

## Sumagic For Northern Growers

By John Erwin

### INTRODUCTION:

The popularity of Sumagic as a growth retardant has increased greatly. The reasons for this are:

- 1) Sumagic is an effective growth retardant on many of the bedding plant crops we grow, i.e. it is broadly effective.
- 2) Sumagic usually results in more uniform inhibition of stem elongation than Bonzi application.
- 3) Sumagic does not delay flowering as much as B-Nine.
- 4) The cost per application can be less than that for other growth retardants.

However, there are some problems when using this material compared to other, more traditional, growth retardants as well. Common problems include:

- 1) Effectiveness changes greatly with weather.
- 2) Effectiveness is dependent on the way it is applied.
- 3) Variation in effectiveness with cultivar and species.
- 4) Excessive effectiveness on some species—begonia.

### BACKGROUND:

Both Bonzi and Sumagic belong to a class of chemicals called triazoles. These materials are more effective on a part per million basis than any other growth retardants we have previously used (B-Nine, Cycocel, Arest). Sumagic is effective as either a spray or as a drench. However, it is very important to note that Sumagic is 2 to 4 x's as effective

as a drench than as a spray.

Sumagic is not absorbed by leaves. Instead, Sumagic is absorbed through the stem and roots of a plant. This is critical—if only leaves are sprayed effectiveness can be reduced compared to if stems and/or roots are applied. I believe, this is part of the reason why we need to apply more of this material later in the season when plants are larger to get the same effectiveness as we see earlier in the season—less material is applied to the stems and roots as more of the plant is covered with leaves.

As mentioned before, the effectiveness of Sumagic varies with species and cultivar. For instance, Sumagic effectiveness is considerably greater on blue Majestic Giant pansies than on yellow Majes-

*“To catch the reader's attention, place an interesting sentence or quote from the story here.”*

Responsiveness	Rate Early Spring	Rate Late Spring	Crops
Low Sensitivity	2 ppm	4 ppm	African Marigold, Celosia, Vegetative Coleus, Pentas
Medium Sensitivity	1 ppm	2 ppm	Petunia, Snapdragon, French Marigold, Salvia, Coleus, Verbena, Dianthus
Highly Sensitive	1/2 ppm	1 ppm	Impatiens, Geraniums, Vinca, Pansy, Drangonwing Begonia
Very Sensitive DO NOT APPLY!	≤ 1/4 ppm	1/2 ppm	Begonia, New Guinea Impatiens

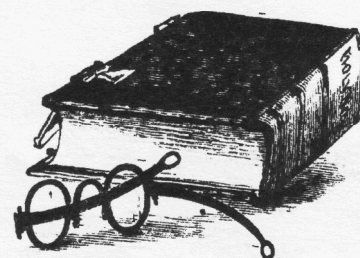
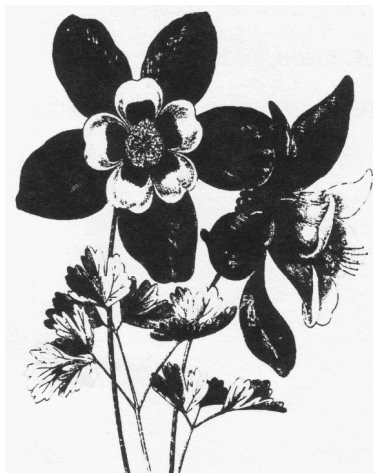




Table 2. Suggested drench rates for Sumagic application at different times in the growing season. Drenches should be 14 oz per pot. Apply a 'HOLD' rate to stop baskets or greatly limit elongation at the consumers home.

Plant Type	1/4 ppm	1/2 ppm	1 ppm
Impatiens	EARLY	HOLD	
New Guinea Impatiens	EARLY	HOLD	
Petunia		EARLY	HOLD
Ivy Geranium		EARLY	HOLD
Lobelia		EARLY	HOLD
Helichrysum		EARLY	HOLD
Hanging Torenia		EARLY	HOLD
Mixed Baskets		EARLY	HOLD



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tic Giant pansies.

In general, the response of plants to Sumagic can be broken down into four response groups as shown in Table 1.

It is critical to remember that the response of a crop to a given Sumagic spray or drench decreases as the season progresses. The response decreases because 1) early applications often result in some spraying of media resulting in a small drench application, 2) DIF (Day temperature—night temperature) increases, and 3) daylength increases which increases stem elongation for most species.

Drench applications are very effective in controlling stem elongation of species that are very vigorous. For instance, Sumagic drenches are great for controlling vegetative coleus, pentas, Bidens, and vegetative petunia elongation.

Drenches should be applied at either of two rates: A rate for general continued reduction of elongation, or a rate for nearly stopping elongation in order to hold a crop for delayed sales or to improve postharvest performance on crops where additional postharvest elongation may reduce crop quality (hanging impatiens baskets).

Suggested rates for drenches are shown in Table 2. Rates listed are for the mid-late season only. Therefore, early applications will need to be reduced further. Please note that drench applications are volume dependent. Increasing the volume of material applied will increase the dose of Sumagic applied and, therefore, the response to the drench. Apply 15 fluid oz. of drench solution per 10" hanging basket.

In addition, remember that

drench applications effectiveness is generally longer than that for spray application. Lastly, drench applications are particularly good for mixed hanging baskets. Growers can drench plants 2 days prior to planting in the mixed baskets to achieve more even stem elongation during the season, or make a general drench to the entire mixed basket when the response of species in the basket to Sumagic is similar.

**FINAL COMMENTS:**

Different growers can have very different results when applying the same rate of Sumagic. This is usually due to differences in spraying technique and greenhouse environment. For this reason, apply conservatively and do some of your own experiments!