New Project

FV 407

Spinach: Preliminary studies on forecasting migrations of *Aphis fabae* into crops

Project Number:	FV 407
Project Title:	Spinach: Preliminary studies on forecasting migrations of *Aphis fabae* into crops
Project Leader:	Dr Rosemary Collier
Contractor:	University of Warwick
Industry Representative:	Shaun Clarkson, Vitacress Salads Ltd
Start Date:	1st April 2012
End Date:	30 September 2012
Project Cost:	£5,020

Project Summary:

The black bean aphid (*Aphis fabae*) has a very large range of summer hosts, of which spinach is one. This species overwinters mainly as eggs on spindle bushes. The eggs hatch from late February to early April and aphid colonies develop on the winter host. Winged forms are produced in May/June and these migrate to summer hosts. Reproduction continues throughout the summer, further winged forms are produced in response to crowding and these spread within crops and invade new crops. Populations usually peak in July/August. In autumn *A. fabae* migrates back to spindle and winter eggs are laid. Winged forms of *Aphis fabae* are captured in the suction traps operated by the Rothamsted Insect Survey. Several researchers have developed forecasting systems for infestations of *A. fabae* on beans or sugar beet. One approach, using egg counts on spindle and suction trap samples, was used in the UK for a number of years. The objectives of this project are to 1) produce a short review of relevant information on the life cycle and biology of *Aphis fabae* and summarise previous approaches to forecasting, 2) summarise Rothamsted suction trap records on captures of *Aphis fabae* to indicate the pattern of aphid migration, 3) look for relationships between aphid flight times/abundance and weather data and 4) propose a way forward.

Aims & Objectives:

(i) Project aim(s):

To gain a better understanding of *Aphis fabae* and its life cycle with a view to developing a prediction method to provide advance warning of possible sudden influxes.

(ii) Project objective(s):

1. Produce a short review of relevant information on the life cycle and biology of *Aphis fabae* and summarise previous approaches to forecasting.
2. Summarise Rothamsted suction trap records on captures of *Aphis fabae* over at least 10 years to indicate the pattern of aphid migration.
3. Look for relationships between aphid flight times/abundance and weather data using information from the literature as available.

Propose a way forward.

Benefits to industry

- This proposal is in direct response to a request from industry and the intention is to provide information that will inform an improved control strategy for *Aphis fabae* on spinach.

Disclaimer

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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