WHITMIRE MICRO-GEN PRESCRIPTION TREATMENT®

QUARTERLY

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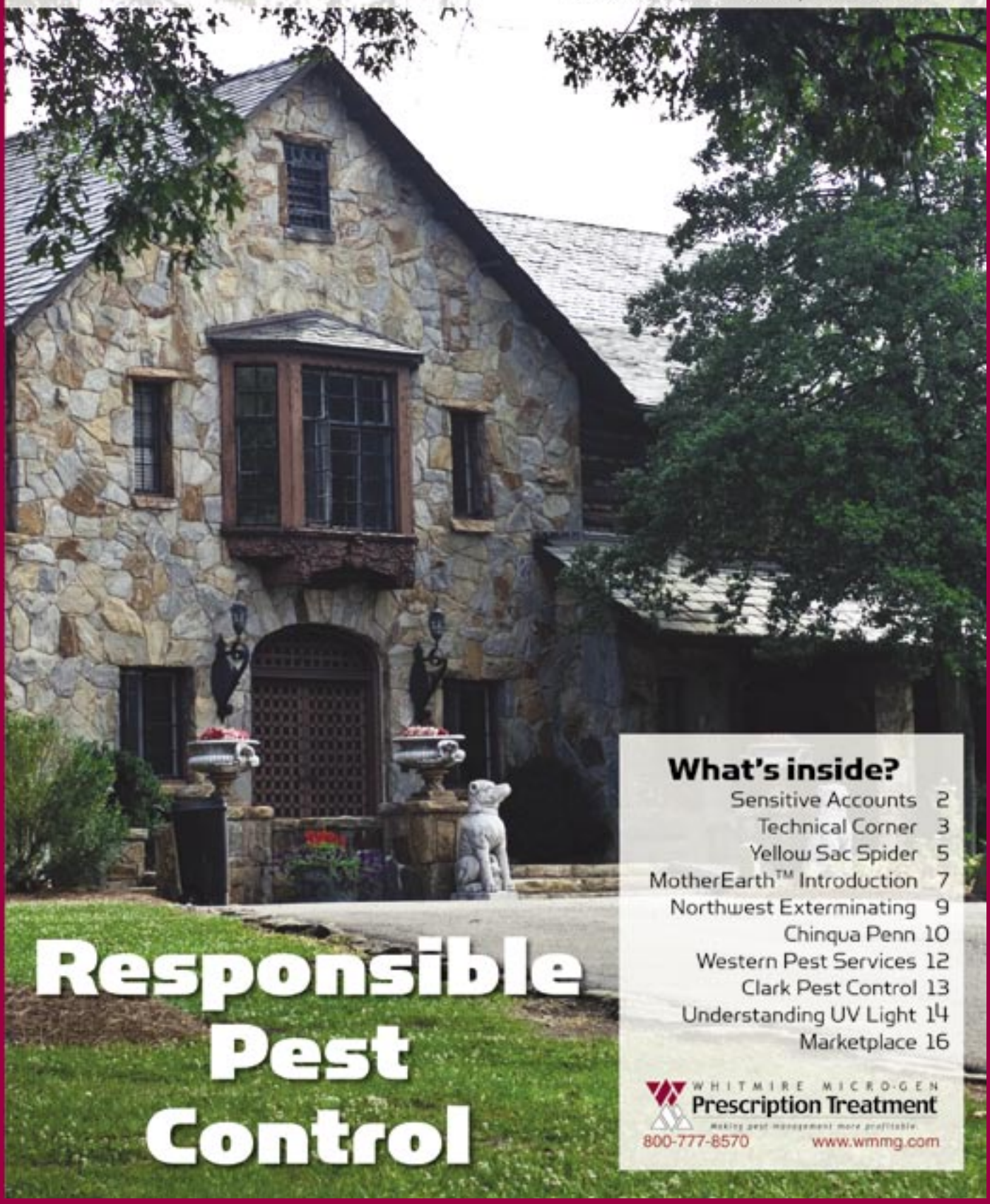

Responsible Pest Control

What's inside?

by Andy Symons

SENSITIVE ACCOUNTS

■ *Expanding Product Lines Help PMPs Provide Prescriptive Solutions for Sensitive Accounts*

There is a lot of talk these days about environmentally friendly products for "sensitive" pest control accounts. But from our perspective, all accounts are sensitive in some way and should be treated in a responsible manner. In fact, that has always been the basis for our Prescription Treatment® approach.

So what's a PMP to do? The easiest way to ensure your ability to treat the wide variety of sensitive accounts – and therefore boost sales – is to incorporate a broad spectrum of products into your toolbox and follow a prescriptive treatment approach.

Whitmire Micro-Gen has been offering this prescriptive approach for years through our Prescription Treatment system. Most PMPs have been using this approach for a long time. The use of "low impact", "natural" or "green" products has a role to play in the toolbox of the PMP but it is absolutely not the only offering if we are to provide our customers with a responsible solution.

Our Prescription Treatment process and product line incorporates a wide array of products and formulations, including products such as pyrethrum. And now, we are excited to expand our Prescription Treatment offerings with the MotherEarth™ brand of products (read more on pages 7-8).

While we are pleased to be adding the "MotherEarth" range to the Whitmire Micro-Gen product line we also fully recognize this line of products will not provide the solution to all customer needs. The ultimate decision as to what is the best solution for a customer should be determined by the PMP after a careful analysis and discussion with the customer. Our role at Whitmire Micro-Gen is to ensure we continue to provide options and choices within the Prescription Treatment offering that will help you achieve that goal.

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Finally, don't miss reading about the non-invasive, environmentally conscious use of our Advance® Termite Bait System at the world-renowned Chinqua Penn Plantation and how Whitmire Micro-Gen customers incorporated Advance® Cockroach Gel Bait and Microcare® into their treatment programs.

Andy Symons is president at Whitmire Micro-Gen.

Prescription Treatment® Quarterly is published by Whitmire Micro-Gen Research Laboratories, Inc. Whitmire Micro-Gen is one of the leading manufacturers and suppliers of general insect control products and equipment to the professional pest management industry in the United States. Whitmire Micro-Gen specializes in the manufacture of aerosols and baits for insect control and develops unique and environmentally friendly fly control equipment.

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TECHNICAL CORNER

It's Not Easy Being "Green"… Or Is It?

There is an emerging market for "green" products and services in the United States. Consumer demand for "green" is recognized in our industry and is seen as an opportunity by many pest management professionals (PMPs). I've been asked, "What does Whitmire Micro-Gen have for 'green' programs?" The answer may surprise you.

"Green" is a term for a movement that advocates the protection of the natural environment. It relates to things that reduce our collective carbon footprint or conserve natural resources. Things that are beneficial for the planet in turn are good for the people living on it. Pretty simple and straightforward, right?

In pest management terms, consumers often refer to "green" in discussions of health and safety. They may be concerned with the earth's environment, but they are also concerned with the microenvironment of their home or workplace. Many are specifically concerned about pesticide products, usually drawing a broad, albeit incorrect, assumption that natural products are "green" by virtue of their origin, and therefore are safer than synthetic products. This is an oversimplification and not necessarily true which raises a critical point. In pest management, "green" is not all about the origin of the products; it is about the professionalism of the service provider and the process he follows.

Many customer segments are emerging that request / require special service to address their specific needs and concerns. Examples include schools, public buildings, certified organic facilities, LEED certified buildings, healthcare facilities – the list goes

Many customer segments are emerging that request/require special service to address their specific needs and concerns.

PRESCRIPTION TREATMENT PEST MANAGEMENT

Contains five key components that work together to ensure an effective and consistent professional pest management process. Together, they create the finished product offered to your customers.

1) INSPECT
2) PRESCRIBE
3) TREAT

Start the Cure. Treatment techniques are the actions taken to solve pest problems. They are options that focus on how the prescription will be implemented. Learning each technique will arm technicians with important knowledge necessary to make informed decisions.

- Crack & Crevice Treatment
- Void Treatment
- Spot Treatment
- ULV-Space Treatment
- Directed Contact Treatment
- Perimeter Treatment
- Exclusion
- Baiting
- Monitoring/Trapping

4) COMMUNICATE
5) FOLLOW-UP

on and on. All could be described as desiring "green", but each has its own special needs. Describing special cases by naming them "green" programs is very misleading due to the vague definition of "green". This leads to confusion in our industry on this topic. A better name is "responsible" pest management.

We are really being called to provide these special accounts with pest management based on a situational analysis of each client and each pest scenario to determine a responsible plan; a process we've called Prescription Treatment® (PT®) Pest Management for years. Many PMPs have been using this approach successfully for years, maybe not realizing how "green" it is. Prescription Treatment is responsible pest management. It is responsible to the environment, the clients and the PMP's business.

For those unfamiliar with Prescription Treatment, it is a five step process. The **INSPECTION** enables evaluation of the situation. It creates an understanding of customer needs, pest problems and other critical information. The information gathered during the inspection provides the basis for developing a responsible plan or **PRESCRIPTION.**

This is the what, where, when, why and how the treatment is to be applied. The prescription may or may not include the use of pesticides and should always be determined appropriate for each situation. When prescribing a treatment the goal is to make targeted treatments to be most effective, while minimizing risk to the customer and environment. The application site, product formulation, treatment technique and active ingredient are all taken into consideration. If a **TREATMENT** is called for, it should be carried out using one of the 9 treatment techniques, properly executed by well-trained personnel with emphasis on safety and effectiveness. After the action steps of the treatment have been taken, FOLLOW-UP ensures success and connects services, making pest management an ongoing process not a one time event. COMMUNICATION with the customer occurs throughout the process. It establishes customer needs and expectations during the inspection, what will be done and why in the prescription, what his/her role in the process is during the treatment, and it establishes value and leads to customer satisfaction as part of the follow-up.

Whitmire Micro-Gen has a growing line of MotherEarth™ brand products that will help you provide prescriptive solutions for special customer needs. It's a mistake though to limit your options unnecessarily when striving to provide the best possible solution to your customers' pest situations. There are many sensible treatment techniques and product formulations in Whitmire Micro-Gen's wide offering; the key is to use the PT process to be responsible in your choices and actions. By properly selling your professional service and the Prescription Treatment Pest Management process you can meet the needs of the most sensitive of accounts. It's that easy to be "green".

Brian Mann is education and market development manager at Whitmire Micro-Gen.

by Dr. Stuart Mitchell

YELLOW SAC SPIDER

■ *Biology, Behavior and Control*

Have you ever noticed a light-green streak run across yourself while sitting on the couch? How about a little spider lowering itself down from the ceiling to say hello to you? If you have experienced one of these events, you may have had a rude introduction to the yellow sac spider, *Cheiracanthium inclusum.*

They are a rather small (5-10mm) pale-yellow spider found on most of the North American continent. The male (5/16" or 8.5mm) is generally larger than the female (3/16" or 5mm). This spider's color is pale yellow to pale green and has eight eyes in two rows. The jaws and leg-tips are light brown.

The yellow sac spider's egg sacks are white, paper-like disks attached to surfaces and contain 30-48 eggs. Females produce several egg sacks during their life-time. The female stays nearby to protect the eggs and the resulting spiderlings.

Yellow sac spiders are found mostly outdoors in leaf litter, short grasses and on tree trunks, but enter houses and other structures.

Yellow sac spiders are found mostly outdoors in leaf litter, short grasses and on tree trunks, but enter houses and other structures. These spiders generally move indoors by higher numbers in the fall as available food supplies diminish and temperatures cool. Entrance is gained via door and window gaps, poor screens and construction tolerances between dissimilar substances, utility openings, vents, weep-holes and importation on plants. Yellow sac spiders routinely inhabit indoor areas year-round. They create shelter in a flattened silk-tube or sac in the upper corners where the ceiling and wall meet during the day and move around at night to hunt. They can frequently be found crawling along walls or other vertical surfaces. Upon being disturbed, the yellow sac spider web drops to the floor and assumes cover.

Spiders

The opinion that this spider is dangerous to humans has been debated. A recent study of 20 confirmed yellow sac spider bites revealed no evidence of necrosis; further review of international literature on confirmed bites revealed only a single bite with mild necrotic symptoms.

It is suspected that the yellow sac spider may reside in voids or dead spaces and feed upon existing insect populations. Yellow sac spiders do not capture prey in webs and they feed on a varied diet of arthropods, including spiders larger than themselves and even their own eggs. Thirty percent of adult males are consumed by females at mating. The yellow sac spider, native to North America, is just one of a select group of spiders in North America whose bites are considered to be medically significant.

INSPECTION TIP

Check exterior for conditions which may attract insect populations to structure such as improper lighting, debris, clutter or heavy vegetation near foundation. Control insects to reduce spider's food resources. More insects generally means more spiders.

TREATMENT TIP

Remove silk sacs and egg cases during treatment with a portable vacuum. Focus attention on wall-ceiling joints, door casings, crown moldings, window frames and the tops and bottoms of window sashes.

PRESCRIPTION TREATMENT® FORMULATION RECOMMENDATIONS

- Tri-Die® Silica and Pyrethrum Dust is very effective for void areas.
- Cy-Kick® CS Controlled Release Cyfluthrin provides excellent residual protection to areas where spiders may crawl as they hunt for prey, indoors and outdoors.
- 565 Plus XLO® Contact Insecticide is an effective product for flushing spiders from their harborage and for directed contact kill.
- Sticky monitor traps are helpful in catching hunting spiders like the yellow sac spider, but keep in mind that this spider spends much of its time above ground level, so may require creative placement.

MEDICAL SIGNIFICANCE

Bites (human arachnidism) resulting from yellow sac spiders are believed to be toxic to humans and may feel like a sharp pain, but seldom produce more than localized symptoms. Chelicerae of yellow sac spiders are very powerful and their fangs can penetrate human skin. This venom can cause localized tissue necrosis (tissue death which may be similar to that caused by a brown recluse bite). However, the symptoms are less severe and do not result in the systemic effects generally seen with brown recluse envenomations.

Symptoms include localized redness, a burning feeling and some swelling for 24 to 48 hours. In severe cases, a localized burning feeling may last an hour and pain may last for 72 hours. Reddening may occur with puss. Yellow sac spiders are understood to produce a high percentage of the spider bites suffered by people in the U.S. They wander when people cannot see well or are asleep; therefore, the spider may receive pressure and bite as reactionary self-defense. Bites occur when this spider gets into clothing or bedding and is trapped.

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Dr. Stuart Mitchell is consulting physician/medical entomologist/technical director for Springer Pest Solutions.

MOTHEREARTH™

■ *MotherEarth Line Offers New Options for PMPs*

If there is one thing PMPs know for sure, it's that every pest control job is different. The treatment environment, level of infestation, mix of pests and customer sensitivities – to name a few factors – weave together to make each treatment situation unique.

What this means for PMPs is that having a variety of treatment options increases the likelihood that you have a solution for every account, which increases your business opportunities. And now, the company that originated the Prescription Treatment® approach to pest management introduces an extension to Prescription Treatment products – the MotherEarth™ product line.

MotherEarth products offer a new set of treatment choices for PMPs based on active ingredients that are derived directly from Mother Earth herself. With active ingredients like boric acid, d-limonene and pyrethrum, more options are available for accounts that are interested in this approach.

"There are an increasing number of customers who – for a variety of reasons – may prefer this type of treatment option," says marketing manager Nick Tresslar. "Now they have that option within the tried and true Whitmire Micro-Gen arsenal of products, along with our robust education, training and technical support."

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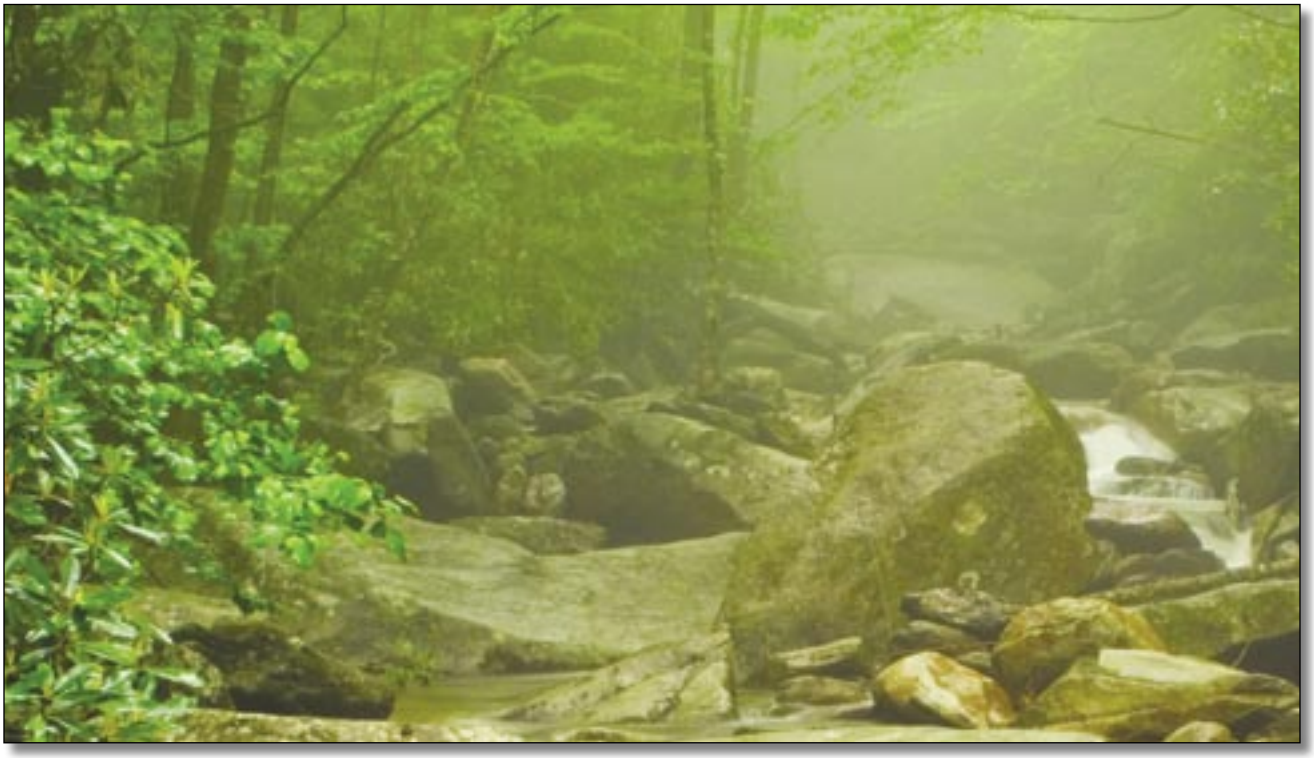

MotherEarth products offer a new set of treatment choices for PMPs based on active ingredients that are derived directly from Mother Earth herself.

CURRENT MOTHEREARTH™ PRODUCT LINE:

MOTHEREARTH D PEST CONTROL DUST

MotherEarth D Pest Control Dust is a broad spectrum desiccant dust that is effective against a wide range of pests, including ants, cockroaches, earwigs, fleas, mites, spiders and other crawling insects. It is labeled for both indoor and outoor use including food handling areas.

MotherEarth D Pest Control Dust consists of 100 percent diatomaceous earth, the fossilized skeletal remains of single-cell phytoplankton. Unlike boric acid dusts that work best when ingested, MotherEarth D Pest Control Dust only requires contact with the insect to be effective. The absorptive properties of the fossilized cell walls easily remove the cuticle's outer waxy layer. This results in the loss of an insect's ability to maintain proper fluid levels, which eliminates the pest.

MOTHEREARTH GRANULAR SCATTER BAIT

MotherEarth Granular Scatter Bait is a long-lasting granular scatter bait for the treatment of ants, cockroaches, crickets and other occasional invaders. Its attractive bait matrix offers broad-spectrum control and its granules provide long-lasting protection.

The active ingredient, boric acid, in MotherEarth Granular Scatter Bait is mined straight from the earth. The product is an excellent choice for preventative and curative treatments.

MOTHEREARTH 2% PY CONTACT INSECTICIDE

MotherEarth 2% Py Contact Insecticide is a fast-acting pyrethrum aerosol for quick kill of crawling and flying insects. It is ideal for Crack & Crevice® spot and space treatments.

The active ingredient in MotherEarth 2% Py, pyrethrum, is derived from chrysanthemum flowers and it has no synthetic synergists. This powerful spray is quick drying with excellent killing and flushing power.

MOTHEREARTH WASP & HORNET JET SPRAY

MotherEarth Wasp & Hornet Jet Spray is a pressurized jet spray that is specifically formulated to provide quick knockdown of wasps and hornets. It has a high dialectic rating and is labeled for spiders.

Its active ingredient is d-limonene, a botanical insecticide, which is also in Whitmire Micro-Gen's ProCitra™ DL contact insecticide. The spray can travel 10 feet and has a pleasant citrus odor, making it ideal for many types of accounts.

This new line of products within the trusted Prescription Treatment approach gives PMPs yet another set of treatment options for all of the many unique pest control situations they face every day.

For more information about the MotherEarth line of products, visit www.wmmg.com or call 800-777-8570.

**See www.wmmg.com for state registrations.*

by Steve Richardson

MOTHEREARTH™ GRANULAR SCATTER BAIT

■ *New Granular Bait Solves Argentine Ant Infestation for Northwest Exterminating*

A difficult to treat, problem account can sometimes present the best opportunity to try a new treatment approach. Such was the case for Georgia-based Northwest Exterminating when Argentine ants had overrun a residential account.

The severity of the infestation made treatment difficult, and Northwest Exterminating was looking for opportunities to try Whitmire Micro-Gen's new MotherEarth™ Granular Scatter Bait – a granular treatment that offers long-lasting protection against ants, cockroaches, crickets and other nuisance pests.

"The ants took up the granules literally in a matter of seconds," says Jason Tripp, Northwest Exterminating's Commercial Manager and Staff Entomologist. "It was a very quick treatment and it was the solution we needed for that home."

The efficacy demonstrated in several additional test accounts convinced Northwest to incorporate MotherEarth Granular Scatter Bait into their product rotation.

MotherEarth Granular Scatter Bait utilizes an attractive bait matrix that provides broad-spectrum control of a variety of common pests. Its active ingredient, boric acid, is derived directly from the earth, and it is an excellent option for preventative and curative treatment scenarios. The bait is odorless and has low mammalian toxicity, making it ideal for sensitive accounts and both indoor and outdoor use.

Northwest Exterminating saw the perfect opportunity to weave Mother Earth Granular Scatter Bait into its "NorPest Organic" program, a self-described "green" pest control approach which is growing in popularity with the company's customers in Georgia and the Southeast region.

"NorPest Organic incorporates a series of environmentally sensitive products for the increasing number of customers who are seeking low-impact, highly-effective pest control," Tripp explains. "MotherEarth products fit right in."

Whitmire Micro-Gen's Mother Earth line – a line of products whose active ingredients include essential oils and materials mined directly from Mother Earth herself – includes Mother Earth Granular Scatter Bait, Mother Earth D Pest Control Dust containing diatomaceous earth that treats crawling insects, MotherEarth 2% Py Contact Insecticide which is a fast-acting, non-synergized pyrethrum aerosol for quick kill of crawling and flying insects, and MotherEarth Wasp & Hornet Jet Spray.

"The MotherEarth product line is all about providing PMPs with options," says Nick Tresslar, Whitmire Micro-Gen marketing manager. "There is clearly a growing interest in environmentally responsible pest management treatments, and PMPs who are embracing products like Mother Earth into their programs are seeing increased business opportunities – and happy customers who appreciate having choices."

Northwest Exterminating saw the perfect opportunity to weave MotherEarth Granular Scatter Bait into its "NorPest Organic" program.

MotherEarth Granular Scatter Bait is a granular treatment that offers long-lasting protection against ants, cockroaches, crickets and other nuisance pests.

Steve Richardson is a freelance writer based in St. Louis, Mo.

CHINQUA PENN PLANTATION

■ *Advance® Termite Bait System Protects Historic Plantation in North Carolina*

Tucked away off the winding roads near Reidsville, North Carolina, is an American architectural gem known as the Chinqua Penn Plantation. Built in the 1920s for prominent businessman and farmer Thomas Jefferson Penn and his wife, Beatrice, the sprawling estate is listed on the National Register of Historic Places and has been featured on the A&E Channel series, "America's Castles."

The plantation is anchored by a 27-room English countryside mansion filled with rare and elaborate furnishings from 30 countries, many of which the Penns acquired while traveling the world. It is surrounded by 22 acres of gardens and historic landscape, and it recently re-opened to public tours.

"The grounds are spectacular and the level of architectural and design detail was a huge draw," explains Lisa Phelps, who bought the house in 2006 with her husband, businessman Calvin Phelps.

A big part of preserving the historic plantation comes in the form of preventing damage caused by the one of the area's biggest troublemakers – subterranean termites. North Carolina is a hotbed of activity for subterranean termites, which cause more than $5 billion in damage in the U.S. each year, according to the National Pest Management Association.

The first sign of potential trouble came while the Phelps' were conducting their final walk-through before closing on the property. The inspector found termite tunnels in several spots, but further inspections by the property's long-time pest control company, General Termite & Pest Control located in Reidsville, North Carolina showed

The Chinqua Penn Plantation was built in the 1920s for businessman and farmer Thomas Jefferson Penn and his wife.

that there was no active termite infestation.

That scare was enough, however, for the owners to seek out the best possible long-term preventative treatment for all of the structures on the plantation. Chinqua Penn's caretaker and groundskeeper, Mead Lott, was utilizing Whitmire Micro-Gen's Advance Termite Bait System (ATBS) on his own home, and General Termite & Pest Control also uses Advance as their exclusive baiting system. With this meeting of the minds, a solution was born.

"Since we made the switch to the Advance Termite Bait System three years ago, we've never looked back," says Karen Pugh, owner of General Termite & Pest Control. "And in the case of the Chinqua Penn Plantation grounds, there really wasn't any other solution that provided the long-term treatment that the owners wanted."

Now, nearly 100 ATBS stations surround and protect the plantation house, as well as the grounds' four additional buildings.

Pugh says there were two key reasons why ATBS was the treatment of choice. First, the structural aspects of the buildings do not lend themselves to a liquid treatment. The main house is made primarily of stone and the owners did not want to compromise the integrity of the structure by drilling into the stone and pouring in chemicals. ATBS was also appealing because the stations sit inconspicuously at ground level where the many guests and tour groups will not spot them while walking the property.

"The design of the stations – all the way down to the color – makes them blend in perfectly, and they are still very easy for our technicians to locate and service," Pugh says.

General Termite & Pest Control spends countless hours monthly educating technicians to deliver excellent service.

Secondly, Calvin and Lisa Phelps preferred to find a treatment method that was environmentally friendly and used the least possible amount of chemicals. "We have a young son and there are so many people that come through the property that we just feel better about minimizing the use of chemicals," Lisa Phelps says.

ATBS stations typically see signs of termite activity within 15-45 days of installation. Once the stations have a "hit" from termites, a bait cartridge containing an insect growth regulator is placed into the station. The termite colony is eliminated after the naturally occurring molting process is short circuited by the bait.

Pugh says that servicing ATBS on a quarterly basis not only provides the owners with long-term peace of mind, but it also coincides nicely with her ongoing pest management efforts at Chinqua Penn. She adds that Whitmire Micro-Gen's technical and training support has been an enormous help.

"The product support materials and the support of my regional technical specialist have been invaluable," Pugh explains. "I am able to customize the materials to our business and they have such a professional appearance. It gives our customers a lot of confidence in the product."

For more information on the Advance Termite Bait System, visit www.advancetbs.com

Steve Richardson is a freelance writer based in St. Louis, Mo.

by Steve Richardson

ADVANCE™ COCKROACH GEL BAIT

■ *Experiment Turns Tester into User for Western Pest Services*

Western Pest Services Branch Manager Don Walton had been looking for an opportunity to test Whitmire Micro-Gen's recently introduced Advance Cockroach Gel Bait. The opportunity came a few months ago in the form of a serious infestation in a shopping mall food court restaurant in Richmond, Va.

Walton's test proved successful thanks to the new fast-acting Advance Cockroach Gel Bait.

The restaurant was overrun with cockroaches throughout the kitchen and prep areas. In order to test the efficacy of Advance Cockroach Gel Bait in comparison to other competitive products, Walton applied several products at the site, but used Advance only in one particular area – a 10-foot long stainless steel prep table. The hollow legs of the table were full of roaches, and the undersides of both shelves were clustered with roaches in various life stages.

"I followed up several days after the application and there was not a sign of life on that prep table," Walton says. "Advance is the only thing that could have killed those cockroaches. I was thrilled – and so was the customer – that the product worked so well." Three weeks later, the restaurant's cockroach problem was completely solved.

Walton's test proved successful thanks to the new fast-acting Advance Cockroach Gel Bait. It offers both ingestion and contact kill. The one-of-a-kind bait matrix attracts both averse and non-averse cockroaches and stays attractive for 30 days or more.

Advance Cockroach Gel Bait offers both ingestion and contact kill.

"Advance effectively solves the gel-aversion problem while still offering the benefits of an easy-to-use gel bait," explains Marketing Manager Nick Tresslar. He adds that integrating Advance Cockroach Gel Bait with other treatment techniques can reduce selection pressure and protect against resistance and aversion, resulting in higher performance and happier customers.

"Advance is the first new product that has come along in a while that has worked this well," Matt Remmen, Western's Technical Manager, says. The company has incorporated Advance Cockroach Gel Bait into its rotation.

Steve Richardson is a freelance writer based in St. Louis, Mo.

ADDITIONAL TESTING RESULTS

In 2006, Advance Cockroach Gel Bait was tested by independent researchers in Texas, California and Virginia. Results from both lab and field tests consistently showed 98 percent or greater control of different strains of averse and non-averse cockroaches. In real world conditions (poor housekeeping, new roach introductions, bait contamination and other factors) Advance Cockroach Gel Bait quickly killed cockroaches and maintained control for 28 days.

by Steve Richardson

MICROCARE® CS

■ *California PMP Chooses Microcare CS as Pyrethrum Product*

Regulatory changes in California are often an indicator of what's to come in other states and nationally. So when pressure began in California to reduce reliance on synthetic pyrethroids to treat a wide variety of common pests, Clark Pest Control took action.

In January 2007, the company made the decision to switch from synthetic pyrethroids to the active ingredient pyrethrum, a botanical insecticide made from the blossoms of the chrysanthemum flower. Clark Pest Control chose Microcare CS from Whitmire Micro-Gen, and Clark has replaced all other previously-offered pyrethroid products.

"Given the questions posed about water quality and bioaccumulation in creek bed sediment in California, we decided to take a proactive approach and shift to softer chemistry products," says Robert Baker, Operations Manager for Clark Pest Control. "We were looking for a product that offered a good residual, but had less environmental impact."

Microcare CS is an advanced capsule suspension pyrethrum perimeter product that provides quick knockdown and residual in and around residential and commercial structures. Its microencapsulation technology disperses an effective barrier of pyrethrum capsules over the application area, which increases pest exposure.

Microcare CS is designed as a contact product with good residual activity, making it ideal for sensitive accounts. It can be applied as a spot treatment and/or ULV/space treatment both indoors and outdoors in a wide variety of residential and commercial accounts, including food handling.

Baker says his technicians are reporting consistent efficacy with Microcare CS. "It is different for technicians and customers who are used to seeing dead bugs everywhere because the knockdown is a little slower and the bugs just seem to disappear – but the result is exactly the same – it works very well," he says.

Clark Pest Control is developing a program for customers that focuses on lower-impact pest control products which they plan to roll out later this year. Regulatory and consumer perceptions continue to shift, forcing changes in product use, treatment protocols and the approach to customers.

"Pest control in general is becoming far more prescriptive. In the old days you could pick a couple of products and treat almost any residential account with them. But now solutions are more custom, products are more target-care specific and have a softer chemistry, and customers are often the ones driving demand for sensitive products," he says.

Baker adds that Whitmire Micro-Gen's training and technical support has helped Clark Pest Control make the fairly significant product transition to Microcare CS easier for his team. "As always, the service aspect has been top-notch," he says.

Steve Richardson is a freelance writer based in St. Louis, Mo.

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Microcare CS is an advanced capsule suspension pyrethrum perimeter product that provides quick knockdown and residual in and around residential and commercial structures.

UV TECHNOLOGY

■ *Understanding What It Is And How It Works*

Q: What is ultraviolet (UV)?

A: UV is the abbreviation for ultraviolet that means 'beyond the violet'; it is electromagnetic radiation. UV has a wavelength of between 100nm and 400nm and is invisible to the human eye. Most UV reaches the earth from the sun and accounts for less than 10% of the total energy output from the sun. Most of the UV radiation is absorbed or scattered back into space by the earth's atmosphere, resulting in very little UV radiation reaching the Earth's surface.

Q: How many bandwiths are there in the range of UV wavelengths?

A: UV wavelenghts are subdivided into three bandwidths: UV-A ('near' ultraviolet), UV-B ('far' ultraviolet) and UV-C ('extreme' ultraviolet). The wavelengths of UV-A radiation range between 315nm and 400nm. Insect traps that use dark light, black light (BL) or black light blue (BLB) or 'UV' lamps are all using UV-A. UV-B ranges in wavelengths between 280 and 315nm. Ozone absorbs much of this shorter wavelength radiation, but this absorption weakens as 320nm is approached. UV-C is characterized by wavelengths between 100 to 280nm. Although highly dangerous to plants and animals, this part of the UV spectrum is completely absorbed by stratospheric ozone and does not reach the earth's surface.

For the best quality insect light traps, choose Whitmire Micro-Gen's Vector® Insect Light Traps.

Q: How do fluorescent lights work?

A: Fluorescent lights are far more complex in design than incandescent light bulbs, waste very little energy and generally last up to six times longer. The inside of the glass tube is powder-coated with Ionic phosphors. A small drop of mercury is also placed inside the tube, which is filled with argon gas at a low pressure. An electrode at either end connects to electrical circuits. Primarily, when electricity flows through the electrodes in fluorescent lights, it produces a charge that causes gaseous mercury atoms to absorb enough energy to emit photons and radiate. Secondarily, when the atoms of the Ionic phosphors are exposed to this mercury atom UV-C radiation energy, they absorb the energy and reradiate it back out at the optimal UV-A wavelength.

Q: What is it about UV that attracts flies?

A: In their natural habitat insects fly from the interior of vegetation and seek open space and UV is the visual signature of open space.

Q: How does the eyesight of humans vary from houseflies?

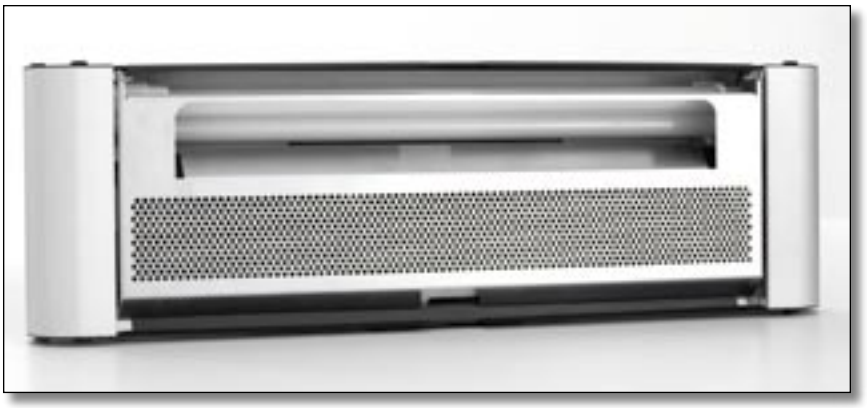
A: The human has single-aperture eyes whereas insects have compound eyes. Compound eyes have poor image resolution; how-

UV Light

by Dave Poling

ever, they possess a very large view angle and the ability to detect fast movement and, in some cases, the polarization of light.

Human's visible peak response is 555nm while the housefly's UV peak response is around 350nm. The conclusion can be drawn that a UV source that emits around 350nm would engender a greater response in most flying insects. Whitmire Micro-Gen's Vector bulbs peak at 353nm; close to the peak UV-A response of the house fly. Many other bulbs emit UV-A at 368 and above.



Vector bulbs peak at 353nm, close to the peak UV-A response of the house fly.

Q: Why are Vector bulbs the best?

A: Vector bulbs emit UV at wavelengths that correspond with heightened insect spectral response. They have selected phosphors which extend performance life – maximizing catch throughout the one-year service life of the bulb.

Q: What's the importance of servicing the unit?

A: The unit will perform to its maximum design capability. A well maintained trap enables the monitoring of insect trends and identification of insects, leading to focused prescribed actions. Well serviced traps also remain clean and attractive for the customer.

Q: What's the importance of changing bulbs?

A: The UV decays over time and even if the bulb looks as if it's running there can be little or even no effective UV coming from it. Bulbs should be changed annually to ensure optimal performance at identified peak season. As the UL output decays, the trap catch is reduced.

Q: How do black light (BL) bulbs deteriorate?

A: Over time Mercury within the bulb is lost to the phosphors and the glass by virtue of the bulbs's operation, resulting in the decay of the output of UV. Constant bombardment by UV-C from the mercury is particularly damaging to the phosphor. Also, Mercury is lost to the crystal matrix of the phosphors and reduces phosphor efficiency. The power of the UV radiation diminishes but not the wavelength; it's the same wavelength only not as strong. This fact is easily hidden when the bulb is still running and emitting visible light.

Q: What's the Importance of changing glueboards?

A: The glue on the boards becomes less tacky over time. This occurs because of the cumulative effect of heat from the bulbs drying the glue, UV curing the glue and the heat and humidity adversely affecting the glue.

Bottom line — it is important to service your light traps regularly, keep them clean, replace the boards at least monthly and change your bulbs at least annually right before the fly season begins; generally in the spring. Choose Whitmire Micro-Gen's Vector Insect Light Traps for the best quality traps, glueboards and bulbs.

Bottom line — it is important to service your light traps regularly, keep them clean, replace the boards at least monthly and change your bulbs at least annually right before the fly season begins; generally in the spring. Choose Whitmire Micro-Gen's Vector Insect Light Traps for the best quality traps, glueboards and bulbs.

Dave Poling is business director, residential markets (SPC) at Whitmire Micro-Gen.

MARKETPLACE

■ *Overview of What's New at Whitmire Micro-Gen*

RESTAURANTS & COMMERCIAL KITCHEN PEST MANAGEMENT

Whitmire Micro-Gen offers a wide variety of training programs and tools. The latest is designed to help pest management professionals manage pest populations in commercial kitchens using the latest integrated pest management (IPM) techniques with the new Restaurant & Commercial Kitchen Pest Management brochure. The brochure breaks down the complex commercial kitchen environment into more than a dozen habitat zones, from food preparation and storage areas to floor drains and perimeter treatment zones. The focus is on three key areas of pest management in commercial kitchens: cockroach and fly control treatment techniques, understanding the restaurant environment and selecting the best treatment option for each situation.

NEW TECHNICAL SUPPORT SPECIALIST

Jeff Whitman

Jeff Whitman will manage technical services for Whitmire Micro-Gen's professional product lines for the structural, horticultural and animal health markets. He will also work with PMPs field testing new products. Whitman's vast experience and knowledge of our industry will make him a valuable asset to our team.

MOTHEREARTH™ FAMILY

MotherEarth products offer a new set of treatment choices for PMPs based on active ingredients that are derived directly from Mother Earth herself. The MotherEarth line includes MotherEarth D Pest Control Dust, MotherEarth 2% Py Contact Insecticide, MotherEarth Granular Scatter Bait and MotherEarth Wasp & Hornet Jet Spray. Product availability is dependent on state registrations.

MotherEarth™