



Toronto Master Gardeners

Toronto Master Gardeners are trained volunteers dedicated to providing horticultural information to the public.

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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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Hardy Ferns for Sun

Description:

Ferns are fascinating and ancient plants, one of the first plant groups to adapt to life on land. They are found in a wide variety of habitats, from the Arctic to the tropics, with many species growing on all continents. Unlike most plants, they produce no flowers, fruit or seeds, but reproduce by unicellular structures called spores. Usually the spores appear as rusty patches on the underside of the leaves, called fronds, but some species develop showy fertile fronds.

Ferns unfold from their tightly curled fiddleheads in spring. Fern leaves do not expand in all directions but mature first at the base, gradually maturing to the tips as the fronds unfurl. Fronds can be lacy or strap-like and can vary in size from 6" to 4 to 5' in height. Most are varying shades of green but some of the Japanese varieties have remarkable silvery foliage tinged with deep red.

Ferns are generally wild plants that have not been hybridized to the same extent as our garden flowers. They can add beautiful colour, texture and structure to the landscape. This fact sheet focuses on growing ferns in sunny conditions.

Location:

Identifying the ultimate height of the plant and its growing pattern will help to determine its placement. Ferns spread by underground stems or rhizomes. Those with short rhizomes will develop into a centralized clump while those with longer or more vigorous rhizomes may spread into a larger colony. Some of vigorous, spreading ferns, such as *Matteucia struthiopteris*, can become invasive if given

ideal growing conditions. Ferns are shallow rooted and do best where the soil is not compacted by foot traffic.

Cultural Considerations:

It is important to reproduce the natural habitat of ferns, as much as possible, to ensure success in growing these plants. Grow only those for which you have the proper conditions.

Generally, ferns have not adapted well to hot, sunny or dry conditions, preferring rich organic soils, dappled shade and adequate moisture. However, many can tolerate some sun providing that there is adequate moisture available. Morning or filtered sun is recommended and soil should be moist but well-drained. Only a few ferns, such as the Royal Fern, will be happy in wet, boggy soil.

Uses:

Ferns add texture, mass and interest to a garden and can be useful plants for the transition areas of your garden between full sun and shade. They look natural when planted beside a stream or at the edge of a bog garden and can soften hard edges of water features, rocks and paths. Their delicate foliage can act as a foil to the large-leaved plants, such as ligularia and Rodgersias, which like similar conditions. A few small ferns, such as the Lip Ferns, would be suitable for a sheltered rock garden or tucked into the crevices of a protected wall where they will provide a long season of interest. Some ferns are suitable as ground cover plants.

Maintenance:

Ferns are best planted in early spring before the fronds uncurl. Amend the soil with lots of organic matter - compost and/or leaf mould - to give the plants the airy soil they prefer.

Water regularly and deeply until the plants are established and watch for browning tips or wilting as a sign of drought stress.

An annual spring mulch with organic matter will improve the soil quality, help retain moisture in the soil and provide the nutrients that the plants require. An additional layer of chopped leaves in winter will help the plants overwinter. In spring, tidy the plants by cutting off the dead fronds near the crown.

Clump-forming plants may need dividing after a few years. If the clumps are congested and raised well above soil level, dig them up, discarding dead or decaying parts, and replant in amended soil just above soil level.

Recommended Species/varieties/cultivars:

It should be emphasized that, once established, the ferns noted below will tolerate more sun under certain conditions such as the presence of moisture. Some of them tolerate the sun but prefer being shaded in the hotter part of the afternoon.

Asplenium scolopendrium - Hart's-tongue Fern; Zone 4-9. Hart's-tongue fern is unique among ferns for its undivided, strap-like fronds up to 2' tall. These like alkaline soil with good drainage and can be grown in part sun. There are some decorative cultivars, among them: A.s. 'Cristatum', A.s. 'Laceratum Kaye' and A.s. 'Undulatum'.

Athyrium filix-femina - Lady Fern; Zone 4-9. On moist sites, lady ferns will tolerate more sun. Wait until spring to remove old fronds and divide congested groups. Because of their size (1-3' tall), and vigour, they are good for massing as groundcovers. Some showier cultivars include: Athyrium filix-femina 'Cristatum', Athyrium f.-f. 'Frizelliae', Athyrium f.-f. 'Victoriae' and Athyrium f.-f. 'Lady in Red'.

Cheilanthes - Lip Fern; Zone 6-9. This group of small ferns (6" - 12" tall) is unusual, as they prefer dry habitats and full to part sun. A rock garden in partial sun, with loose, gritty soil and a cool area for roots to run among rocks is ideal. They are also good for wall gardens. Look for *C. lanosa* - the Hairy Lip Fern and *C. argentea* - the Silvery Lip Fern.

Dennstaedtia punctiloba - Hay-Scented Fern; Zone 4-8. Hay-scented fern is a bright green, fast-growing groundcover up to 18" tall, turning soft yellow in autumn. This species will grow among rocks and in poor, sandy soil, including fairly dry shade. Plants in full sun may go dormant if the soil is too dry.

Dryopteris filix-mas - Male Fern; Zone 4-9. This is a stately native fern and one of the easiest to grow, forming large clumps 2-3' tall. This species will tolerate sun if the soil is moist. Some cultivars of *Dryopteris filix-mas* include: 'Barnesii', 'Crispatissima', 'Grandiceps' and 'Linearis Polydactyla'.

Matteucia struthiopteris - Ostrich Fern, Fiddlehead Fern; Zone 1-9. Ostrich fern is easy to grow and can become invasive but will form a good groundcover with a mature height of 3-5 feet. They like moist humus-rich soil in shade but will tolerate some sun if in a moist, cool location. In direct sun, the fronds may burn and yellow.

Onoclea sensibilis - Sensitive Fern; Zone 2-9. Sensitive ferns grow 1-2' tall. They will thrive in a variety of conditions and need frequent division to keep them in bounds. They like moist soil and will tolerate considerable sun if given adequate moisture.

Osmunda cinnamomea - Cinnamon Fern; Zone 3-9 . Cinnamon ferns grow up to 5' tall. They need moist to wet, humus-rich soil in sun or shade. If the soil is dry, they will become dormant or die out.

Osmunda regalis - Royal Fern; Zone 3-9 . Royal ferns require consistently moist soil in sun or shade conditions but tolerate more alkaline soils than *O. cinnamomea*. This is a slightly smaller plant than cinnamon fern. There is a European variety with reddish stems and purple new growth - *O. r. 'Purpurascens'*.

Pests and Diseases:

Generally, ferns are free of pest and disease problems but slugs or snails may eat delicate emerging fronds in spring and are particularly attracted to the maidenhair fern. Pick off by hand or set out beer traps (See fact sheet on slugs and snails). Some ferns, such as the Japanese painted fern (See fact sheet on Ferns for Shade), are damaged by insecticidal soap.

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

References:

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

- Brickell, Christopher, Trevor Cole, Judith D. Zuk (Eds). *Reader's Digest A-Z Encyclopedia of Garden Plants*. Montreal, Canada: Association (Canada) Ltd., 1997
- *Ferns; wild things make a comeback in the garden*. Brooklyn Botanic Garden, 1995.
- Valleau, John. *Heritage Perennials Perennial Gardening Guide*, 1998.

Some sources for ferns in the GTA:

- Garden Import: P.O. Box 760, 135 West Beaver Creek Rd., Richmond Hill, ON
- Humber Nurseries: 8386 Hwy. 50, R.R. #8 Brampton, ON
- Lost Horizons: R.R. #1 Acton, ON
- Mason Hogue Gardens: 3520 Durham Rd. #1, R.R. #4 Uxbridge, ON

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