# LAWN ALTERNATIVES

## Introduction

The word *lawn* and its ancestral forms has had a few meanings since the 14th century; initially it meant untilled land or wasteland, it evolved to signify a woodland glade and then by the 19th century, it had the modern meaning of a flat, usually level area of mown and cultivated grass.

Expansive areas of grass were first used by landscape architects in France in the mid- to late 1600's. The real popularity of lawns started with British upper classes in the 18th century and moved quickly to North America, where, by shortly after the Second World War, lawns had become an obsession. In current times, faced with apparent time management issues, changing climatic conditions and a growing environmental awareness, lawns are becoming a fading fad.

## Lawns: The Pro's and Con's

***Pros***: Lawns cover the ground well, keep the soil intact and reduce soil erosion, and they retain and purify water. They are relatively easy and fairly inexpensive to install, they hold up fairly well to foot traffic and can be played on. A well-kept, well-watered green lawn provides a fire-resistant landscape.

***Cons***:

- Lawns require a great deal of time and effort to keep up their appearances. Maintenance can include watering, weeding, feeding, seeding, mowing, aerating, edging, raking, patching, dethatching, and the unfortunate application of chemicals in the form of fertilizers, herbicides, fungicides, and pesticides instead of the safe management of weeds, disease, and pests. With extensive maintenance also comes a financial factor.
- Lawn watering is one of the top residential water uses. Many North American climate regions, <u>including our own Mediterranean-like region are ill suited to lawns</u>, as drought-like summer conditions require vast amounts of water to maintain the aspired green look.
- The power tools used to maintain lawns (e.g., mowers, blowers and weed-whackers) contribute to noise and air pollution.
- Lawns are prone to infestation by grubs (e.g., Chafer beetle) and can be extensively damaged not only by the grubs but also by ravens, racoons, rats, and other critters digging up the lawn in search of the grubs for a meal.
- Lawns lack diversity, "banal uniformity" and a "monoculture of turf" are apt descriptions.
- Lawns generally contribute little to local ecosystems, supporting only a minimal number of living creatures.
- Lawns tend to be underutilized, often front lawns are never used for rest or play.

## Suggested Lawn Alternatives

Variety is the spice of life, so mix up the *hardscape* (the non-living features) and *softscape* (the plants) as well as different plant styles. Also, consider that you might not be able to replace your entire lawn but reducing its footprint can be beneficial

# LAWN ALTERNATIVES

1. ***Alternative Grasses & Grass-like plants***. *Ecological lawns* ('ecoturf', 'envirolawn'), *ornamental* and *native grasses*, and *sedges* need less maintenance (once established) than the traditional marketed grasses.
    a. ***Ecological lawns***: spread by seed mix on prepared site; needs mowing every now and then to maintain height and keep flowers in check if bees and/or spreading by seed are an issue; reportedly have a lower watering and fertilizing frequency once established than regular lawn grass. Examples (from West Coast Seeds) include; Micro-clover *(e.g.Trifolium repens* var. *Pipolina),* which may need to be mixed with regular lawn seed in high traffic areas, Tall Fescue (Festuca arundinacea), and some blends consisting of mixed clovers, sheep fescue, perennial ryegrass, and low-growing wildflowers.
    b. ***Ornamental* and *native grasses***: purchase and dig in individual plants; these tend to grow as clumps and are not really suited for walking on; use different arrangements and planting densities, for example lower growing plants can be packed more closely to look field-like and taller plants more spaced and toward edges or islands; many prefer full sun but there are grasses that thrive in shade too; there are drought tolerant grasses and those that like some water; may need dividing every few years. *Examples are numerous and some are listed at the end of the text.*
    c. ***Sedges***: like the true grasses these grow in clumps and can be densely or sparsely arranged depending on desired appearance; most like cool, damp to wet shade, although there are heat and drought tolerant varieties; most do not want foot traffic or can only handle very light traffic; may need dividing every few years. There are numerous choices of sedges (*Carex* spp.), including several native to British Columbia.

2. ***Ground covers.*** These include *vines*, *creeping* and *fast-spreading* plants, *succulents*, and *mosses*. The plants grow low to the ground, forming a dense mat that shades the ground so completely that competing species (weeds) cannot germinate. The plants may be allopathic, producing chemical substances that inhibit other species, and are often aromatic.
    a. ***Vines***: most will climb up if given the chance; they may take a year or two to get firmly established; stay away from really aggressive varieties, for example English ivy (*Hedera helix*) a renowned smothering invasive. Some deciduous examples are Climbing hydrangea[b] (*Hydrangea petiolaris*), Virginia creeper[b] (*Parthenocissus quinquefolia*), and Boston ivy[b] (*Parthenocissus tricuspidate*) and Chocolate vine (*Akebia quinate*) is a semi-evergreen twining vine. They like full sun to dappled shade, are drought tolerant once established, don't like wet feet, and most can be cut back hard in winter to control; Virginia creeper has toxic berries.
    b. ***Creepers and fast spreaders***: great for areas that regular lawn grass doesn't grow well and/or is difficult to maintain, such as slopes, under trees where it is shaded and/or dry, and areas that are too hot. There are numerous choices both native and non-native; of these, thyme is likely the most tolerant of foot traffic, but it cannot take daily heavy use. *Some examples of drought tolerant (once established) creepers and spreaders are listed below the text*.
    c. ***Succulents***: these like rocky to sandy, poor soil, full sun to dappled shade, and they despise standing water; they cannot handle foot traffic. Examples include Two-row

stonecrop (*Sedum spurium*), Broad-leaved or spoon-leaved stonecrop (*Sedum spathulifolium*), Lance-leaved stonecrop (*Sedum lanceolatum*), and Hens and chickens (*Sempevernium* sp.).

d. ***Moss***: typically requires deep shade or moist, but not sopping wet, conditions; established moss is somewhat drought and sun tolerant in that it goes dormant until favorable moisture and light conditions return; large quantities may be hard to find, propagate from your property or that of a friend (with permission); do not harvest from the wild; some species tolerate foot traffic and walking on them can help them better adhere to soil. There are dozens of local native species. Scotch moss and Irish moss (*Sagina subluata* and *Arenaria verna)*, which superficially resemble mosses but are actually herbaceous evergreen perennials in the carnation family, can handle a bit more sun, heat, and moderate foot traffic and are available in nurseries.

3. ***Small Perennials & Shrubs.*** Obviously not to walk on, but these can surround trees, form a perimeter around patios and walkways, or an island amidst lower growing ground covers. These can include *edible* and *medicinal* as well as *ornamental* plantings. There are too many possibilities to list, but don't overlook the less traditional plants such as, the succulents and native possibilities, such as ferns, salal (*Gaulthoria shallon*), and Oregon grape (*Mahonia aquifolium*).

4. ***Wildflowers & Meadow Gardens***. Use wildflower seed mixes with caution as they may contain invasive species. To reduce and/or control spread by seed dispersal, mow or cut back after flowering and before seeding. Can be mixed in with 'ecoturf'. For example, wild strawberry, yarrow, coneflowers and asters.

5. ***Hardscape***. This can include *rock and gravel gardens* as well as more constructed features such as *retaining walls, raised beds, containers/planters, paths, patios, decks, terraces, steps, outdoor kitchens, water features, gazebos and driveways*, to name a few. There are countless choices of materials for pathways and patios, but these should be non-toxic and, ideally, permeable so that some water is absorbed into the ground beneath rather than most of the water flowing across the surface. For example, use wood mulches or gravel or leave space between pavers, flat rock, bricks etc. and fill with well-draining material or allow low ground cover plants to spread in between, or use bricks with holes etc.

6. ***Vegetable Garden***. Convert part of lawn to veggie garden (± raised beds). Manage potential wire worms prior to planting root vegetables.

7. ***'Astro-turf'.*** Artificial lawns are a controversial alternative and because of their many negative impacts on the environment and human and animal health they should not be promoted.

# LAWN ALTERNATIVES

## Considerations

1. Weigh the pros and cons of the chosen alternative. "*Right plant, right place*" applies also to lawn alternatives. Is it compatible with the climate, soil conditions, slope, and local wildlife? Is it suitable for the needs of the area in terms of foot traffic, pet use, maintenance level, irrigation, aesthetics, and period of use during the year? Will it establish quickly? Will it require more maintenance than the lawn you remove? What is the financial commitment?

2. Consider using plants that will attract and support pollinators, beneficial insects and birds.

3. Consider *Xeriscape* as a landscaping method; the emphasis is placed on selecting plants for water conservation, not necessarily selecting native plants.

4. Choose a variety of different replacements; avoid replacing one monoculture with another! For example, create a multi-coloured tapestry lawn by combining a variety of low, ground hugging plants such as thyme, chamomile, and yarrow.

5. In urban environments, native plants may not thrive because the conditions are very different than what the former natives were adapted to and introduced species suited to the environment will be a better choice.

6. If considering keeping some lawn while integrating the alternatives remember that lawns work best in areas subjected to *intermediate traffic* such as children's play areas; they are ill-suited for heavy foot traffic and are pointless in areas that are rarely walked on.

7. Comply with local rules (city ordinances etc.) and consult neighbours if making dramatic changes.

8. Incorporate fire-resistance in design and plant choice especially in the 10 metre perimeter around your home and other buildings In this zone, use non-flammable hardscape and well-spaced, lower growing plants that are moisture holding and low in resin or oils.

9. Consider potential allergic reactions in the choice of softscape; flowering groundcovers will attract bees, so not a great choice for children's play areas.

10. Be aware of potentially invasive species; they will grow quickly and fill in spaces that we want covered and then move on to areas that they were not intended for. Be especially careful if you are in an interface area (the region where urban and wild meet). Use edging to help contain prolific spreaders. Plants that spread by seed can be controlled by cutting or mowing flowers before they go to seed. Note that a plant labeled invasive in, for example, California may be perfectly well-behaved in Victoria!

11. Don't forget the old lawn needs to be removed. Removal methods can include; digging manually with a shovel, using a power sod-cutter, tilling, solarizing and, sheet mulching. Each

method has pros and cons to weigh, for example the level of physical exertion required, the logistics and finances of renting equipment, the length of time involved, the ability to remove all of the old grasses and their rhizomes and also discouraging the growth of dormant seeds. For environmental reasons, avoid all and any pesticides, herbicides, and other products that will contaminate, injure or otherwise damage beneficial organisms.

## Example Plant Alternatives

Suggestions listed below for alternative grasses and some of the groundcovers; the list is not exhaustive ([a] sourced from Munts and Mulvihill, [b] sourced from MGIT 2019 Course Handouts)

***Grasses that are drought tolerant once established:***

Native bentgrass[a] (Agrostis pallens),
Blue fescue[a] (*Festuca glauca*)
Blue gamma grass[a] (*Bouteloua gracilis*)
Blue moor grass[a] (*Sesleria caerulea*)
Blue oat grass[a] (*Helictotrichon sempervirens*)
Mexican Feather grass[a] (*Stipa tenuissima)*
Fountain grass[a] (*Pennisetum alopecuroides*)
Little bluestem[a] (*Schizachyrium scoparium*), native North American
Maiden grass[a] (*Miscanthus sinensis*)
Pampas grass (*Cortaderia selloana)*
Pearl millet[a] (*Pennisetum glaucum)*, water early in season
Ravenna grass[a] (*Saccharum ravennae*)

***Grasses that like more water during the dry season:***

Fine fescues[a] (red - Festuca rubra, Chewings - F. rubra subsp. commutata, sheep - F. ovina, hard - F. longifolia) needs weekly watering
Japanese blood grass[a] (*Imperata cylindrica*)
Japanese forest grass[a] (*Hakonechloa macra*)
Mondo grass[a] (*Ophiopogon* spp.)
Northern sea oats[a] (*Chasmanthium latifolium*)
Pink Muhly grass[a] (*Muhlenbergia capillaris*)
Tufted hair grass[a] (*Deschampsia cespitosa*)
Sedge (*Carex* spp)[a] North American native, many varieties, water regularly

***Ground covers, fast-spreaders and creepers that are drought tolerant once established:***

Bellflower[a] (Campanula spp.)
Bugleweed[a] (*Ajuga reptans*), fast spreader
Hardy ice plant[a] (*Delosperma* spp.), water regularly the first year to establish root system
Hardy verbena[a] (*Verbena canadensis*), water regularly the first year to establish root system
Kinnikinnick[a] (*Arctostaphylos uva-ursi*), water until well established, then water sparingly
Snow-in-summer[a] (*Cerastium tomentosum*), can be invasive, control with wide edging
False dittany[b] *(Ballota pseudodictamnus)*
Pigsqueak[b] (*Bergenia cordifolia*), prefers moist but will become drought tolerant
Point Reyes, Point Reyes creeper[b] (*Ceanothus gloriosus*), very tough plant
Bishop's Hat, Barrenwort[b] (*Epimedium* spp. and cultivars)
Mexican fleabane daisy[b] (*Erigeron karvinskianus* 'Profusion')
Winter creeper[b] (*Euonymus fortunei*), will adapt to dry conditions
Creeping Juniper[b] (*Juniperus horizontalis* cvs.)

Creeping raspberry[b] (*Rubus pentalobus* 'Emerald Carpet'), can tolerate some drought
Thyme[b] (*Thymus* cvs.), many different varieties, water until established, then decrease
Blue star creeper (*Isotoma fluviatilis*)[b], approach with caution – spreader??
Sea thrift (Armeria maritima), native to Pacific Northwest
Cotoneaster spp; low growing varieties

## Lawn Alternatives - Sources of Information

**Northwest Gardener's Handbook**: your complete guide: select, plan, plant, maintain, problem-solve; Oregon, Washington, northern California, British Columbia; Pat Munts and Susan Mulvihill, 2014, Cool Springs Press, Minneapolis, 256 pages.

Three books available from the GVPL were very useful:

**Lawn Gone!: l**ow-maintenance, sustainable, attractive alternatives for your yard; Pam Penick (2013), Ten Speed Press, Berkeley, California, 184 pages.
**Planting Design for Dry Gardens:** beautiful, resilient groundcovers for terraces, paved areas, gravel and other alternatives to the lawn; Olivier Filippi (2016), Filbert Press, London, 240 pages.
**The Magical World of Moss Gardening**: Annie Martin (2015), Timber Press, Portland, Oregon, 238 p

**The following internet sources also helped**:

http://plants.gardenworks.ca
https://www.artsnursery.com/blog/drought-tolerant-plants-for-your-garden
https://www.westcoastseeds.com/products
https://guelph.ca/living/house-and-home/lawn-and-garden/groundcovers-lawn-alternatives/
https://carletonlandscaping.ca/articles/the-traditional-lawn-needs-to-go-heres-what-to-try-instead.shtml
https://www.ceedcentre.com/alternative-to-lawn.html
https://www.bcliving.ca/wild-about-native-blackberries
https://www.mgabc.org/node/1277
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**Photograph sources**:

1 https://www.pandotrip.com/city-parks-in-europe-32028/
2 https://www.dumpsters.com/blog/complete-yard-cleanup-guide
3 https://growgreenguideblog.ca/2019/04/trading-the-turf-4-low-maintenance-lawn-alternatives/
4 https://mgabc.org/node/1277
5 https://piedmontmastergardeners.org/article/alternative-lawns/
6 https://www.themasterslawncare.com/blog/3-alternatives-grass-your-gainesville-landscape
7 https://www.rdn.bc.ca/cms/wpattachments/wpID2154atID6889.pdf
8 https://www.vernonmorningstar.com/community/okanagan-waterwise-proper-planting-saves-water/

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MONOCULTURE LAWNS OF EUROPE & NORTH AMERICA



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Tapestry lawn with flowering creeping


Micro-clover lawn


Floral lawn (this example is from the U.K.)


Clump-forming grasses


Spaced perennials


Floral and creeping ground cover