



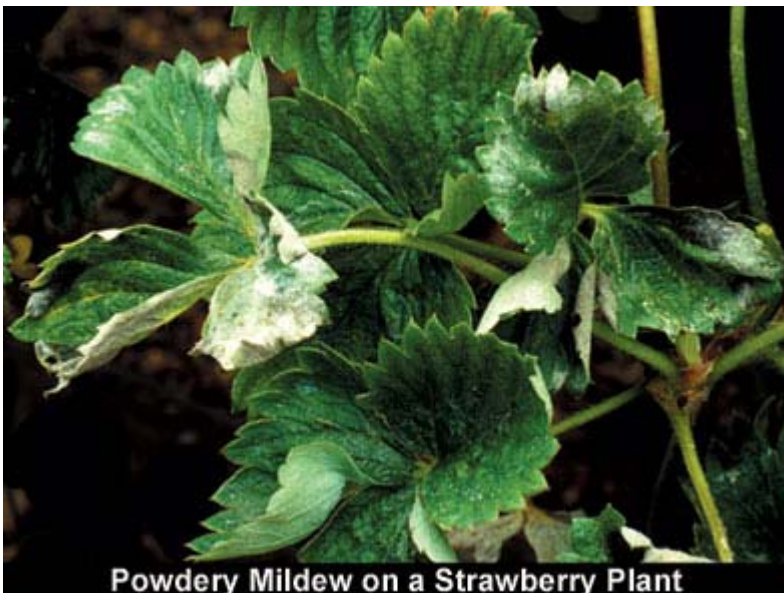
Powdery Mildew

There are many species of Powdery Mildew and the symptoms are similar, coating buds, shoots, leaves and flowers in a fine dusting of white powder, appearing from late April onwards. It is often associated with humid conditions, but grows particularly rapidly during periods of hot, dry weather. The fungus is normally host specific, meaning that they will often affect plants from just one family, for example the Apple Mildew fungi is different from the one affecting strawberry plants. This fact sheet covers Powdery Mildew on strawberries, raspberries, grapes and stone fruits. For mildew on apples, pears and quince please see our fact sheet on Apple Mildew.

DAMAGE

Strawberries

Purple spots appear on the upper surfaces of the strawberry leaves and on the undersides a white, mealy fungus will be found. As the disease progresses, the leaves dry up and their edges curl upwards, giving the infected plants a characteristic appearance as if they are suffering from drought.



Powdery Mildew on a Strawberry Plant

From the leaves the mildew may extend to the blossoms. In severe attacks the flowers themselves become mildewed. Such flowers are deformed, often having dark pinkish petals, and sometimes the petals do not open.

The fungus later spreads to the fruits, causing distortion and giving them a dull appearance with protruding seeds. If the fruit is attacked early, it may dry up before it ripens.

Raspberries

Powdery Mildew on raspberries is very similar to that on strawberries. The mycelium is present on the undersides of the leaves but causes a yellowing of the veins on their upper surfaces and this is very difficult to distinguish from virus infection. The effect on growth of the new canes is minimal and rarely, if ever, serious. The white mycelium growing on the surface of the berries detracts from their appearance, reduces size and can cause distortion.

Grapes

Occurring on both indoor and outdoor vines the mycelium is whitish/grey in colour. The first signs can be hard to detect and consist of small powdery patches on the leaves that spread and merge to cover the foliage, stems and fruits. Symptoms can vary according to the level of infection and leaves can become discoloured, distorted and die. Infected blossoms may either fail to set fruit, or produce fruit that then develop weblike, russeted scars, split or drop prematurely. Damaged fruits are then open to infection by grey mould.

Stone Fruits

There are several different species of Powdery Mildew that can affect stone fruits but the effect is the same with them all attacking the new growth including buds, shoots, leaves and flowers. In severe cases it can cause russetting and splitting of the fruit. New growth is often stunted, distorted, and covered with a white, powdery growth. One of the species *Podosphaera pannosa*, which affects peaches, plums, apricots and nectarines, also attacks roses and therefore it is advisable to be vigilant when growing any of these trees in the same vicinity as rose bushes, as if one is infected the other may suffer, therefore both should be carefully monitored and treated accordingly.

CONTROL

Non Chemical Control

The following measures should be taken-

- In mild cases pick off, or prune infected leaves and shoots as soon as they are seen and destroy.
- In autumn rake up and burn fallen leaves to help reduce the amount of infectious spores around the following spring.
- Mildew tends to be more severe on plants/trees that are suffering from dryness at the roots. It is therefore important to water before the soil dries out completely. It is also advisable to mulch in the spring to help conserve moisture.
- Avoid using too much nitrogen rich fertiliser as this can result in an abundance of soft new growth which is more susceptible to Powdery Mildew.
- Prune branches on overcrowded trees to improve air circulation. This should only be done between late April and mid August with stone fruits to avoid any risk of Silver Leaf infection.
- Prune overcrowded shoots on grape vines to improve air circulation. Indoor vines should be kept well ventilated.
- Avoid overhead watering as this can spread the infectious spores.

Chemical Control

Organic Fungicides (Based on a blend of plant & fish oils)

Spray with Bayer 'Organic 2 in1 Pest & Disease Control' which is suitable for treatment of Powdery Mildew on all fruiting plants, following the manufacturers instructions.

Sprays based on mineral lattice/urea a natural foliar feed that appears to also control Powdery Mildew by physically removing active mildew spores from the leaf surface.

SB Plant Invigorator

Systemic Fungicides (Grapes only)

Spray grape vines with Difenconazole (Westland 'Plant Rescue Control' concentrate), following the manufacturers instructions.

USE CHEMICALS SAFELY: ALWAYS READ THE LABEL

When using chemicals it is most important to follow the manufacturer's instructions precisely. Only use on the fruits that are listed on the manufacturer's label. An accurate weighting machine and measuring cylinder should be obtained. Chemicals can be wasted by making concentrations unnecessarily strong or by making them too weak and ineffective. Furthermore, if chemicals are too strong they may cause some damage to the foliage.