

Prophet Mums

Advanced breeding and research has made this crop successful in many ways.

By Catherine Evans

Garden mums have been grown and marketed for decades. Over the last decade, strides have been made in two main areas that affect garden mum production: new genetics and advanced cultural techniques. With some useful information provided by Yoder, here are some general guidelines that may help you grow a successful mum crop.

TRANSPLANTING

There are two different schedules that will work the best for sticking cuttings: The first one uses one cutting per 8-inch container, planted approximately June 10-20. The second schedule uses two cuttings per 8-inch container, planted approximately June 28 to July 10. Both schedules require one pinch approximately 10-14 days after planting.

Both schedules provide good head size and flower dates comparable to the same varieties planted in late May or early June. The schedules plant the cuttings into warmer weather (less crown budding) and offer opportunities to reduce labor (fewer pinches), fertilizer, water and pesticides (shorter crop time).

It is always best to plant (rooted) or stick (unrooted) garden mum cuttings immediately upon arrival into moist root media. If this isn't possible, they may be stored for several days in a cooler at 33-40° F.

Thoroughly water the plants immediately after planting. It is beneficial to mist or syringe the plants frequently for the first few days or until the plants are fully turgid and the roots are absorbing water.

Always water-in freshly planted cuttings with a complete N-P-K fertilizer containing 200-300 ppm nitrogen immediately after planting. Unrooted cuttings should be fertilized 2-3 times during propagation.

GROWING ON

Fertilization. Fertilization rates vary depending upon the type of media and fertilizer being used and the frequency of application. A fertigation program using 250 ppm nitrogen from a complete N-P-K fertilizer is a good method for



'Jeanette'

producing high-quality garden mums. The rate may need to be adjusted depending on the media and weather. Fertilization should be continued until the buds are at least pea-sized and stopped no later than when flower color is seen to improve post-harvest longevity.

Watering. Apply enough water to soak thoroughly through the pot. About 10 percent of the water applied should run out the pot's drainage holes. Wilting during the first few weeks of growth can restrict branching and overall growth. However, in the later stages of growth, slight wilting can be beneficial by hardening off, controlling height and promoting uniform flowering.

Pinching. Plants are ready to pinch when they have achieved 1-1½ inches of new growth. The top ½-inch of growth should be pinched out. Traditionally, second and third pinches should be given, time permitting, to help control height and provide a bushier plant. These pinches should be performed when the breaks are 2-4 inches long. The last pinch should be given between early July and early August, depending on which part of the country you are in.

Growth Regulators. Prophets may be kept more compact with the use of B-Nine. Growers should adjust B-Nine schedules to their own situations to be successful. Bonzi also is quite effective in height control but must be used carefully to avoid excessive stunting. Florel has been shown to show good potential to delay fall flowering response,



reduce or eliminate pinching, and inhibit or reduce the number of early crown buds.

Lighting. Long days are needed to allow vegetative growth. Artificial long days can be supplied by lighting plants from 10 p.m. to 2 a.m. with 10-15 foot-candles of incandescent light.

Short days are needed for flowering. Artificial short days are provided by covering plants with an impermeable light barrier for 12-15 hours daily. For most predictable timing, covering should be done every night until color shows on buds.

Pests & Diseases. A preventative spray program may be employed to guard against outbreaks of insects such as aphids, mites, various caterpillars, leafminers and thrips.

The most common disease problems are root rots caused by *Pythium* and *Rhizoctonia* and bacterial leaf spot and leaf spots caused by *Alternaria*, *Botrytis* and *Septoria*. In contaminated root media or field soil, *Fusarium* wilt may also develop. Root rots are best prevented with the use of well-drained root media. There are also a number of chemical controls that can be used. The best control for *Fusarium* wilt centers on disease-free cuttings and pathogen-free root media. *Alternaria*, *Botrytis* and *Septoria* can normally be controlled with a number of chemicals as well as preventative sprays. GPN

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Why Prophet Mums?

It's nice to have personal experience with certain crops and varieties, as I now do with a few Prophet mums. And, I have to say what a good experience it was. Mums are one of my sister's favorites for her garden — not just mums, yellow mums. Last year, I put a few different yellow Prophet plugs in her garden in June and was amazed by their performance and mounding habit that fall. There was no pinch needed, and they flowered by September. I just put another batch in this past weekend and plan on doing a little trial of my own to see what different pinches will do.

A lot of breeding has gone into these mums to improve growth habit and timing, and if they grew so well for me outside in the garden, just think the wonders you can do with these good performers in your greenhouse. — **Carrie Burns**

