New Project

PE 007 - Amendment

Sweet pepper – aspects of the biology and control of Fusarium fruit rot

Project Number:	PE 007 - Amendment
Project Title:	Sweet pepper – aspects of the biology and control of Fusarium fruit rot
Project Leader:	Tim O'Neill,
Contractor:	ADAS.
Industry Representative:	Gill Wardell, Abbey View Nurseries
Start Date:	01 April 2011
End Date:	31 March 2014
Project Cost (total project cost):	£69,499

Project Summary:

Internal fruit rot of sweet pepper grown in glasshouses has been an increasing problem worldwide since around 2000. In the UK a survey in 2007 showed infected fruits were present in many crops at levels from 1 to 37% (PC 260). The disease causes some losses on production nurseries but more importantly Fusarium continues to be a frequent cause of rejection by packers and complaints by supermarkets. Losses vary greatly between crops and seasons. Several weakly pathogenic Fusarium species are associated with the disease, notably F. lactis and F. oxysporum. Fusarium spores deposited on the stigma during flowering grow through the style resulting in infection of seeds and internal fruit wall. Observations in commercial crops indicate the disease is favoured by high humidity and fluctuating temperatures. At present there is no practical method of control. This project aims to reduce losses to Fusarium internal fruit rot through increased knowledge of factors associated with a high incidence of the disease and use of biofungicides and fungicides to control flower infection

Aims & Objectives:

(i) Project aim:

To identify treatments which reduce the occurrence of internal fruit rot of sweet pepper caused by Fusarium species.

(ii) Project objectives:

1. To obtain and review the latest research results on this disease from Canada, Belgium and the Netherlands;

2. To confirm the identity of *Fusarium* species associated with internal fruit rot in the UK by molecular characterisation of isolates;

3. To determine the influence of inoculum type and flower age on infection;

4. To determine the susceptibility of some different varieties;

5. To determine the effect of high humidity and moisture on flower infection;

6. To determine the efficacy of some biofungicides and fungicides applied to flowers for control of Fusarium internal fruit rot;

- To communicate results of the project to growers.

Benefits to industry

- Confirmation of *Fusarium* species causing internal fruit rot in the UK
- Knowledge of how some crop and environment factors influence disease risk.
- Potential to apply targeted treatments to reduce Fusarium internal fruit rot through use of biofungicides and fungicides in at risk glasshouses, on the most susceptible varieties or during weather periods favourable to the disease.
- Reduced risk of packhouse rejection, supermarket complaints and disruption to the supply chain.

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