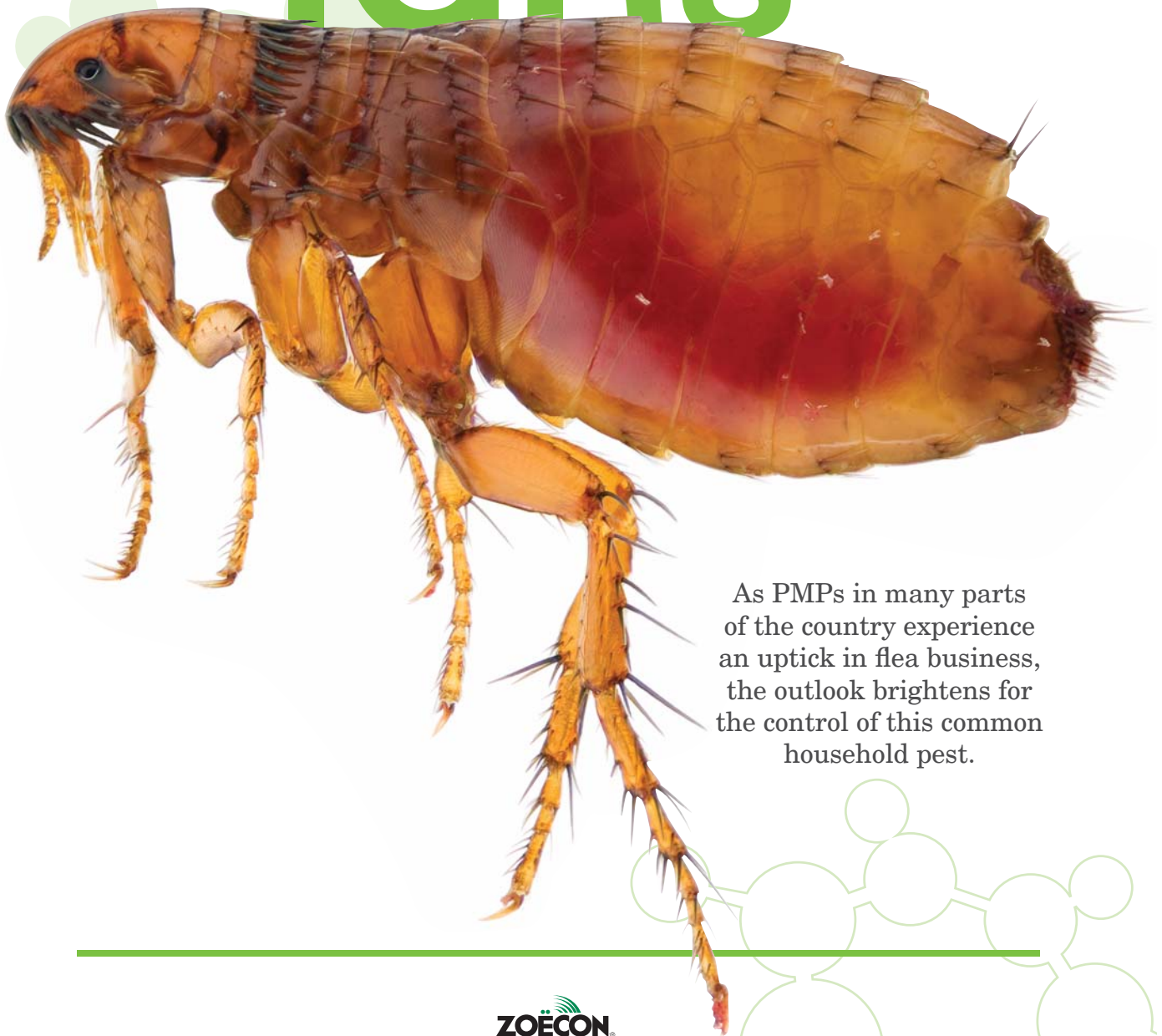


Fleas & IGRs



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ZOËCON
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New Life in the FLEA MARKET

As PMPs in many parts of the country experience an uptick in flea business, the outlook brightens for the control of this common household pest.

Two decades back, flea control work represented a major revenue stream for pest management professionals and was one of the industry's most economically important pests. But that all changed in the early 1990s.

It was then that the veterinary market introduced a series of new products: topical and systemic flea control products for pets. These on-animal or oral products containing a variety of active ingredients proved highly effective and were simple to use. Not surprisingly, their popularity soared with consumers. But the veterinary market's gain was the pest control industry's loss, and the products drastically reduced flea revenue for PMPs.

But the tide may now be turning for flea control. Some PMPs are noticing either an uptick in calls, or a change in how flea problems are progressing. And the

troubles have been blamed on everything from homeowner complacency to insecticide resistance. Whatever the cause, one thing is certain: with a dependable arsenal of products, the pest control industry is ready to step up to the plate.

A Market Opportunity

The rise in flea control work has been reported time and again in recent months. "We've seen a resurgence in our flea business," observed Doug VanGundy, director of specialty product development with Zoëcon Professional Products. VanGundy says PMPs have more flea work, and the company's salespeople are doing more flea training. "I think flea jobs are on the upswing," VanGundy added, "which is good for the PMP's business."

Other industry experts agree. Dr. Gary Bennett, professor of urban entomology at Purdue University, says there's been word of an increase in flea calls for about two years now. "From what I understand talking to PMPs, their flea business has jumped up quite dramatically."

While not all PMPs have documented an increase, many have noticed a difference in the type of flea calls they are receiving. Adam Jones, vice president of quality assurance, Massey Services, Orlando,

Fla., hasn't seen a significant jump in flea work, but he has seen a change. "We are getting a minor blip," said Jones, "in terms of having problem flea accounts, where consumers that didn't have flea problems before, all of a sudden are having flea problems."

Resistance Questions

Experts around the country offer a number of reasons for the change. One explanation, shared by a few industry professionals, is that resistance to on-animal products has developed in some flea populations.

Dr. Philip Koehler, professor of urban entomology at the University of Florida, Gainesville, said the on-animal products, typically applied between the shoulder blades of a dog or cat's back, have been of particular concern. "These have been around for about 20 years now and fleas are probably evolving resistance to some of the chemicals," Koehler explained.

Koehler noted there have been some efforts made to determine if resistance is occurring. While researchers haven't documented resistance to all of the chemistries used in on-animal products, says Koehler, "people who used to apply it successfully before are not able to apply it successfully now."

Some other professionals in the academic community tend to agree. Dr. Michael Rust, urban entomology program director and professor of entomology at University of California, Riverside, said he also learned of problems with some on-animal products, but doesn't have data to back those claims up.

Usage Issues

Still, not all industry experts are jumping on the resistance bandwagon. Dr. Nancy Hinkle, professor





Zoëcon: Flea Control Pioneers

Zoëcon® Professional Products are designed with the belief that pest prevention leads to profitability. The company is rooted in the foundation of Insect Growth Regulator (IGR) technology. They were the first to develop, manufacture and market IGRs: ((S)-Hydroprene and (S)-Methoprene), a technology that uses the insect's chemistry as a means to reduce pest populations.

Doug VanGundy, director of specialty product development for Zoëcon Professional Products, says the company's employees have been the reason for the company's success. "We have a lot of long-term, experienced employees," VanGundy noted. "While undergoing changes over the years the organization has pretty well stayed intact and I think that's been a strength of the company, allowing us to maintain and grow the business. We have a lot of long-term knowledgeable people here," he said.

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of entomology at the University of Georgia, Athens and extension veterinary entomologist for the state of Georgia, says pest control companies often get flea calls after the veterinary products fail. Therefore, she added, "the industry is ending up with the real challenges."

However, Hinkle believes factors other than resistance may be responsible for the recent rise in flea calls. "We see misuse of the product because the customer doesn't understand how it's supposed to be used." Toward that end, she explained, some homeowners may be washing their pets so frequently, that the topical products, which need oils on the pet's skin to help them dissolve and spread, aren't getting distributed properly.

"Generally it works quite well, however you have these fastidious pet owners that wash these pet animals on a weekly basis," Hinkle said. In those cases when the skin oils are removed, there's nothing for the active ingredient to dissolve in, she explained, and it doesn't spread as it's intended to.

Similarly Jones isn't convinced there's resistance and says he believes homeowners may be to blame, particularly when they change their pet's flea care regimen or don't use on-animal products consistently.

"Most often it's because they've decided to try and stop using a topical treatment," Jones said.

Wildlife Pests

Hinkle also points out that many flea problems aren't pet-related. Instead, the source is one or more vertebrate pests such as raccoons, skunks or opossums that have gained access to a structure. The construction type of the home may also factor in, particularly if there's a ventilated or accessible crawlspace where wildlife pests can gain entry and perhaps stay for a few weeks to rear their young, Hinkle said.

"When they leave, they leave their fleas behind," she explained. Attics, carports or adjoining sheds may also serve as nesting spots. Then, fleas left in the nesting area can climb up through floor boards to gain entry to a home in search of a new host. Hinkle said some examples of access points include holes around plumbing fixtures and electrical or cable line openings.

Hinkle believes flea numbers may have increased largely due to wildlife sharing their fleas in these domestic situations. "By allowing wildlife to come in and nest around our structures, we're also allowing them to share their fleas with us," she said.

Rust has learned of similar problems. "I have had more calls each summer about outdoor infestations and failure to control them," said Rust. He said feral animals in crawlspaces or under temporary structures are often the culprits.

Hinkle surmises that about half of the springtime flea issues may be caused by wildlife problems. Later in the summer, flea problems are more often due to pets.

Green Concerns

Finally, a more green-driven customer may also be behind the rise in calls to PMPs, as more pet owners contemplate their use of topical products. "A lot of people don't like the idea of dousing their pet with pesticide," noted Koehler. Furthermore, he said many pet owners don't want their families exposed to the pesticides that are applied to their companions.

That's good news for an industry that has green options to offer when it comes to flea control, namely insect growth regulators, or IGRs. "I think what this translates into is an opportunity for the pest control industry to offer a good service," said Koehler, "and if the pest control industry does their job correctly, they have a big market that they can exploit." 🌱



A practical approach to flea control utilizing IGRs.

With a rise in flea business on the horizon, many PMPs will need to brush up on the basics. That's especially important considering some PMPs are finding flea control more challenging than in years past.

Toward that end, PCOs can turn to Precor®, the industry's top selling flea control product. The Precor® family of products — IGRs for prevention and adulticides for knockdown — provide PMPs with the necessary tools to kill adult fleas while also targeting other stages of development.

IGRs and Fleas

Doug VanGundy, director of specialty product development for Zoëcon Professional Products, explains flea control must be viewed as a total package. "A proper flea job requires a multi-faceted approach," VanGundy notes. "It's not just a matter of going in and spraying the entire house." Rather, he says PMPs have to look at *all* areas where fleas can develop, including the yard,

garage, basement, and areas of the house where the pet(s) spends most of its time.

VanGundy also points out that IGRs are essential in the battle against fleas. Zoëcon was the first company to launch IGR technology, having introduced hydroxyurea and methoprene some 30 years ago.

"One, they provide excellent efficacy," VanGundy said. For example, Precor® 1% as a tank mix can provide up to 210 days of control from eggs being dropped in a carpet by an infested animal. The residual action keeps the infestation from rebuilding because the IGR will target those developing larvae long after the adulticide is gone, preventing them from becoming breeding, biting adults. "What the IGRs do is help keep rebound from occurring, so you have a satisfied customer," VanGundy said.

VanGundy admits IGRs have sometimes been difficult to market, as they do not provide a direct kill of the insect. As PMPs are embracing green technology and lower toxicity products, IGRs have become recognized



for their value as efficacious products and offer a profile that today's environmentally aware consumer can relate to. "PMPs have begun to recognize the value IGRs offer in



"Using IGRs in a timely manner, we can actually forestall flea problems, instead of waiting until we have a severe flea problem and then trying to get it under control."
— Dr. Nancy Hinkle

providing satisfaction to their customers and providing no callbacks," VanGundy said. Furthermore, he explained, an IGR combined with an effective adulticide — such as Zoëcon's recently released Zenprox™ EC (see related story on page 7) — will knock the adult population down and help prevent fleas from coming back. "They're going to get that one-two punch and keep the fleas under control," VanGundy explained. "For PMPs and customers that are looking for a lower toxicity alternative, IGRs fit very well into that program."

Dr. Nancy Hinkle, professor of entomology at the University of Georgia, Athens, also recommends the use of IGRs to prevent future flea problems. "Using IGRs in a timely manner, we can actually forestall flea problems, instead of waiting until we have a severe flea problem and then trying to get it under control," Hinkle said.

Flea Opportunities

Hinkle recommends that companies develop proactive flea programs, and start by contacting any customers that may have had flea problems

in the past. Companies can then treat the home with an IGR, and also inspect to determine if wild-life are nesting under or near the structure. Similarly, proactive efforts also can be made with customers who have pets, Hinkle said, and spring is a good time to take a preemptive approach to the problem, she said.

Dr. Philip Koehler, professor of urban entomology at the University of Florida, Gainesville, also believes taking a proactive approach to fleas is a good idea for PMPs. "They have available to them some products that are very good for flea control," he said, "and have very minimal impacts on anything else." Koehler said growth regulators are tremendous tools professionals can use that affect the insects but not warm-blooded animals.

Adam Jones, vice president of quality assurance for Massey Services, Orlando, Fla., points out there are opportunities for flea control work in a number of areas, particularly among homeowners with indoor animals who value a comprehensive control program.

With Massey that includes treating outdoor areas in shrub beds and shadier parts of the lawn with a pesticide, vacuuming, and performing indoor treatments with both residuals and insect growth regulators. Homeowners are also reminded to treat their pet with a topical flea treatment.

"When we do deal with fleas

IGRs Arrest Future Flea Generations

Dr. Gary Bennett, professor of urban entomology at Purdue University, notes that fleas have always been one of the more challenging pests to control, particularly since they infest a variety of hosts and pass through multiple life stages: egg, larva, pupa and adult, all of which are likely to be present in a typical infestation.

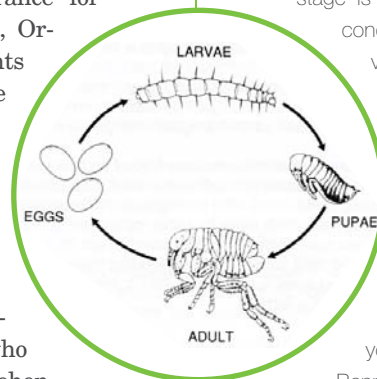
Adult fleas usually stay in the host's resting areas until the population explodes, at which point they'll scatter in search of a blood meal. Female fleas can lay viable eggs once a blood meal is taken, and on average they lay 25 eggs per day over 50 days.

Flea eggs also have a close association with the host animal and will be present in the bedding areas of the pets or animals. As the eggs hatch out, those larvae move down into carpeting and underneath things where they are fairly well protected, Bennett notes. The larval period normally lasts 7 to 15 days but can be longer.

Unlike the egg and larval stage, the pupal stage is extremely resilient to harsh conditions. At this point the larva has spun a cocoon from its own saliva and debris. Adults emerge from the pupal case anywhere from one to two weeks, up to a few months depending on conditions.

"So you've got several different stages of fleas that you have to try to control," Bennett said. Furthermore, PMPs need to have cooperation from the customer in terms of treating their pet.

Bennett said while adulticides will kill adult fleas, professionals also need a growth regulator to prevent the immature stages — the eggs and the larvae — from developing into adults. If you don't do that, he says, in another week or two, more adults will continue to show up. "They have a more complex life cycle," said Bennett of fleas, "so as a result you have to pay attention to all those stages of the life cycle in order to get good control."



we are able to effectively deal with them very easily with the products and materials we have available.” said Jones. For indoor treatments the company uses either liquid Precor® IGR or Precor 2000® Plus Premise Spray, Jones said. The product is applied to all the surface areas, including the carpets, floors, rugs, furniture, and underneath upholstery cushions, Jones said. Massey also treats the undersides of upholstery: Couches are flipped over and their undersides are treated.

Jones said the extent of treatment depends upon where fleas are found. “In most situations we have a flea problem, the flea problem tends to be pretty fairly widespread,” Jones said. “It’s not isolated just in one room so you typically have to do the majority of the house.”

Jones said Massey has selected Precor® IGR and Precor 2000® Plus Premise Spray because it’s effective. “Looking at the problem over the years, we’ve always been successful with that combination of that insect growth regulator and that active ingredient,” he said. “So we continue to use what we know works.”



“When we do deal with fleas we are able to effectively deal with them very easily with the products and materials we have available.” — *Adam Jones*

Massey also has devised a protocol and preparation checklist for customers. “The key to solving the problem indoors is to be very thorough and comprehensive,” Jones said. That means an infested structure has to be vacuumed, then treated with an insect growth regulator and a liquid residual, and the pets also have to be treated. Jones says the outdoor areas should also be treated to cover all bases. “When we do that, we’re very successful at solving the problem very quickly for our customer,” Jones said.

Homeowner Cooperation

Dan Oliver, manager of Spider Man Pest Control based in San Antonio, Texas, said the flea pressures in his area are relatively high. Oliver also

uses either Precor 2000® Plus Premise Spray or Precor® IGR mixed with an adulticide. “That’s standard on all treatments,” Oliver said.

In order to warranty the service, the company must treat the lawn at the same time the house is treated, Oliver said. And a thorough preparation is requested of homeowners. “Homeowner preparation is probably a bigger part of the job than the actual application,” said Oliver. “If they don’t do the preparation...you could have a failure.” Spider Man’s customers are asked to vacuum in advance, cut the lawn, remove the pets from the house, have the pets treated, and then to stay off the treated areas until they’re dry.

Oliver said he may choose Precor® IGR mix for heavier infestations or when treating tile floors, and selects Precor 2000® Plus Premise Spray when treating carpeted areas.

Oliver also provides post-treatment tips to customers. “We recommend the vacuuming even after we’ve done the treatment,” he says. He explains the vacuuming will help loosen any eggs that remain. The company also typically makes a quality control follow-up phone call in 14 to 21 days. “We try to take a proactive measure instead of waiting for the phone to ring with a problem,” said Oliver.

Treatment Options

Cherie Hunter, pest control supervisor of Rid-A-Critter Nuisance Animal and Pest Control in Atlanta, has also seen changes in the flea control area. “Over the years they’ve become increasingly a little bit more difficult to eliminate, due to the resistance that they’re building towards the products,” said Hunter.

Hunter uses either Precor® IGR or Precor 2000® Plus Premise Spray for all of the company’s flea treat-



Pet resting areas such as dog beds are prime treatment sites for IGRs, since flea eggs and flea larvae are often found there.



ments. “As long as we continue that on a regular basis and we eliminate their ability to continue to reproduce, then it continues to drop,” Hunter explained.

Generally Hunter uses the Precor® IGR and concentrate for initial treatments, and may switch to Precor 2000® Plus Premise Spray if the first treatment isn’t completely successful. She has found the adulticide in Precor 2000® Plus Premise Spray offers a bit more staying power than other pesticides labeled for indoor use in a tank mix. Additionally, Hunter said Precor 2000® Plus Premise Spray is ideal for use on hardwood floors.

Hunter also likes the application convenience of the Precor® IGR mixture sprayed in a fine mist and used as a general surface spray to cover a larger area, including flooring, rugs, underneath furniture, on furniture and curtains. “You can’t leave any leaf unturned,” Hunter said. “You have to truly treat everything.”

Proven Results

Michael Baric, service manager with Impact Pest Management in Tarpon Springs, Fla., says his com-

pany has used Precor® IGR for a few years now. “Our techs have been very happy with Precor® IGR,” Baric said. Impact covers the Tampa Bay area of Florida. Their season tends to be the dryer months of March, April and May, but Baric observes the local climate in the area helps sustain fleas year round as well.

Baric has heard customers complain that the veterinary products may not be working as well as they used to, but he adds, “you never know if people are applying it consistently, applying it to the correct dosage.”

When his company is called in to take care of a suspected flea problem, technicians first confirm the presence of fleas. One way he’s often done that is by walking through the structure wearing white socks pulled up over his pant cuffs. If fleas are present, they’ll typically hop up at his feet. “It’s one of the easiest ways to determine if you have adult fleas,” he said.

Baric treats inside structures with Precor 2000® Plus Premise Spray, hitting upholstered and carpeted areas, particularly where the pets rest. The company also treats

outside areas, again focusing on favorite pet hangouts. Baric says in his area, flea problems are associated with pets at least three-fourths of the time. However, in his region many homes are built on crawlspaces, where wildlife may nest, often introducing fleas to the structure.

“We have been very happy with Precor® IGR,” Baric said. He likes the light consistency of the spray which allows it to dry quickly and not drip. He also has used Precor® Plus Fogger in cluttered areas such as garages, where it’s difficult or impractical to move objects or walk around freely.

It’s Baric’s policy to call or visit customers two weeks after treatments as a follow-up. “Most of the time,” he said, “we’re able to get control pretty easily.”

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For more information about Zoëcon Professional Products’ entire line of flea and pest control solutions, visit www.zoecon.com.

New from Zoëcon: Zenprox™ EC

Zoëcon Professional Products recently introduced Zenprox™ EC, a broad-spectrum contact kill product approved for indoor use. Fast-acting Zenprox™ EC controls more than 25 different insects including fleas, bed bugs, ants and cockroaches with an extended residual.

Zenprox™ EC is an ideal tank mix partner for use with Precor® IGR or Gentrol® IGR. The combination of a contact kill product and an IGR helps provide complete control for a variety of insects and helps prevent reinfestations.

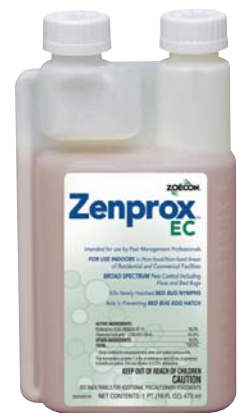
“Our primary goal was to create a broad-spectrum contact kill product that works immediately and offers an extended residual, and we’ve done that with Zenprox™ EC,” said John Neberz, business manager, Zoëcon Professional Products.

Zenprox™ EC contains the active ingredient Etofenprox, a non-repellent “ether” pyrethroid. Approved for indoor use, Zenprox™ EC

can be used as a broadcast, spot or crack-and-crevice treatment to control pests in homes, apartments, hotels, schools and commercial properties. It can be applied to carpets, mattress seams, box springs and more, and provides up to one month of residual activity.

Zenprox™ EC is available in a 16-ounce squeeze-and-measure bottle and comes with six bottles per case. It mixes easily with water and may be applied with most application equipment. To learn more about Zenprox™ EC visit zoecon.com.

Zenprox is a trademark and Gentrol, Precor and Zoëcon are registered trademarks of Wellmark International.



Precor® Flea Control

The industry leader in IGR technology, Zoëcon Professional Products offers a comprehensive line of Precor® products to meet virtually any flea control need including:



Precor® IGR Concentrate: Precor® IGR Concentrate is a tank mix partner for compressed air sprayers which controls the pre-adult fleas that make up 99 percent of a typical flea population. When applied, Precor® IGR molecules move to the places pre-adult fleas live (in the base of carpet fibers and between furniture cushions) and target fleas in the egg and larval stages of development, preventing new infestations of breeding, biting adults. The product should be used in conjunction with an appropriately labeled adulticide. Precor® IGR provides up to seven months of indoor control of pre-adult fleas.

Precor 2000® Plus Premise Spray: Precor 2000® Plus Premise Spray is an aerosol providing two adulticides for knockdown along with the IGR for controlling future generations. Precor 2000® Plus Premise Spray is a convenient alternative for those PMPs that don't want to tank-mix. A single application provides long term residual that helps to solve tough flea problems, while the IGR prevents larvae from becoming adults, thereby helping to prevent future infestations and callbacks. Precor 2000® Plus Premise Spray applies as a fast-drying fine mist and penetrates deep into the base of carpet and upholstery fibers. The product leaves no visible residue and can be applied as a broadcast application to carpet, wood flooring, tile, pet bedding, and other areas where pets rest and eat. The product prevents adult flea emergence for seven months. One can covers 2,000 square feet.

Petcor® Flea Spray: This on-animal spray is designed as a leave-behind product for customers with pets. The Petcor® Flea Spray combination of pyrethrin and methoprene kills adult fleas for up to two weeks and sterilizes flea eggs for up to 63 days with a single application. Gentle enough to be applied directly to flea-infested dogs and cats, Petcor® Flea Spray provides backup to those accounts with companion animals that pick up fleas from other sources. The spray can be used on dogs, puppies, cats and kittens, and also kills ticks on contact. It provides added value and protection to flea service accounts.

Precor® Plus Fogger: This product contains an adulticide and IGR for immediate knockdown of adult fleas with the long-lasting control of an IGR. Designed for spraying cluttered areas such as basements and garages, the combination prevents reinfestations for up to seven full months. Precor® Plus Fogger offers a no-odor formulation, is water-based, and won't stain or leave an unsightly residue.

Petcor, Precor and Precor 2000 are registered trademarks of Wellmark International.

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