

Brookings School's Integrated Pest Management in Schools Newsletter

Summer 2009



The district is participating in a pilot program to look at how pests are managed/controlled. This program is being funded by the U.S. Environmental Protection Agency and will last approximately one year. Information about the novel method used during the pilot program will be provided in newsletters. Schools participating are Camelot, Medary, and Mickelson

What is Integrated Pest Management?

By Darrell Deneke

South Dakota State University

What is IPM? The letters IPM stands for Integrated Pest Management. IPM is a concept by which we learn about our pests and select the best control methods to manage them with the least effect to people, and the environment as well as the most economical approach. By anticipating and preventing pest activity and combining several pest control options or methods, long-term results can be achieved.

IPM is an educational process combined with a management plan to control pests. IPM is used in a number of areas where pests can be a problem, such as agriculture, landscapes, buildings and structures, schools, and other public venues. IPM follows some very simple steps or approaches:

•Monitor and Identify Pests

Not all insects, weeds, and other living organisms require control. Many organisms are innocuous, and some are even beneficial. IPM programs work to monitor for pests and identify them accurately, so that appropriate control decisions can be made in conjunction with action thresholds. This monitoring and identification removes the possibility that pesticides will be used when they are not really needed or that the wrong kind of pesticide will be used.

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Spiders and Schools

By Ken Holscher

Iowa State University

Spiders come in all shapes, sizes, and colors. Although pest identification is a key component of integrated pest management, this process can be simplified for spiders. All you have to know is that spiders found in the upper Midwest can be placed in two major groups depending on their biology and behavior. These groups are the web builders and the hunters.

As their name implies, web builders construct webs made of silk and are rarely found away from their webs. These spiders have extremely poor vision and rely on their webs to capture insects for food. A number of small to moderate-sized web builders, such as the cobweb spiders, can live and reproduce inside buildings if an adequate insect food supply is present. Since these spiders must rely on their webs to capture food, effective management is based on mechanically removing their webs on a frequent schedule. This process also affords the removal of the unsightly webs, which are often viewed as a sign of poor cleaning practices. These efforts should be started in early spring when spider populations are just starting to increase rather than during peak populations in summer or early fall. Managing insects that are the food source will also aid in the management of indoor web-building spiders.

Hunting spiders, such as the common wolf spider, do not construct webs to capture food. These spiders are fast, strong, and have excellent vision that allows them to actively hunt for insect prey. This hunting behavior usually takes place at night. During the day these spiders hide in cracks, crevices, under stones, or in other similar outdoor harborages. Because of their hunting behavior these spiders may, at times, accidentally enter a building through gaps or cracks around windows and doors or through other openings. Once inside a building, hunting spiders will not live for more than a day or two and will not reproduce. Effective management of hunting spiders starts with exclusionary techniques to locate and eliminate likely entry points into the building. Removing harborages from around the outside foundation of the building and trimming back plants that directly contact the building will reduce the number of hunting spiders that collect around

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•Set Thresholds

Before taking any pest control **action**, IPM first sets an action threshold, a point at which pest populations or environmental conditions indicate that pest control action must be taken. Sighting a single pest does not always mean control is needed. The level at which pests will either become an economic threat is critical to guide future pest control decisions.

•Prevention

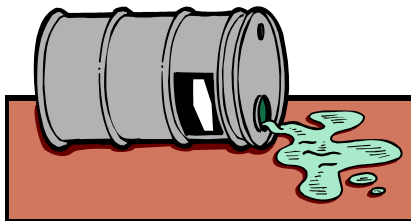
As a first line of pest control, IPM programs work to manage the crop, lawn, or indoor space to prevent pests from becoming a threat. In an agricultural crop, this may mean using cultural methods, such as rotating between different crops, selecting pest-resistant varieties, and planting pest-free rootstock. For IPM in buildings, this may mean cleaning up cluttered areas, sealing around plumbing, and installing new door sweeps on outside entries. These control methods can be very effective and cost-efficient and present little to no risk to people or the environment.

•Control

Once monitoring, identifying and action thresholds indicate a pest problem requires a control measure and preventative methods are no longer effective or available, a control needs to be considered. IPM considers an integrated approach, not just a pesticide option. Control options include cultural controls, mechanical controls, biological controls or chemical (pesticide) controls either used alone or as multiple strategies.

•Evaluation

Once the control measure has been used and the pest is eliminated, a good evaluation and record system will help to keep the pest from being a problem in the future.



the outside perimeter and the likelihood of accidental entry. Replacing exterior lighting that is attractive to insects will also discourage the number of hunting spiders. Any hunting spiders found inside the building can be vacuumed and discarded. Non-toxic glue boards placed inside likely entry points can also aid in the management of hunting spiders.

The application of insecticides as residual sprays either inside or outside a structure and insecticide fogging (“bombs”) inside a building are not recommended for the management of any type of spiders. These treatments are generally ineffective in eliminating existing spider problems and will not provide any measure of prevention.

Storage of Pesticides

By Erin Bauer and Clyde Ogg
University of Nebraska-Lincoln

When you store pesticides on school grounds, keep them in locked locations away from water sources and in places that cannot be easily flooded after a heavy rainfall. Make sure the storage location is in good repair, doesn’t leak, and has sturdy shelving. Keep pesticides in their original containers and store out of reach of children. Buy only the amount you estimate you will need in a season to avoid storing larger quantities for a longer period of time.

Keep a spill kit in the storage area in case of emergencies. Such kits include chemical resistant gloves, absorbent material such as kitty litter, coveralls, a shovel, and a temporary plastic storage container. Protective equipment such as gloves and a change of clothing should also be stored elsewhere in the facility.

If a pesticide spill should occur, follow the **3 Cs** — control, contain, and clean-up. **Control** the spill by stopping it from spreading further, such as uprighting a container or bag. **Contain** the spill by using absorbent material, such as kitty litter, to soak up the liquid, and then **clean-up** the spill by shoveling the contaminated material into a temporary plastic storage container. Follow the pesticide label instructions for disposal.

School IPM Newsletter in collaboration with

- Brookings Public Schools
- South Dakota State University
- South Dakota Department of Agriculture

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