PHC2022/04: Enhancing preparedness against pests and diseases: plugging evidence gaps for Scotland

Background: Plant Health across the sectors of agriculture, horticulture, forestry and the natural environment is at risk from a wide range of pests and diseases. Some of these are familiar threats which can be tackled through established management practices, others can be kept at bay through attention to good biosecurity practices, while others remain a focus of vigilance, surveillance and early detection. Preparedness for action should new pests and diseases arrive depends upon available evidence, drawn from many sources, including UK Plant Health Risk Register. However, the evidence base is often lacking, particularly with respect to important national characteristics and geographical differences. For example, some plant species may be of greater economic or environmental importance in Scotland and so merit particular attention, whilst aspects of the climate, soils and land use may also be distinctive. In each case, decision-makers require bespoke evidence with which to plan and take action.

The Plant Health Centre helps Scotland's regulatory authorities prepare for unwanted pests and diseases through plugging such evidence gaps and, for example, has commissioned projects on *Xylella*, Bronze Birch Borer, and Potato Cyst Nematode in order to improve knowledge and understanding. Many gaps still exist in our understanding of the complex threats that these and other pests and diseases pose to Scotland's plants.

This is an open call to help plug these evidence gaps with respect to important threats to Scotland's plants – whether widespread, rare, domesticated or native.

Impact: Better evidence base to improve Scotland's preparedness and ultimately resilience against a wide range of future threats from pests and diseases.

Objectives and research required for this call:

To provide evidence that contributes to preparedness against important pests and diseases which threaten the health of Scotland's plant.

It is anticipated that the focus of this work will be on either specific pests and diseases identified as of considerable risk to Scotland's plant health (and likely to be identified as such in the UK Plant Health Risk Register), on plant assets that are of special significance to Scotland (important plant species or habitats), on official contingency plans, or on issues raised as concerns by key stakeholder groups.

The evidence gaps to be filled may vary in character – including i) a basic understanding of the biology of a particular pest/disease (e.g. climatic requirements of pest/disease and how these might change in the future; plant host range – particularly with respect to plants of economic, environmental or cultural importance to Scotland); ii) understanding of modes and rate of reproduction and spread, better profiling of possible arrival pathways and likely entry points; appropriate methods to enhance

detection and enable early eradication of any incursions; iii) specific plant based assets of socio-economic or ecological importance to Scotland and how to protect them; iv) key processes or activities that can be implemented to protect Scottish plants.

For more information on the remit of the projects the PHC commission, including areas that are not within scope, and for previous examples of our projects please refer to the [projects page](#) on the PHC website.

Outputs required from individual project:

- Final Report (<20 pages of text excluding figures, appendices, and references) on investigations, to contain key sources and recommendations for implementation or further work.
- Brief policy summary (1-2 pages) explaining how the work has contributed to filling an evidence gap(s), and the context in which the findings can be used by policy makers and practitioners.
- Attendance at briefing discussion with PHC Steering group to discuss findings and next steps.
- Presentation at Scotland's Plant Health conference, or any other relevant stakeholder meeting(s), to disseminate findings and contribution to other KE output such as the PHC virtual poster room or blogs.

Indicative key dates:

- Deadline for submission of applications: **12pm on 31st October 2022**
- Project start date: by 28th February 2023
- Overview of plans and project start-up meeting with PHC Directorate: by 17th March 2023
- Final report will vary depending on application, but all work must be completed by December 2023
- Briefing meeting with PHC and Conference participation: dates to be confirmed

Detailed milestones to be confirmed by bidder.

Date all work needs to be completed by: Length of projects may vary, but all work must be completed by December 2023

Project type: Collaborative

Maximum funding available (including overheads and VAT, where applicable): Projects with a maximum budget of £40,000 will be funded and we expect to be able to fund up to 4 projects