

Kenya Avocado Industry Support Programme (KAISP)

Technical Note 5: Cercospora Spot

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Cercospora spot, caused by the fungus *Colletotrichum purpurea*, is one of the most common diseases of avocado in Kenya. The disease can affect all varieties of avocado but is particularly severe on the variety 'Fuerte' causing cosmetic damage on the fruit. The variety 'Hass' is rarely affected.

Symptoms

On fruit, the disease causes numerous dark brown to black spots and corky, often cracked scabs, commonly up to 3-5 mm diameter on the fruit skin. They do not normally develop into internal rots but cause significant cosmetic damage which can lead to the rejection of a large proportion of fruit for export. Cracks in the scabs can offer entry points for infection by the anthracnose fungus *Colletotrichum gloeosporioides*.

On fruit stalks (pedicels), the disease causes brown lesions that sometimes completely surround the stalk. Damage to the pedicel is restricted to the cortex and does not appear to lead to premature fruit drop.



Figure 1. *Cercospora* symptoms on fruit (left) and on pedicle (right).

On leaves the disease appears as relatively inconspicuous, angular, reddish-brown spots 2-4mm across. They occur singly or in clusters over the leaf surface. In cases of severe infection, adjacent spots can run together causing larger leaf spots. The spots are visible on both leaf surfaces of mature leaves. The disease does not cause significant damage to the leaf, nor cause leaf drop.



Figure 2. *Cercospora* symptoms on leaf upper (left) and lower (right).

Life cycle

The fungus survives in the tree in the leaf spots. Under wet conditions it forms clusters of spore-bearing structures (conidiophores) on the lower surface of the spots, on the lesions on peduncles, and on the spots on the fruit. The spores are dispersed by rain splash and wind and, under wet conditions, infect juvenile leaves, young fruit and pedicels. Infections on young fruit first appear as small black pinhead spots on the skin. They enlarge as the fruit grows to form the typical black circular spots and scabs.



Figure 3 Underside of leaf showing angular lesions constrained by veins. Clusters of conidiophores emerge through ruptures of the lower epidermis (left). Spores of *Cercospora purpurea* formed on underside of leaves (right)..

Control

The disease can be controlled by fungicides. While a range of fungicides could control this disease, chemical control is not feasible in most older orchards because of the high canopies, often steep terrain, and lack of spray equipment. Where young trees are managed to maintain a low canopy, fungicidal control could be considered if the appropriate spray equipment is available.

Because most expansion of the industry in Kenya is based on the more tolerant 'Hass' variety, the disease is not likely to become a serious issue for most growers. Should more susceptible varieties become popular, control programmes may be needed.

Where 'Fuerte' is being planted, plants should only be sourced from nurseries with a high standard of plant management. Purchased plants should be inspected to ensure freedom from *Cercospora* leaf spots and, wherever possible, not planted close to old, infected trees.

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