

# Ring testing of diagnostic methods for the identification of potato cyst nematodes (*Globodera rostochiensis* and *G. pallida*) and assessing resistance of potato cultivars (GLOBODERA)



## Funding

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## Research consortium

Austria: AGES; Belgium: ILVO; Bulgaria: NSPP, CLPQ; Czech Republic: PPI; France: DGAL, LNPV; Germany: JKI; Hungary: CLPD; Netherlands: HLB, PPO, PPS; Slovenia: AI; Spain: INIA; Turkey: GDAR; UK: SASA

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## Goals

Develop reliable diagnostic tests to identify potato cyst nematodes to species level and evaluate the ability of EU laboratories to perform the standard resistance testing procedure specified in EU Directive 2007/33/EC.

## Objectives

- Evaluate the ability to diagnose potato cyst nematodes (*Globodera pallida* and *G. rostochiensis*) from non-potato cyst nematodes (*G. tabacum* and *Heterodera schachtii*) by ring testing among participating laboratories.
- Evaluate the ability of participating laboratories to obtain comparable results using the standard resistance testing procedure specified in EU Directive 2007/33/EC in ring tests.
- Create a nematological network between the participants.

## Key outputs and results

- PCR was successfully used by 13 of the 15 consortium members to identify *Globodera pallida* and *G. rostochiensis*.
- PCR was successfully used to distinguish *G. rostochiensis* (87%) and *G. pallida* (90%) from the non-potato cyst nematodes *G. tabacum* and *Heterodera schachtii*.
- Use of morphological diagnostic methods was less reliable than using PCR.
- The standard resistance testing procedure specified in EU Directive 2007/33/EC could be successfully applied by consortium members with comparable results.