



DEVELOPMENT OF UK/EU PEST RISK ANALYSES FOR THREE *PHYTOPHTHORAS*

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Pest Risk Analysis (PRA) became formally recognised by the FAO Secretariat to the International Plant Protection Convention in 1996, by the publication of ISPM no. 2 (*Guidelines for pest risk analysis*). PRA is ‘*the process of evaluating biological or other scientific and economic evidence to determine whether a pest should be regulated and the strength of any phytosanitary measures to be taken against it*’. ISPM no. 11 (2001) gave more detail of what is needed in a PRA; a revision in 2004 (*Pest risk analysis for quarantine pests, including analysis of environmental risks and living modified organisms*) considered the effects on biodiversity caused by both intentionally and unintentionally introduced pests.

Recently, risk analysts have had to consider unidentified pathogens new to science. This is a challenge, as without full taxonomic identity it is difficult to proceed with a PRA. However, provided a pathogen is considered unique (usually by molecular analysis), the process continues. Tree death in California in the 1990s was initially of unknown cause, but was eventually linked to the isolation of an unknown but unique *Phytophthora* in 2000, allowing a UK PRA to be undertaken on *Phytophthora* sp. in September 2000 for the UK (Brasier, Forest Research (FR)). Key milestones that helped develop the PRA were: (i) reports of an unusual *Phytophthora* affecting ornamentals in Europe since the early 1990s (November 2000); (ii) Brasier establishing similarities between the *Phytophthora* in the US killing trees and the *Phytophthora* in Europe (January 2001); and (iii) Werres *et al.* describing *P. ramorum* sp. nov. (November 2001) as the *Phytophthora* in Europe affecting ornamentals. This allowed a new, joint CSL/FR PRA to be conducted on *P. ramorum*. As measures/surveys were implemented across the EU (2002) a full UK/EU research programme kicked-off to develop the PRA, to inform policymakers of future directions for risk management. A new PRA is under development in the EU ‘RAPRA’ Project. In October 2003, as part of the surveillance for *P. ramorum*, a new and unique *Phytophthora* was found affecting beech and rhododendron at two separate sites in Cornwall; a joint CSL/FR PRA for *Phytophthora* taxon C sp. nov. was completed (February 2004) recommending further surveys, host-range testing and eradication of infected hosts. Between May and September 2004 *P. taxon C* sp. nov. was found on a wider range of hosts and sites; new findings emerged in south Wales and the first nursery finding occurred in Cheshire. Emergency legislation aimed at containing the pathogen within a specified area of the south-west of England with a view to eradication was implemented in 2004. Named in 2005 as *P. kernoviae*, CSL and FR have mainly concentrated on undertaking host-range testing and studying the efficacy of rhododendron clearance as a way of reducing the risk the trees. The 2006 report of its presence in New Zealand (since at least 2002; possibly the 1950s) has led to speculation as to its origins. A new PRA (completed in June 2006) accounts for all available information and makes recommendations for consideration by UK policy makers. Finally, *Phytophthora lateralis*, not new to science, but relatively new to the EU was considered by the first ever EPPO ‘Performing PRA’ panel in early 2006 and has been classified as a quarantine pest for the EPPO region. The processes involved in developing PRAs are well-structured; we try to fill the gaps with appropriate and targeted research. The experiences with *P. ramorum* and *P. kernoviae* have led to a joined-up approach to tackling these problems as far as the legislative process allows.