



» **Left: HEAVILY TRAFFICKED AREAS** like where children wait for school buses should be a top priority for fire ant control. For more info on fire ant control in schools, visit www.fireants101.com.

» **Inset: "WORKED" SOIL**, aggressive behavior and hundreds of reddish ants is a sure sign.

Fighting FIRE ANTS in sports turf

Editor's note: This article was written by Stacey Himes of Clayton | Himes PR, Ambler, PA.

FIRE ANTS may be coming to a field near you. Traditionally thought of as a southern pest, fire ants are slowly moving up both coasts, reaching as far as Oregon and Maryland. If you start to find mounds of "worked soil" on your turf, add fire ants to the list of what keeps you up at night.

Fire ant stings can cause severe allergic reactions, some even life threatening, in about 1% of the population. Fire ants are aggressive and at times deceptive; what looks like a small mound can extend as much as ten feet underground. Each mound can contain up to 100,000 ants that will boil up to the surface when disturbed.

For Craig Dennie, pest control supervisor at the Dallas Independent School District, fire ants on athletic fields are a constant challenge. However, through careful monitoring and inspection, he and his 5-person team have managed to significantly reduce fire ant populations, while also reducing pesticide costs (overall by 45%).

Dennie's proactive fire ant strategy is part of his department's overall commitment to integrated pest management (IPM) principles. It's been a mindset change for the district, which was used to the days when technicians "would spray on a whim." Now, techniques like trapping, exclusions and setting thresholds are ensuring pesticide applications are made only when necessary.

Here, Dennie shares how he controls fire ants on athletic fields and beyond:

Identify. In manicured sports turf, fire ants can be easier to spot than in regular turf. Fire ant mounds look like worked soil, and can be a few inches to a few feet across. Unlike native ant species there is no opening at the top; fire ants enter and exit through underground tunnels.

Fire ants prefer to build nests around goal posts, near bleachers, along dugouts, in sidewalk cracks, and near HVAC equipment. Even if a playing field is clean, check those areas as well.

The ants themselves are about a quarter to a half-inch long, red to reddish brown,

and not uniform in size. Another key trait is their aggressive nature. Unlike native ants, fire ants will run quickly up vertical objects like poles, rakes and legs.

Inspect. For Dennie, who has 253 campuses to cover, daily inspections aren't possible. He or his technicians try to inspect each field at least every 2-3 weeks during playing seasons. They walk a sufficient amount of the field themselves but also encourage staff and teachers to report any new ant activity.

Fire ants are more active in the summer, when temperatures are between 72 and 96 degrees. In very hot temperatures, they tend to stay underground near water sources. After rains, they emerge to forage for food—and that's when you'll find mounds being built.

"If it's been hot and dry for a while and then we see at least a quarter inch of rain, we will have mounds pop up, almost overnight," says Dennie. "And down here, we're not talking just one mound, we might see fifty."

Establish thresholds. Thresholds are the cornerstone of IPM, but they can be difficult to implement, especially when dealing with fire ants. Pressure from teachers and parents can be a factor, too.

"With fire ants there is a health threat so thresholds may be lower than with other pests like beetles," says Dennie. "The important thing is to establish guidelines in advance with your team, and then try to adhere to these guidelines from day to day."



» **CRAIG DENNIE**, pest control supervisor and IPM coordinator for the Dallas Independent School District, and technician Kevin Rogers treat a fire ant mound at the district's Environmental Center.

Many states do not offer guidance on fire ant thresholds, and so it is up to the turf professionals to decide what levels they are comfortable with. For some schools, one mound may be one too many, while for other schools, five mounds per 1,000 square feet is the right number. On an athletic field, most experts agree that four to five mounds are enough to justify a broadcast treatment of the entire field.

Control strategy. On the majority of his athletic fields, Dennie uses insect growth regulators (IGRs), a type of bait that disrupts the insect's endocrine or hormone systems, and can be sprinkled on mounds or broadcast with a spreader. These and other baits are inexpensive but they are also slow acting. It could take weeks for the bait to be passed to the queen and destroy the mound. Excessive moisture can also hinder bait effectiveness.

On turf where fire ant activity is above the threshold or in high-risk scenarios like where children play, Dennie prefers broadcast granular insecticides that provide a longer residual, usually at least three months.

"Granulars are great because they provide a lot of protection without a lot of exposure," says Dennie. "The product binds tightly to the soil and gets to where the ants nest."

Broadcast granulars also offer added protection against other surface feeding pests like chinch bugs, spiders, earwigs, and more.

In emergency situations such as when mounds are found on game day Dennie has been testing a new granular insecticide (Talar XTRA) that can be used to clean up active mounds and also as a preventive broadcast treatment spread over the entire field. The product uses a new active ingredient, zeta-cypermethrin, which is meant to work quickly and also 3 months or more residually. "I am seeing dead ants in about five to ten minutes," says Dennie.

Communicate. Another aspect of pest control is communication, especially when moving toward a proactive rather than reactive fire ant strategy. "It takes a whole lot of talking," says Dennie. "You have to get people to understand what you are trying to do."

For Dennie, it starts with educating your



>> **TOP ROW**, left to right: Michael Downum, Lee Gipson and William Moham; bottom row, l to r, Craig Dennie, Kevin Rogers and Robert Hill. They use integrated pest control principles at their 253 campuses.

own team and then teachers, administrators and the public. "We want folks to understand that we are no longer going to spray just because someone sees a bug," he says. "We want everyone to work with us, whether it means cleaning up in a kitchen or understanding how thresholds work."

Of course, it takes time. "It won't happen overnight," he says. "But eventually it becomes a way of life."

For more information on fire ant monitoring and thresholds as well as a fire ant control cost calculator see www.fireants101.com. ■

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