



Horticultural
Development
Company

New Project

FV 344

Sustaining the effectiveness of
new insecticides against aphid
pests in the UK

Project Number: FV 344

Title: Sustaining the effectiveness of new insecticides against aphid pests in the UK

Start and end dates: 1 January 2009 to 31 December 2011

Project Leader: Dr Ian Denholm (Head of Department) and Dr Steve Foster (Senior Research Entomologist)

Project Co-ordinator: Mr David Norman, Fresh Produce Consultancy Ltd

Location: Plant and Invertebrate Ecology Dept, Rothamsted Research, Harpenden, Hertfordshire, AL5 2JQ

Background and project objectives

This proposal was submitted to the Defra Sustainable Arable Link programme with a request for support from the HDC. In the past this work has been funded by Defra with no HDC contribution. However a request for an 'in kind' contribution (includes submission of aphid samples by growers) and the above for funds was received. The 'in kind' and HDC financial contribution have been matched financially by Defra.

Project Background

The project will strengthen the scientific framework for combating insecticide resistance in aphids, exemplified primarily by work on *M. persicae*, it will take a broad perspective on the range of chemicals available for aphid control, and will focus on the cross-company and cross-commodity challenges posed by the stewardship of neonicotinoid insecticides. Novel elements include: (i) the incorporation of new non-neonicotinoid insecticides (pymetrozine and flonicamid); (ii) analysis of possible fitness costs associated with neonicotinoid resistance; (iii) systematic evaluation of how neonicotinoid dose-rates, timing of exposure and mode of application (seed treatment vs. foliar) influence resistance risks; and (iv) pilot work on key aphid targets other than *M. persicae*.

The project will sustain scientific momentum through improved knowledge of the risks for resistance posed by different compounds, doses and methods of treatment. The major benefit will be to maintain effective options for ensuring the sustainability of insecticides in the UK, and avoiding ineffective applications due to insecticide resistance. Uncontrolled aphids can cause dramatic crop losses.

Further information

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

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