

Identification and early detection of *Cryphonectria* *parasitica* and *Ceratocystis* *platani* occurring on trees in Europe



Funding

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Research consortium

NVWA (NL), ILVO (BE), CRAW (BE), CISTA (CZ), INRA (FR), NFC SO (HU), DAFM-PHL (IE), CREA (IT), INIAV (PT), FR (GB), WSL (CH), UNITUS (IT), LTOA (GB)

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Key outputs and results

Intermediate results:

- Collection of isolates, isolated from diseased trees/shrubs
- Correct identification of the isolates

End products:

- Updated distribution maps of both *Cryphonectria parasitica* and *Ceratocystis platani* in Europe
- Increase the proficiency level for the detection/identification of *Cryphonectria parasitica* and *Ceratocystis platani* throughout plant health laboratories in the countries participating to this study.

Goals

- Production of reliable distribution maps of the two diseases in Europe, foremost the Northwestern part of Europe. For example, for *Cryphonectria parasitica* it is known that the organism occurs in the Netherlands only on sporadic basis, in the middle and south of the country. In Belgium, the pathogen was detected for the first time in urban trees in December 2014
- Collection of isolates of *C. parasitica* and related *Cryphonectria* spp., and also *Ceratocystis* spp.
- Testing a formerly described baiting method for *Ceratocystis* spp. (Grosclaude *et al.*, 1988)
- Specific identification of the pathogen *C. parasitica* affecting *Castanea* spp. using molecular methods as well as classical culturing on different media, with the intent of discriminating this pathogen from prevalent saprotrophic fungus *Cryphonectria radicalis* (Hoegger *et al.*, 2002)¹ and putative pathogenic species *Cryphonectria naterciae* (Bragança *et al.*, 2011)
- Genetic diversity of *C. parasitica* – vc type determination; mating type ratio (MAT1 and MAT2) and screen for the occurrence of hypoviruses (healing cankers and dsRNA screening)
- Collection of isolates of *Cryphonectria* spp. and *Ceratocystis* spp. in order to build a reference database, followed by a proficiency test/Test Performance study