


Calendula officinalis

<i>Calendula officinalis</i>	
	
Scientific classification	
Kingdom:	Plantae
(unranked):	Angiosperms
(unranked):	Eudicots
(unranked):	Asterids
Order:	Asterales
Family:	Asteraceae
Tribe:	Calenduleae
Genus:	<i>Calendula</i>
Species:	<i>C. officinalis</i>
Binomial name	
<i>Calendula officinalis</i> L.	

Calendula officinalis (**pot marigold**, **ruddles**, **common marigold**, **garden marigold**, **English marigold**, or **Scottish marigold**) is a plant in the genus *Calendula* of the family Asteraceae. It is probably native to southern Europe, though its long history of cultivation makes its precise origin unknown, and it may possibly be of garden origin. It is also widely naturalised further north in Europe (north to southern England) and elsewhere in warm temperate regions of the world.^[1]

Description

It is a short-lived aromatic herbaceous perennial, growing to 80 cm (31 in) tall, with sparsely branched lax or erect stems. The leaves are oblong-lanceolate, 5–17 cm (2–7 in) long, hairy on both sides, and with margins entire or occasionally waved or weakly toothed. The inflorescences are yellow, comprising a thick capitulum or flowerhead 4–7 cm diameter surrounded by two rows of hairy bracts; in the wild plant they have a single ring of ray florets surrounding the central disc florets. The disc florets are tubular and hermaphrodite, and generally of a more intense orange-yellow colour than the female, tridentate, peripheral ray florets. The flowers may appear all year long where conditions are suitable. The fruit is a thorny curved achene.

Cultivation



A double-flowered cultivar

Calendula officinalis is widely cultivated and can be grown easily in sunny locations in most kinds of soils. Although perennial, it is commonly treated as an annual, particularly in colder regions where its winter survival is poor, or in hot summer locations where it also does not survive.

Calendula are considered by many gardening experts as among the easiest and most versatile flowers to grow in a garden, especially since they tolerate most soils. In temperate climates, seeds are sown in spring for blooms that last throughout the summer and well into the fall. In areas of little winter freezing (USDA zones 8-11), seeds are sown in autumn for winter color, plants will wither in subtropical summer.

Seeds will germinate freely in sunny or half-sunny locations, but plants do best if planted in sunny locations with rich, well-drained soil. Pot marigolds typically bloom quickly from seed (in under two months) in bright yellows, golds, and oranges.



Seeds

Leaves are spirally arranged, 5–18 cm long, simple, and slightly hairy. The flower heads range from pastel yellow to deep orange, and are 3–7 cm across, with both ray florets and disc florets. Most cultivars have a spicy aroma. It is recommended to deadhead (removal of dying flower heads) the plants regularly to maintain even blossom production.

Numerous cultivars have been selected for variation in the flowers, from pale yellow to orange-red, and with 'double' flowerheads with ray florets replacing some or all of the disc florets. Examples include 'Alpha' (deep orange), 'Jane Harmony', 'Sun Glow' (bright yellow), 'Lemon' (pale yellow), 'Orange Prince' (orange), 'Indian Prince' (dark orange-red), 'Pink Surprise' (double, with inner florets darker than outer florets) and 'Chrysantha' (yellow, double). 'Variegata' is a cultivar with yellow variegated leaves.

Calendula are used as food plants by the larvae of some Lepidoptera species including Cabbage Moth, The Gothic, Large Yellow Underwing and Setaceous Hebrew Character.

Uses

Pot marigold florets are considered edible. They are often used to add color to salads, or added to dishes as a garnish and in lieu of saffron. The leaves are edible but are often not palatable. They have a history of use as a potherb and in salads.

Flowers were used in ancient Greek, Roman, Middle Eastern and Indian cultures as a medicinal herb as well as a dye for fabrics, foods and cosmetics. Many of these uses persist today. They are also used to make oil that protects the skin.

Constituents

The petals and pollen of *Calendula officinalis* contain triterpenoid esters and the carotenoids flavoxanthin and auroxanthin (antioxidants, and the source of the yellow-orange coloration). The leaves and stems contain other carotenoids, mostly lutein (80%) and zeaxanthin (5%), and beta-carotene. Plant extracts are also widely used by cosmetics, presumably due to presence of compounds such as saponins, resins and essential oils.

The flowers of *Calendula officinalis* contain flavonol glycosides, triterpene oligoglycosides, oleanane-type triterpene glycosides, saponins, and a sesquiterpene glucoside.^{[2][3]}

Pharmacology

Plant pharmacological studies have suggested that *Calendula* extracts may have anti-viral, anti-genotoxic and anti-inflammatory properties *in vitro*. In an *in vitro* assay, the methanol extract of *C. officinalis* exhibited antibacterial activity and both the methanol and the ethanol extracts showed antifungal activities. Along with horsetails (*Equisetum arvense*), pot marigold is one of the few plants which is considered astringent despite not being high in tannins. Wikipedia:Citation needed

References

- [1] Interactive Flora of NW Europe: *Calendula officinalis* (<http://ip30.eti.uva.nl/BIS/flora.php?selected=beschrijving&menuentry=soorten&id=4116>)
- [2] Ukiya M, Akihisa T, Yasukawa K et al. Anti-inflammatory, anti-tumor-promoting, and cytotoxic activities of constituents of pot marigold (*Calendula officinalis*) flowers. (2006). *J Nat Prod.* **69**:1692-1696.
- [3] Yoshikawa M, Murakami T, Kishi A et al. (2001). Medicinal flowers. III. Marigold.(1): hypoglycemic, gastric emptying inhibitory, and gastroprotective principles and new oleanane-type triterpene oligoglycosides, calendasaponins A, B, C, and D, from Egyptian *Calendula officinalis*. *Chem Pharm Bull.* **49**:863-70.

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