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“Totally astonishing.”

“Massive die-off of bedbugs.”

“Groundbreaking.Revolutionary

Aprehend® Case Study:
Effective pairing with the Cimex Eradicator steam generator



Green Flag Services, Lake Mary, FL
Geffry Gorman, Owner

ABSTRACT

Newly established in 2017, Green Flag Services had to make some critical choices when setting up for their eco-friendly bed bug services. Aprehend® enabled Green Flag to offer a low-cost, effective bed bug remediation service, requiring just one treatment. The addition of steam using the Polti Cimex Eradicator allowed them to offer bed bug treatment with immediate relief from bites, plus the long-term residual of Aprehend® for a fraction of the cost of a standard thermal remediation. Green Flag offers a 12-month warranty with their single-visit bed bug remediation service and 64 treatments later has only been called back for 5 re-treats.

BACKGROUND

Geffry began his pest control career as a technician with Terminix in 1993. He was also a technician with Steritech before eventually spending 16 years with Massey Services. After leaving Massey, Geffry worked in law enforcement and started Green Flag Services part time. In August of 2017 Geffry left law enforcement to work full time on his business. Green Flag offers a range of eco-friendly and all-natural pest solutions for bed bugs, termites, rodents, exclusion work and mosquito control. Geffry is a member of NPMA, FPMA, and the Facebook group Pest Cemetery.

Setting up Green Flag Services

When deciding on their service protocol for bed bugs, financial and logistic considerations came into play:

Thermal remediation (Estimated cost of initial investment \$25-40K)

Start-up costs are an important consideration when setting up a business. For bed bugs, purchasing a suitable thermal remediation system was one consideration. However, the investment required to purchase the initial set up, in addition to the running and maintenance costs made this option cost prohibitive. Furthermore, the time and labor required during a bed bug heat treatment, make this solution the most expensive option for customers. Since this would impact the number of customers that could afford such a service, Green Flag looked for alternative options for bed bug control.

Chemical control (Estimated cost of initial investment \$250 - B&G)

There are a wide range of chemical options available for bed bug control, most commonly applied with a B&G sprayer. The B&G can be used for many different chemical applications in addition to bed bugs, so this investment may be offset if other pest services are offered. However, chemical options were not a good fit for a company promoting Eco-friendly pest control.

Aprehend® (Cost of initial investment \$150)

Aprehend® requires the use of a low volume low pressure spray applicator. ConidioTec offers a complete spray kit set up, complete with a rechargeable lithium ion battery and carry pouch for \$150. This kit is optimized for application of the 2" spray barriers. Green Flag became one of the first companies in Florida to adopt Aprehend® for its bed bug services.

Start-up costs were minimal and a single bottle of Aprehend® at \$125 was sufficient to conduct 4-5 treatments to evaluate efficacy. With training videos and guidance documents available on the Aprehend® website, Green Flag was soon out in the field putting



Figure 1: The Aprehend® low-volume spray kit.

the product to the test. The results were impressive, but some customers were impatient, and wanted faster relief than the 2-week period that is required for Aprehend® to take full effect. (Note – Aprehend® will kill bed bugs in 3-7 days but will take longer to transfer and infect the entire population that have not immediately crossed the barriers.)

Polti's Cimex Eradicator (Cost of initial investment \$1,500)



Figure 2: The Cimex Eradicator ready for another bed bug job.

The Cimex Eradicator is a steam generator specifically designed for bed bug eradication. It uses 'dry steam' technology and produces a powerful steam jet with temperatures of up to 356 °F (180 °C). Adults, nymphs and eggs are killed following only brief exposure to the steam jet. By adding the Cimex Eradicator to their bed bug protocol, Green Flag services were able to offer immediate relief for customers after treatment, while still providing the long-term residual efficacy of Aprehend® for bed bugs that could not be reached by the steaming process.

Cimex Eradicator plus Aprehend® protocol

Clients are given the minimal preparation protocol provided on the Aprehend® web site (www.aprehend.com/resources). Clients find this protocol easy to follow. Closets and dressers do not need to be emptied and most items on furniture surfaces can remain in place. Items littering the floor should be picked up, trash disposed of, and dirty clothing laundered. De-cluttering is recommended, but not required. This basic preparation makes treatment easier and has a positive impact on the daily living environment for the client.

First, Green Flag steams all areas where bed bugs are visible. Beds are treated thoroughly to address all harborage areas. All other areas where bed bug activity is visible or suspected are also steamed. Once the steaming process is completed, Aprehend® is applied in strategic barriers. Barriers are carefully placed to ensure that any bed bugs that escaped the steaming process will come into contact with Aprehend® when seeking their next blood meal. Care is taken to ensure that all surfaces are completely dry prior to application of Aprehend®, as damp surfaces reduce the residual activity of the spores.



Figure 3: Starting the steaming process.



Figure 4: Following steam with the 2" band of Aprehend®. Make sure the surface is dry!

The combination protocol using steam plus Aprehend® treatment takes about 4-5 hours in an average sized 3-bedroom home. Green Flag also offers a lower cost service with Aprehend® alone, which takes approximately 2 hours including inspection time. Green Flag adjust their pricing according to the amount of time required for treatment. Ideally Green Flag recommends the combination treatment since it provides immediate relief from bed bug bites.

At the end of the treatment protocol, SenSci Volcanoes are used to provide monitoring and feedback on efficacy of the treatment. No further applications are conducted, but follow-up either in person or by phone is conducted approximately 30 days after treatment to ensure that the client is happy with the results. Green Flag services offer a **12-month warranty** with their bed bug service.

Efficacy

To date, Green Flag has conducted 64 bed bug services and has only been called back to conduct 5 re-treats. In each case the reason for failure was identified. In two cases, the re-treats were in multifamily units where the neighbors had infestations and bed bugs were dispersing into the adjacent units. In one case this dispersal was assisted by the use of “bug bombs.” One re-treat was the result of an infestation in a baby crib, which was missed during the initial service. Another call back turned out to be the result of re-introduction from visiting grandchildren and Green Flag was asked to treat that home too. The fifth call back occurred soon after introducing the Cimex Eradicator steaming process and was the result of applying Aprehend® to surfaces that were still damp after the heat treatment.



Figure 5: Don't get re-infested! Use Aprehend® for 90-day protection.

Business advantages gained through use of Aprehend® and Cimex Eradicator

Green Flag Services has been able to increase the number of bed bug services that they can conduct annually. In comparison to standard chemical control protocols, only one thorough treatment is required, whereas standard chemical protocols require two or even three follow-up applications to ensure eradication. This saving in time and labor, allows a steady flow of new customers to be serviced.

The service is also popular with clients due to the reduced preparation requirements and the absence of chemical pesticides. Interestingly, public reaction to the concept of having a fungal biopesticide applied in their homes has been resoundingly enthusiastic. There have been no concerns or complaints.

Green Flag Services now offers a quarterly bed bug prevention contract to at-risk properties. These include hotels and clients who want extra peace of mind that they will remain bed bug free. While scheduling for these quarterly treatments is more challenging than exterior servicing, the actual treatment time for pro-active bed bug service is only 20-25 minutes.



Figure 6: Green Flag Services ready for another day of Eco-friendly pest control.