

Pesticides and Alternatives

Reducing Risks Using IPM_

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Pennsylvania IPM Program



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What is IPM?

Integrated Pest Management (IPM) is an approach to controlling pests in safer, more effective, and longer-lasting ways.

When you use IPM, you

- a.) understand a pest's identity and habits so non-toxic, preventative measures can be used first
- b.) use a combination of different tactics for better effectiveness
- c.) use least-toxic chemicals, if any

Integrated Pest Management

- Begins with pest identification
- Determines level of infestation
- IPM plan is site specific and considers exposure
- IPM depends on knowledge of and buy-in by professionals

How do we do Integrated Pest Management?

1. Keep Pests Out
2. Remove Pests' Food & Water
3. Remove Pest Harborage
4. Monitor for Pests
5. Treat Existing Pest Problems

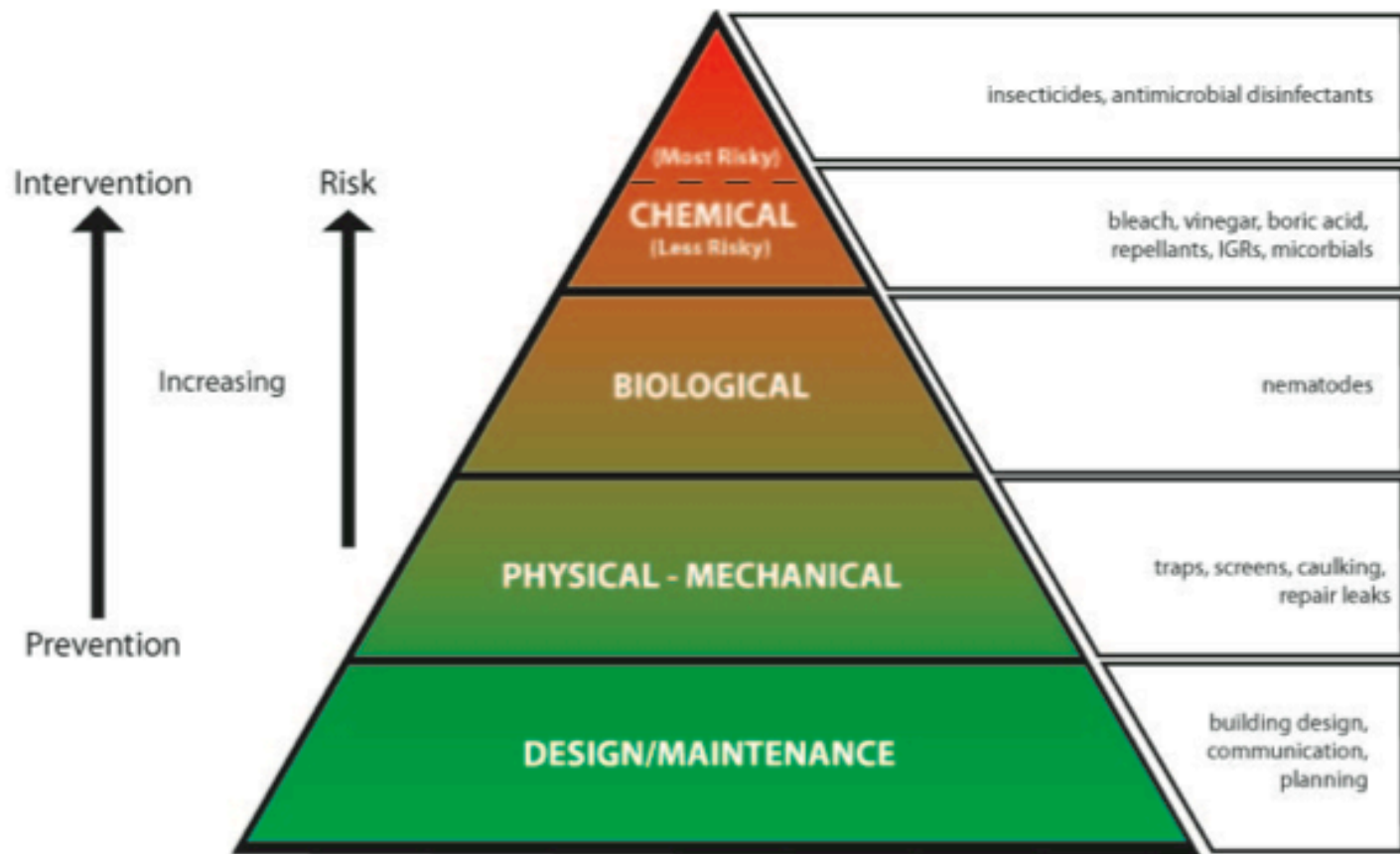
Routine Monthly Spraying is NOT Part of IPM

Problems with Pesticides

- Pesticides are toxic
- Children and elderly at higher risk
- People don't understand the risks and don't protect themselves
- Pesticides do not solve pest problems

Pesticides Do Not Solve Problems

- Pesticides treat only the symptoms, not the cause
- To be used effectively and safely pesticides must be:
 - Used as part of an IPM program
 - Chosen for the particular pest(s)
 - Chosen for the particular situation /environment
 - Used according to the label' s directions



Pyramid of IPM Tactics Inside Buildings

Read the Label First!

- Only 1 out of 4 people read labels



Pesticide Signal Words

Read Labels on Cleaning Products & Pesticides

Signal Word

DANGER

WARNING

CAUTION

Toxicity

Highly toxic

Moderately toxic

Slightly toxic

Oral Lethal Dose

Few drops to 1 tsp.

1 tsp. to 1 Tbsp.

1 oz. to more than a
pint

Pesticide Testing and Why it's Important.

- Active vs. Inert Ingredients
- Does $1 + 1 = 2$?



Most Risky Formulations

- Aerosols
- Liquid concentrates
- Liquid sprays
- Granules/pellets
- Some dusts



Less Risky Formulations

- Self-contained, tamper-resistant baits
- Gels applied in small dabs in cracks
- *Specific* dessicating dusts (DE, boric acid)



Why sprays don't work

- Pests can escape pesticide sprays
- Pests scatter through pipes and wiring in walls

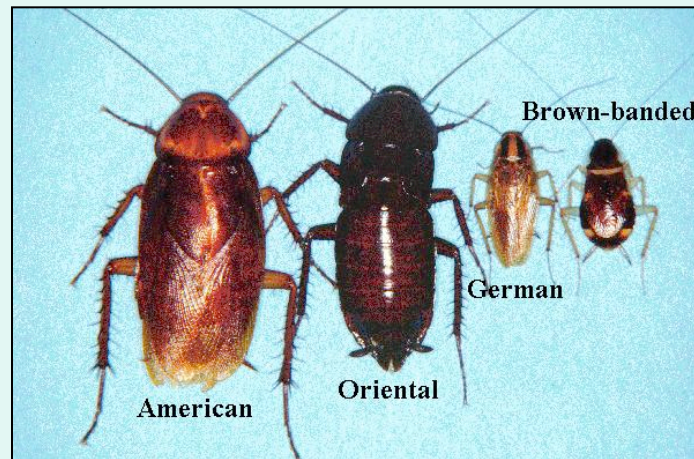


- Clutter keeps sprays from contacting them
- Food & water keeps population growing

Cockroaches

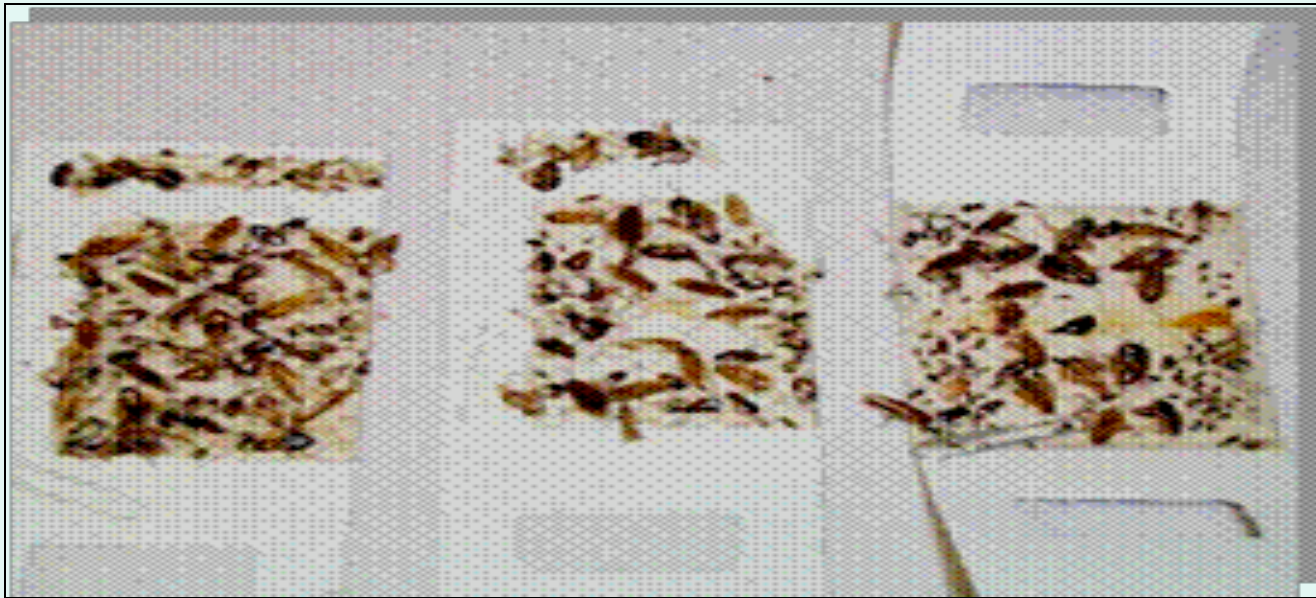
- Many species in nature
- Only a few follow people around
- Our most common “freeloading” roaches

- German
- American
- Oriental



First Step: Proper ID is Key!

So, what do you have???



German Cockroach



- Small, light brown with two stripes on head
- Life stages = nymphs who molt 5x to adult
- Females carry egg case till hatch
- Female produces 4-6 cases, each with 30-50 eggs

German Cockroach Habits

- “*Harborages*” where there is water, food and warmth (mostly kitchens)
- Like to hide in small tight spots, cracks, crevices
- Active at night

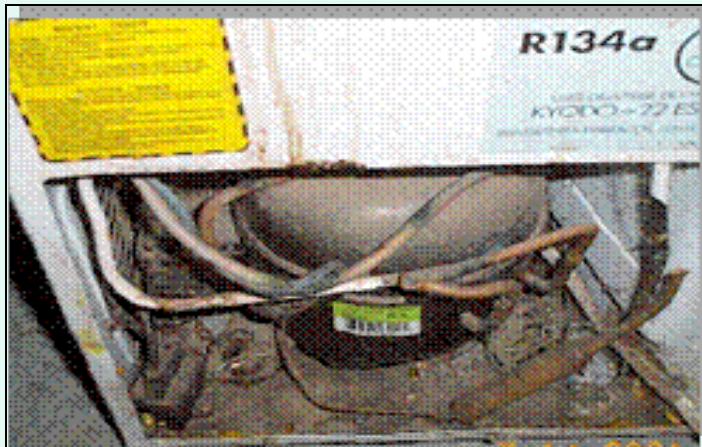


IPM Plan for Roaches

- Step 1. Assess** - conduct a visual inspection
- Where are there roaches or signs of roaches?
 - Set traps if needed to ID species, harborages



Step 2: Thorough Inspection





Step 3: Identify conducive conditions

- Water sources
- Food sources
- Warmth
- Clutter
 - Place to hide
 - Keeps them safe



Step 4:

Take Pest Prevention Actions

- Remove their **Food**
 - don' t leave food out overnight
 - put all food items into sealed containers
- Remove their **Water**
 - Fix all plumbing problems
- Remove their **Harborage**
 - Clutter, trash, piles of paper bags, boxes, clothes
 - Old appliances, infested furniture

Step 5: Intervention Options

HEPA
Vacuum
Attack!





Which will work best and safely at this site?

1. Baits, gels to knock down population at once?
2. Boric acid dust in cracks/crevices for a sustained attack?
3. Insect growth regulators to keep reproduction down?

Mouse Infestation



- Mouse infestations are a common problem in urban early care and education programs and in programs housed in old buildings.
- Use an IPM approach to solve the following problem.

How can we work together?

- Use our outreach materials & spread the word!
- Connect with pesticide and pest management experts and professionals
- Educate staff and parents at your center
- Choose safer tactics at home and at work

Important Points to Remember

- READ THE LABEL

- The label is the LAW



- Only a licensed pest control operator may apply a pesticide in a facility or a home

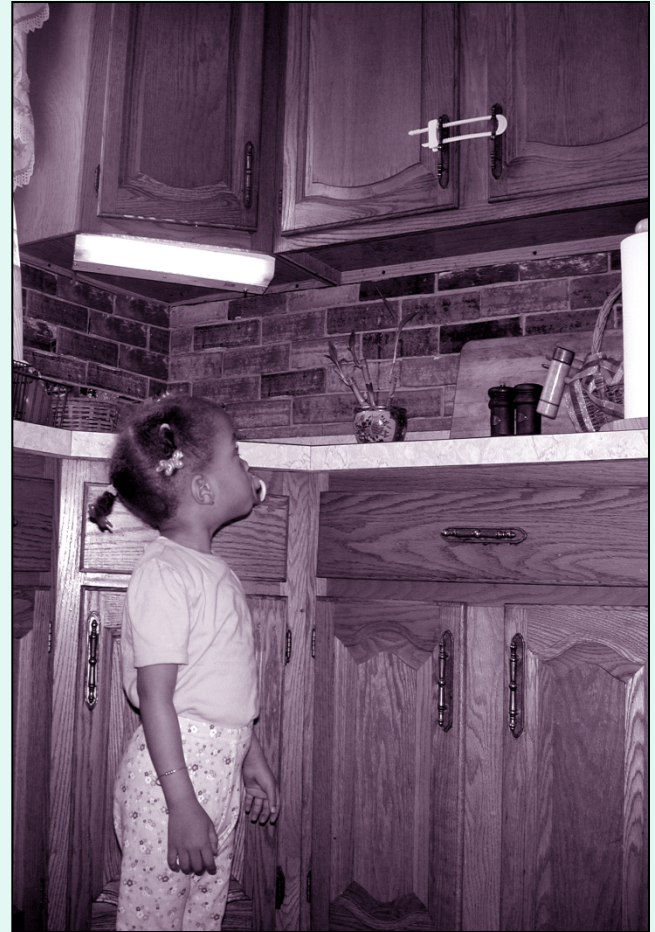
Store it high and lock it up!

Why?

47% of households with kids
had at least 1 pesticide
stored in unlocked cabinet
less than 4' off ground

8 out of 10 families use
pesticides

More than 150 million pounds
of pesticides are used by
homeowners each year



Resources

- National Pesticide Information Center

1-800-858-7378

<http://npic.orst.edu/>



- National Center for Environmental Publications (EPA warehouse)

1-800-490-9198

<http://www.epa.gov/nscep/>



Resources

- Poison Control Center: 1-800-222-1222



- Household Hazardous Waste Disposal Sites:
City of Philadelphia, Streets Department

http://www.phila.gov/streets/hazardous_waste.html



Resources

- Pennsylvania Integrated Pest Management (PA IPM) Program, PSCIP

Phone: 215-471-2200 Ext. 109

Website: <http://paipm.org>



- Safer Pest Control Project

Phone: 312-641-5575

Website: www.spcpweb.org/childcare



The development of this training module was funded by a grant from:

The US Environmental Protection Agency (EPA)

Pesticide Environmental Stewardship Program (PESP)

<http://www.epa.gov/pesp/>

Additional Trainings

1. Pests and Children's Health: Why IPM?

2. Pesticides and Alternatives

3. Developing an IPM Program for your Home-based or Center-based Facility

4. Implementing Your IPM Plan: Pest-Free, Safe Environment

