

CHEMICAL CONTROL OF CERCOSPORA SPOT DISEASE OF AVOCADOS

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OPSOMMING

Geen betekenisvolle verskille is verkry tussen die verskillende swamdoderbehandelings nie, maar al die swamdoderbehandelings het betekenisvol verskíl van die onbehandelde kontrole.

Die laer konsentrasie (0,08% a.b.) van kaptafol blyk om 'n geskikte behandeling te wees vir die eerste bespuiting in middel-November, opgevolg deur 'n tweede bespuiting met benomiel 10,025% a.b.l of koper-oksichloried (0,255% a.b.l in iiddel-Januarie. Skynbaargee hierdieprogram geen oorblyfsel probleme op avokados nie.

SUMMARY

No statistical differences were found between the various fungicide sprays tested, but they all showed a significant controlling effect against the disease if compared to the untreated control.

The lower rate (0,08% a.i.) of captafol appears to be a suitable application rate for the first spray in mid-November, followed by a second spray with Benomyl (0,025% a.i.) or copper-oxychloride (0,255% a.i) in mid-January. This programme seems to give no residual problems on avocados.

INTRODUCTION

Considerable work has been done in the past four years on the chemical control of Cercospora spot disease of avocados at Westfalia Estate in the Northern Transvaal. It was previously found that Benomyl controlled the disease well at 0,025% a.i. concentration (Darvas 1977) and that two sprays applied during the summer months, provided satisfactory results (Darvas, 1978). A number of fungicides have been evaluated against the disease and captafol also proved to be effective. Some of the copper formulations were also promising (Darvas and Kotzé, 1979; Darvas and Kotzé, 1981).

This is a report on the results with captafol tested at various concentrations and in spray programmes with other fungicides.

RESULTS

TABLE 1: The control of Cercospora spot disease on Fuerte with various fungicide sprays

Treatment Number	Treatments	Number of applications	Date of applications	Average number of Cercospora spots/fruit	% Exportable fruit (<5 spots/fruit)
1	Benomyl 0,025% a.i. (standard)	2	Nov. 80 Jan. 81	6,3 b	73 a
2	Captafol 0,16% a.i.	2	Nov. 80 Jan. 81	5,3 b	79 a
3	Captafol 0,16% a.i. Benomyl 0,025% a.i.	1 1	Nov. 80 Jan. 81	4,6 b	82 a
4	Captafol 0,16% a.i. Cu-oxychloride 0,255% a.i.	1 1	Nov. 80 Jan. 81	7,5 b	69 a
5	Captafol 0,08% a.i.	2	Nov. 80 Jan. 81	5,6 b	77 a
6	Captafol 0,08% a.i. Benomyl 0,025% a.i.	1 1	Nov. 80 Jan. 81	4,1 b	86 a
7	Captafol 0,08% a.i. Cu-oxychloride 0,255% a.i.	1 1	Nov. 80 Jan. 81	4,5 b	82 a
8	Control (untreated)			15,9 a	31 b

Letters a and b differ statistically at 0,05 level (Duncan's multiple range test)

MATERIALS AND METHODS

Fuerte trees were used for the experiment at block 34 of Westfalia Section. There were eight randomly selected trees in each treatment and trees were sprayed in mid-November 1980 and in mid-January 1981 with high volume ground sprayers. An average of 240 fruits were harvested on 14 April and 14 May 1981 from each treatment and evaluated for the incidence of Cercospora spots.

The following fungicides were used: Benomyl 50% ai, captafol 80% ai, copper-oxychloride 85% ai. Nu film 17 was added to all sprays.

DISCUSSION

The statistical analysis of the data obtained from this experiment showed that all chemical treatments provided an effective reduction of Cercospora spot disease and that the percentages of exportable fruit were also significantly higher than in the untreated control. There were no statistical differences between the various chemical treatments. This was due to the relatively large variation which occurred in the experiment. It is also concluded that the residue problem with captafol (Darvas, 1981) may be reduced by using the 0,08% a.i. concentration in spray programmes with other

fungicides with captafol being applied first, early in the growing season.

REFERENCES

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