

8.0 Integrated Pest Management

CWU's Integrated Pest Management (IPM) plan combines the industries best known methods of pest control as outlined by the Environmental Protection Agency (EPA) and the Washington State Department of Agriculture (WSDA). The methods used in pest control must be environmentally sensitive and reduce hazards to people and property while being economically responsible. The IPM process involves a visual inspection of campus for signs of pests, positive identification by staff or extension offices and monitoring of pests combined with record keeping and evaluation for possible action to reduce campus pests.

Establishing an allowable threshold of pests on campus allows CWU to reduce wasted material costs and unnecessary impact on the landscape by attempting to eliminate non nuisance pests.

Whenever pests do grow to a population size that is detrimental to the landscape, plants or the public, pest management practices will be incorporated based on the specific situation. These practices will continue until the pest is at a manageable population.

Initial steps in the reduction of pests are prioritized by using physical and cultural methods described below, before any chemical application is used. It is important to ensure that all chemicals used at CWU are registered with the EPA and the WSDA and that only trained and licensed professionals make the applications. Preference is given to chemicals that offer the least toxic option for the specific application.

Weeds

Control of noxious weed species is a state mandated activity and is a necessary part of CWU's landscape maintenance program. CWU incorporates various methods of weed managements including preventative, cultural, mechanical, and when necessary, chemical applications.

Preventative methods are any steps we can take to not expose our campus to weed infestation Taking steps such as always inspecting imported materials for signs of contamination by weeds, eliminating bare dirt areas by installing grass or mulching, or simply cleaning equipment and clothing so weed seeds are not carried from one site to another.

Cultural practices include properly feeding lawns with composted materials that are taken from campus fall leaf clean up, grass clipping, and excess sod. These materials are composted by CWU at our sustainability plant. Using our compost reduces the amount of fertilizer used on lawns, flower and shrub beds. Mulching our beds and around trees with either our compost and, or bark helps to feed plants, minimizes weed growth, and reduces irrigation requirements by limiting evapotranspiration rates.

Mechanical methods of weed control would include hand removal of weeds in small locations without disrupting the soil to prevent infestation, tilling of soils to reduce certain weeds or prepare ground for lawn installation. Correct mowing heights for the variety of lawns on campus is beneficial in the reduction of turf weeds. By adjusting the grass height for the seasonal conditions we can limit the amount of weed germination that occurs as well as eliminating and seed heads that have sprouted. In combination with our compost topdressing, aerification of lawns increases the root health of our grass

by allowing air and beneficial microbes into the soil. If turf infestation occurs after preventative measures have been taken, the affected areas of sod may be removed and replaced with fresh sod to avoid chemical application. These practices create healthy dense lawns that can aid in reducing existing weeds and prevent infestation in lawns.

All of these practices reduce the reliance on chemical applications to control weeds. When chemicals are required on campus, CWU chooses pesticides that target problem weeds with as little active ingredient as possible. Notification of chemical applications are always posted in the application site near any obvious entry point. The posted signs include information about the chemical applied, who applied the chemical and a contact number. The signs are left in place for a minimum of 24 hours or longer if required by the chemical label. CWU also rotates applications with a variety of chemicals to reduce weed resistance. Our current rotation includes, but is not limited to the following chemicals.

Post-Emergent:

Carfentrazone-ethyl

Triclopyr

Sulfentrazone

2, 4-D

Dicamba

Pre-Emergent:

Prodiamine

Trifluralin

Isoxaben

Indaziflam

Non Selective:

Glyphosate

Diquat

Surfactants:

Modified Alkylated Polyol

Alkylphenol Ethoxylate

Insecticide:

Imidacloprid

Diazinon

Insects

With the exception of CWU's Birch tree population which receives annual application of Imidacloprid to protect them from the deadly Bronze Birch Borer, insect control at CWU is handled on a case by case basis. It is very important to properly identify the insect and verify that it is in fact the cause of any damage that may be taking place. CWU works with our state extension offices and the WSDA to make correct identifications. Once we have a positive identification of the pest, only the proper type and amount of insecticide will be used. If possible campus insects are reduced by attempting to eliminate the host home of the pest. Removal of infected trees or shrubs beds is an option. If ground infestation is found, plant food sources may be removed as well as eliminating irrigation to make "home" inhospitable. Physical methods are near impossible in reducing insect infestations.

Beneficial insects, including bees, are in abundance at CWU and by the selective and limited use of insecticides we are able to maintain that level. Chemical applications are never used where bee activity is observed or at a time when bees are actively foraging.

Rodents

Preventative maintenance is key with rodents and there are two important steps taken in preventing rodents on campus. One is regular litter collection to reduce any possible human made food source, especially near dining halls. The second is to eliminate possible homes in shrubs and flower beds. Dense, woody growth shrubs are excellent homes for rodents and are being eliminated campus wide.