

Resources

SEED CATALOGUES

- Salt Spring Seeds - (organic) P.O.Box 444, Ganges Salt Spring Island, BC V8K 2W1 saltspringseeds.com
- West Coast Seed - (organic) 3925 - 64th St RR # 1 Delta, BC V4K 3N2 604-952-8820 westcoastseeds.com
- Stellar Seeds - (heritage, organic) Sorrento, BC V03 2W0 stellarseeds.com
- Stokes - (some untreated, open pollinated, good growing info) Thorold, Ontario - 1-800-396-9238 stokeseeds.com
- Wm Dam Seeds (untreated, some organic) 279 Hwy 8 RR 1 Dundas, ON L9H 5E1 905-628-6641, damseeds.com
- Aurora Farm , Creston BC kootenay.com/~aurora

GARDENING BOOKS

- Coleman, Elliot, The New Organic Grower.Old Bridge Press,1952.
- Coleman, Elliot, Four Season Harvest.Old Bridge Press, 1993
- Hemenway, Toby, Gaia's Garden, a Guide to Home-Scale Permaculture.Chelsea Green Publishing, 2004
- Jeavons, John, How to Grow More Vegetables, Ten Speed Press, 2006
- Bubel, Nancy, The New Seed-Starter's Handbook, Rodale Press, 1986
- Tukey, Paul, The Organic Lawn Care Manual, Storey Publishing, 2006
- Barthelomew, Mel, Square Foot Gardening, Rodale Press, 2003; squarefootgardening.com

COMPOSTING

- Vancouver Compost Hotline 1-604-736-2250
- Compost Council of Canada: www.compost.org
- Canadian worm links: <http://members.shaw.ca/borealwormer> , www.wormwoman.com
- Dog Poo Composter: <http://www.cityfarmer.org/petwaste.html>
- <http://homepage.mac.com/cityfarmer/PhotoAlbum22.html> for a video guide to pet waste composting

OTHER LINKS

- Biodynamics: www.dgsgardening.btinternet.co.uk/biodynamics.htm , www.biodynamics.com
mypage.direct.ca/l/lofstedt/farm/ (biodynamic farm in Kaslo, BC) , www.gardeningbythemoon.com
- Organic seed sources in Canada: www.certifiedorganic.bc.ca/rcbtoa/services/seeds-sources.html
- Seeds of Diversity Canada (heritage seed, members' seed exchange and resources): www.seeds.ca

Notes:



Fernie Community Eco Garden
Workshop Series 2008 - Keeping Food Real

For more information:
ecogarden.ca
ecogarden@fernie.com

Organic Gardening 1

What is Organic?

In horticulture, 'organic' refers to elements within a natural system; products and soil amendments are derived only from plants, animals or minerals. When gardening organically, we consider the impact of our actions on the soil, water and air quality, and on the health of the earth. A successful organic system improves life, both above and below ground.

*Nothing happens
in living nature
that is not in
relation to the
whole...*

John Jeavons

Healthy Soil

Healthy soil creates healthy plants. This is the motto of the sustainable gardener. Sustainable gardening practices allow you to have a positive impact on the environment. One of the essential ways to do this is to protect and enrich the single most important element of your garden, the soil. This is also the way to a natural method of pest control, minimizing disease, and soil management. A complex ecosystem lives within your garden soil, which is filled with a multitude of beneficial microorganisms that help prevent diseases, release mineral nutrients, help plants withstand insect attacks, and create the loose soil structure that crops need to thrive. Conventional gardening practices can easily damage this complex soil ecosystem, burn tender root hairs with fertilizers, and destroy texture by tilling, which disturbs the layered soil web. By focusing on feeding the soil, rather than just the plants, is like putting money into the bank. Soluble chemical fertilizers and pesticides provide plants with a quick fix and short-term benefits. Research has shown that these chemicals also stress plants, kill beneficial insects, pollute ground water, and destroy soil organisms. Without the soil organisms the processes of decay and decomposition no longer can continue, and your garden becomes dependent on chemicals for its source of nutrients. Practicing other sustainable gardening techniques like companion planting, and crop rotation in your garden will nourish the soil, provide long-term benefits, and contribute positively to the environment.

Types of organic gardening

PERMACULTURE is about designing ecological human habitats and food production systems. It is a land use and community building movement which strives for the harmonious integration of human dwellings, microclimates, annual and perennial plants, animals, soils and water into stable, productive communities. The focus is not on these elements, but on the relationships created among them by the way we place them in the landscape.

Bill Mollison wrote, "Permaculture is a philosophy of working with, rather than against nature; of protracted and thoughtful observation rather than protracted and thoughtless labour; of looking at plants and animals in all their functions, rather than treating any area as a single-product system."

BIODYNAMICS is an agricultural method developed from talks by Rudolf Steiner and was one of the first organized organic approaches to farming. The biodynamic farm strives to be a self-sufficient organism and includes three main principles: lunar effects, breathing cycles of the earth, and preparations to enhance the soil for plant health and growth. As a practice, biodynamics heals and balances the land, the individuals that work it, and the community it supports. **Gardening by the moon** is a technique to time various garden activities such as seeding and harvesting by the phases of the moon cycle. This ancient practice is a perfect compliment to organic gardening and Biodynamics.

SQUARE FOOT GARDENING is a method of growing plants in a grid structure instead of in open rows. Soils are kept light with additives such as compost and peat moss, and great economy of space and seed is implemented to produce high yields in a small area. Advantages of this method are conservation of water, time and effort.

BIOINTENSIVE GARDENING, a system developed by John Jeavons, involves eight components to increase yields: 1) double-digging and forming raised beds; 2) composting; 3) intensive planting - placing plants close together; 4) companion planting; 5) carbon farming - using plants which add carbon to compost; 6) calorie farming - growing high calorie, space-efficient foods such as potatoes; 7) using open pollinated seeds; 8) using all components together.

The Ethics of Permaculture

- *care of the earth*
- *care of the people*
- *share the surplus*

Composting

Composting is a natural process through which organic material is converted into a soil-like product called compost or humus that improves soil structure, provides nutrients for plant growth and encourages beneficial soil organisms. Composting lawn and garden waste along with kitchen scraps will decrease the amount going to the landfill.

Home composting can be done with a “build your own” or a commercial unit. It’s important to locate the composter in a sunny area (for warmth) with good drainage, and where it’s convenient. To balance out wet kitchen scraps you will need to have other materials to build the compost. The compost will need occasional turning to provide air to the organisms and it will also need to be kept moist.

- Things to include in your compost bin are: leaves, grass clippings, plants & weeds without seeds, old potting soil, soft plant stems, straw, vegetable trimmings, crushed egg shells, tea bags & coffee grounds, and shredded paper.

- Things to keep out of your compost bin are meat, fish & bones, fats & oils, dairy products, pet waste, packaging.

VERMICOMPOSTING: A good method for turning your kitchen scraps into useful material for the garden is vermiculture. This consists of providing an environment for a special species of small red worms to eat and process organic waste into a nutrient-rich fertilizer, or castings. The worms can be kept in a wooden or plastic tub with moist shredded paper for bedding. A worm bin kept indoors is accessible throughout the winter. Worms can be fed cooked or raw food, most fruits, vegetables, eggshells, cereals and grains, and tea bags. As in outdoor composting meat, dairy, and oily foods are not good additions. Vermiculture does not take a great deal of time, and can be an interesting family activity.

DOG POO COMPOSTING: Dog poo can be safely and efficiently disposed of in your backyard. Select a site at least 100 feet from any water sources, as well as away from gardens and tree roots. A container which provides good drainage, such as an old garbage can or pail with the bottom cut out and holes drilled in the sides, is buried to ground level and covered. The system is initiated with septic tank starter to promote natural bacterial growth, is given water regularly along with the dog poo. Most of the material is liquefied and washed away; the remaining humus can be collected once every year or so.

Managed properly, all these composting systems will be safe, odour-free and provide good materials for your gardens year after year.

Planning your Garden

If you are new to gardening, remember that what you learn this year will make gardening easier in years to come. Developing plans and keeping good records every year will pay off with well-organized, productive gardens. From planning exactly what you want to grow, to mapping out where each plant will grow and when it will be planted, your overall plan will span the entire year. Your most valuable tools for planning will be a garden journal, either on paper or on-line, a list of seed and plant sources, graph paper for mapping your garden, a pencil and a big eraser.

PLANNING & PLANTING METHODS

- Bed construction - raised beds, grids, as in square-foot gardening, rows, containers, or a combination of all these;

- Interplanting - arranging plants with different habits and needs (space, light, root depth, etc.) closely together in an area;

- Companion planting - capitalizing on the mutual benefits plants can provide each other, such as deterring pests or transporting and storing nutrients;

- Polyculture planting - combining crops that minimize competition for sun and nutrients, thus developing a natural plant community;

- Succession planting - timing planting to have late season crops follow early season crops in the same space;

- Crop rotation - changing plant locations each year to reduce disease, and introducing cover crops for ‘green manure’ between planting times.

The Three Sisters

The ancient polyculture of corn, beans and squash: corn stalks form a trellis for bean vines to climb; beans draw nitrogen from the air and convert it to a plant-available form in the soil. The broad leaves of the squash form a living parasol to keep the soil cool, moist and weed-free.

Choosing seeds and plants

When choosing seeds, be sure to check the number of ‘days to maturity’ on the seed packet or research on-line. This will help you judge whether the seeds will have time to grow in our shorter season. A problem that many newer gardeners have is to try too many new plants at once, or to plant too much or seed too thickly. Many types of seed from half-used packets will stay viable for several years if stored in a cool, dry place.

Selecting seed companies that sell Canadian, heritage and organic seeds support growers that care for the soils, and work to preserve seed stock diversity. For the same reasons, buying healthy bedding plants and nursery stock from organic growers or nurseries with knowledgeable staff is advisable.

Starting plants indoors

Gardeners in northern climes use a variety of means to cope with the brevity of their growing season. When the last frost might arrive in early June, seed planting must be delayed. With some quick-growing plants, this isn’t too much of a problem, but many vegetables and ornamentals will benefit greatly from a little head start. Some vegetables, such as salad greens, peas, and the root crops, will do better if you sow seeds directly in the garden at the end of May. Plants which need a longer growing season and don’t mind the extra handling involved in transplanting include the blossom fruits (tomatoes, peppers, cucumbers, squash) and the cole crops (broccoli, kale, cabbage etc.). If you’re planning annual flowers, starting seeds indoors will result in earlier blooms in your garden.

For new gardeners, starting only a few varieties indoors is a good idea. Growing larger numbers of plants indoors requires space, proper growing conditions such as light and temperature control, and attention for the seedlings to thrive. The advantage, however, is access to the great variety of plants you can start from seed compared to nursery-grown bedding plant stock, and of course the simple joy of growing plants while the snow is still on your garden!

Learning to produce our own food is essential if we are to ever truly take control of our own lives.

Types of seeds

HYBRID SEED: A hybrid is created by crossing two unique parents. Crossing involves taking the pollen from the male and transferring it to the female. The first generation of offspring from this cross all look and act the same. They also show what’s known as hybrid vigour: they come out stronger than their parents. But you can’t plant their seed in order to raise these plants the following year. The seed collected from a hybrid plant will either resemble one of the parents or be sterile. In most seed catalogues, hybrid seed is indicated by the term ‘F1’ or ‘F2’ after the name.

OPEN POLLINATED SEED: Some seed catalogues state which seed is open pollinated, or OP. If you grow their seed next year, you will pretty much get the same plant you had the previous year. This is a great, cost-effective way for you to select plants that do well in your garden. Open pollinated plants are dynamic; that is, they mutate and adapt to the local ecosystem as opposed to modern hybrids, which are static.

HERITAGE or HEIRLOOM SEED: There are over 40,000 cultivars of garden vegetables in North America, but most of these are extremely rare and almost unknown. Fewer than one-quarter are available commercially today. Heirloom vegetables are a rich resource of valuable traits but they are in jeopardy of extinction. Adopt an heirloom today! Propagate it and pass it on to another gardener!

ORGANIC SEED: Growers who sell certified organic plants and vegetables must produce or purchase their seed from certified organic suppliers; thus organic seed is from organically grown plants. The diversity of organic seed stock is growing rapidly as increasing numbers of food producers are switching to organic methods.

GENETICALLY ENGINEERED SEED: Scientists can now bypass the traditional breeding methods of manipulating plant characteristics. Rather than cross-breeding plants, they can work directly with plant DNA —the genetic code containing the blueprint for all characteristics. Scientists can now take pieces of this code with the qualities they want and insert them into any cell. Drawbacks to genetically engineering seeds include: 1) Too many unforeseen reactions to make this a safe method of breeding; 2) There is an assumption that once a gene is transferred, it will stay where it is. This has been disproved in many cases where “weedy” relatives have picked up characteristics from stray pollen.