

# Ash Tree Alert

Dr Terry Mabbett reports on an unprecedented potential threat to your course

# Native Common Ash Trees Face Surprise Disease Threat

**Native common ash (*Fraxinus excelsior*) now faces an unprecedented threat from the latest alien plant pathogen to arrive in the United Kingdom (UK). Chalara ash die-back caused by the fungus *Chalara fraxinea* sailed into the country in style on a consignment of 2000 ash trees exported by a Dutch nursery to nursery in southern England.**

The south of England nursery based in Buckinghamshire subsequently sold the consignment by mail order to 90 customers throughout the UK. Forestry Commission (FC) and Fera (Food and Environment Research Agency), which subsequently intercepted *Chalara fraxinea* on the trees, identified the 90 customers and gave out instructions for them to dig up, chop up and double-bag the trees before taking them to a landfill for deep burial.

This is somewhat surprising since standard biosecurity practice in such potentially catastrophic pest and disease situations is for the destruction of trees on site by burning followed by a thorough clean up including tools, soil and compost by professionals drafted in specifically to do the job. Transporting tree material infected with a new alien pathogen into the wider environment flies in the face of standard biosecurity practice and common sense.

Be that as it may, FC and Fera have since found the disease in the wider environment on some 500 ash trees planted in a Leicestershire car park and sourced from a nursery in Lincolnshire. Fera is also investigating outbreaks of the disease at nurseries in Surrey and Yorkshire.

*Chalara fraxinea* was able to 'walk into' the UK because although it is rampant across continental Europe, including France, Belgium, Netherlands, Germany and Denmark, it is not an EU regulated pathogen. That means common ash trees can be imported into the UK from any other EU country with absolutely no restriction, inspection or documentation (an EU Plant Passport) that would otherwise declare a clean bill of health.



The disease is particularly prevalent in Denmark where up to 90 per cent of trees in many locations are infected and all are expected to die. *Chalara ash dieback* has the capacity to inflict on common ash what Dutch elm disease did to English elm in the 1970's. That is to essentially wipe out the species as forest, woodland, amenity and landscape tree in the UK.

So what's the damage? *Chalara fraxinea* infects ash trees of all ages but is more likely to be terminal in ash saplings. Symptoms are seen on the leaves, shoots and branches. Trees with advanced infections have defoliated crowns and profuse epicormic growth on trunk and branches.

Leaves display dark coloured lesions at the base and along the mid-rib, accompanied by obvious signs of wilting. Dieback of shoots and twigs is common.

Small lens shaped lesions form on the bark of stems and branches, subsequently enlarging to form perennial cankers which cause shoot and branch wilt and dieback especially in the upper crown.

The wood underneath bark lesions is brown/grey in colour which often extends longitudinally beyond the necrotic area of bark.

Advanced infections of whole trees is characterised by withered tops and shoots in the crown, marked dieback of shoots, twigs and branches and prolific epicormic growth lower down.

The causal pathogen, which can be isolated from leaves, shoots, stems, branches and even roots of symptomatic trees, is spread by rain splashes and disseminated by insects.

Long distance spread is most likely through trade in living trees and the movement of saw logs from infected trees.

Ash dieback caused by *Chalara fraxinea* may be confused with similar symptoms caused by completely different fungal pathogens, insect pests and even physiological problems caused by environmental factors.

Cankers caused by the fungus *Nectria galligena* and even bark necrosis caused by ash bark beetle (*Leperisinus varius*) could be mistaken for ash dieback.

Other factors which may be confused with ash dieback are larvae of *Prays fraxinella* (bud moth) that mine into shoot bases causing them to wilt and die. Even frost and drought damage could conceivably be confused with ash dieback.



**TOP:** Shoot dieback with wilting leaves on common ash and caused by *Chalara fraxinea* (Picture Forestry Commission)

**ABOVE:** Bark canker on common ash caused by *Chalara fraxinea* (Picture courtesy Thomas Kirisits)



*(Continued from pages 8-9)*

**Impact on golf courses**

Trees are an important and integral part of virtually all golf courses in the UK and their continued health is vital to the structure and appearance of the course as well as the health and safety of members, players and staff.

Common ash is spread throughout the UK. The ash tree population was recently estimated at 80 million but this is almost certainly a gross underestimate.

Common ash is a pioneer tree which freely germinates from naturally dispersed seed to establish in groves where opportunities arise in woodland, copses and rough open land.

Many if not most golf courses will have ash trees that have naturally established in this manner.

Common ash is also widely planted on golf courses, prized for its fast growth, an open and light shade casting canopy which does not kill the turf-grass beneath. And a light leaf load which rots away quickly in autumn and is relatively easy to clear away.

FC and Fera are now recommending that landowners who have planted ash trees in the last five years should inspect them for symptoms of Chalara ash dieback disease.

Greenkeepers should follow this advice even if the trees were purchased from a UK nursery. The nature of trade between EU nations means they could have just as easily come from any one of 26 other EU countries the vast majority of which have endemic chalara dieback disease.



**ABOVE: Greyish brownish wood of ash branches infected with Chalara fraxinea** (Picture courtesy Thomas Kirisits).

**LEFT: Severe shoot dieback on common ash caused by Chalara fraxinea** (Picture Forestry Commission)



**ABOVE: Bark canker on common ash caused by Chalara fraxinea** (Picture courtesy Thomas Kirisits)

**BELOW: Leaf necrosis on common ash caused by Chalara fraxinea** (Picture courtesy Thomas Kirisits)



**Help is at hand...**

Greenkeepers who suspect they may have Chalara ash dieback disease on their courses should contact:

**Forest Research Tree Health Diagnostic and Advisory Service.**  
Tel: 01420 23000.  
E-mail: ddas.ah@forestry.gsi.gov.uk

**Forestry Commission Plant Health Service.**  
Tel: 0131 314 6414.  
E-mail: planthealth@forestry.gsi.gov.uk

**Fera Plant Health and Seeds Inspectorate.**  
Tel: 01904 465625.  
E-mail: planthealth.info@fera.gsi.gov.uk