



Horticultural
Development
Company

New Project

PC 299

Cucumber and tomato: to
evaluate new strategies for IPM
of spider mite

Project Number: PC 299

Title: Cucumber and tomato: to evaluate new strategies for IPM of spider mite

Start and end dates: 01 September 2009 – 28 February 2011 (18 months)

Project Leader: Dr Rob Jacobson, Rob Jacobson Consultancy Limited

Project Co-ordinator: Mr P Pearson, A Pearson & Sons, Cheshire
Mr D Schellingerhout, Cottingham, East Yorkshire

Location: Appropriate commercial cucumber and tomato crops

Background Information: Due to concerns by the HDC Board about the approval status of 'Floramite' Dr Jacobson was invited to resubmit this proposal that had been approved by the PC Panel 26 February 2009. The resubmitted proposal was once more approved by PC Panel 11 June 2009. This went to the 11th Board meeting where again concern about the status of Floramite and the substituted chemical Borneo were raised and the project put 'on-hold'.

Since the 11th Board meeting it has become clear Certis are not pursuing a label registration for Floramite. Due to industry requests for a second line of defence chemical to use in IPM strategies in cucumbers, following a difficult season with spider mite, HDC are now pursuing an emergency SOLA for cucumbers and ornamentals and a SOLA for use on tomatoes and peppers.

Following this decision the Director of Horticulture and Chairman of the Board were able to approve the project.

Summary: This project will take recently registered (or soon to be registered) products for cucumber and tomato crops and integrate them with existing biological control agents to construct new cost effective strategies for spider mite control. The new strategies will take into account the requirements of conventional and organic crops.

The new strategies will be based on the predatory mite, *Phytoseiulus persimilis*, which will provide season-long protection, combined with minimal use of bifentazate, etoxazole or *B. bassiana* as a "second line of defence". The second line of defence products will be used to slow down the pest population growth when conditions provide it with an advantage over the predator.

Three separate strategies will be evaluated to support *P. persimilis*

i) during early season establishment, ii) during periods of hot summer weather and iii) at first sight of hyper-necrotic damage symptoms.

Bifentazate will be the preferred option for conventional crops. The less

effective, *Beauveria bassiana*, will be suitable for organic crops. If HDC do not receive the SOLA for bifenazate, then it will be replaced by etoxazole in conventional tomato crop trials and by *B. bassiana* in conventional cucumber crop trials.

All work will be done on commercial nurseries.

Further information

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

AHDB – Horticulture
Stoneleigh Park
Kenilworth
Warwickshire
CV8 2TL

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