Why must some pesticides still be used?

IPM employs cultural controls to prevent outbreaks of pests from reaching levels damaging to plants. Pesticides are viewed as a last resort, their use kept to an absolute minimum. There are times, however, when pesticides are the only effective alternative, such as when a plant that is highly valued from an educational, architectural, or historical point of view is threatened.

There also are times when weeds sprouting from cracks in paved surfaces and turfgrass weeds, many of which are the bane of allergy sufferers and would otherwise need to be pulled by hand, must occasionally be spot treated with chemicals.

How is the decision to use pesticides made?

Integral to IPM is the practice of scouting. Scouting eliminates the need for preventive, routine applications of pesticides. Surveys are taken year-round to determine which pests are present and in what numbers. Under the supervision of the IPM coordinator in the Department of Grounds, each pest is identified. Then an evaluation is made to determine whether the numbers present can cause major damage. The location of the pests and their potential for spreading or for threatening the life of valuable plants are all taken into consideration. When appropriate, faculty members in the Departments of Floriculture and Ornamental Horticulture, Plant Pathology, and Entomology are consulted.

What policies guide pesticide use?

- By-the-calendar applications of pesticides do not occur on the Cornell campus.
- Individual pesticides are chosen for their effectiveness in controlling specific pests and are applied only where those pests occur.
- Materials are selected to minimize environmental impact.
- Restricted-use pesticides—those that are highly toxic or persistent in the environment—are never applied.

How are the campus community and the public protected from exposure to pesticides?

Public health and environmental quality are primary concerns on those few occasions when pesticides must be applied. The materials used are registered with and approved for use as pesticides by the New York State Department of Environmental Conservation and the federal Environmental Protection Agency. They are applied only by professional pesticide applicators who are trained and licensed by the New York State Department of Environmental Conservation.

Applications generally occur early in the morning, well before the beginning of classes, and only under weather conditions that prevent the materials from drifting beyond the area being treated.

The perimeter of the location is posted with notification signs, as required by New York State law, warning pedestrians to avoid the area. These signs must remain in place for twenty-four hours after the pesticides have been applied.

In Summary

A respect for the land and assuming the responsibility to care for it well have been traditions at Cornell since the founding of the university. The Cornell faculty and the staff of the Department of Grounds take great pride in the campus as it is today. They are dedicated to preserving its beauty and its environmental integrity for generations to come.

For answers to additional questions regarding pesticide use on the Cornell campus, call the Department of Grounds at (607) 255-4027.
“To live in right relation with his natural conditions is one of the first lessons that a wise farmer or any other wise man learns.”

—Liberty Hyde Bailey, botanist, environmentalist, and a founder of the College of Agriculture and Life Sciences, Cornell University

A Century of Environmental Concern

Since Liberty Hyde Bailey, an early advocate of environmental awareness, wrote these words, great strides in agricultural research and pest control techniques have brought our society in closer harmony with his environmentally conscious philosophy. From Bailey’s day to the present, Cornell University has recognized its responsibility for supporting pest control practices that are both effective and safe for the environment and the public at large.

Today Cornell faculty members are recognized worldwide as leaders in exploring the impact of pesticides on human health and environmental quality and in seeking effective nonchemical alternatives. Their pest control recommendations, distributed in pamphlet form through Cornell Cooperative Extension, are relied upon with confidence by commercial growers and homeowners alike.

Integrated Pest Management—
A Solution for Today and Tomorrow

Twenty-five years ago, Cornell faculty members were among a small group of scientists who developed the concept of integrated pest management (IPM) as a means of reducing the agricultural use of pesticides. The philosophy behind IPM is to employ an array of nonchemical techniques for controlling pests, resorting to pesticides only when all else fails. The limited and judicious use of chemicals will remain a part of IPM only until equally effective nonchemical alternatives are discovered.

The Department of Grounds at Cornell, like Cornell Plantations, follows IPM procedures in maintaining the campus landscape. By doing so, pesticide use on campus is reduced every year. In fact, Cornell uses a significantly smaller quantity per acre than does the average suburban community in New York State.

The IPM system used by the Department of Grounds at Cornell is a model for other institutional programs throughout the nation.

Preserving a Campus Renowned for Its Beauty

Ezra Cornell, a farmer turned businessman, gave his own fields as the site for the university that would bear his name. Located on a hilltop overlooking one of New York State’s largest lakes and bordered by woodlands, gorges, and waterfalls, the 500-acre central campus is cited as one of the most beautiful in the nation.

Thousands of flower and shrub species, from native to exotic, flourish here, adorning 300 acres of lush green lawn. Hundreds of trees, some that stood on Ezra Cornell’s farm, shade the walkways. Formal perennial gardens tucked among the buildings offer a quiet retreat from the bustle of campus life.

While conveying the spaciousness of a granuously landscaped park, the Cornell campus is actually a highly efficient urban center designed to support one of the world’s foremost research and teaching universities. On an average weekday, 30,000 people live, work, visit, and study in its 250 major buildings. Sometimes classes are held on the lawns. So are stately receptions as well as rough-and-tumble games. The Cornell campus is a place where the out-of-doors beckons and is enjoyed to the fullest. But this means constant wear and tear to a fragile, natural environment. The job of the Department of Grounds is to protect and preserve the beauty for which Cornell is known. IPM is the only way to carry out this job in a responsible manner.

How is integrated pest management used to protect the campus landscape?

- Insects, weeds, and plant diseases all threaten the lawn, flower, shrub, and tree species that make the campus such a pleasing and restful place to be. To keep these pests under control, IPM uses a holistic approach that includes many cultural pest control techniques:
  - Naturalized landscape design, emphasizing a diversity of species
  - Careful site selection and preparation
  - Use of hearty, disease- and pest-resistant varieties
  - Proper planting and fertilization procedures
  - Proper frequencies of watering, pruning, and mowing
  - Mulching
  - Introduction of naturally occurring organisms to control pests