STATE OF THE Mosquito Market

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Exclusive Market Research

GROWTH OPPORTUNITIES

FUTURE OUTLOOK

Marketing Recommendations





PYRANHA

Providing Pest Control Solutions for More Than 40 Years

yranha, Inc. may be a new name to many pest management professionals, but the company has been around for more than 40 years, developing a variety of natural insecticides and misting systems for the control of mosquitoes, flies and other common insect pests.

For instance, Pyranha pioneered the development of an automatic insect control system that dispenses specially-formulated insecticides, providing an economical method of insect control in and around animal quarters and barns. As we've continued to innovate, Pyranha has introduced the Bug Amor® line of Automatic Mosquito Control Systems and Pyranha® Insecticide Refills to the professional pest management industry. The line includes:

- The Bug Armor® Misting System designed to rid your customers' backyards of
 flying and biting insects, while helping you build a recurring revenue model and
 grow your customer base.
- Bug Armor® Concentrate, featuring 10 percent permethrin and 10 percent piperonyl butoxide, for use in automatic misting systems, backpack misters/blowers, spray rigs and hand pump sprayers.
- **Zero-Bite**[®] **Concentrate**, featuring the environmentally friendly concentrate Geraniol, a powerful natural active ingredient extracted from geranium oil that is extremely effective at repelling mosquitoes, flies and other pests.

We've also ratcheted up our industry involvement, exhibiting at NPMA PestWorld and various state and regional trade shows, as well as sponsoring special projects like this "State of the Mosquito Market" report.

We hope you find the market research featured in this 12-page supplement beneficial to your business. We're here to help you grow your mosquito control business, so please view us as an industry "partner" committed to your success. To learn more about Pyranha and the Bug Armor® line of products, visit www.bugarmor.com.

Let's grow together!

The Pyranha, Inc. Team







Mosquito Market

Mosquito control is a small but growing segment of the pest management industry with significant opportunity for growth if marketed properly.

hat can you expect from mosquito control in 2015? Pest management professionals tell all — from detailing the segment's opportunities and challenges to the most effective marketing tactics and service protocols — in PCT magazine's second annual State of the Mosquito Market Survey.

The Market: Small But Growing

Nearly half of pest management companies offer mosquito control, but for most it's a small part of their overall revenue, found the PCT 2015 Mosquito Market Study by Readex Research. The majority of pest management professionals (45

percent) who responded to the survey said the service contributed less than \$5,000 to the bottom line in 2014. Sixteen percent reported revenue of \$10,000 to \$19,999, and 12 percent cited \$5,000 to \$9,999 in revenue.

For 28 percent of PMPs, this revenue was less than 1 percent of overall income. Twenty-four percent of respondents said it made up between 1 and 2 percent of revenue; 16 percent said mosquito control accounted for 5 to 9 percent of revenue, found the study. More than half who offer the service said this revenue increased over the past three years, meaning there is significant opportunity for growth.

"We had tremendous growth in mosquito control last year," said Scott Fortson, president of Terminix Service, Columbia, S.C. In 2014, the company "more than doubled" its mosquito revenue to over \$1 million, or between 1 and 2 percent of overall revenue, he said. Last year "was a tough year for us so we're certainly glad we had the growth in that segment," said Fortson. Previously, the company didn't target this "low-hanging fruit," he explained.

Josh Erdman, owner of Erdye's Pest Control in Green Bay, Wis., expects his service to grow 15 to 20 percent in 2015. It's a key part of the growing company's





business strategy, he said.

Mosquito control "can be very profitable if priced properly," noted Stuart Aust, president of Bug Doctor and its Mosquito Doctor division, Paramus, N.J.

The Service: Products, Treatment Options, Employees Ultimately Make the Difference

Most PMPs (86 percent) offer mosquito control as an add-on service, while 13 percent include it as part of their general pest control service, found the PCT 2015 Mosquito Market Study.

The service is performed most often for one-time special events like outdoor weddings and parties (82 percent), followed by ongoing monitoring and maintenance programs (73 percent). Service is conducted mainly for residential (92 percent) and commercial (62 percent) properties.

Most PMPs (71 percent) favor the targeted application of mosquito adulticides, found the study. In follow-up interviews, PMPs said programs generally feature monthly or bi-monthly service visits from March through October, depending on weather. Backpack mister/blowers, power spray rigs and hand-pump sprayers commonly are used to apply conventional insecticides and green products to bushes, shrubs and foliage where mosquitoes rest.

Peter Wonson, president of General Environmental Services, Boston, said both synthetic pyrethroids and EPAexempt green products "work really well as long as you know where to treat."

Lance Trovato, owner of Think GREEN Pest Control, Vernon, Conn., said using a mix of both green and traditional products is an "expensive but very effective" control approach that delivers the repellency of essential oils and the long-lasting efficacy of conventional chemicals.

The PCT study found nearly 60 percent of PMPs also perform larval control, such as applying a larvacide to areas of standing water like ditches and puddles.

Habitat modification is a focus of 34

percent of survey respondents. Mosquito Doctor employees turn over anything in the yard holding water; they also educate clients on how to eliminate standing water so mosquitoes can't breed, said Stuart Aust. That's basic Integrated Pest Management (IPM), he reminded.

Eighteen percent of PMPs offer automatic misting systems, according to the report. Erdye's Erdman became a misting system dealer last year. He said this service has huge growth potential in his market for residential and commercial clients.

Most PMPs (37 percent) had a 1 to 4 percent callback rate for their mosquito control programs, and 35 percent had zero callbacks, according to the PCT study. To maintain these low numbers, hire the right employees for the job, said Terminix Service's Fortson. He learned early on his universal technicians didn't like doing mosquito work, which affected the program's results. So, his branch managers built designated mosquito teams. "Once we figured that out, sales spiked," he said.

The Outlook: Preparing for Growth and Expansion

Most PMPs who offer mosquito control (65 percent) expect this revenue to increase in 2015, according to the PCT 2015 Mosquito Market Study.

General Environmental Services saw its service grow 20 percent in 2014 and expects the same increase this year, said Peter Wonson. "Opportunities are everywhere" to grow the business, said Terminix Service's Fortson. Some of his

competitors only offer mosquito control. "That tells you there's a market out there," he said.

About half of PMPs plan to invest next year in mosquito control equipment, including backpack sprayers (53 percent), foggers (36 percent), spray rigs (26 percent) and automatic misting systems (19 percent), found the study. Mosquito Doctor's Aust advised pest management professionals to consider buying a gaspowered spray rig so service can be done at remote sites like ball fields and utility substations.

A robust mosquito season may help grow the segment. Standing water from the Northeast's record snowfall will create plenty of mosquito-breeding sites, said Wonson. Another boon: Customers in general are becoming less tolerant of pests, noted Think GREEN Pest Control's Troyato.

Why don't more PMPs offer mosquito control? According to the study, they said the pests aren't a problem for customers (32 percent), the service requires special training/equipment (28 percent), and the market is too small (21 percent).

Still, offering mosquito control can help you "protect the business you have," cautioned Aust. "I know how we work," said Aust. When hired for mosquito control, his employees are asking about general pest service next. "If we get our foot in the door, we're trying to get two feet in," he said. By not offering the service, he explained, you may be leaving the door open to competitors.

ABOUT THIS SURVEY

The survey sample of 3,226 was selected in systematic fashion by GIE Media and Readex Research from emailable Pest Control Technology recipients at unique company locations and with upper management titles and upper management title codes in the circulation list. Data was collected via an online survey from Feb. 17 to Feb. 26, 2015. The survey was closed for tabulation with 192 usable responses, a 6 percent response rate. To best represent the audience of interest, most of the results are based on the 95 responses who indicated their companies offer mosquito control services.

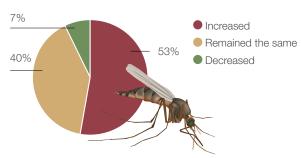




THE MARKET

MOSQUITO REVENUE GROWING

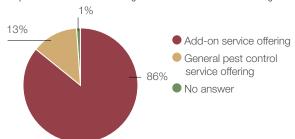
In the past three years, has the percentage of your company's revenue derived from mosquito control services increased, decreased, or remained the same?



Number of respondents reporting who offer mosquito control services: 95 Source: PCT 2015 Mosquito Market Study by Readex Research

LARGELY AN ADD-ON SERVICE OFFERING

Does your company offer a mosquito control service as part of its general pest control service offering or as an add-on service offering?

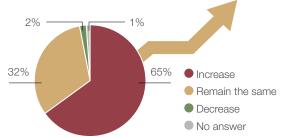


Number of respondents reporting who offer mosquito control services: 95 Source: PCT 2015 Mosquito Market Study by Readex Research

THE OUTLOOK

PMPs ANTICIPATE GROWTH IN 2015

Compared with 2014, do you anticipate the percentage of revenue generated from your company's mosquito control services to increase, decrease, or remain the same in 2015?

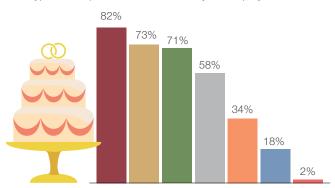


Number of respondents reporting who offer mosquito control services: 95 Source: PCT 2015 Mosquito Market Study by Readex Research

THE SERVICE

DIVERSE SERVICE OFFERINGS

What types of mosquito control services does your company offer?

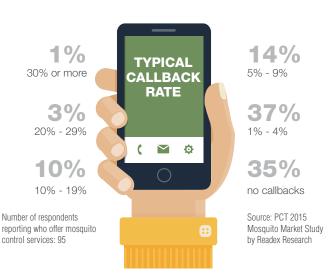


- Special event services (outdoor weddings, community events, etc.)
- Ongoing monitoring and/or maintenance
- Targeted applications of mosquito adulticides
- Larval control
- Habitat modification
- Automatic mosquito misting systems
- Other

Number of respondents reporting who offer mosquito control services: 95 Source: PCT 2015 Mosquito Market Study by Readex Research

WHAT ABOUT CALLBACKS?

What is the typical callback rate for your company's mosquito control services?













Reclaiming the Backyard: A Key Marketing Message

ccording to the PCT 2015
Mosquito Market Study, 49
percent of PMPs emphasize
'taking back the yard' when
promoting mosquito control programs.
That's exactly why Peter Wonson, General Environmental Services, started
offering this service: He was tired of
getting eaten alive in his own yard
while mowing the lawn or sitting on
the terrace.

Wonson said clients know mosquitoes vector disease — 60 percent of PMPs said their clients are somewhat to very concerned about this issue, found the PCT report — but they care more about using and enjoying their yards. "Without (a mosquito control) program, they can't," he said.

"We get more comments about our mosquito control than any other service" because the results are so dramatic, said Scott Forston, Terminix Service. "There's something about 'you had mosquitoes and now you don't" that amazes people and they tell others, he explained.

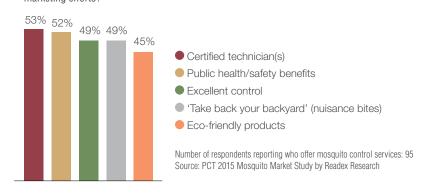
"Word-of-mouth is the best way to grow," said Lance Trovato, Think GREEN Pest Control. According to the study, PMPs rely most on word-of-mouth advertising (95 percent) to promote their services; 60 percent said this ad form is the most effective. PMPs also use online advertising (57 percent), door hangers/cloverleafing (31 percent) and direct mail (30 percent) to get the word out.

The service will "grow as long as

MARKETING STRATEGIES

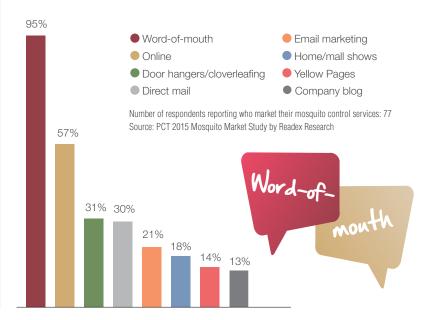
MULTIPLE MARKETING MESSAGES

What aspects of your company's mosquito control services does it feature in its marketing efforts?



WORD-OF-MOUTH ADVERTISING IS KEY

What types of advertising has your company used to promote its mosquito control services?

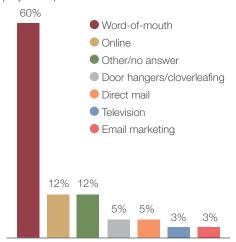






MOSQUITO ADVERTISING: WHAT WORKS?

What type of advertising has been **most effective** in promoting your company's mosquito control services?



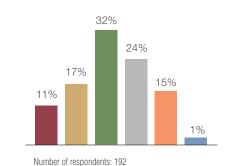
Number of respondents reporting who market their mosquito control services: 77 Source: PCT 2015 Mosquito Market Study by Readex Research

Very concerned Concerned Not much concerned Not at all concerned No answer

MOSQUITOES & DISEASE TRANSMISSION

transmission by mosquitoes?

How concerned do you think your customers are about disease



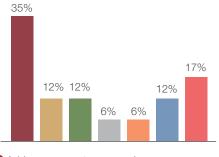
Source: PCT 2015 Mosquito Market Study by Readex Research

you're actively promoting it," said Stuart Aust, Mosquito Doctor/Bug Doctor. Fortson is running more mosquito-specific billboards and radio ads in 2015. General Environmental Services relies on phone sales, envelope stuffers and salespeople, who cross-sell the service in the field. Aust said email blasts to existing and former customers and "putting vehicles on the road" as rolling billboards create awareness.

More than half of pest management professionals emphasize the public safety/health benefits of mosquito control services in their marketing initiatives, found the study. But most "don't want to use scare tactics" to sell the service, said Fortson. Other key messages: certified technicians (53 percent), excellent control (49 percent) and eco-friendly products (45 percent).

WHY PMPs OFFER MISTING SYSTEMS

What has been the most appealing aspect of offering an automatic mosquito misting system?



- Addresses a customer need
- Generates recurring revenue
- Expands service offerings
- Protects public health
- Reaches an untapped market
- None of the above
- No answer

Number of respondents reporting who offer mosquito misting systems: 17 Source: PCT 2015 Mosquito Market Study by Readex Research

More than half of pest management professionals emphasize the public safety/ health benefits of mosquito control in their marketing initiatives, found the study.





Misting Systems: Meeting Needs, Recurring Revenue



ighteen percent of PMPs who offer mosquito control, install and service automatic mosquito misting systems, according to the PCT 2015 Mosquito Market Study.

These ultra-low-volume systems operate on a timer to produce a fine mist of water and EPA-registered insecticide or green products lasting 10 to 30 seconds. Strategically placed nozzles and hoses connect to a drum that stores diluted product. A remote control lets the client conduct additional mist sessions as needed.

While relatively new to structural pest management, misting systems have been used for decades in horse barns and livestock facilities to control flies, mosquitoes and other biting and stinging pests, said Greg Cunningham, partner of the firm that patented and makes the Bug Armor misting system and insecticides.

Josh Erdman, Erdye's Pest Control, began offering residential misting systems in 2014. "It's going to make up a pretty big portion of our revenue" going forward, he said.

More than one-third of PMPs offer these systems to address customer needs, found the PCT study. Affluent homeowners appreciate being mosquito free and commercial customers don't lose business because their outdoor venues are too buggy, they said.

Erdman plans to convert his commercial clients from backpack mister/blower treatments to commercial-grade misting systems. "It's a better business for us," and clients won't have to worry about calling for service the morning of an event; they'll know it's taken care of, he said.

Recurring revenue is why 12 percent of pest management professionals offer misting systems, found the study. "We don't make as much on the install, but the service year after year after year is

what we're looking for," Erdman noted.

System design, installation and maintenance are easy and require some, but not extensive, labor, said Cunningham. Manufacturers offer comprehensive training and estimating support.

PMPs cited pesticide exposure (44 percent), system cost (38 percent), and the wrong customer demographics (33 percent) as reasons for not offering misting systems, found the study.

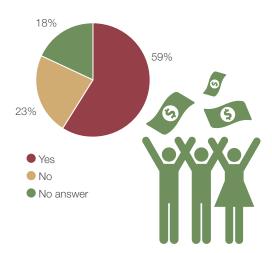
Bug Amor® Mosquito Misting System





MAKING THE CONNECTION

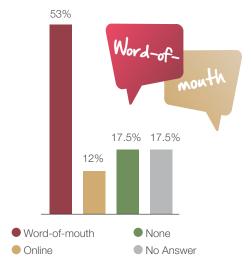
Do you think your customers understand the financial benefits of installing automatic mosquito misting systems on their properties?



Number of respondents reporting who offer mosquito misting systems: 17 Source: PCT 2015 Mosquito Market Study by Readex Research

MISTING SYSTEM MESSAGING

What type of advertising has been most effective in promoting your company's automatic mosquito misting systems?



Number of respondents reporting who offer mosquito misting systems: 17 Source: PCT 2015 Mosquito Market Study by Readex Research

Selling Misting Systems

Strategies for driving word-of-mouth advertising to your target customers.

he most effective way to advertise mosquito misting systems is through word-of-mouth, reported 53 percent of PMPs providing this service in PCT's 2015 Mosquito Market Study.

Once installed, the systems "really sell themselves," said Josh Erdman, Erdye's Pest Control. To get the buzz going, he held a contest for residents of an exclusive housing community. The winner received a fully installed system and a year of maintenance in return for hosting two outdoor events for neighbors.

"Everyone was just blown away with how (the system) worked," Erdman recalled. "Word spread fairly quickly. Before you know you're putting 200 systems in one area." He also sponsors community activities and advertises in its magazine.

His target is folks who live in high-end golf course communities and spend \$10,000-plus on landscaping. If they live in a \$500,000 home and have a \$6,000 sprinkler system, spending \$2,500 to eliminate mosquitoes is an easy sell, said Erdman, and "they're just thrilled" to operate the system for less than \$500 a year. PMPs said nearly 60 percent of customers understand the financial benefits of misting systems, found the study.

Misting systems are "the only way to guarantee mosquito control for a living or play space," a strong message that resonates with customers, while also knocking down gnats, "no-see-ums," flies and perimeter pests, said Bug Armor's Greg Cunningham.

Demand is growing: Manufacturers like Bug Armor need "more people to handle the leads we're generating" through national advertising and home shows, noted Cunningham. ■

Executive Summary

There is opportunity in the market for PMPs to offer mosquito misting systems, and to educate their staff and customers on the <u>financial</u> benefits of these systems.

- Approximately one-in-five mosquito control providers offer automatic misting systems (18%). Among those who do, addressing a customer need has been the most appealing aspect of offering this type of system (35%); generating recurring revenue and expanding service offerings for 12 percent, each.
- Seventy-one percent of those who offer mosquito misting systems think their staff understands the financial benefits to customers of installing these systems on their properties; fewer (59%) think their customers do. Three-in-four (76%) indicated their staff and/or customers would benefit from sales literature focusing on the financial benefits of automatic misting systems.

(Source: 2015 State of the Mosquito Market)





BUG ARMOR® Residential Outdoor Misting System

yranha® has developed a state-of-the-art product line designed to meet the needs of PMPs serving the residential misting market, a largely untapped segment of the pest management industry with significant growth potential. The company's product line includes the Bug Armor® Misting System, Bug Armor® Concentrate and Zero Bite® Concentrate. To learn more about Pyranha® and the Bug Armor® line of mosquito control products, visit www.bugarmor. com or call 800/231-2966.



Bug Armor® Misting System

This ultra-low volume misting system rids your clients' outdoor world of flying and biting insects (mosquitoes, flies, spiders, fleas, ticks, ants, roaches) while helping you build recurring revenue and grow your customer base. The system is easy to design, install and maintain and uses EPA-exempt and registered products. Bug Armor® provides estimating, design and marketing support so you can promise customers a mosquito-free environment. The system operates on a timer to produce a fine mist of diluted product lasting 10 to 30 seconds; a remote control lets clients mist as needed. The system appeals to affluent homeowners with pools, patios, outdoor kitchens and landscaped yards, as well as outdoor restaurants and entertainment venues.

Bug Armor® Concentrate

Featuring 10 percent permethrin and 10 percent piperonyl butoxide, Bug Armor® Concentrate effectively kills mosquitoes and can be used in automatic misting systems, backpack mister/blowers, spray rigs and hand pump sprayers. It also provides fast knockdown of gnats, flies, wasps, fleas, ticks, cockroaches, crickets, spiders and other small biting and flying insects. One bottle of the water-based concentrate makes 50 to 200 gallons of finished product. It is not available in the state of New York.



Zero-Bite® Concentrate

Non-toxic and safe for use around children and small pets, this environmentally friendly concentrate features Geraniol, a powerful natural ingredient extracted from geranium oil that is extremely effective at repelling mosquitoes, flies, gnats, ticks, fleas, cockroaches and other pests. It can be applied as a light mist via automatic misting systems and backpack mister/blowers and directly to infested areas and cracks and crevices using hand-pump sprayers and spray rigs. The water-based concentrate is neither oily nor greasy.





Automatic



Mosquito Control Systems & Pyranha Refills



www.BUGARMOR.com

800.231.2966



