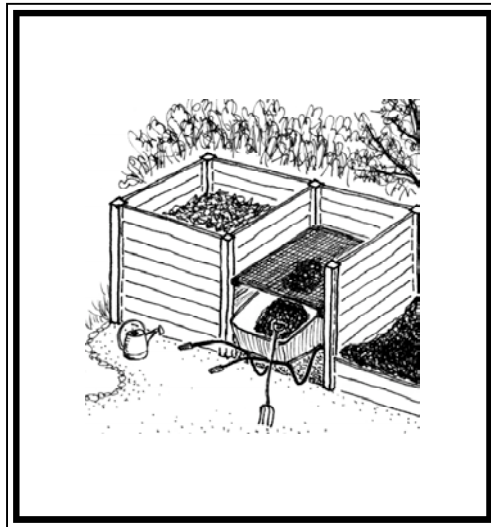


Practical Tips for Organic Gardeners

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SOUL Mission:

"To support our communities in their transition to organic practices".

Our Goals:

- To foster and promote the practice of organic land care.
- To provide opportunities for education in all aspects of organic land care.
- To establish and promote guidelines, standards and specifications for all aspects of organic land care.
- To establish procedures for certification of organic land care practitioners
- To establish and develop a means for the exchange of information and ideas between the public and the organic land care industry.

Please join us - we need your support!

We welcome all landscape professionals and members of the public who support and practice environmentally sound land care

Introduction

Organic gardeners understand that soil is more than dirt: It is an intricate and highly sophisticated ecosystem. The most important elements of healthy soil are not “NPK”, but rather mulch, microbes, and moisture. When we feed the microbes with organic matter and provide them with water, they will create great fertile soil and take care of our plants. This is true for ornamental beds, vegetable gardens, fruit trees, and lawns alike.

Rather than feeding the plants and protecting them against pests and diseases, organic gardeners strive for maximum biodiversity both above ground and below. The result is a beautiful, dynamic balance in which plants thrive. In these gardens, an invasion of pest or disease organisms is unlikely. Growing a wide variety of plants ensures a higher resistance to such damage than would be the case in a garden monoculture. In addition, a wide variety of insects and microbes means that even the populations of pest and disease organisms are held in check by their predators.

How to get started “Seeing Things Differently”

1. Stop poisoning the soil

All pesticides - even the so-called less toxic alternatives - and all synthetic fertilizers cause damage to the soil ecosystem, as well as to the plants themselves. They harm or kill untold numbers of “non-target species”, and result in pest resistance and widespread pollution. While simply stopping their use will not automatically create a healthy organic garden, it is the first step on the way. Inquire with your local municipality about where and how to safely dispose of unwanted leftover poisons.

2. Start feeding the soil-dwelling microbes

Soil-dwelling microbes are bacteria, fungi, and a host of other organisms that feed on organic matter, in turn feeding our plants. The most appropriate microbe foods are plant residues such as leaves, lawn clippings, and plant trimmings. Leaving all these materials to decompose in place is the single most effective, cheapest, and easiest thing you can do.

3. Increase microbial numbers and soil biodiversity

In newly installed landscapes, as well as in gardens that have been managed conventionally for years, microbial populations may be low. If microbes are lacking, they can be reintroduced. Fully finished, aerobic compost is an excellent source of microbes. However, it is not always easy to produce or obtain large enough quantities of such high quality compost. In this case, compost tea is a great alternative. Further options are commercially available mycorrhizal fungi and fermenting microorganisms (“EM”). See the brochure “Products for Organic Gardeners” for details.



How to keep going “Doing Things Differently”

4. Provide food, water, and habitat for all

Mulching is at the base of organic soil management. Its many benefits go beyond suppressing weeds: Quality mulch provides habitat and food for soil dwelling organisms (who in turn feed our plants), it shades and cools the soil, it works to relieve compaction, and to prevent water evaporation and erosion. As mulch is broken down, it improves soil structure and the soil’s capacity to hold air, water, and nutrients, and it helps balance nutrients. Materials suitable for mulching include: Fall leaves, composted garden waste, aged manure, plant trimmings, grass clippings, and straw. Contrary to popular use, bark mulch and wood chips are less suitable. These are better applied to pathways where the objective is not to grow plants but to provide soft and naturalistic footing. Plastics and so-called landscape fabrics interrupt air, water, and nutrient cycling and should never be used in planted areas.

Compost is not only a source of nutrients, but also - and perhaps more importantly - a source of a wide diversity of microbes. In addition, compost can improve the structure of heavy clay soils, as well as improve the water and nutrient holding capacity of light sandy soils. The Greater Victoria Compost Education Centre and other urban environmental education centres have excellent information on how to make and use regular compost and worm compost.

It is important to note that microbes need **water** to perform their function. Microbes, water, and organic matter are inextricably linked in compost and in soil alike. Transformed by microbes into fine humus, organic matter acts like a sponge - it enables the soil to become a water reservoir of its own. In order to thrive, microbes depend on water; in turn, water holding capacity depends on microbes and organic matter. Obviously, watering restrictions are in place for good reason. However, supplementing water judiciously results in higher water holding capacity, so in the long run we can irrigate less.

In order to be of use for the insects and microbes, irrigation water needs to be applied over top of the mulch. It also needs to cover entire planted areas, not just root zones of individual plants. Therefore, avoid drip irrigation and soaker hoses and opt for hand watering or efficient micro-sprayers instead.

In established organic gardens, **fertilizers** play a minor role at best. As all plant nutrients are constantly recycled, there is very little need to supply anything extra. Only during the transition period may it be useful to apply small quantities of supplemental full spectrum fertilizers. These contain a wide array of plant nutrients in very low amounts. They are safe to use without a soil test and can be phased out over time as natural soil fertility increases. See the brochure “Products for Organic Gardeners” for details.

5. Adopt organic gardening practices

“**Chop & Drop**” is the new buzzword! If and when you do clean up spent flowers, perennial stalks, or pull weeds, leave the debris in place to add to the mulch layer. See if you can live with a healthy degree of messiness. To Nature, bare soil deprived of its nourishing mulch blanket is an emergency situation that will be fixed by pioneer plants which we call weeds.

No-dig gardening is another practice coming into widespread use. Every time the soil is dug or tilled, its intricate microbial world is turned upside down. The benefits of digging are short-lived, as it is the long term uninterrupted actions of microbes that create that perfectly loose, crumbly soil.

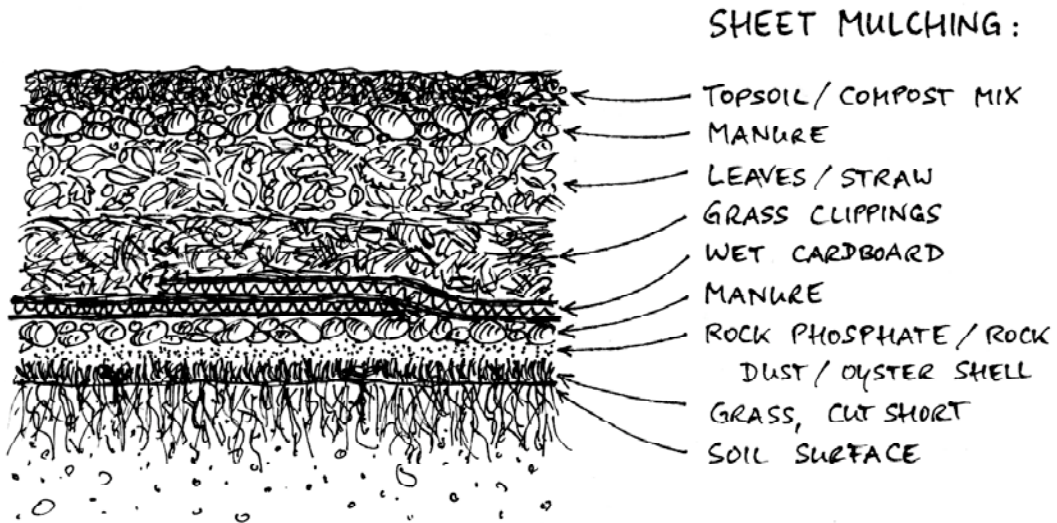
Here is how you can create new beds over grassy areas by **sheet mulching**, a method also called “lasagna gardening”:

- Cut the grass very short and leave the clippings
- Sprinkle a bit of rock phosphate, granite dust, and crushed oyster shells
- Spread a thin layer of manure
- Cover this with a layer of wet corrugated cardboard, making sure the edges are well overlapping

- Then spread one or more thick layers each of grass clippings, and leaves or straw, finishing with another layer of manure – essentially creating a horizontal compost pile
- Finally spread a layer of topsoil and compost to cover the manure and give the bed a pleasing look.

Keep the new bed moist. There is no turning required. The grass dies as the cardboard acts like a decomposable weed barrier, and all the valuable organic matter from the grass and topsoil below remains in place.

Sheet mulching is an easy and inexpensive method to create new beds. All it takes is time. The new beds need to sit and decompose for a few weeks or months before planting, depending on the time of year. Wait about a year before sowing seed into them. The reward for waiting is a more biodiverse soil and a better planting environment.



Sheet mulched beds, like any other garden beds, can be flat, mounded up, or raised above the adjoining ground. **Raised beds** should be edged with rock or untreated wood. Compared to beds on flat ground, raised beds warm up a little faster and may be more comfortable to work with. On the other hand, they might pose a bit of a challenge when it comes to keeping them watered. Raised beds are the perfect solution when used to terrace land on a slope.

6. Organic lawn care in a nutshell

The principles of organic gardening apply to lawns just the same. Success depends on the activity of microorganisms, who work for us, for free, if we simply support their needs. Here are some practical tips for healthy organic lawn care:

- Mow high (around 3”) and always leave the clippings to decompose in place
- Do not cut more than one third of the grass height at any one time; keep mowing equipment very sharp
- Water infrequently but deeply, keeping in mind that shallow watering produces shallow roots and weak plants. Water is also needed by the soil dwelling organisms that feed the lawn and keep it healthy
- Phase out the routine of aerating and de-thatching, as these practices physically harm the grass plants without addressing the underlying cause for compaction and thatch, which is a lack of microorganisms
- Start topdressing the lawn twice a year with finely screened compost, or apply compost tea
- Stop the use of all pesticides, including herbicides and fungicides
- Discontinue the use of synthetic fertilizers and the routine use of dolomite lime. Ordinary marking lime is generally more appropriate, but only an organically interpreted soil test can tell if your soil needs it.

The organic method is easy, cheap, and provides best nutrition. By leaving the clippings and applying compost, you can supply more than enough nutrients for the grass and all the life in the soil to create a healthy lawn. In addition, these nutrients are fully balanced - unlike synthetic fertilizers which contain only a few nutrients in concentrations that reach toxic levels.

Weeds, whether in the lawn or elsewhere, are messengers. Their stories are worth listening to. Many weeds indicate nutrient imbalances in the soil and they are actually working on fixing these imbalances. Weeds are simply better adapted to the growing conditions than the plants we intend to grow. Often our gardening practices have caused the conditions that certain weeds favour. When we work towards correcting these mistakes, the messenger's job is done and the weeds tend to disappear.

If your lawn is located in a very shady spot or does poorly due to the proximity of tall trees, consider growing an ornamental garden instead. There are many beautiful shrubs, perennials, and groundcovers available that will thrive where lawns will not.



Recommended Resources, Books, and Publications

Society for Organic Urban Land Care (SOUL)

www.organiclandcare.org

Gaia College

www.gaiacollege.ca

Soil Testing for Organic Gardeners

by Heide Hermary, SOUL 2008

Products for Organic Gardeners

by Christina Nikolic and Heide Hermary, SOUL 2008

The Essence Of Organic Gardening – Seeing and Doing Things Differently

by Heide Hermary, Gaia College 2008

Organic Soil Fertility Management* and *Organic Weed Management

by Steve Gilman, Northeast Organic Farming Association (NOFA),
Chelsea Green Publishing 2002

Secrets of the Soil

by Peter Tompkins & Christopher Bird, Earthpulse Press, Third Printing 2002

The Non-Toxic Farming Handbook

by Philip A. Wheeler, PhD & Ronald B. Ward, Acres U.S. A. 1998

6 Ways Mushrooms can save the World

www.ted.com/index.php/talks/paul_stamets_on_6_ways_mushrooms_can_save_the_world.html

SOUL Organic Master Gardeners

Make a Difference!
Share your Passion!
Have Fun!

Are you concerned about the effects of environmental toxins in our environment - or on your own family's health? As a SOUL Organic Master Gardener you will learn to do things differently, and to make a difference in your community.

Whether you grow your own fruit and vegetables, or whether your gardens are purely ornamental, you can garden organically - without the use of pesticides and other toxic chemicals.

As a SOUL Organic Master Gardener you can share your knowledge and empower others to learn to do things differently as well.

Yes, you CAN make a difference - in your own life, the lives of your family and friends, and in your community.

For more information about the SOUL Organic Master Gardener Program, and our in-depth training course please visit the SOUL website: www.organiclandcare.org



