

Black Sigatoka

What is black Sigatoka?

Black Sigatoka (sometimes referred to as black leaf streak) is caused by the fungus *Mycosphaerella fijiensis* and is one of the most devastating leaf diseases of banana around the world. Severely infected leaves die, significantly reducing fruit yield and causing mixed and premature ripening of bunches.

Leaf symptoms of black Sigatoka are very similar to those produced by yellow Sigatoka (present in Australia) and Eumusae leaf spot (not present in Australia).



Advanced stage of black Sigatoka on banana leaf

Jeff Daniells



Black Sigatoka-infected banana plant

Jeff Daniells

What do the symptoms look like?

Black Sigatoka leaf spots begin as minute (1mm) reddish-brown flecks on the lower leaf surface that gradually increase in size to form dark linear streaks (4–12mm) parallel to the leaf veins that are visible on both leaf surfaces. As the streaks mature they expand, becoming oval spots often with a distinctive yellow halo. As the lesions mature further they become sunken and the centre turns grey. In susceptible cultivars, high levels of disease can cause large areas of the leaf surface to die.

What should I look for?

- Narrow streaks parallel to the leaf veins.
- Early lesions that are reddish-rusty brown and most easily seen on the underside of leaves.
- Developing lesions becoming dark brown to black, with lesion centres eventually turning grey and becoming sunken.
- Heavy infection levels causing large areas of leaf to die, eventually leading to total leaf collapse.
- Leaf death reducing fruit yield and causing uneven ripening.

What can it be confused with?

Yellow Sigatoka (caused by *M. musicola*) or Eumusae leaf spot (caused by *M. eumusae*).

How do I distinguish black from yellow Sigatoka?

In black Sigatoka, early leaf streaks are reddish to rusty-brown, longer and broader than yellow Sigatoka and most evident on the lower leaf surface. In comparison, early streaks of yellow Sigatoka are yellow-green, narrower and shorter, and more prominent on the upper leaf surface. Both pathogens can be present on the one plant.

Laboratory testing is required to reliably distinguish these pests.

How is it spread?

Infection is favoured by hot, wet and windy weather. The pest can be spread by the movement of infected plant material, or by fungal spores produced on leaf lesions and within dead leaf material on the plant or in the trash. Black Sigatoka spores can be dispersed by wind or by water splash.

The unfurling and youngest fully expanded leaves on large plants and suckers are the most susceptible and as the leaves mature they become resistant to infection. The pest can also be spread by contaminated fruit shipments.

Where is it now?

Black Sigatoka is present in all major banana exporting countries, including in South East Asia, India, China, the Pacific islands, East and West Africa, Hawaii, Grenada, Trinidad, Central and South America. It also occurs in Papua New Guinea and on several islands in Torres Strait.

There have been several outbreaks of black Sigatoka on the Cape York Peninsula during the 1980s and 90s. The only outbreak in an Australian commercial production area occurred in Tully, North Queensland in 2001 – the successful eradication of the disease was a world first. Reinstatement of mainland Australia's pest-free status for black Sigatoka occurred in 2005.

How can I protect my farm from black Sigatoka?

Check your farm frequently for the presence of new pests and unusual symptoms. Make sure you are familiar with common banana pests, so you can tell if you see something different.

If you see anything unusual, call the Exotic Plant Pest Hotline on 1800 084 881.

**EXOTIC PLANT PEST HOTLINE
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