


Session Two of Integrated Pest Management for Multifamily Housing




www.StopPests.org

Find handouts for today's session at:
<http://stoppests.org/go/onlinecourse>

While we wait, please tell us in the chat:
Do you think cockroaches are just a fact of life in multi-family housing?

Session Two of Integrated Pest Management for Multifamily Housing



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Session Two of Integrated Pest Management for Multifamily Housing



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Session Two - Meet Your Host



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Session One Introduction

- Priority Pests
- Why IPM
- Pesticides & Health

Session Two Cockroaches

- What they are
- Associated Health Hazards
- What they eat & drink
- Where they live
- Prevention & Control



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Session Three Rodents

- What they are
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Session Four Bed Bugs



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Session Two - Meet Your Trainer




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Any Questions from Session One
Introduction




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Susannah K. Reese <sck27@cornell.edu>

Homework Review from Session 1

- Did you find your IPM log?
- Remembering our suggested list of contents, is yours complete?
- What should you add?

Slide 8

JW6 Jayne Windham, 4/28/2022

Poll 1: Did you find and access your IPM log?

- Yes; all records are electronic
- Yes, all records are on paper
- Yes, we have a combination of paper/electronic
- No
- N/A

Select one.

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Poll 2: What's the status of your IPM log?

- It contains all or most of the documents we discussed in Session 1
- It contains some of the documents we discussed in Session 1
- We've got some work to do!
- N/A

Select one.

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What's Missing?

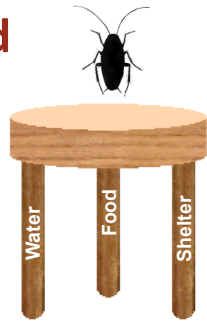
Please chat!

Now that you have some recommendations from Session 1, what else should be included in your IPM log?

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What All Pests Need

- Food
- Water
- Shelter



Know Your Priority Pests

- **Cockroaches** cause asthma in infants, trigger asthma attacks, and contaminate food
- **Rodents** such as mice and rats carry diseases, bite, destroy property, may cause fires, and may trigger asthma attacks
- **Bed Bugs** and their bites are a nuisance and are expensive to eliminate

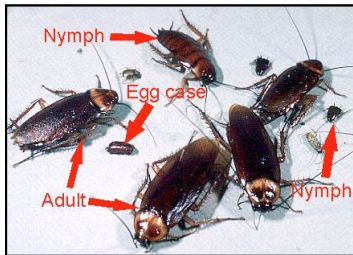
Poll 3: On average, what level of infestation have you seen in units?

- High (live cockroaches obvious in daytime)
- Medium (evidence of roaches and frass)
- Low (occasional resident reported sightings)
- None
- N/A

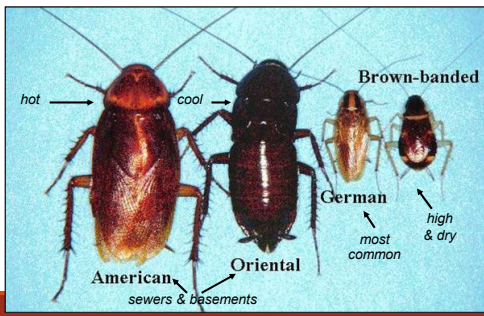
Select one.

What is a Cockroach?

- Live where humans provide food and water
- Multiple eggs in each egg case means many nymphs (babies)
- Mostly active at night, visible Cockroaches during the day indicate a serious infestation



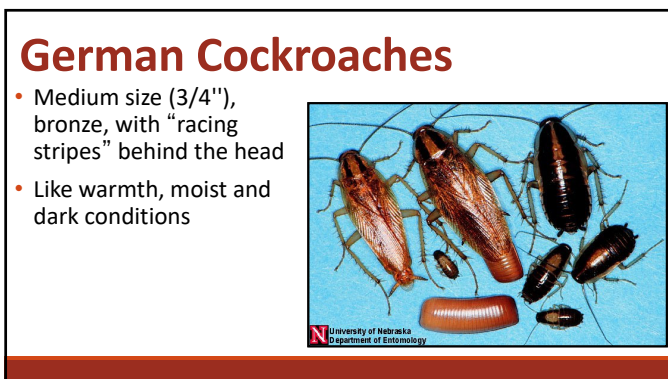
Common Cockroaches











German Cockroaches

- Medium size (3/4"), bronze, with "racing stripes" behind the head
- Like warmth, moist and dark conditions
- Reproduces quickly
- Mother carries eggs to term even if she is dead



Cockroaches Are Health Hazards

Cockroaches, their shed skins, and their frass:

- Make asthma worse
- **Cause** asthma in children
- Cause or aggravate allergies
- Contaminate food, dishes, and counters
- **We must clean the dead roaches, skins & frass**

Cockroach Frass Math

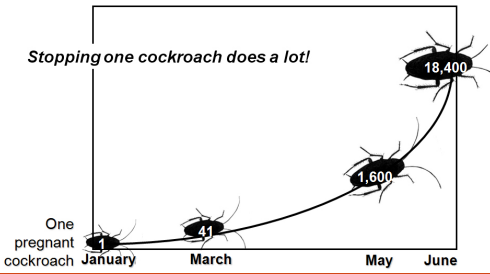
For sensitive people with asthma:

8 units of cockroach allergen per gram of dust can trigger a reaction.

One female cockroach will produce

1,500 units per day

One German Cockroach, ½ a Year



Signs of Cockroaches

- Live cockroaches
- Dead cockroaches and their parts
- Frass
- Egg cases

Live Cockroaches



American
Cockroaches



German
Cockroaches

Dead Cockroaches



German cockroaches on a sticky trap



Brown banded cockroaches by a door hinge

Frass



Under a cabinet shelf

Frass



Wall clock



Behind the wall clock

Where Cockroaches Live

- Near water, food and warmth
- Cracks and crevices
- Anywhere in a building



What Cockroaches Eat

- Crumbs
- Grease
- Trash
- Cardboard glue
- Just about anything*

*This knowledge will help us later



Where Cockroaches Drink



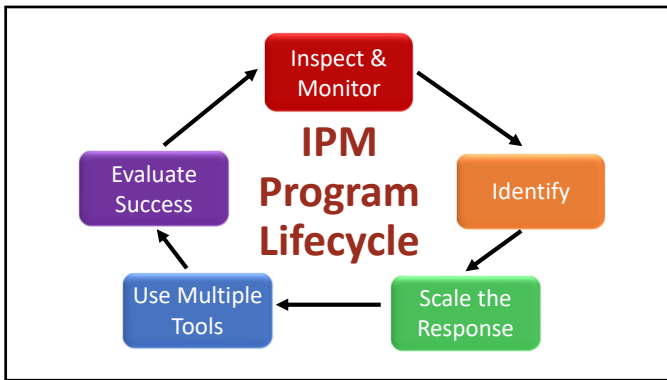
- Sinks
- Counters
- Floors
- Pet bowls
- Shower stalls
- Sweaty pipes
- Refrigerator drip pans and gaskets
- AC units

Poll 4: Which of the following are TRUE statements about cockroaches?

- Make asthma worse in sensitive people
- Can cause asthma in preschool-aged children
- Live where humans provide food & water
- Will eat just about anything
- All of the above

Select **all** that apply.

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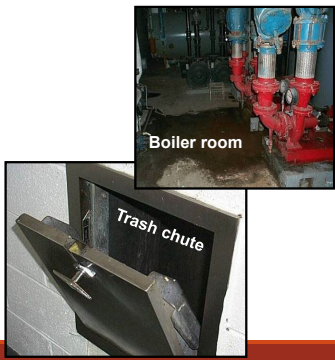


Inspect & Monitor

Inspect & Monitor

Inspect

- Using a flashlight, look for evidence where cockroaches would find food, water, or a hiding spot: up, down, behind, and under
- Think like a cockroach – look in hidden areas



When are cockroaches most active?

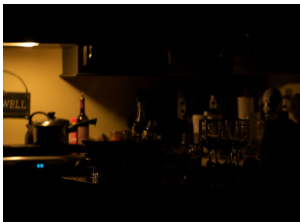


Photo credit: www.Chitsrun.com

- Cockroaches are active at night when people aren't looking
- They hide where people don't usually look
- Monitors help find cockroaches when and where people can't

Monitors Can Help

- Monitors help find cockroaches when and where people can't.



Monitor

Monitor by placing sticky traps near areas where cockroaches might travel - at corners and near warmth, food, and water



Monitor

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Identify

Check your monitors:

- Is it a cockroach?
- What kind?



Scale the Response

How many cockroaches do we have?



What's Your Response?

Please chat!



Use Multiple Tools

- Sanitation
- Exclusion
- Targeted Chemical Use
 - Only by Licensed Professionals

Use Multiple Tools

Sanitation

Detailed sanitation makes pest control work

Eliminate hiding spots, food, and water available at night



Clean the Kitchen



Clean the Kitchen



Thorough Stove Cleaning



Clean the Bathroom



Vacuum Cockroaches

- Non-chemical intervention
- Quickly reduce cockroach population
- Remove live roaches, dead roaches, shed skins
- Prepare the area for cleaning and treatment

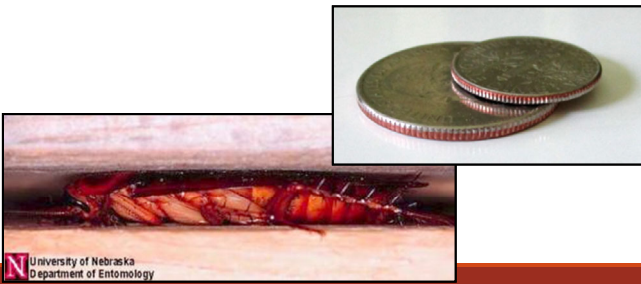


Simple Soap and Water Work Best

- Cockroaches, shed skins, and their frass:
- We must clean the dead roaches, skins & frass.



Cockroaches like to be squeezed



University of Nebraska
Department of Entomology

Exclusion

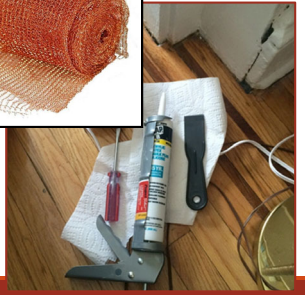
Seal or fix cracks, loose moldings, or holes where cockroaches could fit



Exclusion Tools

Use:

- Silicone caulk
- Copper mesh
- Screens



Exclusion



Caulk:
Around cabinets and counters to limit access

Exclusion



Door sweeps:
Always on boiler rooms
and exterior doors

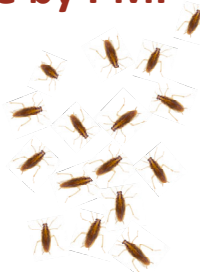
Targeted Chemical Use by PMP

- Ideally, sanitation first
- Monitor and Inspect before treatment



Targeted Chemical Use by PMP

- Ideally, sanitation first
- Monitor and Inspect before treatment
 - No “calendar-based” spraying
 - How much to apply
 - Where to apply
- Only licensed individuals should apply pesticides



Baits: The most effective pesticide option

- Cockroaches feed and share
 - Secondary kill - All stages
- Use in every room where inspection finds evidence

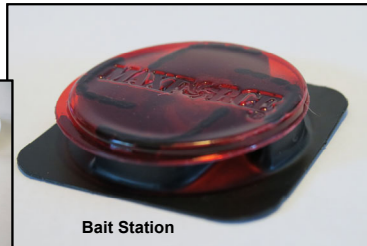


Bait Delivery Mechanisms

- Bait station
- Gel form



Gel Bait



Bait Station

Targeted Chemical Use by PMP: Baits



- Will still work where sanitation is low
- More roaches = more bait
- Rotate formulations



PMPs applies gel bait under a drawer

Targeted Chemical Use by PMP: Keeping Baits Attractive

- Wear gloves
- No pesticide sprays
- No scented cleaners



Targeted Chemical Use by PMP: Insecticidal Dusts

- Boric acid
- Stomach poison
- Silica and diatomaceous earth
 - Desiccant
- Chemical



Targeted Chemical Use by PMP: Insecticidal Dusts

- Light dusting, keep dry
- Unit turnovers or Cabinet replacement:
 - Clean first
 - Apply in walls, under and behind cabinets



Targeted Chemical Use by PMP: Insect Growth Regulators



Credit: Brad Harbison

- Interfere with cockroach growth and egg hatching
- Take a month to work, effective for +/- 90 days
- Compatible with other IPM methods; may enhance baits

Poll 5: Which treatments does your PMP use?

- Monthly or quarterly sprays
- Baits
- Monitoring
- Insect growth regulators
- Insecticidal dusts
- I don't know or N/A

Select **all** that apply.

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Prohibit the Use of Over-the-Counter Sprays & Foggers

- Not part of IPM
- Not compatible with baits
- Cockroaches develop resistance



Evaluate Success

Evaluate
Success

IPM Practice

Please chat!

Examine each photo, then tell us:

- What's the problem here?
- How would you fix it?
- Who is responsible?

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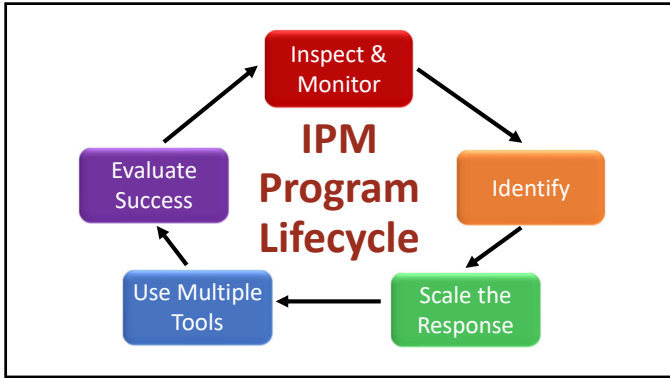












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What we learned...

Homework for Session 2

- Does your PMP use cockroach monitors?
- Where? (focus units only, focus & neighbors, all units, common areas)
- How often are the monitors inspected/changed?
- Be ready to report your findings

