

A SUPPLEMENT TO

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2026 BED BUG MANAGEMENT SUPPLEMENT

Zero Tolerance

Establishing protocols
helps restore clients'
peace of mind



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Aprehend and CimeXa: The deadly duo for unmatched bed bug control and prevention



BY DR. CISSE SPRAGINS
Founder and CEO,
Rockwell Laboratories

Bed bug work has changed dramatically over the past decade. Thanks to advances in product technology, pest management professionals (PMPs) today have more effective tools than ever before. The two products that have had the biggest impact on modern bed bug protocols are Aprehend and CimeXa — and now, both technologies are part of the same company following Rockwell Labs' 2025 acquisition of Aprehend from ConidioTec.

For PMPs, the combination creates a powerful opportunity to build a service program with confidence, even in the face of well-documented, widespread resistance to conventional chemistry, while also dramatically reducing customer prep, labor requirements and service time.

CimeXa has long been a cornerstone product for many successful bed bug protocols. Developed by Rockwell Labs, CimeXa Insecticide Dust uses engineered silica to damage the insect's waxy outer layer, causing rapid dehydration and death. Because of the physical mode of action, it has been shown repeatedly in independent research to kill bed bugs resistant to widely used synthetics.

CimeXa is dusted or brushed into cracks, crevices, wall voids, furniture voids, box spring interiors, behind headboards and electrical switch plates, and other protected areas where bed bugs may hide or travel. It also can be applied to mattresses by brushing into creases, seams and tufts with a paint brush. It's a perfect complement and added insurance for any bed bug protocol.

Aprehend approaches bed bug control from an entirely different angle. The product uses the naturally occurring fungal biopesticide *Beauveria bassiana* to infect and kill bed bugs. Once exposed, bed bugs can carry fungal spores back into harborages, where spores may transfer

to other bugs through contact. This transfer effect helps reach hidden populations that might otherwise avoid direct treatment.

Importantly, this approach reduces the need to dismantle rooms searching for every hidden bed bug harborage. Instead of tearing apart furniture, emptying closets and turning a service into an all-day, labor-intensive project, technicians can focus on applying residual barriers where bed bugs must travel. This allows for more efficient treatment while delivering exceptional control. Rather than broad applications, Aprehend is applied as narrow barrier bands in locations where bed bugs travel between harborages and hosts. As bed bugs cross the treated barriers seeking a bloodmeal, they pick up spores that continue working after the insect returns to hiding areas. The barriers continue working for up to 90 days.

The labor savings can be substantial. Traditional bed bug programs often require extensive client preparation, including bagging belongings, emptying drawers and pulling apart rooms before treatment can even begin. Those protocols also commonly require a mandatory two-week follow-up treatment visit. By contrast, many PMPs using Aprehend and CimeXa operate with minimal preparation requirements beyond laundering and drying bedding at high heat. Thanks to the transfer effect and long residual, technicians frequently eliminate the need for labor-heavy retreatments and instead perform a simpler follow-up inspection around 30 days to confirm eradication.

This streamlined approach improves efficiency for both PMPs and customers. Technicians spend less time performing invasive inspections and repeat treatments, while customers appreciate avoiding the disruption that often accompanies traditional bed bug service. Reduced prep time also lowers the risk of spreading infestations through unnecessary movement of infested belongings.

Strategic placement of Aprehend and CimeXa, simplified service protocols and reduced labor requirements are helping transform bed bug work from a difficult specialty service into a more predictable and profitable part of modern pest management. Plus, the long residual effectiveness allows PMPs to offer a quarterly proactive service in susceptible accounts, offering a consistent revenue opportunity.



Zero Tolerance

Establishing proper bed bug management protocols helps ensure success and restores clients' peace of mind **By Diane Sofranec | PMP Senior Editor**

Pest management professionals (PMPs) who are devoted to helping their clients tend to have a passion for bed bug management. That's because they are aware of the stigma that comes with *Cimex lectularius*, and the impact an infestation may have on their clients' mental health.

"Nobody — young, old, poor, rich — should have to live with bed bugs," says Brad Carrier, owner of Buggy's Pest Solutions in Waterloo, Iowa. "They are hard to treat, but with new products and procedures, they are manageable."

Client involvement

An additional, critical step in bed bug management protocol is clear communication with clients.

Bug Zero Pest Control's commercial sales consultant, Shawn Patterson, ACE, says his Springfield, Mo.-based company provides clients with a detailed preparation checklist and directs them to a preparation video on the company's website.

"There are so many steps that are important to ensure our bed bug service is successful, but it all starts with detailed inspections, and client preparation and education," Patterson explains.

When it comes to bed bugs, "overcommunicating" with clients is not necessarily a bad thing, according to Cameron Brennan, owner of Brennan Pest Control in Pensacola, Fla.

"We need the people living in those spaces to act appropriately and do — and not do — certain things to yield the best outcomes," Brennan says. "So, we guide them along the process with verbal and written instructions, not only for before and during a treatment, but after the service as well."

This protocol is not limited to homeowners or tenants; it applies to property managers, too. "One misinformed maintenance or healthcare worker can spread bed bugs in a residential or assisted living community," he adds.



Shawn Patterson

When working in multi-family housing, Carrier says he also ensures all parties understand what a successful treatment entails.

"We also discuss the service with the landlords, because we need them to understand that if the tenant does not prep, uses insecticides over our product or continuously brings in bed bugs, the problem will not get resolved," he says.



Brad Carrier

Thorough inspections

Bed bug management is no different from general pest control: Inspection is critical to success.

Conduct a thorough inspection and identify the pests you find to make sure your client actually has bed bugs, says Scott Hornemann, ACE, field training/quality/safety director for Adam's Pest Control in Medina, Minn.

Nothing is left to chance during Bug Zero Pest Control's inspection process. Patterson says techs take photos of every room to ensure no new "used" furniture is brought into the home to potentially reintroduce bed bugs after a heat treatment.

"Inspection does not stop there," he adds. "We also inspect any belongings they may be taking with them when we arrive the morning of treatment."

After inspection, Hornemann recommends implementing a proven process on which your team is trained and able to execute every time.

"Heat, chemical, steam, bio — it doesn't matter which route you take, but it does matter that you follow the protocol with no shortcuts," he says. "Consistency is what drives results."

The next step Hornemann recommends is following up on every job, every time.

"If you don't have a clear follow-up process to re-inspect and ultimately clear that unit or home, the service isn't finished," he says. "That follow-up inspection should be just as thorough as the initial, with the same level of detail and same expectations."

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For Brennan, follow-up inspections are important to show clients “we truly care about achieving results.” They also provide quality control.

“We can make sure our technicians are taking appropriate measures,” he explains. “If they are not, it gives us an opportunity to provide additional training to steer future outcomes.”

Hornemann also favors quality control checks. “Not to catch people doing something wrong, but to make sure we’re holding the line on the process and delivering what we said we would,” he says. “That’s how you protect the service and the client.”

Proper tools

Fortunately, manufacturers have delivered new and improved bed bug management solutions over the years. Still, it’s smart to proceed with caution.

“I’m wary of over-hyped and unverified panaceas,” Brennan says. “I want to see the scientific *and* field data to determine if I’m going to adopt a new product, chemistry or application method.”

Hornemann urges PMPs to explore treatment options and how to use them properly.

“There’s no shortage of ways to learn in this industry, you just have to use them,” he says. “New inspection techniques, treatment options, chemical tools and monitoring methods are all out there if you’re paying attention.”

Local and state pest control associations are a good place to start when you want to learn about what is and is not working for your fellow PMPs, Hornemann suggests. The



Cameron Brennan

National Pest Management Association and its annual PestWorld trade show also offer excellent resources.

“Webinars and printed materials are another solid option,” he adds.

“They are quick, accessible and usually focused on new products or evolving techniques.

There’s no excuse not to stay current.”

Critical need

Because do-it-yourself bed bug management is likely to fail, there is plenty of bed bug work to go around. The pros who do it know from experience that not every PMP is cut out for the job, however.

“Bed bug management separates professionals from amateurs because it requires inspection skills, understanding of behavior, proper product selection, integration methods, and client education and preparation,” says Patterson.

Be sure it’s bed bugs

You may think you know a bed bug when you see one, but are you sure?

Scott Hornemann, ACE, field training/quality/safety director for Adam’s Pest Control in Medina, Minn., says his team has seen an uptick in bat bugs lately.

“Some of that is likely because we’re looking harder and our customers are more aware, but there’s also been increased bat activity around the Minneapolis metro — that’s the real driver. More bats equal more opportunity for bat bugs to show up.”

That’s why identification really matters. “You can’t treat what you haven’t correctly identified,” he adds (see “*Don’t sleep on bat bug identification*,” p. BB5).

Hornemann says the company’s bed bug team has been trained to slow down and dig into the details during the customer interview. “Where the client found the insect tells you a lot,” he says. “If someone is finding them around a bathroom fan, ceiling light or attic access point, that should immediately raise a flag for bat bugs, not bed bugs.”

In addition, any pest a customer brings in is properly identified. “We’ve got multiple team members who can do that, including a board-certified entomologist,” he says. “Bottom line: Don’t guess. Take the time to confirm what you’re dealing with before you treat.” — D.S.



Scott Hornemann

Brennan concedes bed bug management does not fit every company’s business model. Perhaps they do not want to risk bringing hitchhikers back to their vehicles, offices or homes. Or maybe they lack the training or experience to ensure success.

“The pests we deal with day in and day out are tolerable if the population is low enough. But for pests like bed bugs or fleas, the acceptable number is zero,” he says. “That’s a high bar a lot of people just can’t imagine being able to achieve consistently.”

The need for bed bug management is not going away anytime soon, so the companies that successfully offer these services will continue to reap the rewards.

“Treat your clients with the highest level of respect,” Hornemann says. “They deserve to have this problem pest taken care of free of judgment. No one wants these pests in their home.” **PMP**

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Don't sleep on bat bug identification

By Dr. Mohammed El Damir, BCE | PMP Contributor

In recent years, bat populations are on the decline because of disease (such as white-nose syndrome), habitat loss and seasonal migration. But when bats die or abandon roosts, their parasites don't simply disappear — they wander in search of new hosts.

This leads to an increasing number of bat bug infestations in homes and other structures. Because they are easily mistaken for their bed bug cousins (*Cimex lectularius*), it's important to recognize the similarities and differences.

Like bed bugs, bat bugs belong to the family Cimicidae. Before his death in 1968, Dr. Robert Usinger¹ described about 74 species in this family, many associated with bats. In North America, the most common species are the Eastern bat bug (*C. adjunctus*) and Western bat bug (*C. pilosellus*), with the Mississippi River being an informal dividing line. These insects typically are found near

bat roosts like attics, wall voids and chimneys, and feed primarily on bat blood. Key distinguishing features, for which you'll need a microscope to detect, are in the chart below.

Eastern and Western bat bugs are nidicolous parasites, which means they live in bat roosts rather than on the bats themselves.¹ They can survive for months without a host. They require a bloodmeal, however, to go through each of their five stages of nymphal development to become adults. They are most active when bats are present, and go dormant during winter.

Inspect for bat bugs in cracks, crevices, attics, wall voids and hollow trees. The Eastern species, which feeds mainly on big brown bats and Myotis bats, often occupies chimneys and belfries. The Western species feeds on a wide range of bat species.

Beyond the prevention and exclusion of bat populations, several treatment options are labeled to bring a bat bug

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infestation under control.² Treat bat roosting areas and hiding spots as listed above, but also treat migration routes into living spaces, such as vents, light fixtures, plumbing chases and electrical outlets.

After treatment, monitor treated areas using glue traps to track movement and detect surviving or wandering bugs. Let customers know that it is normal to see bat bugs for several weeks as dormant stages emerge. **PMP**

REFERENCES

- Usinger, R.L. (1966). *Monograph of Cimicidae (Hemiptera: Heteroptera)*. Thomas Say Foundation, Vol. 7. Entomological Society of America, College Park, Md.
- Yu, J.J., & Wang, C. (2020). "Comparative susceptibility of the Eastern bat bug (*Cimex adjunctus* Barber) and the common bed bug (*Cimex lectularius* L.) to selected insecticides." *Journal of Economic Entomology*, 113(4), 1907–1913.




Feature	Eastern Bat Bug (<i>C. adjunctus</i>) 	Western Bat Bug (<i>C. pilosellus</i>) 	Bed Bug (<i>C. lectularius</i>) 
Pronotal hairs	0.13–0.22 mm	Similar, sometimes star-shaped tips	Less than 0.1 mm
Hind tibia bristles	~0.09 mm, nearly tibia width	Similar	Shorter than tibia diameter
Antennae	Segments 2 and 3 are similar	Segments 2 and 3 are equal	Segment 3 is larger than segment 4
Body hairs	Long sensory hairs	Stellate/star-shaped tips	Short, stiff
Pronotum shape	Not deeply notched	Not deeply notched	Deeply notched, reflexed margins

CHART PHOTOS: DR. MOHAMMED EL DAMIR; CCOOR. GARY D. ALPERT, NORTHERN ARIZONA UNIVERSITY, DEPARTMENT OF BIOLOGICAL SCIENCES; TOMASZ KLEIDYSZ / ISTOCK / GETTY IMAGES PLUS / GETTY IMAGES; BATE: DANIEL CALLAWAY / ISTOCK / GETTY IMAGES PLUS / GETTY IMAGES

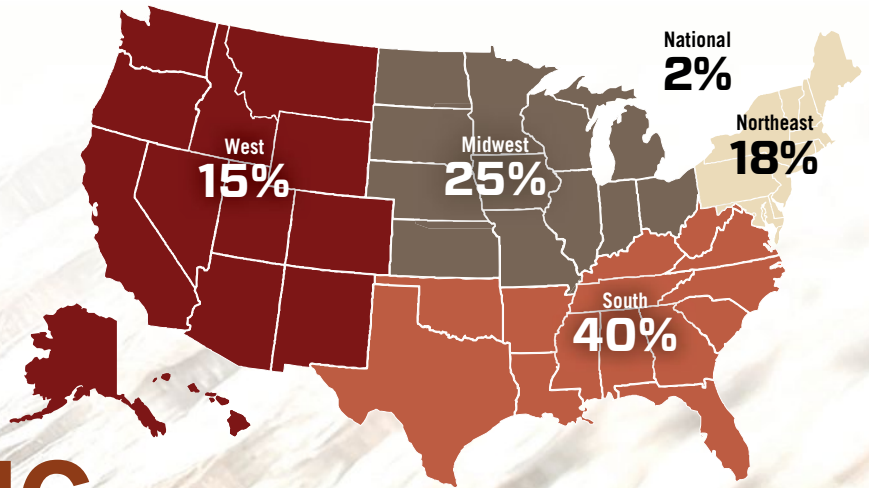
Area of Operations

WEST (AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY)

MIDWEST (OH, IN, IL, MI, WI, MN, MO, IA, ND, SD, NE, KS)

SOUTH (AL, AR, FL, GA, KY, LA, MS, NC, OK, SC, TN, TX, VA, WV)

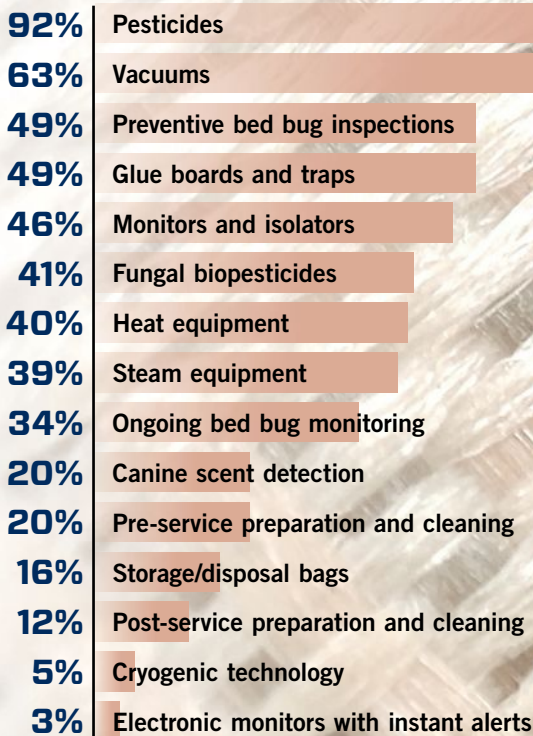
NORTHEAST (CT, DE, ME, MD, MA, NJ, NH, NY, PA, RI, VT, DC)



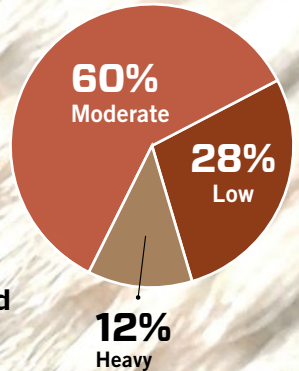
BED BUG MANAGEMENT SURVEY

SOURCE: PMP ONLINE SURVEY CONDUCTED MARCH-APRIL 2026

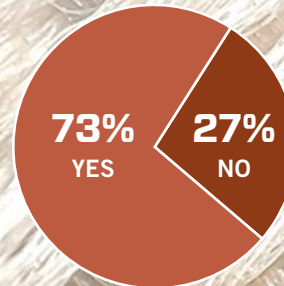
Which bed bug management tools do you use?



Bed Bug Pressure



Do you differentiate bed bug job pricing based on infestation severity?



ART: GIANSLU/SHUTTERSTOCK.COM (BACKGROUND); TINNAKORN (MAP) / ISTOCK / GETTY IMAGES PLUS / GETTY IMAGES

What do you charge to treat ...



What do you charge to treat a single-bedroom apartment/condo involving a severe bed bug infestation?



What do you charge per unit to treat a severe bed bug infestation spread across several apartments/condos?

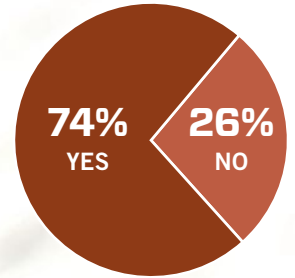


What do you charge per unit to treat a severe bed bug infestation spread across several hotel rooms?

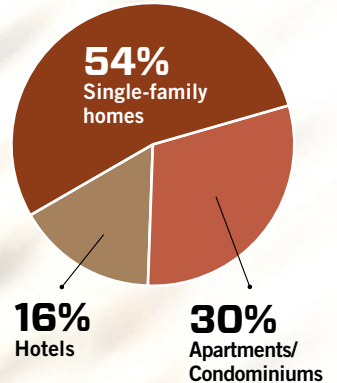
\$299 or less	6%	7%	16%
\$300 to \$599	31%	25%	35%
\$600 to \$899	31%	32%	22%
\$900 to \$1,199	21%	16%	12%
\$1,200 or more	11%	20%	15%

Customer Cooperation

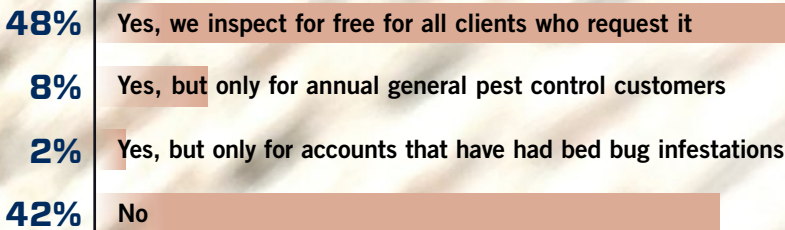
Have you ever walked away from a bed bug job because a customer did not or would not follow your prep instructions?



Which types of bed bug jobs typically cost the most?



Do you offer current clients *free* bed bug inspections?



Do you include mattress and/or box spring encasements as part of your comprehensive bed bug management program?

60% YES **40% NO**



Landlord Liabilities

Slightly more than half of the PMPs who answered say they believe most bed bug-related lawsuits and claims could have been avoided had the property managers hired pest management professionals to perform the correct work at fair prices.