



Agriculture & Horticulture
DEVELOPMENT BOARD



New Project

HNS 186

Control of downy mildew on shrub
and herbaceous plants

Project Number: HNS 186

Project Title: Control of downy mildew on shrub and herbaceous plants

Project Leader: Tim O'Neill

Contractor: ADAS

Industry Representative: Alistair Hazell, Paul Howling & Chris Bowman

Start Date: 01/04/2012

End Date: 31/03/2014

Project Cost: £58,500

SUBJECT TO CONTRACT

Project Summary:

Downy mildew diseases can seriously damage over a dozen nursery stock and herbaceous perennials including Buddleia, Digitalis, Gaillardia, Hebe, Rose and Veronica. Fungicides are the primary method of control for most growers. The availability of fungicides for use on ornamentals is currently declining due to changing legislation. Furthermore, there is a risk of some fungicides failing to control downy mildew diseases due to selection of fungicide-resistant strains; this has recently occurred with metalaxyl-M (e.g. Fubol Gold WG) failing to control impatiens downy mildew. The SCEPTRE HortLink project (CP 77) is evaluating a wide range of new fungicides and biofungicides for downy mildew control on edible crops, initially on Brassica. The project proposed here will examine the most promising new products identified in the SCEPTRE HortLink project and elsewhere for control of downy mildews on two ornamental crops, and for their crop-safety to a range of woody and herbaceous ornamentals. Simple crop protection programmes, based where possible on 'low risk' products and designed to reduce the risk of resistance build-up, will be devised and tested. The HDC factsheet on downy mildew diseases (04/04) will be updated.

Aims & Objectives:

- (i) Project aim(s): To develop crop-safe and sustainable fungicide and biofungicide treatments for reliable control of downy mildew on shrub and herbaceous plants.
- (ii) Project objective(s):
 1. To determine the effectiveness of selected novel fungicides and biofungicides for control of downy mildew on one woody and one herbaceous perennial species.
 2. To devise and determine efficacy of some simple alternating programmes of fungicides and biofungicides for control of downy mildew on two crop species.
 3. To screen novel fungicides and biofungicides with good potential for control of downy mildew diseases for their safety to a range of susceptible woody and herbaceous ornamentals.
 4. To communicate results to growers through an update of HDC Factsheet 04/04 and by presentation of results at an appropriate growers meeting.

Benefits to industry

This project will benefit the industry through:

- Rapid identification of new fungicides and biofungicides with activity against downy mildew and their potential for use on ornamentals;
- Identification of the most promising products for HDC to seek a SOLA from CRD;
- Knowledge on the safety of new products to some important downy mildew susceptible ornamental subjects;
- Provision of example sustainable fungicide/biofungicide treatment programmes;
- Reduced losses and down-grading due to downy mildew.
- Updated listing of fungicides and biofungicides with activity against downy mildew and the situations in which they can be used.

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