some districts, we find very high-level IPM programs; in others, we find areas for improvement. In some cases, we find the random invasion of a pest species as is typical in the school setting. What we find is always used as a teaching method. The case for the school walk-thru is to help the coordinator learn why school building inspections are so important and how by maintaining building integrity helps the school stay pest free. This concept is the hardest for school personnel to adopt; most people do not understand the total concept of indoor IPM principals. The majority of IPM practices for indoor pests relies heavily on human behavior to report findings, to clean up after oneself and work with others to ensure that pests are not introduced to campuses via backpacks, boxes and a variety of other ways.

In addition to the trainings, there is a website devoted to school IPM (<http://schoolipm.tamu.edu>) which has evolved over the years to meet the needs of coordinators. Too often, our team hears at these trainings that the coordinator needs additional materials to help them do their job. Some of the materials have little to do with IPM. Our website offers a listing of upcoming trainings, how to purchase the ABCs of IPM DVD series (converted from the original videos), how to become a licensed applicator, issues of the newsletter, where to find more answers, and the all important forms page. The forms page includes the state required forms, but also documents that can be useful to coordinators. Recently the state of Texas updated their school IPM law and rules to require schools to adopt thresholds and management plans to trigger treatments. Our forms section has met this need by working with the Southern Region School IPM Workgroup to develop management plans for the top ten pests for schools.

Our newsletter is designed for coordinators and interested stakeholders. Unlike the Pest Presses adopted using the Monroe Model, the *School Pest News* is a quarterly newsletter packed with a variety of information. The newsletter can disseminate information about an emerging pest, explain specific IPM principles, detail new rule adoptions, prepare coordinators for inspections, or help the coordinator get educational information out to their staff. The back to school issue is generally geared toward a pest issue that generally happens in the early fall. In years past this has been from head lice to American cockroaches. Articles written to distribute to Agricultural teachers is something that will be forthcoming from the Center.

Like the Monroe Model, the Texas Model offers schools to work with AgriLife Extension on a one-to-one basis. During the inspections of 2002, the program coordinator traveled to over 100 Texas schools helping them with the program implementation. To date the Resource Center has worked with over 250 schools on their IPM program adoption. Site visits offer a chance for the school to ask specific questions about their school district and the problems they are having. Initially these site visits grew out of the Structural inspections, but now they offer a chance for the Center to research new IPM methods or offer support to a specific pest problem. Since 2005, AgriLife Extension has been working on a cost-calculator program to assist IPM coordinators with the determination of IPM costs. The need for this program was grown out the need for Texas IPM Coordinators to fulfill the state mandate that they must maintain a prioritized list of structural and landscape improvements.

IPM Specialists teach about the importance of conducting an IPM inspection and we understand that maintaining a buildings integrity will help keep pests away. Unfortunately, most of the individuals who are appointed as IPM coordinators don't understand this principal. The general populous believes that pest management is about killing bugs. Instead, pest management is people management to coin a phrase used by Marc Lame. However, this is a true fact. In our IPM trainings we train that IPM is everyone's responsibility. The site visits often reinforce this mantra by engaging the coordinator with other departments, be it food service, custodial, or teachers to assist with the IPM program. Too often, the district has appointed one person to manage a small community and this person has several other job responsibilities. The site visits offer the program coordinator a chance to assess the district's strengths and weaknesses and offer solutions to problems. The majority of problems often occur with paperwork management, next is the management of people – how to engage others to help the coordinator with their program.

The Texas Model would not be successful if it were not for the support and cooperation of the Texas Department of Agriculture, Texas Association of School Boards, and Texas Association of School Business Officials. In 2007, the Structural Pest Control Board was abolished under the Sunset process and the school IPM law was updated to reflect stronger wording and requirements. The Texas Department of Agriculture formed the Structural Pest Control Service Division; this division oversees all aspects of structural pest control, including the school IPM rules. The changes to the school IPM law required the Agency to adopt new rules for school IPM. This process brought Extension, TDA and TASB together for the betterment of the schools of Texas. This rule process allowed all parties to meet and discuss what could be regulated and what requirements schools must meet to fulfill the states requirement to keep children safe from pests and pesticides. The partnership bond that was formed between Extension and the other agencies that serve schools allowed everyone to come to one table and work out these

negotiations. This bond between Extension and other school groups was brought about for the need to reach as many IPM coordinators as possible.

TASB offers regional three-day trainings focusing on Asbestos, IPM, and Indoor Air Quality/Environmental Issues. Extension and TASB have been working together for several years to ensure that IPM training is the same standard as Extension's. TASB offers classroom content, but does not offer the classroom walk-thru at this time. TASBO offers professional conferences for school maintenance and operations directors. Extension is often requested to participate in these annual conferences as a presenter on IPM issues. These alliances further help to enforce IPM adoption and understanding. At the same time, AgriLife Extension has also engaged the pest control industry by giving continuing education credit talks on school IPM at regional and statewide pest control conferences. The linkage between pest control, regulators, educators and school personnel is necessary in order to ensure complete adoption and compliance with school IPM rules.

Future

As EPA, USDA, CDC and HUD decide on how best to help citizens understand and adopt indoor IPM methods, Texas AgriLife Extension struggles on how to answer the need of Texans. School IPM 2015, a pest management strategic plan is in development outlining how all schools can adopt IPM standards. This document states that each State devote a salary to one Extension person to help oversee the education portion of the mandates. However, it does not state and should be considered is the appointment of regulatory and education appointments as well. In Texas, having SLA support for an unfunded mandate has ensured continued adoption. At the same time, having a school association that also oversees policy adoption ensures that the rules are not overly burdensome to the school districts.

During the 80th Texas Legislative session, the school IPM law was amended during the Sunset process when the Board was abolished and functions transferred to TDA. This process allowed the school and pest control associations; TDA and Extension all came to the table to work out the best possible solution to new rule development for school IPM. The updated school IPM rules allow regulators and schools alike to understand what can be measured and what cannot. An IPM policy statement can be measured, but total adoption is not something easily measured. However, having SLA inspectors look for documentation and evidence of pest monitoring can be measured, as well as looking at facility inspection sheets and notification about posting. The updated Texas School IPM rules require coordinators to be in total control of their IPM program and outline what that program will look like. Extension has the challenge of working with schools and others to meet these needs.

Texas has finally begun to fund the school IPM program with more emphasis from TDA and Extension working together. TPCA, TASB and TASBO support has allowed everyone to understand the need for more educational programming as it relates to IPM methods. However, Extension as a nationwide agency has still not seen the value of adopting methods in all aspects of Extension. IPM has functions in 4-H, Family and Consumer Sciences and in homeowner education. AgriLife Extension has four full time urban IPM Specialists just to fulfill a portion of these expectations. The Texas Model is still attempting to work with public health agencies throughout the state to collaborate on health messages as well. Many health educators are just now learning about cockroaches and pesticides as allergen triggers for children. Asthma education is an area that has yet been tapped to help spread the word about integrated

pest management and how IPM can help reduce asthma triggers. Department of Health's can also help with enforcing IPM standards when they understand IPM principals for food service inspections. Knowing that pest monitoring is essential and looking for evidence of this monitoring will enforce IPM concepts of food service workers as well. The Texas Model shows that school IPM can be managed by a small core group of personnel from Extension, Dept. of Ag and Education agencies with little or no funding.