

## Research Tender

### Improved seed management to minimize losses due to *Pectobacterium* species

#### 1. Background

Currently control of blackleg, considered to be caused mainly by *Pectobacterium atrosepticum* (Pba) in Scotland and in >75% of cases in England and Wales, is carried out through a multi-faceted approach comprising high-quality disease free planting material, industry good practice and targeted legislation (seed certification). Until 2007, despite wet seasons, current control measures seemed to be working well and although present, blackleg was widely considered to be under control. However, from 2007 there was an increase in seed area downgraded or rejected within the Scottish Seed Classification Scheme as a result of blackleg. In response to this change AHDB Potatoes and Scottish Government co-funded a research project to identify how and when early field generations of potato become contaminated and infected by Pba. The aim was to use this information to modify current control strategies to reduce infection. The final report from the project, and a related project on bacterial contamination of early generation seed crops, are available at:

<https://potatoes.ahdb.org.uk/publications/114r475-routes-pectobacterium-contamination-high-grade-potato-seed>

The reports identify several areas where further work is required. On 31<sup>st</sup> January 2017, the Scottish Government issued a specification for a research project which will aim to:

- Determine the balance between seed-borne and environmental infection sources
- Determine how effective roguing of diseased plants is at reducing disease impact in crops

This document sets out the requirements for a separate, co-funded (by the Scottish Government and AHDB Potatoes) project which will aim to:

- A. Identify the major routes of initial contamination of high grade tubers
- B. Establish best practice to achieve a proactive reduction in tuber bacterial levels, e.g. through the use of appropriate ventilation, handling, grading and storage practices/environments, and/or novel control options

## **2. Scope of the tender**

Bacterial contamination can be detected during the first field-grown seed potato crop. Potential contractors seeking to address item A above should describe a programme of work which would determine the route(s) of initial contamination of high grade tubers. The tools to be used for detailed tracking of pathogenic Pba populations in the environment and within seed should be specified.

Although there is information on the general principles of storage best practice for seed (and ware) crops available in the [Store Managers' Guide](#): there are specific practicalities associated with storing seed crops, such as extended store filling and the practicalities of grading, that mean the ideal storage conditions cannot always be met or maintained. Therefore, the aim of this aspect (item B) of the tender is to commission research which would provide quantitative information on the impact of post-harvest practices (e.g., storage, grading, handling practices) and/or novel control options on the bacterial contamination/infection of tubers. It is expected that the research will accurately quantify the conditions which encourage and discourage Pba multiplication. This information would provide an evidence base for growers to prioritise the practices which have the greatest potential impact in minimizing the ingress and spread of the pathogen. The scope of the work can include PBTC material to be planted for its first field generation.

Utilisation of pathogen identification tools to track the spread of the pathogen and the provision of information on any blackleg disease which develops when the studied stocks are planted in the field is encouraged. The latter may be achieved through engagement with industry partners and/or as part of an integrated programme of knowledge exchange (KE).

Applications which focus on one of the aspects specified above will be considered and it is not essential that all areas are addressed. Potential contractors must provide a justification for the focus/approach taken.

Programmes of work which incorporate opportunities for KE are encouraged. Applicants may wish to be involved only in the delivery of research or only in the delivery of KE. Applicants intending to deliver KE are asked to describe the KE approaches in Sections 3.2 – 3.4 of the application form.

## **3. Collaboration and co-sponsorship**

Joint applications from two or more organisations are acceptable and encouraged where there is added value. AHDB reserves the right to not proceed with any application or, if appropriate, to request applicants to form a consortium to work together to deliver a programme of activities. Applications involving in-kind and/or cash funding from industry are particularly encouraged.

## **4. Related information**

[AHDB Potatoes Research & Innovation Strategy 2015 -2020:](#)

## 5. Budget and duration

AHDB Potatoes has set aside a maximum total budget of £90,000 over three years for the research activity and a budget of £20,000 for an integrated programme of KE. The Scottish Government has set aside a maximum budget of £110,000 over three years for the research activity. Therefore the maximum total budget available is £220,000.

The earliest date of commencement for a project funded as a result of the tender will be 1<sup>st</sup> August 2017.

## 6. Completion and submission of the application form

Applicants should complete the [AHDB Research and KE Application Form – Full Proposal Large](#) please also refer to the guidance notes. The criteria on which the proposals will be assessed are outlined at the end of the application form. Applications are made on the basis of the [AHDB Research Funding Agreement](#) and any organisation receiving funding shall comply with the terms and conditions specified in the RFA. AHDB will not be held responsible for any expenses or losses incurred by applicants in the preparation of an application(s).

For organisations describing a programme of KE activities, all the costs associated with the KE activities (ie staff costs, overheads, travel etc) for that organisation should be provided as one figure (line f in the tables in Section 6 of the application form).

Completed application forms should be submitted to [research@ahdb.org.uk](mailto:research@ahdb.org.uk) and cc to [sue.cowgill@ahdb.org.uk](mailto:sue.cowgill@ahdb.org.uk) no later than **5pm on Friday 2<sup>nd</sup> June 2017**

## 7. Timings for the assessment process

Stage of process	Deadline
Call published	18 <sup>th</sup> April 2017
Full proposal submission deadline	5pm on Friday 2 <sup>nd</sup> June 2017
Applicants informed on outcome	19 <sup>th</sup> July 2017
Earliest date of project commencement	1 <sup>st</sup> August 2017 (subject to contract)

## 8. Questions

If you have a specific question related to this tender please email [research@ahdb.org.uk](mailto:research@ahdb.org.uk). As part of the open tender process AHDB cannot discuss specific project details with you before submitting your proposal. All responses to questions will be anonymised and published on the AHDB Potatoes website funding page. **It is your responsibility to check this page regularly for new information.**