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Toronto Botanical Garden

Toronto Botanical Garden is a volunteer-based, charitable organization whose purpose is to inspire passion, respect and understanding of gardening, horticulture, the natural landscape and a healthy environment.

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Potager Vegetable Gardening

Description

This fact sheet provides an introduction to designing and planting a potager where the practical vegetable garden and the decorative garden come together.

What is a Potager? Potager, the French word for soup, is used to describe kitchen gardens where vegetables, fruits, herbs and edible flowers are planted in symmetrically arranged plots of geometric patterns.

Groundwork

Step One: Identify the site. Consider the available hours of sunlight and protection from the wind. House or garage walls, hedges or fences can create a micro-climate for healthy, vigorous plant growth. Choose a sunny, well-drained site and test the existing soil to determine pH level (vegetables require a pH of 6.0-7.0 for optimum growth) and the need for soil amendment. Remember that this is a decorative garden and an ideal condition for chosen plants is preferable. If possible, locate it where you can view it from several different spots in your garden or home.

Step two: Develop the design. The classic potager is made up of small rectangular, square or triangular plots divided by brick or stone paths and bordered by clipped hedges. Any simple, repeating pattern is appropriate. Consider whether you want a formal, high maintenance garden with well-defined beds and gravel paths or an informal garden with mulched paths and plots with soft edges of spreading plants. Try to incorporate vertical design elements. These can be temporary and/or permanent in the form of small fruit trees (at

the edge of the garden), bean teepees, arbours or trellises. Introduce a distinctive entrance in the form of a gate, arbour or a pair of planters.

Step three: Determine the varieties of plants you wish to grow and their location. Special attention should be given to variety of colour, form and texture (e.g. Mix leaf forms - tall green leek leaves with fluted burgundy beet leaves), placement in each plot and mature size. Low growing plants are best for edging, while tall fruit trees can be espaliered on a wall. Consider designing each plot as a colour block.

Harvest time is also an important consideration. Early and late season plants should be intermingled to avoid bare patches in the plots. Plants that can be replanted should be part of the overall-planting scheme. In the classic potager balance and repetition give a sense of order.

Preparation

1. Measure the site accurately and draw it to scale on graph paper.

2. Lay out the proposed design on the ground using a rope or garden hose. Walk through it; make sure that there is space for mature plants and that you can easily reach all the planting areas.

3. Layout the paths first. The main or central access path is usually wider than the side paths. Marjorie Mason suggests that you delay installation of hardscaping until year two when you are satisfied that the plan works for you. Some options for path construction include packed earth, mown grass, mulch, gravel and paving stones.

4. Amend soil, as required, based on a soil test. The ideal pH level for optimum vegetable growth is 6.0-7.0. A soil rich in organic matter (composts or manure) is ideal. If the site is being cultivated for the first time the soil should be dug to break it up to enable excess water to drain away, air to penetrate and plant roots to absorb moisture and nutrients. Digging will also bury weed seeds (although effort should be made to use weed free soil). Incorporate organic matter (garden compost) essential to healthy crops to give you good soil tilth for sowing seeds and planting.

5. Consider raised beds if your soil is less than ideal.

Planting:

- If planting in straight lines use a piece of wood to maintain proper spacing and straight lines.

- Give each plant enough space for maximum growth or plant with the intention of thinning out and/or harvesting plants throughout the growing season. Plant broccoli and lettuce together, the lettuce will be harvested before the broccoli needs the extra room.

- Plant a mix of seeds, bulbs and established plants with different maturity dates.

- Plan consecutive plantings - different species with similar requirements - to avoid bare spaces in the garden.

- Companion planting can help repel pests naturally (e.g. French Marigolds and tomatoes reduce the number of nematodes in the soil that can stunt the growth of tomatoes; Coriander among carrots is believed to deter carrot fly). Research companion planting because there are good and poor companions (e.g. chives are good with tomatoes, carrots and grapes but poor with beans and peas; cabbage and beans

apparently increase each other's yields when planted together; dill should not be grown next to tomatoes).

- Control invasive varieties such as oregano and mint. Bury strips of metal or plastic to contain their roots or grow them in containers at the entrance to the garden.

Maintenance

Keep a journal; record the species planted, planting and harvest times, planting locations and successes and failures. This will be helpful when planning next year's garden and rotating crops.

Spring: Dig the garden where possible and incorporate compost. Topdress with compost if digging isn't possible. Add bonemeal (a source of phosphorous) to seedbeds. Prune fruit trees just before active growth begins. Plant! Water! Mulch beds once the ground has warmed up.

Summer: Fertilize once a month during active growing period with soluble fertilizer high in phosphate and potassium. Weed weekly (easiest after rainfall) and check for signs of pests or disease. Harvest continually and replant to maintain a mix of mature and new plants.

Fall: Harvest cool season crops. Check soil pH level and nutrient content (adding lime or sulphur, if necessary, in the fall gives them time to act). Compost healthy plant debris and destroy diseased plants. Dig the ground and add manure.

Winter: Read seed catalogues and visit the library at the Toronto Botanical Gardens for ideas for next year.

Water: The garden should receive a minimum of 1" of water per week throughout the active growing season. Watering in the morning should be done early enough to avoid evaporation from the mid day sun. If watering later in the day do it early enough to allow plants to dry before dusk. A soaker hose allows water to be absorbed deeply, limits run-off and keeps the water off the plant leaves. Soaker hoses can be buried in the ground or left on top of the soil.

Crop Rotation: Crop rotation decreases the incidence of disease. In small gardens this can be difficult, however, grouping plant families together (i.e. peas and beans) and rotating them as a group can make insect and disease control easier.

Recommended Species/varieties/ cultivars:

Hedges, arbours and fences:

- Grapes
- Golden Hops vine 'Aureus' - fast growing
- Boxwood
- Red or Black Currant shrubs

Edges:

- Lavender - can be clipped to resemble the formal hedges
- Strawberries
- Parsley
- Purple sage
- Thyme

Vertical Interest:

- Beans, cucumber, peas

Vegetables

Perennials

- Asparagus, rhubarb, chives, oregano (invasive), mint (invasive)

Annuals - all season

- Broccoli, Swiss chard, cabbage

Annuals - successive plantings

- Lettuce 'Revolution'
- Beets 'Bull's Blood'

Annuals - late harvest

- Brussels sprouts
- Tomatoes

Trees/Shrubs/Flowers:

- Dwarf apple (two for pollination)
- Rosa rugosa
- Viola - perennial
- French Marigold
- Pot Marigold 'Orange King' -annual, self seeder, attracts beneficial insects
- Nasturtium 'Alaska' - annual, semi-trailing

Disease & Pests:

Soil health and plant vigor are the best defenses against disease and pests. Different vegetables, fruits, herbs and edible flowers are susceptible to different insects and diseases, therefore, it is essential that you understand the optimum growing conditions for your plants and regularly check for symptoms of disease. Prevention and control measures include:

- Grow the most resistant plants.
- Fertilize properly to promote vigorous growth.
- Keep the garden clean. Plant debris can encourage overwintering pests. Diseased debris should never be composted.
- Rotate crops to decrease the incidence of soil-borne disease and insect populations.
- Keep weeds under control.
- Encourage natural predators such as beetles and spiders.
- Ensure good air circulation by not crowding plants.
- Do not water late in the day.

Organic Management/Control Strategies

The City of Toronto adopted a new municipal by-law (spring 2004) that restricts the use of pesticides. For details about the by-law visit the Pesticide by-law page on Toronto Public Health's Web site at www.city.toronto.on.ca/pesticides or www.toronto.ca/health. Questions may be e-mailed to pesticide@toronto.ca.

Examples of organic controls, with differing levels of effectiveness, include:

- Bacillus thuringiensis: a bacterium harmless to humans, birds, bees and many beneficial insects that is either dusted or sprayed onto plants to help control gypsy moths, tent caterpillars and Colorado potato beetles.

- Diatomaceous earth: a non-selective (can kill beneficial insects) residual powder made from shells or diatoms can help to control slugs, snails, earwigs and ants.
- Ladybugs or Lady Beetles: can be purchased and released into the garden to control aphids.
- Spray aphids with a strong stream of water.
- Hand pick insects such as slugs, caterpillars, snails and aphids.

Where to get plants

Consider using Heirloom seed catalogues for long established varieties that are no longer available at local nurseries.

Considerations:

How important is productivity? When incorporating annuals and perennials choose varieties that are edible to be true to the potager definition.

References:

The Toronto Botanical Garden Weston Family Library is an excellent source for horticultural information.

Larkcom, Joy. *Creative Vegetable Gardening Accenting Your Vegetables with Flowers*. New York: Abbeville Press, 1997

Pavord, Anna. *The New Kitchen Garden*. New York: DK Publishing Inc.1999

Abbott, Marylyn. *Gardens of Plenty, The Art of the Potager Garden*. Great Britain: Kyle Cathie Limited, 2001

Thomson, Bob. *The New Victory Garden*. Toronto & Boston: Little, Brown and Company, 1987

Well known Potagers

Chateau Villandry, Loire Valley, France

Rosemary Verey's Barnsley House, Gloucestershire, England

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