

# Low-Maintenance Lawns —

## Canadian Mortgage and Housing Corporation

Although there is a growing trend towards alternatives, lawns remain the dominant landscape feature of many Canadian homes. Lawns provide open views and a wear-tolerant soft surface for active recreation and they are relatively inexpensive to install.

However, lawns can be a lot of work. You can reduce the time, cost and environmental impacts of lawns by reducing the amount of lawn in your yard, choosing a low-maintenance lawn or doing both. This About Your House tells you about the benefits of low-maintenance lawns and provides tips on how to plant and maintain them.



Figure 1: Close-up comparison of a conventional lawn (left) and a low-maintenance lawn (right)

## What is a Low-Maintenance Lawn?

Conventional lawns are typically made up of a small number of fine turfgrasses, such as Kentucky bluegrass. The grasses are selected primarily for their attractiveness (Figure 1 — left).

To keep them green, homogenous and manicured, many people neatly mow them at least weekly and regularly water, edge, fertilize and treat them for pests (insects, diseases and weeds). All of this can be time-consuming, costly and resource-intensive. Some of these practices can have adverse impacts, including:

- Increased water consumption. Municipal water consumption doubles in the summer, mainly as a result of lawn and garden watering. Excess consumption lowers water tables and reduces stream flows, which affects fish and other aquatic life. It also increases the costs for municipalities to supply and treat water and increases homeowners' water bills. To reduce costs, some municipalities restrict lawn and garden water use when there is little rainfall.
- Increased air and noise pollution. Regular use of electric- or gasoline-powered mowers, trimmers and other equipment discharges air pollutants and creates noise.
- Increased use of pesticides. Many Canadians are voluntarily reducing their use of

pesticides and some Canadian municipalities restrict pesticide use. These trends reflect growing concerns about the potential health and environmental risks of pesticides.

- Increased use of fertilizers. Depending on types used and site conditions, fertilizers can leach into groundwater and enter streams and lakes through stormwater runoff. This has negative consequences for water quality and aquatic life. Over time, fertilizer residue can lower soil quality.

Low-maintenance lawns are made up of a diverse mix of hardy, drought-tolerant, slow-growing and low-height turfgrasses, fescues, and wear-tolerant broadleaf species such as clover (Figure 1 — right). These species require less mowing, fertilizing and watering than conventional lawn species. Upkeep of low-maintenance lawns requires less intensive, low-impact practices as described below (Figure 2).

Low-maintenance lawns typically appear less uniform than conventional lawns. For some people, low-maintenance lawns may mean a shift in thinking — that a less-than-perfect appearance is well worth the savings in time and costs and the environmental benefits.



Figure 2: This low-maintenance lawn is only mowed a couple of times a year and receives no other maintenance inputs. The lawn contains white clover and turfgrass species.

## **Benefits of Low-Maintenance Lawns**

In 1998 and 1999, CMHC studied the time, costs and resources involved in planting and maintaining seven different residential landscape types.

The maintenance activities of 30 residential landscapes in southern Ontario were recorded over the two-year period. In relation to lawns, the study compared the maintenance of five conventional lawns with four low-maintenance ones. Residents with low-maintenance lawns spent 50 per cent less time, 85 per cent less money, and used 50 per cent less fuel, 85 per cent less fertilizer, 100 per cent less water and 100 per cent less pesticides per year than residents with conventional lawns (Figure 3). The study estimated planting costs to be similar, although, depending on the species selected, specialized low-maintenance seed mixes may be slightly more expensive than conventional seed mixes.

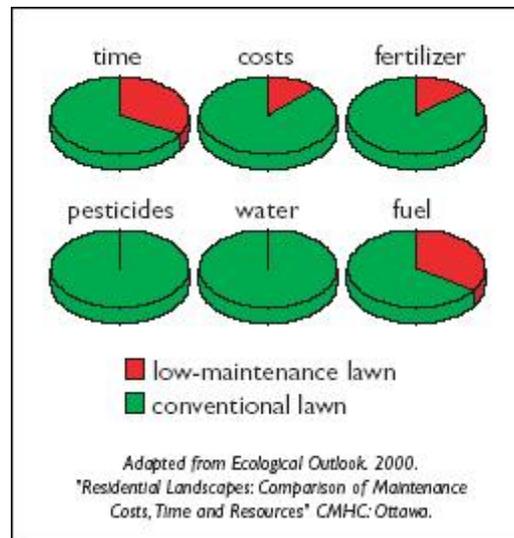


Figure 3: Comparison of maintenance inputs for low-maintenance and conventional lawns

There are three steps involved in creating and maintaining low-maintenance lawns: selecting a suitable species mix, installation and changing to less-intensive maintenance.

## Selecting Suitable Species

Low-maintenance lawns are made up of a mix of species that are typically hardier, better-suited to a wider range of conditions and more drought-tolerant than conventional lawn species. Most are slow-growing or low-height, so they need less mowing. Some, such as fescues, are less prone to insects and other factors that cause stress. Others, such as clovers and trefoils, are able to fix nitrogen, an important plant nutrient, in the soil. A diversity of species also provides some assurance that if one or two species are vulnerable to a specific disease or insect, other species can compensate.

[Table 1](#) lists some species suitable for low-maintenance lawns. For maximum benefit, select a mix of species that are suited to your climate, soil type, soil pH and the amount of shade or sun. (For tips on assessing your soil, see CMHC's About Your House fact sheet [Get to Know Your Soil](#).) A mix of drought-tolerant, warm- and cool-season species will provide some greenery all summer with little, if any, extra watering.

It is best to create a blend of fescues, other grasses and broadleaf species. Suitable broadleaf plants could include clover, trefoils or vetches. There is no specific formula for the best low-maintenance lawn mix, but a general guideline is 40 per cent fescues, 40 per cent other grasses and 20 per cent broadleaf species. You can adjust the percentages based on your own preferences and the intended use. For instance, in areas where there will be a great deal of regular intensive activity, reduce the amount of fescue.

## [View Table 1: Comparison of Some Low-Maintenance Lawn Species](#)

There are a growing number of commercially available, low-maintenance lawn seed mixes. Low-maintenance lawn is also available as commercial grade or specialty sod in some areas. For both sod and pre-packaged seed mixes, the diversity of species tends to be somewhat limited. If needed, you can adjust the mix by adding complementary species.

Note that some low-maintenance and conventional lawn species may be invasive in some parts of Canada (see "[Resources and Further Reading](#)"), but non-invasive alternatives are not yet widely available. If you live next to or close to a natural area, try to prevent the spread of potentially invasive plants by mowing before they go to seed and/or maintaining a border, such as a shrub bed or an edging material, between your lawn and the natural area. To maximize suitability for your region and minimize the possibility of introducing invasive species, ask a reliable supplier of locally sourced native seed for advice about suitable species to include in your mix.

Note that with reduced maintenance practices, some species will naturally colonize your lawn. Many colonizers can become desirable components of a low-maintenance lawn, but some may prove undesirable and will need to be removed. Undesirables include thistle, ragweed, nettle, nightshade, plants that grow tall too quickly to allow for reduced mowing and others that you personally find unsuitable. See the maintenance tips below about [removing weeds](#).

## **Installing a Low-Maintenance Lawn**

Before planting your lawn, assess your needs and the best locations for lawn. Where lawn is not required for specific activities, consider other low-maintenance alternatives, such as woodlands, meadows or groundcover plants. Large, relatively flat areas are better suited and easier to maintain as lawn than are slopes, shady, narrow passages or several small lawn areas. For example, a narrow side yard on which people occasionally walk may be better suited to groundcover plants or low shrubs, with a pathway of stone or crushed brick.

To prepare the site, loosen the top 10 – 15 cm (4 – 6 in.) with a pitchfork or spade. If you select species that are suited to your site, you will need few, if any, soil amendments. Many low-maintenance lawn species are adapted to low-nutrient (infertile) soils and some, such as clover, fix nitrogen. [Table 1](#) gives the characteristics of several species. For some species mixes, or where soils are especially of poor quality, you may need to make some amendments to your soil. For more information on testing and amending your soil see CMHC's About Your House fact sheet [Get to Know Your Soil](#). Spread the material that you have picked to amend your soil uniformly and work it into the soil to a depth of about 10 cm (4 in.). Smooth the surface with a rake, being careful not to compact the soil.

Seeding or sodding is best done as soon as possible after preparing the bed. Delay allows unwanted weeds to migrate to your site and leaves your site at risk of erosion due to the presence of bare soil. Spring or fall are the best times to seed. However, if you seed in spring, your seedlings will face more competition from weeds. Sod can be put down in spring or early to mid-fall. Ask your seed or sod supplier for details about the best time for installation. Although

seeding or planting sod in summer means a lot of extra watering, it may be unavoidable in some cases.

Spread seeds uniformly at the seeding rate recommended by the supplier. If you seed by hand, scatter half the seeds while walking in one direction and the rest while walking in the other. Mixing the seed with sand will help you spread the seed evenly. Incorporate the seeds into the soil with a rake and gently roll the area to ensure good soil-to-seed contact. Some grass seed is very fine and will be crushed by rolling, so avoid rolling if you are working with fine seed. Work the seed in to a maximum depth of 1 cm (3/8 in.). A mechanical seeder spreads and covers the seeds in a single operation. A light mulch, such as straw, helps retain moisture and prevents the seeds from scattering. Loose straw can contain weed seeds and blow in the wind, so use a straw blanket if possible.

If it doesn't rain, water your seeded lawn every day for three to six weeks or until it becomes established. Water deeply enough to moisten the surrounding soil, but water lightly, as too much force will dislodge the seedlings. Avoid walking on the lawn until it is established. If you seed late in the fall, you don't have to water, but you should water in the spring if rainfall is insufficient. Wait until the grass is at least 6 cm (2.5 in.) tall before mowing.

If you are planting low-maintenance sod, your supplier can give you more guidance. Be sure to water immediately after planting sod so water reaches the soil beneath. Keep the sod moist for three weeks or until it is established.

## **Converting an Existing Lawn**

To gradually make an existing lawn a low-maintenance lawn, rake it to expose whatever bare soil you can. Then, if needed, topdress with a suitable material, such as compost, and overseed with low-maintenance species (see [Table 1](#)). Follow the watering instructions noted for seeding in the previous section. Depending on the species already in the lawn, you may have to overseed every year for as long as three years. You can begin to reduce your regular maintenance activities immediately and continue to reduce maintenance as the species composition changes.

For faster results, you can strip off the existing lawn using a sod cutter, garden spade or edging tool, making sure to remove all pieces of root. Another way of killing an existing lawn is to mow it close to the ground and cover it with a thick, black plastic sheet anchored with rocks. Leave the plastic on for at least two months. After removing the plastic, dig the dead grass into the soil. Prepare the bed, and install low-maintenance lawn following the directions for new lawns described above.

## **Maintenance**

These maintenance tips will help you keep your lawn and soil healthy without intensive mowing, watering, fertilizing and pesticide use. These tips also apply to conventional lawns, but they work best with low-maintenance species.

For more information on installing and maintaining lawns, refer to CMHC's [Landscape Guide for Canadian Homes](#).

## **Mowing**

You don't have to mow low-maintenance lawns as often as conventional lawns. Mow to a height of at least 6 to 8 cm (2 ½ to 3 in.). This height helps strengthen the roots, helps retain water and nutrients, and makes the lawn less susceptible to pests. You can leave lawn clippings on the lawn to add nutrients and help retain moisture. If you use a mulching mower, clippings will be finely chopped, which prevents matting and improves air and water movement. A push mower will reduce gasoline or electricity consumption, and be far less noisy than a power mower. Whatever your choice, keep the blades of your mower sharp. Dull blades tear the grass, leaving it open to disease and heat stress.

## **Watering**

For newly planted lawns or where you overseed, keep the soil moist until the new lawn is established as described above under "[Installing a Low-Maintenance Lawn](#)". Once the lawn is established, and if you have selected species well suited to your site's moisture conditions, your lawn should need little, if any, watering. Most low-maintenance lawn species are drought-tolerant. In hot, dry conditions, cool season species go dormant and turn brown. They revive naturally when cooler, moister conditions return. If you have included some warm season and broadleaf species in your mix, there will be some greenery all season. For more water-saving tips, see CMHC's About Your House fact sheet [Water-Saving Tips for Your Lawn and Garden](#).

## **Fertilizing**

Low-maintenance lawns are generally composed of species that require less-fertile conditions. Some species, such as clover, fix nitrogen, which reduces the lawn's fertilizer needs. Clippings left on the lawn also provide nutrients. With reduced use of pesticides, beneficial soil organisms can thrive and further contribute to soil nutrients. All this means that a low-maintenance lawn doesn't need much help with nutrients.

While your low-maintenance lawn is getting established, applying a non-synthetic amendment, such as compost, can help root growth and boost poor soil's health. Beyond that, use soil amendments selectively, only if the lawn has difficulty growing. Refer to CMHC's About Your House fact sheet [Get to Know Your Soil](#) for more details about analysing and amending soil. It is especially important not to over-fertilize a low-maintenance lawn because it can damage some species. Also, the more nutrients you give the lawn, the more you will need to water and mow.

## **Controlling Pests**

Many low-maintenance lawn species are less susceptible to disease and insect damage than conventional lawn species. The diversity of species also helps protect against the possibility of one pest destroying the entire lawn. Using the other maintenance practices described in this About Your House will also help keep your lawn healthy and less susceptible to pests. For

example, keeping the grass at least 6 to 8 cm (2 ½ to 3 in.) high will reduce weed invasions, since the soil is less exposed. It will also make it easier for the lawn to resist the stress of heat and drought. Overseeding bare patches also helps reduce weeds.

Nevertheless, low-maintenance lawns may be subjected to weeds, insects and diseases. Keep an eye out for pests or pest damage and try to identify the pest. Learn about the pest — what it likes or dislikes and when you are most likely to find it. The appearance of a pest does not necessarily mean it will become a problem. Many pests remain contained or disappear naturally. Monitor the pests and treat only if their presence is building up to an unacceptable level. Spot treat problems when and where they arise, instead of treating on a regular basis or blanket-treating your entire lawn whether there is a problem or not.

Select the least harmful, most specific treatment for the pest you are trying to control. This could include manual or cultural controls, for example, pulling weeds by hand or trapping certain insects. Some plants repel pests; others attract natural predators. You can purchase biological controls, such as predators that will help control specific pests without harming other species.

[Table 2](#) gives examples of non-synthetic treatments for two common lawn problems. Consider using a pesticide product only if non-synthetic approaches fail. Again, spot treat only where the problem exists and treat only specific problems as they arise, being careful that the selected pesticide does not damage beneficial organisms, such as ladybugs, green lacewings or birds. Check with your municipality to find out if there are any regulations restricting the use of pesticides. For more information on pest controls, see "[Resources and Further Reading](#)" and CMHC's [Landscape Guide for Canadian Homes](#).

## **Redefining Weeds**

In low-maintenance lawns, some species once considered weeds, such as clover, trefoil and vetch, might actually prove beneficial (see "[Selecting Suitable Species](#)"). Even those that are not as directly beneficial are acceptable when uniformity is no longer required. Establish your own level of tolerance for plants that you are willing to keep and those that you prefer to remove.

In a small lawn, you can remove undesired species by hand or with a small hand tool. Pull weeds when they are immature, before they go to seed. They are easier to pull when the soil is moist. Take care not to overly disturb soils or neighbouring plants. Try to pull out the entire root.

Discussions are underway to reconcile the growing trend towards more diverse lawns and natural plantings with the need to control noxious weeds. If in doubt about the status of a particular plant, contact your local weed inspector.

## **Overseeding, Dethatching and Aerating**

In the first spring or fall after you plant your new lawn, overseed areas where the lawn did not germinate well. Loosen the soil surface with a rake and topdress if needed, adding compost or other amendments. Spread the seeds evenly and work them no deeper than 1 cm (3/8 in.) into the soil. As noted, overseeding for a few years is also one way to establish low-maintenance lawn.

Once established, you may need to overseed your lawn occasionally to help reduce weeds. Keep overseeded areas moist for the first few weeks.

**Thatch** is a layer of partially decomposed grass and leaves that can gradually build up on the soil surface. Some thatch is good because it insulates soil, cushions the grass from foot traffic, helps retain moisture and adds nutrients. But too much thatch can reduce water penetration, block the movement of oxygen and nutrients to the soil and even smother living plants. With a low-maintenance lawn, you will be mowing less frequently, so there will be less build-up of thatch. If your thatch is more than 1.5 cm (5/8 in.) thick, you may need to dethatch. You can rake excess thatch, rent a thatch remover from a garden centre or install a dethatcher on your mower. Removed thatch can be composted.

**Aeration** involves the removal of small plugs of soil and turf. It helps provide oxygen, water and nutrients to the plants and helps prevent soil compaction. Earthworms and other below-ground organisms are nature’s aerators — they constantly stir the soil. A low-maintenance lawn will likely host a healthy community of beneficial organisms, which reduces the need for manual aeration. If there is intensive activity on your lawn, it may occasionally need manual aeration. You can buy or rent manual or gas-powered aerators.

**Table 2: Non-Synthetic Treatments for Two Common Lawn Pests**

Pest	Symptoms	Control Methods
Chinch bug	Causes yellow patches on grass — can cause grass to turn brown and die	<ul style="list-style-type: none"> <li>• If needed, aerate compacted areas and remove excess thatch.</li> <li>• Big-eyed bug, tiny wasp and praying mantis are natural predators of chinch bugs.</li> <li>• Put 30 ml of dishwashing soap in seven litres of water and drench a small area of the lawn. Place a flannel sheet on the treated area and wait 10 – 15 minutes. Chinch bugs will crawl to the surface to escape the soapy water and climb on to the sheet, where they are trapped. Vacuum them or drown them in a bucket of water.</li> </ul>
White grub	Feeds on roots of grass, causing lawns to wilt and turn brown	<ul style="list-style-type: none"> <li>• If needed, aerate compacted areas and remove excess thatch.</li> <li>• Nematodes diluted in water and applied to your lawn in late summer may also be effective.</li> <li>• Larkspur and geraniums may be</li> </ul>

		<p>toxic to the grubs.</p> <ul style="list-style-type: none"> <li>• Choose resistant varieties, such as some fescues.</li> </ul>
<p>Adapted from <i>Pest Notes</i>, Health Canada website  <a href="http://www.hc-sc.gc.ca/cps-spc/pubs/pest/_pnotes/index-eng.php">http://www.hc-sc.gc.ca/cps-spc/pubs/pest/_pnotes/index-eng.php</a></p>		

## Other Alternatives to Conventional Lawns

Along with installing or converting to low-maintenance lawn, you can reduce the amount of lawn in your yard. Steep slopes and small or narrow areas are not the best places for lawn. As far as possible, also avoid introducing lawns in areas that already contain other types of vegetation, such as woodlands. You can replace areas of lawn that you don't use for recreation or other purposes.

Relatively low-maintenance alternatives to lawns include woodland gardens, native shrubs, wildflower meadows or prairies, or low-lying groundcover plants (Figure 4). All of these can also be designed and maintained to minimize maintenance requirements and maximize environmental benefits.



Figure 4: Groundcover plants are a popular low-maintenance alternative to a lawn, particularly in shady locations, such as under trees

## Resources and Further Reading

### Books

CMHC. (2000). [Household Guide to Water Efficiency](#). Ottawa, ON, Canada: CMHC.

CMHC. (2004). [Landscape Guide for Canadian Homes](#). Ottawa, ON, Canada: CMHC.

Ecological Outlook. (2000). *Residential Landscapes: Comparison of Maintenance Costs, Time and Resources*. Ottawa, ON, Canada: CMHC.

Ellis, B. (1997). *Safe & Easy Lawn Care: The Complete Guide to Organic, Low-Maintenance Lawns*. Boston: Houghton Mifflin.

## **Websites**

[Canadian Botanical Conservation Network — Invasive Alien Plants](#) (July 2008)

[Health Canada — Consumer Product Safety: Pest Notes](#) (January 2009)

[Nova Scotia Department of Environment and Labour — Pest Management at Home](#) (July 2008)

[Ontario Ministry of Agriculture, Food and Rural Affairs — Turf in Ontario](#) (July 2008)

[Natural Resources Canada — Plant Hardiness](#) (November 2008)

### Related CMHC Information

- [Get to Know Your Soil](#)
- [Rain Gardens — Improve Stormwater Management in Your Yard](#)
- [Water-Saving Tips for Your Lawn and Garden](#)
- [Landscape Guide for Canadian Homes](#)
- [Household Guide to Water Efficiency](#)