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# Hardy Chrysanthemums

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**TODAY'S CHRYSANTHEMUM VARIETIES** are much hardier than those available in the past. However, winter survival of chrysanthemums is extremely variable in North Dakota. Most varieties which flower early (Sept. 1-25) are worth growing even as annuals. If they survive for two or more years, it's an extra bonus for the grower. Reliable autumn bloom may compensate for the necessity of frequent replacement.

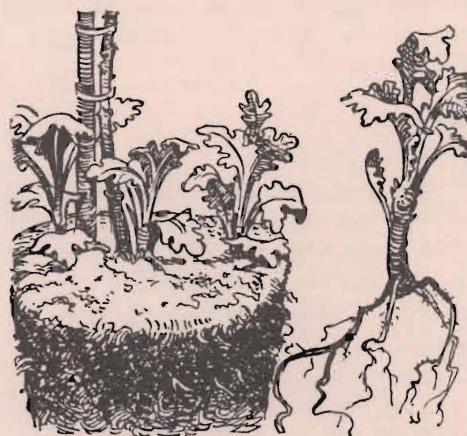
Chrysanthemum survival, firstly, depends upon the type of weather during any particular winter and spring (snow cover, temperature variations, etc.) and secondly, the culture of the chrysanthemums during the growing season. Healthy, well-grown plants that have been grown in full light, watered regularly and fertilized are stronger and are more apt to survive than those grown under poor growing conditions.

Since there is a great diversity in plant habit, flower color and form of "mums", they are excellent subjects for both cut flower and landscaping purposes. The bright splashes of color are unrivaled in the autumn garden. They may be used to advantage in perennial borders, foundation plantings around your home or in the formal garden.

## CULTURE AND CARE

**Size and Age of Planting Stock:** Either well rooted cuttings or vigorous divisions of overwintered clumps qualify as good planting stock. Plants offered for sale by nurseries as "Spring Bedding Mum Plants" are usually well rooted cuttings which have been pot-grown for a few weeks to provide sturdier plants.

**When and Where to Plant:** Chrysanthemums are best planted in May. Stock purchased from nurseries, especially rooted cuttings or started plants, should not be planted until danger of hard frost is past, unless you are prepared to offer frost protection. Chrysanthemums have been propagated in greenhouses and may not have been hardened sufficiently to withstand spring frosts. Divisions from overwintered plants (see illustration) may be moved and replanted about May 15. However, weak plants are best left in place until new growth is vigorous (about June 1) before transplanting.



Overwintered clump

Spring division

Chrysanthemums do well in most fertile garden soils. Plant on well-drained soil that is high in organic matter. The addition of peat or well-rotted barnyard manure worked into the soil is recommended. Work two tablespoons of 5-10-5 or similar fertilizer into the soil around each plant in the spring. Be sure to water in such fertilizer, especially if the soil is dry.

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Space chrysanthemum plants 18 to 24 inches (about 46 to 61 cm) apart. Wider spacing is desirable where supplemental water is not readily available. Plant hardy "mums" where they will receive plenty of sun (two-thirds day or more of sunlight).

## WATERING

Never water chrysanthemums from above with a sprinkler due to potential foliar disease problems. Your "mums" may not need supplemental watering some years but when necessary lay the open end of the hose on the ground near the plant and let the water run slowly until the soil is thoroughly soaked. A thorough soaking at 7 to 10 day intervals during dry periods is much better than more frequent light waterings. This method also conserves water.

## PINCHING BACK

To produce low-growing, sturdy, well-branched plants, pinch back the tips of shoots once or twice during the growing season. You can do this easily with your thumb and forefinger or with a knife. Remove about one inch of the soft growing tip of the main shoots. This first pinching should be done when your plants are about six inches tall. The plants will then produce side branches. When these side branches are six to eight inches long, pinch out their tips to produce additional branching. Do not pinch later than July 1, since many varieties start forming flower buds and later pinching simply delays flowering.

Cool summers may result in earlier flowering of "mums", while hot summers may delay blooming by one to two weeks. Some "mums" have frost-resistant blooms and these are preferred, especially among the later blooming varieties.

## WINTER CARE

Although there is considerable natural variation in the hardiness of garden chrysanthemums, most losses occur in early spring. Such losses are probably due to alternate freezing and thawing when there is little or no snow cover over the plants. Losses may be much greater on poorly drained sites.

Usually the original chrysanthemum plant dies during the winter. The small shoots (rosettes) that form around the base of the mother plant in the fall are your next season's new plants. Therefore, it is very necessary that you water your chrysanthemums well during the fall (flowering) season in order to encourage growth of these young shoots around the base of the mother plant.

Leave the tops on your plants during the winter to help hold a snow cover. A coarse mulch, such as

slough hay, wheat or soybean straw, is good. Leaves and lawn clippings are not a desirable mulch since they tend to become compressed, soggy and may smother your "mums".

## VARIETIES

Varieties of chrysanthemums are numerous and each year many new kinds are added to the list, some of which may be superior to older varieties. Evaluations indicate the following varieties have particular merit for our climate.

COLOR VARIETY	SEASON OF BLOOM	HEIGHT; FLOWER SIZE
<b>WHITE</b>		
Drifted Snow	Early	Medium; medium
Minnwhite	Mid-late	Low; small
Poise	Early	Tall; medium
Powder River	Late	Low; medium
Wee Willie	Early	Low; small
White Darlingmum	Late	Low; small
White Prom	Early	Low; small
<b>CREAM</b>		
Cream Top	Mid-season	Tall; medium-large
<b>YELLOW</b>		
Goldstrike	Early	Low; medium
Little One	Mid-season	Low; small
Minglow	Mid-season	Low; medium
Minyellow	Mid-season	Low; medium
Muted Sunshine	Early	Medium; medium
Prairie Sun	Early	Tall; medium-large
Sea Urchin	Mid-season	Medium; medium
Wayzata	Late	Tall; medium
Wendy Ann	Early	Tall; large
Yellow Darlingmum	Mid-late	Low; small
Yellow Glow	Mid-season	Medium; medium
<b>GOLD BUFF</b>		
Best Regards	Mid-season	Tall; medium-large
Companion	Early	Tall; medium-large
Golden Jubilee	Mid-season	Tall; medium-large
Pure Gold	Mid-season	Tall; medium-large
<b>ORANGE</b>		
Campaigner	Early	Medium; medium
Superior	Early	Medium; medium
Sunny Glow	Early	Medium; small
<b>RED</b>		
Fired Gold	Mid-season	Medium; medium
Flamboyant	Late	Tall; large
Redheart	Late	Tall; medium
Red Headliner	Late	Medium; large
<b>MAROON</b>		
Mingopher	Mid-season	Medium; medium
<b>BRONZE</b>		
Brown Eyes	Mid-season	Low; small
Minnautumn	Mid-season	Low; small
Zonta	Early	Medium; small
<b>PURPLE</b>		
Hoback	Mid-late	Medium; medium
<b>LAVENDER</b>		
Grandchild	Mid-late	Medium; medium
Lindy	Mid-season	Tall; large
Lovely Lass	Mid-season	Medium; medium
Tenstrike	Early	Low; small
<b>PINK</b>		
Bonnie Blush	Mid-season	Low; medium
Cameo	Mid-season	Medium; small
Pink Darlingmum	Late	Low; small
Minnpink	Mid-season	Low; small
Sachet	Mid-season	Tall; large