

SOUTH DAKOTA STATE UNIVERSITY

Integrated Pest Management (IPM)

DEFINITIONS

Campus Proper- The approximately 500 acres of land centrally located in Brookings, SD that is maintained by SDSU Facilities & Services or other campus entities.

Pest or Pathogen- Any living organism that interferes with healthy and normal growth of landscape plants, trees, or turfgrass. Pest is also encompassing of weedy plants in the landscape and turf areas.

Pesticide- In this document, pesticide is used as an umbrella term to include pesticides, herbicides, insecticides, fungicides, miticides, and nematocides. These are chemicals specifically used to control the growth or persistence of pests and pathogens.

INTRODUCTION

Integrated Pest Management (IPM) is defined by the EPA as “the coordinated use of pest and environmental information with available pest control methods to prevent unacceptable levels of pest damage by the most economical means with the least possible hazard to people, property, and the environment.” SDSU Facilities & Services Grounds Services staff follows this IPM strategy in their everyday management of the SDSU turf, annual beds, landscape beds and campus forest.

Objectives of this IPM plan include:

- Monitoring and identification of pests and pathogens
- Action thresholds
- Protocols for control
- Assessment
- Prevention

IPM COORDINATOR

The IPM coordinator is the Facilities & Services Horticulturist or the Facilities & Services Grounds Services Supervisor. The coordinator is responsible for:

- Maintaining records of pests, pathogens, and their control measures.
- Acting as a liaison for public questions
- Communication for control recommendations
- Regular evaluation of the IPM plan
- Serve on the Bee Campus USA sub-committee

The IPM Coordinator is required to issue a notice to the Associate Vice President of Facilities & Services prior to any large scale application of pesticides on Campus Proper. Typically, 24 hours is a sufficient amount of notice. The coordinator recommends action steps, but is not given the authority to apply any pesticides specifically labeled or otherwise known to be detrimental to native pollinating insects without first submitting a written request to the Associate Vice President of Facilities & Services to apply these chemicals.

BEE CAMPUS USA SUB-COMMITTEE

South Dakota State University maintains this sub-committee in part to review the IPM Plan regularly and suggest changes as they are needed. This committee is tasked with incorporating the latest in industry standards and relevant research to better inform grounds management on campus. This committee also identifies sensitive habitat or areas of restricted maintenance in the interest of promoting native beneficial insect communities.

PESTICIDE APPLICATION

The IPM Coordinator may determine that a pesticide application is the best control protocol for certain pests or pathogens. When this is the case, and when approved for treatment, a notice is sent first to the Associate Vice President of Facilities & Services and then to the Department Head of Agronomy, Horticulture & Plant Science. This is to mitigate any risk posed to any sensitive research. The notice may be sent out to the wider campus if the pesticide application is broadcast over a large area.

1. Pesticide application in landscaped beds around campus will not have any physical signage. Notices are generally not given to the wider campus for these targeted applications. The most common applications are pre-emergent pesticides for weedy plant control.
2. Turfgrass pesticide application will be visibly flagged with green lawn flags spaced to clearly delineate the area of application. Notice is typically given to the wider campus community when these applications are made. Fall is the most common time for pesticide use on turf, though special cases may require applications any time during the growing season.
3. Application of pesticides to campus trees is not generally marked in any physical way. Notice is not given to the campus community under normal circumstances. Common applications to trees are injections for high impact pests such as Dutch Elm Disease or Emerald Ash Borer. Canopy and trunk sprays are not common, but would require notifications similar to turf application.

These application guidelines are for normal circumstances and in the event of a pest or pathogen emergency that poses an immediate risk to human health or serious detriment to the living environment the IPM Coordinator will work with the Associate Vice President of Facilities & Services to provide for emergency treatment of such pests or pathogens.

Whenever possible, the IPM Coordinator should use least toxic strategies for pest and pathogen treatments. Products that are applied in ways that limit their offsite damage potential are preferred.

RECORD KEEPING

Records are kept by the SDSU IPM Coordinator in accordance with South Dakota Department of Agriculture regulations. All pesticide applications are recorded on Application Record sheets and kept for 3 calendar years from date of application. MSDS sheets are available to interested parties by request.

CERTIFICATION

Staff of the SDSU Facilities & Services Grounds Services Department are all required to hold and keep a South Dakota Department of Agriculture Commercial Pesticide Applicator License in categories:

G- General

3- Forest pest control

4- Ornamental and Turf pest control

Staff attends bi-annual re-certification courses that highlight emerging issues and shifts in the industry in regards to pest and pathogen control. Copies of the IPM Plan are distributed to staff at hire and posted in the Grounds Services shop.

IPM STRATEGIES

Pest management strategies may include education, exclusion, sanitation, maintenance, biological and mechanical controls, and pre-approved, site-appropriate pesticides.

South Dakota State University's IPM Coordinator will make IPM decisions using the following steps, in this order:

1. Identify pest species. Without an understanding of the issue, it is not possible to react appropriately or effectively. Academic individuals on campus may have expertise in identification and their resources should be used whenever needed.
2. Estimate the pest or pathogen populations against action thresholds. For some pests or pathogens this threshold may be zero, for others it may be very high.
3. Select the appropriate management tactics based on the most up to date industry standards, site specific data, and ecological sensitivity.
4. Assess effectiveness of pest management.
5. Keep appropriate records.

The best defense against pest and pathogen infestation or infection is through prevention of the conditions that support them. SDSU Facilities & Services strives to keep plants healthy on campus through proper site and plant selection and thorough monitoring of plant health throughout the year. Pesticide application is only considered after all other least toxic options have been eliminated.

When the IPM Coordinator determines that a pesticide must be used in order to meet pest management objectives, the least-hazardous material, adequate for the job, will be chosen.

All pesticide storage, transportation, and application will be conducted in accordance with the requirement of the Federal Insecticide, Fungicide, and Rodenticide Act (7 United States Code 136 et seq.), Environmental Protection Agency regulations in 40 CFR, and Occupational Safety and Health Administration regulations.

Any pesticide applicators will be trained on proper use of equipment and IPM Principles prior to applying any pesticide on SDSU campus. Applications are made with best management practices, in acceptable conditions, and always in accordance with label directions.

Pest specific management strategies are available upon request.