



Pelargonium (Geranium)

A Toronto Master Gardeners Guide



Continuous, vibrant flowers make common geranium (*Pelargonium x hortorum*) a garden classic, especially in containers.

Photo: Helen Battersby

The name “geranium” is often given to two members of the geranium family (Geraniaceae). However, the name really belongs only to one of them – the hardy perennial *Geranium*. The other is a tender perennial, not hardy in Canada. When these attractive flowering plants were first introduced from South Africa, they were misclassified as being in the same genus as the perennial geranium. When you buy “geraniums” to plant in your window boxes, think of them by their true botanical name: *Pelargonium*.

The genus *Pelargonium* includes an estimated 230-300 species and subspecies of annuals, perennials and subshrubs. Most come from South Africa with a few from the Middle East and Australia. They come in many shapes and sizes, and can range from tiny to over 1.8 metres (6 feet) in height. In areas with cold winters, they are generally treated as annuals.

Pelargoniums are excellent bedding plants and are particularly effective when planted in masses. They are also unsurpassed as container plants. Smaller varieties make excellent houseplants.

Classification of pelargoniums is confusing, and experts advise that many identical plants can be called by several different names. Pelargoniums have been informally classified into 4 basic types:

- **Common or Zonal:** *Pelargonium x hortorum*. Upright and bushy, with succulent stems, roundish leaves that may have a dark c-shaped band, single or double flowers on long stalks, often used as bedding plants. Most are 30-60 cm (1-2 feet tall), although dwarfs and miniatures exist.
- **Ivy-leaved:** *Pelargonium peltatum*. Trailing growth habit, leaves frequently smooth, waxy and shiny with pointed lobes (like ivy!), long stems, flowers single or double
- **Regal or Martha Washington:** *Pelargonium x domesticum*. Bushy, with roundish leaves that have coarse teeth and may be scented, flowers primarily single. Angel hybrids are similar to regals but smaller with single flower heads.
- **Scented-leaf:** e.g., *P. capitatum* (rose), *P. crispum* (lemon), *P. tomentosum* (peppermint). Shrubby, with scented and frequently lobed, toothed or variegated hairy leaves

How to grow

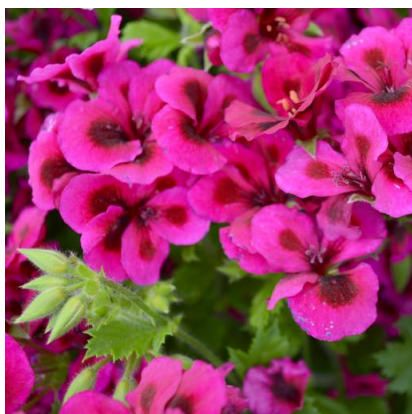
When grown outdoors, pelargoniums require well-drained, slightly acidic soil. Most grow best in full sun, but some species, like zonals, tolerate some shade, while regal cultivars prefer partial shade conditions and cooler growing conditions. Ivy-leaved cultivars enjoy moderate temperatures and like afternoon shade, as well as constant moisture levels. Plant outdoors as soon as there is no danger of frost.

Pelargoniums do not like hot, humid conditions. They prefer average moisture but can withstand periods of drought. Water sparingly when the temperature is cool, and more frequently during hot spells. To help prevent disease problems, water early in the day, allowing the foliage to dry before night. Limp foliage indicates that the plant needs water. Do not overwater.

The best fertilizer is one high in phosphorus and potassium, but low in nitrogen, applied every 3-4 weeks from March to October. This encourages flowering and plant vigour rather than leaf production. Feeding with a high nitrogen fertilizer will result in all leaves and no blooms. Container plants usually need more fertilizer than those planted directly in the ground.

As houseplants, pelargoniums enjoy a sunny spot with good air circulation. They require well-draining potting soil and thorough watering when the soil surface is dry. Applications of a high phosphorous liquid fertilizer once a month (not during November through January) is recommended. They prefer cool nights.

Pinch back the growing tip in early spring to encourage bushiness, branching and more flower production. Remove spent flowers to encourage more blooming.



The distinctive, pansy-like flowers of Martha Washington pelargoniums.

Photo: Helen Battersby

Propagation and Overwintering

Pelargoniums can be grown from seed, stem or leaf cuttings, or root divisions. Many prefer stem cuttings, where an 8-10 cm (3-4 inch) length of stem containing 3 or 4 nodes should be cut, with only 1 or 2 leaves left on the cutting. Prepare a container with good well-aerated potting soil and insert the cutting around 2.5 cm (1 inch) into the soil, with at least 2 nodes buried below the surface. Tamp down the soil gently and water, then water again when the soil is dry – do not let the cutting dry out. Keep in a sunny, warm spot, and the cutting should root in 3-4 weeks. Once rooted, transfer to a 10 cm (4-inch) pot and fertilize with a balanced 20-20-20 fertilizer.

Overwinter outdoor plants using bareroot storage. Before the first frost, lift the plants out of the ground and cut them back by at least one third, removing dead leaves, stems and other matter that might decay, to prevent fungus. Shake dirt off the roots and hang the plants upside-down in a cool, moist basement, shed or garage where they will not freeze. From time to time take them down and soak the roots in water to prevent them from drying out too much. Once spring arrives, remove at least half of the new (top) growth, then pot them up or plant them outdoors.

Alternatively, outdoor plants can be cut back, potted up and moved indoors before nighttime temperatures dip below 7°C (45°F), to a bright spot (a south-facing window is ideal) where they can get at least 4 hours of direct sunlight each day. If grow lights are used, prune the plants every couple of months if they get leggy. In the late spring, prune and harden off the plants before moving them outside again.

Pests and diseases

Most pests or diseases that may afflict pelargoniums are not unique to these plants. For a fuller discussion, see:



Variegation on the edges of this cultivar outlines the leaf shape that gives Ivy-Leaf Pelargonium its common name.

Photo: Helen Battersby

Missouri Botanical Garden. [Problems Common To Many Indoor Plants](http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/help-for-the-home-gardener/advice-tips-resources/visual-guides/problems-common-to-many-indoor-plants.aspx) (<http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/help-for-the-home-gardener/advice-tips-resources/visual-guides/problems-common-to-many-indoor-plants.aspx>)

The University of California. Integrated pest management program. [Pests in gardens and landscapes. Geranium – Pelargonium spp. Family Geraniaceae \(Geranium family\)](http://ipm.ucanr.edu/PMG/GARDEN/FLOWERS/geranium.html) (<http://ipm.ucanr.edu/PMG/GARDEN/FLOWERS/geranium.html>)

References

Thomas, P.A. Geraniums. [University of Georgia Cooperative Extension](https://secure.caes.uga.edu/extension/publications/files/pdf/B%20790_2.PDF). (https://secure.caes.uga.edu/extension/publications/files/pdf/B%20790_2.PDF)

Herb Society of America. [Pelargoniums. An Herb Society of America Guide 2006](http://www.herbsociety.org/file_download/inline/2b2f9fc8-e827-446c-99da-1c1e8b6559d0) (http://www.herbsociety.org/file_download/inline/2b2f9fc8-e827-446c-99da-1c1e8b6559d0)

Perry, L. Geraniums or pelargoniums? [University of Vermont Extension](https://pss.uvm.edu/ppp/articles/geraniums.html). (<https://pss.uvm.edu/ppp/articles/geraniums.html>)

Date revised: March 2019

Produced by the Toronto Master Gardeners, these Gardening Guides provide introductory information on a variety of gardening topics.

Toronto Master Gardeners are part of a large, international volunteer community, all committed to providing the public with horticultural information, education and inspiration. Our goal is to help Toronto residents use safe, effective, proven and sustainable horticultural practices to create gardens, landscapes and communities that are both vibrant and healthy.

If you have further gardening questions, reach us at our gardening advice line 416 397 1345 or by posting your question online in the Ask a Master Gardener section. To book Toronto Master Gardener volunteers for talks, demonstrations, advice clinics, or other services, please contact us at 416 397 1345 or bookamg@torontomastergardeners.ca