



Back to Basics: Holistic Green Thumbs

Imagine biting into a luscious, crunchy, bright orange carrot. Did you pick it out of your garden? Why not? Do you long for tasty, home-grown food, but can't tell the difference between a carrot seed and a lint ball? Are you a self-proclaimed lover of the earth and all things natural, but haven't a clue where to begin in your empty backyard? Not to worry. This article will take you through the basics of gardening - the organic way.

What exactly is **organic gardening**, anyhow?

The Canadian Organic Growers defines organic gardening as follows: "While the elimination of synthetic fertilizers, pesticides, and herbicides is important, **care for the entire ecosystem and most notably the soil is the basis of growing organically**" (3). To embrace the organic gardening philosophy, one must take a holistic approach, examining the mind, body and "soil" of the garden. Start with the most important foundation, the soil.

Get to know your soil and site:

The first step to produce a lovely organic garden is to know what you're dealing with under the ground. In other words, familiarize yourself with your soil type and structure. The major categories of soil are clay, silt and sand. The soil types are based on the size of the particles

and how quickly they drain or retain water. The clay has the least amount of space between particles and the sand has the most space. The ideal ratio according to The Toronto Master Gardeners Organization, is two parts of each sand and silt to one part clay (1).

The second important factor in good soil is the pH level. A neutral pH of 6 or 7 allows most plants to grow, so a soil test is recommended ahead of time. If the soil turns out to be too acidic, add lime or peat moss. If the soil is too alkaline, add sulphur (1).

Once your soil assessment is complete, begin to add organic matter to increase the nutrients of the soil. This will result in better crops!

Enrich your soil:

You can add the following to your soil regularly, but remember the holistic approach. It takes time, perhaps years to improve and build up soil. Plants will still grow, but the steady improvement in the quality of the plants will be seen over years, not weeks. These examples are taken from the Toronto Garden Masters information sheet. For the complete list, visit this link: http://www.toronto.ca/health/pesticides/pdf/gardening_soil.pdf

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What's Your Favorite Cooking or Salad Oil?

Most of us choose cooking and salad oils based on taste. Olive oil tastes great on salad and is perfect for bread-dipping, while rice bran oil has a pleasant buttery flavour. There are, however, several other and important questions to consider when choosing oils, including their nutritional value (for example, are they a source of essential fatty acids or phyto-nutrients?), what the oil can be used for, its smoking point, oxidative stability, and finally, its cost.

One of the most over-looked but most important questions to ask when selecting an oil is how it's extracted and refined? Let's examine these two processes closer to help us decide which methods are the least detrimental to oil quality.

Extraction can be done by mechanical pressing or crushing, solvent, melting or water extraction.(1) Regardless of the method of extraction, some undesired components may remain in the oil that can affect its taste, odor, smoke point and appearance. To counter these effects, oils go through a **refining** process that can take a chemical route or a physical filtered route using fine mesh strainers and filters. Some oils are then bleached using phosphoric acid and a natural adsorbent called 'bleaching earth', which is finely powdered clay. De-acidification and deodorization is then done using steam distillation, and another process called winterization (exposing the oil to low temperatures forming wax crystals that can be separated from oils). **CONTINUE ON PG 2 ...**

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May 2011

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If you've never experienced the joy of accomplishing more than you can imagine, plant a garden.

~Robert Brault

It's difficult to think anything but pleasant thoughts while eating a homegrown tomato. ~Lewis Grizzard



What's Your Favorite Cooking or Salad Oil?

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Some oils are then hydrogenated (1) or partially-hydrogenated, creating dreaded trans-fats.

Some vegetable oils, such as olive oil, have been around for millennia. The humble little olive was a native to Asia Minor and spread from Iran, Syria and Palestine to the rest of the Mediterranean basin 5,000 years ago. Olive oil is traditionally extracted from olives by cold pressing - using no heat or chemicals - and then filtering the oil to remove any sediment. (2) Olive oil labeled "extra virgin" or "virgin" indicates that no further processing has been done after filtering. The best quality olive oil is extra-virgin cold-pressed olive oil, and it carries with it numerous health benefits.

Some plants, such as rice bran, do not release

their oils by pressing, so the oil must be extracted using a solvent or via water extraction. Aqueous (water) extraction results in low oil yields, but is an environmentally cleaner alternative technology for oil extraction. Enzymes are added to increase the amount of oil extracted. Since this process uses only enzymes and water and is performed without chemicals or preservatives, it results in a pure non toxic oil.(3,4)

Chemical extraction generally involves a solvent called hexane, a petroleum derivative. While hexane-based extraction is able to achieve oil yields in excess of 95%, the solvent cannot be completely removed from the oil afterwards. Not only does this raise health concerns, but there are environmental air quality issues and fire hazards associated with this process.(4,5) **CONTINUE ON PG 4 ...**

Take a Walk on the Wild Side

The unmistakable shoots, stalks and berries poking out from the forest floor, hiding amongst the grasses or just hanging around small bushes is a welcome sign that spring has arrived. Whether you're walking in the woods, traipsing through a field, or walking on the

Purslane has a slightly sour and salty taste and is found throughout America, Europe, and Asia from early spring until late summer. It is a member of the spinach family and tastes somewhat like a cross between spinach and beet greens or chard. The stems, leaves and flower buds are edible. One hundred grams of fresh purslane leaves (about 1 cup) contain 300 to 400 mg of alpha-linolenic acid (1),

side of the road, look for Canada's wide variety of wild edibles. They make wonderful, nutrient-rich additions to meals; especially they're harvested from environmentally clean areas.

90 mg of calcium, 561 mg of potassium, and more than 2,000 IUs of vitamin A. Purslane has been studied as a regulator of cholesterol and may help adjust LDL/HDL ratios (2). Add it to smoothies, soups or salads for an extra nutritional punch or try it as a replacement for lettuce in a sandwich. Look for purslane in fields that have not been sprayed.

Purslane Mango Smoothie

1 bunch (or 3 cups) purslane, leaves, stems, and flowers
1 large mango, peeled, pitted, and sliced
1 cup wild salmon berries, raspberries or blueberries
3 cups water



Place all ingredients into a blender and blend until smooth.

Yields: 1 quart (liter) of a pleasant tasting, slightly sweet smoothie.

Fiddleheads

Fiddleheads, also known as the Ostrich fern have yet to be studied to determine their benefit to human health; however, their nutritional breakdown indicates that they contain significantly high amounts of phytonutrients from both the carotenoid and polyphenol families. They also contain plant based Omega 3 and Omega 6, as well as significant amounts of B vitamins and Vitamin C (3), (4). Fiddleheads must be cooked and include a warning from health Canada that it is necessary to do so. Studies have indicated that

while 50% of the vitamin content is lost during cooking (4), they still retain a significant amount. They are also high in fibre (4)(5) even after cooking. Be sure to wash them thoroughly by unfurling them as they are immersed in water. They are found fresh in groceries stores and the forest between mid-April and late May, but they aren't available for long. Frozen packaged fiddleheads are available in specialty stores throughout Canada and the US. Add fiddleheads salads, soups, stir-frys and pasta dishes.

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Fiddlehead Cashew Stir Fry

2 cups fresh or frozen fiddleheads*

1 cup snow peas

1 cup diced carrots (coins)

1 cup fresh bean sprouts

1/2 cup chopped brown mushrooms

1/2 cup raw cashews

1 tbsp. rice bran oil or coconut oil

1 tsp fresh ground ginger root

1 clove garlic

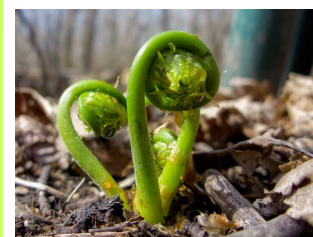
2 tsp tamari soy

Wash and prepare the fiddleheads by removing the fuzzy fronds and cutting off any dry ends. Prepare other vegetables and ginger. Preheat the butter or oil in a wok or sauté pan using medium heat. Stir-fry the fiddleheads for 10-12 minutes (longer for frozen) until they are a vibrant green shade and soft (fully cooked, not crunchy). Cook longer if the fiddleheads are still crunchy. Add carrots, peas, mushrooms, cashews, ginger garlic and soy sauce. Add the bean sprouts last. Cook another 1 to 2 minutes until all the veggies are cooked but not too soft. Serve with brown rice and classical violin music.

***Asparagus** also works well in this recipe as a substitute for or in addition to fiddleheads.

Recipe courtesy of Violinist Rhiannon Schmitt, Salmon Arm, BC, Canada

Video: How to Identify Fiddleheads from the University of Maine





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Good Quality Soil: Mix as thoroughly as possible with existing soil, to a depth of 4–8 inches.

Composted Yard Waste: Spread annually up to 1 kg/m². Works best when there is a balance of “browns” (dead leaves, wood shavings) and “greens” (fresh grass clippings, kitchen waste).

Green Manure: Ground up plant products or cover crops - plants that are seeded, grown and then plowed into the garden soil to provide green manure (nitrogen).

Seaweed: Seaweed applied to plants and soil. It reduces transplant shock, increases frost resistance and improves crop storage.

Mulch: Any organic material that is placed on the soil surface around plants, to preserve moisture and suppress weeds. Leaves, straw, pine bark, pine needles and wood chips are excellent choices.

Adding these items will improve the soil's ability to retain nutrients, support life forms in the ground and improve the overall texture of the soil.

What tools are needed?

So, you've dug around in the dirt and taken a long hard look at your backyard. Now what? As with everything, you need tools. Aside from the usual gloves, sunhat and sunscreen, you'll also need these:

Collinear hoe: An upright tool used for removing small weeds without disturbing the seedlings;

Wheel hoe: This comes with attachments for various jobs including making furrows;

Broad fork: This is used in the spring to break up the soil, relying on leverage and not your back!

Row cover: Used to protect the seedlings until they are more established from wind, pests, etc.

What to plant?

In last month's issue of Nutrition News and Views, you learned about the different types of seeds and their benefits from the article, "Seed Saving" (refer to the April issue). Now, what should you grow? It goes without saying; plant the foods that your family will enjoy eating. This is your own personal restaurant, so make up the menu. For all you first-timers, these vegetables grow easily and mature quickly: Tomatoes, green beans, green onions, lettuce, Swiss chard, radishes, cucumbers and zucchini (2).

Homemade pest spray:

Chop: 2 pounds of ripe tomatoes, 1 large onion, 1 pound of chili peppers, and 2 cloves garlic. Blend. Add 1 cup vinegar and ½ tsp

pepper. Strain. Spray (3).

Companion planting: This process pairs beneficial plants together to reduce pests.

Where to plant?

Vegetables need to be in the full sun for at least 6 to 8 hours a day. This goes back to knowing your site – be aware of where the sun will be and where the shade will be and plant accordingly. Raised beds save space and are a more efficient use of the space in your backyard.

The next step is to plant seeds and tend to them with all your might. As noted earlier, patience is required, and there is no better feeling than when plants start to grow! Refer to the resources in this article and get started today.

Don't have a backyard? Sharing backyards will match homeowners and gardeners alike to share space and crops: <http://sharingbackyards.wordpress.com/>

Find some interesting studies on soil research in Ontario as well as many other excellent resources for organic gardening information at the **Organic Agriculture Centre of Canada:**

http://www.organicagcentre.ca/ResearchDatabase/res_ont_soils.asp

Refer to this excellent guide by **Canadian Organic Growers** on how to test your soil as well as other excellent step by step instructions on how to grow a thriving organic garden:

<http://www.cog.ca/uploads/Organic%20Backyard%20FINAL.pdf>

Easy tips to prepare your soil for next season include (2):

Place leaves in the fall over the garden. The worms will mulch them;

Collect free manure from Sunnybrook Stables 416 444-4044;

Make your own compost. Bins are available from your city to buy.

Click here for the full list

http://www.toronto.ca/livegreen/pdf/org_veg_qrdn.pdf

Important principles:

Since organic gardening relies on the holistic approach, there are some important rules to follow.

Crop rotation: This process breaks the cycle of soil-borne diseases from year to year, promotes soil fertility, and reduces weed pressure. Don't plant crops of the same family in the same place year after year. (3)

Weeds: Compost the areas where you plant - not all around, as this feeds the weeds. Learn about certain plants that keep weeds at bay and observe your garden over time (for example, dandelions are a sign that your soil is too acidic). Weeds decline as your soil health increases.

Pests: Not all bugs are bad. Some are very beneficial (refer to Organic Backyard document listed at the bottom of this article for which ones to encourage). Maintain plant health, as this makes plants more resistance to pests and disease.



What's Your Favorite Cooking or Salad Oil?

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A 2006 study published in Agricultural Engineering International examined different solvents for oil extraction and concluded that:

Hexane, the common solvent for extraction of edible oils from seeds is no more considered safe due to the presence of solvent in oil and also solvent vapour, a hazardous air pollutant. (6)

What is meant by the term "smoke point"? The smoke point refers to the temperature at

which a cooking fat or oil begins to break down. The important thing to remember about cooking with any oil is to avoid heating it past its smoke point (also referred to as smoking point), which marks the beginning of both flavor and nutritional degradation. (7)

For instance, clarified butter (ghee) has a higher smoke point than butter. Fragments of olive in unfiltered olive oil will burn quicker than the oil. Refining generally increases its smoke point.

Take a Walk on the Wild Side

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Wild Asparagus and Wild Rhubarb

You might already be aware that both asparagus and rhubarb are cultivated, but they also grow wild. Rhubarb is not native to North America and landed on both coasts in the mid 18th century, but like many other plants, it escaped the garden and has thrived in the wild. Be sure to look for its clump of greenish-red stalks and dark green leaves and not a

single stock - that's more likely yellow dock, which is also edible but has different uses. Asparagus also came over from Europe in the 1700s and was equally adept at escaping the garden for the wild. Both plants contain oxalic acid, a chemical that has been suspected to play a role in calcium-based kidney stones, though no conclusive evidence exists (read the article on page XX). So enjoy both these wonderful escapees from the gardens should you come across them in the forest or fields.

Salmonberries

Many varieties of wild berries grow throughout Canada and the U.S., including different families of gooseberries, currants, raspberries or variations of the blueberry family. Not all berries are edible, so be sure to check with your local conservation authority to find out the best edible options in your area. Salmon berries, local to British Columbia and the west



Nettle:

Like so many green plants that grow wild, stinging nettle contains significant amounts of vitamins and minerals. A 2004 study found that the plants' phytonutrients exhibit not only antioxidant abilities, but they can also calm inflammation and exhibit anti-ulcer properties (7). Another study from Germany found that nettle inhibited the proliferation of prostate cancer cells both in vitro and in vivo (8). Analysis of



coast including Alaska, Oregon and Washington, vary in colour from light pink to orange. Early settlers looked for salmonberries in the spring as their earliest source of fresh Vitamin C. They are quite sour at first but sweeten as they ripen. Like all berries, salmonberries contain powerful polyphenolic compounds including anthocyanins, but climate and location can affect the amount (6).

the plant has shown it contains the neurotransmitters serotonin and acetylcholine, both helpful for brain function (9). Only the young tender tips are suitable for cooking; the stalks and lower leaves are not edible. Purée nettle for soup or as an accompaniment for vegetables. Finely chopped nettles can also be added to a soft cheese, such as goat cheese or ricotta, and used as a filling for ravioli.

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