

THE PRACTICAL USE OF PHOSFON-D AS A DRENCH IN POT-MUM CULTURE

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Large scale experiments were conducted with Phosfon used as a drench to potted chrysanthemums. Since April 1961, all pot-mums (5,000 per week) grown here at Patterson's Flowers have been treated with Phosfon.

The experiments indicated that Phosfon could be used as a drench after the cuttings were established in the pots and that Phosfon should be used after pinching in order to avoid poor breaking. All plants in these experiments were grown by the single-pinch method.

The varieties responded differently to the use of Phosfon. However, it was found to be most practical to use a weak solution of 125 to 150 ppm for all varieties and simply vary the time of application for the different response groups of pot-mums. Tall varieties had to be treated soon after pinch, whereas low varieties and varieties showing greater response to Phosfon should be treated several days after pinching.

One hundred twenty-five grams of powdered Phosfon was first dissolved in boiling water and then mixed with cold water in a 1,000 liter spray tank. (125 grams per 1,000 liters = 125 ppm). Six-inch pots were filled with this solution using a waterbreaker and moderate pressure. One thousand liters treated 5,000 pots. That equals 200 cc per pot, but some solution was spilled between the pots and the actual amount applied was about 175 cc per pot. Two men treated 5,000 pots in two hours.

To obtain the maximum effect of Phosfon, the soil should be on the dry side when drenched. Also, the soil should be allowed to dry following the Phosfon-drench before being watered again. In our practice the Phosfon-drench was given instead of an ordinary watering. A second application one week after the first may be given in the hot summertime to tall varieties in group I and II below.

The advantage of Phosfon-treatment is a lower, more compact plant that is easier to wrap and truck. The darker leaf color adds to the quality of the plants. Also, by using Phosfon more long days can be given, thus resulting in more leaves on the plants and better quality.

The disadvantage of Phosfon-treatment is the delay in flowering when plants are overtreated or treated too early. By using the schedule for treatment outlined below, the delay in flowering is often less than two days.



Figure 1. Cream Yellow Princess Anne, planted Nov. 11, lighted Nov. 11 to Nov. 18, pinched Nov. 24, treated with 125 ppm Phosfon-D solution (as described in text) on Nov. 27. Photo made on February 5.



Figure 2. Golden Yellow Princess Anne, planted Dec. 22, lighted Dec. 22 to Dec. 29, pinched Jan. 5, plant on left was treated with 125 ppm Phosfon-D solution (as described in text) on Jan. 8. Photo made on February 5.

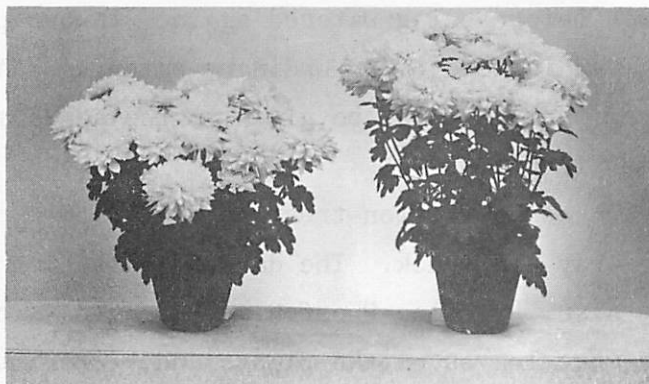


Figure 3. Golden Yellow Princess Anne, planted Nov. 11, lighted from Nov. 11 to Nov. 18, pinched Nov. 24, treated with 125 ppm Phosfon-D solution (as described in text) on Nov. 27. Photo made on February 5.

For Phosfon-treatment we are grouping the varieties into five groups:

- I. Tall varieties and varieties with low response to Phosfon as Lace, Jackstraw, Starburst, Ice Follies, Vedova, Venoya and all Princess Anne varieties.
- II. Relatively tall varieties as Personality and Caress.
- III. Medium tall varieties with good response to Phosfon as Quicksilver, Snowclad, Red Star and Blue Ridge.
- IV. Low varieties as Mermaid, Delaware varieties, Oregon, Floridian, Americana, Charm, Warhawk, and Wilson's varieties.
- V. Varieties extremely sensitive to Phosfon as Blue Ribbon, Scepter and Luminary.

We still have a lot to learn in the use of Phosfon on pot-mums, but from experiments and practice we have learned enough to make the following schedule:

Group	Days from Planting to Pinching			Long Days after Planting			125-150 ppm Phosfon-Solution Days after Pinching		
	Winter ¹	Spring ¹ Fall ¹	Summer ¹	Winter ¹	Spring ¹ Fall ¹	Summer ¹	Winter ¹	Spring ¹ Fall ¹	Summer ¹
	I	14	12	12	7	5	3	3	3
II	14	12	12	10	7	5	3	3	1*
III	14	14	14	14	14	14	10	10	8
IV	21	14	14	28	21	14	17	10	8
V	14	14	14	14	14	14	17	17	15

¹ In our latitude: Winter: Nov. 1 - Feb. 15
 Spring: Feb. 15 - May 1
 Summer: May 1 - Sept. 1
 Fall: Sept. 1 - Nov. 1

* Give a second treatment one week later.

By following this schedule, we can treat all varieties with Phosfon the same day, and all varieties are given the same strength solution and the same amount of solution. The only variation is in the time interval between pinching and application of the Phosfon-solution. We have found this method is faster and more accurate than applying the dry powder to the soil or dipping of pots in a Phosfon-solution before planting.

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