

# Honey fungus

GWF243  
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This serious disease kills trees and shrubs and spreads by underground, bootlace-like threads. Honey fungus can also sometimes produce honey-coloured toadstools.

**Q** What is honey fungus?

**A** Honey fungus is the most serious fungal disease affecting garden trees and shrubs in this country. With young trees and shrubs, death can be very sudden, while older trees may take many years to die. The disease gets its name from the honey-coloured toadstools it produces in the autumn. Unfortunately for diagnosis these are not always produced and they often appear only when the disease is in an advanced state.

**Q** Are there different kinds?

**A** In Britain, five main species occur. The two most damaging are *Armillaria mellea* (mainly attacks broad-leafed trees) and *A. ostoyae* (attacks conifers). *A. gallica*, although very common, seems to go mainly for exotic trees and shrubs that are young or in a weakened state. The other two species are less common and rarely cause serious damage.

**Q** How do I recognise honey fungus?

**A** To identify honey fungus, look for white growths under the bark, bootlace-like threads in the soil, plant dieback and, in autumn, the honey-coloured toadstools.

Sheets of white or creamy-white paper-like growths underneath the bark of an affected tree or shrub can be seen clearly when the bark is pared off. They are often marked with fan-like striations and can

be pulled off in strips. Look for them near the base of the tree or shrub.

**Q** What are bootlaces?

**A** Honey fungus spreads through the soil via long, flattened, bootlace-like threads known as rhizomorphs. These can easily be confused with small tree roots. The harmless or less virulent species of the fungus often produces tough elastic rhizomorphs in abundance. The bootlaces of the damaging *Armillaria mellea*, however, are fragile and hard to find, making it easy to miss the spread of the disease. When the rhizomorphs meet the roots of a susceptible tree, they invade the root system and eventually kill the whole plant. On occasions, you may also be able to see flattened ribbon-like rhizomorphs growing beneath the bark. These are reddish at first but soon turn black on exposure to air.

**Q** What about dieback?

**A** Yellowing, premature leaf fall and the death of branches may be the first thing you notice about a plant dying from honey fungus. It is important to remove all the roots as well, or the fungus will continue to feed on these. Alternatively, you could hire a contractor with a stump grinder. Burn infected wood and roots as soon as possible. Old tree stumps will often act as bait for honey fungus, so it's wise to remove them if there is a history of the disease in your area.

**Q** Is there a chemical control?

**A** There is no approved chemical control for this problem.

**Q** What can I do if I can't dig out the stump?

**A** If honey fungus has just hit your garden and you are unable to remove the source of infection, you could try digging a trench or sinking a vertical sheet of heavy-duty polythene or PVC into the soil, just beyond the reach of the tree's infected roots. As a general guide, the roots of most trees spread as far horizontally as the branches above. On heavy soils, the barrier should extend at least 50cm below ground level; 90cm or more on light, porous soils. The danger of erecting too shallow a barrier is that the rhizomorphs may turn down and pass beneath it. Only when the stump is removed or has rotted away completely is it safe to remove the barrier.

**Q** What can I do once I have cleared the fungus?

**A** Honey fungus is known to affect a wide range of trees and shrubs. Young specimens are particularly vulnerable. A plant that is stressed in some way, through drought or insect attack for example, is also much more prone. Replanting success will depend on what plants you use, which species of honey fungus you have, and how thoroughly the land has been cleared of infected

material. If you are doubtful that you have cleared the infection, grow a few strawberry plants the summer before you want to replant. Strawberries are especially susceptible to the disease and will usually die within three months.

#### **Q What trees and shrubs should I avoid?**

**A** We have drawn on the experience of the Forestry Commission and our own survey to compile this list. These plants are notably susceptible to honey fungus and are frequently killed at any age. Avoid them when replanting infected land. Apple, azalea, birch, blackberry, buddleja, cedar, cherry, cotoneaster, elm, flowering currant, forsythia, gooseberry,

hop, hydrangea, Japanese cedar, Lawson cypress, Leyland cypress, lilac, maple, pear, peonies, pine, plum, privet, raspberry, rhododendron, rose, viburnum, walnut, Wellingtonia, western hemlock, willow and wisteria.

#### **Q What trees and shrubs can I use?**

**A** The following plants are generally thought to be far more tolerant of honey fungus. There is a good chance that they will succeed if used to replant infected areas. Delay planting for at least a year after removing the infected plant, however.

Abutilon, actinidia, bamboo, berberis, beech, blackthorn, box, carpenteria, catalpa, ceratostigma, cherry laurel,

choisya, clematis, elder, elaeagnus, false acacia, fir (abies), flowering quince, grasses, hawthorn, hebe, holly, honeysuckle, hornbeam, ivy, juniper, kerria, larch, mahonia, mallows, oak, passion flower, photinia, pieris, pittosporum, rock rose, Russian vine, smoke tree, sumach, sweet chestnut, sweet gum, tamarisk, tree of heaven and yew.

#### **Q What other plants can I use?**

**A** Fortunately, lawns, flower borders and annual vegetables tend to be unaffected. As far as we know the only herbaceous plants or annual vegetables to avoid are those with starchy roots or tubers (such as irises, potatoes and rhubarb) and, of course, strawberries.

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