

Pesticides

Pesticides (the generic term for insecticides, herbicides, and fungicides) are among the most widely used chemicals in the world. Pesticides do pose some risk, and their use cannot be made completely safe. The majority of lawn and landscape pesticides are applied with combined pesticide-fertilizer products, such as weed and feed. The following tips will provide you with information on how to minimize the risks associated with pesticide use.

Integrated Pest Management

Home gardeners have many insect pest management options that don't rely on insecticide use. The systematic adoption of these options with attention to pest and beneficial insect life cycles and behavior is a key component of Integrated Pest Management (IPM). IPM is a strategy that helps gardeners prevent and manage pest problems with as few chemicals as possible. Some of its basic principles include: early and accurate identification of pests; regular inspections to gather information used in the management decision process; and having an "action threshold," which describes the level of pest presence that requires control.

After the garden has been planted, harmful insects can be managed in a variety of ways. If the garden is relatively small and the insect pests few, hand picking remains one of the most effective means of insect control. Traps or barriers can be useful for some pests, and biological control agents that are commercially available can be very effective against specific insect pests. Finally, when all other measures have failed, very selective and well-timed spot treatments of individual plant parts with a low-impact insecticide (such as insecticidal soaps or horticultural oils that are relatively safe compounds) may be considered. Even though insects may cause some damage, you may not need to control them if you learn to tolerate a modest level of insect feeding on your garden vegetables.

An Attractive Lawn with Minimal Herbicidal Use

The following steps from the Purdue and University of Illinois Extensions can reduce the need or amount of herbicides used to control dandelions and crabgrass while still maintaining an attractive and healthy lawn. Spottreating or mechanical removal of the occasional dandelion may be all that is needed.

1. Mow at 3 inches or more.
2. Mow frequently, never removing more than 1/3 of the grass leaf blade.
3. Return the lawn clippings.
4. Fertilize in the fall (nitrogen).
5. Irrigate only as needed.

The best defense against weeds is healthy, dense turf. Overseeding can be used to improve turf density in many existing lawns. The best time to seed cool season turf grasses in northern Indiana and Illinois is generally mid-August to late August.

1. Mow the area to approximately 1.5 inches.
2. Aerate if needed.
3. Fertilize (organic alternative: 1/4 to 1/2 inch compost).
4. Apply seed at recommended rate.
5. Lightly tamp or press to insure seed/soil contact.
6. Water newly seeded area lightly and frequently over the first few weeks.

Source: www.agry.purdue.edu/turf/pubs/ay-13.pdf, www.agry.purdue.edu/turf/pubs/ay-32.pdf



Management Strategies

IPM uses a combination of compatible control techniques. These include cultural, biological, mechanical, plant selection, and chemical techniques. In many cases, a combination of these strategies may be necessary.

- Cultural controls are modifications of practices to disrupt or reduce pest populations (ex. maintaining healthy soils, proper watering and fertilization, and sanitation).
- Biological control refers to the use of natural enemies to control pests.
- Mechanical control refers to the use of barriers or traps to exclude or catch pests.
- Plant selection involves the selection and use of plant varieties that are disease and/or insect resistant and compatible with the existing conditions.
- Chemical control, as a last resort, includes the use of pesticides. The least toxic pesticide should be used initially.

Using IPM is the best way to safe, long-term pest management with minimal adverse effects to your family and the surrounding environment.

10 Stewardship Principles for Safe Pesticide Use

1. Read the label before buying the pesticide.
2. Buy only the amount of pesticide needed for one season.
3. As a general rule of thumb, the temperature inside the storage area should not get below 40°F or over 100°F.
4. Calibrate equipment carefully to assure that the pesticide is applied at labeled rates.
5. Be aware of current and probable future weather conditions in order to make the best application decisions to prevent drift.
6. Locate the mixing/loading site away from wells, streams, and lakes.
7. Never leave a tank while it is being filled, and pay constant attention during filling to prevent overfilling and spilling of the pesticide on the ground.
8. When you empty a container, allow it to drain into the spray tank for 10 seconds after it begins to drip.
9. Remember that exceeding the label rate of application is a violation of the law.
10. Follow the label each time you mix and use the pesticide, and when storing or disposing of the pesticide.