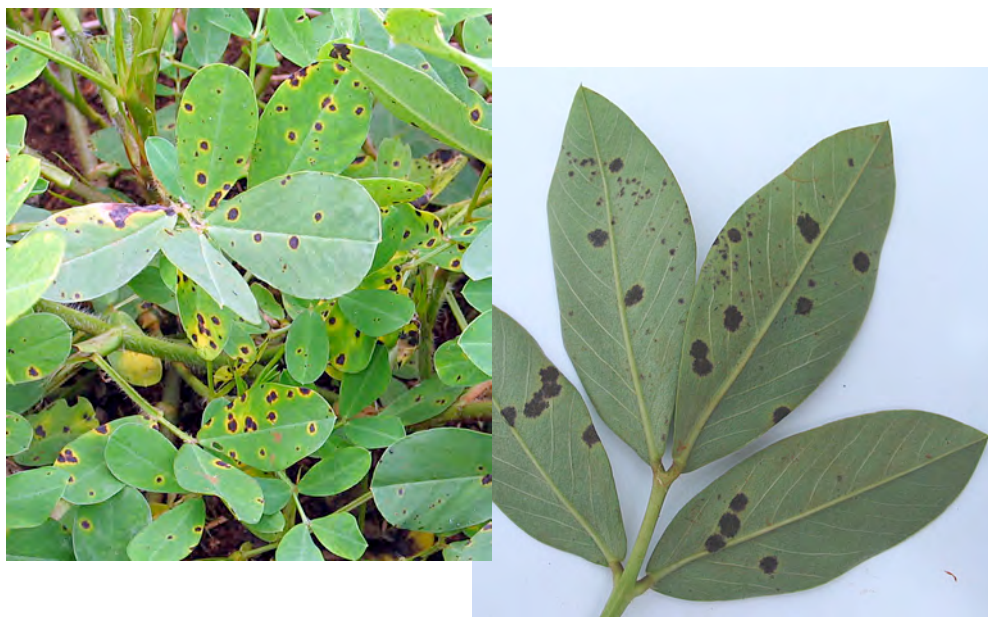


Extension Fact Sheet 36: Peanut Leaf Spots



Common name: Peanut leaf spot

Scientific names: *Mycosphaerella arachidis* (Early leaf spot) and *Mycosphaerella berkeleyi* (Late leaf spot). These are the names of the fungus that produce sexual spores. Where only asexual spores are present, the fungus is known as *Cercospera arachidicola* and *Cercosporidium personatum*, respectively.

Hosts: The fungi infect peanuts, and other plants belonging to the genus *Arachis*.

Damage

Infection causes early death of the leaves and yield loss. It is not known what losses these diseases cause in Solomon Islands, but it is likely that they reduce yields by 50%, probably much more.

Biology and Life Cycle

It is difficult to tell the two leaf spot diseases apart, except that one appears later than the other. The Early leaf spot (photo, left) is supposed to have a more obvious yellow margin around the brown spot, but this is not always the case. The Late leaf spot (photo, right) is black rather than brown on the underside of the leaf, but this is not always obvious. Examination of the spores under a microscope is needed to tell the fungi apart.

The first sign of the diseases are spots on the older leaves. These spread rapidly to leaves of all ages. Spots also occur on the petioles. The brown or red-brown leaf spots

are roughly circular up to 10 mm diameter, often with a yellow margin. The spots are darker on the under surface of the leaf.

Masses of spores are produced on the spots, but a hand lens is needed to see them. These are spread by wind and rain splash. The spores germinate in water on the leaf surface, infect and produce more spots and spores. The life cycle takes 10-14 days.

The fungi survive in crop remains.

Detection and inspection

Inspect plants regularly, at least once a week, looking for spots, especially on the older leaves, where infections first occur.

Management

Cultural control:

Cultural control is important. The following should be done:

- Leave at least 1 year between crops planted on the same land, so that the remains of the old crop decomposes before another crop is planted;
- Preferably, remove and burn or bury the remains of the crop after harvest.
- Plant new crops as far away as possible from old crops, especially those with leaf spots;
- If it is not possible to avoid planting near old crops, do not plant down wind from them; otherwise, spores will easily spread to the new crop;

Resistant varieties:

There is no information on the differences between varieties grown in Solomon Islands. There are varieties with resistance in Papua New Guinea.

Chemical control:

- Carry out regular inspections;
- Spray as soon as spots are seen, even if they appear only on one or a few plants;
- Spray regularly: 10-14 days is best, continue until 14 days before harvest.

Spray more often if:

- The first treatment is late and there are many plants with spots. In most cases, spraying should begin no later than 30-35 days after planting;
- Rainfall is high and control is poor.

Use chlorothalonil (the trade name is Bravo). It is good for leaf spots and also rust disease. Copper fungicides can also be used. **FOR BOTH FUNGICIDES, READ THE INSTRUCTIONS ON THE LABEL BEFORE SPRAYING.**