



Tree Health update – 29th October 2012



Chalara dieback of ash

The past decade has been a tough one for trees in Britain. A number of pests and diseases are becoming increasingly prevalent, with much news in the media regarding acute oak decline (AOD), oak processionary moth (OPM), chestnut bleeding canker, red band needle blight, and numerous phytophthora species. The recent arrival of ash dieback in the UK gives further cause for concern. This is a fungal disease of ash trees (*Fraxinus* species) caused by *Chalara fraxinea*. It was unknown in Great Britain until recently, but the first case was confirmed in a nursery in Buckinghamshire early in 2012 on ash seedlings imported from The Netherlands. Since then there has been further spread, with it found on mature ash trees in Norfolk in October 2012.

The disease causes leaf loss and crown dieback in affected trees, and can lead to tree death. It is also particularly destructive of young ash plants, killing them within one growing season of symptoms becoming visible. Older trees can survive initial attacks, but tend to succumb eventually after several seasons of infection. The Forestry Commission are treating *C. fraxinea* as a 'quarantine' plant pathogen, which means they can enact measures to contain or eradicate it when it is found. Local spread may be via rain splash or transmission by insects. Over longer distances the risk of spread is most likely to be through the movement of diseased ash plants. Movement of logs or unsawn wood from infected trees might also be a pathway for the disease. It is potentially a very serious threat and has caused widespread damage to ash populations in continental Europe, including estimated losses of 60 to 90 per cent of Denmark's ash trees.

The Forestry Commission have produced an exotic pest alert sheet and [http://www.forestry.gov.uk/pdf/Symptoms_guide_Chalara_dieback_of_ash_2012.pdf/\\$FILE/Symptoms_guide_Chalara_dieback_of_ash_2012.pdf](http://www.forestry.gov.uk/pdf/Symptoms_guide_Chalara_dieback_of_ash_2012.pdf/$FILE/Symptoms_guide_Chalara_dieback_of_ash_2012.pdf) photo guide which provide more information on how to identify the disease and what you should do. [http://www.forestry.gov.uk/pdf/pest-alert-ash-dieback-2012.pdf/\\$FILE/pest-alert-ash-dieback-2012.pdf](http://www.forestry.gov.uk/pdf/pest-alert-ash-dieback-2012.pdf/$FILE/pest-alert-ash-dieback-2012.pdf)

Suspected cases of Chalara dieback of ash should be reported to Forest Research Tree Health Diagnostic and Advisory Service. T: 01420 23000; E: ddas.ah@forestry.gsi.gov.uk

Future Tree's Trust Position

The struggle to control the impact of pests and diseases in trees is, in part, an evolutionary battle, matching genetic variation within tree species against the negative impacts of other organisms. Although trees have largely coped in the past, this struggle has now intensified through human activities. These have degraded tree populations, resulting in adverse effects on their regeneration and increased dispersal of pests and pathogens around the world.

Compared to the financial costs of direct intervention to combat each new threat, the most sustainable long-term strategy for managing tree health is to exploit the high natural genetic diversity within tree species to develop resilient populations. This is a fundamental part of what Future Trees Trust has been doing over the last twenty years in our tree breeding work. We place great emphasis on the genetic diversity of our seed orchards, not just for ash, but for all species that we work with. Ensuring a broad genetic base in all our populations and seed – far broader than in any commercial seed lot – will provide resilience to whatever the future throws at our trees, be that a novel disease such as Chalara, or combating climate change through adaptation. Indeed, work in Denmark, where the disease has been prevalent in the last decade, shows that there is a degree of resistance within genetically diverse populations, which gives hope for a future based on diversity.