Apple powdery mildew

GWF205
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A common fungal disease of apples which occasionally also affects pears. Fortunately, there are steps the gardener can take to prevent it.

Q What is apple powdery mildew?

A It's a very common fungal disease which turns the young shoots of apple trees white. Pears may also suffer powdery mildew attacks, which should be dealt with in the same way. The fruits are rarely affected, but so much foliage can be destroyed that the tree's vigour, and consequently next year's crops, could be reduced.

Q How do I recognise this disease?

A The most distinctive symptom is a greyish-white powder covering younger leaves and stems. The leaves will be distorted, and blossom may wither and drop. Often only a few shoots will be affected at the beginning of the disease.

Q What causes it?

A A fungus (*Podosphaera leucotricha*) is responsible. It overwinters in the buds, then affects the leaves and shoots.

Q Can you tell me more about it?

A Apple powdery mildew overwinters in buds which were infected the previous summer. When conditions warm up, the resulting shoots are stunted and whitened. The white powder consists of spores or 'conidia' which are spread on the breeze, infecting shoots, leaves and occasionally fruit during the summer. The flowers, too, can be infected by overwintering fungus in the buds. Infected flowers are pale with narrow petals and they don't set any fruit.

In severe attacks whole shoots can lose their leaves, except for a tuft of new foliage at the tip.

The fungus covers the leaf surface with white threads or 'hyphae', and feeds on the tissue beneath. During summer you may see tiny black dots in this white mass of threads. These are resting bodies that can survive the winter, releasing spores in the spring.

Q Will it spread to other plants?

A There is no danger of it spreading – apple powdery mildew only affects apples and, occasionally, pears and quinces. However, there are many different kinds of powdery mildew that affect other plants.

Q How do I control it?

A Carefully removing affected leaves when they first appear in spring, so that the powdery spores are not shaken on to other leaves, can be effective with a small tree. Later, cut off and dispose of the worst-affected shoots, and try to keep the tree well-watered in dry spells.

Q How do I prevent it in future?

A Healthy trees are less susceptible to this disease. In particular, make sure they are not going short of water – this is a common problem if they're planted near walls or fences. Irrigation is the only fail-safe way of making sure your trees have enough water. However, you may find that a mulch of bark, compost or straw, applied in April, will help retain the winter rain and reduce mildew attacks.

In winter, make sure you remove any distorted or 'silvered' shoots or buds. These reveal where the fungus is overwintering. Cut back the branch to a point several buds below where the visible distortion or silvering stops.

Q Can apple powdery mildew be sprayed?

A There are chemicals approved for spraying apple powdery mildew but in our trials we found them to be ineffective, and so would not recommend them.

Q Are there any organic options?

A Sulphur dust is acceptable to organic growers and is a traditional mildew control. However, there are some apple varieties that are sensitive to sulphur or 'sulphur shy'. Examples of these are 'Lane's Prince Albert' and 'Stirling Castle'. If in doubt, do a trial dust on just one small branch of each kind. Remember that sulphur is a preventative fungicide and will need repeated applications for your tree to be protected.

Q What about less susceptible varieties?

A Any apple variety can get apple powdery mildew, but some varieties show above average resistance. Dessert varieties include:'Falstaff' 'Ashmead's Kernel', 'Egremont Russet', 'Ellison's Orange','Pixie', 'Golden Delicious', 'Jupiter', 'Red Devil', 'Scrumptious', 'Winston', 'Winter Gem', 'Saturn', 'Laxton's Fortune' and 'St Edmund's Pippin' Culinary varieties: 'Bountiful', 'Bramley's Seedling', 'Grenadier', 'Edward VII', 'Golden Noble' and 'Reverend W Wilks'. The popular 'Cox's Orange Pippin' though, is particularly susceptible.

Chemical information

Brand names of garden products change frequently, whereas the active chemical ingredient in them usually doesn't. Because of this, we list the active chemical ingredient recommended for a given problem, rather than the brand name of the product. The only exception is when we have tested a brand and chosen it as a **Best Buy**. If you need any more information on chemicals, please ask for our factsheet GWF281.