

## CHRYSANTHEMUM FRUTESCENS\*

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Chrysanthemum frutescens (Marguerite daisy), a native of the Canary Islands is re-emerging as a popular bedding and cut flower plant. This is a single, daisy flowered chrysanthemum species quite different from the greenhouse and garden mum. It may be grown as a cut flower in the greenhouse or as a bedding plant. In warmer climates it is a perennial shrub reaching 3-6' in height (Carlson, 1985).

Marguerites require short night conditions for flowering. This is the opposite of greenhouse and garden mums which set bud when nights are long. Regular mum lighting is suggested, i.e. 60 watt bulbs four feet apart and two-three feet above the plants. According to Carlson (1985), flower initiation and development is best at 62° F nights and 70° F days. Post and Weddle (1940) show that plants flower at similar time if grown at 50° to 60° F with no supplementary light, presumably because of photoperiodic response (Post, 1949).

A retail greenhouse operator may find that a small area will be a profitable addition to their crops and their customers. To be perfectly correct, stock plants should be kept vegetative using black cloth (after March 1) to provide cuttings. In practice, cuttings may be taken from vigorous shoots on a flowering bench in April or May. Buds are removed. After rooting, plant into 3, 4, or 5" pots depending upon when they will be benched. Then plant as far apart as 24" (two plants across a 4' bench will fill up solid). They will set buds. Remove them. By September a good sized plant will exist. Turn on (mum) lights when plants are well developed and eight weeks before you wish to begin cutting. They will flower rather steadily through the year and you can take cuttings from them in April or May for the next crop.

The same procedure might be followed in part for bedding plant production. Don't bother with shade in the summer, just pinch regularly. Do not light in the fall. The plants will become totally vegetative. Pinch regularly to build a supply of cuttings. These are taken according to the following schedule. (Adapted from Carlson, 1985) for 6" or 4" pots or for paks.

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\*Based in part on a paper presented by Meredith Antin in Plant Science 298, Greenhouse Crop Production.

Pak propagation starts in February. The stock will produce cuttings through late March. Will it produce enough cuttings to pay for its keep? This is a question that only your records will tell.

Though marguerites are fairly long lasting cut flowers, research has shown that the life of the flower may be prolonged. Overall, conditioning marguerites in deionized water containing 320 ppm citric acid and 200 ppm Physan-20 may be the most effective way to improve longevity when stems cannot be recut after bunches are compacted. Use a commercial cut flower food to prevent slime on stems (Farnham and Byrne, 1980).

Leaf rollers, thrips, aphids, spider mites, leaf miner and cyclamen mite are common pests. Botrytis, rhizoctonia, phthium, crown gall, powdery mildew, and aster yellows are diseases that attack marguerites.

Good garden performance and long lasting cut flowers should contribute to continual climb in the use of marguerites in floriculture.

#### Marguerite Production Schedule

	Propagate	Plant	Pinch	Light	Gr.Reg.*	Space	Flower
6" Pots	2/3	2/17	2/24	3/10	3/17	3/24	5/5
6" Pots	2/10	2/24	3/3	3/17	3/24	3/31	5/12
6" Pots	2/17	3/3	3/10	3/24	3/31	4/7	5/19
6" Pots	2/24	3/10	3/17	3/31	4/7	5/19	5/26
4" Pots	3/3	3/3	3/10	3/10	3/24	?	5/5
4" Pots	3/10	3/10	3/17	3/17	3/31	?	5/12
4" Pots	3/17	3/17	3/24	3/24	4/7	?	5/19
4" Pots	3/24	3/24	3/31	3/31	4/14	?	5/26
Paks	3/10	3/10	No	3/10	3/24	No	5/5
Paks	3/17	3/17	No	3/17	3/31	No	5/12
Paks	3/24	3/24	No	3/24	4/7	No	5/19
Paks	3/31	3/31	No	3/31	4/14	No	5/26

\* Cycocel at 1:80 (1500 ppm) may be applied after cuttings are well rooted and repeated after 10 days if shorter plants are desired. If applied after buds are visible, smaller flowers and delayed flowering may result.

## References

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