

State of the Bed Bugs

Allison Taisey, BCE
The Northeastern IPM Center
Cornell University

STOP
Pests
in housing
www.StopPests.org

stoppests@cornell.edu [@StopPests](https://twitter.com/StopPests) facebook.com/StopPests

Outline

- A look back
- State of the bed bug industry
- Two year research recap
- Battle plan

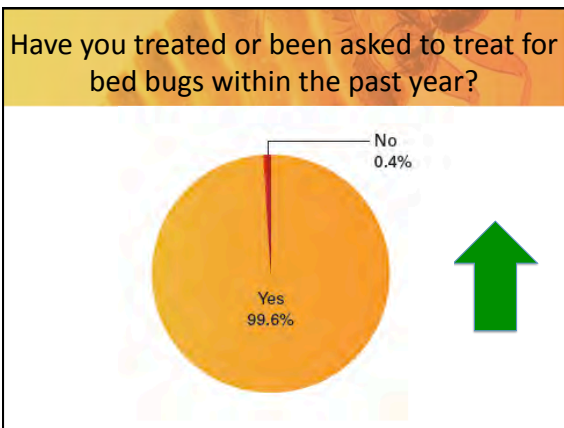
A look back

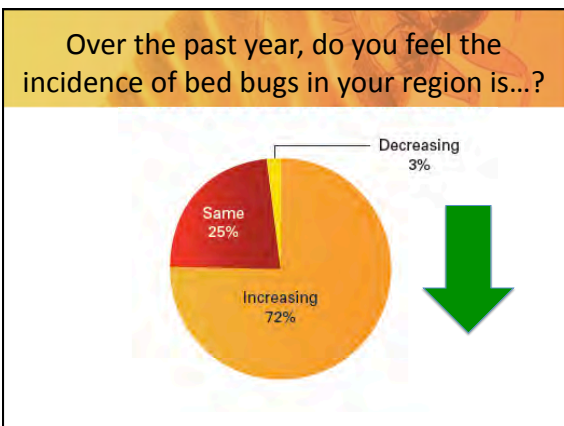
Bed Bugs Without Borders Survey

Source:
PestWorld Magazine



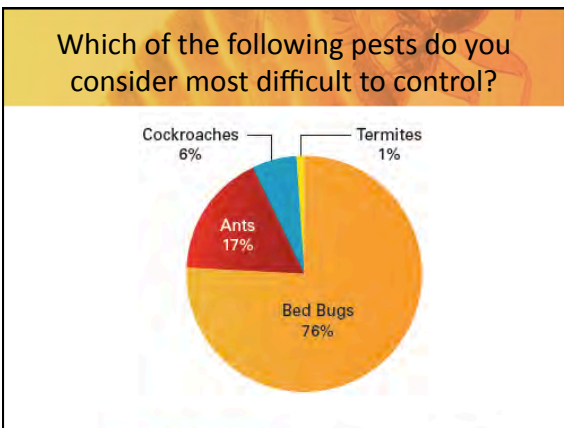
UKY survey
251 Pest Control Companies
www.npmapestworld.org/news/releases/BedBugSurvey.cfm

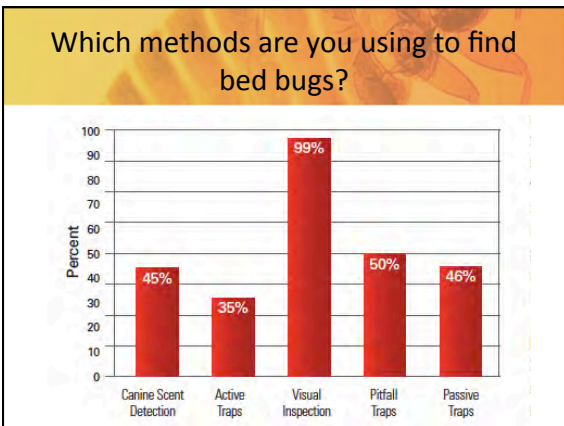


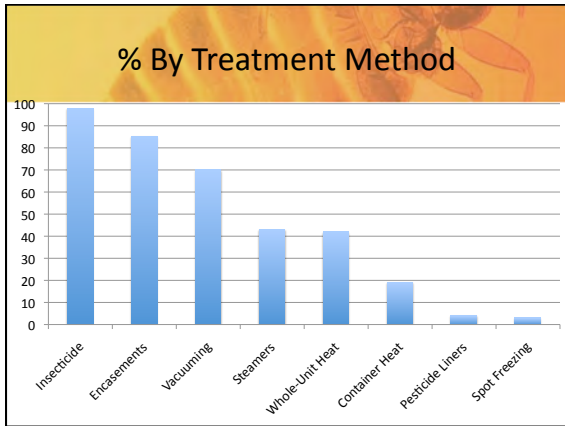


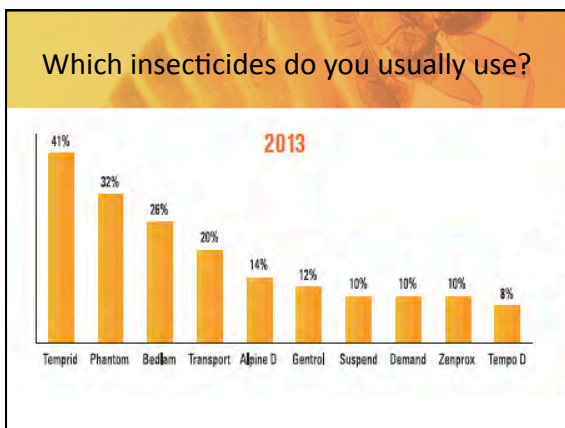
- Multifamily housing: 98% up
- Single-family homes: 96% up
- **Hotels/motels: 75% down**

- **College dorms: 47% down**
- *Nursing homes: 46% same*
- Schools & day care centers: 41% up
- **Office buildings: 36% down**
- Hospitals: 33% up
- Transportation (train/bus/taxi): 21% up
- **Retail stores: 15% down**
- Libraries: 12% up
- **Movie theaters: 10% down**
- *Laundromats: 9% same*
- *Restaurants: 7% same*
- **Airplanes: 2% down**









Other findings

- Seasonal speculation
- 94% spend more than one hour on the initial
- 69% usually need 2 or 3 services to get control
- 67% said clutter was the biggest customer-oriented challenge (58% not following advice)
- 60% offer proactive/preventative service

www.bedbugbmps.org

**NPMA
BMP BED BUGS
best management practices**

Best Management Practices for Bed Bugs

The resurgence of bed bugs has created significant concern in the pest management industry and its society overall. Controlling, let alone eradicating, this pest is extremely difficult. To ensure industry professionals have the best possible guidance on controlling bed bugs effectively, responsibly and safely, the National Pest Management Association (NPMA) has created Best Management Practices for Bed Bugs (BMPs), guidelines developed by industry professionals, regulators, technicians, and entomologists. In addition to helping industry professionals, the guidelines are useful to consumers so that they can understand what they should expect to working with trained pest management professionals for problems associated with bed bugs. Best practices, bed bugs can be treated but proper management will involve an effective partnership between a pest professional and customer.

The National Pest Management Association is pleased to offer a consumer friendly version of NPMA's Best Management Practices for Bed Bugs for Industry Professionals. You will find the full version tags and a summary of what the guide contains below. If you believe you may have bed bugs or would just like to understand more about how inspections and treatment are performed, you will find the resources offered very valuable educational tools.

Download the PDF version of the document: [Click Here to Download](#)

- Business Practices
- Service Agreements
- Technician and Sales Staff Training
- Disposal of Beds, Furniture, Possessions
- Client Cooperation and Treatment Preparations
- Bed Bug Detection
- Bed Bug Scent Detection Canine Teams
- Integrated Pest Management and Methods of Control
- Post-Treatment Evaluation
- Health and Safety of Customers

[Click Here for a Printable Summary of BMPs](#)

**Research Recap:
Biology**

- Population dynamics
- Lay ~200 eggs in a lifetime
- Live ~5 months without food
- Effects of caffeine & alcohol
- Ability to crawl up smooth surfaces

www.stoppests.org/Research

**Research Recap:
Behavior**

- Female scent attracts nymphs to food/shelter
- Bed bugs move around A LOT within a home
- Bed bugs may be attracted to human odor

www.stoppests.org/Research

**Research Recap:
Inspection & Monitoring**

- Canines are not 98% effective
- Evidence of both single and multiple introductions in a building
- Monitor tests
 - Verifi,
 - BlackOut,
 - ClimbUp,
 - Nightwatch, and
 - DIY active monitors

www.stoppests.org/Research

**Research Recap:
Non-chemical Control**

- Steam
"Results of this study suggest that non-chemical methods can effectively eliminate bed bugs in lightly infested apartments. –Wang et.al."
- Heat
- Freezing
- Cryonite
- Vacuuming
- Bean leaves
- Fungus
- Gut symbionts
- Ultrasonic

www.stoppests.org/Research

**Research Recap:
Chemical Control**

• Botanicals	• DDVP
• Diatomaceous Earth	• Pesticide- Impregnated Covers
• Conventional Pesticides	• Foggers
• Resistance	• IGRs
• Misuse	

www.stoppests.org/Research

**Research Recap
Integrated Programs**

- Cannot rely on residents to report
- Misconceptions abound
- Teaching staff

- Canada: sufficient funding, partnerships among many stakeholders, training and education, and surveillance and evaluation

www.stoppests.org/Research

Your turn

- On the index card, please write a question that you would like researchers to answer.

Current requests

Areas at-risk for introduction and infestation

- Introduction is likely where people
 - frequently travel
 - set down personal belongings
 - sit or lay down for long periods of time
- Infestation is likely where bed bugs can
 - Crawl (upholstered furniture or bedding)
 - Feed on a person for 5 minutes without being detected
 - Hide in cracks or folds

22

Areas prone to introduction vs. infestation

Area	Risk of Introduction?	Risk of Infestation?

3 =High
2=Medium
1=Low

23

Integrated Pest Management (IPM)

1. Inspect and monitor
2. Identify
3. Determine the scale of response
4. Respond
 - Non-chemical control
 - Changing people's behavior
 - Chemical control
 - Biological control
5. Evaluate effectiveness

24

Battle Plan

Keep up the great work!

 **STOP**
Pests
in housing
www.StopPests.org

Contact Info:
www.stoppests.org/request
aat25@cornell.edu
@taiseybug or @StopPests

I would appreciate your research suggestions!
If you want me to follow up, write your e-mail
address on the back
