

Brown rot

GWF210
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This opportunistic infection takes advantage of damaged fruit, especially apples and pears. It spreads quickly, both on the branch and in stored fruit.

Q What is brown rot?

A It's a fungal disease which can affect many types of fruit. It gets its name from the resulting brown patches that may engulf the fruit. The disease starts by attacking fruit that has already been damaged by pests - especially wasps and birds - or has been bruised. Once the infection builds up it can affect otherwise undamaged fruit. Brown rot can spread very quickly, especially among stored apples or pears. Earlier in the season, this fungus is also one of the causes of blossom wilt and shoot wilt on fruit trees and their ornamental relations, such as flowering cherries and almonds.

Q How do I recognise it?

A It appears as soft brown patches on ripe fruit. Apples, pears and plums are especially susceptible. Grey or white fluffy dots, or pustules, may also develop on the surface, often in concentric rings. Look out for small, sunken, elongated brown cankers on the twigs. These, too, will develop grey or yellowish white pustules in wet weather.

Q Could I mistake brown rot for anything else?

A There are many other fruit rots, especially among stored

fruit. Eye rot gives rise to round, sunken, rotten patches near the flower end of the fruit, whereas bitter or gleosporium rots have brown, saucer-shaped blotches with rings of fungal pustules inside. Neither of these diseases produces the characteristic flower attacks or twig cankers of brown rot. In storage, several moulds, such as grey mould or botrytis and penicillium moulds, produce soft, fluffy rots.

Q What causes brown rot?

A The fungi *Sclerotinia fructigena* and *S. laxa* are responsible. They are sometimes referred to as *Monilinia fructigena* and *M. laxa*. *Sclerotinia fructigena* hits apples, pears, medlars, quinces and stone fruits, while *S. laxa* affects stone fruits like plum, peach, almond, apricot and cherry - although fruit with pips are not entirely free from risk. Similar fungi attack the fruit of other trees such as hawthorn, quince and medlar. Deal with these in the same way as brown rot.

Q Can you tell me any more about brown rot?

A Brown rot overwinters in cankers on shoots, in mummified fruits still on the branches or in fallen fruit. The mummified fruits seem to persist as a source of the disease for several years.

In spring, spores are released; these go on to cause blossom infections and travel to new sites on the breeze, by rain splash or carried by insects. They multiply quickly in floral parts when the weather is wet, releasing more spores. These go on to create more floral infections.

At the same time, the fungus spreads from the afflicted flower on to the shoots and spurs, where cankers develop. Look out for tufts of fungal growth on these cankers, about 3mm across and yellow (*S. fructigena*) or grey (*S. laxa*). When the fruit is fairly large, the disease spreads from the cankers to the fruit. This usually only happens when there has been bird, insect, hail or wind damage to the fruit.

Once inside the fruit, brown rot will spread at points where the bunches of fruit are close enough to touch. The effect of the fungus is to shrink and wrinkle the fruit, forming 'mummies'. The fungus also spreads by contact in store, so boxes of apples are spoiled.

Q How do I control brown rot?

A Remove all infected fruit as soon as you spot them while the crop is ripening. This will help reduce the spread of the fungus. Give plum trees priority, as brown rot can ruin the entire crop. In winter, cut out and burn

cankered twigs to reduce the number of disease spores.

Even when there has not been much brown rot it is still worth being vigilant, as the disease can quickly become troublesome if the weather favours it the following year. Also try to destroy wasp nests and net small fruit trees to keep out birds. This limits the initial damage that lets the brown rot into the fruit.

Q Should I collect rotten fruit?

A Picking up fallen fruit and removing shrivelled, mummified plums from the tree should reduce the amount of fungal spores released into the garden. However, large quantities of half-rotten fruit are difficult to

dispose of completely. It is questionable how much control this technique offers as any rotten fruit left on the ground will produce large amounts of light, easily dispersed spores, spreading the disease widely.

Q What about stored fruit?

A Reduce rotting in store by keeping only undamaged fruit. Check stored fruits weekly. Try to keep the fruit as cool as you can.

Q Can brown rot be sprayed?

A There are no recommended fungicides for gardeners to use on brown rot in Britain.

Chemical information

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