IPM Strategies & Techniques: Cockroaches

Cockroaches are among the most important public health pests inside buildings (Potter & Beavers, 2005). They consume human food and contaminate such with saliva and excrement. Additionally, cockroach feces and cast skins contain allergens that are asthma triggers for students in schools (United States Environmental Protection Agency, 2012). While the German cockroach tends to be the most frequent and widespread, there are several other important pest cockroaches. It is important to know the species that you are dealing with because the biology, and subsequently IPM strategy, varies. The New York State IPM Program offers a brief web page to assist school facility officials identify different species of cockroaches.

When conducting a thorough inspect of the building, school facility officials should consider the unique nature and harborage sites of cockroach species. Essential tools to conduct an inspection include:

- Flashlight,
- Inspection mirror (for inspecting underneath, above and behind construction elements), and
- Set of screwdrivers to access equipment (Potter & Beavers, 2005).

Furthermore, school facility officials should mark all locations on a site map where cockroaches, or their signs (feces, shed skins, egg cases), are observed. School facility officials should note pest-conducive conditions for sanitation purposes; such as leaks, condensation, or other water sources. Lastly, check for possible cockroach entry sites to the room, such as holes in the floor or wall, spaces around pipe and conduit chases, and vents. For a thorough inspect, Potter and Beavers (2005) suggest the following:

- Perform the inspection in an organized, methodical manner to avoid missing harborage sites, and
- At least one visit should be made at night when cockroaches are the most active.

Best practices for sanitation and exclusion include:

- Seal all cracks and crevices possible,
- Follow the "off the floor and away from the wall" storage rule,
- Avoid the use of cardboard for long-term storage (to cockroaches, corrugated cardboard provides ideal harborage sites; they can even subsist on the glue, if need be; and
- Replace wooden shelving with metal shelving, preferably on the wheels to facilitate cleaning and inspection.
Also, vacuums are an ideal tool for cockroach control. Not only can the school physically remove a lot of cockroaches, they can remove cockroach pieces which are asthma triggers for building occupants.

Cockroach monitors, such as sticky traps and glueboards, serve both as an early-warning system for new cockroach introductions and a means to provide information (relative numbers, locations) about an established infestation. When using sticky traps and glueboards as monitoring devices, school facility officials should ensure they are strategically located throughout the building. Locations might include: beneath sinks, behind refrigerators, and positioned flush against walls, corners or at the junction of two or more construction elements (Potter & Beavers, 2005).

Also, monitors are important in assessing the effectiveness of your control program.

Pest cockroaches are introduced species native to tropical areas. Thus, essentially in northern climates, they tend to be brought into a building rather than move in on their own. If schools have repeat problems with cockroaches, school facility officials should think about how they might be arriving. In kitchens, typically this occurs with food and supplies deliveries. For example, one school discovered their milk supplier was the source of cockroach introductions. Also, repeat cockroach problems in classrooms and offices might point to an occupant bringing the insects from home. Not uncommonly, cockroaches hitch rides on book bags, clothing, and the like.

Often times, insecticides are required to eliminate an existing cockroach infestation. In order to safety perform the insecticide treatment, careful attention should be paid to the type of insecticide and how it is applied (Potter & Beavers, 2005). Cockroach baits have greatly increased the efficacy of using insecticides to help eliminate cockroaches. Baits consist of a food source that is mixed with the toxicant. This formulation greatly reduces the exposure risk of the insecticide to humans. School facility officials are responsible to incorporate IPM strategies and techniques, including inspecting, monitoring, and eliminating conducive conditions, to ensure the safety and well-being of all building occupants.

Additional IPM strategy and technique information for cockroaches can be found at:

- [School IPM Plan for German Cockroaches](#)
- [School IPM Plan for Outdoor Cockroaches](#)
References:
