

Integrated Pest Management: Managing People to Manage Pests

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*Anything is possible with a
little cooperation...*



Courtesy of Marc Lame

**IPM is
a team
activity!**

Why are pests a problem?

- Pests can be asthma triggers or cause allergic reactions
- Pests cause damage to our homes
- Pests contaminate the food we eat and the spaces we use to prepare food
- Cockroaches spread 33 kinds of bacteria including *E. coli* and Salmonella
- Pests cause us to lose sleep and well-being

IPM is a sustainable approach to managing pests by combining biological, cultural, physical and chemical tools in a way that minimizes economic, health, and environmental risks.

Integrated pest management is a process, not a miracle.

By implementing IPM in a team environment, you can manage pests by managing people.

Why use IPM?

- It works
 - The Boston Housing Authority noted a 75% reduction in pest calls after starting an IPM program.
- It is sustainable
 - Pests can develop pesticide resistance, become bait shy or even change behaviors if only one management method is used.
- IPM promotes pest management options that reduce risk to you and the environment.
 - If pesticides are used, the least risky alternative will be selected.

Traditional Pest Control vs. IPM

- | | |
|--|--|
| ▪ Single Solution | ○ Integrated |
| ▪ Extermination | ○ Management |
| ▪ Non-target overflows (damage to environment) | ○ Specifically targeted to a pest with minimum overflows |
| ▪ Chemical Usage Exclusively | ○ Non chemical 1 st |
| ▪ General | ○ Specific |

Basic Elements of IPM

- Pest monitoring
- Identification of pests
- Recordkeeping
- Use established economic or aesthetic injury thresholds
- Management of pests, if needed

IPM Program Components

- Pest prevention through exclusion and sanitation
- Pest monitoring by visual inspection, pest log reports, and monitoring stations (non-baited, baited or pheromone/kairomone sticky traps)
- Pest identification, understanding of pest life cycle and identification of conducive conditions
- Maintain pest monitoring records including date, location and pest counts
- Consider all management options with pesticides as the last resort
- Keep records of treatments and management approaches

IPM Program Evaluation

- Important to evaluate the effectiveness of the IPM Program
- May need to fine tune action thresholds or injury levels
- If regular or monthly pesticide applications are required, IPM program is not working
- May need to seek other solutions to the pest problems in order to reduce pesticide applications and maximize non-toxic or natural controls including sanitation and exclusion

What is a Pest?

- A pest is any creature, plant or fungus that is where we don't want it.
 - They can be seasonal, circumstantial or permanent
 - They can be outdoors, indoors or both
 - They can be invaders or colonizers
- The pests we'll concern ourselves with today are indoor colonizers
 - They come, they stay and they reproduce

Mice



Cockroaches



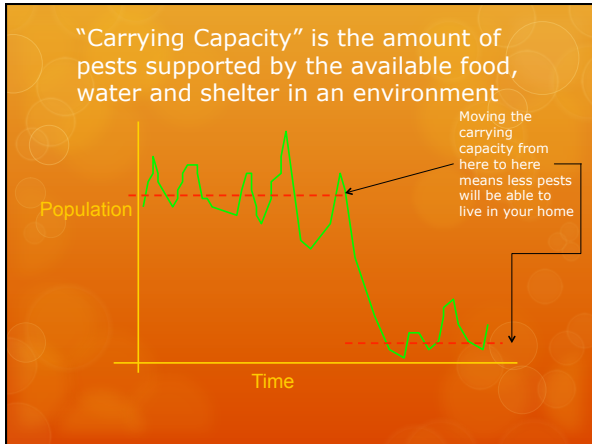
Bed bugs



What attracts pests?

- Pests are attracted by the presence of three things
 - Food
 - Water
 - Shelter





Don't Let Populations Buildup: Act Promptly to Manage Pests

- Most indoor colonizing pests reproduce rapidly
- Report and/or document your pest observations
- Follow directions from the Pest Management Professionals (PMP) and building management
- Don't waste time on the "blame game"
 - Once pests are present, address the problem

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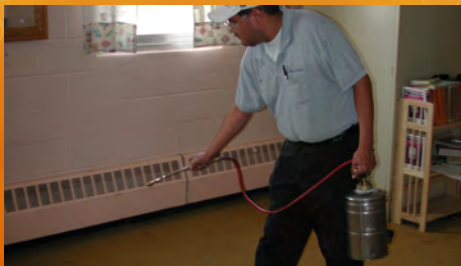
Exclusion



Don't Self Medicate



This is not part of an IPM plan



This is part of an IPM plan





Managing Mice

- Mice can squeeze through a 1/4" hole
- If you can fit a #2 pencil in an opening, a mouse can enter through the hole
- Exclusion is the best defense
- Once inside, the second line of defense is eliminating clutter and harborage
- Use snap traps rather than glue boards
- Glue boards are considered inhumane as they do not kill the mice immediately
- Use rodent bait cautiously as it is very toxic to humans

Cockroaches

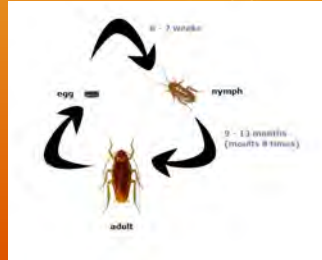
Snapshots at jasonlove.com

Infestations can be identified by the presence of *frass* near cracks and crevices

Cockroaches



- Multiple eggs in each egg case
- Reproduce rapidly
- Nymphs look like small versions of the adults



Simple or Incomplete Metamorphosis

American Cockroach



Scavengers. Normally located in roof voids, drains and sewers. Reddish brown with a yellowish margin on thorax.

American Cockroach



Note yellowish margin on thorax

Oriental Cockroach



Normally found in dark moist areas.

German Cockroach



Normally found indoors near warm areas such as refrigerator motors, microwaves, toasters, ovens and other electrical appliances.

Brown-banded cockroach



Accurate identification is paramount to controlling brown-banded cockroaches. Control strategies for other cockroaches will not work.

IPM for Cockroaches



- Monitor using glue trap near suspected infestation areas
- Seal and/or repair cracks and crevices
 - Consider putting a small amount of diatomaceous earth or boric acid powder in the crack prior to sealing
- In heavily infested areas, vacuum up the roaches using a HEPA -filtered vacuum

IPM for Cockroaches



- After sanitization and repair, Bait-Don't Spray!
 - One spray that is acceptable is an Insect Growth Regulator (IGR)
- Cut down on clutter as much as possible
 - The fewer places to hide, the easier to treat
 - Do not use corrugated boxes for storage and dispose of cardboard boxes including soda pop packaging

Bed Bugs

- A blood-sucking insect
- Most active at night
- Only feed on blood
- Hide in cracks and crevices near sleeping areas-often in groups
- Can hitchhike on clothing and personal belongings
- Can travel along wires and pipes
- Cannot jump, fly or burrow into skin...they crawl



Bed Bugs

- Bed bugs do not transmit disease, but...
 - Scratching bites causes secondary infections
 - Can cause stress, loss of work, loss of sleep and financial burdens
 - Are unwelcome in our homes and workplace

Bed Bugs

- Since bed bugs only eat blood, control measures are different from other pests
- There is no "magic bullet" for bed bugs
- Bed bug management requires everyone's attention

Unfed →

Fed →



Bed Bugs

- Signs of Bed Bugs
 - Bites
 - Blood spots
 - Shed skins
 - Dead bed bugs
 - Live bed bugs (the only proof)
 - Remember, lots of things look like bed bugs




Bed Bug Don'ts

- Don't bring home used furniture; especially off the street
- If visiting bed bug infested dwellings, don't put your personal belongings on areas that might have bed bugs
- When disposing of infested furniture, only move it after it has been wrapped in plastic and then destroy it once it's outside
- Don't spray or use "bug bombs", leave any treatments to the professionals

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Questions?

