

CHEMICAL WEED CONTROL OF GLADIOLUS

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It is estimated that 400 acres of gladiolus are grown in Massachusetts. The New England Gladiolus Society has 52 members who grow 15,000 corms and up. A large

part of the production is marketed within the State. For the past four years, chemical weed control as pre-emergence has been demonstrated at the Waltham Field Station and at 7 of the 14 counties in Massachusetts. The materials that have been safe and fairly successful were Dinitro, CMU, 2,4-D, Chloro IPC and Crag No. 1.

During this past season several new chemicals and a few granular types were compared with the liquid forms at the Waltham Field Station and in the counties. The project of weed control was carried out in cooperation with the project on studies of diseases. The bulbs were donated by B. D. Goss of Acton, Flying Cloud Farms of Acushnet and Champlain Gardens, Burlington, Vt. There were 48 plots 10' x 10' with 16 different treatments, replicated three times. The granular forms were evenly distributed over the soil. All plots received an overhead irrigation for 15 minutes following the application of the chemicals. The treatment rate of application and results are given in the following table:-

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CHEMICALS APPLIED JUNE 8 - DATA TAKEN JULY 5
 - 1956 -

Code	Treatment	Type	Rate lb./acre	Weed ¹ Control
1	Dinitro 12%(Verm.)	dry	6	0*
2	Dinitro 9%(Clay)	dry	6	0+
3	Chloro IPC 4%(Clay)	dry	6	0+
4	Karmex DL 2%(Clay)	dry	1	2+
7	Alanap Gran. 20%(Clay)	dry	6	2
8	NaPCP Gran 15%(Verm.)	dry	10	4-
9	Crag 974 85 w.p. Gran.	dry	50	2-
5	Emid 75%	liquid	2	2-
6	Crag H-1 SES (Sesone) 90%	liquid	4	0+
10	Dinitro 53%	liquid	405	0
11	Crag 974 85% w.p.	liquid	50	1+
12	Chloro IPC 40%	liquid	6	0+
13	Karmex w.p. 85%	liquid	1	1+
14	Amino Thiozole 50%	liquid	1	3
15	Alanap 3-	liquid	6	1+
16	Na PCP	liquid	6	2

(1) Average of 3 replication

* Key to Evaluation of Effective Control

- 0 - no weeds
- 1 - 20% of area having weeds
- 2 - 40% of area having weeds
- 3 - 60% of area having weeds
- 4 - 80% of area having weeds
- 5 - 100% of area having weeds

Discussion of Results

The data show that dinitro liquid and granular controlled weeds equally well. The liquid Chloro IPC showed slightly better control than the granular form.

The commercial growers who do not have irrigation systems prefer the use of granular materials. The amateurs like the granulars because of the ease of application.

Granular grades were safer to apply over foliage for post-emergence weed control. These results suggest that additional research for application of granular materials for post-emergence treatments should be made before recommendations can be disseminated. The following chemicals gave good control of broadleaved weeds, but only partial control of the annual grasses:-

Dinitro liquid

Dinitro ver.

Dinitro Clay

Chloro IPC Granular

Crag Herbicides SES

Chloro IPC Liquid

Size and growth of grass was reduced.

The tests indicate that continued use of Dinitro materials either as liquid or granular can give effective pre-emergence weed control in gladiolus. The next best material in the test was the liquid Chloro IPC. The ease of application of granular materials warrants continued investigation for their development as pre-emergence and post-emergence weed control in gladiolus.