

What is Integrated Pest Management (IPM)?



IPM Definitions



Technically: IPM is a process for achieving long term, environmentally sound pest suppression through the use of a wide variety of technological and management practices.

Simply: IPM controls pests while reducing the hazards of pests and pesticide exposure to humans.



Significance of Common Pests



- ◆ **Cockroaches:** Skin fragments and feces are the most common cause of asthma in urban youth.
- ◆ **Ants:** Fire ant stings cause several human deaths per year.
- ◆ **Rodents:** Deadly hantavirus is transmitted by rodent urine and feces.



Harmful Effects of Pesticides Caused by Excess Exposure



- ◆ **Acute Effects:** Harmful or fatal if swallowed or inhaled.
- ◆ **Delayed Effects:** Tumors, cancer, birth defects, blood and nervous system disorders.
- ◆ **Allergic Effects:** Asthma and skin, eye and nose irritation.



Four Points of IPM



- 1 **Prevent** pest populations (remove access to food, water and shelter).
- 2 Apply pesticides only **as needed**.
- 3 Select the **least hazardous** pesticides.
- 4 **Target pesticides** to areas not contacted by or accessible to the students, faculty or staff.



1) Prevent Pest Populations



All plumbing should be in good repair.

Proper screening or other devices should be in place around air vents, windows, doors, etc.



Any cracks in walls or around plumbing and electrical conduit should be well sealed.



2) Apply Pesticides As Needed



Treatment is necessary only when pests are present. Proper inspection procedures result in early detection of pest problems.



Sticky traps are great for monitoring pest infestations. Also, specimens can be collected and properly identified.



3) Select the Least Hazardous Material



Sprays create significant risks to children in schools. When it is necessary to treat, use the safest products that will solve the problem.



Many newly developed products are very effective in controlling pests, but are virtually harmless to humans.



4) Target Pesticides Properly



Crack and crevice treatments, such as puffing dusts into wall voids or treating cracks with gel baits drastically reduces exposure potential.

Targeting surfaces with residual sprays places pesticides where children and staff may contact them.



Landscape



- ◆ Trim trees and shrubbery away from exterior walls and roof lines.
- ◆ Landscape plantings offer pests access to buildings.



Playgrounds



- ◆ Thoroughly inspect grounds on a routine basis for evidence of pests such as fire ants, yellowjackets, etc.
- ◆ Limit the use of pesticides in playgrounds.
- ◆ Apply pesticides to grounds during summer.





Front Office/Media Center




- ◆ Administrative areas are much less likely to have pest problems, but periodic inspections are still necessary.





Kitchen 1


- ◆ Pest problems can be very severe in the school cafeteria.
- ◆ Sanitation is essential. Close, careful inspection of the dining hall is very important.





Kitchen 2


- ◆ The tube framing of cafeteria tables provides excellent refuge for cockroaches.
- ◆ Closely inspect these areas and keep them clean. Gel baits can be safely placed here.





Kitchen 3


- ◆ The serving line can create pest problems as a result of uncleaned spills and droppings.
- ◆ Clean these areas on a daily basis.





Kitchen 4


- ◆ Store trays only after they are properly cleaned and fully dried.
- ◆ Even small amounts of water left behind can sustain a pest population.





Kitchen 5


- ◆ Food debris is often spilled or left behind at the tray and silverware return areas. Thoroughly clean these areas on a daily basis.





Kitchen 6

- ◆ Keep areas under kitchen equipment clean and dry. These are preferred hiding places for many pests.




Kitchen 7


- ◆ Store dish washing racks only after they are cleaned and dried.
- ◆ Inspect floor drains often.



Dry Storage Area




- ◆ Do not store items within cardboard boxes.
- ◆ Discard leaky or damaged goods.





Garbage Storage/Removal





- ◆ Remove garbage from the cafeteria on a daily basis.
- ◆ Close lids on all garbage containers.
- ◆ Store dumpster away from facility.






Classrooms 1


- ◆ Store classroom items in a well kept manner to facilitate pest inspections.
- ◆ Keep areas near windows and doors clear.
- ◆ Clean after food served in classroom.
- ◆ Food used in art projects may be source of infestation.



Classrooms 2

- ◆ Many pest species use classroom sinks as a water source.
- ◆ Cleanliness in this area is a must.
- ◆ Clean pet bedding regularly.
- ◆ Keep pet food in pest-proof container.




Seven Steps to Developing an IPM Program





- ◆ Design an official IPM policy statement.
- ◆ Designate pest management roles.
- ◆ Set pest management objectives.
- ◆ Inspecting, identifying and monitoring.
- ◆ Set action thresholds.
- ◆ Applying IPM Strategies.
- ◆ Evaluate results and recordkeeping.






1. Design an Official IPM Policy Statement

- ◆ Define pests & pest management.
- ◆ IPM procedures
- ◆ Education
- ◆ Recordkeeping
- ◆ Notification
- ◆ Pesticide storage and disposal
- ◆ Pesticide applicators

2. Pest Management Roles - IPM Coordinator

- ◆ Contract complies with IPM policy
- ◆ Over-see in-house programs
- ◆ Maintains priority list of needed structural/landscape improvements
- ◆ Maintains records of IPM-related activities
- ◆ Educates administrators and personnel about IPM
- ◆ Understands pesticide label
- ◆ Appoints logbook overseer




2. Pest Management Roles -




Kitchen staff & custodian – sanitation, pest sightings, & repairs



Admin. – authorize repairs





Teachers – no eating in classroom, reduce clutter, pest sightings


3. Set Pest Management Objectives

- ◆ Pests are managed to prevent interference with the learning environment,
- ◆ the health of building occupants should be protected,
- ◆ building occupants should be safe from injury on playing fields, and
- ◆ the integrity of the building should be preserved.

4. Inspect, Identify and Monitor

- ◆ Floor plan with number and location of traps
- ◆ Record the following on pest surveillance sheet:
 - ◆ Date checked
 - ◆ Trap number and location
 - ◆ Trap condition
 - ◆ Number and species of pest trapped
 - ◆ Other evidence of pests or damage, and need for pest management.




5. Set Action Thresholds



6. Applying IPM Strategies



- 1 **Prevent** pest populations through sanitation and exclusion practices.
- 2 Apply pesticides only **as needed**.
- 3 Select the **least hazardous** pesticide to control the pests.
- 4 **Target** pesticides to areas not contacted by or accessible to the students, faculty or staff.



7. Evaluation and Record Keeping



Log book should contain:

- ◆ Copy of IPM Plan and service schedules
- ◆ Copy of pesticide label and MSDS
- ◆ Pest surveillance data sheets
- ◆ Diagrams noting pest location
- ◆ List of treatments (date and time of inspection, site, target pest, pesticide name, dosage rate, % dilution, and total pesticide used) and diagram of trt. date and loc.



Benefits of IPM



- ◆ **Reduced pesticide use.**
- ◆ **Healthier learning environment for our children.**
- ◆ **Better long-term control of pests.**
- ◆ **Reduced liability of school districts.**



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