

Clarifying the Fipronil Label for Control of Fire Ants and Nuisance Ants

Daniel A. Potter

Fipronil belongs to a relatively new class of insecticides known as phenyl pyrazoles. It is the active ingredient in some of the world's most effective insect-control products including Chipco® Choice™ for mole crickets; Combat®/MaxForce® for control of ants, cockroaches, and other household pests; Frontline® on-animal flea control; and Termidor®, a new termite product. **Fipronil is also highly active against ants, especially imported fire ants (*Solenopsis* spp.) as well as mound-building ants (e.g., *Lasius neoniger*) that are nuisance pests on golf courses.**

Recently Chipco/Aventis announced registration of TopChoice™, a new granular fipronil product for control of imported fire ants on golf courses, sports fields, commercial and home lawns, sod farms, and other turf sites. Applied at just 0.125 lb a.i./acre (87 lb product/acre), a single broadcast application in autumn to early spring (November to March) provides superior control of fire ants for up to a year. **That same rate will also control nuisance ants** (for three months or more), mole crickets (about four months), and fleas and ticks (about one month). Those pests are listed on the label as secondary targets. Fipronil is also available as FireStar™, a new bait formulation that can be used as a mound or broadcast treatment for fire ants.

Fipronil is relatively slow-acting, which is a big advantage for ant control. With faster-acting insecticides (e.g., pyrethroids, organophosphates), exposed worker ants are killed quickly, but the rest of the colony usually survives. With fipronil, however, foraging workers that contact or feed on the material do not die right away. This allows them to return to the underground nest where body-grooming and exchange of food among nest-mates transfers the insecticide throughout the colony, including the immature ants and queen. So, in this case, slower is better. **Granular fipronil often provides 95% control of existing ants in four to six weeks after application, with enough residual to eliminate developing queens and also new, winged queens that may enter the landscape.** Unlike baits, TopChoice™ does not lose effectiveness if it gets wet.

Fipronil's advantages include long residual in soil, flexible timing, and low use rates. It targets the GABA recep-

tors of insects, a unique mode of action. GABA acts to "switch off" nerve impulses—blocking this action severely disrupts the insect's nervous system. Fipronil binds about 100 times more tightly to insect receptors than to those of mammals, making it much less toxic to humans and pets than to insects. It is, however, potentially hazardous to birds and fish.

I've recently received questions concerning whether TopChoice™ or FireStar™ can be used by golf superintendents in northern states to control mound-building ants on putting greens. I've also seen some articles containing misinformation about labeled uses for fipronil. I'll try to clarify the situation. . . .

First, the granular TopChoice™ product is labeled for use only in 13 southern states, Alabama, Arkansas, California, Florida, Georgia, Louisiana, Mississippi, New Mexico, North Carolina, Oklahoma, South Carolina, Tennessee, and Texas, where fire ants occur. **So, golf superintendents in states other than those listed cannot legally apply fipronil products to control mound-building nuisance ants.**

For listed states, the label wording is vague with regard to nuisance ants (e.g., *Lasius*). It states (under Specific Use Directions) that "The primary purpose of this product is for fire ant control." But, the fact that nuisance ants are listed as secondary targets leaves the door open for use on putting greens and tees, so long as fire ants might also occur at or near the treated site. The FireStar™ bait formulation (which may also be broadcast), lists only imported fire ants on its label.

So, for now, fipronil is only available for use by southern turf managers. Aventis is actively seeking to broaden the fipronil label, so that granular products for nuisance ant control on northern golf courses will hopefully be available soon. In the meantime, superintendents in non-fire ant states may want to try a different approach: spot-treating nuisance ants on putting greens with Maxforce® fine granule insect bait, containing hydramethylnon. My tests showed it to be effective, and I've heard positive feedback from those who have tried it. 