New Project

PC 302b

Tomato: Phase 3 of contingency plans for the control of Tuta absoluta

Project Number:	PC 302b
Title:	Tomato: Phase 3 of contingency plans for the control of Tuta absoluta
Start and end dates:	01 January 2011 to 31 August 2012
Project Leader:	Dr Philip S Morley, Wight Salads Group
Industry Representative:	Mr Philip Pearson (TGA Technical Committee Chairman), A Pearson & Sons
Location:	Main site: Wight Salads Ltd, Main Road, Arreton, Isle of Wight, PO30 3AR Additional sites: Horticilha Agro-Industria S.A., Alcochete, Portugal Libraries at Fera (Sand Hutton) and Lancaster, Leeds and York Universities Statistics Department Warwick University
HDC Cost:	£27,855

Project Summary:

- *Tuta absoluta* is becoming an increasingly important pest of tomato crops in Southern Europe. It is extremely damaging and currently controlled in those countries by intensive applications of chemical pesticides. However, such products would not be compatible with biological control agents and would therefore threaten the continued use of IPM in UK tomato crops. Organic crops are particularly vulnerable to *Tuta absoluta* because growers would not be allowed to use synthetic pesticides and retain their organic status.

- The financial loss to UK tomato growers could be over £300k per hectare depending on the time of year that the infestation is first detected.

- The overall commercial objective of Project PC 302 is to enable UK tomato growers to retain organic production status when faced with an outbreak of *Tuta absoluta*. However, the control measures will have a knock-on benefit for all conventional growers and in particular those who are trying to minimise use of synthetic chemical pesticides.

- The original PC 302 project was split into three phases. Phase 1 began in August 2009 and focused on the development of a short-term solution that could be implemented immediately against *Tuta absoluta*. WSG were in a unique position in that they had crops in southern Europe that were already infested with this pest and in which efficacy trials could be done on a large-scale. Within 10 months, Phase 1 had successfully developed a short term control measure. In addition, Phase 1 paved

the way towards longer-term more sustainable control measures that could be further evaluated in this phase of the project.

Phase 3 will:

- Evaluate cost-effective application rates of entomopathogenic nematodes
- Further refine methods of applying spinosad through the irrigation system
- Evaluate combined pheromone and light traps
- The trials will follow the approach which was successfully developed and utilised in recent HDC projects (PC 240, PC 251/a, PC 295/a, PC 302); all of which delivered results that were implemented by growers within the duration of the project. This approach will immediately identify any important interactions with current agronomic practice and eliminate the need for an additional exploitation phase to transfer the technology to the commercial situation.
- WSG has assembled a team of appropriately qualified and experienced personnel to undertake this project. The team have an excellent record of delivering practical solutions and effectively conveying new information to the tomato industry.
- The TGA Technical Committee 'fully support' the continuation of this work into Phase 3 (Minutes of TGA TC meeting 1 September 2010).
- The original Phase 3 proposal submitted to the HDC PE Panel meeting on 11 November 2010 has been modified according to guidelines provided by Dr Turner on 21 December 2010.

Aims & Objectives:

(i) Project aim:

To develop cost-effective and sustainable IPM strategies for *Tuta absoluta* that are acceptable within organic tomato production in the UK.

(ii) Project objective(s):

1. Evaluation of entomopathogenic nematodes against *Tuta absoluta*
2. Further refine methods of applying spinosad through the irrigation system
3. Evaluation of combined pheromone and light traps
4. Draft a Factsheet for growers
5. Convey results to tomato industry

Further information

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