

Ash dieback

TREE PEST AND DISEASE SERIES #1



Scottish
Forestry
Coilltearachd
na h-Alba



INTERNATIONAL YEAR OF
PLANT HEALTH
2020

Outdoor &
Woodland
Learning
SCOTLAND



What is ash dieback?

It is a highly destructive disease caused by a fungus called *Hymenoscyphus fraxineus* (*H. fraxineus*).

Which type of trees are affected?

Ash trees, including the main ash tree in Scotland (*Fraxinus excelsior*).

What effect does it have?

Ash dieback may lead to the death of at least 50%-75% of Scotland's mature ash trees over the next two decades. This will change the landscape dramatically as well as impacting on biodiversity. The trees provide a valuable **habitat** for a range of species including insects, other **invertebrates**, lichens and mosses.

How does it spread?

Local spread of up to tens of miles can be caused by the wind blowing **spores** of the fungus. Movement of diseased ash trees, seeds or wood by people may have spread the disease over longer distances.

Why is plant health important in Scotland?

Healthy plants and trees are at the heart of Scotland's economy in rural areas and the natural environment.

There are threats to plant health from

- **Globalisation** of trade
- Introduction of new pests and diseases
- Pressure of climate change



Ash dieback

Latin name
Hymenoscyphus fraxineus

Present in Scotland

YES



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Diseased sapling with dead top
and side shoots

Ash dieback

Symptoms of the disease

The fungus enters trees through their leaves and then grows inside the tree. Leaves wilt and turn black, and sometimes **lesions** can be seen where tree branches meet the trunk. The most obvious symptom is the dieback of outer shoots and branches, so they lose their leaves and die. Eventually the fungus can block the tubes (**xylem**) that carry water and nutrients from the roots to the rest of the tree. The fungus produces **spores** inside small white fruiting bodies (mushrooms on the leaf stalks). They can be seen from July to October and can be found in the damp leaf litter at the base of the tree. These **spores** spread the disease to other ash trees.

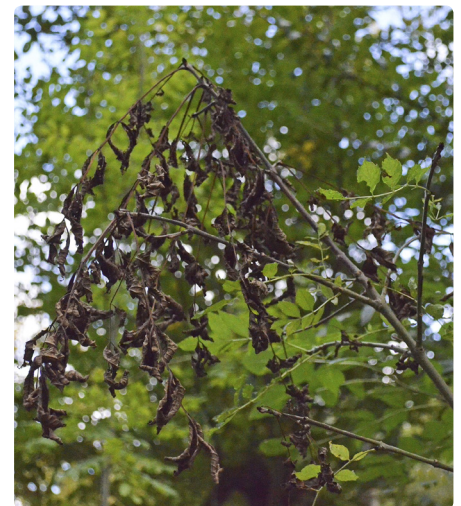
Outlook

It is not possible to **eradicate** ash dieback in Scotland and no cure currently exists. It is anticipated that ash dieback will infect most of Scotland's ash trees, and many of them will die. Scientists are identifying ash trees that seem to be resistant to ash dieback disease, and trying to work out why that is. One project, called The Living Ash Project, is hoping to breed disease-resistant ash trees so we may one day be able to safely plant ash trees again.



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**Tiny white fruiting bodies
(mushrooms) on a dead leaf stalk**



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**Wilted, blackened leaves caused
by ash dieback infection**



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Small white fruiting bodies (mushrooms) on the leaf stalks