



Growing Chrysanthemums in the Garden

Chrysanthemums (*Chrysanthemum x morifolium*) bloom in early fall when most annuals and perennials are winding down for the season. Mums are available in a wide range of flower colors and forms.

Chrysanthemum history

The chrysanthemum is native to China and was cultivated as a crop as early as 15 centuries BC. Chrysanthemums were introduced to Japan in the eighth century AD and later became a symbol used on the Imperial Seal of Japan. The chrysanthemum was introduced to Europe in the 1600s and to the United States during the colonial period.

Flowering habit

Chrysanthemums are photoperiodic. Photoperiodic plants bloom in response to day length. Specifically, mums are short-day plants, meaning they bloom in response to short days and long nights

Garden and florist mums

Florist mums are sold throughout the year at floral shops, supermarkets, and other retailers. When planted outdoors, florist mums do not perform well. Most florist mums will not survive the winter when planted outdoors in Iowa. Those florist mums that manage to survive the winter typically do not bloom outdoors. Florist mums require a long period of uninterrupted darkness. As a result, florist mums bloom late in fall when grown outdoors. Oftentimes freezing temperatures destroy the flower buds before they are able to fully develop and open.

Garden mums are more cold hardy than florist mums. Plants also have a shorter dark period requirement, resulting in most cultivars blooming by early fall in Iowa.

Planting

Spring is the best time to plant garden mums in Iowa. Flowering garden mums planted in late summer or early fall often do not survive the winter.

When selecting the planting site, choose an area that receives at least 6 hours of direct sun per day. Avoid sites near outdoor lights as the light may inhibit flower formation.

Chrysanthemums grow best in moist, well-drained soils. Avoid wet, poorly drained sites. Improve hard, difficult-to-work soils by incorporating 2 to 3 inches of organic matter (compost, peat, or well-rotted manure).

Plant garden mums at the same depth as they are growing in their containers. Space plants 18 to 24 inches apart.

After planting, water the mums with a dilute fertilizer solution. Continue to water plants on a regular basis for 2 to 3 months.

Care of garden mums

Garden mums like a consistent supply of moisture throughout the growing season. Place 2 inches of mulch (woodchips, shredded bark, chopped leaves, etc.) around plants to conserve soil moisture. Water plants every 7 to 10 days during prolonged dry periods.

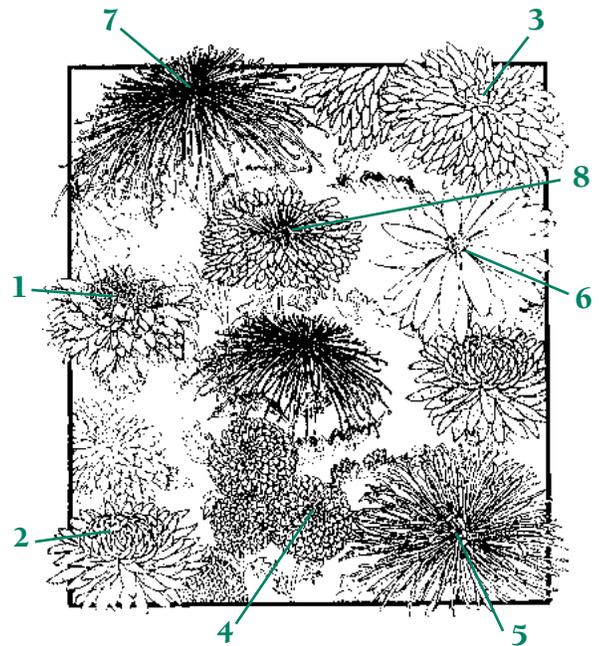
Fertilize garden mums by applying a slow release fertilizer around plants when new growth begins in spring.

Most garden mums benefit from pinching plants 2 or 3 times in spring and early summer. Pinching produces bushier plants and additional flowers. When the new shoots are 6 inches tall, pinch out the shoot tips with your fingers, a pruning shears, or hedge clippers. New lateral shoots will develop along the stems. Pinch again when these new shoots reach a length of 6 inches. Continue pinching until early July.

Garden mums usually perform best when divided every 2 or 3 years. Divide mums in early spring as soon as new growth appears. Dig up the entire plant clump. Using a large knife, cut out the old central portion of the clump and discard it. Cut the remaining portion into sections. Each section should have several shoots and a good root system. Immediately replant the sections.

Chrysanthemum classification is based on the shape and arrangement of the petals. The following are the major types and their characteristics.

- 1. Anemone:** Long, large petals surround a center covered by short, deeper colored petals; most cultivars are hardy.
- 2. Cushion:** Often called “azalea” mums; low bushy plants flower early; most cultivars are hardy.
- 3. Decorative:** Several rows of petals are “incurved” (close, regular petals curving toward flower center), “incurving” (loose, irregular petals curving toward flower center), or “reflexed” (all petals curving away from flower center); many hardy cultivars available.
- 4. Pompon:** Small, stiff, almost globular flowers; some hardy cultivars.
- 5. Quill:** Long, straight, tubular petals; few hardy cultivars.
- 6. Single:** Daisy-like flowers with several rows of long petals radiating from a flat center; many hardy cultivars.
- 7. Spider:** Long, tubular petals with curled ends; few hardy cultivars.
- 8. Spoon:** Spoon-shaped petals; some hardy cultivars.



Winter survival

Although more cold hardy than florist mums, garden mums may be severely damaged or completely destroyed in winter. Chrysanthemums have shallow, fibrous roots. Repeated freezing and thawing of the soil (because of a lack of snow cover) in winter can heave plants out of the ground, making them vulnerable to winter damage.



Several things can be done to increase the likelihood of garden mums surviving the winter in Iowa. Select early-flowering cultivars that are known to possess excellent cold hardiness. For example, many of the University of Minnesota introductions perform well in Iowa. Do not fertilize plants in summer



to discourage late season growth. Do not cut down plants in fall. Research has found that garden mums survive better if the old growth is left standing through the winter. Apply a protective mulch over the plants in late fall. Mulch helps keep the soil uniformly cold after it has frozen, thus eliminating the alternate freezing-thawing cycle and the resulting soil heaving. Apply several inches of straw or pine needles over the plants in late November or early December. Leaves tend to mat down, possibly damaging plants. Remove the mulch in early spring (typically late March or early April).



For more information

Horticultural information is available from your local Iowa State University Extension office and these websites.

www.yardandgarden.extension.iastate.edu/
<https://store.extension.iastate.edu/>

Revised by Richard Jauron, extension horticulturist, from materials he originally prepared with Linda Naeve, former extension horticulturist. Illustration by Mark Müller.