



Agriculture & Horticulture
DEVELOPMENT BOARD



New Project

CP 80

HDC Studentship: Pathogen diversity, epidemiology and control of Sclerotinia disease in vegetable crops

Project Number:	CP 80
Title:	Pathogen diversity, epidemiology and control of Sclerotinia disease in vegetable crops
Start and end dates:	1st October 2011 to 31st December 2014
Project Leader:	Dr John Clarkson, Warwick Crop Centre, University of Warwick
Industry Representative:	Martin Evans, Fresh Growers Ltd
Location:	Main site: Warwick HRI, University of Warwick Wellesbourne Campus Additional sites: Sclerotinia infected field sites as required
HDC Cost:	£66,150 (plus up to £2,000 p.a. available for expenses)

Project Summary:

Sclerotinia disease caused by *Sclerotinia sclerotiorum* continues to be a major problem in many vegetable crops. The pathogen is very diverse in the UK but little is known of how this impacts on disease development and control. This project aims to investigate the effects of organic soil amendments on survival of *S. sclerotiorum* sclerotia as a new method of reducing soil inoculum and evaluate *S. sclerotiorum* genotypes for their relative aggressiveness on different carrot varieties and their susceptibility to fungicides. Results will inform disease control strategies such as soil management, deployment of fungicides and resistance breeding. Aspects of the epidemiology and control of the recently discovered related pathogen *S. subarctica* will also be investigated. The student will acquire a wide range of research skills from field sampling and pathogen identification to molecular and microbial laboratory techniques and will liaise with growers and the industry in developing new approaches to Sclerotinia control.

Aims & Objectives:

(i) Project aim(s):

To identify potential new soil treatments for Sclerotinia disease control and to assess the impact of diversity on pathogen aggressiveness and fungicide sensitivity.

(ii) Project objective(s):

1) To test the effect of organic soil amendments on the survival of *S. sclerotiorum* sclerotia.

- 2) To develop a pathogenicity test and determine the aggressiveness of different *Sclerotinia* species and genotypes on commercial carrot varieties.
- 3) To evaluate the relative sensitivity of different *Sclerotinia* species and genotypes to fungicides.
- 4) To investigate the epidemiology and control of the closely related pathogen *S. subarctica*.
- 5) To consult with, and communicate results to the industry through meetings, presentations and publications.

Further information

Email the HDC office (hdc@hdc.ahdb.org.uk), quoting your HDC number, alternatively contact the HDC at the address below:

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