

Grower Summary

PO 011a

Monitoring metalaxyl-M
sensitivity in Impatiens Downy
Mildew isolates from 2012
infections

Final 2013

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Use of pesticides

Only officially approved pesticides may be used in the UK. Approvals are normally granted only in relation to individual products and for specified uses. It is an offence to use non-approved products or to use approved products in a manner that does not comply with the statutory conditions of use, except where the crop or situation is the subject of an off-label extension of use.

Before using all pesticides check the approval status and conditions of use.

Read the label before use: use pesticides safely.

Further information

If you would like a copy of the full report, please email the HDC office (hdc@hdc.ahdb.org.uk), quoting your HDC number, alternatively contact the HDC at the address below.

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HDC is a division of the Agriculture and Horticulture Development Board.

Project Number:	PO 011a
Project Title:	Monitoring metalaxyl-M sensitivity in Impatiens Downy Mildew isolates from 2012 infections
Project Leader:	Dr Philip Jennings
Contractor:	The Food and Environment Research Agency
Industry Representative:	Mike Smith, W D Smith and Son
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Headline

All nursery and garden isolates of Impatiens downy mildew collected during 2012 were sensitive to metalaxyl-M. No isolates were submitted for testing in 2013 which may reflect the success of the decision by the majority of UK growers to produce only seed raised material.

Background

Early and widespread introduction of a metalaxyl-M resistant strain of the pathogen responsible for impatiens downy mildew infections in commercial production in 2011 meant that the disease proved difficult to control. It is hoped the pro-active decisions made by the industry regarding production of cutting raised plants will minimise infections in 2012 and beyond, however the risk of infection still remains. This small scale work aims to provide growers with:-

1. An early warning system for identifying metalaxyl-M resistance in any infections arising in 2012 and 2013, in order to assist with decisions on suitable spray programmes.
2. Guidance on the prevalence, persistence and geographical distribution of the metalaxyl-M resistant isolate compared to metalaxyl sensitive isolates in the wider environment.

Summary

A total of 10 samples were received from eight different locations, with the first sample arriving on the 15th May 2012 and the last on the 27th September 2012. The samples were received from four nurseries (although one sample was too badly decomposed to recover) and four private gardens. All the infected plants were from seed raised material.

Each isolate was tested against three replicate 6 week old impatiens plants treated with a metalaxyl-M soil drench (as Subdue at 12.5 mL product/100L water @ 10% of pot volume) two days prior to plant inoculation and three untreated control plants.

All the isolates for which a test result was obtained (nine) were designated as metalaxyl-M sensitive. This designation was based on no disease was observation on any of the metalaxyl-M treated plant, but disease symptoms on all the control plants, i.e. the disease had taken but was controlled by the application of metalaxyl-M.

The result of each test was immediately sent to the HDC research manager for dissemination as deemed appropriate.

No downy mildew on impatiens was reported in 2013, this was reflected in no samples arriving at the laboratory.

Financial Benefits

In the UK, the annual retail value of the impatiens crop before 2008 was estimated to be £40m; however the onset of impatiens downy mildew has considerably reduced this value. The outbreak of downy mildew in 2011 demonstrated that the disease has potential to destroy whole site annual production as well as undermine consumer confidence in this commercially important product.

Prompt (up to 10 days after sample receipt) and widespread (sample originator and the wider network of growers) reporting of the metalaxyl-M resistance status of any infections occurring in 2012 and beyond would allow growers to ensure that spray programmes used will be effective in minimising losses that may result from any outbreaks.

Action Points

- In 2012, the application of metalaxyl-M would have been effective in a fungicide programme to control the development of Impatiens downy mildew.
- The lack of disease in 2013 may reflect the success of the decision by the majority of UK growers to produce only seed raised material.