

Need to Know

- Straight talk for professionals about pests and pest control products

Volume 2

Issue 5

Date: April 22, 2005

Guidelines for successful bed bug control

Bed bugs are probably the oldest insect pest associated with human misery. Although they have never been associated with transmitting disease to humans their dependent parasitism of man has been a scourge since history began. Within recent years, bed bugs have returned with a vengeance. For many Pest Management Professionals bed bugs are currently creating more callbacks than all other target pests.



Bed bugs are about 1/4 inch long and their color ranges from dark red to almost black (courtesy of Dr. Mike Potter, University of Kentucky)

Bed bug service is complicated and may be perceived as being a challenge to today's service technicians. Plan your service along basic guidelines of: inspection and interrogation; preparation; treatment; and follow-up. Make these plans specific for the types of accounts that you will service. Apartments, single-family homes, nursing homes, hotels/motels, and health-care facilities will have specific requirements and unique harborage sites that require attention. As an example almost all hotels utilize a head-board bolted to the wall above the bed. This technique creates a void behind the head-board that will become heavily infested.

Inspection and Interrogation: interview residents regarding the habits of all occupants of the living spaces. Find out everywhere people sit and or sleep for extended periods. When inspecting, use a bright flashlight and magnification tools. Bed bugs, eggs and fecal deposits are very small and may go unnoticed with a casual inspection. No potential harborage site should be ignored. Bed bugs will infest: wall sconces, behind electrical switch plates, behind wall posters, between books and magazines on shelves and in racks. While inspecting modern sleeping systems (i.e. waterbeds, air mattresses, and foam pads) be sure to inspect the entire structure of the system.



Bed bug life cycle: egg, nymph, and adult (courtesy of Dr. Mike Potter, University of Kentucky)

Preparation: A thorough cleaning will make control efforts more effective. Prior to service have customers strip all beds down to the bare sleeping surface. Bedding (sheets, blankets, comforters, covers, and shams) should be laundered or professionally cleaned. Personal items (stuffed animals, soft toys, blankets) should be removed and cleaned. Clutter should be removed from furniture tops and bed stands. Clothing should be removed from dressers and chests.

PMP's should consider utilizing a pest control vacuum to remove bed bugs, their eggs and the frass from harborage. Use only a specialized pest management designed vacuum with HEPA filters to prevent the spread of potentially irritating debris through the exhaust. Utilize a crack & crevice tool to remove bedbugs from deep harborage such as: under baseboards; under carpet edges (pull up along the tack strip); around switch plates (you may have to remove the plate first); from the bed frame; inside box springs; inside furniture; and from floor cracks. Use a hand-brush attachment to vacuum: mattresses and box springs (especially along seams and folds); upholstered furniture; and behind drapes. When vacuuming is complete remove the cleaner from the account and place the vacuum bag directly into a plastic bag for disposal.

Treatment: Insecticide applications for bed bug control are similar to cockroach treatments. Technicians will be making applications of labeled liquid residual, dust and aerosol formulations in crack and crevice, spot and void treatments. **Always read and understand all label directions before making any insecticide application.**





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Treat the perimeter walls/voids first: The first step is to treat the wall voids of the room. Remove switch plates and wall fixtures to gain access to wall voids. If access under the baseboard is suitable (i.e. no visible dust will remain in the living space) inject dust using hand-held or powered dusters. **DeltaDust[®]**, **Tempo[®]** 1% dust and **Drione[®]** are effective for these types of applications. Wall void dusting is highly recommended when treating apartments and hotel/motel accounts. Treat perimeter wall voids first on adjacent rooms. Dust may also be applied along the tack strip under wall to wall carpets. Pull the carpet up for treatment and replace the carpet immediately after dusting. No visible residue should be left on the wall or carpet surface. Bed bugs will move from treated to untreated units. Propose treating all neighboring units.

Pyrethroid insecticides provide quick knock-down and long residual control of bed bugs with low hazard to occupants when applied correctly. Liquid residuals, such as **Suspend[®]** SC or **Tempo[®]** SC Ultra can be applied as a crack and crevice treatment under baseboards. Spot treatments may be appropriate around fixtures.

Treat Bed Area: The bed area needs to be treated next. Bed bugs are usually found close to the bed so focus on the headboard, foot board (if present), box spring/support platform and frame.



Bed bug infested mattress (courtesy of Dr. Mike Potter, University of Kentucky)

All cracks and crevices of the bed structure must be treated with a residual like **Suspend** SC or **Tempo** SC Ultra. Mattresses may be treated with labeled, non-residual pyrethrum products or if residual control is required. If needed **Suspend** SC can be applied directly to mattresses and sleeping surfaces along seams, tufts and folds. Box spring tops should be treated in a manner

identical to mattresses. The underside of the box spring may be sprayed with liquid residuals; spot treated with labeled aerosols or for long residual, treated with dusts such as **Drione**, **Tempo** 1% or **DeltaDust**. After treatment covering the mattress with a plastic or allergy-proof cover will help prevent reinfestation.

Treat Furniture (Night Stand, Chests, Dressers, Couches and Chairs): The next step is to do a very thorough crack and crevice to all the furniture in the room. For wooden furniture pieces, you can not miss any cracks. Apply liquid residuals **Suspend** SC or **Tempo** SC Ultra. For upholstered furniture, use a similar treatment as the mattress and box spring. Always turn infested furniture over and treat from the bottom.

Some furniture may have hollow metal framing (children's bunk beds are an example). Treat inside the metal tubing with dusts, aerosols or liquids.

Follow Up: Within 5-10 days, plan a return service and repeat the above inspection. Retreat any area where bed bugs persist or new areas where bugs may have moved to avoid insecticide treatments. Follow up is a requirement since bed bug eggs will hatch after service and possibly find untreated harborages. In hotel /motel accounts it is highly recommended to keep the room out of service until the infestation is eliminated. In cases of heavy infestations, a third visit is recommended.

Service proposals: It is clear that effective bed bug service is labor intensive and requires multiple service visits. Proposals should be priced to accommodate the level of service required.

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