

# Diagnostics of plant diseases

Healthy crops for a safe and sustainable agriculture



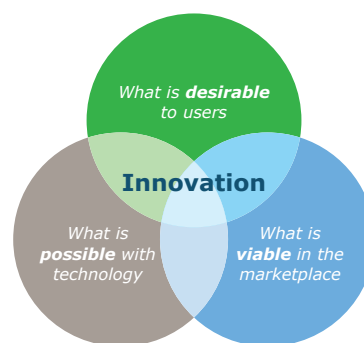
WAGENINGEN UR  
For quality of life

## Healthy plants to feed the world

- Healthy crops are essential for safe, healthy, and sustainable farming. They contribute to the quality of food and life
- Reliable diagnostics for the timely detection of plant pests and diseases provide the basis for healthy crop production
- This is how diagnostics helps controlling risks and provides security during crop production

## Diagnostics of plant diseases at Wageningen UR

- Our scientists are experts in the field of phytopathology and the application of new technologies. This combination of expertise gives us a head start in the search for solutions to practical problems
- The collaboration between primary diagnostics and diagnostics development in Wageningen UR provides a direct link with the wishes and ideas of our customers
- Any conceivable field situation can be mimicked and tested in our laboratories and greenhouse facilities
- Developed detection methods are rapidly made available to our clients through the services and sale of end products by *Prime Diagnostics*
- The detection methods we develop are meeting the needs of our clients. They range from simple field tests through to very advanced detection systems for *high-throughput* laboratories



**The reliable tests and diagnostics of Wageningen UR provide our clients with security and restrict risks in critical processes in plant health.**

Please visit our website for more information about our various projects and publications:

[www.wageningenur.nl/healthyplantstofeedtheworld](http://www.wageningenur.nl/healthyplantstofeedtheworld)

Under "Diagnostics Plant Diseases" you also find our services in the field of Primary Diagnostics and Electron Microscopy.

On [www.primediagnosics.com](http://www.primediagnosics.com) you find the catalogue of Prime Diagnostics. This catalogue contains the end products, and the methods we develop, produce and market worldwide.



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# Taqman-PCR

Quantitative detection



**All organisms contain DNA and/or RNA with information that is specific for that organism. Utilisation of this fact allows the development of unique *TaqMan PCR* methods for quantitative and high-quality detection of an organism in plant material, air, water, substrate, and soil. The *TaqMan PCR* is based on polymerase chain reaction (*PCR*), a method for which Kary Mullis was awarded the Nobel prize in 1993. This technique allows real-time visualisation of the specific DNA and/or RNA information of one specific organism during reproduction.**

## *Advantages*

- Very sensitive
- Widely applicable for organisms that contain RNA and/or DNA
- Quantitative: the amount of the organism can be determined
- One tube assay: all in one tube
- High throughput: many simultaneous analyses
- Multiplex: simultaneous analysis of several, up to about 3 or 4, organisms

## *Approach and procedure*

We have many years' experience with the *TaqMan PCR* technology and developed specific assays for a large number of customers; these are still being used on a routine basis. Methods have been developed, validated and implemented for various organisms originating from different matrices. These results have frequently been published in scientific journals and are frequently cited.

For lacking and/or new organisms we are eager to jointly develop a suitable *TaqMan PCR* for your specific application.



## Contact

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