

## Appendix 5 - Confirmatory Policy for Suspect Potato Cyst Nematode (PCN) Infestations

### Introduction:

This policy is specific to PCN and is based on knowledge about the biology and epidemiology of the organism.

Specimens must be identified and confirmed by an NPPO or NPPO-approved laboratory using definitive morphological/morphometric and molecular identification techniques, including those specimens originating from a non-NPPO or non-NPPO-approved laboratory. If the pest is confirmed, regulatory action may result.

Subsequent samples from a field with at least one confirmed positive sample do not require confirmatory testing. If the suspect sample is not an official sample, the collection of an official sample may be required.

### Morphological and Molecular PCN Confirmation:

Complete, definitive identification of *G. pallida* or *G. rostochiensis* is a multi-step process, as follows:

1. Verify that the sample contains suspect *Globodera* spp. or other cyst nematode genera (such as *Cactodera*).
2. Verify that the suspect cysts and/or any juvenile forms have key characters and are morphometrically within the range of the PCN species.
3. Verify that the suspect nematode tissue yields DNA identifiable as a PCN species. (As per PPQ CPHST-Beltsville work instructions posted at [www.nahln.org](http://www.nahln.org) and Skantar et al, 2007 at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2586493/>.)
4. Verify that the morphological and molecular analyses concur.

### PCN Infested Field Confirmation:

For a field to be considered infested with PCN, the following criteria should be met:

- at least two cysts from two different soil samples with one of those cysts containing viable PCN eggs or juveniles.

If the above criteria are not met, a survey using Method A must be conducted as soon as possible. If no additional cysts are detected, a Viability Assay Survey must also be conducted following the next susceptible host crop. If no additional cysts are detected after these surveys then the regulatory controls can be removed.

Fields that do not meet the terms of this policy will not be considered as infested, however, continued monitoring of the fields would be prudent after any susceptible host crops.