

Mum Growing Guide by Region: Sept. - Dec.

Pinching and Disbudding, General Instructions:

Both the garden hardy and disbud types should be pinched to encourage branching when about 6 inches tall. This is done by removing the top ½ inch of the growing tip. When the side shoots resulting from this pinch have grown about 6 inches, they should also be pinched in the same way. Additional pinching may be done if time permits.

The large flowering types of chrysanthemums should be debranched and disbudded to allow only a specific number of blooms per plant. For example, if 4 blooms are wanted, only 2 of the sturdiest side shoots should be allowed to grow from the first pinch and 2 from each of these shoots after the second pinch, giving a total of 4 stems. All side branches should be removed from these 4 stems from then on until blooming time.

Northeast Region

September

Stop shading when blooms begin to show color and discontinue feeding. Continue disbudding. Replace shade cloth with clear plastic sheeting to prevent rain damage and pray that no hurricanes reach the East Coast.

October

Cut blooms one to two days before show and place in hot tap water. Fill out entry cards and groom your blooms. Don't forget the leaves and stems. Proudly display at the show and win blue ribbons.

Northern Virginia & Washington, D.C. Area

September 15 - 30

Continue disbudding, as needed, and feeding and spraying on schedule. Do not neglect tying the taller varieties. A total of three tyings (as growth progresses) is usually sufficient for



Disbudding: If large blooms are desired excess buds should be removed when they are the size of small peas. Flower buds sometimes form in clusters with a central (usually the largest) bud with several smaller ones surrounding it. Carefully remove all the side buds by rolling them off with your thumb and forefinger or by cutting them out; then remove all buds from the leaf axils in a similar manner. If a single terminal bud (not shown) forms at the top of the stem; leave it in place and remove all buds from the leaf axils below it. Photos by Dan Schadler.

the season. Many of the garden-hardy types and some early disbuds, particularly the English varieties, will come into full bloom during this period.

October 1 - 15

Make plans now to enjoy the fruits of your labors. Be sure to invite friends and neighbors out during the next few weeks to enjoy this most colorful display. Protection from rain and frost may be needed. A plastic "tent" will do the job.

October 15 - 31

Now that you have grown some of the large incurve and spider types of chrysanthemums, bring them to the shows so others may enjoy them too and you may compare your results with other mum enthusiasts.

November 1 - 15

With some protection, such as that furnished by a plastic shelter, you can extend your season of enjoying chrysanthemums to include some of the later flowering incurve, reflex, spider, and quill types, particularly if hard frosts are late in coming. It is worth the chance.

November 15 - 30

Most garden-hardy type chrysanthemums will winter over safely provided they are in a well-drained location. The tops of all types should be cut about 6 inches above the ground and discarded (do not add them to your compost pile). The disbud types can be carried over safely if heeled-in in a cold frame with top raised about 1 inch. If a cold frame is not available, the clumps can be lifted, placed on top of the ground in a well-drained location, and covered with 2 inches of sand. Spray the clumps with the regular mixture to kill lingering insects and disease spores.

December

If the ground freezes early to a depth of about 2 inches, cover the clumps left outside with pine boughs, straw or other light airy mulch to a depth of 4 to 6 inches. Study the season's results. Cull out unworthy varieties and plan to add those you liked in the gardens of friends and fellow members. The catalogs will be out soon. Study them for new and interesting varieties.

Central Carolina

September

The buds of the large and medium

exhibition cultivars should be swelling at a fair rate. Towards the middle of the month other cultivar buds will begin to swell and color. Continue to disbud and spray for pests and diseases. By the end of the month many buds will be starting to show color. Keep laterals well tied to canes to keep them straight and also to support the bloom, which gets very heavy as it develops. Make sure you cut your cane just below the head of the bud. This will prevent the bloom from being damaged or destroyed. Keep a watch out for caterpillars.

Take the opportunity to visit other growers again this month. Make a point of checking on the classification of your cultivars. Begin preparing for the show by learning their names and classifications. Start filling out your show entry cards; this will cut down on the time it takes to get your cultivars into the show.

October

Remove any dead or decaying leaves. This helps air to move more freely and also helps with mildew control. Remove basal growths and side shoots. Keep checking for pests, etc. If things have gone well, now is one of the best times of the year. Blooms will be well on the way to opening and it's time to enjoy the last nine months' work. Continue checking and spraying for pests.

Blooms can be cut 48 to 72 hours before a show. Place stems in cold water with a ½ teaspoon of bleach per gallon of water. This helps to control bacteria. This time period also allows for grooming blooms, removing wolf florets, stubs, tears in leaves, removal of bad florets, and bug specks.

As you select your blooms for a show, mark the plants that produced your best blooms. These are the ones you want to keep for next season's cuttings.

Dates, times and fertilizers are a guide only. Individuals will form their own growing style suitable for them.

Georgia

August 23 – September

Switch the fertilizing program on August 23 to 5-10-15 sprinkled lightly over the mulch and water in. Immediately follow up with three tablespoons of 60% muriate of potash, one tablespoon of 34% ammonium nitrate, five tablespoons of fish emulsion to five gallons of water and apply one pint of this solution to each plant. This program should be continued on a two-week schedule until the chrysanthemum buds show color. This same program may be continued on a reduced basis of half strength until the blooms are mature.

Controlling insects, pests, and fungus infections will virtually eliminate most of the need for grooming at show time, providing the spray program is properly administered. The spray program is very important. A hand pump pressure-type spray is most important to spray fungicides and insecticides without leaving spray residue on the foliage and bloom. Always spray the underside of leaves to kill or control most insects and pests since this is where insects are most of the time. A fine mist is best to avoid runoff and residue build-up on the plants. A light mist or fog on top is good to finish the application and kill top feeders. Two weeks between applications is recommended unless a hard rain washes off the spray. Spray material should not be saved overnight since the material loses much of its strength after being mixed with water.

Buds should begin to form at the growing tip around September 1 to 15, depending on the bloom date for different cultivars. The terminal bud will have several small buds surrounding the terminal or lead bud. For a single disbudded bloom, all the buds surrounding the terminal bud should be removed by rolling out with your thumb, being careful to retain the center bud. For crown buds, the

same disbudding procedure should be followed by removing all buds at leaf axils except the lead bud. You need to disbud when the buds are about the size of a small pea, but be careful not to bruise or damage the lead bud.

October

Continue the spraying regime. About the first of October a frame should be constructed and covered with poultry wire to support a plastic cover. Four mil clear plastic should be placed over the frame and secured to protect the opening blooms from rain or frost. As the weather cools, the sides will need to be put into place. If all sides are covered by plastic, a fan should be placed near the top of the frame to maintain air circulation and keep down the possibility of bloom blight or botrytis. As blooms open halfway, cut fertilizer application in half. At this time, apply a very fine mist of systemic acting insecticide and fungicide to help control botrytis and insects.

Blooms should be cut at least 24 to 48 hours before entering the show. Place the stem into deep water immediately after cutting. If there is a very long time lapse before placing in water, cut off about one additional inch of stem. An individual container such as a tall narrow-necked bottle is very good to hold single specimens.

Ohio

September

Your timed pinch should have been 100 days prior to our show, which is usually held the first weekend in October. Continue watching for cabbage loopers, slugs and earwigs. Do not overwater. Protect from torrential rain storms, hail, groundhogs, chipmunks, deer, raccoons and other vermin. In other words, keep your mums in jail, especially if you live in the suburbs or in a rural area.

Stake your best lateral side shoots – disbud them early so that you won't have ugly scars in the leaf axils. Fer-

tilize every 1 – 2 weeks. Water deeply when needed. Shade with screening on 90 degree days to keep foliage from cooking or blooms from fading.

October

Start shading approximately 10-11 weeks before the show, or earlier for some blooms. Protect from early frost. Ohio is divided into three zones, so shading time varies. Some early bloomers may not require shading.

November

After the show, many growers have success in wintering over cultivars; others purchase new plants every year.

San Francisco Bay Area

September

Watch and use insect control of choice. Spider mites and worms can become worse this time of year. Bait or set out rolled newspapers for earwig control. Unsure you have earwigs? Go out after dark with a flashlight and see what is feeding on your plants. We suggest a small spray bottle of insect control be carried and used on all damaging pests.

Your buds should be selected. The easiest way is to select buds—the largest in the terminal cluster. First and second crown buds will be surrounded by vegetative growth. Remove vegetative growth and save the small bud. Visit experienced growers for examples and tips; get to know them, and they will gladly share their knowledge.

October

Color should be showing by early October for show blooms. Continue tying and staking your plants. Stake close to the bud, but not above it. As the bloom opens, the stake will damage the blooms. B-9 at a rate of one-half teaspoon per quart of water sprayed only on the neck below the buds will help keep the neck from getting overly long. Do not spray the buds.

At show time, select and enter a

few blooms, or a potted plant. Look for best form and color. Entering a show for the first time can be daunting—visit more experienced growers for tips and ask about showing at meetings. Remember, the best grower in your chapter previously conquered the same challenges as you!

November - December

After the shows, share leftover blooms. Cut down your plants to about 4" to 6". In our warmer California climate, you may need to water (but not overwater) during winter months. Relax, clean up your growing areas, and keep your area clear of weeds and dead leaves.

Sacramento

August/September

The arrival of the short days of fall (less than 14½ hours of light) with longer nights causes the growth to slacken and the flower buds to develop. In the Sacramento Valley, this usually occurs during August, and the flower buds begin to appear at most leaf axils in late August and September. It is very important to remove the excess buds in order to concentrate the growth in your chosen bud or buds, thus getting larger flowers. If you want a "bush" form in your garden, do not remove all the buds from the leaf axils and you will get smaller flowers.

Continue with your fertilizer program, and also be vigilant about spider mites. Most of all on hot August days, keep the plants well watered. If planted in pots, rotate them a quarter turn every week so that all blooms get equal amount of sun and stems grow straight. During September and October water potted mums every day. Do not let the pots dry out. On days when the temperature exceeds 100 degrees F and the plant is in the full sun, it should be watered twice a day. If it is placed in a plastic dish and water is allowed to collect around its base, it may die.

October

During the month of October, you should continue with your program of fertilizing.

November

Enjoy your chrysanthemums in your yard or in beautiful bouquets in your home. Share them with your friends!

Southwest (Phoenix, Las Vegas)

September

Fertilize your plants every 10 days in the ground or once a week in pots until buds are initiated and then weekly until color shows. Use a high-phosphorus type fertilizer such as 10-50-5 or 15-30-15. Spray for insects. Removal of extra buds (disbudding) will be necessary on disbudded varieties. Removal of side growth should be done on disbudded cultivars to ensure large blooms. Do not remove buds on cushion-type mums. In late September, potash 0-0-52 should be applied to disbudded varieties to strengthen stems and enhance bloom color. Sprinkle 1 tablespoon around each plant. Apply iron.

October

Fertilize weekly until your bloom is half open -- no further. Use high-phosphate fertilizer 15-30-15. Spray for insects if necessary, mainly aphids. Continue to remove extra buds from disbud varieties. Continue to remove side growth. Initial grooming of spray cultivars can be done.

November

Continue localized spraying for aphids if necessary. Enjoy blooms from early in the month through early December.

December

Early in December add fertilizer. Ammonium sulfate diluted 1 tablespoon per gallon. Spray for insects if necessary. Cut off stems with old blooms after they start to die. Initially cut stems to approximately 1 foot high.

Pacific Northwest

August - September

Around Labor Day when the buds are starting to break the membrane, bring them into a shelter. Wash the pots thoroughly around the bottom to remove moss and any residue that may have formed there. Clip off all excess roots that are hanging out of the drain holes and pick off all old and damaged leaves around the bottom of the plant because they harbor pests and fungi. Spray the plant with a good fungicide, insecticide, and miticide, taking care not to get any of the spray on the blooms. Watch for and destroy earwigs, worms, caterpillars etc. They can wreck blooms very quickly.

Top-dress the pots for one last time. Add about ½ to ¾ in. of your 9" mix or some compost to the pot surface and level it. Top-dressing the plants helps to finish them and also promotes new growth for next year's cuttings. Now is the time to cut off (not tear out) all new basal shoots that are developing. If your pot exhibited significant moss growth, add ½ tsp of hydrated lime to the top dress mix to help sweeten the soil. For colored blooms (not white or yellow), you may add ¼ tsp of ferrous sulfate (Fe_2SO_4) to enhance the color. In particular the *Athabasca* cultivar needs this Fe_2SO_4 to show a significant ring of pink tips on its blossom. Pink cultivars in general look more intense if they are well fed. Additionally, if you have not started feeding potash in your fertilizer formula then add ¼ to ½ tsp sulphate of potash to the top mix to harden off the plant and keep the bloom petals from being too soft.

Cut back to the final selection of laterals. Stake them securely and start getting the support shingles attached to the stem and the support stake. Stake and tie up all selected laterals and add support shingles under the blooms. Keep moving the support shingle up under the bloom as the

neck stretches. Use support shingles to straighten the neck and keep the bloom flat atop the stem. Finally, remove all side laterals as they appear on the selected stems below the bloom so that the bloom and leaves are all that are left.

For the bloom cycle, we reduce the fertilizer to half-strength immediately after taking the bud and at the same time switch to a different fertilizer formulation that is higher in potash content. Basically, we mix ½ tsp of our basic 20-9-20+ fertilizer with 1/4 tsp to 1/2 tsp of sulphate of potash per gallon of water. After the petals begin to open it is safe to increase the strength of this solution gradually up to 2 times or less of this formula to promote blossom growth.

Note: It's easy to overfeed the plant at this time and produce ragged, cocked, or deformed blooms; so increase the fertilizer sparingly. Watering is different at this stage also. Water more sparingly using about 1 pint per watering and do not water when the temperature is over 75 degrees. Use a small container for watering to keep from spilling water. Keep the finishing area dry and clean.

October - November

Once the membranes on the buds have broken and some petal tips are showing, it is imperative to get the pots under some kind of shelter where they will remain as the final bloom develops. The watering and fertilization program must also be modified to assure proper bloom development, and pest management and fungus control need to continue throughout bloom development.

Shelters can be garages, carports, greenhouses or temporary wood or plastic structures. Basic requirements are shelter from rain, dew, and winds; adequate daytime light (though it can be shady) or light supplements; temperature control; and ventilation.

Maximum temperature should be

kept below 80 degrees F. if possible. Above that temperature, the probability of bloom damage due to petal rot is high. If the shelter is exposed directly to the sun in early September, the temperature within it can skyrocket. Large fans can be used to increase ventilation and keep the temperature down.

In general, try to keep the temperature between 50 to 70 degrees for most of the finishing, but for the last few weeks of October, letting the nighttime temperatures dip into the 40s will probably accelerate your bloom development. If your temperatures dip into the 30s you will probably get pinking on the edges of some blooms.

Considerably less light is required during the bloom cycle than when the plants are actively growing, but nevertheless it is necessary in most cases to provide supplemental light in the area where you have sheltered the plants. If you are finishing in a greenhouse or similar structure, it will probably be necessary to add light filtration in the ceilings as the opening blooms generally cannot accept full sunlight through clear plastic or glass. You can use shade cloth or old white sheets to reduce the amount of sunlight.

The most common and functional method to supplement light is by hanging fluorescent light fixtures in the ceiling. Plain white lights work or you can buy Grow Lights which are reputed to be better. You can run the lights all day, 8-10 hours during the day or all night if you so choose. I prefer just the time during daylight hours. Some growers say that, in general, reflexing varieties like it light and cool while incurves usually like it warmer and less light.