A greener approach to bed bug control

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Photo caption: Timothy Wong, Technical Director at M&M, and his dog Champ

Few pests pose control challenges as complex as bed bugs. Bed bugs are tiny persistent pests that can be very hard to find. They travel easily and can migrate effortlessly through walls of adjacent units, from one dwelling to the next. Even worse, bed bug strains that are resistant to pyrethroid insecticides are now widespread throughout the United States, according to research conducted by the University of Kentucky.

New York is one of many states battling these increasingly pervasive pests. In 2009, M&M Pest Control received hundreds of bed bug complaints in New York City alone, many from people living in multi-unit dwellings. To help control these infestations, M&M Pest Control knew that it was going to need the right solution.

Bed bugs are small, cryptic nocturnal insects which can be extremely difficult to control. When conditions change in their environments – because of things like pesticides or items that cause a change in temperature – they can migrate to locations with more favorable living conditions. Some bed bug populations have also developed insecticide resistance towards pyrethroids. Traditionally, pyrethroids have been effective in providing quick knockdown of bed bug populations. But widespread resistance in bed bugs has made the use of pyrethroid treatments alone a less reliable, singular solution.

Between the resistance issues and bed bugs' ability to migrate quickly, M&M recognized the need for a new solution - one that needed to be eco-friendly and follow Integrated Pest Management (IPM) guidelines.

"M&M has always employed Integrated Pest Management so nothing was going to stand in the way of our following these guidelines," said Timothy Wong, Technical Director at M&M.

IPM is a set of guidelines that offer effective and environmentally sensitive approaches towards pest management, by relying on a combination of common-sense practices. IPM programs use current, comprehensive information on the life cycles of pests and their interaction with the environment. This information, in combination with available pest control methods, is used to manage pest damage through inspections, assessments, actions and follow up, and with the least possible hazards to people, property, and the environment.

The specific goals of M&M's IPM program were to:

- Change the living environment of the bed bugs to make their survival less likely.
- Use inspections and monitoring tools to determine where pests were active.
- Use only Environmental Protection Agency (EPA) accepted pesticides.
- Apply pesticides to area(s) where pest activity had already been confirmed.

"Staying green was at the top of our list of our priorities but we still wanted to be able to use a liquid residual and an eco-friendly dust that we knew would work," Wong said.

Many of M&M's clients required a low level of toxicity in chemicals to be used in their treatment programs because of health or environmentally-related reasons. Additionally, M&M needed an effective residual that would not repel bed bugs into other non-affected areas. Because of these reasons, their solution needed to include nonrepellent products that were proven to be effective. This combination is often difficult to find in treatment options. Wong worked with BASF Pest Control Solutions when looking for assistance to design a thorough and effective plan.

Wong met with Tom Dolan, Sales Specialist, BASF Pest Control Solutions, to discuss using the BASF SmartSolution for bed bugs as M&M's new treatment program.

BASF's SmartSolution for bed bugs includes **Phantom® SC termiticide-insecticide**, **Prescription Treatment® brand Phantom® Pressurized Insecticide**, and **Prescription Treatment® brand AlpineTM Dust Insecticide** all of which effectively control pyrethroid-resistant and non-resistant bed bugs. They utilize different classes of chemistry to avoid the development of resistance. They also don't repel bed bugs and drive them into new locations.

"M&M needed a program that fought off pyrethroid-resistant bed bugs and prevented relocation to other units," Dolan said. "The long-lasting residues from the foundational nonrepellents in the SmartSolution for bed bugs can control bed bugs for an extended period."

Phantom is a liquid, but it's entirely different from common broad spectrum liquids. It is selectively applied in small, precisely targeted "shots." This means less chemicals are subsequently applied to customers' homes, and that there are more homes treated per container.

"Unlike ordinary liquid materials, Phantom SC dries without leaving a visible residue," Dolan explained.

The secret behind the success of **Phantom** lies in its cutting-edge chemistry. The active ingredient, chlorfenapyr, is undetectable. Pests can't smell it, taste it or, most importantly, avoid it. As a result, they unknowingly contact and ingest it as they go about their routine activities.

“We’ve used the suspension concentrate of **Phantom** in the past but the pressure sprayer we used was not able to deliver a fine enough droplet size to penetrate deeply into cracks and crevices compared to **Phantom** pressurized,” Wong said. “We’ve experienced such resounding success with **Phantom** pressurized insecticide that it is now part of our protocol for nearly all of our bed bug programs,” Wong said.

Alpine Dust features the nonrepellent active ingredient dinotefuran, which has been granted the industry’s first Reduced Risk* status for public health use by the EPA.

“We were really excited about Alpine because it is ideal for bed bug prone voids and especially in areas where people are in close contact with products,” Wong said.

Alpine Dust is lightweight for better coverage and gives more applications per pound than other dusts.

“Not only is Alpine just as low hazard as using Diatomaceous Earth, it controls bed bugs at a significantly faster rate,” Wong said. “At M&M, Alpine is the only dust we use for our bed bug program.”

Armed with the SmartSolution for bed bugs, M&M Pest Control continues to win the battle against bed bugs in the greater NYC area and surrounding communities.

“M&M’s attention and devotion towards constantly looking for new ways to improve their current programs is a great example of how companies should be adapting their methods as conditions that affect pests change,” Dolan said.

Users must always read and follow label directions.

* All Alpine formulations contain the active ingredient dinotefuran, a new nonrepellent to the pest control industry that the EPA has granted reduced-risk status for public health use.