

## Weed Control in Lawns

A weed is a plant that grows where it is not wanted, like a dandelion in a lawn (Figure 1). Weeds compete with desired grasses for moisture, nutrients and sunlight. They can also make a lawn look ‘messy’ or unattractive if they are over-abundant or if the weeds have bright flowers or large leaves. Some home owners see the benefits of weeds, including more biodiversity or an added food source for bees. Most lawns can remain attractive and still contain a small number of weeds if good turf management is carried out on a regular basis. With proper weed identification, good cultural practices and occasional use of weed control measures, most lawns can be easily maintained and remain attractive all season long.



**Figure 1.** Dandelion plants growing in a lawn compete with the grass for limited resources.

### Weed Identification

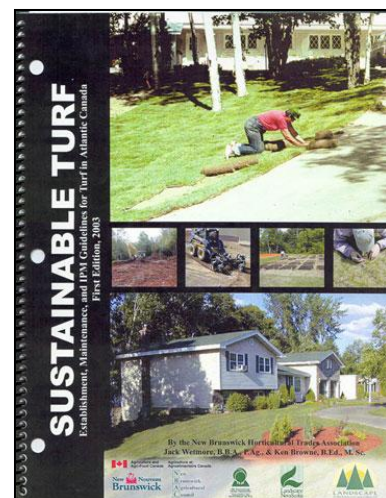
The first step in managing weeds is to properly identify them. Most weeds can be classified as either broadleaf weeds, like [dandelion](#), [white clover](#), and [ground-ivy](#), or as grasses, such as [smooth crabgrass](#) and [quackgrass](#). The [Integrated Pest Management Image Bank](#) is an excellent on-line resource for weed identification. This searchable website provides images of weed, disease, and insect problems common throughout New Brunswick.

Some weeds prefer certain environmental conditions for growth. Knowing these conditions can sometimes help identify an easy method for control. For example, [knotweed](#) and [plantain](#) are generally associated with areas of soil compaction. Sedge and [buttercup](#) prefer wet conditions, while clover is frequently found in nitrogen-poor soil. [Sheep sorrel](#) and [hawkweed](#) generally grow in low pH soils or areas of low fertility.

### Cultural Control of Weeds

The best defence against weeds is healthy turf, as healthy lawns are less susceptible to weed problems. Cultural control practices which focus on improving turf health, will allow the desired grasses to compete better with weeds. An excellent resource for the proper management of all aspects of turf is “Sustainable Turf – Construction, Maintenance, and IPM Guidelines for Atlantic Canada”, available on-line [here](#) (Figure 2). Some examples of cultural control practices focus are outlined below.

**Mowing:** The ideal height at which to mow lawn grass is between 6 and 8 cm (2.5-3 inches). This keeps the soil cool and prevents weeds from germinating. Mowing too close to the ground will result in short



**Figure 2.** Sustainable turf.

roots and a less drought resistant lawn. Letting the grass grow too long, however, will lead to competition and shading within the turf stand. Mowing frequently will help grasses out-compete broadleaf weeds. Do not remove more than one third of the grass blade in a single mowing. Maintain a sharp mowing blade as grass recovers more quickly and easily from a clean cut than when torn. Leave clippings on the lawn after mowing or use a mulching mower.

**Fertility:** Maintain proper soil fertility. Too much or too little fertility can lead to weed issues. It is also important to manage the pH of the soil as most grasses grow better at a pH of 6.5. The addition of lime may be needed to increase soil pH. A soil analysis will determine soil pH, what nutrients are available, what type of fertilizer you may need and how much to use. Information on a soil testing service provided by the Department of Agriculture, Aquaculture and Fisheries is available [here](#).

**Thatch:** Thatch is the spongy material between the grass and the soil layer. The presence of some thatch is acceptable but should not be thicker than 1.3 cm (0.5 inch). When there is a moderate thatch layer microbes will be able to assist with the breakdown of grass clippings and stems and help to conserve soil moisture. Core and/or tine aeration or raking can be used to reduce the amount of thatch.

**Watering:** In general, most lawns require about 1.5-2.5 cm (0.5-1 inch) of water per week, including rainfall. Most healthy lawns will not require additional water beyond regular rainfall. Too much water starves the soil of oxygen and creates conditions that favour the development of disease. Using a rain gauge to properly measure the amount of water received by rainfall or irrigation is encouraged. If watering is necessary, do so in the early morning to prevent turf diseases or loss from evaporation. Also, water less frequently but for longer periods to promote the growth of deep roots. Allow the turf to go dormant in times of extreme drought to conserve water.

**Overseeding:** If the turf is thin, overseed in the spring or fall to thicken it and prevent weed seeds from germinating. If large areas are bare or heavily infested with weeds, it may be advisable to cultivate the area and either re-seed or lay sod.

## ***Mechanical Control of Weeds***

Removing weeds by hand can be practical when numbers are relatively low and plants have distinct tap roots, like dandelion and plantain. Hand weeding is easiest when the soil is moist. Numerous mechanical weeding devices are available to assist with root removal. Ensure you remove the root and dispose of all plant material. Fill the holes created in the turf with a mixture of soil/compost and grass seed to help prevent new weeds from establishing in these areas. For some weeds, like ground-ivy, raking and removal of plant material may help to limit the spread of the plant.

## ***Herbicide Control of Weeds***

Herbicides are products designed to control plant growth. They can be made from conventional (synthetic) or naturally occurring active ingredients, but all can have an effect on the growth of targeted plants. Herbicides are only an effective weed management tools when they are used correctly. It is generally not necessary to apply a blanket herbicide treatment on turf. Broadleaf weeds tend to be localized in small areas, where spot-treatment is effective.

The New Brunswick Department of Environment has revised regulations on how lawn care pesticides are managed in New Brunswick, and implemented a ban on the use and sale of more than 200 Over-the-Counter lawn care products. Homeowners will no longer be able to buy or use products that meet the criteria of the [Over-the-Counter banned list](#). The ban focuses on products

that are commonly misused or overused, thereby adding more pesticides to the environment than are necessary. If you require more information or if you would like to clarify whether a specific pesticide is permitted, please contact the Department of Environment, Stewardship Branch, at 1-800-561-4036, email at [pesticides@gnb.ca](mailto:pesticides@gnb.ca), or at this [website](#).

Homeowners continue to have access to “Over-the-Counter” lawn care products that do not meet the banned criteria. These products are available at most landscaping and home improvement stores. Product active ingredients include acetic acid, fatty acid soaps, glyphosate, iron, sclerotinia, and other biological agents. **Selective herbicides**, like iron and sclerotinia, control broadleaf plants but do not harm grasses (Figure 3). **Non-selective herbicides**, like acetic acid, fatty acid and glyphosate, control the growth of most plants. Grasses will be harmed if they are treated with these non-selective herbicides. Therefore, they should be used very carefully on lawns. It is preferable to use them in areas without grass, like pathways or sidewalks.



**Figure 3.** Effects on weeds three days after the application of a selective herbicide (iron).

Every herbicide has a label explaining the proper use of the product. This label is reviewed and approved by Health Canada. Each label is a legal document that must be followed. Product label information is available [here](#). The label specifies the correct use of the product to reduce health or environmental concerns and ensures that proper pest control occurs. Make sure to use the protective clothing, gloves and other equipment specified on the label. Following label requirements is even more essential when using biological agents, like the fungal product Sarritor, which contains living organisms that require specific environmental conditions to survive. Home-made pest control remedies can often have significant negative impacts and can pose adverse risks to your health and the environment. More information on the risks of using home-made pesticides is available [here](#).

Commercial lawn care companies in New Brunswick that apply herbicides (or any pesticide) must be licensed through the provincial Department of Environment. Lawn care employees must complete mandatory Integrated Pest Management (IPM) training, certification and accreditation. Annual personnel training and company audits ensure that turf care and weed management practices are up to date and responsible. Professional lawn care companies usually offer a full range of services to keep lawns in optimum condition (mowing, fertilization, aeration) and are required to use herbicides responsibly. More information on the requirements for commercial lawn care companies and a list of accredited firms in New Brunswick can be found at the [Plant Health Atlantic website](#).

## Conclusion

Weeds are simply plants that grow where they are not wanted, but they can often cause problems in lawns. Important steps in managing any weed problem include the proper identification of the weed present and then the implementation of good cultural, mechanical, or herbicidal control methods. Further information and assistance for weed control companies and contact information is available through [Plant Health Atlantic](#).