# Integrated Pest Management Program for Campus Recreation

 IPM Strategy for Campus Recreation at the University of Illinois Urbana-Champaign

## Introduction:

 A successful integrated pest management program is one that focuses on environmental stewardship, incorporates an economic threshold, and utilizes the latest technology to ensure safety and playability for those that use our sports fields.

IPM Strategy:

* Preventative controls
* Environmental controls
* Biological controls
* Mechanical controls
* Chemical controls

The basis of a good IPM strategy begins with scouting. To identify problems, one must be able to identify common issues related to sports field management. Advanced training and further education are available to employees.

Preventative controls:

 The best defense for a healthy stand of turf is an optimized fertilization plan, which naturally crowds out weed competition and inhibits fungal growth. Mowing height can be utilized as a preventative control. We must maintain a balance because raising height of cut would be beneficial for the plant, but to maintain playability and safety, we must keep it shorter. These preventative controls help avert issues from arising later into the season.

Environmental Controls:

 Properly identifying pests due to environmental factors and utilizing phenology, one can help fix problems before they arise. Phenology is the study of environmental cues and how they help identify factors such as soil temperature and disease pressure. Each year it is not possible to know the exact date that temperatures will react 55 degrees F (important to note that crabgrass germinates when soil temperatures reach 55 degrees for 3 consecutive days in the spring). Timing of herbicide applications to prevent unwanted crabgrass needs to be accurate to prevent waste of product and environmental harm. Timing of broadleaf weed herbicide application heavily influences native bee population. Introduced, non-native species such as white clover provide essential functions for native bees that help pollinate other plants before native flowers can. Delaying spraying until other food sources are available is an effective, environmentally friendly practice.

Biological Controls:

 Incorporating new cultivars into the current turf stand reduces the need for additional fungicides, fertilizer, and water input. Slower growing cultivars reduce the need to mow as often. Each year, fall overseeding with the newest cultivars help keep us up to date with technology that reduces inputs.

Mechanical Controls:

 Mechanical control of our IPM strategy involves not removing more than 1/3 of the grass blade at a time. By removing less than 1/3 of the blade, it reduces stress on the plant and reduces overall reliance of fungicides. Maintaining sharp mower blades also reduces stress and provides a clean, healthy cut.

Chemical Controls:

 Our last line of defense is chemical control. We have licensed pesticide applicators hired to spray our fields at correct, legal rates. It is our decision to call them to apply fungicides, herbicides, and other pesticides after we have done a thorough observation at the situation at hand. Timing for re-entry of the area is noted on the label, which is implemented into our chemical control strategy.