

# Brassica pest and disease

Brassica establishment can be compromised by occasional localised and seasonal pest and disease attack. Their impact can usually be minimised by management. Once established, brassicas are normally relatively disease-free compared with other crops.

Table 3. Summary of the key pests and diseases to affect brassica crops

Condition	Impact on plant	Control
<b>Plant pests</b>		
<b>Red legged earth mite</b> (Halotydeus destructor)	Sap sucked from plant tissue, gives plant a burnt appearance	Chemical
<b>White butterfly</b> (Pieris rapae)	Leaf feeding, leaves a skeletonised leaf with leaf ribs remaining	Chemical
<b>Lucerne flea</b> (Sminthurus viridis)	Leaf feeding, feed between leaf veins, plants left with a white blanched look	Chemical, heavy grazing
<b>Cutworm</b> (Agrotis ipsilon aneituma)	Plants, especially seedlings, and leaves are ripped off at or below ground level	Chemical, crop hygiene
<b>Cabbage moth</b> (Plutella xylostella)	Young larvae burrow in and feed on internal leaf tissue, older larvae feed on lower leaf surface, larvae damage is similar to that caused by leaf miner	Chemical
<b>Leaf miners</b> (many species)	Larvae create tunnels and live within leaf tissue, tissue damage may reduce photosynthetic activity and limit growth at this time, damage is similar to that caused by Cabbage moth	Chemical
<b>Aphids</b> (many species)	Sap suckers that weaken plants, reduce yields, carry viral diseases, mainly attack summer crops	Chemical, tolerant cultivars, some resistant cultivars to some aphid species

For specific advice on pest and disease identification and control contact your local technical representative.

## summary guide



Slug damage in kale



Leaf miner damage

Condition	Impact on plant	Control
<b>Viruses</b>		
<b>Turnip Mosaic</b>	Stunted growth, mottling and crinkling of leaves, yellowing, leaf death, poor bulb development	Control of vector aphids
<b>Beet Westerns Yellows</b>	General stunted growth, purpling of leaves	Control of vector aphids
<b>Cauliflower Mosaic</b>	Poor vigour, can attack all brassica species	Control of vector aphids
<b>Fungal diseases</b>		
<b>Clubroot</b> ( <i>Plasmodiophora</i> spp)	Causes irregular swelling, wilting, stunted growth, plant death	Crop rotation (6 years in high risk areas), hygiene, resistant cultivars
<b>Leaf spot</b> ( <i>Alternaria</i> spp)	Small dark lesions and dark sooty mould on leaves, may lower yields	Chemical
<b>Fungal blackleg</b> ( <i>Leptosphaeria maculans</i> )	Whitish spots and patches on leaves containing small black spots, development of cankers at base of stem, plant death	Crop rotations, crop hygiene
<b>Sclerotinia stem rot</b> ( <i>Sclerotinia sclerotiorum</i> )	Small dark spots on older leaves in cool wet conditions	Rotation with grasses and cereals
<b>Leaf spot</b> ( <i>Alternaria</i> spp.)	White lesions and white cottony growth in wet weather, black sclerotia form inside stem, wilting and stem death	Chemical
<b>Black rot</b> ( <i>Xanthomonas campestris</i> )	Attack on vascular system in warm humid conditions, yellowing of leaf margins, wilting, leaf loss	Crop rotation
<b>Nutrient deficiencies</b>		
<b>Brown heart</b>	Boron deficiency, swedes and turnips	Soil testing, B fertiliser applications

Adapted from: Ayres and Clements, *Forage brassicas Agfact 2.1.13, 2002*

### ***Brassicas as a biofumigant***

Many brassica species are known to have biofumigant properties. Their chemical make-up allows the suppression or control of a range of insects, nematodes and fungi. Early studies at Wollongbar Agricultural Institute indicated that brassicas may specifically reduce the fungal disease of kikuyu, commonly known as Kikuyu Yellows *Verrucalvas flavociens* (Slack & Fulkerson, 2002).