

Improving Children's Health Through Integrated Pest Management "IPM"



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Healthy Buildings, Active Learners

Healthier Environment →

Healthier Children →



Higher Academic Achievement !

So what does this have to do with "Integrated Pest Management"?

Asthma is the most common chronic illness in children

- 4.8 million kids - U.S.
- **Number one cause of absenteeism** – *more than 12.8 million school days per year*
- Most exacerbations are due to environmental triggers
- Common pests in schools are triggers



Pests and pesticides in schools are an environmental health issue

- Children are especially vulnerable to problems associated with some pests
- Cockroaches are asthma triggers
- Rodent infestations can be disease vectors, asthma triggers
- Chemicals (eg. cleaning agents, air fresheners, pesticides) commonly used (*and misused*) can be asthma triggers (especially aerosols)
- Certain pesticides have been associated with other short and long-term health problems



Conventional control methods often have unrecognized impacts

- Regularly scheduled spraying around the perimeter of a school: Environmental contamination, creation of pesticide resistance in pests, health risks to children
- Unsanctioned use by well-meaning teachers, parents: Environmental contamination, negative health effects to children



Children are NOT Little Adults



Children are still

1) Growing & 2) Developing

Greater Metabolic Demands

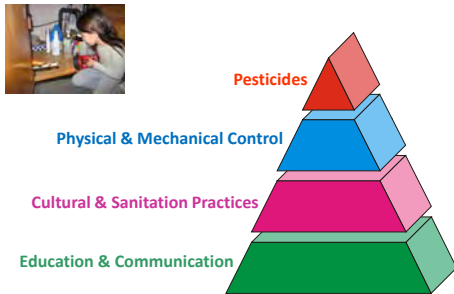
Anatomic & Physiological Differences

Behavior Differences

Integrated Pest Management (IPM)

- Common-sense strategy integrating multiple tactics – does not rely on a single tactic
- Long-term solutions (it's a process, not a miracle)
- Focus on minimum impact on human health and the environment
- Solutions based on understanding pest biology and behavior

IPM Basics



IPM in Schools: Key Concepts

- Prevention and avoidance through pest exclusion and good sanitation
- **Inspection**, monitoring and identification of pests
- Treatments focus on minimum impact on health and the environment.
- Custodians, teachers, principals, pest management professionals, and others all have a role

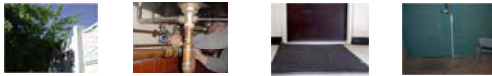


In other words...

- **Don't attract pests** (pests need food, shelter, water)



- **Keep them out** (pests need an entrance)



- **When you do have them, get rid of them in the safest way possible** (least risk to people and the environment)

What's the difference between IPM and what we're doing now?

Element	Conventional Pest Control	Integrated Pest Management
Education, knowledge	Minimal	Extensive
Inspection & monitoring	Minimal	Extensive
Emphasis	Treat <u>symptoms</u> of problem, and/or routine pesticide applications.	Treat <u>causes</u> of problem. Pesticides used only rarely.
Insecticides in occupied spaces	Sprays and aerosols	Baits, gels, dusts, IGRs, etc.
Application of sprays or fogging	Surface treatments	Generally avoided or crack and crevice only
Sanitation and exclusion for rodent control	Minimal	Extensive
Lethal control of rodents	Emphasis on rodenticides	Emphasis on trapping
Program strategy	Reactive	Preventive
Potential liability	High	Low



The Promise of IPM in Schools

- 71% Reduction in pesticide use
- **78% reduction in pest-related work orders**
- Reduced asthma triggers, **reduced absenteeism**
- **Lower costs** as pest problems are reduced (IPM implementation requires initial investment)
- **No increase to workload of school facilities staff** ("Do what you're already doing, just think pests.")



School IPM 2015: A Strategic Plan for Integrated Pest Management in Schools in the United States

The Situation in Oregon (not untypical?)

- **Most frequently reported indoor pest problems**
 - small ants 73%
 - mice 53%
 - spiders 35%
- **Most frequently reported outdoor pest problems**
 - yellow jackets 73%
 - weeds 59%
 - gophers 27%
- **Top reported cause of problems: "Don't know"**
- **Districts with IPM Policy or Plan: 14%**
- **Budget cuts have reduced ability to manage facilities effectively: 70%**

But what does SB 637 require?



- a) Requires districts to reduce workload of facilities staff
- b) Requires districts to reduce pests, pesticides, & pest-related work orders
- c) Requires districts to reduce asthma triggers
- d) All of the above
- e) None of the above

But what is the vision of the OSU School IPM Program?



- a) All districts reduce workload of facilities staff
- b) All districts reduce pests, pesticides, & pest-related work orders
- c) All districts reduce asthma triggers
- d) All of the above

Key Points of SB 637



- School IPM Coordinator for each district
- IPM Plans
- No pesticides applied without a license
- “Low-impact” pesticides
- Notification, posting, record-keeping



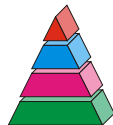
Current Challenges



- Facilities folks have too many hats (IAQ, lead paint, asbestos, safety/security, etc.) and shrinking budgets
- Baseline data collection: Difficult to get what funders require to measure impact
- Inspection/Monitoring → Reporting → Action Protocol: Difficult for districts to internalize/institutionalize need for protocol as a precursor to effective IPM plan adoption/implementation
- Lack of Federal and State Support

Summary and Final Points

- **IPM in schools** creates healthier environments, healthier children and higher academic achievement.
- **School IPM** eliminates conducive conditions and reduces pests through multi-stakeholder education, exclusion, sanitation, **inspection**, monitoring, and action.
- **School IPM** is as much “people management” as it is pest management. Custodians, teachers, students, principals, kitchen staff, and pest control professionals all have a role to play.
- **School IPM** is a process, not a miracle. **Monitoring** → Reporting → Action protocol is key to fulfilling the “promise”.



New species of giant ants trained to follow flashlight beam