Integrated Pest Management Plan

Grounds Services

Missouri State University

901 South National

Springfield, Missouri 65897

(417) 836-5963

Grounds Services will use methods of pest control that include monitoring for pest population, modifying cultural practices, mechanical control, biological control, and conservative use of pesticides. Pesticides will be used to control and maintain pest populations at or below an acceptable threshold while maintaining plant health and aesthetics.

Grounds Services will inspect the grounds of Missouri State University, Springfield campus at least once monthly April through October; additional monitoring may be required during periods of higher populations of insects, weeds, or diseases. Inspections may also be required November through March on an as needed basis.

**Trees, Flowerbeds and Landscaping**

Best management practices will be used in the care of trees, flowerbeds, and landscaping. Pest resistant varieties of trees and plants will be selected when used in landscape plantings and in flowerbeds when possible. Trees and plants will be inspected for pest and disease prior to being planted. Plants found to be infested or unacceptable will not be planted in order to eliminate further contamination. Trees and plants will be planted at the proper depth to avoid undue plant stress. Mulch will be maintained in landscape beds and around trees to reduce weed growth, retain moisture, and protect plants from mowing equipment. Dead or dying vegetation will be removed and disposed of to prevent the spread of disease and reduce pest infestation. Pesticides will be applied if pest exceed acceptable levels. Consideration of toxicity, frequency of application and location of application will be taken into account when selecting a pesticide.

**Ornamental Insect Control**

Visual inspection will be performed during routine maintenance. In an effort to promote beneficial insects, pesticides will only be applied on an as needed basis. Pesticide application will only be in infested areas, the timing of the application will be based on the damage, pest life cycle, and when the pest is most vulnerable. Preventive application of pesticides will only be performed in areas where problematic populations of insects have occurred in previous years.

**Weed Control**

Pre-emergent weed control may be used in perennial flowerbeds and landscaping where pesticide labeling allows. Post-emergent application of herbicides will occur as spot treatments. Mechanical weeding of annual beds and ornamental plantings will be the preferred method of control.

**Disease Management**

Application to control disease on ornamentals will be performed when culture practices have been employed and disease has been found and significant damage is anticipated. Preventative application will only be performed in specific problem areas where disease has been a reoccurring issue.

**Lawn Areas**

Best management practices will be used to maintain the lawn in good health and appearance. Lawn will be mowed to maintain a 3.5” – 4” height on a weekly basis. When possible mowing will occur when the lawn is dry to avoid spreading lawn diseases. Mowing equipment should be maintained with sharp blades to avoid excess damage to the lawn. Soil samples will be collected late fall or early spring on an annual basis to assess soil fertility and ph. Recommended amendments to the soil will be made following the soil analysis to promote plant and soil health. Grass clippings will remain on the lawn to help increase soil organic matter. A thatch layer of ½” – ¾” is beneficial, if excessive thatch buildup occurs, dethatching will occur in spring or late summer when the lawn is actively growing. Fertilizer application will occur April/ May and September/ October when the lawn is actively growing.

**Turf Insects**

Visual inspections will be performed during routine maintenance. In an effort to promote beneficial insects and nematodes, pesticides will only be applied on an as needed basis. Pesticides application will only be in infested areas, the timing of application will be based on the damage, pest life cycle, and when the pest is most vulnerable. Preventive application of pesticides will only be performed in areas where problematic populations of insects have occurred previous years.

**Weed Control**

Application of a broadleaf herbicide will not be performed unless weed species have invaded more than 20% of the entire lawn area. Spot treatment will be performed on an as need basis for small areas. Over seeding will occur in late summer early fall with a tall turf type fescue to promote lawn growth. Proper culture practices will be followed to promote lawn density and health.

**Disease Control**

Application to control disease on lawns will be performed when culture practices have been employed and disease has been found and significant damage is anticipated.