

The correct diagnosis for diseased plants



Trudie Coenen

Planteziektenkundige

Cause of disease

- Fungus
- Bacterium
- Virus/viroid
- Fytoplasm
- Insects
- Mites
- Physiological

- Dna-multiscan
 - Fast screening
 - Most common plant pathogenic fungi
 - Some bacteria

- List of fungi and bacteria is not complete
- No distinction between primary and secondary
- Importance score 0-6

- Not only fungi and bacteria
- Microscopic assessment
- Use of dna-multiscan but also other techniques
- Report cause of disease; pathogenic organism or something else
- Primary or secondary
- Advice

D

PlantDoctor

Client number:

Client name:

Street:

Postal Code - City:

Country:

Client reference (optional):

Test code: 700 - PlantDoctor
705 - PlantDoctor Virus

Nr. of samples: Code RST: Advice: 10 = YES

Date of sampling (d - m - yr):

Administration:

Send your samples to:

Eurofins Agro
Binnenhaven 6
8709 PD Wageningen
The Netherlands
Tel: +31 (0)24 476 1014
Email: hurst@eurofins-agro.com

Information

Diagnostic services

PlantDoctor general - code 700
Why: to determine which plant pathogen causes the problem
How: send 20g leaves / roots or a complete plant

PlantDoctor virus - code 705
Why: to determine if a virus infected the plant / seed
How: send 20g of leaves or 5000 seeds

Send your samples to:

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Binnenhaven 6
8709 PD Wageningen
The Netherlands
Tel: +31 (0)24 476 1014
Email: hurst@eurofins-agro.com

Country, Agro sector:

Sample nr.:

Sample identification:

(max 24 pos.)

Send your samples to:

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Blue Berry

Results

The Blueberry show wilting and leaf fall and has some brown leaves left on the affected branches. The tissue in the plant foot and stem base has a glassy appearance and the pith is dark brown.

Using plating techniques on different culture media the plant material has been tested for the presence of plant pathogenic fungi.

A pure fungus culture was isolated from the plant material. Using sequence analysis it indicates that we are dealing with *Neofusicoccum parvum* (a fungus belonging to Botryosphaeraceae).

Subsequently we have tested the material on plantpathogenic fungi and bacteria using dna-multiplex. *Alternaria* spp., *Fusarium* spp., *Pythium* spp. and *Pythium* dimorphum, have been detected with a strong signal. *Phytophthora* spp. and *Verticillium* spp. and primary bacteria or *Pseudomonas syringae* have not been detected.

Alternaria spp. can cause leaf spot diseases and seems to be secondary. *Pythium* species can cause root- and stem base rot and can cause the glassy appearance of the tissue in the stem base. *Pythium* can produce survival structures, zoospores, which can be present in soil or infested plant material for a long time.

Fusarium spp. can have both harmful and harmless species. The harmful can cause foot- and root rot diseases, but probably here we are dealing with a harmless species.

Neofusicoccum parvum can cause shoot dieback in various plant species or woody plants.

Based on the results, we conclude that *Neofusicoccum parvum* and *Pythium* spp. are the cause of the symptoms in the Blueberry.

Neofusicoccum parvum can cause shoot dieback and canker in various plant species or woody plants (tree and shrubs). Wilting is often a symptom caused by infestation. Often this pathogen causes problems when plants are under stress and not grow under optimum conditions. Pruning wounds may have been affected, use always disinfectied pruning tools and make sure the wound tissue dries quickly.

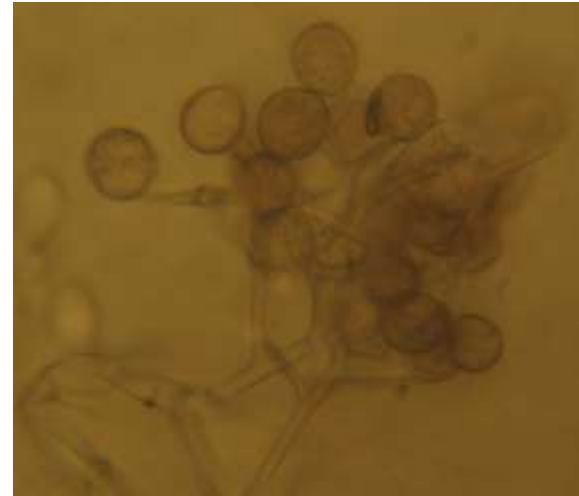
Ensure proper drainage of the soil and optimal growth conditions.

Material upon arrival



samples

- Raspberry



samples

○ Raspberry



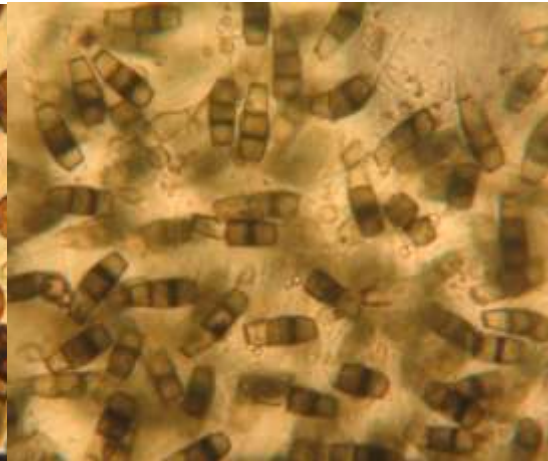
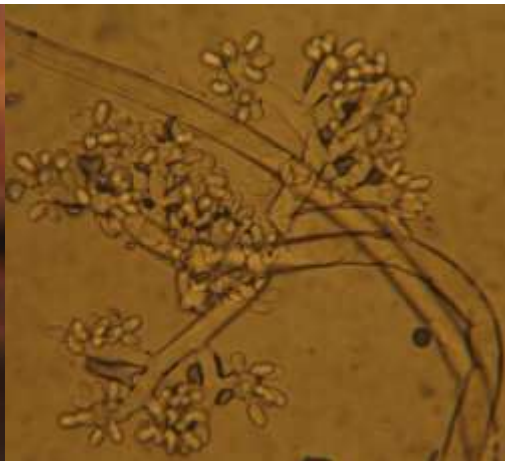
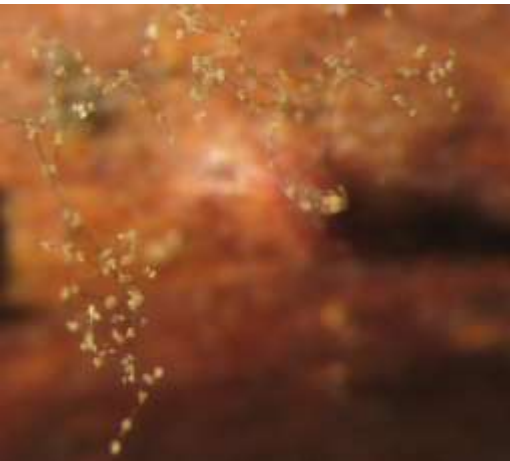
samples

- Raspberry



samples

- Raspberry and Blueberry



samples

○ Blueberry



samples

○ Blueberry



sample

○ Blueberry



Thank you for your attention

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