

Ash Dieback Disease

Ash dieback is a serious disease of ash trees caused by the fungal pathogen *Hymenoscyphus fraxineus* (previously known as *Chalara fraxinea*).

Ash dieback is a highly destructive fungal disease affecting ash trees. It causes leaf loss and canopy decline and in some cases causes the trees to die.

Ash dieback was first detected in the Republic of Ireland in October 2012 on plants imported from continental Europe. The disease is now prevalent throughout most of the island of Ireland and is likely to cause the death of the majority of the ash trees over the next two decades.

The disease can affect ash trees of any age and in any setting. The disease can be fatal, particularly among younger trees. Ash dieback is more severe in wet sites, where it is more likely to cause collar infections in ash trees.

Teagasc is carrying out research to establish a gene bank composed of genotypes of ash tolerant to ash dieback with the aim to produce planting stock for forests and hedgerows in Ireland.

SIGNS OF POSSIBLE ASH DIEBACK

- Spots on the leaves
- Wilted leaves
- Branches losing their leaves and 'dying back'
- Dark patches, called lesions, on the branches and/or trunk

The symptoms are easily visible in young trees, but they can be harder to recognise in more mature trees. Unfortunately, lesions can be caused by a number of factors including other fungi and bacteria and so dark patches alone do not necessarily mean the tree has ash dieback. For more detailed information on lookalike signs and symptoms of ash dieback

Anyone responsible for managing ash trees should learn to recognise the visual symptoms of ash dieback so they can assess the current health of their ash tree population and then consult, if appropriate, with a tree professional on what action they might take.

Once you know what you are looking for, you should survey your trees to assess their health. If you spot signs of ash dieback, you should survey them each year to track the progress of the disease.

Your responsibilities

Managing the risk from trees is the responsibility of the owners and managers of the land on which they grow. If your ash tree or one of its branches falls on someone or someone else's property, you may be liable

Further information:

Forestry Division of the Department of Agriculture, Food and the Marine (DAFM)

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How will ash trees be affected by ash dieback?

Ash dieback is caused by a fungus called *Hymenoscyphus fraxineus* (formerly known as *Chalara fraxinea*).

The disease is a serious threat to the future of the common ash tree. Research from the UK and Europe has found that seven or eight out of every 10 ash trees may die (although there are some local variations), but some trees do show some levels of tolerance and may even recover over time. Some research carried out in France and published in April 2020, suggests that isolated ash trees, such as those growing in hedges or other open areas, may be less affected by ash dieback than those in woodlands.

The ash dieback fungus progressively damages the vascular tissues of the tree, causing particular branches to die back by blocking their supply of water and nutrients, hence the name. Ash dieback causes a range of symptoms including wilted and spotted leaves. Most affected ash trees will lose some of the leaves at the top of the tree (which is called its crown).

Ash dieback can affect trees in different ways – for example, some may develop dark patches called ‘basal lesions’ at the base of their trunk, but have no sign of ash dieback in their leaves and branches. This is why it’s important to consult a tree professional if you are unsure.

Once the fungus infects a tree, the dead or dying branches can become brittle and fall. Over time, as the tree loses nutrition, water and the leaves which produce its food, the disease may eventually kill the tree. However, often other opportunistic disease-causing organisms (pathogens), such as honey fungus or shaggy bracket, may cause the eventual death of the tree by accelerating wood decay and tree failure rather than ash dieback itself



Images © Jon Stokes

Honey fungus



Shaggy bracket fungus



In late summer and early autumn (July to October), fruiting bodies of *Hymenoscyphus* can be found on blackened rachises (leaf stalks) of ash in damp areas of leaf litter beneath trees. These do not necessarily belong to the pathogen but can be tested to determine their identity.