



Fire Ants and the Texas IPM in Schools Program

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Fire ants are among the most troublesome pest problems for schools. Fire ant mounds on playgrounds can lead to stings, which are painful and can have serious health implications for some children. Fire ants can also invade classrooms and damage lights and other electrical equipment.

Fire ant stings commonly result in visits to school nurses and loss of class time. Slightly less than 1 in 100 children are at risk for an allergic reaction to fire ant stings. Out of this group, about 1 percent of these allergic-prone children may have serious, even life-threatening, reactions to fire ant stings. Statewide, fire ants pose a significant health threat to Texas school children.

Control Strategies

Fortunately there are several excellent control options for fire ants. Outdoors, fire ant mounds can be treated with one of several pesticides that kill fire ant colonies quickly. This approach, called an individual mound treatment, is best for quick control of problem mounds, such as those near sidewalks or in playgrounds.

Treating each mound individually is expensive and takes much time. A better way to manage fire ants on school grounds is to use a broadcasted fire ant bait. Such baits applied are scattered lightly over large areas of school grounds. This type of application poses minimal environmental and health risks. Although baits require more time to achieve control (about 2 to 10 weeks), they ultimately provide better results.

Many schools use a combination of these two approaches, known as the Two-Step Method. For more information about this strategy, see the Extension fact sheet [L-5070, The Texas Two-Step: Do-it-yourself Fire Control for Homes and Neighborhoods](#).

Regulations Affecting Pesticide Use Around Schools

Since 1995, all public schools in Texas have been required to follow a sophisticated approach to pest control called integrated pest management, or IPM. The Texas Structural Pest Control Board, the agency that regulates pest control in the state, ensures that all schools follow safe IPM practices by inspecting school districts periodically. IPM in School regulations cover:

- **Pest control policy.** Each school must have a policy stating its commitment to following IPM practices in its pest control program. This policy should be available for the public or any staff to review.
- **Designation of an IPM Coordinator.** Each school district must designate an IPM program coordinator who oversees the implementation of the district's IPM policy. The coordinator is responsible for approving pesticide use on school property and is the one to contact if you have any questions about pest control at your child's school.
- **Licensing of pesticide applicators.** Since the new IPM regulations were implemented, only those who are licensed by the Texas Structural Pest Control Board or the Texas

Department of Agriculture (outdoor applications only) can apply pesticides to school property. Licensed applicators must pass a test and attend ongoing classes to ensure that they know about pests and the best control methods. Exceptions are made for some “incidental uses” of pesticides, but generally teachers, janitors and others can no longer apply pesticides in a school unless they are licensed.

- **Pesticide classification.** The new regulations encourage the use of pesticides with lower risks for children. Under Texas regulations, pesticides are classified as Green, Yellow or Red List products, according to their U.S. Environmental Protection Agency-assigned signal word, and depending on whether they fall into certain categories of low-risk products.

Green List products include pesticides posing the lowest risk to school children. These include the low-toxicity inorganic pesticides: boric acid, silica gels, diatomaceous earth and disodium octoborate tetrahydrate; non containerized baits and gels for cracks and crevices only; insect growth regulators for cracks and crevices or for containerized bait stations only; insect and rodent baits in tamper-resistant containers or bait stations; microbial-based or fungal insecticides; granular baits for void areas; and biological (living) control agents.

Yellow List products include all non-Green List pesticides bearing the signal word CAUTION. *Red List* products include all pesticides bearing the signal words WARNING or DANGER.

Green List pesticides can be used at any time at the applicator’s discretion. Yellow and Red List products can also be used on school property, but their use must first be justified and approved in writing by a certified applicator and IPM Coordinator.

- **Re-entering pesticide treated areas.** In general, pesticides must be applied when schoolchildren are not expected to be in a school building or area for a least 12 hours after the application. Certain Green List products are exempted from this requirement: baits in tamper-resistant containers; gel or granular baits placed in inaccessible areas; and insect growth regulator baits. These products may be applied during the school day as long as students are kept at least 10 feet from the area being treated.

Suggested IPM Programs for Fire Ant Control in Schools

Football fields. Ideally, football fields should be treated with a bait 2 to 3 months before football practice starts. Baits are best applied as a broadcast treatment over athletic fields in the spring and fall. When faster control is needed, individual mounds can be treated with a liquid drench, granular or dust product and watered-in at least 12 to 24 hours before the field is needed. Pyrethrum drenches provide rapid kill and are a Green List treatment for individual mounds.

Broadcast applications of residual (non bait) insecticides is less desirable from an environmental and safety perspective, but can be used when quick control is needed and there are too many mounds to treat one at a time. Such treatments should be the method of last resort; using broadcast baits ahead of time should eliminate the need for their use.

Playgrounds and other school grounds. Similar to football fields. Treatment in spring and fall should suppress fire ants well. Then treat problem mounds with pyrethrum or another approved pesticide. Water-in all mound treatments well before children are allowed back into treated areas.

Mounds next to sidewalks and roadside curbs. These sites are particularly difficult to treat with many individual mound treatment products, because it is difficult to get the treatment to parts of the mound under pavement. Baits, because they are carried by ants into the nest,

control such mounds successfully. Hydramethylnon, fipronil and spinosad baits applied as a mound treatment can control such mounds within a week. Other baits can be used this way, but results will be slower. When you distribute baits around the mound area, avoid leaving piles that might attract children or pets.

Classroom and indoor infestations. Indoor fire ant infestations generally are the result of mounds located next to the infested building. Inspect building perimeters and apply a fast-acting treatment to any nearby mounds. Indoor insecticide applications are often unnecessary; however, certain baits may be applied in inaccessible areas. If the point-of-entry into the building can be located, treat it from the outside with a residual insecticide. Because fire ants generally travel in single file from nest to feeding sites, points-of-entry can be located by following trails of ants. Regular broadcast bait applications around school buildings should minimize indoor fire ant problems.

Electrical equipment. Pyrethrum aerosol sprays provide quick, temporary knock-down of ant activity in electrical equipment. For the longest control, apply granular insecticides, such as bifenthrin, to the floor of electrical equipment housing. Electricians servicing such equipment may be exempted from pesticide licensing requirements under the incidental use policy. Check with the Structural Pest Control Board for more information.

Some Insecticides for Fire Ant Control on School Grounds

<i>Common name</i>	<i>Trade Name</i>	<i>Formulation*</i>	<i>Action</i>	<i>Classification**</i>
<i>abamectin</i>	Ascend [®] , Advance [®]	B	microbe-based, slow-acting toxin	Green
<i>acephate</i>	Orthene [®]	L, D	residual toxin	Yellow
<i>carbaryl</i>	Sevin [®]	L, D	residual toxin	Yellow
<i>diazinon ***</i>	Diazinon	L, G	residual toxin	Yellow
<i>fenoxycarb</i>	Award [®] , Logic [®] , Precision [™]	B	IGR	Green
<i>fipronil</i>	Choice [®] , Firestar [®]	B, G	slow-acting toxin	yellow
<i>hydramethylnon</i>	Amdro [®] , Maxforce [®] , Eclipse [®] , Siege [®] Gel Insecticide	B	slow-acting toxin	Green****, Yellow
<i>methoprene</i>	Extinguish [®]	B	IGR	Green
<i>permethrin</i>	Astro [®] , Spectracide [®] , Raid [®] , Hot Shot [®] products, others	L	residual toxin	Yellow
<i>pyrethrins, pyrethrum</i>	Organic Solutions [™] , others	L, D	botanical toxin	Green
<i>pyriproxifen</i>	Distance [®]	G	IGR	Green
<i>spinosad</i>	Eliminator [®]	B	microbe-based, slow-acting toxin	Green

* B=bait; D=dust; G=granule; L=liquid

** These classifications may vary from one product to another, depending on signal words and the product formulation. Check with your distributor or the Texas Structural Pest Control Board for confirming each product's classification.

*** Diazinon is currently being phased out of sale, and will be unavailable after 2002. There are equally effective products with less odor that should be used in school IPM programs.

**** Green classification applies to these products only if used in cracks, crevices, inaccessible areas or in a tamper-resistant bait station.. As broadcast treatments these products are considered part of the Yellow List.

A new source of assistance is available to help schools and others with technical information and training needs about fire ant control and IPM programs for schools. The Southwest Technical Resource Center for IPM in Schools and Childcare Facilities maintains a hotline and website. On the web visit, <http://schoolipm.tamu.edu>, or call toll-free: 877-747-6872. In addition to personalized assistance, the center can provide pest management plans, workshop schedules, videos, books and other resources.

For More Information

For more information regarding fire ant management, see Extension publications [B-6043](#), *Managing Red Imported Fire Ants in Urban Areas*; [B-6076](#), *Managing Red Imported Fire Ants in Agriculture*; [B-6099](#), *Broadcast Baits for Fire Ant Control*; or [L-5070](#) *The Texas Two-Step Method Do-It-Yourself Fire Ant Control for Homes and Neighborhoods*. Also visit our web site at <http://fireant.tamu.edu>.

For the latest information on IPM in Schools laws and regulations, contact the Texas Structural Pest Control Board at (512) 451-7200, or visit its web site at <http://www.spcb.state.tx.us/default.htm>.

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