

EPA's National Bed Bug Summit

Recommendations from the Ten Workgroups

April 14 and 15, 2009

Arlington, VA

*This meeting is being held under the auspices of EPA's
Pesticide Program Dialogue Committee.*

Workgroup 1 Recommendations

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Government

- Form interagency taskforce to address bed bugs
 - Identify priorities
 - Coordinate efforts/ share knowledge
 - Create clearinghouse
 - Provide management guidance
 - Implement Summit recommendations
- EPA website
 - Up-to-date information
 - Improve search capability

Government (cont'd)

- Recognize as a public health pest
- Review efficacy data on all bed bug products
- Streamline path to register bed bug pesticides
- Create regulations for reconditioning/ recycling mattress and mattress components
- Subsidize bed bug control services

Education (Public)

- Improve and coordinate education/ outreach efforts
- Develop bed bug education curriculum for children in schools
- Provide internet-based outreach (podcasts, factsheets)
- Produce Public Service Announcements
- Use Picture-based education
- Key Points: Early detection; Consult a professional; do not treat yourself

Education (PCO)

- Standardize PCO training
- Implement pesticide applicator certification for bed bugs subcategory
- Offer continuing education by independent trainers
- Mandate IPM certification for bed bug control

Research

- Fund research to improve treatment methods
- Target research to develop solutions to real-world problems (e.g. treatment protocols)
- Formulate IPM strategies
- Form public-private partnerships

Property Owners

- Hold property owners liable for known bed bug infestations
- Share cost of abatement
- Add bed bugs to home inspection reports

Workgroup 2 Recommendations



Role of Government

- Involve all Levels of Government
 - Define the role of each level
- Recommend Joint Task Force (CDC/EPA)
- Legislative Support
 - e.g. Mattress regulations
- Support IPM Approach
 - Funding
 - Outreach and education programs
 - Research

Consumer Education and Communication

- NPMA Involvement
 - Provide training on all levels
- National Center for Healthy Homes
- State Pest Extension
- Local Health Departments
 - Bed Bug 101
 - Basic information on identification, biology, prevention, treatment
 - Easy access to consumer groups
 - Safe use of pesticides i.e. how to use, what to use, when to use

PCO Education and Training

- Separate Licensing for Bed Bug Treatment
 - Supported by PMPs present
- Alternative Option
 - Certification/Recertification
- Nationwide Training Standards
- Possibility of Using Funds from Licensing for Research Expansion
- Elevate Status of Bed Bugs to Public Health Pest

Role of Property Owners & Property Managers

- Responsible for Overall Management of Problem in Property
 - Partnership with tenants and PCO
 - Training of staff
- Staying Up to Date on Current Issues
- Awareness of IPM Practices

Research

- Provide More Funding
- Update Current Information
 - Possible natural enemies (Biological Agents)
 - How quickly can they spread?
 - Behavior
- Products for Humans
- Furniture Design to “Build Them Out”
- Utilize New Techniques for Existing Chemicals
- IPM

Workgroup 3

Out Put



Research

Problems:

- Lack of dedicated research funds.
- Lack of bed bug research (ecology, non-pesticide and pesticide, translational) during the last 50 years.
- Lack of cross research and networking between researchers who study other insects whose data/technology may help with bedbug elimination.

Solutions:

- Raise bed bugs to an epidemic level so it becomes a public health pest (CDC) and will receive appropriate federal and state funds for research.
- Fund the Indian Health Services (50 years exposure to bb).
- Create a tracking system for better data from PCO feedback.

Role of Government

Problems:

- Standardize the definition of whether it is a public health problem or not.
- Extension services aren't set up to deal with bed bug problems.
- Lack of coordination between different agencies (CDC, Housing Authority, EPA)

Solutions:

- Creation of national bb foundation.
- Better coordination of government agencies.
- Raising bb to a higher priority level within all government authorities.

Consumer Education & Communication

Problems:

- Consumer misuse of pesticides.
- Policing inaccurate information on the Internet
- Stigma challenge...fear of neighbors finding out you have bed bugs.

Solutions:

- Public Service announcements; TV, Radio, Web, Billboard, Consumer bb Hotline.
- Educate the children to bring home bb info to parents for more awareness.
- Educate nursing home, health care, and hotel industry staff about bb.

PCO Education and Training

Problems:

- No separate certification for bb with supervisor oversight (not just a technician).
- Inconsistent / inadequate training between state and national levels.
- There is no standard level of training on bb between the states.

Solutions:

- NPMA Quality-Pro training for PCO's on bb.
- Separate license certification for bb technology.
- Dedicated bb CEU's for PCO's

Role of Property Owners and Managers

Problems:

- Unprepared for cost of service.
- Unprepared for treatment of property (Clutter).
- Uncooperative and uneducated tenants (“Bed Bug Mary”).

Solutions:

- Create a legal responsibility for control / payment.
- Create legislation for disposal of infested bedding.
- Training and outreach to property owners and managers on bb.

The background of the slide is a solid orange-brown color, overlaid with several large, semi-transparent leaf silhouettes in various shades of brown and orange, creating an autumnal theme.

Work Group 4 Recommendations

Research

- Potential funding sources (HUD, EPA, CDC, HHS) should be tapped for research and outreach efforts. Modify current funding sources to include bedbug research.
- New basic and more applied research to promote more effective products. Basic research is old and may be outdated, applied research not conducted with enough frequency to be useful.
- Have clearinghouse for prevalence data. Should be confidential to prevent depression of real estate or affect commerce. In order to get a sense of the actual number of infestations and be able to map distribution. PCOs could be encouraged to report infestation to confidential database.

Role of Government

- Establish federal, interagency task force.
- Fund research- bedbug bailout.
- Review bedbug efficacy protocols.
- Legislation mandating certification for bedbug treatment.

Role of Government con't

- State-level regulation that clarifies landlord/tenant expectations of cost and clean-up when dealing with infestations. Would protect tenants from incurring costs they ought not bear and ensure landlords deal with infestations.
- Encourage registration of specialized uses rather than allowing off-label use. Incentivize new products and new uses of existing products through expedited reviews and fee reduction, extended period of exclusive use.

Consumer Education and Communication

- Multiagency website, clearinghouse of info. A “bedbug.gov.” Agencies involved EPA, GSA, CDC, HUD, HHS, DOT, FAA. General tips for the public on how to identify and treat; resources for teachers and curriculum for schools; misuses of pesticides for bedbugs- “Dos and Don’ts”; resources for renters, landlords, and PCOs. Site could be organized by stakeholder or sector.
- National PSA campaign, in multiple languages and venues to reach different cultures

PCO Education and Training

- Certification specific to bedbugs. This includes field training, encourage mentorship.

Role of Property Owners & Managers

- Require licensed PCO application, or landlord would have to be licensed PCO to treat their property.
- Certification for property owners to be trained in pest control. If educated would have the knowledge to effectively treat an entire building.

Work Group 5 Recommendations



Research

► Problem

- Lack of funding
- Type of research (chemical, non chemical)
- Lack of bed bug biology research
- The inability to use human subjects

► Option/Solutions

- Establishing bed bugs as public health pest
- Education
- Dispelling myth of who is affected by bed bugs

Research

► Recommendations

- Research to demonstrate that bed bugs are public health problem
- Research quantifying the impact of bed bugs on society similar to cockroach research
- Funding needed from government and private industry

Role of Government (all levels)

► Problem

- Lack of funding
- Lack of legislation
- Scope of problems misunderstood
- 50 years of data gap

Government

► Recommendations

- Work on Legislation/research funding/grants (fed/state)
- Reevaluation of risk assessments to include misuse of pesticides and considering reregistering products for PCO only (fed)
- Sanitary Guidelines specifically for bed bugs (state)
- Public Awareness Programs (all levels)
- Earmark fines to subsidize treatments for those that cannot afford (state/local)
- Requirements to treat used mattress and furniture (state)

Consumer Ed and Training

► Problems

- Misinformation to consumers and medical personnel
- Lack of transparency and disclosure
- Poorly defined roles of stakeholders

Consumer Ed and Training

► Recommendations

- PSA on bed bugs
- Web-based information
- Local Personal Outreach (Baltimore outreach)
- Mini Bed Bug Summit in EPA Regions (EPA Lead)
- Bridging Legislation with Education

PCO Education and Training

- ▶ In general the group did not find lack of PCO Ed and training to be part of the problem

Role of Property Owner/Managers

► Problems

- Stigma Issues
- Potential for abuse of tenants
- Money Concerns
- Lease Agreements
- Lack of Education – self treatment
- Language barriers

Property Owner/Mgrs

► Options/Solutions

- Acknowledgement of bed bug problem
- Establishment of action plan
- Communicating contents of action plan and responsibility to tenants/guests
- Open communication with tenants
- Notification to tenants of bed bug problem

Property Owner/Managers

► Recommendations

- Proactive involvement
- Action Plan to include regular inspections, training of employees, tenant responsibilities
- Lease Language addressing bed bugs and various responsibilities
- Providing Education Material to tenants

Group 6

Research

- Extend exclusive use duration

Role of Government

- Incentivize Treatments
- Furniture Disposal Regulation (especially mattresses)
- Separate trucks for delivery and removal of mattresses
- Encourage rental furniture business to address issue of infested furniture transfer
- Regulate mattress packing used for transit
- Give priority to bed bug product registration and label amendments
- Outreach and education

Consumer Education/Outreach

- EPA/Government Website/ Fact Sheets specific for consumers/PCOs/Property Managers
- Provide Demographic information on infestations to remove stigma
- School programs to educate and reduce stigma
- Travel advisories/Airport signage
- Rapid reporting of infestation to property management
- Debunk myths (treatments that don't work and negative stigma)

PCO Education/Training

- Bedbug certification program through industry or state licensure requirement enhanced
- Improve inspection/detection techniques/equipment
- Complete treatment
- Vacuum, Steam, Encase, Heat, Chemical, etc...
- "Clover Leaf"
- Respond promptly to service requests (1 week)
- Prep Sheets & Post Sheets for Residents

Property Managers/Owners

- Education of Tenants
 - How to identify bed bugs
 - Prevention
 - How to solve problem/What to do
- Educate Staff
 - How to identify bed bugs
 - Prevention
 - How to solve problem/What to do
 - Have a key contact at property who is informed about bed bug
- Inspect between each tenant
- Participate in program outside own company for exchange of information and ideas
- Rapid/Comprehensive Response
- Maintain contact with extension agency/land grant university

Group 7

- Facilitator – Meredith Laws
- Note taker – Autumn Metzger
- Spokesperson – Ted St. Amand

Research

- Need money – EPA has some funding available for grants
- Need new chemicals but none in pipeline
- No silver bullet expected (need to utilize tools better)
- Old chemicals worked; need to review all options for our toolbox

Role of Governments (all levels)

- **#1 – Government officials and legislators need education**
 - Take federal employees, legislators & stakeholders on tours/jobs to see for themselves and better understand
 - Greater need for an understanding of the complexities surrounding a bed bug infestation
- **EPA needs to take the leadership role for all stakeholders**

Consumer Ed. & Comm.

- **Need for education to be targeted to specific organizations:**
 - Hoteliers, Dorms, Hospitals, Nursing homes
 - Medical Professionals (misdiagnoses)
 - Social Workers/Home attendants/First Responders
- **Proper identification of a bed bug**
- **EPA bed bug specific website & standardized fact sheet**

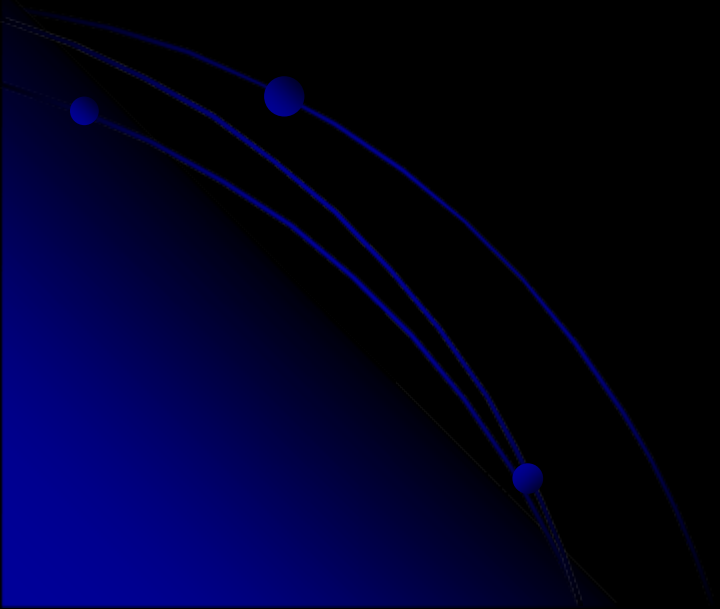
PCO Ed. & Training

- Resources are available
- Self-policing – reporting misinformation, misapplication, illegal products (including web sales)
- Beneficial aspect of having government/unbiased perspective at certification programs or state pest control association meetings

Role of Property Owners and Managers

- Refer back to consumer education & outreach
- Bring HUD into field
- Create landlord fact sheet
 - Standard industry practices
 - FAQs
 - Service frequency
 - Legalities

Group 8 summary



First topic: Government Responses

- Many agencies have a stake, but no single agency is taking the lead on bed bug issues
- Environmental Health lead agency differs by state and locality: no agency wants the lead on bed bugs
- Coordinated research/grant opportunities exist for public and private organizations—awareness is low and there is no central resource for information
- Development of a bed bug response flow chart would be useful for agencies such as HUD
- Should bed bug info be integrated into homebuyer information (such as is done for termites and fleas)?
- Oversight on used cars? (other varied harborage items)

2nd topic: Consumer Ed and Comm.

- Best practices need to be harmonized over different jurisdictions
- The largest information battle is mis-information: bogus claims, products, websites, etc.
- An IPM training module is on the way from CDC (6 month window)
- IPM training module for multi-family housing is on the way, but not focused on bedbugs (multi-agency)
- A single clearinghouse for information (same issue as finding a 'lead' agency) interagency bedbug task force
- HUD 'eco-wise' newsletter is open to article submissions on bed bugs

3rd Topic: Research

- Bedbug lure should be a top research priority because it could be quite effective while minimizing household residues.
- Need for both applied and basic research to tackle the problem—funding is limited due to the non-public health perception of bedbugs.
 - A good example is a VT effort for development of a bed bug life table
- More info and evaluation is needed on the potential for vectoring, which is still poorly understood
- Allergenic effects, mechanical transmission of diseases, etc.
- Development of mathematical models for bedbug populations
- Studies with real field strains rather than susceptible lab strains
- There is a need for social sciences to investigate these problems—the interaction of entomology with sociology
- No rapid assays are available for ID of insecticide sensitivity

Topic 4: Role of property owners/managers

- The problem of re-infestation, after much money has been spent
- What constitutes an 'infestation'?
- What is a realistic treatment threshold: legal definition vs. a biological one?
- Bed bugs present a challenge to traditional confines of 'IPM'
- The CSI problem: infestations are case-specific and the ability to trace-back the source of the problem
- Detachment of pest management issues from the social stigmas
- Issues of moving: should 'bedbug free' certification be required by landlords for incoming tenants

Topic 5: PCO Education/Training

- Homeowner preparation is key to success of any control effort
- Should there be a centralized certification program solely for bed bugs?
- A PCO is only as effective as their training
- Onus of education falls to PCO's while public education is not adequate: PCOs end up trying to educate the public, which is a futile effort.
- PCO's are the front line in battling rampant misinformation.

National Bed Bug Summit

Report of Workgroup 9

April 15, 2009

Overarching Recommendation:

- Form a committee or panel to explore adopting best practices & guidelines for the pest control industry (PMPs) drawing from previously developed materials such as those of Doggett in Australia, AFPMB, etc...

Education and Communication:

- Design national outreach and education campaign to be led by EPA in partnership with other organizations (e.g., ASPRO, CDC, NPMA/PPMA, NAA, ESA, medical & consumer groups)
- Educate consumers on OTC products – what approaches work and what don't
- Educate the medical community to prevent misdiagnosis
- Design national outreach and education program (website) for first responders
 - Message – seek professional identification; here are identification resources
 - Will save time & money
 - Professional species identification – critical to encourage first responders to seek professional identification

PMP Education and Training:

- Establish voluntary standards at a national level for accreditation for bed bug specialists (PMPs) to help people find qualified PMPs (example – QualityPro approach); Agency could apply economic incentives/recommendations.

Research:

- Dedicate more money for bed bug research on the following major areas:
 - Resistance
 - Mode of behavior
 - Population ecology
 - Possibility of disease transmission
 - Population – effect of temperature, season
 - Role of alternate hosts
 - Interaction with other insects
- Survey of bed bug problems and consumer behavior across the US to establish baseline of information

Government:

- Ask CDC to consider classifying bed bugs as a public health pest because of psychological considerations; asthma.
- Update bed bug efficacy guidelines for better testing procedures
 - Including testing of resistant populations

Government, continued:

- Federal government should be a clearinghouse for state and local governments (will help if CDC makes bedbugs a public health issue)
- Require efficacy testing of products exempt from regulation under 25(b)
- Increase monitoring and enforcement of pesticides sold over the internet
 - False claims
 - Unregistered products

Further recommendations:

- ASPRO should establish national model legislation on bed bug management in consultation with EPA, CDC, & others
 - tenant and/or landlord responsibilities
 - resale of secondhand furniture & mattresses
- Hold a 2nd Bed Bug Summit or other communication action as a follow-up to this summit



Workgroup 10
Recommendations

Research

- Defining the biology
 - Behavioral mechanisms to find host, etc.
- Identify existing pesticides that may be efficacious against bedbugs
- Coordinate research



Role of Government



- Consistency of message/rules within local governments
- Develop best management practices, central “clearing house” of information for local governments/consumers
- Legislation to clarify everyone’s responsibility
 - Landlord, tenant, homeowner, commercial sector, etc.
- Easier/cheaper registration process for pesticides to control bedbugs
- Educate the medical community, especially dermatologists and pediatricians

Consumer Education and Communication

- To reduce stigma:
 - Education in schools/colleges, PSA's, education about the biology
 - public event information sessions (in light-hearted manner)
- To promote early detection/control:
 - Education of landlords/property owners
 - Cost-comparisons of timely v. delayed action
- To minimize the spread of bedbugs:
 - Consumer education about used furniture
 - Travel advisories
 - Bedbug life cycle and behavior education



PCO Education and Training

- Voluntary continuing and specialized education opportunities for PCOs
 - Provided by CDC, NPMA, EPA, etc.
- Encourage consumer-driven PCO choices:
 - Hire PCOs that specialize in bedbug control
 - Encourage public participation in consumer rating systems, such as Angie's List, etc.



Role of Property Owners/Managers

- Educate about identification, control, prevention, and inspection
- Clarifying legislation for roles and responsibilities
- ID sources of financial aid/tax credits
- Use mediators to try to resolve disputes



Overarching Issues



- High cost of control
 - Discourages early identification and subsequent control
 - Limits money available for research
 - Encourages disputes over responsibility
- Education for all concerned, from the consumer to the PCO to the healthcare community to government