

# Weed Control in Shasta Daisy

costly hand weeding of commercial flower crop reduced in successful field tests with neburon in Santa Barbara County

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One of the more promising of the newer herbicides for weed control in commercial flower crops is neburon—1-n-butyl-3 (3,4-dichlorophenyl)-1-methylurea—a chemical low in water solubility and toxicity to man or animals.

To test the effect of neburon on Shasta daisy and to determine the extent of weed control during the growing period of the crop, an experiment was set up in an established field planting in Santa Barbara County.

The soil in the experimental plot is a Baywood loamy sand, moderately acid, developed from wind-modified sandy coastal-plain material.

The daisies were set in rows 24" apart with the plants spaced 12" in the row on April 23, 1957. The commercial neburon used in these experiments contained 18.5% of active ingredient and was applied as a suspension in water. On May 10, 1957, replicated plots, each 10'x4', were treated with neburon at rates of 2, 4 and 6 pounds of active ingredient per acre. Applications were made with a two gallon sprayer at the rate of 200 gallons per acre with frequent shaking of the sprayer and contents to insure maintaining an adequate suspension. The entire plot surface was treated with no attempt to keep the the suspension off the foliage of the daisies. The

Treatment	Average Number of Weeds per Square Foot		
	July 11 1957	Oct. 23 1957	March 14 1958
<b>Neburon</b>			
2 lbs./acre . . . .	1.3	3.0	22.7
4 lbs./acre . . . .	1.0	1.1	13.0
6 lbs./acre . . . .	0.2	0.05	2.3
Check . . . . .	17.1	23.5	27.2

field was irrigated 12 times from April 1957 to November 1957 with approximately 1.3" of water applied each time. Rainfall from November 1957 to April 1958 was 23.08".

The plots were hand weeded three times and each time all weeds in a 12" strip through each plot were counted. The first count was made July 11, 1957; the second on October 23, 1957; and the third on March 14, 1958. The weed species found in the check plots included annual bluegrass, bur clover, carpetweed, common chickweed, dandelion, filaree, lamb's-quarters, malva, mouse ear chickweed, pigweed, purslane, and wild mustard.

The control of weeds was excellent over a period of five months at all rates of neburon used in the test. At the end of 10 months there was no weed control at the low rate and the 4-pound-per-acre rate had lost much of its effectiveness. The 6-pound-per-acre rate gave excellent weed control for more than a year and

at no time was there any visible damage to the daisies.

Neburon is an effective weed killer at low rates and easily applied. It may be sprayed on the foliage of the daisies without injury to the leaves. However, treatment of daisies should be delayed until the planted area has received sufficient water to settle the soil well around the roots.

Agitation within the spray tank is necessary to keep neburon in suspension. Also, sufficient irrigation—or rain—is necessary after spray application to wet the soil to a depth of several inches. Weed seed that germinate from depths of 1" or more, are not killed. Hand weeding of those species is a precaution against the possibility of such weeds becoming established in epidemic proportions.

Neburon is particularly effective against shallow seeded weed species—such as purslane—which are particularly difficult to control by cultivation or hand weeding. In these tests, neburon at four pounds active ingredient per acre gave good control of all shallow seeded broad leaf weeds and grasses.

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Shasta daisy planting. Foreground treated with six pounds of neburon per acre. Untreated plot in background beginning at white stakes.



## VALENCIAS

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deficiency patterns in citrus leaves. However, the present study suggests that phosphate fertilizers do not have any deleterious effect on the zinc concentration in Valencia orange leaves when zinc maintenance spray applications are applied annually to the trees.

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