

Battling Bedbugs With Pesticides and Things That Really Work !

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It ain't rocket science !

DDVP Demonstration

Two Questions:

1. Are you in the bed bug business ?
2. ***Does This Kid Deserve to Live With Roaches & Bed Bugs ?***

What is a bed bug ?

- It's a "true bug", a hemiptera
- Cimex lectularius*
- Feeds on blood
- Similar bugs include:
 - Bat bug, Bird bug, Poultry bug, Chimney Swift bug
- Others true bugs include
 - Plant bugs, Leaf footed bugs, Chinch bugs & others

Where Do Bed Bugs Come From ?

- Bedbugs have been around man and his environs for a long time.
- They were virtually eradicated from the US in the early 60's.
- It is widely thought that the current bedbug resurgence can be traced to Eastern Europe and the fall of the "iron curtain".
- Bedbugs are common outside the US.

How Do I Get Bed Bugs?

- Bedbugs are transported by man from place to place.
- They can travel from room to room or apartment to apartment.
- Can be transported by housekeeping or guests.
- Basically, we get bedbugs from being at places where bedbugs are.

What Type of Places Have Bed Bugs?

- Bedbugs are found in many places including:
 - Hotels, Motels, Resorts, College, Dorms, Apartments, Condos, Homes, Summer Camps, Hospitals, Movie theaters, Airplanes, Buses, Trains, Hospitals, Nursing Homes, Prisons, etc.
 - Virtually everywhere people are

Bed Bug Biology

- Description

- Adults ~ 3/16 inch long
- Nymphs start at about 1 mm or 1/25th inch in length & resemble adults
- Eggs are oval, milky white about 1 mm long
- Oval in shape
- Flattened body
- Thin legs
- May appear translucent white to rusty red

Bed Bug Biology

- Must have blood meal to get to molt to next “instar”
- Five instars to adult
- Female must have blood meal to produce eggs
- Lay 1 to 5 eggs per day, about 200 per lifetime
- Eggs are glued to hidden surfaces
- Eggs hatch in about from 4 to 7 days, longer if in cold temperatures

Bed Bug Biology

- Reproduce via “traumatic insemination”
- Egg to adult about 21 days
- If necessary, can suck blood from other bedbugs
- May live up to one year without blood
- Can withstand cold temperatures
- Can **not** withstand heat very well

Bed Bug Behavior

- Bedbugs are dependent upon man but can feed on animals if necessary.
- They hide during the day and wait until after dark when victims are sleeping to bite.
- They hide in undisturbed places near food sources.
- They crawl about as fast as small ants.

Bed Bug Behavior

- Bedbugs feed by crawling from hiding places and onto their victims.
- They inject a numbing and anti-clotting agent into the bite so the victim can not feel the bite.
- Feeding can take 3 minutes or longer.
- Reactions to the bites can vary by victim.

Bed Bugs Inspection & Hunting

- Use a magnifying glass
- For \$1.99 you can see a lot better !
- Bed Bug Bites
- Bed Bugs On Popcorn Ceiling
- Bed Bugs On Popcorn Ceiling

New Products

- “BB Interceptor” or BB Climbup
- Two catch areas
- Catches BB due to smooth surfaces
- People act as “bait”

Nuvan Prostrip

- Contains DDVP
- Resin strip impregnated with DDVP
- Escapes slowly from strip
- Lasts up to four months
- Deadly on bed bugs
- Effective on all stages of bed bugs

How to use Nuvan Prostrips

How Bad Can It Get ?

- Rooms where BB are bad display outward & obvious signs including:
 - Fecal stains
 - Smears
 - Cast skins
 - Live bedbugs
- Bed Bug Fecal Stains
- Fecal Stains & Smears
- What Is A *Smear* ?

- A *Smear* is what used to be a live bed bug before a resident or victim crushed or smeared it on the wall, ceiling or floor.

Smears

Smears

How Bad Can It Get ?

- 800 Apartments
 - 250 vacant
 - \$1,250/mo rent
 - \$312,500/mo lost
 - \$3.75 MM/yr lost

- 300 Apartments
- 90 vacant
- \$1,550/mo rent
- \$139,500/mo lost
- \$1.67 MM/yr lost

How Bad Can It Get ?

- Hotels
 - Litigations are increasing
 - Reputations are at risk
 - Hotel guests area are making claims against companies that service the hotel
- Control/Management Program
- With the techniques from our program presented today we are achieving “excellent control” success that exceeds reported industry standards of about 75% success !
- Bedbug Management Program
- Should Match Account Needs
- Programs need to be suited to the considerations and needs of the account:
 - Residential
 - Apartments & multi-family
 - College dormitories & student housing
 - Hospitality, hotel, motel, resort
 - Healthcare, assisted living
 - Others

Control/Management Program

- It’s like a Jigsaw Puzzle or “House of Cards”
 - One piece missing and it’s not complete
 - Pull one card and it falls apart
- Bedbug Management Hospitality Industry Considerations
- Transient residents.
 - Constant threat - may bring in bedbugs at any time.
 - May not report problems.
- Problem can be “growing” without management knowledge.
- Interior “transportation system”.
 - Staff may be unknowingly moving bedbugs from room to room or to several places within facility.
- “Discretion is a Must !”
 - How this is communicated, if at all, to the marketplace is a sensitive issue !

Management Program

- Inspection
- Documentation
- Identification
- Education

- Treatment
- Adjacent Units
- Follow Up Inspections
- Follow Up Treatments
- Maintenance & Prevention

Thorough Inspection

- Headboards
- Primary Spot for Hotel rooms !
- Why ?
- An undisturbed area close to the bed
- Difficult to move or inspect

Thorough Inspection

- Between couch cushions

Thorough Inspection

- Clean Looking Crib

•Crib Frame Beneath

Thorough Inspection

- Seam at bottom of couch

“Four Outta Six !”

- Hotel on I - 65

Thorough Inspection

- Mattresses
- Box Springs
- Head Boards
- Night Stands
- Bed Frames
- Furniture
- Furniture Frames
- Wall Hangings

•Picture Frames

•Moldings

- Carpeting
- Closets
- Utility Penetrations
- “Other Contents”

Inspection Tools

- Superior flashlight
- LED Upgrade Bulbs
- Magnifying Glass
- Needle Nose Pliers
- Screwdrivers
- Electric Screwdriver
- Ladder
- Flushing Agent

- “Two guys !”
- Bump Cap
- White or Light Colored Clothing
- Gloves
- Inspection Form
- Clipboard
- Mechanical Pencil

Documentation

- Necessary to keep track of control program
- Necessary to assure units, rooms or jobs progress in control program
- Necessary to identify and track problem & potential problem areas
- Necessary to track problem rooms opposite occupancy needs
- Necessary to track problems opposite potential claims

Education

- Customer education
- Staff Education
 - Housekeeping
 - Maintenance
 - Others

Staff Education

- Staff is in rooms more often and more frequently than the pest management team.

- Teaching staff to recognize possible bedbug problems can serve to address problem early before it becomes very difficult or spreads.

Guest Education ???

- The hospitality industry needs to decide how to communicate this situation to the marketplace or if at all !
- Considerations:
 - It is a real problem
 - It is not your fault
 - Most folks do not know about it
 - There have been several claims & litigations already

Treatment Work

- Vacuuming
- Steaming
- Cleaning
- Furniture Inspection & Treatment
- Residual Treatment
- Carpet Edges
- Voids
- Utility Penetrations
- Mattress Encasements
- Treatment Form

Treatment Work - Vacuuming

- Vacuuming to remove as many pests as possible leaving less to control later.
Vacuuming Base Board Area
- Removes many but not all
- Followed up by steam
- Followed up by residual

Treatment Work - Steaming

- Steaming, performed correctly, kills all life stages on contact but provides no residual !

Treatment Work - Steaming

- Steaming carpet edge.
- Use a “continuous fill” type steamer.

Treatment Work - Cleaning

- Clean “old evidence” much as we would remove old rodent droppings such that we can better assess new activity.

Treatment Work - Furniture

- Need two techs.
- Remove dust cover.
- Steam.
- Use residual where NO human contact.
- Use steam & non-residuals where may be contact.

Treatment Work – Utility Penetrations & Voids

- All utility penetrations opened & treated with suitable dust. (Delta Dust & Drione Dust)
- All voids drilled & dusted.
- Must have ladder !
- This Company
- Fees, Warranty & Other

Treatment Work

- Residual treatments
- Suspend SC
- Kicker
- Other products

Treatment Work - Encasements

- Bite proof.
- Escape proof.
- Seal bedbugs in.
- Eliminate hiding places.
- “Protect-A-Bed” brand.

Treatment Work - Documentation

- Provide suitable documentation and maintain good records for each unit, room or account.

Treatment Work – Adjacent Units

- Necessary to inspect & treat adjacent units in hotels, motels, resorts, apartments, condominiums, dorms, etc.

New Products

- Nuvan Prostrip
- AI is DDVP
- Lasts ~ 4 months
- Kills 100% of BB in about 24 hours
- Kills BB eggs in about 5 ½ days, label ~ 7 days

Management Program – Follow Up

- Must “Proactively” follow up to assure control is attained !
- Follow up inspections !
- Follow up treatments !
- Periodic inspections !

Management Program – Account Maintenance & Prevention

- Must construct a program best suited to the type of account and conditions.
- Each account type has its own needs, concerns and parameters that must be considered
Customer Considerations: How Do I Know We Are Hiring A Good Pest Management Firm?
- They are an established company.
- They have a qualified “Technical Director”.
- They have a sound bed bug management program.
- They have an excellent training program.
- They are properly equipped.
- They send at least two technicians to do the work.
- They provide professional services.
- They are capable of providing “emergency services”.
- They stand behind their work.

Why it will get worse

- Not easily detected in early stages
- Victims may not realize they are bitten
- Some are bitten for a year or more before they realize it’s bed bugs !
- Ability to last extended periods of time without feeding
- > 1 year or more without feeding
- Easily transported by man by travel & other means
- Mobility, can move from room to room
- Easily hide, difficult to find

Why it will get worse

- May hide in any number of places beyond the most common areas
- The Industry not universally good at bed bugs yet
- Nearly impossible to eliminate in one visit
- Customer cooperation is needed
- If necessary, may get blood meal from another bedbug !
- No habla ingles, y no habla espanol !

Need help?

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QUESTIONS ? ? ?