

Annexure H: Cercospora Fact sheet



CERCOSPORA SPOT

Background

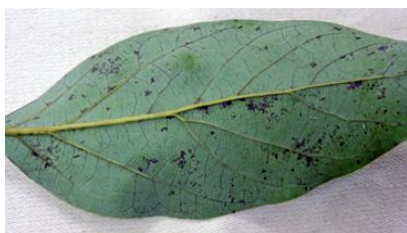
Cercospora spot is one of the most serious pre-harvest diseases affecting avocado. Losses of up to 70% have been reported on unsprayed trees. The disease affects all commercial cultivars with 'Fuerte' and 'Edranol' being the most susceptible cultivars.

Symptoms

Typical symptoms are found on leaves, stems and fruit.

Older leaves:

- Lesions first appear on the lower surface of the leaf.
- Lesions are angular, around 3 mm in diameter and purplish to brown in colour.
- As the disease progresses lesions are observed on both sides of leaves.
- Lesions become surrounded by a yellow halo.



Small purplish to brown angular Cercospora spot lesions on the lower surface of a 'Fuerte' avocado leaf.



Small purplish to brown angular Cercospora spot lesions surrounded with a yellow halo on upper surface of a 'Fuerte' avocado leaf.

Fruit:

- First sign is darkening of epidermis and swelling of underlying tissue which raises a small dark spot.
- Lesions become sunken, brown to black and cracks open as cells die and dry out. Cracks allow secondary pathogens such as *Colletotrichum gloeosporioides* to enter.



An infected 'Fuerte' avocado fruit showing characteristic Cercospora spot symptoms.

- Disease is confined to the rind, however during advanced stages the flesh may be invaded.

Causal agent

Pseudocercospora purpurea (Cooke) Deighton

Epidemiology

- Rainfall and temperature are the most significant parameters for conidia release. Water (dew) is required for infection. Fast drying orchards are less affected.

The fungus remains latent for 2-3 months before lesions are observed.

Control

Darvas' z-value model: $z = -58.99 + 3.22 (\text{mean weekly temp.}) + 0.18 (\text{weekly rainfall in mm})$ can be used to calculate spore load and when the first copper spray should commence. The model should however be used in combination with monitoring of fruit size and the first spray should be applied when the fruit is 25 mm in diameter and the z-value 15. Spraying when the fruit is 40 mm in diameter would be too late to slow down infections. After the initial application of a fungicide, fruit need to be covered with copper every 30 days until disease pressure is low, or two months before harvesting to ensure complete control.

Fungicides registered for control:

- Azoxystrobin
- Copper based products
- Benomyl and carbendazim: not for export.