Integrated Pest Management Program Description

1. OVERVIEW AND PRINCIPLES

Effective and environmentally sound land stewardship is a fundamental component of the university's landscape management philosophy. Controlling invasive pests while promoting healthy growth of desirable species helps to fulfill this responsibility by:

- Reducing health dangers caused by insect or disease infestations
- Maintaining indigenous and cultivated/introduced landscape vegetation
- Supporting stakeholder activities, i.e. sports, recreational pastime, aesthetic enjoyment
- Maintaining wildlife habitat

The Buildings and Grounds Services Unit uses an Integrated Pest Management (IPM) Program to promote healthy vegetation and guide pest control activities on lands owned and leased by the University of Alberta. The program follows a "traditional" IPM approach (cultural/biological, mechanical, chemical, legislative) to improve plant health and to prevent and manage pest infestations.

The IPM Program is a decision-making guideline that gathers critical information and utilizes all necessary techniques to suppress pest populations effectively, economically and in an environmentally sound manner that sustains a healthy landscape. The IPM Program strives to reduce reliance on pesticides and to integrate preventative measures and alternative control technologies.

2. PROCEDURES

2.1. Site Analysis and Evaluation

Since prevention is the cornerstone of any IPM program, site-specific prescriptions require analysis and evaluation of the particular site conditions and circumstances. The maintenance of an accurate site inventory, routine monitoring, and routine evaluation of historically successful prescriptions provides information to select prescriptions that address changes in the present and future pest populations. This information is used in reviewing potential options outlined in general prescriptions to help determine the most appropriate treatment methods, tools, materials and timing, that together provide cost-effective and environmentally sound results.

IPM prescriptions are continually subject to review and revision. Technological advancements, field research, registration, and availability of control products, resources, as

well as changes in site conditions impact the long-term success and viability of an IPM prescription.

2.2. Identify and Monitor Pest Problem(s)

For the purposes of this plan, “pests” are any injurious insect, noxious plant or plant disease. When identifying and monitoring a pest problem, three main considerations are important:

- acceptable damage and tolerance levels
- current infestation level, and
- most effective timing for treatment

Once a pest problem has been identified, IPM strategies and prescriptions must be considered.

2.3. Identify, Select, and Apply IPM Strategies and Prescriptions

Pesticide use can be limited or reduced by increasing cultural practices to improve long-term vegetation health that successfully competes with pests.

The University of Alberta will consider these criteria when selecting IPM prescriptions and developing pest management strategies:

- Human health and safety
- Be least disruptive of natural controls
- Minimize negative impacts to non-target organisms
- Be least damaging to the general environment
- Best preserve the natural or management ecosystem
- Most likely produce long-term reductions in pest control requirements
- Be operationally feasible and effective
- Be cost-effective in the short and long term

Strategies

Strategies are a combination of short- and long-term approaches to managing a pest problem. For example, a strategy could be to use direct, manual methods to control weeds in tree wells, while planning to install tree mulch by the end of the season to eliminate the need for further weed control.

Prescriptions

Prescriptions describe the implementation plans for one or more practices. For example, a prescription for turf grass management might include a strong cultural program consisting of increased mowing heights and frequency, fertilizing, irrigating, top dressing, aerating, over seeding, and allowing for regular rest periods to recover from heavy use.

IPM prescriptions may comprise a single strategy or a matrix of different treatments within each strategy. General prescriptions outline a full range of treatments that have shown merit

and may be useful for preventing or managing a pest problem. They do not indicate the precise set of practices, techniques, or materials that will be cost-effective. In the “traditional” IPM Program, the use of chemicals as a control method is always considered as the last resort.

2.4. Evaluation

The final step to ensure a successful IPM Program involves ongoing evaluation of the effectiveness of chosen IPM strategies and prescriptions. Following prescriptions, follow-up inspections are carried out; frequency and timing vary according to the treatments and the site(s) category. Monitoring records and site plans are reviewed to determine any factors that affected the treatment(s).

3. SCOPE

The IPM Program applies to all Landscape Maintenance and Construction staff and contractors who directly or indirectly manage vegetation or pests; or plan, design, renovate or construct landscapes and facilities.

The IPM Program directly guides the management of all university property; it applies to all soft and hard landscaping:

- Informal green space
- Quadrangles
- Plazas
- Courtyards
- Gardens
- Hanging baskets and planters
- Urban forests
- Athletic fields
- Walkways
- Parking areas
- Natural landscape
- Agricultural landscape

Our IPM Program is fundamental to the effective and environmentally sound stewardship of university lands and demonstrates to our stakeholders that the program for pest control is implemented following sound judgment and safe practices.