

Sustainable Lawns, Ground covers and Alternatives



Lawns are the ubiquitous suburban (and even urban) landscape. Lawns offer a place to play, a serene landscape and a soft ground cover to walk upon. It's a calming setting for a building, taming the wild and unruly wilderness and managing the relentless growth and inundation of unwanted plants. Many institutions including faith communities, choose lawns as they are a familiar landscaping option with well-understood maintenance requirements.

Benefits to lawn:

- A variety of grasses for different conditions (such as sun and shade).
- The ability of a turf grass to stand up to high-traffic.
- Grasses can go dormant in dry conditions and bounce back.
- Providing an area for outdoor events and activities.

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Over seeding is good. Over watering or over fertilizing is not. When in doubt of what to do for your lawn, adding some seed is a good choice. This is best done in the fall but can also be done in the spring. Take advantage of wet weather and add the seed just before it rains. Include a light top dressing of compost or manure to add nutrients. Rake the seeds to spread them around and wet them down so that they don't blow away. Top dressing also encourages healthy microorganisms in your soil.

When watering, water once a week deeply, rather than every day. Lawn needs about 2.5 cms each week which can be easily measured by putting out

a tuna can and letting it fill up. This deep watering also helps prevent thatch build up. Water early in the morning (from 6:00 to 8:00 am) before it gets too hot. And water any problem areas by hand so that other areas are not over watered.

Leave grass clippings in lawn. This "grasscycling" does not create thatch – just ensure that the grass blades are less than 7.5 cms long. The clippings break down quickly and help feed the lawn so that it requires less fertilizer. This also helps put less demand on municipal yard waste collection.

When you do spread fertilizer ensure that it doesn't get washed into storm drains. Check both the forecast and also any programmed watering schedule so that fertilizer is not spread on the lawn just before a deluge of water washes it away. This will not only save you money but also will safeguard local water systems from receiving high levels of phosphorus and nitrate.

Let your lawn go dormant during droughts and heat waves. Grass has its own way to survive periods where there is a lack of water by going dormant. It can easily revive once it receives water again. Do not try and revive with water in the middle of a heat wave.

Another option to make your lawn more sustainable is to consider adding other grass seeds. Even if you have an established lawn these seeds can be mixed in to make your lawn more resilient. You can even find a good pre-mixed lawn seed for specific conditions. For example, a tougher shade grass mix will include Kentucky Blue, Rye and fine fescues. Use this in higher traffic areas or where you want to have a nice dense lawn. Or choose to mix in a specific seed alternative for difficult areas: extremely high traffic areas, shady areas or acidic soil found under conifers. Some options include:



- **Perennial Ryegrass** is a great addition to a lawn as it is disease-resistant, germinates quickly (in less than a week) and is drought tolerant. It works best mixed with other seeds as it has a tendency to clump.
- **Clover**, while considered unwanted in lawns these days, was an essential part of a lawn seed mix in the past. While not native, consider adding Clover to your grass mix as it is drought tolerant and cuts down on the need for fertilizers and extra compost.
- **Buffalo Grass** is a native species to Canada and is a great addition to sunny lawns. It is a warm season grass, which means it will green up in the spring later than other grasses and go dormant after the first frost but it can tolerate extreme heat and drought.
- **Fine Fescues** are great for the shade. The ones used for lawns do not clump. They also reseed well. If it's part of a mix in your lawn, cut the lawn a bit higher than for a typical lawn (10 – 14 cms high) so as not to injure the fescues as they grow from the meristem approximately 10 cms from the ground, and not the base.

Keep in mind that a healthy lawn requires regular weeding, reseeding, watering, mowing, thatching and aerating. If grass is being used for its aesthetic quality rather than for a specific activity, it might be worth consideration to reduce or replace grass with something that is more sustainable and requires less maintenance and water. Most ornamental (non-native) turf grass has short roots and needs a large quantity of water to stay green. If your lawn is showing some neglect with unwelcome plant species appearing, new grubbing activity by wildlife, or unhealthy bare spots this may also indicate the need to choose a different ground cover.

Replacing, Reducing Lawn

One option when considering an alternative to lawns are various groundcovers. If a native drought-tolerant ground cover is chosen, this can also help with water conservation as a xeriscaped landscape can require up to 70% less water (Bennett, 2006). Lawns have become a monoculture in our cities, providing little diversity

or alternate habitat for wildlife, and have adversely changed the local historic ecosystem. Native plants can bring back some of that diversity and help recreate some of these historic flora communities. They also require less maintenance than their ornamental counterparts.

Ground covers are not necessarily short, quickly spreading plants like Ivy. Small to medium sized plants can be chosen and while they are growing in, mulch can help reduce unwanted invading plants. Or use leaf litter, which is a natural ground cover underneath treed areas. While a “no maintenance” option is rather difficult with most softscaping with plants, native low maintenance options are available that require less watering, less weeding and less other maintenance. However, be aware that the first few years, while plants are becoming established, they will require some extra maintenance.

Some suggestions for replacing lawn:

- **Create a low maintenance lawn under groups of trees.** By using just native fine fescues, which are slow growing, drought tolerant and do not need mowing, this will create a more relaxed look under trees. The grass will provide a uniform cover and lay down almost flat by mid-summer. Create a border from rocks or mulch to make the design look more intentional. Use these in low traffic areas and rake leaves off of the grass in the fall. Have some fun and add some spring ephemerals like Mayapple, Troutlily and Trillium.
- **Replace the lawn in any difficult areas such as edges and back corners.** If you find yourself constantly fertilizing or reseeding or overwatering an area to encourage the grass to grow, consider a different option. Allow edges to grow wilder by seeding with meadow flowers and mix with certain naturalized plants. (*Watch out for invasive ones!*) Or plants some shrubs instead. (*See both the Urban Meadow and Native Trees and Shrubs Fact Sheets.*)
- **Add a low maintenance native xeriscape garden bed in a large sunny spot on your front lawn.** Make the most of the sun by designing a garden with plants that are drought and heat tolerant. Try for a less “designed” look by encouraging drifts, patches and waves. Add some rocks



in a variety of sizes, including one or two well placed sitting stones. (See both the Urban Meadow and Drought Tolerant Landscaping)

- **Create a more natural garden in a small shaded yard.** Remove unwanted grass and add shade-loving native plants including Ferns, Wild Ginger and Solomon's seal. Ferns that tolerate dry shade will allow for a lower maintenance options. To add variety, choose some Goldenrods and native grasses that can be added to a shade garden. Ferns and Goldenrod may need some work to ensure that they do not spread too much once established. A border can be created to help discourage these plants from advancing into other areas. Watch if you are planting under trees such as maples and beeches as they have shallow roots and the plants will end up competing for water. Oaks and other deep rooted trees are better for a fern garden.

There are many great native options which should make it easy to avoid ornamental – non-native species. Besides requiring more maintenance or possibly overwhelming your garden, some are very invasive if they escape into natural areas. Some key ones to avoid include: Periwinkle, Goutweed, English ivy, and Moneywort. If you do have these specific ground covers currently, consider removing and replacing with a native species and be very careful where you dispose of them. Solarizing the full area where the invasive species is, might be the best option if eradication proves difficult. See OIPC's "Grow Me Instead" (listed below) for more information on invasive species.

Native Plants to Consider as Ground Cover:

Blue Eyed Grass (10 – 40 cms high) is a lovely morning flowering iris that can tolerate dry conditions. It likes a bit of shade and looks lovely combined with Tickseed or Prairie Smoke.

Field Pussytoes (up to 30 cms high) is a member of the aster family that likes dry sun. It can form a dense mat of its small spring blooming flowers. Provides habitat for bees, moths and butterflies.

Canada Anemone (30 – 60 cms high) offers both white spring flowers and interesting seed heads and is a great ground cover with its lobed leaves.

This plant is great for both shade and full-sun.

Sweet Cicely (45 – 90 cms high) is a woodland plant that can also be planted in sunny spots. It spreads quickly so creates great ground cover but will need to be thinned annually.

Fireweed (50 cms – 200 cms high) is a plant that likes partial shade to sunny spots and tolerates dry conditions. It quickly spreads by seeds and roots and is an early colonizer in natural areas.

Some Native Shrubs that can be used as Ground Cover:

Shrubby Cinquefoil is a sun loving, drought tolerant shrub that grows up to 90 cms high. Blooms last throughout much of the summer (from June until September) and provide nectar and pollen to bees.

Creeping Juniper is a pleasantly-scented evergreen that is both salt and drought tolerant. It is a low-lying plant with a height of up to 30 cms and is great for sloped areas or areas where grass just won't grow. It may need a bit of weeding however as it spreads above growth with long branches.

Common Bearberry is a native Eastern Ontario evergreen that offers both attractive white-pink flowers and red berries, which many birds enjoy. It is also salt and drought resistant, can grow up to 30 cms high, and be situated in both full sun and part shade.

If your faith community has the space, you can also consider larger shrubs as they take up space and cover the ground. See the Native Trees & Shrubs fact sheet for more information.



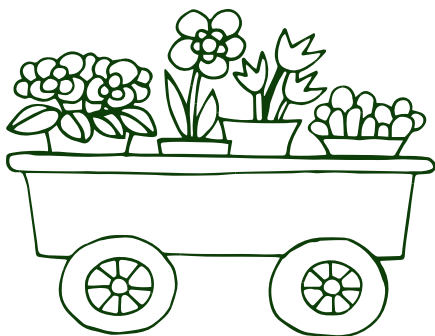


While not native some other drought tolerant and low maintenance plants to consider are:

White Clover – this offers a great alternative to lawn as it can still be mowed but requires less water and no fertilizer. It sprouts in less than two weeks and is also resistant to the chemicals in dog urine that creates brown spots in typical grasses.

Creeping Sedum – while not native to eastern Canada, Sedums can be found out west and in high alpine areas. These plants are drought resistant and can grow in poor soil. They will add texture and colour (from reds to blues to greys) to a yard and provide habitat, pollen and nectar for insects.

Thyme is another favourite drought tolerant ground cover option. There are many varieties of Thyme to choose from, for your garden. Slower growing Thymes are better for small places and to encourage around flagstones. These plants love the sun and the fragrance is an added bonus for both congregants and pollinators.



Permeable Pavement

Permeable pavement is another option to reduce grass. Choose this option for high traffic areas and/or gathering spots. It's a better option than asphalt or cement for areas that do not require winter snow removal, as it allows storm water to sink in at the source rather than runoff and burden stormwater sewers. This type of hardscaping is a low maintenance and low-energy demand option, as it doesn't require watering or mowing or much work at all, but it does not offer the cooling or dust absorbing properties of greenery. A pergola could be added to the space to provide this function or some south facing shrubs could be added if shade is needed.

This type of hardscaping does benefit from a regular sweeping so that no extra soil accumulates which may encourage unwanted plants to take over. Sand should be used to fill cracks if there is no desire to have a filler plant like thyme or moss to weave through the gaps. When watering nearby try not to spray or splash water onto the hardscaping if possible as you do not want to be encouraging any type of growth on patios, walkways and gathering spaces. If there are undesirable plants that do grow on the permeable pavement or in between pavers, it's best to get them as early as possible in the spring so that roots don't develop or seeds spread.

Links / Further Info:

Bennett, Doug - *An in-depth investigation of xeriscape as a water conservation measure*, American Water Works Association Journal, pg 82-93, 2006 publication via The Nature Conservancy

CMHC – *Water-Saving Tips for Your Lawn and Garden*:

www.cmhc-schl.gc.ca/en/co/grho/grho_008.cfm

Ontario Invasive Plant Council – *Grow Me Instead*:

www.ontarioinvasiveplants.ca/resources/grow-me-instead