

# BETTER POT MUMS

Ralph Freeman

In the interest of growers producing better pot mums, we are providing the following information from the 1981-82 Yoder Bros. products catalogue. If these and other sound cultural guidelines are followed, top-quality crops can result crop after crop after crop.

These production tips will review basic approaches, multiple bud removal, use of B-Nine, lighting, pinching and shading. If you wish more information, feel free to contact us.

## B-9 SENSITIVE VARIETIES

Some mum varieties are sensitive to B-9 in varying degrees. The Trophy family is the classic example. When B-9 is applied at the usual time (top breaks 1-1½" to 2" long) on B-9 sensitive varieties, the plants flower too short, or more often, the LOWER breaks are checked in growth and fail to develop to normal length. A few spray pot varieties, such as the Garlands in Winter, may not develop lateral buds in the spray cluster. A delayed first application of B-9 corrects this.

### For Late-Fall, Winter and Early-Spring Flowerings

Delay the first 2,500 ppm B-9 application until the top breaks are 4" to 4½" long.

**For Late-Spring through Early-Fall Flowerings**, two approaches can be followed:

1. Continue applying B-9 when breaks are 4" to 4½" long, but increase the concentration to 3,750 ppm, or higher if necessary.

2. Maintain use of a 2,500 ppm concentration, but apply EARLIER, when top breaks are 2¾" to 3" long.

These varieties benefit from a delayed first application of B-9.

#### Pot Mums

Always Pink  
Intrepid White & Gold  
Paragons  
Royal & Illini Trophy  
Snow Purple  
Spirit  
Surf  
Tip  
Torch, Red Torch &  
Yellow Torch  
Windsong  
Wild Honey & Wildfire

#### Daisy Pots

Dixie  
Garlands  
Pride  
Ritz  
Senorita & Senora  
Sophisticates  
Spark  
Spice



## B-9 Dips and Sprays for Better Height Control on Pot Mums

Background: At certain times of the year, or with certain tall or long internoded varieties, the conventional B-9 spray just does not do the job.

Plants get too tall, they lack compactness, or the plant stub stretches after pinching, causing upright and/or top-heavy plants.

In addition to the regular B-9 applications, two approaches can be utilized on problem varieties: the pre-plant dip, or a post-plant spray.

### 1. Pre-Plant Dip

Use 1,250 ppm

### a. Rooted

Hold a handful of cuttings by the root system; dip in the B-9 solution just long enough to thoroughly wet all leaves and stems. Then remove and pot. Allow B-9 to dry on the foliage before watering-in. Normally, by the time you are at the end of a bed, you can start watering-in those plants first potted.

### b. Unrooted

Remove unrooted cuttings from the box. Dip them in the B-9 solution, remove and place in a flat. Cover with cheesecloth to avoid dehydration and place in the cooler overnight. Stick the next day and go onto your normal misting program.

### 2. Post-Plant Spray

Spray rooted cuttings just as the cuttings establish themselves—approximately three to five days after potting.

The cutting will respond to this early application once the root system begins to establish itself. Concentration will vary from 1,250 to 2,500 ppm, depending on variety and time of year.

### Benefits of Dips and Sprays:

1. Eliminates after-pinch stretch.
2. Develops breaks closer together and lower on the plant.
3. Produces a wider breaking action.
4. Sum total—a more attractive plant with a sturdier understructure on troublesome varieties.

### Reminders:

1. Works on all varieties (if required) except Spirit, Spark and the Intrepids.
2. The dip is more effective than the spray.
3. Sprays are more practical for rooted cuttings, the dips easier for unrooted direct stick.

### Basic Approaches

1. AVOID LATE B-9 APPLICATIONS. Apply the late application about a week before one would normally remove the center bud. Later applications shorten peduncles and dilute flower color.

(continued on page 7)

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## Better Potted Mums

(continued from page 2)

2. CBR (center bud removal — removing 1-2 buds) should be done as the lateral buds elongate away from the terminal bud far enough to conveniently remove the center bud(s). Two buds can be removed as easily as one, when one is not enough to open up the spray formation.

Unfortunately, these approaches did not always solve the problem on all varieties, so a new technique has been developed called MBR (multiple bud removal).

### MBR (Multiple Bud Removal)

MBR is done much earlier than CBR (the traditional center bud removal). It is actually a second pinch.

#### How is it Done?

1. Tip pinch each break that develops from the first pinch. (The old Yellow Delaware tip pinch).

#### When is it Done?

1. When a minimum of 4, maximum of 6 leaves have developed on the breaks.

2. When you can just *feel* the bud, but not yet *see* it.

3. If the leaf count is there, don't wait to feel the bud. Pinching a little earlier is better than being later. A late pinch causes uneven growth and response.

4. If you see the bud before the proper leaf count develops, the variety is not suitable for MBR (Annes), but more likely the potential growth of the plant will not be maximized.

#### Benefits:

1. More attractive spray pots. Eliminates clubbiness.
2. Usable on many pot varieties.
3. Increases head size, particularly on the upright varieties.
4. Reduces height. Particularly on tall growers.
5. Eliminates cost and labor of one B-9 application on tall varieties.



### Reminders:

1. Minimum of 4 leaves before you MBR.
2. MBR when you can just feel the bud or earlier.
3. Also works on most disbud varieties except Annes and some of the soft-flowered varieties.
4. Response is the same as spray pots with center bud removal if done on time. Uneven and delayed response occurs if done when the bud is visible.



### Cultural Details

**Lighting:** The start of long-day timing (lighting) and planting occur at the same time. Long days maintain vegetative growth and help regulate the ultimate height of the plant. Long days are produced with lights which must provide ten foot-candles during the night. This schedule prevents premature budding and is recommended year-round.

Hours Per Night	Month
4	Oct.-March
3	April-May, Aug.-Sept.
2	June-July

**Pinching:** Pinching is based on the growth of the plant and not by a calendar. Therefore, pinch dates are not included in the Date Finder. Before pinching: (1) establish a good root system on the plants. Roots just to the bottom of the pot. (2) Develop 1½" to 1¾" of good new growth. (3) Once these requirements are met, pinch ¼" to ½" of new growth. (Pinching a few days earlier or later than normal will not affect the flowering date.)

**Shading for Daylength Control:** Shading for daylength control is used to produce a night, or dark period of 12 hours or more to initiate and develop flower buds. Black cloth, or poly shading must be used for spring, summer and early-fall crops. Shading should be started March 15 and discontinued September 15. A daylength of 12 hours or less occurs naturally the balance of the year. Light intensity under the cloth or poly must be two foot-candles or less.

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