

WHITMIRE MICRO-GEN
PRESCRIPTION TREATMENT®

PT

Quarterly

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ADVANCE™
Termite Bait System

**Whitmire Micro-Gen
Launches Into The**

Termite Bait Market



The best termite control by design.
Innovative. Proven. Profitable.

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January – February 2004

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Whitmire Micro-Gen is one of the leading manufacturers and suppliers of general insect and termite control products to the professional pest management industry in the U.S. 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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The Best Termite Control By Design

Improved profitability, serviceability and station design with the Advance™ Termite Bait System. By Jeff Tucker

Over the course of 70 years, Whitmire Micro-Gen Research Laboratories has distinguished itself in the field of pest management science by meticulously applying insect biology, behavior and insecticide chemistry to the design of highly effective products for use by the pest management professional. During this time, Whitmire Micro-Gen not only developed unique insecticide formulations but also application devices and techniques that have become standards in the industry. The education model developed by Whitmire Micro-Gen in the late 1970s continues to evolve and is admired throughout the pest management industry. And now, Whitmire Micro-Gen announces the development and introduction of the next generation in termite baiting — the Advance Termite Bait System.

The Advance Termite Bait System was developed by Whitmire Micro-Gen to address and overcome the obstacles and technical issues observed with other bait systems. Six key areas were targeted for improvement

and innovation: profitability, serviceability, service frequency, termite disturbance, station design and bait matrix palatability. By applying the skills and insights learned over the last 70 years, Whitmire Micro-Gen has developed what I believe to be the best termite bait system in existence. Let me explain.

A primary goal of any termite bait station is to simulate conditions conducive to termite infestation, thereby encouraging their residence in the station. That is exactly what the Advance Termite Bait Station (TBS) creates — a termite-friendly environment that provides maximum wood-to-soil contact with easy-access vertical slots that facilitate termite entry. In addition, the slots allow soil to penetrate into the interior of the station, providing contact with the wooden Termite Monitoring Base (TMB) and creating the ultimate termite-friendly environment... wood-to-soil contact. The station is 2¾ inches in diameter at the base and 3 inches at the collar with anchors around the collar to stabilize the station during opening and closing. Installation is easy.



As termites create an aggregation site within the TMB, they explore upward leading them from the TMB to the Termite Inspection Cartridge (TIC). The TIC has entry holes only in the top and bottom of the cartridge, promoting initial feeding on the TIC contents. In the TIC, termites encounter unique, highly compressed, Puri-Cell™ monitoring tablets that provide a second preferred feeding site within the station. This dual-stage feeding system keeps termites from abandoning the station when the TIC is removed and the Termite Bait Cartridge (TBC) is inserted in its place. This results in an ultra-low disturbance system where the wooden TMB remains in the station bottom and only the TIC is removed during quarterly inspections. When termites hit the TIC it will be obvious because the termites bring mud into the TIC and pack it around the preferred compressed Puri-Cell tablets.



Not only is the system designed for low disturbance, it is also designed for ease of service. The superior station design includes the Quik-Lock cap that makes opening and closing the station quick and easy. The cap system uses a unique tool called The Spider™ that provides easy and flawless opening and closing of the station cap.

The TBC uses highly compressed Puri-Cell tablets containing 0.25% diflubenzuron as the active

ingredient. Diflubenzuron is an insect growth regulator and functions as a chitin synthesis inhibitor (CSI). It is designed to interfere with the molting process of termites. This active ingredient has been used extensively in agriculture since the late 1970s on cotton, fruit trees, ornamentals, soybeans, tea, mushrooms and sheep for the control of grasshoppers, codling moth, lice, fleas, blowfly larvae, leaf-miners, boll weevil, armyworms, mosquito larvae and termites. With its delayed response, typical of CSIs, it kills slowly enough to allow transfer to other termites within the colony. It kills termites in lab studies within 30-60 days. Each TBC contains 93 grams of bait, the largest containerized bait load in the industry!

Each Advance Termite Bait Station comes fully assembled with a TMB and a TIC secured in the station with a Quik-Lock cap. Also, each Quik-Lock cap has a distinctive bar code on the inside surface. Bar coding is also found on the TBC label. This allows the Advance Termite Bait System to be used with bait tracking software.

Whitmire Micro-Gen recommends PestClick™, a multi-purpose, stand-alone bait tracking software.

The Advance Termite Bait System label provides PMPs a great deal of flexibility in designing and delivering

termite management to their customers. For example, the label allows direct baiting without the use of the TIC. While not recommended for routine applications, this feature may be desirable under some circumstances. Also, there is no label requirement for the installation of supplementary stations. The 93-gram bait load in the TBC is sufficient to permit quarterly inspection and service! The only variation to the quarterly service frequency is when the home is infested with termites at the time of station installation. Under these circumstances your first inspection is due approximately 45 days after installation and then 90 days

after installation. From then on, service is approximately every 90 days. And finally, up to 6 months of inspections can be delayed during cold winters along with a label that allows liquid applications with the Advance Termite Bait System.

Another versatile label feature is the 10-20 feet spacing recommended between stations. Whitmire Micro-Gen suggests using one station every 10 feet. If more than 30 feet separate two stations due to concrete or asphalt, it may be advisable to core drill one or more holes to use as stations.

And here's the best part...you own the system and your customer! There is **NO** reporting requirement from the manufacturer.

You buy only as much as you need, when you need it and you buy it from your

PestClick™

local Whitmire Micro-Gen distributor. All of this, coupled with quarterly monitoring, ease of installation and service and label flexibility, mean a more profitable business.

In summary, the Advance Termite Bait System combines the ultimate environment for termites with a superb toxicant and bait matrix, unique station design and service features that are technician-friendly, profitable and deliver the colony elimination you would expect in a termite bait system from Whitmire Micro-Gen. 

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Jeff Tucker, B.C.E., is president of Entomology Associates and a consultant for Whitmire Micro-Gen.

ADVANCE™
 Termite Bait System

Transitional Feeding Technology

Understanding how a termite feeds is an important element to successful termite baiting. By Jeff Tucker

Webster's definition of transition is "to move from one stage to another." As termites forage through the soil they encounter all forms of subterranean obstacles. Some are merely inedible objects that they tunnel around or follow — such as pipes, roots or foundations, during their search for resources (food).

Typically when subterranean termites encounter edible food it is in the form of a heterogeneous mass such as a piece of wood or other cellulose-containing material. While both wood and paper contain cellulose, the amount rarely exceeds 50% of the mass. As such, most of the common food sources that termites locate are considered nutritionally poor. It is suspected that termites adjust their foraging efforts according to the quality of the food they have located. If the resource is of sufficient size and quality then recruitment to the site is intensified. If not, no additional recruitment occurs and the item may even be abandoned. It follows then that feeding avidity is also closely correlated with food quality.

When foraging subterranean termites encounter an Advance™ Termite Bait Station (TBS), they immediately find wood in contact with the soil. This condition is facilitated by the vertical slots in the station and the horizontal grooves in the Termite Monitoring Base (TMB). Since termites forage for both food and shelter (habitat, nesting sites) the TMB satisfies both requirements — an acceptable food resource and a site for creation of a satellite node or calie. At this point the **forage-locate-inhabit-recruit** cycle is typical for the subterranean termite colony. However, what the termites have really found is a **dual-stage cellulose system**. They just don't know it yet.

Once the TMB is undergoing habitation and feeding, termites begin to ascend the walls of the

TMB. At this point they encounter the Termite Inspection Cartridge (TIC) or the Termite Bait Cartridge (TBC). Entering through the holes in the top or bottom of the cartridge will bring termites into contact with the compressed Puri-Cell™ tablets. Now *transitional feeding* begins. Given the higher level of cellulose in the tablets than the TMB and the fact that they are compressed into a hardened form, which termite mouth parts have evolved to exploit, termites begin to preferentially feed in the TIC/TBC using the TMB as an undisturbed refuge site. Since the food quality improves dramatically with the discovery of the TIC/TBC, foraging and recruitment to the station also increases.

Termite baiting without *transitional feeding* technology with dual-stage cellulose remains nothing more than a typical day in the life of a termite. At any moment their low-quality food source could be yanked out of the ground resulting in station abandonment and a lost opportunity for the PMP. ❌

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Jeff Tucker, B.C.E., is president of Entomology Associates and a consultant for Whitmire Micro-Gen.



Photo: Agricultural Research Service, USDA

Termite Monitoring System

The PT® 702 Termite Monitoring Station is designed to increase the profitability of pest management companies by generating more termite leads. The PT 702 is a new product.

PT 702

- Offers a large 6-inch printable surface that is easy to customize.
- Can be quickly and easily installed with a hammer.
- Contains a large 5-inch cellulose feeding disc.
- Utilizes a snap locking lid and living hinge for quick access.
- Available in green, black and brown to blend into the landscape.

PROMOTIONS

Special limited-time offer for pest management professionals: From January through June 2004, we will offer FREE silkscreen printing for PT 702 termite monitoring stations on your first order of 10 cases or more. Call customer service at 800-777-8570 for more details.

.....
 John Flores is technical service manager for Whitmire Micro-Gen.



PestClick™

PestClick™

PestClick,™ a new bait tracking software program designed to read and track bait station inspections, made its first showing to the industry at PestWorld 2003 in Dallas. PestClick is marketed by In-Quiz-It Software in DeSoto, Texas, and is part of the total business solution brought to you by Whitmire Micro-Gen for the Advance™ Termite Bait System. Whitmire Micro-

Gen recommends PestClick for PMPs looking for an excellent and reliable bar-coding program to track inspections and virtually any type of activity happening at an account. Dave Lundeen, vice president of marketing for PestClick, points out that "there is really no other software product that compares to PestClick. We

have invested 10 years in perfecting bar-coding technology and feel that this program is unmatched by anyone." Lundeen added that during the first quarter of 2004, PestClick will be able to do routing and scheduling and will be compatible with QuickBooks accounting software. "We continue to add new features to PestClick and listen closely to our customer base to stay on the cutting edge of software," Lundeen said. PestClick is available by calling In-Quiz-It at 972-938-7280. You can also visit www.inquizitsoftware.com.

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 Jeff Vannoy is termite marketing manager for Whitmire Micro-Gen.

ULD® HydroPy-300®

Mosquitoes are no problem for the newest addition to our fogging product line. ULD HydroPy-300 concentrate is 3% natural pyrethrum in a water-based formulation. ULD HydroPy-300 is compatible with mosquito misting machines like the Coastal Mister, as well as commercial fogging equipment. For more information on ULD HydroPy-300 and our recommendations on mosquito control visit our web site at www.wmmg.com or call tech services at 800-777-8570.

Missi Bachman is a marketing manager for Whitmire Micro-Gen.



960 Vector® Fruit Fly Trap — Beauty is in the Eye of the Beholder

Drosophila infestations can drive even the best technicians crazy. We know that sanitation is key in removing harborage and accessible food and odors that attract and allow *Drosophila* to thrive in an account. Since this pest is transported on vegetables and fruit, and can find harborage in the smallest amounts of debris, even well-kept facilities can encounter constant adult infiltration.

To aid PMPs in their battle against this nuisance, Whitmire Micro-Gen introduced the 960 Vector Fruit Fly Trap. This simple-looking liquid trap does not appear to be a work of art to the human eye, but to *Drosophila* it is the "Mona Lisa."

The Vector Fruit Fly Trap emits vapors from the highly attractive, patented liquid bait through ten holes in the lid, maximizing the area of *Drosophila* interface. To further

enhance the effectiveness of the trap we also used an orange colored plastic for the base and lid that increases *Drosophila* capture rates.

For the convenience of the technician, we included a removable lid to easily monitor and record captures, an inner and outer spill ring to decrease the chance of spillage during use and glue dots to secure the trap in place and keep it in the strategic location selected by the technician.

As part of an IPM program, the Vector Fruit Fly Trap is a very effective tool.

Sanitation is also vital to your efforts and we recommend the use of Vector Bio-5® for cleaning and eliminating debris from drains and floors. For tips on controlling and eliminating *Drosophila*, download the Prescription Treatment Pest Management Bulletin volume #7 from our web site at www.wmmg.com or call customer service at 800-777-8570.

Dale Koenig is business manager of commercial markets for Whitmire Micro-Gen.



Profit is in the Eyes of the Beholder

Each company, large or small, has many ways of measuring and determining what level of profit is acceptable. By Jeff Vannoy

Suffice to say, without profit most companies in America would not be in business. Each day, as managers and owners of companies, we make decisions that will affect the profit outcome of our business. There are three basic ways to increase profits: increase the selling price of the job, decrease the total job costs or increase the number of jobs sold.

As managers of pest control businesses, you make a variety of financial decisions each day — the number of people you employ, how to spend your advertising dollars and, even more critical, which tools to put into the hands of your technicians.

In this article, we will review profitability as it relates to termite baiting and point out the critical factors that make a



termite bait profitable.

When termite baiting was introduced to the industry in the 1990s it was clearly a new and unique business model. There were several key differences between baiting versus liquid treatments, the only standard at the time, which affected the potential profitability of PMPs:

- Labor was no longer a fixed factor (six hours to treat a home with a liquid) and one renewal inspection/year. It became a continuous process of monitoring, baiting stations with termite activity and following this process over a period of years.
- Initial job revenue taken in with baits was much higher, as were renewals, than liquid jobs and only required a one-hour station installation time versus six to eight hours for an average full liquid treatment. This created accounting issues as labor costs were incurred in later months with baiting.
- A new labor pool was created which consisted of technicians who specialized in termite bait station inspections.
- Annual renewal fees were now sent to the manufacturer to pay for the replenishment of wood monitors, bait, etc. (whether they were used or not).
- Material costs, in general, were higher per job than with liquid treatments.
- A broader pool of labor was available since baiting in general was fairly light-duty work, at least during the monitoring phase, compared to liquid applications.
- A significant increase in customer retention was also seen with baits, along with an increase in customer relationships.

Almost nine years after this initial introduction of termite baiting to pest management we need to ask what have PMPs learned and what implications does this have in choosing a termite bait versus a liquid as the primary treatment tool for termites?

After talking with PMPs across the country, Whitmire Micro-Gen learned several key factors that hurt the profitability of termite baiting:

- **Station Inspection Frequency** — Termite baits that require monthly visits during times that termites are present in the station reduce baiting profitability.
- **Technician-Friendly Station** — Bait stations that are easy to open, close and install are critical to keeping

technicians productive on routes.

- **Large Bait in Less Space** — More bait was needed in an inspectable container to allow for greater colony loading. PMPs did not like excessively large stations as they created too many installation hassles. In addition, satellite stations required by some labels created eyesores for homeowners and extra time on the job for installation.
- **Tracking Software** — Must be compatible with current system, but even more important, it must be able to track history on an account and be user-friendly to office staff. Office staff labor costs for termite baiting were a top concern for many companies.
- **Termite Disturbance** — PMPs resoundingly state that disturbance is one of the top challenges they face in eliminating termite colonies and that the more bait tubes required to be inserted and removed at any particular station, the more likely termites will abandon that station. This cycle creates more time to eliminate termites and more labor costs.
- **Material Costs** — PMPs felt that the site license costs with baiting systems were too expensive on the average home treated. Many claimed the expenses for material fees were as high as 30-35% of installation revenue!

After years of listening to PMPs and leading industry researchers, Whitmire Micro-Gen designed a termite station to overcome past profit issues encountered in termite baiting. With the introduction of the Advance Termite Bait System, PMPs will find dramatic increases in profitability that could provide the most profitable termite treatment option in your business. Let's take a look at what makes the profitability of the Advance™ Termite Bait System different and why it should be the top choice for your primary termite control method in 2004:

- **Quarterly Inspection Label** — As PMPs well know, the number of visits to a home clearly dictates the level of profit in termite baiting. In interviews with many PMPs across the country, we learned that in the past five years they averaged 35-37 inspections with monthly termite baits. With Advance, the maximum inspections required by label over five years would be just 21 inspections. Based on our assumptions, Whitmire Micro-Gen has calculated that tracking 500 jobs installed in year one through year five, a PMP can save nearly \$400,000 in labor costs and 7,500 fewer monitoring inspections compared to the market leader with the Advance Termite Bait System.
- **Largest Containerized Bait Load** — As stated earlier, pest management professionals learned that delivering the maximum amount of active ingredient quickly is crucial to colony elimination. The 93 gram bait load of Advance is nearly three times that of the leading bait system and comes in a compressed bait matrix called Puri-Cell™ which termites aggressively feed upon.
- **Best Station by Design** — Whitmire Micro-Gen went to great lengths to design a station that decreased inspection time, increased wood-to-soil contact and was easily installed by technicians. Our goal was to increase the speed

of hits and decrease the time to elimination. Based on feedback, on average, our station takes less time to inspect than other stations, which increases route productivity.

- **Ultra-Low Disturbance Interior** — Our dual-stage interior design lends itself to minimal termite disturbance and maximum feeding by termites. As termites feed on the large bait load, there is the potential for colonies to be eliminated in less time — which makes customers happier and a much more efficient baiting process.

As managers of pest control businesses, you make a variety of financial decisions each day — the number of people you employ, how to spend your advertising dollars and, even more critical, which tools to put into the hands of your technicians.

- **System Ownership + Lower Material Costs** — With Advance, you buy system components as you need them, not on a manufacturer's schedule. Your first-year material costs could average \$200 on a 200 linear foot home. This is nearly 30% below the cost of the leading termite bait system. This in turn increases your cash flow in year one and gives you the freedom of owning the stations, customers and the renewal base you've built. Call your RTS to run an analysis on your business.
- **PestClick™** — This bait tracking software, offered via In-Quiz-It Software, is recommended by Whitmire Micro-Gen for use with the Advance Termite Bait System. With PestClick, you have a user-friendly software program designed specifically for termite baiting that allows you to print management reports and to understand the history of every site installed. PestClick is compatible with QuickBooks for synchronization with billing and will have the ability to route and schedule your technicians. For more information call 972-938-7280.

As you can clearly see, not only does the Advance Termite Bait System have superior killing power, but superior profit advantages over other bait systems. Our significant savings on material costs and our dramatically lower labor costs with our predictable quarterly label will take you to new heights in your baiting business. As you make decisions on termite products for 2004, take a close look at the Advance Termite Bait System because it truly is the best termite control by design. ☘

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 Jeff Vannoy is termite marketing manager for Whitmire Micro-Gen.

Factors Affecting Termite Baiting

Biology, chemistry, mechanics and environment are all part of a successful termite bait. By Jim Cink

The application and effectiveness of termite baits and bait systems have been extensively researched over the past few years by industry, university and private entrepreneurs. Based on this body of research data and observational information, key factors have been identified that can dramatically impact the termite baiting process and affect the overall success or failure of termite bait systems. To help organize the information, the factors have been grouped into four main categories: biology, chemistry, mechanics and environment.

Biology

One of the fundamental factors that enable termite bait systems to work effectively is based on the biology and social organization of a termite colony. For the sake of simplicity and not to turn this into a dissertation on termite colony and member associations, the description of a termite colony will be kept to the basics.



A termite colony is ruled and controlled by a central queen. The members associated with that colony which are produced by that queen are classified as workers, soldiers, alates, and supplemental reproductives. In general,

worker termites are responsible for tending to the needs of the queen, maintenance, expansion of the colony area, foraging for food and distributing it to other members of the colony. Soldiers are considered a terminal development stage and serve to protect the colony from invasion from other termite colonies and ants. Alates are the new reproductive members of a colony which are slated to go forth and start their own colonies. The supplemental reproductive members are members that carry out work duties within the colony but can, when necessary, develop into fully functioning reproductive termites and produce offspring of their own.

It is the dynamics of this social organization within a termite colony that termite baiting systems rely on for their effectiveness. These systems, as they are currently designed, allow

foraging and feeding termites to occupy a termite bait station and feed on or be covered by a toxicant. This toxicant is then transported back into the colony where it can be fed to other termites, or it can be transferred by a grooming process and thus distributed to a larger population — increasing the exposure area. Regardless of the mechanism of toxicity, the goal is to get a bait toxicant distributed to as many members of a termite colony as possible. This distribution and the resulting death of those termites exposed to the toxicant can either directly eliminate a termite colony or it can severely impact the vitality of a termite colony. Ultimately this leads to the inability of a colony to support itself, causing it to be reduced and no longer be a threat to structures within the immediate area or to the point where the colony is eventually eliminated. Either way, directly or indirectly, termite baits and their control rely on termite biology.

Chemistry

Not all termite bait systems work the same. Currently all termite bait products can be divided into two main groups: insect growth regulators and stomach poisons. The insect growth regulator toxicants used today are all considered chitin synthesis inhibitor compounds (CSI). Compounds classified as CSIs include: diflubenzuron (Advance™ Compressed Termite Bait from Whitmire Micro-Gen and Labyrinth™ from Exterra), globally the most widely used insect growth regulator overall and the second most widely used termite bait active ingredient in the United States; hexaflumuron (Recruit® II from Dow AgroSciences), currently the most widely used termite bait IGR in the U.S.; and noviflumuron (Recruit III® from Dow AgroSciences), recently introduced as a commercial termite bait product. The primary mode of action for chitin synthesis inhibitor compounds is the disruption of chitin synthesis and development within the insect. Chitin is responsible for the development and structural integrity of the insect's outer covering. Since insects do not have an internal skeletal arrangement, it is the connection of muscle and membranes to the indocuticle chitin layer and the structural strength chitin provides internal invaginations that enables an insect to survive. The disruption of chitin within an insect can lead to its ultimate demise. As a whole, CSIs are slow-acting toxicants that can be transferred and distributed within a termite colony, thereby affecting a large

number of termites, if not the entire colony.

Compounds used as termite baits and classified as stomach poisons are somewhat misunderstood. The two active ingredients currently registered for termites include hydramethylnon (Subterfuge® from BASF) and sulfluramid (FirstLine® GT Plus from FMC). Although both are considered stomach poisons, they work in different manners. Hydramethylnon inhibits the production of ATP whereas sulfluramid blocks the movement of ATP, both of which impede the energy transfer within the insect. The stomach poisons as a whole work faster than CSIs on those termites that feed on the toxicant, but may not be as effectively transferred into a termite colony or population.

Mechanics

When looking at a termite baiting system it is easy to overlook the importance of the mechanics of the system itself. Generally, the main focus is on the active ingredient or the upfront cost of the system. However, it is how that system works as a unit and in the hands of technicians that is one of the single most important factors that govern the success of the termite baiting process. Since the first introduction of termite bait stations to the market in the late 1980s and early 1990s, the basic design has changed little. Vertical plastic stations with narrow horizontal slots serve as the primary housing for the monitoring and bait products. The primary purpose of the narrow horizontal slots was not to provide for termite entry, but to keep soil and other debris out of the station. The majority of stations have wood monitors inserted into a central cavity within the plastic station with a gap between the outside of the station and the wood monitor.

Recently, changes in station design have been researched and explored. The goal of this research was to create a station that is highly preferred by termites. One of the changes that showed significant improvement was to provide a maximum of wood-to-soil contact with the station housing, having larger and greater access to the interior monitor. Another new approach is the use of dual-stage monitoring system. The purpose of this is to decrease termite disturbance during normal monitoring and lessen the abandonment of stations by termites due to disturbance.

The design and mechanics of the station itself can be a significant factor in the success or failure in any bait system. If the station is difficult to open and service, technicians can get frustrated and spend more time conducting the normal inspection of the stations. The increase in time can be significant, resulting in increased labor costs. The increase in time can also mean fewer sites can be inspected and serviced each day, resulting in increased personnel demands. Once the station is opened and the monitor removed if it is difficult to replace the monitor or install the bait, due to debris or other obstructions, this can affect technicians and the efficiency at which they can conduct an inspection and service.

Environment

Some of the basic environmental conditions and their impact



on termites are well known. During droughts, termites forage deeper in the soil, closer to moisture. When surface temperatures increase, termites tunnel deeper. As termites forage through the soil and find zones of less compact soil, they will readily tunnel through these zones, selecting the path of least resistance. Temperature and moisture are the two most important environmental factors that affect termites and thus impact the success of termite baiting systems. In hot, dry weather, termites will forage deeper in the soil, normally below termite bait stations. Anecdotal information has suggested the use of water poured into a station during this time can entice termites into a termite bait station. More research is needed to document just how effective this procedure is.

On the opposite end is the impact of too much moisture and cold temperatures. It should be obvious that termites do not swim nor do they ball up into a collective group like fire ants and float to higher ground when it floods. Termites live in the soil, mostly, and will move deeper into the ground during flooding or they can move away from an area. If a termite bait station and the surrounding soil is saturated, termites will not stay in that station. The same holds true with cold temperatures. When soil temperature drops below an average of 50°F termite activity generally will not be seen in in-ground stations.

Bringing It All Together

As one can tell from the points highlighted previously, there are several factors that can affect the overall success or failure of a termite baiting system. It is important to understand that technicians need to be trained and knowledgeable about termites and their behavior and how outside factors, such as temperature and moisture, can impact termite activity. Termites, at times, can appear to be finicky or temperamental, yet other times appear to be aggressive and resilient. The key point to remember is that termite control is a process and not a one-time event. It is the effective management of the process by the technician that ultimately means success. ❖

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Dr. Jim Cink is termite product development manager, research & development, for Whitmire Micro-Gen.

Advance™ Termite Bait System Feedback

High marks from 15 PMPs who sampled Whitmire Micro-Gen's new termite monitoring system. By Jeff Vannoy

During the 2003 season, Whitmire Micro-Gen launched a critical fact-finding program to solicit feedback from respected industry leaders and to evaluate training needs for its new termite bait launch. Working closely with 15 PMPs across the country, under a program called Limited Early Adoption Program (LEAP), Whitmire Micro-Gen challenged these PMPs to put the system to the test.

Nearly 850 structures were treated under this program with outstanding results and intuitive comments. During this early adoption program, Whitmire Micro-Gen heard consistent feedback on the Advance Termite Bait System. Below are the system attributes that PMPs thought set our system apart from the competition:

Quarterly Label

- PMPs were excited about the dramatic labor savings and increased ability to predict their labor needs and maximize route efficiency.

Ultra-Low Disturbance Interior Design

- PMPs reported that the dual-stage interior with the wooden monitor left in place during inspections kept termites in the station versus other systems they had worked with that seemed to chase termites away.

Station Serviceability

- PMPs raved about how incredibly easy the Advance Termite Bait Station (TBS) is to open, close and inspect with the Quik-Lock™ cap and The Spider™ station access tool.

Largest Containerized Bait Load

- PMPs quickly appreciated the 93-gram Termite Bait Cartridge (TBC) which is nearly three times the bait load than the competition.
- PMPs also reported how much termites liked the compressed cellulose matrix containing Puri-Cell.™

Paul Hardy, technical director at Orkin Pest Control, described the bait station as the "best of the best." Hardy went on to say, "Advance is the best designed bait station in the industry today!" In a recent interview

Hardy, who has been involved in termite control for 42 years, points out that the Advance TBS is easy to install and service. It is slightly shorter than other stations, which Hardy felt was a major advantage over other systems.

Bob Timmons, owner of 20/20 Exterminating in St. Charles, Mo., worked with the Advance Termite Bait System and said clearly that, "Our company has already installed the Advance Termite Bait System in approximately 60 homes. We have tried all of the competitors and the Advance Termite Bait System is unequivocally the best designed baiting system on the market today." Timmons and his team found Advance easy to install, service and sell to consumers.

Phil Clegg, president of Clegg's Termite and Pest Control in Durham, N.C., was excited to work with Advance during the 2003 season. Clegg said, "It's the labor associated with monthly inspections that kills your profits in baiting. With Advance I am able to check stations quarterly and have the confidence of the large bait load to keep termites feeding. In addition, termites really loved colonizing the station which was evidenced by several swarms we had directly out of the stations, which I had never seen before!"

Billy Tesh, president of Pest Management Systems in Greensboro, N.C., was thrilled to see a station that just made perfect sense. Tesh said, "I loved the fact that the wood stayed in the bottom of the station and was undisturbed. Termites always have a place to reside in the station during the baiting process." Tesh went on to say, "The Advance station design was very well thought out and offers many service advantages over other systems, especially in opening and closing the cap."

Thanks in part to the innovative pest management professionals in the LEAP program, Whitmire Micro-Gen is now making this excellent product available to the industry beginning in January 2004 under a "buy-as-you-go" business model that gives PMPs the freedom to purchase and own the stations and customer renewal base they have built. ❧

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 Jeff Vannoy is termite marketing manager for Whitmire Micro-Gen.

Diflubenzuron: A Proven Molecule

Diflubenzuron is slow-acting and has a range of levels which kill termites. By Dave Naffziger

The active ingredient in the new Whitmire Micro-Gen Advance™ Termite Bait System is diflubenzuron. This molecule is the first of a series of benzoylurea compounds known as chitin synthesis inhibitors (CSI). Initially discovered by chemists at Solvay Duphar in 1972, it is now produced by the Crompton Corporation (formerly Uniroyal). Diflubenzuron is the first insect growth regulator (IGR) discovered and commercialized.

CSIs control insects by preventing the production of chitin in a treated insect. Since mammals do not produce or rely on chitin to sustain life, exposure to diflubenzuron does not affect mammals. The acute oral LD₅₀ for the rat is greater than 4,640 mg/kg. The acute dermal LD₅₀ for the rabbit is greater than 10,000 mg/kg. The acute inhalation for the rat is greater than 2.9 mg/l.

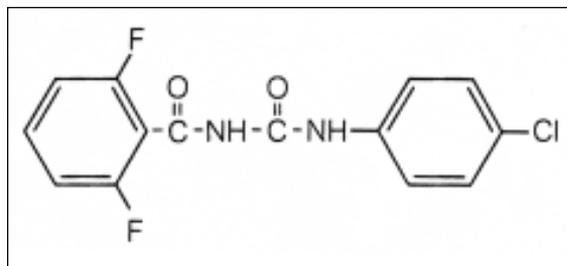
Diflubenzuron has a complete chronic toxicology package and a complete environmental fate data package on file at the EPA. It is non-toxic to birds, fish, bees and earthworms.

Diflubenzuron is non-soluble in water and will not leach or wash into surface or ground water. It strongly binds to soil and is stable when exposed to light.

Registered worldwide on a wide variety of insect species, diflubenzuron is a very broad-spectrum compound. It is registered for use in forestry and on ornamental and agricultural crops, including food crops. It is labeled for the control of mosquitoes and midges, anchor worms and lice associated with fish and is even registered as a bolus "feed through" for livestock to control flies. Diflubenzuron has completed re-registration at the EPA as required by the Food Quality Protection Act.

Diflubenzuron kills insects by disrupting the production of chitin, one of the main components of the insect cuticle. After treatment with diflubenzuron, insects have difficulties with molting. The malformed cuticle of the new instar cannot withstand the internal pressure during ecdysis and/or cannot give sufficient support to the muscles involved. This results in an inability to cast the exuviae (old cuticle) and finally leads to the death of the insect. Termite workers molt

several times during their lives. Normally insects exposed to diflubenzuron die during the molting stage. However, there is another effect noted by the researchers that have worked on termites with this



Diflubenzuron is a broad-spectrum compound with a favorable toxicity profile. It is slow acting but effectively kills termites over a range of concentrations.

compound. Termites that are not in the molting process also die. The exact mechanism for this effect has not been found. Fortunately, the actions on termites by diflubenzuron are slow enough that trophallaxis in the colony has time to occur. In other words, all stages of a termite colony are affected by diflubenzuron.

In university testing it was found that diflubenzuron was a great candidate for use in a termite bait system. For a bait to be effective it must act slowly so that it has time to move through the colony. As it passes through the termite colony, it is diluted with each pass between colony members. The tests for diflubenzuron found that it had a wide concentration range for efficacy against termites. At the 0.25% rate used in the Advance termite bait system there was no repellency to termites feeding on the bait. At lower levels the compound was still effective in causing colony elimination.

In summary, diflubenzuron is a broad-spectrum compound with a favorable toxicity profile. It is slow acting and has a range of levels which kill termites. Combined with the superior Advance termite bait station and bait matrix, diflubenzuron is an excellent compound to complete the system. ☞

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Dave Naffziger is senior research scientist for Whitmire Micro-Gen.

Selling Termite Jobs Made Easy and Profitable

With any new technology comes the challenge of how to sell it to customers. Here's how. By Jim Derbyshire

In Whitmire Micro-Gen's ongoing efforts to support introduced products and technologies, this article presents a sample dialogue that can be used in selling the Advance™ Termite Bait System.

Customer: How do you get rid of these termites?

PMP: We're using a new system just introduced that is very effective, yet non-invasive...the Advance Termite Bait System. It utilizes the best designed station available to eliminate termites from your home, with minimal disturbance to the environment and low-impact on your family.

Customer: Why is this the best system for me?

PMP: This new baiting system is effective because it takes advantage of the termites' behavior to eliminate the colony. Termites aggressively feed on the compressed termite bait containing the active ingredient. They then take it back to the colony to get rid of the termites in and around your home. The station design minimizes any tampering by children or pets and, due to its low-profile design, you will hardly notice it around your home.

Customer: I've heard about drilling into concrete and pumping insecticides into the holes. Do you do that?

PMP: This new bait system is non-invasive in terms of installation of the system around your home. We won't lift carpets or drill through concrete. Almost all of our work will be done on the outside, so there will be minimal disruption to your busy life. Instead of drilling every 12 inches, we'll put a bait station on the outside of your home every 10 feet. To minimize impact on the environment, we won't pump hundreds of gallons of liquid termiticide into the soil around your home. You won't smell any chemical odors with our new system. You won't have to move items away from garage walls, remove patio blocks, deck planks or pull back carpet. We won't inconvenience you with noisy interior drilling, cracked/broken tiles or running a hose through rooms of your home.

Customer: You put the bait out and that's all there is?

PMP: It's a little more involved than that, but basically, we install bait stations containing a termite inspection cartridge and monitor them to determine termite activity.

When we find activity, we'll replace the inspection cartridge with a termite bait cartridge that will eliminate the colony. We will continue to inspect and monitor the stations on a quarterly basis to see if there is additional termite activity.

Customer: Why do you need to come back after you've eliminated the termite colony?

PMP: New termites can invade your home from termite colonies in your neighbor's property, for example, or from decaying trees and wood adjacent to your property. We want your house to be protected 24/7. You'll have peace of mind knowing that we are continually inspecting and monitoring for termites on your property to ensure long-term protection of your biggest investment.

Customer: Will I be able to actually see if there are termites present?

PMP: Absolutely. Our technicians will be happy to explain the system to you as they perform their quarterly inspections. What distinguishes Advance from other baiting systems is the technology of the station. It contains more containerized bait than other bait tubes on the market and is the ideal environment for termites.

Customer: How many times will you be here to inspect?

PMP: The first year, we'll inspect five times and each year thereafter, we'll only be here four times. And you don't even have to be home when we inspect as it's all done outside!

One of the underlying benefits of the Advance Termite Bait system is that it helps PMPs develop a closer bond with their customer and provides the opportunity to sell other services during quarterly inspections.

If you have questions about the Advance Termite Bait System, don't hesitate to contact your Regional Technical Specialist who will be happy to answer your questions. ❧

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Jim Derbyshire is national training and sales development manager for Whitmire Micro-Gen.

The Right Stuff: Training and Education WMG Style

When it comes to state-of-the-art training, Whitmire Micro-Gen leads the way from seminars to PT-U. By Missi Bachman

'Innovations in Termite Control' Seminars

When it comes to state-of-the-art training, Whitmire Micro-Gen leads the way. Due to demand from our customer base, Whitmire Micro-Gen is bringing industry icon and educator, Jeff Tucker, B.C.E., to hold special seminars called "Innovations in Termite Control." These seminars will travel to 18 cities touching nearly 1,000 owners and managers of pest control companies. This program is dedicated to termite control and will be limited to 50 PMPs per location. Sign up by visiting our website at www.wmmg.com or calling 800-777-8570, ext. 2424.

Product Line Brochures

Product brochures are great sales tools. These brochures include product pictures and a brief description of the product and how it is used. The brochures available are: Ant and Cockroach Baits, Capsule Suspension Products, Pressurized Products, Traps and Monitors, Termite Monitoring System, ULD Products and Application Equipment and Prescription Treatment University®.

Tech Notes

These technical bulletins are designed to assist your managers and technicians by providing product specific information such as features and benefits, research data, packaging specifications and treatment tips.

Pest Management Bulletins

PMBs are insect-specific technical bulletins designed to train technicians and provide helpful treatment and training techniques using Prescription Treatment protocols.

Specimen Label & Guide

This reference book contains all of Whitmire Micro-Gen's labels and MSDS. This reference tool is updated annually (every October) and includes a product selection guide on the inside cover. For the most recent labels and MSDS go to our website at www.wmmg.com where the most recent revisions are posted.

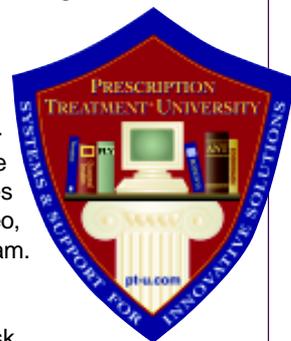
Advance™ Termite Bait System Literature

In conjunction with Whitmire Micro-Gen's new product launch of the Advance Termite Bait System, many tools

for the PMP, homeowner and for educational training are available. PMPs can educate themselves on the many advantages of our new bait system by reading our Advance termite brochure, Advance Tech Note and Advance Service and Installation guide. For the homeowner, Whitmire Micro-Gen will make available both a consumer brochure and door hanger. The brochure is designed to work with a PMP's treatment proposal and any other collateral — such as the product label. The door hangers can be used to drop off at neighboring homes to generate leads.

Prescription Treatment University (PT-U)

PT-U is an anywhere, anytime educational resource. This comprehensive training and education package includes 12 individual courses with streaming video, interactive quick quizzes and a final exam.



The PT-U campus includes:

- Ask Dr. Bug — a technical help desk
- Guest Lecture Series — streaming video of the industry's leading researchers and educators
- Archived past and present issues of the PT Quarterly
- Bulletin Board & Chat Room — a discussion forum where you can post ideas and questions

The "Biology and Control of the German Cockroach" training CD is the 12th in the PT-U series and is now available. Past courses include training on Prescription Treatment techniques, inspection techniques, IPM in schools, filth flies, small flies, ant biology, ant identification, fire ants, pharaoh ants, Argentine ants, and carpenter ants.

Whitmire Micro-Gen is committed to training and education in the structural pest control industry. As new Whitmire Micro-Gen products enter the market, education and support literature is available by request through our customer service department (800-777-8570), on www.wmmg.com and at your local distributor. ❧

Missi Bachman is marketing manager for Whitmire Micro-Gen.

Termites Bring Added Value to PMPs

PMPs across the country are adding termite monitoring to their pest services to increase business. By Jeff Vannoy

Whitmire Micro-Gen, a leader in providing innovative solutions for PMPs to build value in their business, has been actively marketing Termatrol™ termite monitoring stations, manufactured by Sector Diagnostics, since 2001. Many PMPs around the country are using termite monitoring stations to add value to liquid termite treatments and general insect control accounts. Homeowners see great value in monitoring for termites and thus are willing to pay for this additional service.

Many PMPs have combined their quarterly general insect work with a monitoring agreement utilizing termite monitoring stations. This allows the homeowner to understand the level of termite pressure around the home and assess whether further preventive or curative measures

are needed. Often a liquid, spot treatment or a bait system is sold if significant hits are found around a structure or if active termites enter the home. This “awareness” program, sold along with a quarterly general insect control program, will add value to the homeowner and profits to the PMP because they are already at the home for general insect work.

An up-and-coming trend with PMPs across the country is to utilize four to six monitors around the structure of a current general insect control account. This is used as a lead generation tool for PMPs, who can later upsell the homeowner as termites are found in the station. This is not a termite contract and thus a new agreement is drafted if the homeowner decides to add termite protection for his home. At that time a bait or liquid treatment would be performed on the structure according to state regulatory guidelines. Certainly, the presence of termites in monitors does not mean termites are, or will be, in the structure. Care should be taken when presenting and selling termite control if no termites have been found in the structure.

As an industry, the value we bring to homeowners is through service. Our service is much more than the chemicals we utilize for treating insects and other pests, it is the professional inspections and follow-up advice we give homeowners to help prevent pests from entering their homes. By helping homeowners understand the value of monitoring for termites and other insects, we show the true professionalism that this industry brings to homeowners.

For more information on termite monitoring products from Whitmire Micro-Gen, contact your local Regional Technical Specialist or call 800-777-8570 for customer service. ❖

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Jeff Vannoy is termite marketing manager for Whitmire Micro-Gen.



702 Termite Monitoring Station.