

An Update on *Phytophthora ramorum* in Ireland

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Phytophthora ramorum was first detected in traded *Rhododendron* and *Viburnum* in Ireland in 2002. In 2010 it was found infecting *Larix kaempferi* (Japanese larch), causing sudden larch death. Sudden larch death has now been diagnosed in several counties in Ireland (Fig. 1). The pathogen has also been detected on a number of other hosts, including *Fagus sylvatica* (European beech, Fig. 2) and *Abies procera* (Noble fir, Fig. 3). Infection of these other tree hosts is often in association with nearby heavily infected *L. kaempferi*. Samples are collected by field inspectors in horticultural, public amenity, and forest areas and tested in the government laboratories in the Ireland Department of Agriculture, Food and the Marine. In 2020 there were 112 samples tested, with 410 samples in 2021 and 156 in 2022.

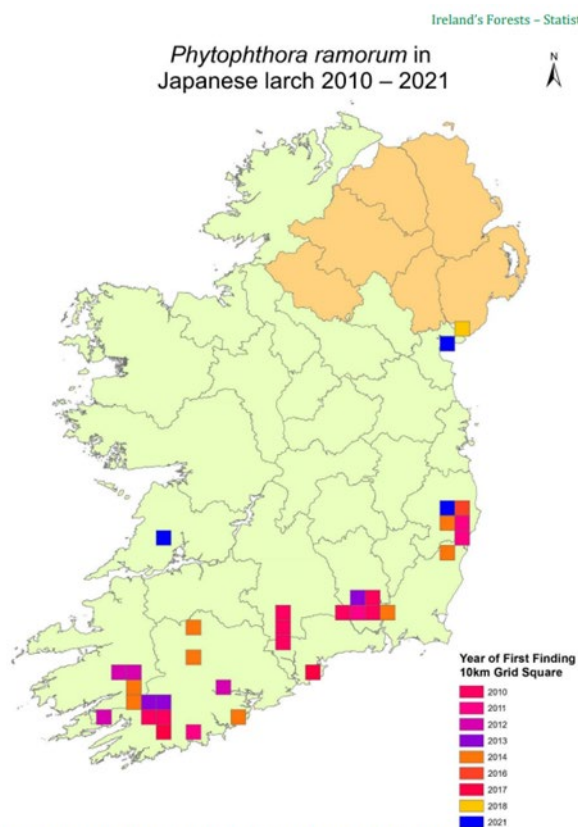


Figure 39: *Phytophthora ramorum* findings in Ireland 2010-2021

Figure 1. Map of *Larix kaempferi* sites where *P. ramorum* has been detected. Taken from Ireland’s Forestry Statistics 2021.

The EU2 lineage was found in Ireland in late 2021, infecting *L. kaempferi* at one site in County Louth (Figs. 4 & 5). Up to this point, only the EU1 lineage was known to be present. Epidemiological monitoring in forests indicated that *P. ramorum* was detected in rain splash under infected *L. kaempferi*, and also in streams running near or through infested forests. A number of other *Phytophthora* spp. have been found causing disease on trees, including *Phytophthora lateralis* on *Chamaecyparis lawsoniana* (Lawson’s cypress, Port Orford cedar)

and *Phytophthora pseudosyringae* on *L. kaempferi*. *P. ramorum* infections of the invasive *Rhododendron ponticum* have also been detected in forests.

Figure 2. *P. ramorum* bleeding canker on *Fagus sylvatica*.



Figure 3. *P. ramorum*-caused mortality in *Abies procera*. The tree in the center of the image showing red/brown foliage is a dead *A. procera*.

Within the European Union, the phytosanitary status of *P. ramorum* has changed recently. Previously the pathogen was a quarantine pest. However, legislation has now come into effect which changes the regulatory status of *P. ramorum*, based on the origin of the infected material. “Non-EU isolates” of *P. ramorum* are quarantine pests. These pests are treated as the most serious pests in the EU, and if detected, extensive control actions need to be taken. The other legislative grouping is for *P. ramorum* “EU isolates” which are now treated as regulated non-quarantine pests (RNQP). The focus of the legislation on RNQPs is to limit the spread of these pathogens on plants for planting only. In the EU plant health legislation the terms “EU isolates” and “non-EU isolates” are understood in the context of the origin of the infected plants/plant material only. It is not directly linked to the lineage, genotyping or any biological characteristic of the isolates. The identification of EU vs non-EU is decided upon following the administrative process of tracing the documentation linked to the infected plants and discerning which country the plants were exported from. A consequence of this legislative change is that it is no longer mandatory under EU law for landowners to take actions in order to eradicate *P. ramorum* in forests, as any finding in a forest setting is not a quarantine pest (i.e. not found on a commodity coming from outside the EU) and is not a RNQP (i.e. not found on a plant for planting). However, legislative options still exist at the national level to prevent the spread of the pathogen.

The plant health team in Ireland works closely with their respective counterparts in the Department of Agriculture, Environment and Rural Affairs (DEFRA), and the Agri-Food and Biosciences Institute, Northern Ireland (UK). In Northern Ireland, both EU1 and EU2

lineages have also been found. The host range and damage has been of similar magnitude as seen in Ireland.

Over the last 5 years in Ireland, the pathogen was also detected in samples from nurseries and horticultural premises, mainly on *Rhododendron*, *Camellia*, *Magnolia*, and *Viburnum*. Surveillance, testing and research on *P. ramorum* in Ireland continues.



Figure 4. Sudden larch death seen at a mixed-coniferous forest. The grey trees are dead *Larix kaempferi*, while the green trees are mostly *Picea*.



Figure 5. *Larix kaempferi* trees affected by sudden larch death.

Photo credits Figs 2 to 5. Richard Hanlon, Department of Agriculture, Food and the Marine, Ireland.