Horticultural Development Company

# New Project

## PC 286

Bedding Plants: Investigating the cause and prevention of “Pansy Mottle Syndrome”

**Project Number:** PC 286

**Title:** Bedding Plants: Investigating the cause and prevention of "Pansy Mottle Syndrome"

**Start and end dates:** 1 April 2008 to 31 March 2010 (2 years)

**Project Leader:** Dr Martin McPherson, STC Research Foundation

**Project Co-ordinator:** To be agreed

**Location:** Stockbridge Technology Centre. MFU benched compartment & laboratory facilities.

# Background and project objectives

Pansy Mottle Syndrome is an unusual, but crop specific, problem that causes distortion and mottling of leaves, shoots & flowers in both Pansy & Viola crops. In severe cases it can cause apical blindness in shoots though whether this is the same or an unrelated problem is unclear at this stage. The same or similar symptoms do not appear to occur on adjacent but unrelated species on the same nurseries. The problem occurs sporadically on different nurseries and preliminary investigations have been unable to identify a single common factor which might account for the problem occurring. Our current state of knowledge of the PMS problem is summarised in a review conducted by Coutts & Bragg in 2007.

The aim of the proposed project, taking due note of previous work on the subject both in the UK and overseas, is to firstly gather samples and photographic records/digital images and to seek agreement with industry representatives as to what symptoms constitute Pansy Mottle Syndrome. Once this is agreed work will commence to try and elucidate the primary cause of the problem. The study will be conducted in a logical step-wise sequence by validation and/or elimination of a series of specific hypotheses. Initially, potential pathogen triggers e.g. systemic infection by downy mildew (*Peronospora violae*), virus risk & seed/graft transmission will be investigated and these will be followed later by investigation of other possible factors e.g. the influence of nutrient status, plant/environmental stress, potential chemical interactions with PGR's and other pesticides in the crop. Ultimately the aim is to quickly eliminate a number of variables so that effort can be focused on the most probable cause(s). The final objective will be to reproduce the symptoms of PMS under controlled conditions to ultimately identify the primary cause of the problem. From here it ought to be possible to provide advice to the industry to hopefully prevent a re-occurrence of the problem and hence minimise future crop loss.

Further information

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

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