



Horticultural  
Development  
Company

# New Project

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## **FV 378**

Assessment of plant elicitors to induce  
resistance against head-rot in broccoli

**Project Number:** FV 378

**Title:** Assessment of plant elicitors to induce resistance against head-rot in broccoli

**Start and end dates:** 01/04/10 – 31/03/12

**Project Leader:** Nicola Holden, Scottish Crop Research Institute, Invergowrie, Dundee, DD2 5DA

**Project Co-ordinator:** TBC

**Location:**

1. SCRI, Invergowrie, Dundee, DD2 5DA.
2. SAC, King's Buildings, West Mains Road, Edinburgh, EH9 3JG
3. EoSG farm (Peacehill Farm), Wormitt, Fife.

**Background and project objectives:**

The overall aim of this project is to test the efficacy of elicitor-based compounds as alternatives to copper-based compounds for treatment of head (spear) rot disease on broccoli. Head rot is a major problem in the UK, costing the industry over £15 million per year. Copper compounds, such as Cuprokyll, are currently the only effective treatment against this disease, but their use is likely to be restricted in the near future due to recently proposed EU restrictions (EU agrochemical registration Directive 91/414).

We have recently reviewed alternative treatment options for head rot and found that elicitors appear to have the most potential for tackling this disease. Elicitors trigger natural resistance in the plant and have proven credentials against bacterial and fungal pathogens, e.g. two such compounds, ASM and BABA, have already been used successfully to control head rot on broccoli under controlled conditions. Some elicitors are licensed for use in the UK but not on broccoli. Others are licensed for broccoli but not in the UK. There are also some fungicide active ingredients, such as azoxystrobin, which are known to induce resistance and, under various trade names (e.g. Amistar), are licensed for use on broccoli in the UK.

We thus propose to test up to 6 of the most effective elicitors (including azoxystrobin), both singly and in combination, in a series of field trials. The first field trials will be focussed on determining the most promising elicitors for further study, with subsequent trials testing these "most promising" elicitors in different combinations and concentrations. In addition, the formulations used for their application to broccoli will be carefully considered and tested. Where elicitors that are not licensed for use on broccoli within the UK are found to be effective for the treatment of head rot, the likelihood of Chemical Regulation Directorate (CRD) approval for use of these elicitors on broccoli will be determined. Finally, the results will be publicised through the *HDC News*, at least one relevant conference or field-day and grower-relevant magazines.

Further information

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

HDC  
Stoneleigh Park  
Kenilworth  
Warwickshire  
CV8 2TL

Tel – 0247 669 2051

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