



Garden Mums

Cheryl Kaiser¹ and Matt Ernst²

Introduction

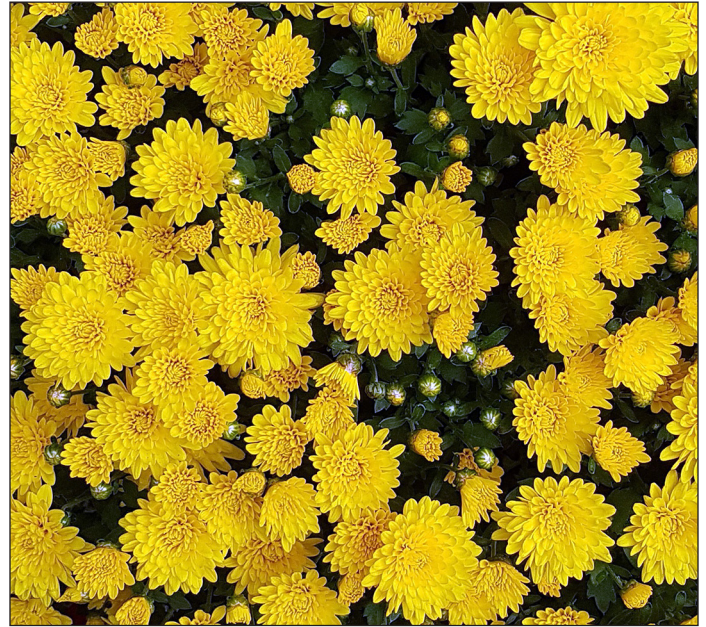
The garden mum (*Chrysanthemum* spp.) is a popular herbaceous perennial flowering plant that is commonly grown for fall sales. While also referred to as ‘hardy mums,’ their actual hardiness outdoors (that is, their ability to survive the winter) can vary by cultivar, time of planting, and environmental conditions. Garden mums are generally container-grown in Kentucky, either in a greenhouse or outdoors in connection with a greenhouse business; there is also some field production in the state.

Marketing

Field-grown mums are limited to direct sales to the consumer since they are dug at the time of the sale. Container-grown plants, on the other hand, can be sold through garden centers, nurseries, landscapers, supermarkets, farm stores, roadside stands, farmers markets, and wholesale produce auctions. Retailers expect flowering garden mums to be available in mid-to late August through mid-October. Early mums often receive a premium price. Producers can also explore opportunities for production of new or unusual mum varieties to differentiate their product in the local marketplace.

Market Outlook

A strong market exists for garden mums because garden centers desire an inexpensive flowering potted plant to accentuate fall landscape plant sales. Garden mums are also in demand by commercial landscapers for use in fall maintenance and plantings. Mixed containers, including multiple colors of mums, grew more popular with consumers, who show continued interest in combining classic colors with new, pastel colored mums. There is also



more interest in mums that retain their colors longer throughout the fall.

Production considerations

Cultivar selection

While most cultivars perform satisfactorily in Kentucky, certain types may perform better under some production conditions than others. Additionally, some cultivars are more desirable than others for early sales. Garden mum cultivars vary in plant size (from dwarf to very large), flower form (such as daisy-like, pompon, spider, spoon, and button), and flower color (various shades of yellow, pink, lavender, bronze, red, orange, salmon, and coral, as well as white). Select locally adapted varieties with the characteristics in demand for the intended market.

Propagation and general production

Garden mums are propagated by cuttings, which can be purchased from



¹Cheryl Kaiser is a former Extension Associate with the Center for Crop Diversification.

²Matt Ernst is an independent contractor with the Center for Crop Diversification.

greenhouse plant supply companies or companies that grow garden mums. Cuttings are traditionally planted May 20 to July 10 for natural season flowering. Plants may require pinching.

CONTAINER-GROWN

Container-grown garden mums can be produced either outdoors or in greenhouses. Five hundred plants will require more than 1,000 square feet of production area. Any commercial growing media for greenhouse crops should be satisfactory for production in containers. Plants will need consistent and regular watering with a trickle or drip irrigation system once or twice every day; some growers are successful with overhead sprinklers. In addition, plants require fertilization every week or with every watering.

Outdoor production is not only cheaper than greenhouse production, but plants are also shorter and tougher when grown outdoors. Pots are set on a 4-inch lime rock base on top of a polypropylene ground cloth, or possibly on black polyethylene with suitable surface drainage. Indoor mum production usually requires growth retardant treatments for height control.

FIELD PRODUCTION

Field production requires good field soil with no agricultural herbicide residue. Soils should be suitable for digging the plants in the fall. Field mums will require watering with trickle or drip irrigation during typical Kentucky summers. Garden mums are heavy feeders and need regular fertilization. Field-grown mums are only suited for local sales and usually via on-farm sales due to transportation and storage issues.

Pest management

Insect pests, such as aphids, leafhoppers, grasshoppers and caterpillars, as well as spider mites, are relatively common on garden mums. Gray mold and bacterial leaf spot are the primary disease problems. Many grass and broadleaf weeds can be a problem in field production.

Labor requirements

Labor requirements for garden mums will vary according to production system, producer experience and marketing channel. Growing season labor is estimated at 250 to 300 hours for the outdoor production of 8,200 mums in containers.



Economic considerations

Typical production costs for garden mum production include purchasing cuttings, fertilizer, soil, pots and pesticides. Controlling production costs is the key to the profitable production of garden mums. Fixed costs vary depending on the production system used. Irrigation may be a significant fixed cost. The cost of installation of an irrigation system (pipe, emitters, time clock, solenoid and fertilizer injectors) can be amortized over the five- to seven-year life of the system. Watering by hand can be costly, adding as much as five to 10 minutes in

labor costs per pot per crop.

Profitability for field-grown mum production will vary considerably between producers. Total costs per pot, including labor and marketing, can range from \$3 to \$4 per pot for a production scale of 8,000 pots. Total costs for smaller producers may range higher depending on production efficiency. This cost of production was below average sale prices for mums at Kentucky produce auctions in 2016, indicating potential profitability for mums in Kentucky wholesale and retail market channels.

A detailed garden mum production budget was published for producers in Indiana in 1990; Kentucky producers may want to use this as a guide to estimating current production costs, updating assumptions, material costs and wage rates for the present day. Refer to the Selected Resources list.

Selected Resources

- Garden Mum Production for Fall Sales (University of Kentucky, 2002) <http://www.uky.edu/hort/sites/www.uky.edu/hort/files/documents/gardenmums.pdf>

- Chrysanthemum – Commercial Greenhouse Production (Auburn University, no year) <http://www.ag.auburn.edu/hort/landscape/Potmum.htm>
- Chrysanthemum Diseases (Penn State, 2006) <http://extension.psu.edu/pests/plant-diseases/all-fact-sheets/chrysanthemum-diseases>
- Cost of Production of Garden Mums in Containers (Purdue University, 1990) <http://www.uky.edu/ag/horticulture/gardenflowers/mumbudgets.htm>
- Fall Garden Mum Production in Alabama, ANR-1096 (Alabama Cooperative Extension System, 2003) <http://www.aces.edu/pubs/docs/A/ANR-1096/>
- Growing Garden Mums for Fall Production (University of Massachusetts, 2015) <https://ag.umass.edu/greenhouse-floriculture/fact-sheets/growing-garden-mums-for-fall-sales>
- Guide to Successful Outdoor Garden Mum Production (North Carolina State University, 1998) <https://content.ces.ncsu.edu/guide-to-successful-outdoor-garden-mum-production>
- Interactive Greenhouse Crop Budget with Five Crops (Rutgers University, 2008) <http://farmmgmt.rutgers.edu/green-house/greenhouseinteractiveform.html>
- Understanding and Producing Chrysanthemums (Clemson Extension, 1995) <https://www.scribd.com/document/297014360/Understanding-and-Producing-Chrysanthemums>
- Virtual Grower (USDA) <http://www.ars.usda.gov/Research/docs.htm?docid=19961>

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