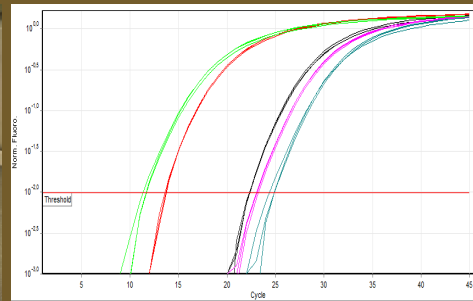
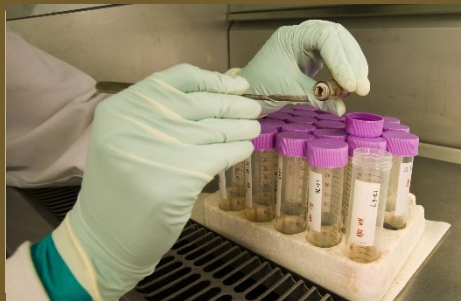


Reliable detection of pathogens in soil



Funding

Non-competitive funding mechanism. Each funder only pays for the participation of their own national researchers. Total funding € 263 000

Research consortium

Naktuinbouw (NL), ANSES (FR), DAFM (IE), MOAG (IL), CREA (IT), KIS (SI), FN3PT (FR), MANAS (KG), UCD (IE), Cleardetections (NL), MPI (NZ), IPN (PT), NAAS (UA)

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Goals

In order to detect soil pathogens in various crops, bioassays and isolations by serial dilutions on different selective growth media are used. But these tests are very impractical as they are time consuming, rely on expertise and may need long incubation periods. Molecular detection of plant pathogens directly in soil presents advantages but representative samples are difficult to prepare. The project aims to support the diagnosis of pests in soil

Objectives

The main objectives of the project are:

- to validate protocols for the extraction of total nucleic acid from specific soil borne pathogens such as *Phytophthora* spp., *Fusarium* spp., *Pythium* spp., *Rhizoctonia* spp., *Agrobacterium* spp., *Meloidogyne* spp., *Globodera* spp.
- to validate the use of large volumes of soil (>100 g) for total nucleic acid extraction with different types of soil, and validate the suitability of the total nucleic acid to be used for molecular testing (real-time PCR or barcoding)
- to compare the sensitivity of the bioassay and of the molecular tests

Key outputs and results

The key outputs of the project will be harmonised protocols for the detection of pests in soil samples, validated following the EPPO standard PM 7/98 'Specific requirements for laboratories preparing accreditation for a plant pest diagnostic activity'