



EVERGREEN
COMMON GROUNDS

Bringing Nature to Our Cities

Common Grounds
Fact Sheet #1

Tips & Techniques for the Natural Garden

Here's a collection of maintenance and gardening tips for those eager to get your garden growing.

Tips for Getting Started

- ✦ Unless you are planning a woodland garden, you will want to find an open sunny space reasonably sheltered from strong winds, with good drainage and access to water.
- ✦ Make sure the soil is suited to the plants you want to grow. Soil testing will determine soil pH and if any soil amendments need to be added.
- ✦ Your group will benefit from having a few tools on hand, including:
 - ✦ spades, shovels, rakes and hoes;
 - ✦ hoses, sprinklers and watering cans;
 - ✦ pruning tools;
 - ✦ wheelbarrows;
 - ✦ plant labels and markers; and
 - ✦ gardening gloves and hand trowels.
- ✦ Learn by doing is the golden rule of gardening. Take advantage of workshops, master gardener hotlines, and don't be afraid of experimenting and trying new things!

did YOU know...

You can test your soil using the "squeeze method." Squeeze a handful of garden soil in your hand—does it hold together? If yes, you've got a soil with good amounts of organic material. Does it break apart and crumble? If yes, add more compost to build up the organic material in your soil.

This fact sheet is part of a series that provides community groups with practical hands-on information for naturalizing parks and other public spaces. The fact sheets are a companion to Evergreen's guidebook, *No Plot is Too Small: A Community's Guide to Restoring Public Landscapes*, which provides the tools to plan, implement and sustain a successful greening project.

The fact sheets in this series include:

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| 1. <i>Tips and Techniques for the Naturalized Garden</i> | 5. <i>Windbreaks, Corridors, Hedgerows and Living Fences</i> |
| 2. <i>Prairie and Meadow Communities</i> | 6. <i>Community Gardening - Themes and Ideas</i> |
| 3. <i>Woodland Communities</i> | 7. <i>Designing Community Spaces</i> |
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Planting

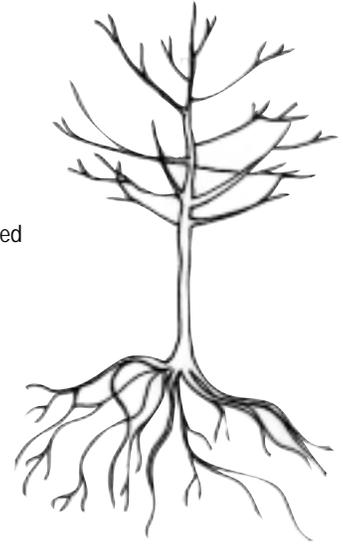
Types of Plant Material

Your group may choose to purchase bare root or potted plants, or collect seed to grow your own.

1. Bare Root

Some trees and shrubs are supplied as bare root plants. Bare root plants are cheaper than potted plants, making them popular for community planting projects. Bare root material should only be planted in the spring and should be planted as soon as they are received on site.

- ✦ Keep the roots moist until planting in the ground, but do not place in a pail of water. Water the roots and then cover with burlap or mulch to retain moisture.
- ✦ Make sure the roots fit comfortably in the hole you dig. Do not stuff the roots into the hole or bend the roots upwards.
- ✦ Pack the soil firmly around the roots and the root collar, making sure all of the roots are fully covered. Have one person hold the plant straight and upright while another packs the soil.



2. Plastic and Fibre Pots

Small to medium-sized trees, shrubs, vines and wildflowers are available in different types and sizes of pots. Potted trees and shrubs are typically hardier than bare root material, but are also more expensive. If planting in the fall, it is advisable to use potted material instead of bare root for a higher survival rate.

- ✦ Dig the planting hole twice as wide as the pot and the same depth as the pot.
- ✦ Water the soil thoroughly before removing the plant from the pot.
- ✦ To remove the plant, tap the bottom of the pot, loosening the soil and roots, and then remove the pot while gently supporting and guiding the stem.
- ✦ Firmly pack the soil around the plant in the hole, covering all roots. Water again.

3. Balled and Burlap

Large deciduous trees and most coniferous trees are typically sold balled and burlap—meaning the root ball, with soil, is wrapped in burlap and tied with twine. These trees are heavy and may require the use of a mechanical tree spade for planting.

- ✦ Dig a hole twice as wide and a few centimetres deeper than the root ball.
- ✦ Remove all twine from the top one-third of the plant and untie the burlap from the trunk.
- ✦ Split the burlap down the sides to allow the roots to quickly spread into the surrounding soil.
- ✦ Place the plant in the centre of the hole. Fill with soil to the earth line on the tree trunk and pack firmly. Water thoroughly.
- ✦ Secure with stakes, if needed.



4. Plugs and Seedlings

Trees, shrubs and wildflowers are available as seedlings or plant plugs. These plants are small and more vulnerable than plants in pots.

- ✦ Remove a patch of sod about three to six centimetres wide and dig a hole three to 10 centimetres deep for each seedling.
- ✦ Plant immediately. Do not shake the soil from the roots or let them dry out. Water well once in the ground.
- ✦ Make sure the area you have planted is well marked so that the plants are visible and protected from trampling.

5. Seeds

Seeds can be purchased from nurseries, seed exchanges or you can collect seed from the wild. If collecting from the wild, make sure you collect from areas where the seed supply is abundant so natural communities are not depleted.

- ✦ Seed in the spring or fall. Spring seeding takes advantage of heavier rainfall and moist soil conditions for germination. Be sure to follow directions for preparing the seed for planting. Fall seeding allows plants to go through a natural dormancy period before germinating the following spring.
- ✦ Rake seeds gently into the soil and water lightly.

Selecting Species

Use plant species that are native to your region and that match the soil and sunlight conditions for your site. Visit nearby natural areas and observe the plants that grow well. Also, look at the types of plants that grow together and try to mimic that pattern when planting your site.

Community vegetable gardens, rooftop gardens and annual and perennial beds may provide some exceptions to using native species. For these cases, here are a few suggestions:

- ✦ Use heritage species when selecting vegetables, annuals and perennials. They are reproduced using open-pollination techniques (no human-modification), which helps to preserve a natural gene pool for future generations.
- ✦ Research the needs of the non-native species to ensure they will not require a lot of maintenance such as watering and fertilizing. If they do, it is likely not a wise choice.
- ✦ Ensure that non-native species are not invasive and will not spread into nearby natural areas.
- ✦ Use non-native species in separate garden areas from your naturalized gardens.

Never remove plants from the wild as this disrupts the natural ecosystem balance. You may, however, want to participate in "plant rescues", using plants from sites that are scheduled for development, or from other naturalization sites that are being thinned.

Invasive Species Management

Invasive species are aggressive non-natives that have been introduced into environments in which they did not evolve. They are also referred to as exotics, aliens, weeds and non-indigenous species. Invasive species spread rapidly, often displacing native species and disrupting natural ecosystems by changing the composition, structure and function of natural plant communities. Here are a few things your group can do to help control invasive species:



Queen Anne's Lace: A common weed.

- ✦ Do not plant exotic, invasive species. Check with your local native plant nursery, municipality or conservation organization to get a list of invasive species in your area. Some species to watch out for include Norway maple (*Acer platanoides*); autumn olive (*Eleagnus umbellata*); common buckthorn (*Rhamnus cathartica*); tartarian honeysuckle (*Lonicera tatarica*); goutweed (*Aegopodium podagraria*); crown vetch (*Coronilla varia*); ivy (*Hedera spp.*); scotch broom (*Cytisus scoparius*); bindweed (*Evolvulus convolvuloides*); Himalayan blackberry (*Rubus discolor*); and holly (*Ilex spp.*).
- ✦ Work with your municipality or local conservation organization to help eradicate invasive species on your site or in adjacent natural areas. Each species may require a different type of management treatment to control its growth (i.e. pulling, mowing, cutting), so it is best to work with an expert.



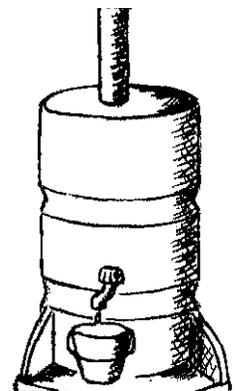
Watering

Getting Plants and Seeds Started

- ✦ Provide frequent and gentle watering to germinate seeds. Once the sprouts emerge, water more deeply, but less often.
- ✦ Allow the soil to just barely dry out once seedlings are established, before the next slow, deep watering.
- ✦ Water trees and shrubs immediately after planting to remove air pockets in the soil.

Water-wise gardening

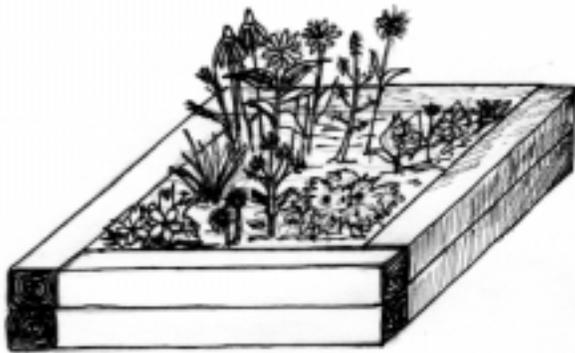
- ✦ Use rain barrels to collect and store rain water for use throughout the summer.
- ✦ Water plants in the early morning when the sun is not at its peak. Watering during midday can burn your plants. Also, remember you are watering the soil, not the plants!
- ✦ Water the soil with a watering can or soaker hose that minimizes water loss. Remember native species do not require as much watering as non-native plants. After they are established you only need to water during long periods of drought.
- ✦ Protect your soil with mulch to help slow evaporation and prevent the soil from overheating and drying out.
- ✦ Try xeriscape gardening—use drought tolerant plants that can withstand long periods without rain.
- ✦ Match species with similar needs together to minimize watering needs.



Weeding

You will need to weed regularly to avoid competition with your plants. Once your plants become established the need for weeding will be reduced.

- ✦ Pull out the entire plant, roots and all.
- ✦ Weed before it produces a seed head to prevent the seeds from spreading.
- ✦ Dispose of young weeds (without seed heads) in your compost. Put mature weeds in a brown paper bag for curbside pick up, if your municipality offers that service.
- ✦ Never dump weeds into a natural area, such as a ravine or adjacent woodland. Dumping grass and weed clippings will restrict sunlight from reaching under-story seedlings and seeds waiting to germinate in the soil bed. This practice also encourages the spread of weed species into natural areas.



Fertilizing

Most native plants do not require fertilizers to grow. However, some plants in container gardens may require additional of soil nutrients. Soil in containers and street planters becomes depleted of existing nutrients over time since there is not a natural cycle for replenishing nutrients. You may need to add nutrients after a month or so, especially with smaller containers. If using fertilizers, always use organic sources such as compost, compost tea, liquid kelp, fish emulsion or worm castings.



Pesticide and Chemical Free Gardening

Typically native plants are less likely to have pest and disease problems since they have evolved over time with the insects and animals that make up that natural plant community. Everything in that web of life has a role and a place. So, the best way to combat bugs and insects is to let nature take its course.



- ✦ Build up a tolerance and understanding of the insects that may inhabit your garden. Not all bugs are bad—in fact many are good and help your garden. Pesticides and chemical sprays kill both the good and the bad bugs in your garden.
- ✦ Learn about the natural predators for those insects. Provide homes for toads, frogs, snakes and birds that will feast on insects in your garden. Invite birds by placing a birdhouse or a birdbath near the garden, encourage snakes with damp rocky areas (hibernaculae) and create a pond or cool sandy shelters (toad abodes) for toads and frogs.

When problems do occur, you can deal with them organically. Use the following techniques for common pests such as aphids, cutworms, earwigs and slugs.

- ✦ Spray the plant's leaves with a mixture of pure liquid soap and water to get rid of aphids. Adding garlic to the mixture may work as well, or try a mixture of cayenne pepper and water.
- ✦ Protect your plants with collars—strips of cardboard or plastic that circle the stem.
- ✦ Trap earwigs in a hollow tube. Earwigs will congregate in the tube overnight so you can easily clean out the trap in the morning.
- ✦ Hand pick slugs off your plants or trap them in a saucer of beer placed in the garden with the rim at soil level. Or, crush eggshells and scatter them around the plants that seem to draw the slugs. Being soft-bodied creatures, the sharp edges will shred their skin.
- ✦ Remove insects such as spider mites and mealybugs from your plants by blasting them with water from the hose.

Composting

Compost can enhance any naturalization project. It is a natural soil fertilizer with built-in time release that adds valuable nutrients to the soil for healthy plant growth. Compost is made up of organic matter (food, leaves) that has been broken down by insects and bacteria to create humus, a rich dark material that looks like soil.

Practical Tips

- Find a spot for your composter that is easy to maintain and close to a hose and your garden, where it will be used. Create a path to your composter to make it more accessible for everyone.
- Start your compost with good organic materials. These can be thought of as "greens" and "browns". Greens include vegetable and fruit peelings, fresh grass clippings, well-rotted manure or compost, garden waste and weeds without seeds. Browns include dried leaves, coffee grounds, wood shavings (free of glues and preservatives), newspaper, cardboard and straw or hay.
- Chop up larger materials to help speed the composting process.
- Do not add meat, fish or bones, fatty foods or dairy products to your compost. These foods will attract rodents. Wire mesh over wooden bins is one way to keep rodents out.
- Keep your compost about as moist as a wrung-out sponge.
- Turn your compost every few weeks. Mixing and aerating the pile helps to speed the composting process.
- Add a layer of garden soil to your compost periodically to ensure helpful organisms like bacteria, fungi, insects and worms stay in your compost. These organisms play a key role in breaking down the organic materials.
- Be patient! Finished compost can take anywhere from six months to a year to produce.



did you know...

Using the right tool to turn your compost pile can make a huge difference in compost time and quality of finished compost material. The "Compost Cane" is specially designed to mix and aerate the compost while it is turned. The compost cane is made and distributed by Jim Lindsay in Orangeville, Ontario.

Compost Troubleshooting

Remember, composting is more of an art than science. The goal is to achieve a balance with nutrient levels, moisture and aeration. Here are a few tips to help build your compost:

- Adding two parts of a green material to one part of a brown material is the best way to achieve the nutrient balance your compost needs.
- If your compost smells like ammonia you have too much nitrogen (greens). Add more browns, such as dry leaves, turn your pile and put soil on top.
- If your pile is not composting you may have a lack of nitrogen. Add more greens such as grass clippings and vegetable scraps. Or, your compost may be too dry—add moisture and turn.
- If your compost smells like rotten eggs, there is poor air circulation. Turn your pile regularly and add dry materials, leaves and grass clippings.
- If the pile gets too wet, mix in more dry materials or leave the lid off for a few sunny days.

VERMICOMPOSTING

For year round indoor composting, try vermicomposting. This is composting with worms, specifically red worms or red wigglers. All you need is a bin with good drainage, ventilation and bedding (such as shredded newspaper) for your worms. The worms will eat the same types of food scraps you put in your composter and can be fed once or twice per week. After three to six months, the vermicomposting process produces fine granular compost called castings, which can be used as fertilizer or soil additive.

Harvesting and Using Your Compost

There really is no finished state for compost. You can use compost when it still has a few recognizable bits of twigs, leaves and straw in it. These will finish decomposing in your garden. Use your compost for:

- Soil Amendment** — Dig five to 10 centimetres per year, in the spring or fall, into your garden before planting. Or, dig a handful or two into the hole you have created for your plants.
- Mulch** —When placed 10 to 15 centimetres deep around your plants compost will retain soil moisture and eventually work into the soil, adding nutrients.
- Compost Tea** — Create compost tea by placing compost in a burlap bag and placing the bag in a barrel of water. Let the tea steep for one week, gently stirring the water every day. Squeeze the burlap bag to extract all the moisture. Use the tea to water your garden or individual plants. The leftover compost can be added to the garden as mulch or placed back in the compost pile.

Mulch

Mulching your site will help prevent the germination of weed seeds, reducing the need for weeding; moderate soil temperature and keep plant roots cool; retain soil moisture and reduce the frequency of watering; protect the soil from crusting and erosion caused by rain and wind; and provide winter protection for sensitive and shallow-rooted plants.

Mulch can be divided into organic and inorganic mulches. Organic mulches, including wood chips, bark, cocoa bean hulls, leaves, leaf-mold, compost and grass clippings help to improve the soil by adding organic matter and nutrients as they decompose. Inorganic mulches, such as crushed stone, plastic and landscape fibre are more decorative and generally used in more permanent locations such as paths. They are not recommended for naturalized areas since they do not add any beneficial nutrients to the soil, can be difficult to install and remove, and can limit the growth of self-seeding wildflowers.

Tips for Applying Mulch

- ✦ Maintain a 7.5-centimetre (three-inch) layer of mulch for fine materials such as shredded leaves or compost.
- ✦ Maintain a 10-centimetre (four-inch) layer of mulch for coarse materials such as wood chips. The wood chips will compact and settle.
- ✦ Plan to add more mulch as it decomposes and works into the soil. Some finer mulch materials may require topping up every fall.
- ✦ Pull the mulch back 7.5 centimetres (three inches) from the main plant stem or trunk to avoid insect or disease problems that could occur if the area around the base of your plant becomes too moist.
- ✦ Use very little mulch, if any, on wet or poorly drained soils. The mulch may keep the soil too wet and could cause root rot or the growth of toxic compounds that injure plants. If mulch is used in wet areas, use a coarse textured one.
- ✦ Add mulch in the spring once the soil has had a chance to warm up. Adding mulch to cool soil will maintain the soil in that state and could damage the roots of your plants.
- ✦ Add winter mulch once plants have gone dormant and temperatures are below freezing. Winter mulch helps to keep plants dormant (not keep them warm!) and protect them against soil fluctuations and frost heaving over the winter.



Hillside Outdoor Education Centre, Scarborough, Ontario

Dividing Perennials

Some perennials (plants that grow each year without replanting) need to be divided every several years in order to bloom to their full potential. Dividing perennials also helps to fill your garden, or allows you to share with the community through plant sales and exchanges. The first step is deciding what can be divided and when. Perennials that grow in big clumps are great for dividing. Divide these plants in the opposite season of their bloom time, for instance black-eyed Susan should be divided in the spring since it blooms in mid-summer and fall. Plants that have just one stem (and main root), such as butterfly milkweed cannot be divided. Instead start new plants from cuttings or seed. For those plants that can be divided follow these steps:



- ✦ Dig an area around the plant, trying to keep the roots intact.
- ✦ Remove the clump from the ground and place on a drop cloth or burlap bag.
- ✦ Place two forks, back-to-back, in the centre of the clump and pry apart the clump into two pieces.
- ✦ Continue dividing the two pieces, making sure each division has a shoot to grow upward and roots to grow downward. Or, divide in larger sections with multiple shoots and roots to maintain bigger plants.
- ✦ Remove any dead or woody parts of the plant and clip back about half of the foliage on the plant. Removing foliage will allow the plant to put all of its energy into growing roots and getting stabilized before developing new foliage next year.
- ✦ Immediately plant the divisions and water each division well. Mulch around your plants and continue to water until the ground freezes.



Where to *go* from here?

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Natural Resources Conservation Service. *Benefits of Mulch*. An electronic article: <http://www.nhq.nrcs.usda.gov/CCS/benmulch.html>.

Virginia Cooperative Extension. *Mulching for a Healthy Landscape*. An electronic article: <http://www.ext.vt.edu/pubs/envirohort/426-724/426-724.html>.

Example projects

- City Farmer's Demonstration Garden, Vancouver, British Columbia: (604) 685-5832
- Douglas College Green Links Project, (plant rescues), British Columbia: (604) 527-5522
- Metro Hall Basement. Composting Program, Toronto, Ontario: (416) 392-4689
- Scadding Court Worm Composting Project, Toronto, Ontario: (416) 392-0335

Organizations

- Compost Council of Canada: www.compost.org
- City Farmer (Compost Hotline), Vancouver, British Columbia: (250) 736-2250
- Peterborough Green-Up, Peterborough, Ontario: www.greenup.on.ca
- Recycling Council of British Columbia, Recycling Hotline: 1-800-667-4321 or (604) R-E-C-Y-C-L-E in the Lower Mainland
- Recycling Council of Ontario, Toronto, Ontario: www.rco.on.ca
- The Compost Cane, Jim Lindsay: (519) 942-2952
- Toronto Community Garden Network, Toronto, Ontario: www.foodshare.net/grow.htm

Published by Evergreen

Evergreen is a national non-profit environmental organization with a mandate to bring nature to our cities through naturalization projects. Evergreen motivates people to create and sustain healthy, natural outdoor spaces and gives them practical working tools to be successful through its three core programs: **Learning Grounds** (transforming school grounds), **Common Grounds** (working on publicly accessible lands) and **Home Grounds** (for the home landscape). We believe that local stewardship creates vibrant neighbourhoods, a healthy natural environment and a sustainable society for all.

Evergreen's Common Grounds Program

Common Grounds brings land-use planners, landscape architects and community members together to restore public land. By supporting community greening initiatives, Common Grounds enriches ecological diversity, fosters healthy, sustainable communities and increases environmental awareness.

Part of the Tool Shed Series

The Tool Shed is an integrated collection of resources designed to inspire, educate and guide students, teachers, planners, community groups and individuals through all stages of a school, community or home naturalization project. The Tool Shed series includes guide books, instructional and inspirational videos, fact sheets, case studies, newsletters, research reports and an on-line registry. For the latest information on Evergreen's Tool Shed resources, check out our website at www.evergreen.ca.

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