

Susceptibility of Selected Ornamental Plants to *Phytophthora ramorum*¹

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Abstract

Within the European project “Risk Analysis for *Phytophthora ramorum*” (RAPRA), susceptibility of economically and ecologically important plants in Europe towards *P. ramorum* was tested via *in vitro* inoculation methods. In these studies different species and/or cultivars of *Buxus*, *Calluna*, *Erica*, *Hedera*, *Rhododendron*, and *Vaccinium* were tested using a detached leaf or twig assay. Zoospore suspensions of five isolates, three European and two North American, were produced for inoculation by immersion of detached leaves and twigs, some of which had been wounded prior to the treatment. After incubation in a wet chamber, development of necrosis was measured.

In these *in vitro* tests all *Buxus* spp., *Hedera helix*, *Vaccinium corymbosum* and *V. macrocarpon* were classified as not susceptible. *Rhododendron simsii* and *Erica x darleyensis* developed only small necroses and were classified as slightly susceptible, the susceptibility of *R. simsii* varying with the cultivar. The cultivar ‘Desta’ was the most susceptible of the four cultivars tested. *Erica cinerea* was classified as moderately susceptible and *E. gracilis*, *E. carnea*, *Calluna vulgaris*, *Vaccinium myrtillus* and *V. oxycoccus* as highly susceptible. The cultivar ‘Marleen’ of *C. vulgaris* was significantly less susceptible than the three other cultivars.

Whether or not the plants had been wounded before inoculation was often irrelevant, though wounding did lead to larger necroses for some of the plant species, e. g. *R. simsii*, *V. oxycoccus*, and *V. corymbosum*. The aggressiveness of the isolates varied with the plant species tested.

Key words: *Phytophthora ramorum*, sudden oak death, ramorum blight, host range, *Buxus*, *Calluna*, *Erica*, *Hedera*, *Rhododendron simsii*, *Vaccinium*.

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