

2ND ANNUAL

STATE OF THE

BED BUG

MARKET



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MGK[®]



COMPLETE **BED BUG** CONTROL

MMGK, a fourth-generation family-owned business, has always taken pride in its ability to innovate. It's the reason we've not only survived, but thrived against much larger competitors, many of whom have significant financial and people resources at their disposal.

How have we done it? Like you, MGK is nimble enough to identify market opportunities as they've developed. The bed bug market is a prime example. When bed bugs first began reappearing in major cities throughout the United States a number of years ago, we never considered it a niche market. Our scientists – supported by top management – immediately began developing cutting-edge products like Bedlam® Insecticide to address this rapidly evolving insect.

Today, bed bug services are a growing part of many pest control businesses throughout North America. And we continue to invest in this critical area of our business by offering one of the broadest, most highly effective product portfolios in the pest management industry, including Bedlam Insecticide, PyGanic® Dust, Onslaught® Microencapsulated Insecticide and Exponent®, which can be used in conjunction with virtually any residual insecticide to increase the speed of kill and control of bed bugs.

Even more impressive, there are no plans to sit back and rest on our laurels. Research and development continues to be the cornerstone of MGK's business with the industry's finest formulation chemists working night and day to ensure that every product in our portfolio delivers on the promise of previous generations of MGK employees. And that promise is to deliver the highest quality products in the most user-friendly formulations at the fairest price possible.

Bedlam Insecticide is just such a product. Packaged in an easy-to-use aerosol formulation, Bedlam is specially designed to control all life stages of bed bugs, including eggs. With one of the broadest labels in the bed bug category, it may be used to treat bed frames and headboards, mattresses and box springs, furniture, fabrics and bedding materials, as well as crack and crevice treatments on and around baseboards, floorboards and walls. When it comes to bed bugs, Bedlam truly is a universal product.

We hope you find the information in this special editorial supplement helpful as you battle one of the most serious pests of this – or any – generation. Our support of this annual "State of the Bed Bug Market" is just one more way MGK is investing in the marketplace, helping its customers innovate just as it has innovated since opening its doors more than a century ago.

Sincerely,

Ian Thorburn

Ian Thorburn
Market Manager, Branded Products
MGK
Minneapolis, MN





BED BUG COMMUNICATIONS 101

**Everyone knows bed bug treatment takes a partnership.
If your customers just don't get it, it's time to change
communication tactics.**

Your customers have bed bug problems, but despite your best efforts they don't follow your site prep directions, don't read your hand-outs...they just aren't cooperating.

Is it possible they don't care and prefer to live with the pests? Hardly. The problem may, in fact, be you.

"Without explaining the nature of bed bugs effectively to customers,

sometimes we miss the control of them," said Adam Jones, vice president and director of quality assurance at Massey Services in Orlando.

Barriers like language, literacy, and the lack of access to people who need bed bug education the most complicate matters even more.

The same goes for limiting re-infestations. "Education is the only way to prevent them from bringing them in," said Jeff White, entomologist at Cooper Pest Solutions in Law-

renceville, N.J.

Clients need to understand "the gravity of what we're saying" and the consequence of not following preparation instructions or treatment advice, added Clark Pest Control Technical Director Darren Van Steenwyk in Lodi, Calif.

It all comes back to communication. What you say and how you say it may differ depending on the client, the infestation and the treatment method, but the basics remain the same:





Say it with pictures. A picture speaks a thousand words, regardless of language or literacy. Twenty-five primary languages are spoken in the San Francisco Bay area, alone, noted Van Steenwyk.

That's why Consulting Entomologist Dr. Stuart Mitchell, BCE, suggests using preparation sheets that are pictorial in nature, not text-based.

Images might show a step-by-step progression of a resident putting clothes into bags, putting the clothes into a dryer, pulling drawers out and turning them upside down, and so on. A secondary sheet might show what the technician will do upon arrival.

Pictures remove some of the vagueness and confusion from the process, said Van Steenwyk. It's "relatively clear and everybody can understand it."

Massey Services created posters and easy-to-carry photo ID cards for clients' housekeeping staffs. These help employees identify bed bugs and explain in Haitian, Creole, Spanish and English what they should do if the pests are suspected.

If using text, avoid industry jargon that can confuse outsiders, advised Clark Pest Control Market-

ing Manager Nicole Kirwan Keefe. She's developing an easy-to-understand DVD, which can be sent to residents in advance to help them prepare their living space.

"When dealing with the public, the simpler the better," Mitchell said.

Think beyond the printed piece. The good news: Today, PMPs can reach current and potential customers in countless ways. The bad news: No one way exists to best reach all of them.

As such, professionals are turning to social media and digital video to spread bed bug education. Massey Services uses Twitter, Facebook and blog postings to ease fears, provide tips and emphasize its partnership with the community.

Bed Bug TV, an effort of Bed-Bug Central and Cooper Pest Solutions, offers 63 (and counting) two- to 15-minute videos ranging from bed bug identification to travel tips. PMPs can post video links on their web sites to help educate customers, said White.

Formalize the interview process. "It's very important that communication goes both ways,"



reminded Van Steenwyk.

He cited this example: A supervisor was having a hard time controlling an infestation. After much discussion, he learned the residents did everything asked, except wash one pillow on the couch where they spent a lot of time. "It took that rapport, going back and forth, to finally be able to identify" the source.

Don't be afraid to ask simple questions, or those that are embarrassing, said Van Steenwyk. The stigma of bed bugs is strong; people don't want to talk about it. "We have to start that conversation."

The first interview coincides with inspection to determine if clients actually have bed bugs. Once an active infestation is confirmed, questions turn to how they got there. Have you been traveling, have guests stayed over, or any visitors? Are bed bugs at your workplace or places you frequent? Have you made any purchases recently? Then, technicians need to get an idea of residents' movement and habits in their living space. Where do you sleep and spend a lot of time?

4 It's in the Bag... Forever?

Most pest management professionals ask residents to bag up some of their items prior to bed bug treatment. **But then what?** According to Virginia Tech Entomologist Dr. Dini Miller, rarely are residents told what to do with to the bagged items or when they can take them out.

Instead of bagging everything from clutter to bed linens and potentially scattering bed bugs right before technicians show up, she suggested residents only bag items in the way of treatment. That way, technicians can inspect while the bed bugs are quiet and undisturbed.

When it comes to site preparation, "a lot of what we're asking clients to do is almost undoable for them," she said.



Where does your pet hang out?

The more information we can get from the customer, “the less deduction we have to do and the more directed actions we can take,” Van Steenwyk reminded.

The process is refined during treatment, and the final, follow-up interview ensures the customer is satisfied and prepared to help prevent an infestation from happening again.

Speak management’s language. Managers of commercial properties often don’t understand where their money is going or the cost of tenants’ lack of cooperation.

Saying a tenant’s closets are too cluttered doesn’t mean much until you attach the \$600 cost of re-treatment. “All of a sudden their eyes are much more open to the problem,” said White.

Cooper Pest Solutions account managers sit down with clients and explain just that. It goes a long way toward building a positive relationship, White said.

Money also talks to clients’ em-

ployees. Some hotels, resorts and cruise ships offer “bed bug bounties,” giving employees a financial reward for finding and reporting the pests, said Mitchell.

Reach the right people. Designed for select groups, bed bug symposiums can help PMPs allay fears, reach key decision makers, showcase the industry’s expertise, and build their client base.

The half-day education sessions – not infomercials – often feature a leading entomologist to discuss pest biology and behavior, a lawyer to address legal implications, the PMP as moderator, and experts to discuss different control techniques and technologies. Some even offer guests professional continuing education credit. “Every one I’ve been involved in has been very well attended,” said Mitchell.

Hulett Environmental Service in West Palm Beach, Fla., addresses homeowner associations and chambers of commerce. The more PMPs can address the public and provide factual information, “the better off the pest control industry is going to be,” said Marketing Director Greg Rice. With all the misinformation on the Internet, it’s important to “correct some of these myths” and “alleviate some of the anxiety people have.”

Ron Box, scientific affairs director at Hulett, advised working closely with homeowner association presidents. It’s “good policy.” Not only can the president provide access to other units for necessary inspections, but once educated will advocate your prevention measures.

Bed Bug Communication Checklist

For a downloadable checklist of some communications tips please visit www.mgk.com.

Stress prevention best practices. Because of bed bugs’ mobile nature, people are picking them up at other locations and cycling them back to their own property. Many never realize where their infestation came from, which makes communicating prevention practices all the more important, said Massey Services’ Jones.

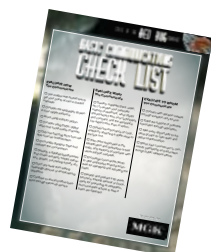
Before the travel-heavy holidays, Massey Services added a prevention tip sheet to residential customers’ statement envelopes and service report bags. It advised homeowners how to inspect hotel rooms and what to do if they suspected bringing the pests home.

Communicating prevention is a big task, because it requires PMPs to help people develop awareness and re-evaluate almost every aspect of their outside-the-home behavior. Buying second-hand furniture or returning from a business trip? Customers need to know how to inspect so they can lessen the chance of hitchhiking, said Hulett’s Box.

Massey Services trains commercial clients how to identify and quarantine an infestation so they don’t spread it. Once they recognize the problem, “what they do next is critically important,” said Jones.

Mitchell advised helping clients establish a zero-tolerance policy for bed bugs, with clear lines of responsibility for the PMP, management and employees or tenants. Communicate that policy so infestations are reported early and management can respond promptly.

Otherwise, “we’ll be chasing that problem forever,” added Clark’s Keefe. ■





BED BUGS IN AMERICA

Bed bugs have taken the country by storm and the media has taken notice. But what's fact and what's fiction? A new survey from NPMA attempts to shed some light on the subject.

One out of five Americans has had a bed bug infestation in their home or knows someone who has encountered bed bugs at home or a hotel, according to a new survey from the National Pest Management Association (NPMA).

“Most Americans recognize that bed bugs are back in a big way. Our survey shows that people are taking the bed bug resurgence seriously and making simple adjustments to daily routines to avoid infestations,” noted Missy Henriksen, vice president of public affairs for NPMA. “While it appears bed bugs are here to stay, it is important that the public, the government and the pest control industry work together to minimize infestations through education, building awareness and assistance.”

The “Bed Bugs in America” survey offers a look at how the bed bug resurgence is impacting the lives of Americans. Here are key survey highlights:

19%

Bed bugs have been found in all 50 states. Specifically, the pests were encountered by 17 percent of respondents in the Northeast; 20 percent in the Midwest; 20 percent in the South; and 19 percent in the West.

Of the 13 percent of respondents who said they knew someone who had a bed bug infestation in their home, 40 percent said they avoided entering the infested home and 33 percent discouraged those who had the infestation from entering their own home.

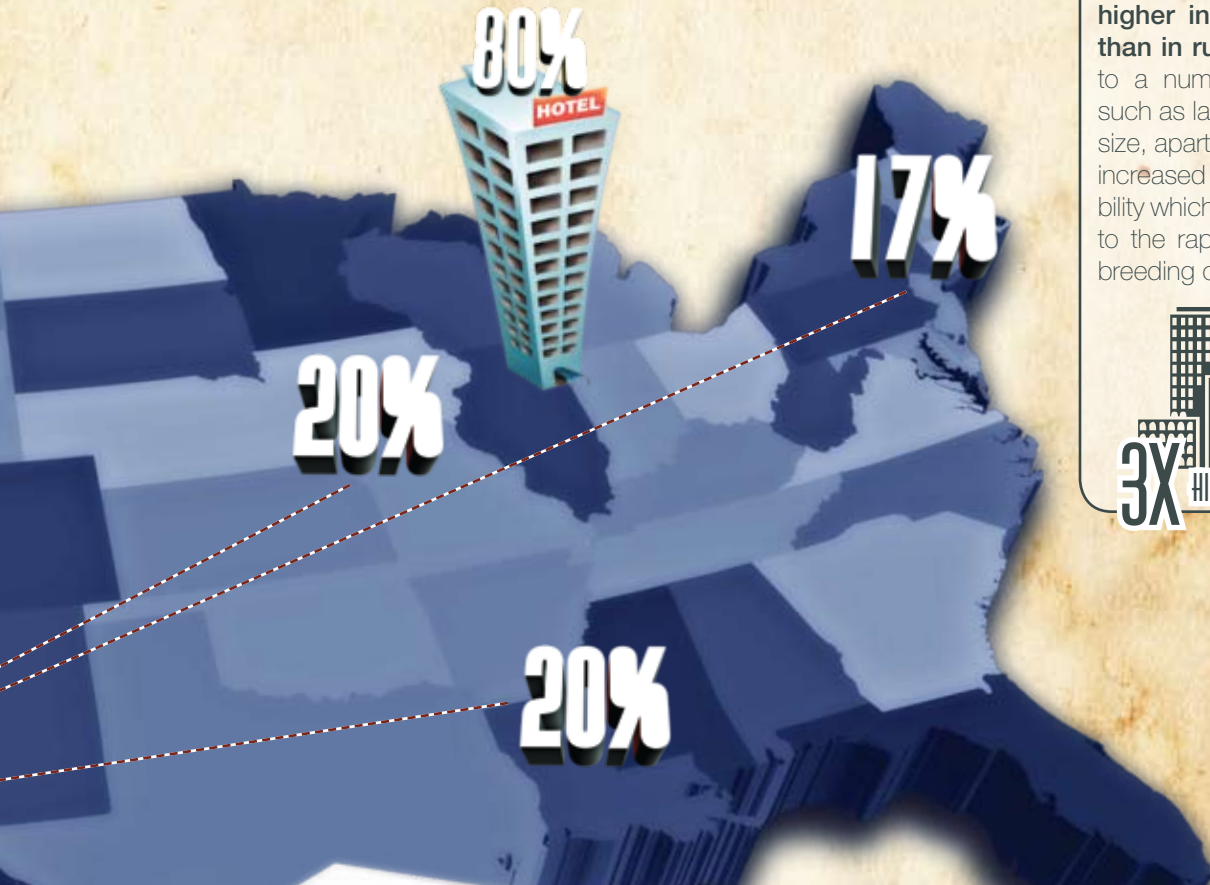
DO NOT ENTER

STATE OF THE **BED BUG** MARKET



Most Americans are concerned about bed bugs and believe that bed bug infestations in the United States are increasing. **Nearly 80 percent are most concerned about encountering bed bugs at hotels;** 52 percent on public transportation; 49 percent in movie theaters; 44 percent in retail stores; 40 percent in medical facilities; 36 percent in their own homes; and 32 percent equally pointed to places of employment and friends' homes. The fear of getting bitten topped the list of concerns.

Americans who have encountered bed bugs tend to be younger, live in urban areas and rent their homes. The incidence of bed bugs is **three times higher in urban areas than in rural areas** due to a number of factors such as larger population size, apartment living and increased travel and mobility which are conducive to the rapid spread and breeding of bed bugs.



As the public's awareness of the bed bug resurgence grows, many Americans are modifying their behaviors to minimize infestations: **27 percent have inspected or washed clothing upon returning from a trip;** 25 percent have checked a hotel room for bed bugs; 17 percent have inspected or vacuumed a suitcase upon returning from a trip; and 12 percent have altered or canceled travel plans because of concern about bed bugs. In addition, 16 percent have inspected second-hand furniture they have brought into their homes; 15 percent have checked dressing rooms when trying on clothing; and 29 percent have washed new clothing immediately upon bringing it home from a store.

PMPs also will find information in the survey about where respondents would search for professional pest management services, consumer attitudes on available treatment options, and more. The survey was enabled by the Professional Pest Management Alliance. (Source: NPMA) ■



**DO YOUR EMPLOYEES
HAVE THE RIGHT
PERSONALITY
FOR BED BUG WORK?**

If not, failure may be in your future.

When time is money, employers value technicians who can handle a fast-paced, high-volume service schedule – and handle it well.



Treating for bed bugs, however, is a different game. It's time intensive, monotonous, and very personal.

"There will be people in your organization better suited for this type of work than others," and you might even need a different type of technician than you currently have on the payroll, said Entomologist Dr. Dini Miller of Virginia Tech.

Smithereen Pest Management Services in Niles, Ill., hired two technicians specifically for bed bug work this past year and evaluates traits of existing employees to identify those best-suited for the task, said Technical Director & Corporate Trainer Sara Kantarovich. A bed bug technician "only has to be the best at doing bed bugs."

So what qualities make for the ideal bed bug technician? Professionals shared some personality traits they seek:

Methodical. Employees best suited for bed bug work are comfortable moving at a slow pace and don't get bored easily. Steaming baseboards and upholstered furniture is tedious, said Miller. One missed area could topple the best-intended treatment plan. With bed bug jobs, the devil definitely is in the details.

Patient. "Oodles of patience" is an attribute of effective technicians, Miller said. "If you're thinking about your next account while you're at this one, you're not going to get the job done." Also, management cannot pressure technicians into doing an unrealistic number of units a day or quality will slip.

Communicates Well. Excellent verbal and writing skills are a must. Documentation "plays a big

part in protecting the company and protecting our customers," said Kantarovich. If the technician makes mistakes in reporting, companies can find themselves in some trouble. Smithereen evaluates employees' writing skills during its training process.

Smart Self-Starter. Rottler Pest & Lawn Solutions President Mike

BED BUG TREATMENT IS A DEPARTURE FROM TRADITIONAL PEST SERVICES, AND REQUIRES MANY EMPLOYEES TO DO THINGS THEY'VE NEVER HAD TO DO BEFORE.

Rottler in St. Louis said technicians should be quick learners who can think on their feet. His employees take intelligence tests to ensure they'll be able to understand the engineering and physics behind heat treatment, as well as the safety implications. They need "to do the right thing when no one's looking," be disciplined, observant and diligent, he added.

Calm and Collected. Technicians can't be easily disgusted by digging in people's personal stuff — "a whole lot of their stuff" — or reaching between mattresses and box springs or into tight cracks and crevices. Already some technicians have been stuck by hidden

needles, Miller explained. It's a fine line: Employees shouldn't feel uncomfortable going through a client's underwear drawer, and at the same time not like it too much, she smiled. Neither can they be freaked out by the pests. "Some people just can't tolerate them."

Good Time Estimator. This is not a job for someone who gets overwhelmed easily. An employee needs to walk into a cluttered apartment, accurately estimate the time needed to get the job done, and then tackle the project given those parameters. This probably isn't the guy who treats public housing kitchens in less than 10 minutes, advised Miller. He or she also must have a big-picture perspective of bed bug treatment.

Can Make Connections. A lot of detective work is required to pinpoint the source of bed bug infestations, so technicians must be good at getting information from people in a non-confrontational way — not interrogation — and then connect those dots, said Kantarovich. It's being able to take the information a step further, such as realizing the child who visits grandma every week may be the one transporting the pests back home.

Sure, But Not Over Confident. The most-effective technicians aren't "I've-got-the-answer people," said Miller, who conceded the best minds in the industry don't have the answer to controlling the pests. A cavalier attitude "doesn't give the bed bugs enough respect. They have so many things going in their favor, and we don't," she said.

Empathetic. The ability to make



‘YOU’RE ASKING A LOT OF YOUR PEOPLE,’ MIKE ROTTLER SAID. ‘THEY HAVE GOT TO BE UP TO THE TASK’ BEFORE YOU TAKE ON BED BUG WORK.

people feel you understand what they’re going through and put them at ease is a plus, added Kantarovich. Appropriately handling customers who “certainly aren’t at their best” is essential, added Rottler. “You’re dealing with people who aren’t always rational.” Employees have to build trust and instill calm. If they’re only interested in the science or have more aggressive personalities, they’re going to have a difficult time exhibiting empathy for the customer.

An Educator. Any employee who interacts with clients and tenants must be able to allay fears, set expectations, and elicit cooperation, using information from reputable sources. Not “crap from off the Internet.” Bed bug information is changing rapidly. Five years ago “is like a hundred years ago in our bed bug learning,” said Miller.

Fit Team Player. Because technicians need to move furniture efficiently around the room, they should be relatively fit. And, have good vision. “Unless I’ve got my reading glasses on, I’m not finding bed bugs,” Rottler said. They also need to work well on a team. Miller said at least two technicians are needed to move furniture without spreading the pests. Who can lift a mattress by himself without leaning it up against him? He’ll be wearing bed bugs out and take them to the next account, she cautioned.

Not Chatty. Understanding the need for confidentiality is an increasingly important quality due

to litigation issues and threats, said Kantarovich. Technicians need to protect tenants, as well as the property management firm. “It’s important for the technician to

understand the liability of not being quiet.” Sometimes being too friendly – read, talkative – with those you’re not authorized to talk to can get the company into trouble. ■

NPMA Releases Bed Bug Best Management Practices

Publication offers guidelines to help PMPs

control bed bugs effectively, responsibly and safely.



In its continuing effort to offer education and guidance as pest management professionals develop their response to the bed bug pandemic, the National Pest Management Association (NPMA) recently released its Best Management Practices for Bed Bugs, offering guidelines to help PMPs control bed bugs effectively, responsibly and safely.

Created by the NPMA Blue Ribbon Bed Bug Task Force, a broad-based stakeholder group whose goal is the development of an industry-wide, multi-faceted response to the bed bug pandemic, the Best Management Practices for Bed Bugs provide guidance in the areas of service agreements, recordkeeping, technician and sales staff training, client education, disposal of beds, furniture, possessions, bed bug detection, treatment methods, and health and safety concerns.

“Because there are multiple products, methods and technologies that may be employed as part of a successful bed bug treatment plan, it is important that pest management professionals are aware of the myriad factors that should be considered when determining which products or methods are the best option to control a given bed bug infestation,” stated NPMA Executive Vice President Rob Lederer. “The NPMA Best Management Practices for Bed Bugs provide PMPs the tools they need to ensure they are treating this elusive pest effectively, responsibly, and safely.”

Senior Vice President Bob Rosenberg said the NPMA called together the diverse group of stakeholders because they “wanted every point of view” represented as the association put together a “comprehensive strategy” to address the bed bug pandemic. “And that’s what I think we got,” he said. “In a very short period of time – less than 90 days – we were able to engage hundreds or thousands of stakeholders and put together what I think was a broad, diverse consensus in support of this document which we think of as a milestone for the industry.”

NPMA Director of Technical Services Jim Fredericks said response to the Best Practices document – whether from PMPs, regulators, educators or consumers – has been “positive,” providing clarity to a complex subject.

To download the NPMA Best Management Practices for Bed Bugs, visit www.npmapestworld.org/publicpolicy/BedBugs.cfm, and click on “NPMA Best Management Practices for Bed Bugs.”



BEDLAM: RESPONDING TO THE RESISTANCE CHALLENGE

It's no secret pyrethroid resistance is a growing problem for PMPs on the front-lines of the industry's ongoing battle against bed bugs. "Researchers have shown that pyrethroid resistance is occurring in the United States across a broad geographical area," acknowledged Dr. Robert Suranyi, an entomologist with MGK, a leading supplier of bed bug products, including Bedlam® Insecticide.

Yet Bedlam, featuring two active ingredients – including a second-generation pyrethroid – continues to perform well in the field, in part because of its unique formulation. To understand further, the company conducted its own independent research in 2010 against a variety of pyrethroid-resistant bed bug strains, as well as various strains and ages of bed bug eggs, in an effort to validate continued efficacy in the field.

First the company identified strains of bed bugs with confirmed resistance to pyrethroids. Then, in a series of studies across multiple labs, resistant, susceptible and field strains of bed bugs were all treated with Bedlam. Knockdown and mortality was documented for 96 hours. The company also tested Bedlam against seven strains of susceptible and resistant bed bug eggs of differing ages and in a variety of conditions.

The results showed that Bedlam

achieved 60 percent knockdown within one minute in all tested strains of bed bugs, and 100 percent kill of all adult bed bugs when applied as a direct contact spray. While Bedlam does not claim to kill all strains of pyrethroid-resistant bed bugs, the test results against a variety of field and pyrethroid-resistant strains speak for themselves.

Furthermore, Bedlam controlled 97 percent of resistant-strain eggs, and 91 percent of susceptible-strain eggs (see charts on next page). "All of the eggs were susceptible to Bedlam as a direct spray application," Suranyi reported. "We treated 945 eggs and only 35 made it to the first instar stage." This ovicidal effect of Bedlam is especially crucial, since surviving eggs will likely lead to callbacks.

COMPLEX INTERACTIONS.

While he's pleased with the results, Suranyi isn't surprised. Bedlam's formulation, he says, has as much to do with its effectiveness, as its active ingredient. "We're talking about a very complex formulation that includes a synergist as well as various solvents, in a water-based aerosol formulation," Suranyi explained. "The aerosol formulation is sufficiently powerful to overwhelm the resistance mechanisms of these insects.

"With some of these other



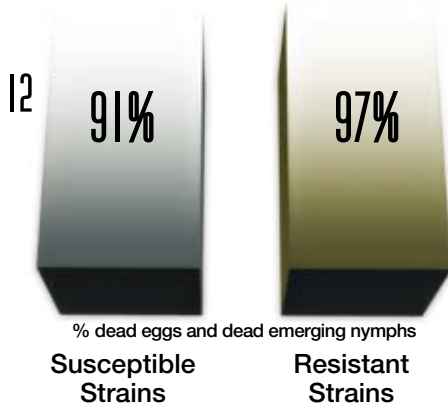


broadcast sprays you're basically trying to lay down a toxic zone for the insect to cross over," he added. But with directed aerosol applications, the insecticide is affecting bed bugs in multiple ways. "We're basically covering the insect and all surfaces with a complex mixture of ingredients," Suranyi observed, "which affects the cuticle permeability and breathing system of the insects, as well as covers the target site with the toxicant."

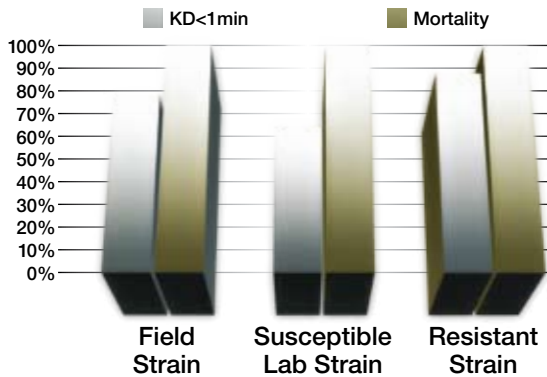
Suranyi says the innovative nature of Bedlam is reflective of the creative culture that permeates MGK. "We identify the best active ingredients available in the world and bring them in house, adding our formulations expertise to meet the specific product needs of the pest management industry," he said.

Bedlam's unique properties make it an extremely effective and us-

Efficacy of Bedlam against bed bugs eggs (*Cimex lectularius*) applied as a direct spray.



Efficacy of Bedlam against bed bugs (*Cimex lectularius*) applied as a direct spray.



er-friendly tool for PMPs, Suranyi says, particularly when accessing bed bugs in hard-to-reach areas, such as under carpeting or inside box springs or furniture. "Having a powerful aerosol formulation that can gain access to these areas provides PMPs with a superior tool for site-specific treatment of bed bugs," he says.

Furthermore, Bedlam features a broad label and can be applied on a variety of surfaces, including mattresses. "It doesn't stain, so you don't have to worry about damaging any of the customer's property," Suranyi added.

The company also takes pride in being able to offer a portfolio of bed bug control products, Suranyi said, allowing PMPs to take a more holistic approach to bed bug services (see related story). "There is no silver bullet for bed bug control," he said. "Having a broad portfolio of products allows you to be flexible. A toolbox that is full of tools is much more powerful than a toolbox that relies only on only one product." ■



MGK's Bed Bug Management Arsenal

While **Bedlam**® is one of the most popular tools in the PMP's control arsenal, it's not the only tool developed by MGK to control these ubiquitous pests. In fact, MGK offers a complete line of bed bug products including:

- **Onslaught**® Microencapsulated Insecticide for residual control of bed bugs including broadcast carpet application
- **PyGanic**® Dust for fast knockdown and kill of bed bugs, especially in cracks, crevices, and voids.
- **JetStream**® water-based fogging concentrate for large commercial use sites including offices, theaters, etc.
- **Vampyre**® concentrate and **Sector**® concentrate for surface treatments including mattresses.

In addition, **Exponent**® Insecticide Synergist can be used in conjunction with virtually any residual insecticide currently on the market, including Onslaught, to increase the speed of kill and control of bed bugs.

"We anticipate driving growth by continuing to make significant investments in our R&D capabilities, which will result in the introduction of a number of new products in the years ahead," says Kevin Caskey, Business Director, Branded Products, "including products for the bed bug market, as well as enhancements to our existing product portfolio."

PMPs interested in learning more about MGK's structural pest control product offerings can visit www.mgkpro.com.