

How Improved Communication Can Help the Industry Manage the Bed Bug Problem



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Which Industry? What Communication?

Industries: Pest Control, Insecticide Manufacturers, Hospitality, Housekeeping, Public Housing, Accommodation Managers, Researchers, Regulatory Authorities, etc...?

Communication: Researcher to pest manager, pest manager to client, hospitality to guest, hospitality to housekeeping, housing manager to tenant, etc...?

Effective bed bug management requires all industries communicating!

How Improved Communication Can Help All Industries Manage the Bed Bug Problem



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Combating Bed Bugs

**Development of
'Best Practice'**

Education

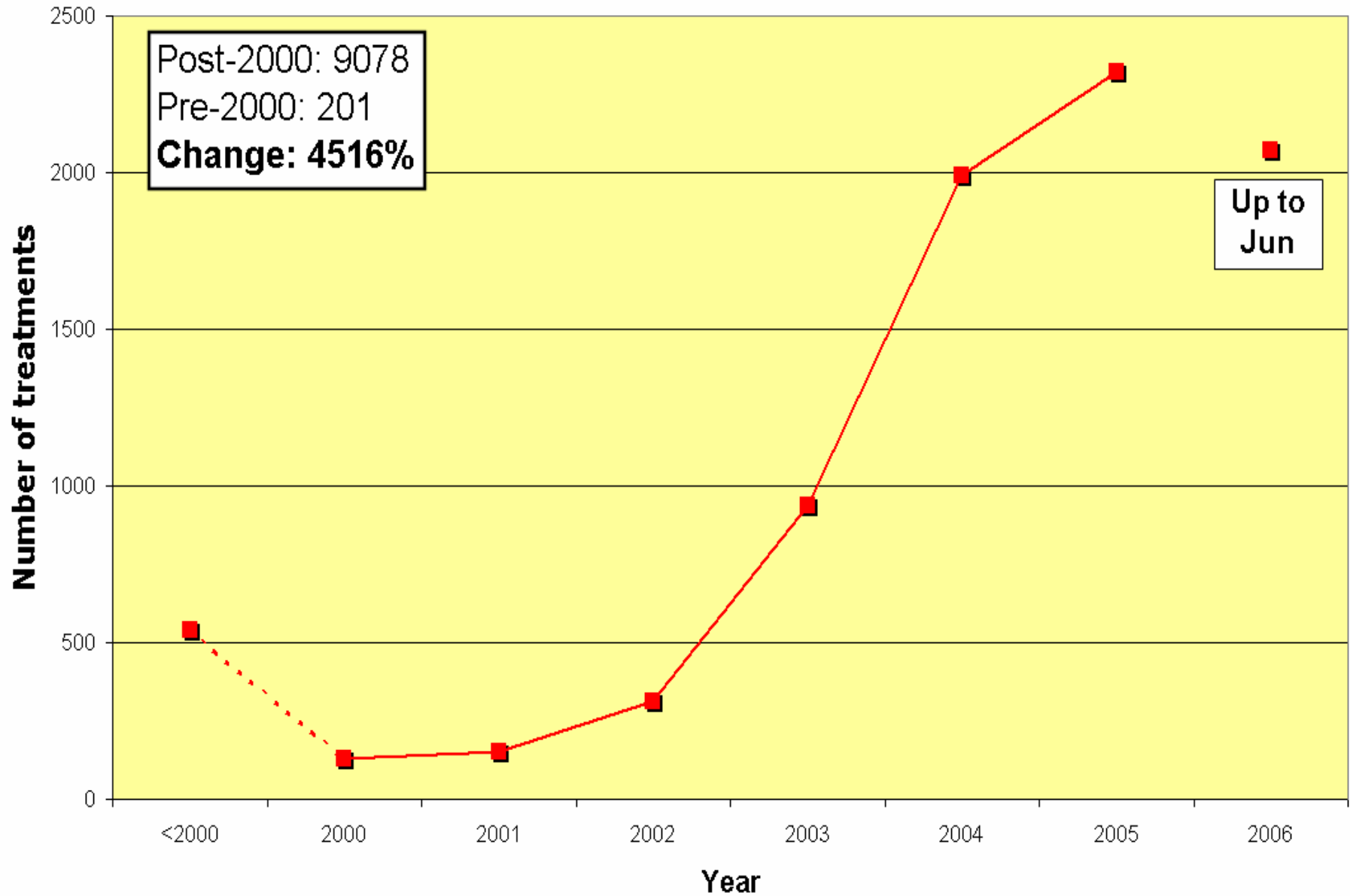
Research

DEFINE THE PROBLEM

Why 'Best Practice'

- To stop & reverse the resurgence

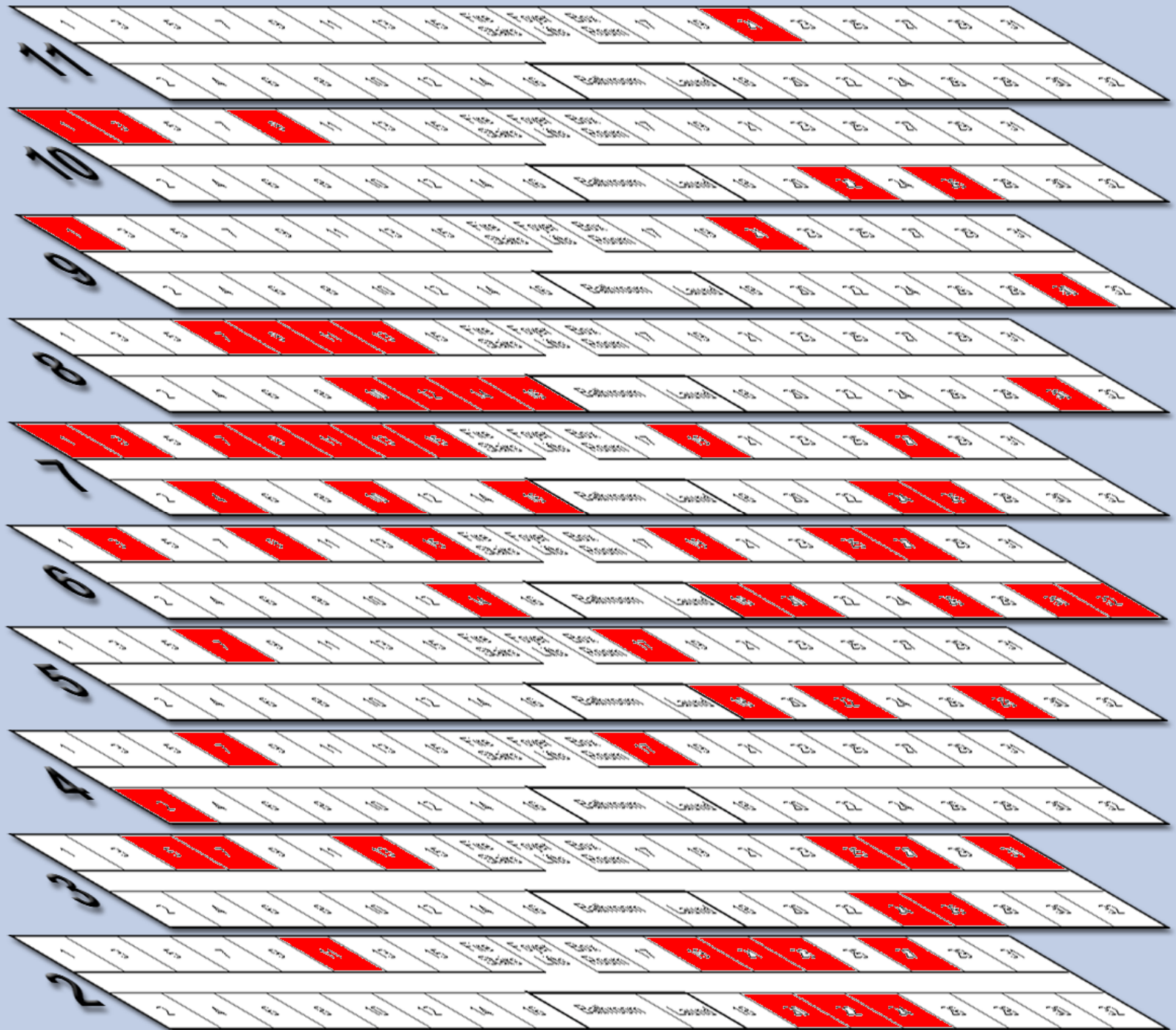
Australian Bed Bug Treatments



Why 'Best Practice'

- To stop & reverse the resurgence
- Minimize poor pest control

Jun
2005



Why 'Best Practice'

- To stop & reverse the resurgence
- Minimize poor pest control
- To reduce bed bug impacts:
 - ◆ Health
 - ◆ Financial (esp Hospitality sector)

Best Practice

- First developed 2005
- Aims: Best practice
 - ◆ Education &
 - ◆ Communication
 - ◆ Broad acceptance
 - ◆ Protection
 - ◆ Reference
- Free!
www.bedbug.org.au
- Evolving...

A Code of Practice

For the Control of
Bed Bug Infestations
in Australia

3rd Edition

May 2010



Stephen L. Doggett



Required Philosophies

- **Eradication the only acceptable outcome**
- **No 'quick fix' control.** Failures due to:
 - ◆ Poor inspections
 - ◆ Poor control & no follow up
 - ◆ Poor process management
- **Control:**
 - ◆ is not just about spraying insecticides
- **Cooperation is essential**
 - ◆ Between the pest manager & client

CoP Features

- Pest managers & training
- Selecting a pest manager
- Treatment processes
- Bed bug management plan
- Integrated pest management
 - ◆ Non-chemical & chemical control
- Insecticide efficacy
- Prevention (harm minimisation)

Bed Bug Management Plan

- Is the service contract
- Includes details of inspection
 - ◆ With photos
- Includes:
 - ◆ Treatment process, insecticides used, limitations, warranties, client duties
- Control conforms with CoP
- Cost



Infestation Dynamics

- I. Introduction
- II. Establishment
- III. Growth
- IV. Spread

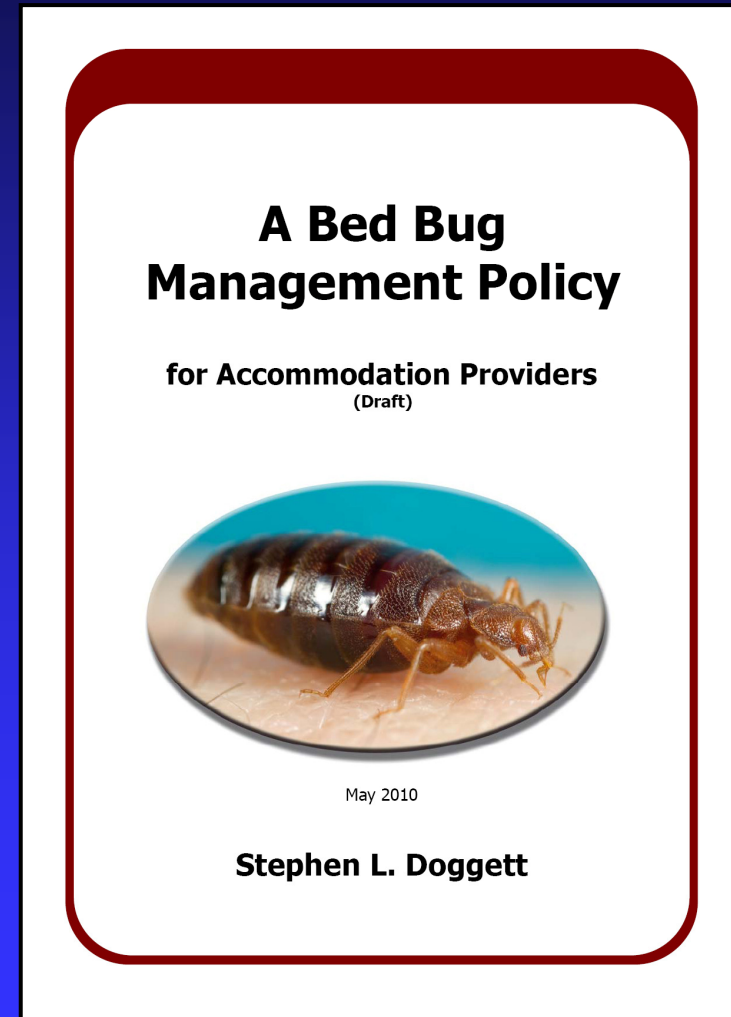
Detect Early & Act Quickly!

Management Policy

Include:

- Define responsibilities
- Education
- Documentation
- OH&S
- Eradication processes
- Preventative measures

Based on 'Best Practice'

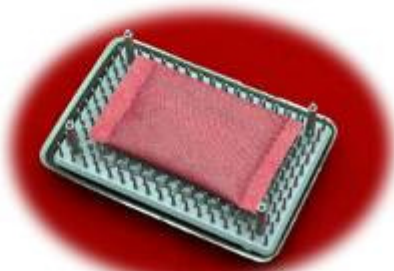


www.bedbug.org.au

**But What is
“Best Practice”?**



New Technologies ????????????



“Best Practice”

- **Evidence of efficacy through:**
 - ◆ Publications (preferably peer reviewed)
 - ◆ Common practice
 - ◆ Efficacy testing by the CoP WP
- **Need to understand the technologies limitations**

BB Safe Ring



Climbup Insect Interceptor

■ Advantages:

- ◆ Proven effective (in CoP)
- ◆ Cheap
- ◆ Based on historical methods
- ◆ Can monitor bbs
- ◆ Keeps bed away from wall

■ Disadvantages:

- ◆ Keeps bed away from wall
- ◆ Maintenance required
- ◆ Obvious





Insecticide Labeling

*Bed Bugs are on the label,
therefore the product must work!*

Ummmm.....well.....maybe not!

Two Main Issues:

i. Has the product actually been tested?

Possibly Not!

MORAG, Vol.3, Pt8, A8-1, Pg 11:

“for Household products then a limited data package is acceptable and only needs to include two cockroach species, cat flea and an ant. Other crawling insects can then be added without testing.”

Two Main Issues:

ii. Has the product been tested on *an appropriate strain*?

Probably Not!

- **Must test with a modern strain**
 - ◆ Susceptible strain data is useless

Resistance Studies

- Resistant vs Susceptible strains
- Determine LD₅₀

Compound	Group	Sydney LD ₅₀ (Modern)	Monheim LD ₅₀ (Old)	Resistance Factor (Sydney LD ₅₀ ÷ Monheim LD ₅₀)
Bendiocarb	1B	6.5422	0.02740	238.77
Deltamethrin	3A	243.24	0.0005630	432,042.63
Permethrin	3A	622.44	0.0004397	1,415,601.55
Pirimiphos methyl	1A	0.2935	0.1063	2.76
Imidacloprid	4A	0.01536	0.005719	2.69

Insecticide Labeling

- **If bed bugs are on the label**
 - ◆ Does not mean it works!
- **Insecticide regulators should:**
 - ◆ Insist BBs are tested
 - ◆ Insist efficacy data on **modern** strains
- **The current labelling rules:**
 - ◆ Have contributed to the resurgence

Efficacy Order – Sprays

Topical

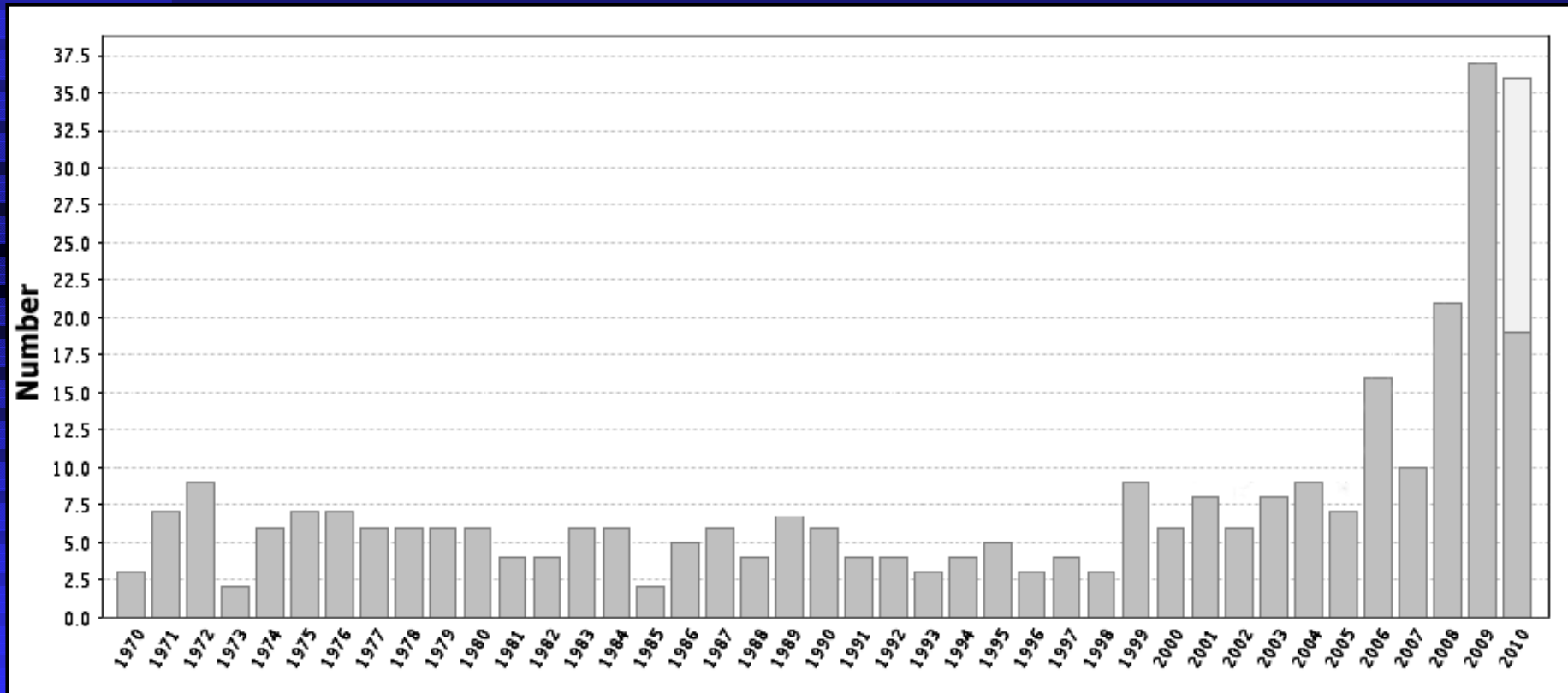
- Natural Pys
- 3rdG SPs
- 4thG SPs & Carbs
- Syn 4thG SPs
- OPs
- Neonicotinoids

Residual

- Natural Pys
- 3rdG SPs
- 4thG SPs & Syn
4thG SPs, Neo
- Carbs
- OPs

**Keeping
“Best Practice”
Up to Date**

Bed Bug Publication Resurgence



Source: www.gpubmed.org

What is a Bed Bug?

> Get the facts on bed bugs. Where they eat, and how to get rid of them.



www.bedbuginstitute.com
(BASF Bed Bug Institute)

In this final picture, you can see just how small a bed bug really is. This will show you just how hard it can be for you to notice that they are there.



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13

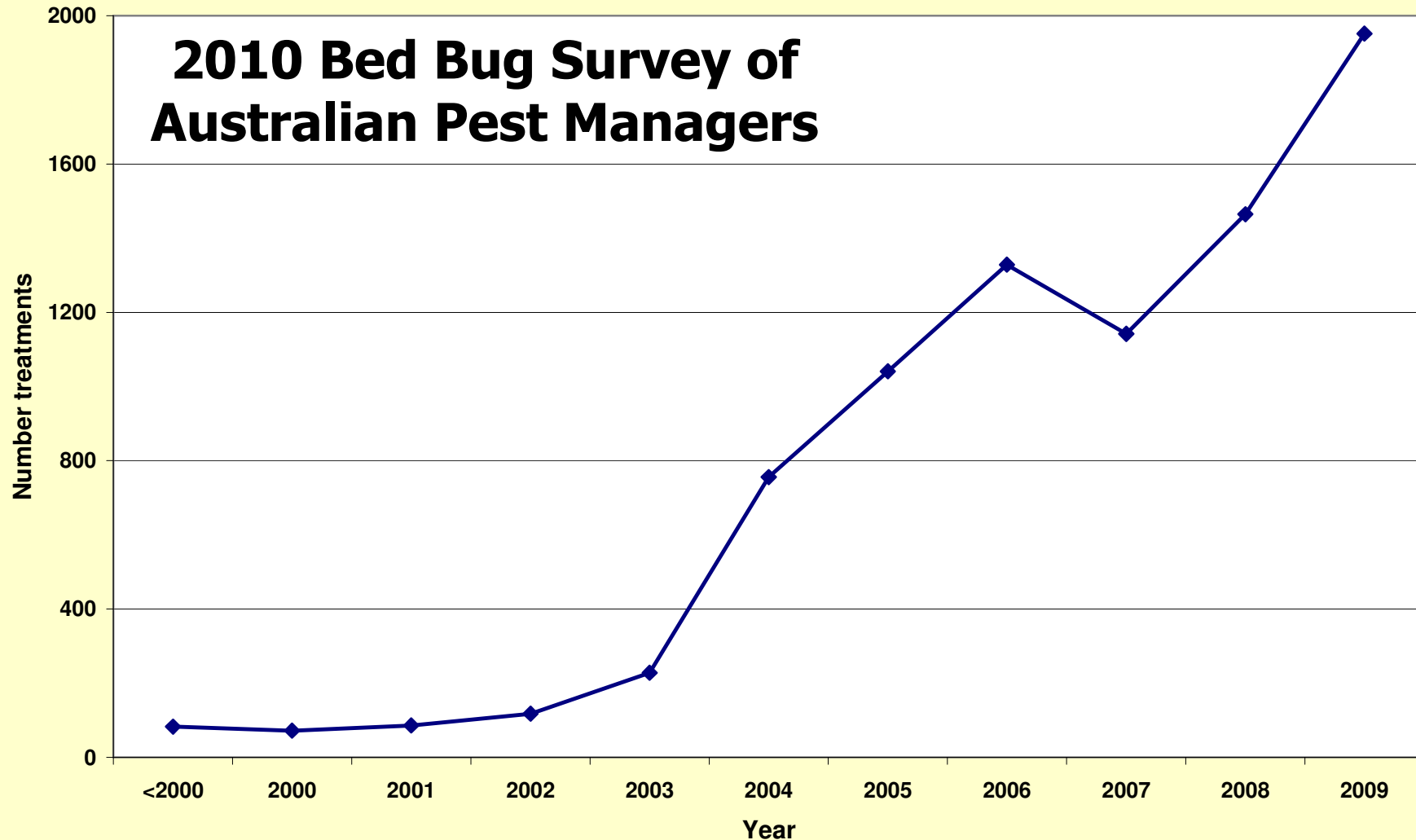
www.bugkill.net

Have to pay \$US17.95!!!

Education

- Seminars (73) & publications (38)
- Bed bug web site: www.bedbug.org.au
 - ◆ CoP, Policy, papers, Fact Sheet
- Full day training course
 - ◆ For pest managers & hospitality
 - ◆ Curriculum based on BB CoP
 - ◆ Course notes provided
 - ◆ Pest managers list on CoP web site
- Future: competency based training
 - ◆ Bed bug licence

Has the CoP Helped?



Has the CoP Helped?

- **Pest Managers:**
 - ◆ Fewer control failures reported
 - ◆ Less ad hoc advice
 - ◆ Aided client communication
 - ◆ Clients adhering to CoP, >>> success
 - ◆ Streamlined treatment processes
- **Insecticide manufacturer:**
 - ◆ IPM prolongs insecticide life
- **???Consequences of no CoP**

Future

- **Bed bug infestations will continue**
- **International problem**
- **International solutions required**
- **Multidisciplinary approach needed**
 - ◆ Best practice, education, research
- **Communication is the key!**
 - ◆ For managing bed bugs

Questions?

