IPM Implementation Techniques

As the case studies iterate, once the IPM approach is understood, it is as "easy as falling off a log," according to Kyrene. Successful implementation of IPM is based on altering the elements that lead to pest problems: entry, food, water, shelter, and stressed, non-native lawn and landscapes. Schools highlighted in *Safer Schools* rely on the following steps, which result in a decrease or elimination of pest problems and prevent future outbreaks from occurring. *(For additional implementation strategies, see Appendix F of the report for a list of pest prevention strategies or* Building Blocks for School IPM: A Least-Toxic IPM Manual *for prevention and specific pest control strategies, available from Beyond Pesticides in hard copy or at www.beyondpesticides.org.)*

Entry restrictions:

- Caulk or otherwise seal any cracks and crevices and any potential pest entry points;
- Install door sweeps on building perimeter doors;
- Install screens on all intake/outlet ports around the school building to keep wasps and bees out;
- Repair or install window screens; and,
- Install air doors on any doors accessing the kitchen from the outside.

Sanitation strategies:

- Use heavy-duty trash bags which will lead to less cleaning of the cans;
- Store food properly and in air tight containers;
- Deep clean kitchens twice to three times a year;
- Remove garbage more frequently and steam clean garbage cans as needed;
- Use enzyme-based cleaners to remove pests' pheromones left on surfaces and/or use enzyme-based cleaners containing peppermint oil to deter pests;
- Use citronella beads in dumpster to repel pests like bees;
- Refrigerate trash and recycle rooms;
- Move dumpsters away from building; and,
- Use metal containers for storage of food and supplies in the classrooms.

Shelter modifications:

- Do not store boxes or products directly on floor and use shelving made of metal;
- Eliminate the storage and/or use of cardboard boxes; and,
- Clear storage areas of unused materials.

Lawn and landscape maintenance:

- Use string trimmers to mechanically manage weeds;
- Prune trees and shrubs and cut back flowers;
- Apply mulch to suppress weeds;
- Manually weed at least three times per season;
- Overseed and fertilize athletic fields annually to promote growth to keep weeds out;
- Use weeders;
- Plant native vegetation that will be better apt to tolerate local climate plants;
- Use compost;
- Install an irrigation system;
- Dethatch lawn and aerate soil;
- Seal sidewalk cracks;
- Flame weeding, which works well for weeds around portable classrooms, and in sidewalk cracks and gravel; and,
- Use herbicidal soaps and corn gluten meal.

Specific pest control strategies:

- Vacuum **small insects** found in the building and place baby powder in the vacuum cleaner to instantly kill the insects;
- For **crawling insects and small rodents**, use glue traps or glue boards;
- For **rodent** control, use sharp traps;
- For **rodent and gopher** control, have woodwork classes build owl boxes;
- For **wasp and bee** control, use jar traps like the Oak Stump Farm Trap;
- For **bee and wasp nests**, use hot soapy water and remove manually. One suggestion is to attach a scraper on a long pool for removing the nests;
- For **ant** control, use soapy water to kill them on contact and caulk holes;
- For **geese** control, a border collie can effectively chase them away;
- For **bagworm** control, use red spider mites, herbicidal soap and prune;
- For **cockroaches**, use sticky traps and modify their habitat by fixing leaking pipes that provide moisture which attracts them;
- For **pigeons**, place decoys at appropriate locations; and,
- For **termites**, use nematodes.