

# Recognizing Green Category Pesticides for Use in Texas Schools

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In 1991, the Texas Legislature amended the Structural Pest Control Act (SPCA) to require that public school districts have an Integrated Pest Management (IPM) program. Since 1995, all public school districts in Texas must have a written pest management policy, designate and train a district IPM Coordinator, and ensure that licensed applicators perform all pesticide applications. The IPM Coordinator keeps detailed records of all pesticide applications and confirms that the district or its designated pest control provider uses the least hazardous methods to control pests. The Texas Department of Agriculture, Structural Pest Control Division (SPCS) oversees the School IPM rules.

In 2007, the legislature updated the laws to make regulatory guidelines for IPM in schools more specific. Texas school pesticide regulations classify all pesticides as Green, Yellow, or Red Category products.



Ants on liquid bait. Source: Michael Merchant



Apply Green Category pesticides when students are not present. They may return when the application is complete or the reentry interval expires. Source: Pixabay

**Green Category** pesticides pose the least potential hazard to people and the environment. They do not require prior written approval from the IPM coordinator and may be applied at the licensee's discretion under the guidelines of the school district IPM program. However, there are a few considerations:

- When using Green Category pesticides indoors, post a notification in the area 48 hours in advance (see [SPCS rules for pest control signs §7.146](#)).
- When applying pesticides outdoors, post the area at the time of application. You can remove the sign after the application is complete.
- For both indoor and outdoor application, students must not be present during the application but can reenter the area when the application is complete, unless the product or district requires a different reentry interval.

**Yellow Category** products usually include the Environmental Protection Agency signal word CAUTION on the label. They are typically residual insecticide products such as Talstar Professional insecticide, Suspend SC, and Termidor SC termiticide/insecticide. These pesticides require approval by a certified applicator, and you must provide a copy of the approval form to the IPM coordinator.

- When using Yellow Category pesticides indoors, post notification of the application 48 hours before treatment. Students cannot be present in the room or treated area during the application, within 4 hours afterward, or until the reentry interval specified on the pesticide label has expired, whichever time is longer.
- When applying pesticides outdoors, students cannot be within 10 feet of the application site. Secure the area and do not allow people to reenter the area for 4 hours after treatment or until the interval specified on the pesticide label has expired, whichever time is longer.



Read the label before you buy, use, or dispose of any pesticide. Source: Michael Merchant

**Red Category** pesticides carry EPA signal words such as WARNING and DANGER on the label to indicate the highest potential risk to applicators or the environment. These products contain an active ingredient that, in Texas, designates them to be a restricted-use pesticide, a state-limited-use pesticide, or a regulated herbicide. Before apply-



Paper wasps (*Polistes* spp.) nest in overhangs, trees, or shrubs. Not usually aggressive, they are more of a predator to other insects. Source: Pixabay

ing a Red Category pesticide, the licensee must provide to the IPM coordinator written justification for its use and receive from the coordinator signed approval.

- When using Red Category pesticides indoors, students must not be present in the room or treatment area during application, within 8 hours afterward, or until the reentry interval specified on the pesticide label has expired, whichever time is longer.
- When applying these pesticides outdoors, secure the area according to [Title 4, Part 1, Chapter 7, Subchapter H, Division 7, Section §7.204](#). Do not allow students within 25 feet of the application site. Prohibit reentry to the area for 8 hours, or until the reentry interval specified on the pesticide label has expired, whichever time is longer.



Insect identification is critical to an IPM program. This American cockroach could be a sign of a widespread pest infestation, depending on its location and time of year. Source: Michael Merchant



Fire ants swarming from a gap in the mortar of a building.  
Source: Michael Merchant



Remember to post signs outdoors when making a Green Category pesticide application. Remove the sign once the application is complete or reentry interval is met. Source: Michael Merchant

Although Texas schools may use any pesticide they deem necessary to manage a pest problem, the Texas Department of Agriculture regulations require that when using a Yellow or Red Category pesticide, written justification and approval must first be recorded and kept on file for at least 2 years. Also, certain Green Category products may have less restrictive reentry requirements than other pesticides. These requirements encourage schools to use the least hazardous materials necessary to do the job effectively.

IPM Coordinators and all pesticide applicators working on school district property in Texas must be able to identify Green Category products (see [Title 4, Part 1, Chapter 7, Subchapter H, Division 7, Section §7.204](#) of the Texas Structural Pest Control Regulations). These products must be from at least one of the following categories:

- Biological (living) control agents
- Boric acid, disodium octoborate tetrahydrate, or related boron compounds
- Botanical insecticides containing no more than 5 percent synergist (does not include

synthetic pyrethroids)

- Insect and rodent baits in tamper-resistant containers or for crack-and-crevice use only (not broadcast)
- Insect growth regulators (IGR)
- Microbe-based insecticides
- Pesticidal soap, natural or synthetic horticultural oils
- Silica gel, diatomaceous earth

### Identifying Green Category Products

Distinguishing Green products is not always easy; no packaging designation shows which pesticides are Green products under Texas law. Even pesticide distributors and sales personnel are often unfamiliar with which products are included in the Texas Green Category.

The following list includes common Green Category pesticides and serves as a guide to the most commonly used active ingredients and current trade names associated with these active ingredients. Because trade names change frequently, schools and pest management professionals should learn the qualifying criteria for Green Category products, rather than depend on a list of trade names.

## Common Green Category Products

Type of pesticide (I=Insecticide, R=Rodenticide, F=Fungicide, B=Biological pesticide, H=Herbicide)	Qualifying active ingredient	Product name(s)
<b>Low-toxicity inorganics.</b> These pesticides share noncarbon-based chemistry and destroy the waxy waterproofing on insect cuticles. Borate compounds, including boric acid and disodium octaborate, are long-lasting, water-soluble compounds that act as fungicides and insect stomach poisons.		
I	boric acid (orthoboric acid)	Borid, Mopup, Advance Liquid Ant Bait, Drax Liquidator Ant Bait, Drax Ant Kil Gel, Drax Roach Assault PGF, Nibor-D, Roach-Prufe, Eaton's Answer Boric Acid Insecticidal Dust, InTice roach bait, InTice 10 Perimeter Bait, Niban FG, BorActin insecticide powder, Provaunt, Pro-Joe ant bait, Magnetic Roach Bait, Niban Granular Bait, Uncle Albert's Ant Gel
I, F	disodium octaborate tetrahydrate	Timbor, Bora-Care, NiBor-D, Uncle Albert's Ant Bait, Ant Café, Gourmet Ant Bait Gel, Dominant 1%, Boracide, MopUp
I	diatomaceous earth	Organic Solutions, Pyatomaceous Insecticide Dust, MotherEarth D Pest Control Dust, Eaton's KOI System, Concern
I	silica aerogel	CimeXa Insecticide Dust, PT Tri-Die
I	sodium tetraborate decahydrate (Borax)	Terro PCO Liquid ant bait, InTice Gelanimo Ant Bait, InTice Thiquid ant bait, InTice Rover Ant Bait
I	pentahydrate Borax	Boracide borate powder
<b>Insect growth regulators (IGRs).</b> IGRs are synthetic versions of hormones. They do not kill insects outright, but disrupt their normal growth and reproduction process. The IGR mode of action is specific to insects and toxicity to humans is very low.		
I	cyromazine	Citation
I	fenoxycarb	Logic Fire Ant Bait, Precision
I	halofenozide	Mach-2 Granular Turf Insecticide
I	hydroprene	Gentrol IGR Concentrate, Gentrol Point Source, Gentrol Aerosol
I	methoprene	Precor IGR Concentrate, Altosid Mosquito Briquets, Meteor IGR Concentrate, Pharorid Ant Growth Regulator, Extinguish Fire Ant Bait
I	pyriproxifen	Distance Fire Ant Bait, Nylar, Nyguard, Archer, Pivot
I	pyriproxifen, abamectin	Vendetta PLUS Cockroach Gel Bait
I	pyriproxifen, novaluron	Tekko Pro
I	tebufenozide	Confirm
<b>Baits.</b> Baits are a mixture of an insecticide with food that attracts pests. They are relatively safe because of the low percentage of active ingredients, especially when applied only in cracks, crevices, or in an enclosed bait station. Texas School IPM rules require that insect or rodent baits (fire ant baits; containerized cockroach baits; granular ant, cockroach, and cricket baits; and rodent baits) be used in tamper-resistant containers or placed in cracks and crevices, but not broadcasted).		
I	ivermectin	PT Avert Cockroach Bait Stations, Advance 360A Dual Choice Ant Bait Stations
I	fipronil	Maxforce FC Roach Killer Bait Gel, Maxforce FC Ant and Roach Bait Stations, Maxforce Carpenter Ant Bait Gel
I	hexaflumeron, noviflumeron	Hexpro, Recruit Termite Bait, Sentricon AG III
I	hydramethylnon	Amdro Pro Fire Ant Bait, Siege Pro Fire Ant Bait, Siege Gel Insecticide, Eclipse Professional Insect Bait, ProBait Professional Fire Ant Bait, Maxforce Granular Insect Bait
I	imidacloprid	Pre-Empt Professional Cockroach Gel Bait, MaxForce Quantum ant bait, InVict Gold Cockroach Gel, InVict Xpress Granular Bait, InVict Blitz Ant Bait
I	indoxacarb	Advion cockroach gel bait, Advion cockroach bait arena, Advion ant gel bait, Advion ant bait arena

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<b>Baits (cont.)</b>		
I	acetamiprid	Transport roach bait
I	dinotefuran	Advance Cockroach gel bait
I	sulfluramid	Firstline Termite Bait Stations, Raid Ant and Roach Controller II, Advance Dual-Choice Ant Bait Stations, FluorGuard Ant Control Baits
I	thiamethoxam	Optigard Ant Gel Bait
I	clothianidin	MaxForce Impact roach gel bait
R	brodifacoum	Final Blox, WeatherBlock XT, Talon G, Talon UltraBlok
R	bromadiolone	Contrac All-Weather Blocks, Maki Paraffin Blocks, Just One Bite Rat and Mouse Bait
R	bromethalin	Top Gun All-Weather Bait Block, Fastrac Blox
R	chlorophacinone	Rozol Paraffin Blocks
R	difethialone	Generation Mini-blocks
R	diphacinone	Ditrac Blox, Liqua-Tox, JT Eaton Bait Block Rodenticide
<b>Microbe-based.</b> Microbe-based pesticides contain active or killed microbes or microbial byproducts. Their toxicity to non-insects is low and they break down quickly in the environment.		
I	avermectin-B, abamectin	PT Avert, PT Ascend, Advance 375A Select Granular Ant Bait, Advance Granular Ant Bait, Advance Granular Carpenter Ant Bait, Avid Insecticide, Vendetta Cockroach Gel Bait, Optigard Fire Ant Bait, InVict AB Insect Paste
I	<i>Bacillus sphaericus</i>	VectoLex
I	<i>Bacillus thuringiensis</i>	Dipel, Bactimos Briquets, Gnatrol, Aquaboc, Mosuito Dunks, Teknar, Summit B.T.I. Briquets
I, B	<i>Beauveria bassiana</i>	Naturalis-O
I	microbial-based drain cleaners	DrainGel, InVade Bio Foam
I	spinosad	Conserve SC, Eliminator
<b>Botanicals.</b> Botanical pesticides contain active ingredients extracted from plants. Once sprayed, botanical pesticides such as pyrethrum (pyrethrins) have a short residual life. Pyrethrum is usually mixed with a synthetic chemical, peperonyl butoxide (PBO) to enhance effectiveness. PBO is not an insecticide, but a synergist—a substance that, when added to a pesticide, increases its effectiveness several-fold. Under the Texas School IPM rules, these products cannot contain more than a 5 percent synergist.		
I	2-phenethyl propionate	EcoPCO ACU – Unscented Contact Aerosol Insecticide
I	2-phenethyl propionate + eugenol (clove oil)	EcoPCO AC, EcoExempt Jet Wasp and Hornet Spray
I	2-phenethyl propionate + pyrethrins	EcoPCO D•X – Dust Insecticide, EcoPCO AR•X – Multi-Purpose Residual Aerosol Insecticide
I	2-phenethyl propionate + pyrethrins, thyme oil	EcoPCO WPX
I	2-phenethyl propionate + rosemary	EcoExempt JET
I	2-phenethyl propionate + rosemary oil, peppermint oil, wintergreen oil	Essentria Broadcast
I	2-phenethyl propionate + rosemary oil, thyme oil	EcoVia™ EC

Type of pesticide (I=Insecticide, R=Rodenticide, F=Fungicide, B=Biological pesticide, H=Herbicide)	Qualifying active ingredient	Product name(s)
<b>Botanicals (cont.)</b>		
I	2-phenethyl propionate + thyme oil	EcoVia™ WD
I, F	azadirachtin	Azatin, Neemix, Triact
H	citric acid, clove leaf oil, cinnamon oil	Weed-A-Tak Organic Herbicide
I, H	d-limonene	Demize, ProCitra-DL, MotherEarth Wasp and Hornet Jet Spray, Organic Weed and Grass Killer
I	eugenol (clove oil), cinnamon oil, cedar oil	Snake Out Snake Repellent, RO-PEL Snake Repellent, Bonide Snake Stopper snake repellent
H	eugenol (clove oil), citric acid, cinnamon oil	Weed-A-Tak Organic Herbicide
I	eugenol (clove oil), thyme oil, wintergreen oil	Essentria G (granular)
I	geraniol	ProVerde Wasp and Hornet Killer
I	geraniol, cedar oil, sodium lauryl sulphate	EcoRaider
I	geraniol, cinnamon oil	ProVerde Broad Spectrum Insect Killer
I	lemongrass oil, geraniol	EcoVia™ WD
I	pyrethrins (pyrethrum)	CB-38 Extra, PT Inspector, PT Microcare, MotherEarth 2% Py Contact Insecticide, P.I. Contact Insecticide
I	rosemary, geraniol, peppermint oil	Essentria IC <sup>3</sup>
I	rosemary, peppermint oil	Essentria All Purpose, EcoExempt IC <sup>2</sup>
I	thyme	ProVerde Dust Insecticide
I	thyme oil, lemongrass, citronella, sodium lauryl sulphate	Nature's Element Web Out
<b>Biological insecticides.</b> Biological controls use living organisms such as predators, parasites, and disease-causing pathogens to control pests.		
I, B	entomopathogenic nem- atodes ( <i>Steinernema</i> )	Biovector, Millenium biological, Nematac
<b>Pesticidal soap and natural and synthetic horticultural oils.</b> These contact insecticides kill small, soft-bodied insects.		
I	potassium salts of fatty acids	Safer's Insecticidal Soap, Garden Safe Insecticidal Soap insect killer
I	petroleum oil-foliar spray	PureSpray Green Organic Horticultural Spray Oil
I, F	highly refined paraffinic oil	Ultra-Fine Oil All Season Horticultural Insecticide/Miticide/Fungicide

## For More Information

For more information about integrated pest management in schools and childcare facilities, visit the AgriLife Extension website at <http://schoolipm.tamu.edu> or call the toll-free hotline at (877) 747-6872.

This is not an official publication of the Texas Department of Agriculture. If in doubt about what constitutes a Green Category product, where and when they may be used, and how to obtain approval for Yellow and Red Category products in schools, contact the Texas Department of Agriculture, P.O. Box 12847, Austin, Texas 78711-2847, call (888) 232-2567, or visit their website at <http://www.texasagriculture.gov/spcs>.

This material is based upon work also supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, CPPM—Texas A&M AgriLife Extension Service IPM Program is 2014-70006-22530. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture.

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Revision The Texas A&M University System, U.S. Department of Agriculture, and the County Commissioners Courts of Texas Cooperating.