

## CONTROL OF CERCOSPORA SPOT

**JM DARVAS**

WESTFALIA ESTATE

**JM KOTZÉ**

DEPARTMENT MICROBIOLOGY AND PLANT PATHOLOGY, UNIVERSITY OF  
PRETORIA

### OPSOMMING

*Difolatan het 'n uitstekende beheer op Cercospora vlek verseker, maar dit het 'n onaangename reuk nagelaat self s vier maande na die laaste toediening.*

*Benlate, koperoksichloried en koperhidroksied het ook goeie resultate gelewer. B77, Baycor PP 296 en Aliette was oneffektief teen die siekte.*

### SUMMARY

*Excellent control of Cercospora spot was ensured by Difolatan, but it left an unpleasant odour on the fruit even four months after the last treatment.*

*Good results were obtained with Benlate, Cu-oxychloride and Cu-hydroxide. 677, Baycor, PP 296 and Aliette failed to control the disease.*

### INTRODUCTION

Cercospora spot of avocados is caused by the fungus *Pseudocercospora purpúrea* (Cke) Deighton and was first positively identified by Darvas (1977) in South Africa. Earlier the disease was known here as black spot or Phomopsis spot of avocados (Brodrick, Pretorius and Freaan, 1974). The ecology and control of Cercospora spot was thoroughly studied under Westfalia conditions (Darvas, 1977; Darvas, 1978; Darvas and Kotzé, 1979).

This is a report on the results of the chemical control experiment of the disease which was carried out in the past season.

### MATERIALS AND METHODS

Fuerte trees at block 34 of Westfalia Section were used for the experiment. Eight trees were selected at random in each treatment. They were sprayed by using high volume ground sprayers twice in the summer, first in mid-November and second in mid-January. One hundred fruit were picked from each tree on 23 May 1980 (giving a total of 8 800 fruit) and evaluated for the incidence of Cercospora spot.

The following fungicides were tested: Benlate (50% Benomyl), Aliette (80% fosetyl-AI), Cupravit (85% Cu-oxychloride), Difolatan (80% captafol), Kocide 101 (77% Cu-hydroxide), Glyodin experimental material, B77 experimental material, Baycor experimental material and PP 296 experimental material. Two experimental stickers, Plyac and Solvaïd were compared to the standard sticker Nu Film 17 in mixtures with Benlate.

## **DISCUSSION**

Unsprayed fruit showed a high incidence of *Cercospora* spot and 42% of the fruit was unsuitable for export.

From all the chemicals tested in this experiment, Difolatan gave the best results. The average number of *Cercospora* spots per fruit was 0,6 and 99 percent of the fruit was exportable. At harvest (four months after the second spray), however, an unpleasant odour could be detected on fruit sprayed with this product. Thus in future work, Difolatan should be tested at lower concentrations or in earlier applications to avoid residue problems on fruit.

Benlate at 0,025% a.i. with Nu Film sticker is presently used as the standard spray at Westfalia Estate for the control of *Cercospora* spot. This combination as well as Benlate with the experimental stickers, Plyac and Solvaïd gave good results.

The Cu-oxychloride containing Cupravit appeared to be slightly more effective than the Cu-hydroxide formulation of Kocide 101. Both of these copper compounds gave reasonable control.

B77, Baycor, PP 296 and Aliette were ineffective in controlling *Cercospora* spot. This is in contrast with earlier findings, according to which Aliette reduced disease incidence by about 50 percent on Fuerte (Darvas, 1977).

## **REFERENCES**

- BRODRICK, HT, WJ PRETORIUS and RT FREAN. 1974. Avocado diseases. Farming in South Africa, Avocado Series No. H1: 1 - 8.
- DARVAS, JM. 1977. *Cercospora* spot. SAAGA Proceedings of the Technical Committee 1977: 3 - 5.
- DARVAS, JM. 1978. *Cercospora* spot. SAAGA Research Report for 1978 Vol. 2: 42 - 44.
- DARVAS, JM and JM KOTZÉ. 1979. *Cercospora* spot of avocados. Research Report for 1979: 38 - 39.

**RESULTS**

**TABLE 1: Results of the Cercospora spot control experiment on Fuerte avocados**

Treatment number	Treatments	Average number of Cercospora spot per fruit	% exportable fruit (< spots/fruit)
1	Benlate 0,025% a.i. + Nu Film 0,02%	2,6	90
2	Benlate 0,025% a.i. + Plyac 0,03%	2,6	89
3	Benlate 0,025 + a.i. + Solvaïd 0,03%	2,7	90
4	Difolaton 0,2% + Nu Film 0,02%	0,6	99
5	Cupravit 0,3% + Nu Film 0,02%	3,1	87
6	Kocide 101 0,2% + Nu Film 0,02%	3,9	84
7	Aliette 0,3% a.i. + Nu Film 0,02%	11,4	57
8	Baycor 0,1% + Nu Film 0,02%	7,8	67
9	B77 0,15% + Nu Film 0,02%	7,1	68
10	PP 296 0,08% + Nu Film 0,02%	9,2	61
11	Control	9,6	58