

Leaf distortion

Cyclamen mite (Phytonemus pallidus), foliar nematodes (Aphelenchoides ritzemabosi Ditylenchus dipsaci), calcium deficiency, virus, herbicide damage, aphid feeding

Damage:



Cyclamen mites



Foliar nematode infection

Photo credit Wayne O'Neill, DAF,
QLD



Calcium and/or boron deficiency



Viral infection



Strawberry lethal yellows (phytoplasma)



Herbicide damage



Aphid feeding

Identification:

Cyclamen mites feeding in the crown on leaves as they develop causes the newly emerging leaves to be crinkled, hardened, and stunted. Cyclamen mites can be seen with a hand lens or microscope along the veins of leaves just emerging from the crown, not yet unfolded.

Aphid feeding on young foliage can cause strawberry leaves to distort as they grow. Look closely for white aphid skins and insects on the undersides of leaves.

Foliar nematodes can cause leaf crinkle and stunting, but are very rare. They make the centre leaves stunted and give a mild distortion.

Many different **viruses** cause leaf distortion such as strapping or buckling, as well as discolouration.

Accurate diagnosis of either foliar nematodes or virus infection will require a diagnostic lab. If it's a single plant showing damage, it's often more practical to remove and destroy it.

Calcium and/or boron deficiency can cause young leaf distortion due to cell wall death while leaves are still expanding. It usually shows up when there's a limitation in the plant's ability to take up Ca or B from roots and move it to the developing leaves – caused by drought; water logging; unhealthy roots; wrong soil pH; humid, still conditions – and rarely an actual lack of Ca/B in the soil.

Strawberry Lethal Yellows is caused by a phytoplasma infection, which is insect vectored. The whole plant will be affected, discoloured and with an upward leaf curl, but with no powdery mildew spores seen under the leaves.

Herbicide damage is often diagnosed by the pattern in the field. If damage occurred in the plant nursery, it can sometimes be seen in a "bundle count" pattern. Herbicides that act by disrupting plant hormones (such as 2,4-D or chlorypyralid) cause twisting, while glyphosate can cause leaf cupping and yellowing.