

# Alternaria leaf spot and bacterial leaf blight

## Alternaria leaf spot (ALS)

- Summary** Two *Alternaria* fungi, *A. brassicae* and *A. brassicicola*, cause these leaf spots on most brassica species.
- Identification** *A. brassicae* causes light brown circular spots with large yellow margins on leaves in autumn and early winter, mainly in the South Island. *A. brassicicola* causes dark circular spots with narrower yellow margins on leaves in summer, mainly in the North Island.
- Importance** ALS reduces leaf efficiency, decreasing crop yield and feed quality.
- Spread** ALS spreads via wind-borne spores produced by lesions on crop residue or weeds. Wet, humid weather favours spore production. Infected seed can also introduce infection into a crop.
- Prevention and management** Sowing clean seed minimises infection, along with good cultivation to work in all brassica crop residue. Grazing early forage that is becoming infected effectively contains the spread of the disease.



ALS on kale.

## Bacterial leaf blight (BLB)

- Summary** The two common bacterial leaf diseases in brassicas are bacterial leaf blight and *Xanthomonas* leaf blight (BLB). Both affect a range of crops and have a similar biology.
- Identification** BLB is typically seen as light brown-black spots with narrow to wide yellow halos. Pathogens often spread down leaf veins giving them a characteristic black appearance. Infected leaves become yellow and die prematurely. Symptoms are sometimes confused with downy mildew (see page 144).
- Importance** Damage to leaves can be severe and result in reduced feed quality and quantity.
- Spread** BLB survives on weeds and crop debris in the soil. Warm, wet and windy conditions assist the dispersion of spores, which enter the host tissue through wounds or natural openings. Infected seed can also spread BLB into new areas or crops.
- Prevention and management** Sowing clean seed minimises infection, along with a three year rotation following an outbreak of the disease. Careful weed control is also recommended, as is keeping pest populations in check to minimise damage that can become a portal for infection.



BLB in kale.