

# 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 painful stings, which can have serious health implications for some children. Fire ants can also invade classrooms and damage lights and other electrical equipment.

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

## CONTROL STRATEGIES

Fortunately, there are several excellent fire ant control options. Outdoors, fire ant mounds can be treated with one of several pesticides that kill fire ant colonies quickly. This approach, 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, 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 Texas Two-Step: Do-It-Yourself Fire Ant Control for Homes and Neighborhoods\*](#).

## REGULATIONS AFFECTING PESTICIDE USE AROUND SCHOOLS

Since 1995, all public schools in Texas must follow integrated pest management, or IPM, a best management practice for pest control. To ensure that all schools follow safe IPM practices and adhere to pesticide regulations, the state inspects school districts periodically.<sup>1</sup> IPM in School regulations cover:

- ◆ **Pest control policy.** Each school must have a policy stating its commitment to following

<sup>1</sup>The Texas Department of Agriculture oversees the licensing and application of pesticides in Texas. The School IPM Rules are governed through the Texas Occupations Code and Texas Administrative Code. School IPM Rules pertain only to independent school districts.



IPM practices in its pest control program. This policy should be available for the public or any staff member.

- **Designation of an IPM coordinator.** Each school district must designate an IPM coordinator who oversees the implementation of the district's IPM policy. The IPM coordinator, along with the licensed applicator, is responsible for approving pesticide use on school property. The IPM coordinator is the person to contact if you have any questions about pest control at your child's school.
- **Licensing of pesticide applicators.** In Texas, anyone applying a pesticide on school district property must be licensed by the Texas Structural Pest Control Service or the Texas Department of Agriculture (outdoor applications only). Licensed applicators must pass a test and attend ongoing classes to ensure that they know about pests and the best control methods.
- **Pesticide classification.** The regulations encourage the use of pesticides with lower risks for children. Under Texas regulations, pesticides are classified as Green, Yellow, or Red Category products, according to their US Environmental Protection Agency-assigned signal word or active ingredient and whether they fall into certain categories of low-risk products.
  - **Green Category** products must be from at least one of the following categories:
    - Inorganic pesticides (boric acid, disodium octoborate tetrahydrate, silica gel, or diatomaceous earth),
    - Insect growth regulators,
    - Insect and rodent baits in tamper-resistant containers,
    - Crack-and-crevice use only, microbe-based insecticides,
    - Botanical insecticides (not including synthetic pyrethroids) containing no more than 5 percent synergists,

- Biological (living) control agents,
- Pesticidal soap, and
- Natural and synthetic horticultural oils.

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

Green Category pesticides can be used at any time at the applicator's discretion. Yellow and Red Category 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, apply pesticides when schoolchildren are not expected to be in a school building or area for at least 4 hours after the application for Yellow Category and 8 hours for Red Category products. Green Category products are exempt from re-entry requirements as long as students are not present at the time of application. In addition, post signs on school property prior to any outdoor application and until the stated re-entry has expired.

## SUGGESTED IPM PROGRAMS FOR FIRE ANT CONTROL IN SCHOOLS

**Football fields.** Ideally, treat football fields with 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, treat individual mounds with a liquid drench, granular, or dust product and water it 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 you need quick control 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.

While the use of long-term control products with fipronil as the active ingredient can be part of a fire ant management program, this application method requires additional paperwork for the IPM coordinator and certified applicator.

*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 allowing children 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 the parts of the mound under the pavement. Baits control such mounds successfully because ants carry them into the nest. Hydramethylnon, fipronil, and spinosad baits applied as a mound treatment can control such mounds within a week. Other baits can be used in 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 result from 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 you can locate the ants' point-of-entry into the building, treat it from the outside with a residual insecticide. Because fire ants gen-

### Some Insecticides for Fire Ant Control on School Grounds

Common Name	Trade Name	Formulation*	Action	Classification**
abamectin	Ascend, Award II Optigard	B	microbe-based, slow-acting toxin	Green
acephate	Orthene	L, D	residual toxin	Yellow
carbaryl	Sevin	L, D	residual toxin	Yellow
fipronil	MaxForce FC TopChoice, Taurus G	B, G	slow-acting toxin	Yellow, Red****
hydramethylnon	Amdro, Pro bait Maxforce Complete	B	slow-acting toxin	Green***, Yellow
indoxacarb	Advion Fire Ant Bait	B	fast-acting toxin	Yellow***
metaflumizone	Siesta	B	fast-acting toxin	Yellow
methoprene	Extinguish	B	IGR	Green
hydramethylnon + methoprene	Extinguish Plus	B	slow-acting toxin + IGR	Yellow
bifenthrin, cyfluthrin, cypermethrin, permethrin, lambda-cyhalothrin, gamma-cyhalothrin others	Talstar, Deltaguard, Ortho, Bifen, Spectracide, Raid, Hot Shot products, Cyzmic, Cyonara, others	L, G	residual toxin	Yellow
pyrethrins, pyrethrum	Organic Solutions, others	L, D	botanical toxin	Green
pyriproxifen	Distance	G	IGR	Green
spinosad	Ferti-Lome Come and Get It!, Payback Fire Ant Bait	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 Department of Agriculture for confirming each product's classification.

\*\*\* 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.

\*\*\*\*The US EPA has designated fipronil used as a broadcast bait as a restricted-use pesticide; as such, all restricted-use products are considered Red Category per Texas School IPM Rules.

erally travel in single file from nest to feeding sites, locate points-of-entry 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 knockdown of ant activity in electrical equipment. For the longest control, apply granular insecticides such as bifenthrin to the floor of electrical equipment housing.

For more information on the Texas School IPM program, visit the web at [School Integrated Pest Management](#) or call toll-free at 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 *Managing Red Imported Fire Ants in Urban Areas*, *Management of Imported Fire Ants in Cattle Production Systems*, *Broadcast Baits for Fire Ant Control*, or *Fire Ant Control: The Two-Step Method and Other Approaches*. Also, visit our website at *Texas Imported Fire Ant Research and Management Project* or eXtension at *Imported Fire Ants* for more information about fire ants from a national and regional perspective. You can also find a detailed management plan for your IPM program at *School IPM Action Plan for Fire Ants*.

Need the latest information on fire ant products? Check out *The Latest Broadcast on Fire Ant Control Products* or *2013 Fire Ant Control Materials for Alabama Homeowners* for general product identification.

For the latest information on IPM in Schools laws and regulations, contact the [Texas Department of Agriculture, Structural Pest Control Service](#) at (512) 463-2686, or visit its website.

## REFERENCES

- The Texas Two Step: Do-It-Yourself Fire Ant Control for Homes and Neighborhoods*  
[www.agrilifebookstore.org/product-p/el-5070.htm](http://www.agrilifebookstore.org/product-p/el-5070.htm)
- School Integrated Pest Management*  
[schoolipm.tamu.edu](http://schoolipm.tamu.edu)
- Managing Red Imported Fire Ants in Urban Areas*  
[www.extension.org/pages/11004/managing-imported-fire-ants-in-urban-areas-printable-version](http://www.extension.org/pages/11004/managing-imported-fire-ants-in-urban-areas-printable-version)
- Management of Imported Fire Ants in Cattle Production Systems*  
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[www.agrilifebookstore.org/product-p/e-628.htm](http://www.agrilifebookstore.org/product-p/e-628.htm)
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[fireant.tamu.edu](http://fireant.tamu.edu)
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[www.extension.org/pages/20444/school-ipm-action-plan-for-fire-ants](http://www.extension.org/pages/20444/school-ipm-action-plan-for-fire-ants)
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- Texas Department of Agriculture, Structural Pest Control Service*  
[www.texasagriculture.gov/RegulatoryPrograms/Pesticides/StructuralPestControlService/SchoolIntegratedPestManagement.aspx](http://www.texasagriculture.gov/RegulatoryPrograms/Pesticides/StructuralPestControlService/SchoolIntegratedPestManagement.aspx)

For more information regarding fire ant management, see Extension publications *Managing Red Imported Fire Ants in Urban Areas*, *Broadcast Baits for Fire Ant Control*, or *Fire Ant Control: The Two-Step Method and Other Approaches* posted on <http://AgriLifeBookstore.org>.

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