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DIFFERENTIAL SUSCEPTIBILITY OF SOME GLADIOLUS CULTIVARS TO GLADIOLUS THRIPS, TAENIOTHRIPS SIMPLEX (MORISON)

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SUMMARY

Two white flowered gladiolus cultivars, Professor Gourdrian and White Lass, showed less flower damage than more coloured commercial cultivars when exposed to field populations of gladiolus thrips, *Taeniothrips simplex* (Morison). This observation was made during insecticide control trials conducted during the 1975-76 and 1976-77 seasons at Ormiston in south-east Queensland.

I. INTRODUCTION

Some gladiolus cultivars have been reported as being more resistant to attack by gladiolus thrips, *Taeniothrips simplex* (Morison). Herr (1934) considered the cultivars Giant Nymph, America and Mrs. Frank Pendleton to be resistant and Wilson (1941) observed less *T. simplex* damage on the cultivars Shaylor, Golden Measure and Golden Eagle.

None of these more resistant cultivars are grown commercially in the Redlands District of south-east Queensland. However, a wide selection of other cultivars is grown to meet the colour demands of the local and interstate gladiolus trade.

Observations were made on a small range of commercial cultivars for any differences in *T. simplex* damage during trials in the 1975-1976 and 1976-1977 summers at Ormiston in south-east Queensland.

II. MATERIALS AND METHODS

Observations of the level of *T. simplex* damage to gladiolus blooms were made during insecticide trials carried out in the periods 12 September 1975 to 4 January 1976 (trial A) and 22 September 1976 to 5 January 1977 (trial B). Details of the experimental layout, harvesting procedures and damage assessment are described in Hargreaves and Cooper (1980).

Recordings of damage were made on the cultivars Attraction (mauve), Golden Boy (yellow), Lohengrin (mauve), Oscar (red), Professor Gourdrian (white) and White Lass (white).

TABLE 1

PERCENTAGE OF MARKETABLE SPIKES* HARVESTED BY CULTIVAR, FROM GLADIOLI TREATED WITH INSECTICIDES FOR CONTROL OF *T. simplex*

Cultivars	Trial A (September 1975—January 1976)						Trial B (September 1976—January 1977)			
	Untreated		Poor Control (dieldrin 0.05%)		Good Control (methiathion 0.05%)		All Treatments †		Untreated	
	Equiv. Mean	Trans.** Mean	Equiv. Mean	Trans.** Mean	Equiv. Mean	Trans.** Mean	Equiv. Mean	Trans.** Mean	Equiv. Mean	Trans.** Mean
Prof. Gourdrian (white) ..	33.5	0.62 b	84.3	1.16 c	96.3	1.38 b	93.7	1.32 b	50.5	0.79 b
White Lass (white)	22.8	0.50 b	78.2	1.08 c	97.2	1.40 b	86.1	1.19 +	59.2	0.88 b
Golden Boy (yellow)	14.0	0.38 ab	28.4	0.56 ab	67.7	0.97 a	72.0	1.01 a	14.9	0.40 a
Attraction (mauve)	1.3	0.11 a	16.0	0.41 a	88.6	1.23 ab	66.5	0.95 +	12.5	0.36 +
Lohengrin (mauve)	2.9	0.17 a	45.0	0.74 a	89.0	1.23 ab	63.3	0.92 a	6.7	0.26 a
Oscar (red)	1.3	0.12 a	13.9	0.38 a	80.5	1.11 ab	73.0	1.02 a	3.8	0.20 a

† Thirteen insecticides used by Hargreaves and Cooper (1980).

* Figures shown based on 982 and 1109 spikes in Trials A and B respectively.

** Inverse sine transformation.

+ Omitted from analysis due to missing values.

Values followed by the same letter do not differ at the $P = 0.05$ level of probability.

III. RESULTS AND DISCUSSION

A summary of the results of trials A and B is presented as table 1. In trial A, analysis of variance showed cultivar/insecticide treatment interactions. Subsequently comparisons for each cultivar were made within treatments. Few significant differences were found in treatments offering good control of *T. simplex*. However, in other less efficacious insecticidal treatments differences in cultivars became progressively more apparent. The white flowered cultivars, White Lass and Professor Gourdrian, suffered less damage than the darker flowered cultivars. In trial B, analysis of variance showed no significant cultivar/insecticide treatment interaction. Again, however, the white cultivars suffered significantly less damage than the more coloured cultivars.

IV. ACKNOWLEDGEMENT

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