

Integrated Pest Management Program - IPM Manual for Home & Garden Pests in B.C. - Chapter 14

Integrated Pest Management

IPM Manual for Home and Garden Pests in British Columbia

Chapter 14: Weeds and Vegetation

Learning Objectives

When you have completed this chapter, you should be able to:

1. Describe common weed and vegetation problems in lawns, gardens and yards.
2. List methods to prevent these plants from becoming pests.
3. List preferred and other control measures for these plants.

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Introduction

Weeds are generally vigorous, hardy species, good at taking advantage of growing conditions that might be too poor for more demanding garden plants. Most weedy species are also adapted to grow very rapidly when they get the chance and are the first to colonize bare soils or gaps in turf. Weeds growing in vacant lots, meadows, ditches, and along driveways, provide food and refuge for beneficial insects and bees, prevent soil erosion, stabilize banks, aerate heavy soils, and break up hard-pan layers. Other than mowing to prevent spread of weed seeds, such sites often do not require additional weed control efforts.

It is important for people to know that long-term solutions to weed problems are only achieved through making changes in how the site is managed, planted, or designed. Unless these types of changes are made, the use of herbicides to control weeds leads to further herbicide use because the hardy, fast growing weeds re-colonize the areas left bare by herbicides.

There is a wide variation between people in their tolerance for weeds in lawns, gardens, and around their yards. People should be informed that routine use of herbicides is not necessary to achieve satisfactory control of weeds. It is important to recommend non-toxic controls and preventive methods to reduce the risk of unsafe or

incorrect application of herbicides, including the possibility of damaging desirable plants. A common error made by people who use selective herbicides on lawns is that they assume herbicides used in garden beds will kill only "weeds" and not other plants.

Note: The use of products that combine herbicides and fertilizers is not recommended as this often results in the unnecessary use of herbicides. Broadcast use of herbicides is also not recommended for domestic lawns for the same reason.

**Information in this chapter is intended only as a guide.
Always apply pesticides according to directions on the label.**

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Lawn Weeds (Including Clover, Creeping Buttercup, Dandelion, English Daisy, Plantain and Moss)

Description



Many "weeds" are attractive and useful plants. For example:

- Clover breaks up compacted soil, produces nitrogen and remains green in dry conditions longer than grasses.
- English daisy has pretty white flowers and stays low growing.
- Moss thrives in conditions too shady for turf and doesn't need to be mowed.

Biology

The presence of large numbers of common weeds in lawns indicates problems such as low fertility, compacted soil, poor drainage, excessively dry or waterlogged conditions.

Prevention

- Healthy turf is the best weed control because it forms a tough, resilient carpet that can out-compete most weeds. Maintain healthy lawns by:

Mowing Practices: Mow lawns (except bentgrass) relatively high (6-7 cm), this strengthens turf roots and shades out weeds, mow the grass often with a sharp blade.

Fertility: Leave lawn clippings on lawns to provide nutrients, supplement with slow release turf fertilizers, apply dolomitic lime to maintain soil pH between 6.5 and 7.0.

Watering: Water deeply, but infrequently, to encourage deep roots.

Aeration: In compacted or heavy clay soils, aerate soil mechanically every year or two (for small areas, use a garden fork).

Thatch Control: A layer of thatch up to 1 cm deep is beneficial. Thicker thatch should be removed with a heavy rake or de-thatching equipment. In healthy turf a good population of earthworms will keep thatch to optimum levels.

- When seeding new lawns:
 - Test soil and apply lime, fertilizer, and amendments as required.
 - Clear the soil of weed seeds by allowing two weeks for weeds to germinate, then cultivate to kill the seedling and repeat the process.
 - Choose a seed mix appropriate to the conditions of soil type.
 - Plant shade-tolerant groundcovers, or cover with bark mulch, gravel, stones, or pavers where turf grasses will not thrive, such as in shady, tree-covered, or heavy-traffic areas.
 - Reduce weed sources by cutting back flowering weeds along driveways, fence lines, or waste areas before they go to seed.
 - Avoid moss growth by correcting the conditions that favour it, such as shading, lack of drainage, and poor air circulation.

Preferred Controls

- Manually remove rosettes of dandelion, thistle, and plantain in the spring while the soil is moist, and dig out as much of the taproot as possible.
- Overseed sparse or patchy lawns with suitable turfgrass mixtures in late winter or early spring.
- For moss, spray herbicidal soap products according to label, rake out dead moss, and overseed with shade adapted turfgrass varieties.

Other Measures

- Spot treat weeds with herbicides registered for control of broad-leaved weeds in turf. Formulations containing combinations of herbicides are useful if there are several different types of weeds present in the treatment area.
- When one weed species is the main problem, choose a herbicide specifically for that plant to get the best results. For example for:
 - creeping buttercup use MCPA, or mecoprop.
 - dandelions use 2,4-D or MCPA
 - moss apply ferrous sulphate products according to label
- **Note:** Use of products that combine herbicides and fertilizers is not recommended as this often results in the unnecessary use of herbicides.

Broadcast use of herbicides is also not recommended for domestic lawns for the same reason.

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Weeds of Garden Beds and Miscellaneous Areas (Including Blackberry, Horsetail, Morning Glory, Thistles and Couch Grass)

Damage

- Weeds in growing beds compete with desired plants for water, nutrients, light, and space.
- Weeds in "no-plant" zones, such as cracks in driveways, patios, and paths are unsightly and if left to grow tall, present a tripping hazard and may speed the breakdown of asphalt surfacing.



Prevention

- In perennial beds, grow ground cover plants beneath taller plants and shrubs to compete with weeds.
- Mulch with organic materials (leaves, bark) or gravel to smother weeds and prevent seed germination.
- Use landscape fabric covered with a mulch around permanent plantings, such as shrub beds.

Preferred Controls

- In areas with hot summer weather, "solarize" unplanted soils to bake weed seeds by leaving a clear plastic stretched over moist and recently cultivated soil (with edges tucked firmly in soil) for 1-2 months.
- Hoe, dig, mow weeds, or hand-pull weeds growing within the root zone of cultivated plants.
- Remove weeds with as much root as possible before they go to seed.
- Smother aggressive perennial weeds by cutting them down, covering the area with a thick layer of mulch and/or an impermeable layer of thick plastic or carpeting, and leave it in place for up to 6 months to kill roots.
- Spray annual weeds and weed seedlings with products containing fatty acid herbicide.
- Kill weed seedlings by pouring a thin stream of boiling water along cracks and crevices in pavers and other hard surfaces.

Other Measures

- Use herbicides with short residual effect, such as glyphosate, to prepare ornamental beds before planting.
- For large, established weeds, cut back foliage to the ground; when new shoots regenerate to a length of approximately 15 cm, spray or wipe glyphosate onto the new growth.
- For blackberries, cut plants to the ground in late spring and apply glyphosate on new shoots in late August/early September.
- Apply other herbicides registered for use according to label instructions.

Caution: Most non-selective herbicide products control weeds for a significant amount of time (check label), during which no other plants can be grown either.

Note: Most herbicides cannot be used on weeds around desirable plants because they will also kill the non-target plants.

Note: Although granular herbicides are registered for control of germinating weed seeds around established ornamentals, instructions for use are complex, and must be applied on weed-free, cleanly cultivated soil. This only works for 6-8 weeks.

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STUDY QUESTIONS

Answers are provided [here](#).

1. Describe mowing, fertilizing and watering practices to help prevent weeds in lawns.
2. List three approaches to prevent weeds in perennial beds.

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