

The future threat of PCN in Scotland

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Introduction

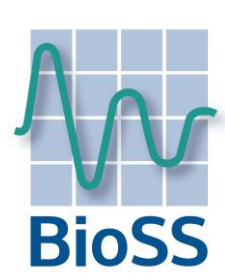
Potato cyst nematodes (PCN) are an increasing concern to potato production in Scotland. Land intended for seed production must be tested and found free from PCN by SASA. Seed potatoes cannot be grown on infested land and ware potatoes can only be produced under a control programme.

Almost 13% of the area planted with potatoes is thought to be infested with PCN. 5,800ha of land is recorded as being infested with *G. pallida*, and increasing two-fold every 6-7 years, while land infested with *G. rostochiensis* is static at 14,000 ha. In the 1970s, *G. pallida* represented only 2-3% of the all PCN findings but is now 68%.

At the current rate of increase, the presence of *G. pallida* may prohibit the production of seed potatoes on PCN-free land in as little as 30 years' time.

Acknowledgements

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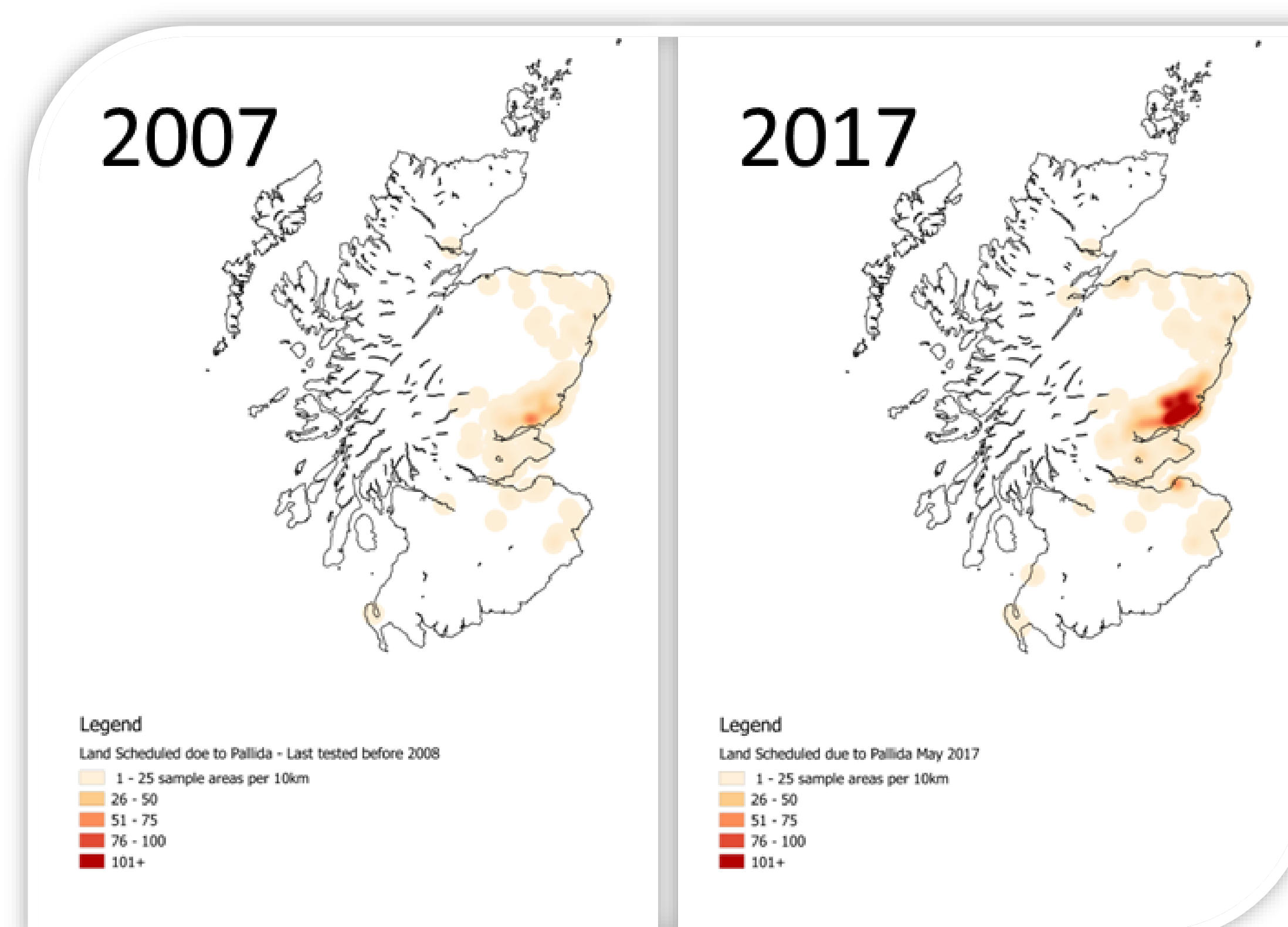


Objectives

- Review control options in Scotland and other countries
- Model future risks of both *G. rostochiensis* and *G. pallida*
- Understand grower behaviours and attitudes to interventions
- Economic analysis of likely impact in Scotland based on a range of possible interventions

Project outcomes

- Validate process-based PCN life-cycle model with data for *G. pallida* and certain potato varieties.
- Conduct interviews and surveys with farmers, producers and buyers to understand motivations.
- Develop and provide analysis of different scenarios using an economic model.
- To research and review all possible control options for Scotland and other countries.
- To simulate the effects of different control options on *G. Pallida* over a 30 year period under different climate scenarios for the chosen potato varieties.
- To develop data visualization of PCN development over time in Scotland.
- To provide information from the models about the potential economic impacts of PCN for Scotland, the seed sector and the potato industry.



Key messages

- *G.pallida* infestations are increasing rapidly in Scotland.
- Understanding grower and market motivations will aid in finding the most suitable tools to control the problem.
- Showing the potential spread of PCN and economic modelling will demonstrate potential risks to the potato industry if no action is taken, which may help with motivation to change behaviors.