

## Questions and Answers

### Phytophthora ramorum on Japanese larch in Ireland.

#### ***What is Phytophthora ramorum?***

In the mid-1990s, it was reported that significant numbers of trees and other plant species were being damaged or killed in California and other parts of the western United States by a newly described disease, commonly known as Sudden Oak Death, caused by a new species of fungus like organism named *Phytophthora ramorum*. The common name for the disease, Sudden Oak Death, which was first assigned in the USA, is a misnomer in a European context as to date European oak species have not been seriously damaged. The same organism had also been found in many European countries including Ireland, on the shrub species *Rhododendron* and *Viburnum spp.*, particularly in garden centers and nurseries, which are subject to regular surveys by the Department.

#### ***What is the status of Phytophthora ramorum in forests in Ireland?***

In forest surveys carried out by the Department's Forest Service since 2003, *Phytophthora ramorum* has to date been detected on *Rhododendron* in 9 forestry locations. In July 2010 the Forest Service detected from proactive surveys the first findings of *Phytophthora ramorum* on Japanese larch, which was showing extensive dieback from the crown and down the stem. Japanese larch appears to be particularly susceptible to the disease, affecting all age classes and causing significant dieback and deaths. Noble fir (*Abies procera*), beech (*Fagus sylvatica*) and Spanish chestnut (*Castanea sativa*) growing in close proximity to the infected larch have also been found to be infected at a number of the sites. The current situation in Ireland is that the disease has been confirmed on Japanese larch at 11 locations, 4 in Co. Kilkenny, 2 in Co. Tipperary, 3 in Co. Cork, 1 in Co. Waterford and 1 in Co. Wicklow, but it will be mid summer 2011 before the overall position can be fully assessed.

In March 2011 a finding of *P. ramorum* in a single Sitka spruce (*Picea sitchensis*) tree was confirmed in a forest. This finding was made during follow up surveys of an area where Japanese larch, noble fir and wild rhododendron had been found to be infected. The Sitka spruce tree was approximately 2 metres in height and significantly it was growing in close proximity to and underneath the 'umbrella' like canopy of a large infected wild rhododendron bush. It is very likely that spores produced by this overhanging infected rhododendron bush were the source of infection of the Sitka spruce. To date only a single juvenile Sitka tree has been found to be infected and is not considered to be a source of infection. Clearly this is a significant development and the Department's Forest Service will now reassess its surveillance programme to monitor Sitka spruce.

In addition there have been findings of *Phytophthora ramorum* in Japanese larch forests in Northern Ireland and in Great Britain where the first findings on Japanese larch were discovered in Autumn 2009.

#### ***What are the symptoms of Phytophthora ramorum on Japanese larch?***

Dead and dying partially flushed trees in groups or scattered throughout the stand  
Partial or whole crown discolouration, (reddish brown or grey depending on level and stage of infection)  
Affected trees may show needle wilt, branch and shoot dieback, abnormal shoot growth

Shoot dieback from tip back along shoot.  
Resin bleeding on branches and trunk  
Excessive side shoot growth and heavy cone production may be observed

### ***How did these trees become infected?***

The disease can be dispersed by the movement of infected plants and plant products. The disease can also be dispersed by rain, mists and air currents.

### ***Why are the Japanese larch outbreaks significant?***

- *Phytophthora ramorum* findings in a forest context in Ireland have always been associated with the presence of Rhododendron. Up until 2009 *Phytophthora ramorum* would have been regarded as a disease of broadleaved trees.
- Japanese larch is an important commercial and landscape forest species in Ireland accounting under inventory data for 3.4% of forest area.
- Not only is *Phytophthora ramorum* causing primary damage to Japanese larch, scientific evidence indicates it that it is also sporulating at a rate far in excess of that known to occur on rhododendron – its main host up to now – thus acting as a very significant source for further spread of the disease.
- Ireland is now only the second country with a finding on Japanese larch.

### ***What action did the Department take following confirmation of the disease ?***

- The Forestry Plant Health Contingency Plan, and the EU Technical Guidelines on Control Measures for *P.ramorum* are being applied.
- The Department will continue to liaise closely with landowners in order to ensure everything possible is being done to contain and eradicate this harmful organism.
- Further intensive field surveys in the affected areas are on-going in order to gather a greater understanding of the extent and severity of the outbreak and the potential management options.
- Extensive national aerial and ground surveys have been conducted.
- Landowners of infected sites are required to clearfell the infected area in order to contain its further spread.
- Secure & hygienic protocols have been put in place in order to minimize the risk of spread of the disease through the harvesting, haulage and processing of timber from the infected sites.
- Other hygiene protocols in infected areas, for forest visitors & users are in place.
- The Forest Service of the Department is liaising with UK Forestry experts and availing of its experience in dealing with this disease.
- Because of the level of damage to Japanese larch, the Department ceased grant aiding Japanese larch in November 2010.