Organic Land Care *with*

November, 2004

"Nature shows us only surfaces,
but she is a million fathoms deep."

Ralph Waldo Emerson
(1803 - 1882)

In this Issue:

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Put Some SOUL In Your Garden!

It's new! It's exciting! It's unique! The SOUL Organic Garden Club!

Formed under the umbrella of SOUL its mission is to assist home gardeners with organic gardening practices. As local municipalities develop new pesticide restriction by-laws, and local garden centers remove pesticides from their shelves, confusion and questions are bound to arise. The SOUL Organic Garden Club will provide current information, answers and assistance to its members on organic gardening practices, organic products and alternatives to toxic pesticides.

Garden Club members will enjoy four seasonally relevant general meetings a year in Spring (March), Summer (July), Fall (October), and Winter (January); access to a Mentorship Program, as well as to special events such as field trips, bus outings, guest lectures, open gardens etc. Each club member will receive four issues of the information-packed SOUL quarterly newsletter and automatically gains membership to SOUL.

But mostly gardeners will benefit by putting some SOUL in their garden!

The club's mandate is to promote further understanding, practice and acceptance of organic gardening in the mainstream society. It will affiliate with like-minded organizations and will endorse the organic standards set out by SOUL. It aspires to provide a stronger voice for the organic sector in the mainstream community by attracting media attention and publicity to organic ornamental horticulture and edible landscaping.

If you would like to find out more or receive a membership form contact the Membership Secretary, SOUL Garden Club, 3611 Quadra Street, Victoria, BC V8X 1H5, (250) 382-7399

Is Soil Testing Necessary ? - (Part I)

By Heide Hermary

Heide Hermary is president of Gaia College Inc. She can be reached at heide.hermary@organic-land-care.com

Organic food producers usually test their soil every year to determine the type and amount of soil amendments needed to produce healthy food. Farmers know that adding large amounts of concentrated elements such as lime, nitrogen and phosphorous, and even manure and compost, without knowing that they are actually required, can be very destructive to soil health. And expensive! Simply adding fertilizers "for good measure" is outright irresponsible.

But the scenario in our ornamental landscapes and home gardens is quite different. Here we are not necessarily harvesting and constantly "exploiting" the soil. Instead, all the organic matter generated by the landscape is recycled within the ecosystem. Where necessary, compost and leaf mulch can be added to keep the plants well fed and to provide a moist, warm environment for all the microbes, and conserve water at the same time. Organic gardening can, and should be, really very simple.

Our goal is to have great, fertile soil so our garden will be beautiful and healthy.

What we need to know is whether our soil contains all the "elements", and if not, which are missing.

The 3 most important elements for healthy soil are NOT nitrogen, phosphorous and potassium! They are the **3Ms**, mulch, microbes and moisture:

- **lots of mulch / organic matter**
- **great diversity of microbes and little critters** to break down the plant residue
- **sufficient moisture** to sustain not just the plants, but the soil dwelling organisms as well, without drowning them out.

This is true for ALL soils. The best way to improve clay as well as sandy soil is through the addition of organic matter.

And it only makes sense:

- plant residue contains all the minerals plants require
- plant residue contains a lot of other organic compounds that plants require or enjoy for increased vitality and immunity to pests and diseases
- microbes excrete compounds that bind soil particles and create an abundance of pores that can hold air and water – not just for themselves, but for the plants as well.

Organic fertilizers derived entirely from the remains of living organisms contain an abundance of minerals and other organic compounds. Organic fertilizer blends are formulated to contain these elements in the proportion plants require, and in concentrations that are not harmful to plants. This means they can be applied without great fear of "burning" plants or killing soil organisms. They can be used safely in situations where the organic matter content of the soil is not yet sufficient to sustain healthy plant growth.

On the other hand, mineral fertilizers such as lime, rock phosphate, gypsum etc. contain only a few elements, and in very concentrated form. Why would we ever want to use such potent substances?

In urban environments much of our soil is fill, and it can be just about anything. Under some circumstances it may be useful to supply elements that are not sufficiently available in the existing soil – especially while the landscape is under transition to organic practices.

Next time: The types of soil tests we can do, and what we can – or cannot – learn from them.

Gardening with Native Plants

Red Twig(Red Osier) Dogwood

By Michael Cowan

Michael Cowan is the owner of Edibella Organic Landscapes in Victoria, B.C.
He can be reached at edibella@islandnet.com

This wonderful native plant looks its best at this time of year as the leaves turn from green to orange to red, and the young branches of this deciduous shrub become lances of scarlet light, shooting up from the ground.

To show off the vibrantly colourful stems of Cornus stolonifera (C. sericea) it is best planted against an evergreen backdrop. Rhododendron, Viburnum, Euonymus and Aucuba all enjoy the moist and partially shaded part of your garden where our native dogwood thrives.

In its native habitat this shrub grows in moist soil, typically in swamps and along the banks of streams. In our gardens it is perfect for the marginal area of a pond or that problematic low spot which always seems somewhat wet.

Red twig dogwood derives this common name from the brilliant colour of its current and one year old shoots. As the wood ages it loses its red colour, so to maintain this, it is recommended that the shrub be coppiced* in the late winter or early spring, every other year.

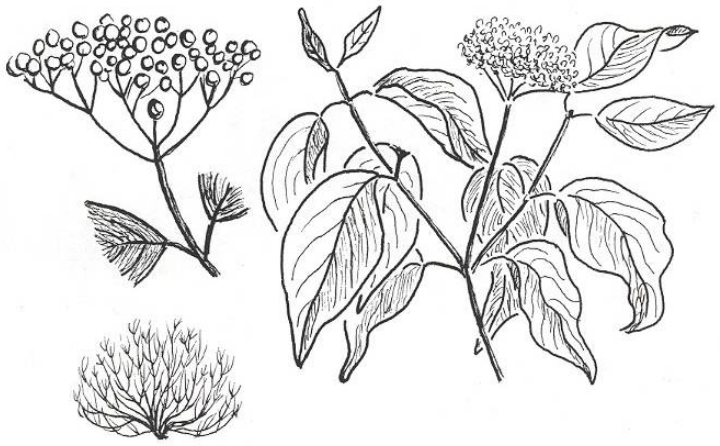

Illustration: Christina Nikolic

This also helps to constrain this fast growing shrub to a size of about 4'- 8', as otherwise it will quickly reach its mature size of 15'x15'.

The fruits are white (occasionally blue tinged), small berry like drupes, which contrast beautifully with the autumn coloured foliage. They are bitter and inedible.

Red osier dogwood is a very important plant in the restoration of riparian habitats of coastal B.C. and Washington state. One year old whips taken in the fall and merely placed upright in the ground to a depth of four to six inches will likely root by spring, and grow from there.

The vibrant red branches make excellent Christmas decorations, and can be easily bent into wreaths. I personally like to shape them into hearts and give them away as Valentine gifts, as February 14th is the perfect time of year here on the coast to coppice deciduous shrubs. There are a number of excellent cultivars which will provide yellow or bright green twigs. The most striking one is Cornus stolonifera 'Flaviramea'.

* Coppicing is the regular pruning back of trees and shrubs close to ground level to stimulate the growth of vigorous shoots.

Keep Your Predators Snug as a Bug

By Jessica Dawe

Jessica is the "Bug Lady". She lives in Errington, B.C.
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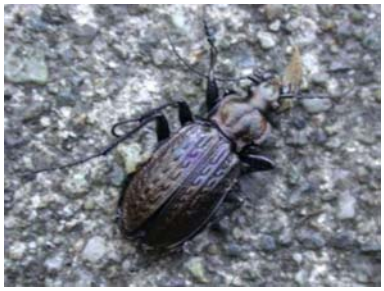
It is the fall and most gardeners have torn out the annuals, pruned down the perennials and put away the gardening tools for the season. It's a good time to think about where your little garden helpers will over-winter.

I am referring to the ladybugs that helped clean up the aphids, the tiny wasps who stung the tent caterpillars, and the ground beetles that feasted on the wicked slugs. Knowing how you can protect them through the winter season will have you prepared with an arsenal of natural pest control.

Most insects tend not to wander far from their place of birth. As a matter of fact it would not take much effort at all to rediscover our gardening buddies very close to the places we left them. The habit of insects is translated to simple terms: sleep where it is warmest and closest to the food. In our fast paced complicated lives this concept of living is far from our reality.

Take for example the ground beetle. These beetles spends their spring and summer days hiding out beneath ground covers avoiding the intensity of the sun on their dark backs. They emerge in the evening to roam, mate and feed, coinciding with the behavior of their prey of slugs, caterpillars and soil grubs. Their methods are effective and efficient, incurring the least amount of unnecessary stress on the beetle. As the winter approaches their habits do not change, they just simply burrow deeper into the insulated soil.



In human terms that would be like us living in the kitchen feeding and sleeping at will. Only to fully awaken in the spring to a replenished environment.

Quite often we disturb the nap of our hard-shelled little friends as we begin our garden preparations for spring. This is a perfect opportunity to admire the beauty of this skilled predator, the cold temperatures having reduced its activity and allowing for a good long look. When finished your observing, always place the beetle back where you found it and cover with a little dirt

Our gardens are virtually cities housing thousands of beneficial insects, their homes disguised as innocuous aging plants. The hollow of the foxglove is an excellent home for the highly predaceous pirate bug. While the thick, cracking bark of a fir tree allows for a ladybug condominium. Many lacewings find their home in the cracks and crevices at the base of your shrubs. The stoic sunflower is a high-rise for the efficient caterpillar killer, the spined soldier bug. Even the simple flowering grasses host hundreds of parasitic wasps preparing for next spring.

Embrace the idea of leaving dead rotting material in the garden! Encouraging the health of your natural predators does not just start in the spring & stop in the fall. Helping them with the right over-wintering habitat doubles the chance that they will return again next year to help out in the garden.

Organic vs. Synthetic Fertilizers

Comparing Apples and Oranges

By Heide Hermary

Heide Hermary is president of Gaia College Inc. She can be reached at heide.hermary@organic-land-care.com

One can easily lose sight of the real issue when debating the pros and cons of organic vs. synthetic fertilizers.

In part it is due to the idiosyncrasy of the Canadian Fertilizers Act which defines a product containing 24% nitrogen, phosphoric acid and potash as a "complete fertilizer".

This misleading terminology just adds to the confusion about the benefits of organic practices and products versus the illusion of providing complete **nutrition** to your plants with the application of three cheap chemicals!

The real issue, of course, is that synthetic chemicals are **not** plant food.

For millions of years plants have prospered without ever receiving a single ounce of ammonium nitrate, or urea formaldehyde, nor a single plastic-coated pellet of Osmocote.

Organic fertilizers are the remains of living organisms: seed meals, seaweed, fish meal, etc. These products contain all the elements required for plant growth, not just 3, or 7…

Unfortunately that 24% clause eliminates many of the best organic products from the fertilizer shelves: composts. Rich in elements they nonetheless cannot match the concentration of NPK contained in synthetic products.

That should tell us something: if nature needed NPK to such high proportions they would exist naturally.

Not surprisingly then these so-called complete synthetic fertilizers create nutrient imbalances in plants – much like us taking too much of one particular vitamin.

Organic fertilizers and soil amendments, on the other hand, provide your plants with well balanced nutrition. Isn't that the point?

"Organic" Demystified

QUESTION:

" How can organic fertilizers be better than regular fertilizers when they have much lower numbers?"

ANSWER:
According to the Canadian Fertilizers Act, every **mixed** fertilizer must show the percentage (by weight) of **total**

Nitrogen (N), **available** Phosphoric acid (P) and **soluble** Potash (K) on the bag (they are always listed in that order: N-P-K.

The act further requires that, except for specialty fertilizers, **mixed** fertilizers **must** contain at least 24% by weight of Nitrogen, available Phosphoric acid, and soluble Potash **combined**.

Finally, each fertilizer must list the percentage of the **elemental** form of any plant nutrients it claims to contain.

This can be really confusing when comparing chemical fertilizers and organic fertilizers, since organic components are not in such an immediately available form.

The nutrients in organic fertilizers need to be first broken down by microbes before they become available to plants.

Hence the numbers for organic fertilizers will be much smaller, even if they contain much larger total amounts, **and** a greater diversity of nutrients!

Putting Your Garden To Bed For The Winter

By Carolyn Herriot

Carolyn Herriot is owner of The Garden Path Organic Plant Nursery in Victoria. She can be reached at thegardenpath@shaw.ca

This is the time of year that most gardeners look forward to with relief. But not so fast! Before you can hit that that cozy chair by the fire there are a few gardening essentials that need to be done. I refer to these last chores of the season as 'putting your garden to bed for the winter'.

Cut back and tidy up your borders now, but be sure to leave lots of coarse debris on the soil surface for over-wintering beneficial insects. The seedheads of grasses, and any fruits and berries should be left to feed the birds in winter. Now's the time to thickly mulch your garden with leaves, compost, well rotted manure or seaweed. The mulch keeps the soil warm for plant roots and insects, and it protects the soil from erosion by our winter rains. As temperatures warm the following year microbes will break down the mulch and turn it into food for your plants, just as they need it!

In the vegetable garden sow fall cover crops such as fall rye, winter wheat, barley or field pea now, to be dug under as a green manure crop in the spring. Mulch frost sensitive plants e.g. Artichokes, beets, carrots for an extra layer of protection.

Protect container plants from root freezing by either moving them closer to the house, under the eaves or a deck, into a sheltered corner, or into a greenhouse or brightly lit garage. To give pot plants an extra layer of protection place one pot inside a bigger one and insulate the layer between with burlap bags or straw or shredded newspapers. And please don't forget to water them during the winter!

Illustration: Christina Nikolic

Wrap frost sensitive plants such as banana trees or tropical palm trees, and mulch half hardy perennials e.g. penstemons, gaura with compost or leaf mulch to add an extra layer of protection.

Dig up begonia tubers & gladioli corms which will not overwinter without rotting, but wait until after the first hard frost to dig up tubers of dahlias and cannas.

Tie up Cypress and Globe Cedar trees so heavy snows won't destroy their shapes, and fasten all climbing plants to their supports to protect against high winds.

Fall is a great time to redesign areas of the garden, as it's the best time to divide perennials, move plants around and add new plants once fall rains start. Now's the time to divide irises and peonies but do not replant them too deep or they will not flower next year.

If you follow these guidelines for putting your garden to bed for the winter you will reap the benefits of a healthier, more disease and pest free garden next year, which means you will spend more time enjoying your garden and fun gardening activities and less dealing with pesky problems.

Urban Permaculture

Home Scale Rain Catchment – Part I

By Geoff Johnson

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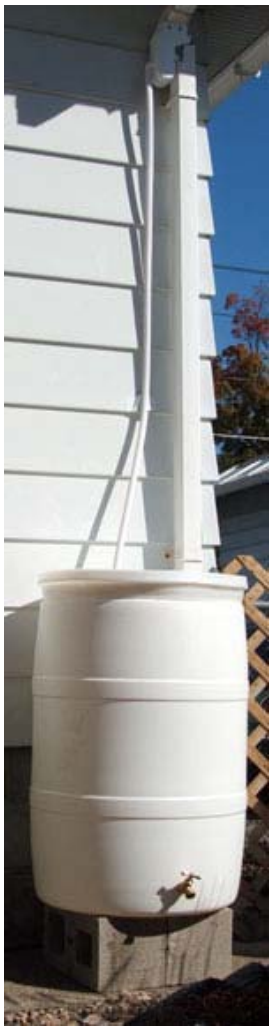

Water can be seen as the lifeblood of the ecosystems we live in, flowing through the earth, the air, and everything that lives. In poorly designed human environments however, clean water is treated as a waste when it becomes most available, and is wasted when there is the least to go round. In addition to conserving water by reducing our needs, we can employ several methods for catching and holding this precious resource in the home landscape. Aside from developing healthy soils, the first place to start is with barrels and tanks.

Roofs are vastly underutilized collectors of high quality water, which your plants far prefer to the cold, chemically treated grid stuff. Rain barrels, which can be easily made out of anything from old garbage cans to large plastic olive containers, can be arranged in tiered fashion on a slope or configured on a level surface.

Unless you have several barrels connected to your downspout, your storage capacity will be quite limited, so you may be wiser to connect them to your washing machine or flush toilet. Unlike the plants in your garden, these consistently need small amounts of water throughout the wet season.

Where other conservation methods are being used (and especially where there is occasional precipitation during the dry season) , rain **tanks** can provide the kind of volume needed to approach self-reliance in dry season irrigation. A 6' wide, 1200-gallon tank will generally cost between $700 - 800 and can be purchased through most agricultural supply stores. Another option is to build a ferro-cement tank by rendering a mixture of sand and Portland cement onto a cylinder of wire mesh atop a concrete foundation (do a web search to find out more about this easy, cheap, but labour intensive technique).

When choosing a location for your tank or barrel, try to place it as high in the landscape as possible to maximize pressure, and always keep overflow in mind. You will always have more run off volume than capacity to store it in barrels or tanks (an average home in Victoria will shed 30,900 gallons yearly!), but by storing it in the earth itself you can make great use of the difference. In my next article, I will discuss the use of ponds and swales to do just this.

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For Gardeners and Land Care Professionals

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Instructor: Heide Hermary, President, Gaia College Inc.

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The information can also be downloaded from the Gaia College web site:
http://www.organic-land-care.com/Gaia_College/programs/lecture_series/index.php

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