

# OptiGene

## Genie® II Field trial September 2011

### Introduction

Genie® II was used in the field to test apple trees for *Erwinia amylovora* using a LAMP assay. *Erwinia amylovora* is the causative agent of fire blight which had infected these cultivar Gala trees in Spring 2011.

The infected parts of the trees had been removed after the initial detection. The field trial was undertaken to confirm that the remaining parts of the trees were still healthy, showing no signs of infection and also to evaluate the suitability of Genie® II for use in the field.



### Methods

Eight samples (0.1 g) of wooden material from three different trees were cut and heated for 3 min in 100µl of PBS buffer at 95°C in the Genie® II. The tubes were shaken manually (with steel ball bearings inside the tubes) to assist disruption of the plant material. Then the *Erwinia amylovora* assay was run on the Genie® II for 40 min at 65°C followed by an annealing step from 92°C to 84°C at 0.05°C.

### Results

Three positive controls with bacterial concentrations of  $10^8$ ,  $10^5$ ,  $10^2$  CFU/ml showed amplification at 10:30min, 19:00min and 27:15min with the expected anneal curve peak at 86°C. None of the samples showed positive results. Bad for the field trial – good for the apple farmer!

The Genie® II proved to be a very easy-to-use, robust, portable instrument; invaluable for use in the field.

### Andreas Bühlmann

Molecular Diagnostics

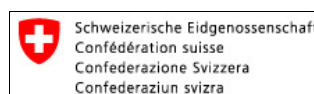
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