

Ornamental kale: A new potential emerging ornamental plant

Ornamental kale (*Brassica oleracea* L. var. *acephala* DC.) is an outstanding foliage plant with a vast range of leaf colours and shapes. Plants thrive in low-to-high areas, such as hills and plains. Ornamental kale is more closely related to wild cabbage than most domesticated forms of the vegetable. Owing to its vibrant, multi-shaped leaves and robust cold tolerance, the plant has gained wide popularity as an ornamental potted and cut plant. Ornamental kale is not only decorative but also edible and contains various health-giving compounds, including glucosinolate, phenolic compounds and carotenoids. These compounds are well known for their antioxidant properties, strength and health benefits.

History

It originated in the Mediterranean region or Asia Minor, where the plants were mostly used as food by the Greeks and Romans. It is also found in herbal medicines and made into poultices that disinfect wounds. Thereafter, early traders and travellers dispersed the plants around the world. Once kale reached China, it was a standard ingredient in Chinese cuisine, whereas in Japan, ornamental foliage types were more widely grown and demanded. Ornamental *Brassica* made an eye-catching comeback as bedding plants in cottage gardens by the 17th century. Ornamental kale was first described in seed catalogues in the 1930s, when ornamental varieties eventually made their way from Japan to the United States in the 20th century.

Ornamental kale is a popular biennial herbaceous foliage ornamental plant belonging to the family Brassicaceae, which includes cabbage, broccoli and cauliflower. Worldwide, it is grown for its spectacular leaves, which come in white, pink, purple, dark green, grey green, pale yellow and other striking colours. During autumn, chrysanthemums and pansies are the principal plants used to add seasonal colour. However, a different group of cold-tolerant plants without flowers may help brighten the fall garden when nearly everything else is worn out and ready for winter. Edible cabbage, broccoli, and cauliflower (*Brassica oleracea*), ornamental cabbage and kale (*Brassica oleracea* var. *acephala*) species are all members of the same family. Decorative kale and ornamental cabbage are two different types of kale (kale doesn't form a head; instead, it produces leaves in a tight rosette). Unlike its vegetable counterparts, ornamental kale leaves are frilly or ruffled and become more intensely coloured with cooler weather.

Ornamental kale and cabbage

Ornamental kale are those with deeply cut, curly, frilly, or ruffled leaves, whereas those with broad, flat leaves that are frequently bordered in a contrasting colour are called ornamental cabbage. Based on leaf shape, commercially available varieties are categorized into two groups: 'fringed-leaved' are having ruffled leaves and 'feather-leaved' with serrated leaves.

Growth and other features

Growth habit: Biennial plants are treated annually. They exhibit a compact, rosette growth habit, with leaves that can be frilly or smooth-edged. They grow 12-18 inches (30-45 cm) tall and wide, forming dense, low rosettes that spread outward.

Flowers: Although they are grown for their foliage, they can produce yellow flowers in the second year before seed setting.

Foliage: The true allure lies in the large leaves, often crinkled, and come in various colours. The cooler the temperature, the more vibrant the foliage become.

Toxicity: Kale is not toxic to humans and is safe for consumption. However, it contains compounds called glucosinolate, which can be toxic to some animals, such as livestock, if consumed in large quantities.

Taxonomy

Common name	Ornamental Kale/Flowering Kale
Scientific name	<i>Brassica oleracea</i> var. <i>acephala</i>
Family	Brassicaceae
Genus	<i>Brassica</i>
Species	<i>oleracea</i>
Cultivar group	<i>acephala</i>



Flower structure

Flower structure

The flower is characterized by four sepals, four petals that stand opposite each other in a square cross, six stamens of which two are short and four are long and a gynoecium formed by two carpels and a superior ovary. The fruit in a special kind of pod called siliqua is divided into two locula by a septum.

Ornamental value

Ornamental kale is popularly used as a cool-season bedding plant. It is extensively grown as a potted plant, cut stem and landscape plant, especially during late autumn through winter to early spring, when there are very few flowers available in the garden, and it can withstand low temperatures. To make mixed flower bouquets, one to three stems of ornamental kale are generally used in, and/or single stems are sold directly to consumers so that they can make their own arrangements. Owing to their high carotenoid and anthocyanin contents, the colourful leaves provide both ornamental value and health benefits to humans. In landscaping, ornamental flowering kale is valued for its high decorative potential, which allows for chromatic effects and continues to enhance visual appeal even in winter. Ornamental kale is edible and is used as a garnish.

SUMMARY

Ornamental kale is popularly used as a cool-season bedding plant. It is extensively grown as a potted plant, cut



Vibrant shapes and colours of ornamental kale

stem and landscape plant, especially during late autumn through winter to early spring, when there are very few flowers available in the garden and it can withstand low temperatures. To make mixed flower bouquets, one to three stems of ornamental kale are generally used in, and/or single stems are sold directly to consumers so that they can make their own arrangements. Owing to their high carotenoid and anthocyanin contents, the colourful leaves provide both ornamental value and health benefits to humans. In landscaping, ornamental flowering kale is valued for its high decorative potential, which allows for chromatic effects and continues to enhance visual appeal even in winter. Ornamental kale is edible and is used as a garnish. Ornamental kale and cabbage are celebrated for their exceptional beauty in cool weather, easy care, and versatility as a garden display. The robust colours and unique forms of these plants make them a favourite for gardeners looking to extend the gardening season during winter. Whether used in mass plantings, as edging, or as dramatic container specimens, these ornamental plants provide a striking visual impact with minimal effort. It has great potential to expand the production of ornamental kale as a cut flower in winter and it is extensively used as a cut stem in bouquets. Considering the importance of the plant systematic research works on ornamental kale is going on at Indian Agricultural Research Institute, Regional Research Station, Katrain, Himachal Pradesh involving screening of genotypes and their performance for different uses.



Ornamental kale cut stem in flower arrangement Flower and bouquet

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