Pacific Pests, Pathogens & Weeds - Fact Sheets

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Eggplant anthracnose (390)

Photo 1. Anthracnose fruit spots, *Colletotrichum* species - young individual light-brown spots (above), multiple merging spots below.

Photo 2. Anthracnose spots of eggplant, *Colletotrichum* species, elongated along the length of the fruit.

Photo 3. Anthracnose of eggplant, *Colletotrichum* species, showing the large spots at the base of the fruit furthest from the flower stalk.

Photo 4. Sunken spots on eggplant, *Colletotrichum* species, showing black spore-bearing fruiting bodies in circular bands.

Photo 5. Anthracnose spots, *Colletotrichum* species, on eggplant, showing concentric circles.

Common Name

Eggplant anthracnose, eggplant fruit rot

Scientific Name

Colletotrichum species, particularly, *Colletotrichum capsici,* and *Colletotrichum gloeosporioides.* The sexual state is *Glomerella cingulata* (**see Fact Sheet no. 177**).

Distribution

Worldwide. *Colletotrichum capsici*: Asia, Africa, North America, Europe, Oceania. It is recorded from Cook Islands, Fiji, Niue, Papua New Guinea, Samoa, Solomon Islands, and Tonga. *Colletotrichum gloeosporioides*: Worldwide. It is recorded from American Samoa, Australia, Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, New Caledonia, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu (and more).

Hosts

Wide host range. McKenzie (2012)[1] states: "*Colletotrichum capsici* has been ... associated with fruit rots, stem die back, and on flowers and leaves causing blossom blight, leaf spots, etc. It is one of the main causes of chilli anthracnose, but it is not the only one. Depending on the chilli variety, *Colletotrichum acutatum*, *Colletotrichum capsici* and *Colletotrichum gloeosporioides* were all isolated from Thailand". They were also all isolated from chilli in Fiji (**see Fact Sheet no. 177**).

Symptoms & Life Cycle

On fruits of eggplant, the first signs of this fungal disease are small, light-brown irregular-shaped spots (Photo 1). Multiple infections are common. The spots darken, expand along the length of the fruit, and merge forming large brown slightly raised warty patches, especially at the base of the fruits (Photos 2&3). Single spots tend to be sunken (Photos 3&4), but whether single or merged they show light and dark-brown target-like rings more clearly seen at the margins of spots and patches (Photo 5).

As the spots as and become sunken, tiny, black fruiting bodies form in the spots.

As with similar infections on capsicum and chilli (**see Fact Sheet no. 177**), infection occurs at any stage of fruit development, but symptoms usually appear on the fruit when they are about to ripen. Warm wet weather, with temperatures around 27°C, and humidity above 80%, are also likely to be ideal for disease development, with fruit wetness a particularly important factor as it is with capsicum and chilli anthracnose diseases.

Spread of the fungi over short distances is by spores in wind-driven rain, and probably on insects and tools. Survival between crops is in debris in the soil and on or in seed. Seed is also a method of long-distance spread. It is likely that survival also occurs on other crops and weeds; these fungi have a wide host range.

Impact

This is a serious disease; in Fiji, losses are estimated to be 10-25% of the crop.

Detection & inspection

Look for the characteristic brown scabby rots on the fruit, often largest at the furthest end of the fruit. Look for the distinct light and dark brown rings at the margins of individual spots, and sometimes on the patches. Look for the black fruiting bodies in the larger sunken spots, seen clearly with a hand lens.

Management

CULTURAL CONTROL

Before planting:

- Use disease-free seed. If unsure if it is disease-free, treated at 50°C for 30 minutes. But do not guess; use a thermometer and accurately time the treatment.
- Check each seedling in the nursery for freedom from leaf spots before taking the seedlings from the nursery to the field.

During growth:

- Avoid overhead irrigation as water splash spreads these fungi, or if overhead irrigation is unavoidable, apply early in the day so that the plants are dry before evening.
- Control weeds and volunteer (self-grown) eggplants.

After harvest:

- Do not plant eggplant in the same land if the last crop was diseased; leave a gap of 3 years and during the period of rotation avoid

crops in the capsicum family, for instance, tomato, capsicum or chilli.

- Plough in or remove crop residues in infected fields.

CHEMICAL CONTROL

If a fungicide is needed, use i) protectant products - mancozeb, a copper product, e.g., copper oxychloride or copper hydroxide, or chlorothalonil, or ii) systemic products - triazoles or strobilurins (note, if using these fungicides, alternate with protectant products to prevent development of resistant strains). Apply sprays beginning at flowering, and 7-10 days thereafter, depending on the weather.

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[1]McKenzie E (2012) Pathogen Identification Manual 3: Export Commodities. Ministry of Primary Industries and Landcare Research New Zealand Limited.

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