



Quality of growing media  
matters

# We need to develop

RHP

Marco Zevenhoven

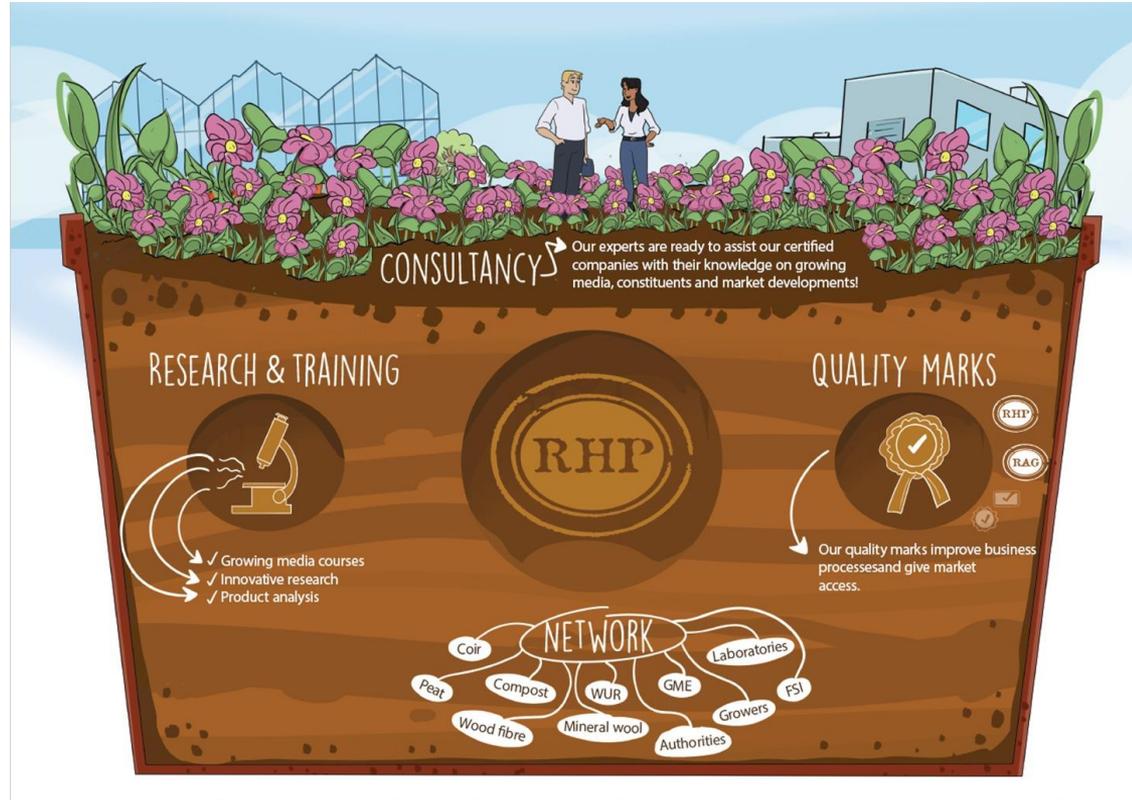




# RHP

RHP develops base knowledge.

Members use this to improve and for further innovation





# Example of a development

To get grip on bad water distribution in a peat substrates, RHP developed the automatic WOK (water uptake) measurement





# RHP 2022



**422 RHP CERTIFIED  
LOCATIONS  
ALL OVER THE  
WORLD**



**9,900,000 M<sup>3</sup>  
RHP  
CERTIFIED  
PRODUCT**



**14.592  
PRODUCT  
ANALYSES  
PER YEAR**



**SUPPORT ON A  
DISTANCE (E.G.  
WEBINARS) AND  
FREQUENT  
COMPANY VISITS**

**71  
CERTIFIED  
(INTERNATIONAL)  
COMPANIES**



**1124 PERSONS  
FOLLOWED  
TRAININGS AND  
WORKSHOPS THE  
LAST 10 YEARS**



# RHP participants





# We need to develop – Why?

The horticulture industry is changing

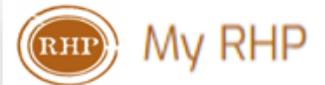
- ✓ More culture management and planned production
- ✓ Much more attention for sustainability
- ✓ Increasing use of other raw materials
- ✓ Vertical growing
- ✓ .....





# Completed RHP projects

- ✓ Difference between fractions of sods compared to fractions of milled peat
- ✓ Difference between milled peat collected mechanically compared to vacuum collected
- ✓ Effects of perlite, clay, bark, wood fibre in mixtures
- ✓ Stability of coir products
- ✓ Behaviour of (harmful) nematodes in peat bogs
- ✓ .....





# Running RHP projects

- ✓ Looking for factors that cause mold (fungi) of packed peat and tools to measure
- ✓ Characterisation of wood fibre types
  - ✓ Fine particles, behaviour nitrogen immobilisation
- ✓ Hygiene protocol for substrate factories and raw material processing locations
- ✓ New Growing Media - how to secure safety and quality
- ✓ Interlaboratory trails for substrate labs
- ✓ Characterisation of plugs (for propagation)
- ✓ .....



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# Fungi in big bales





# Fungi in big bales



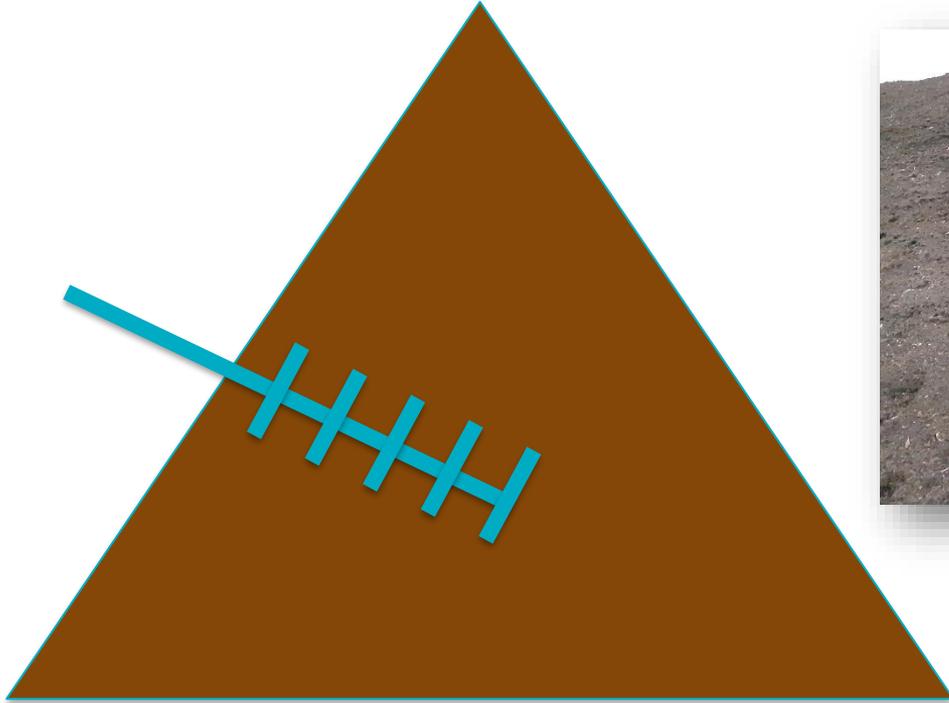


# Fungi in cultures





# Influence of storage on fungi development



✓ Sampling at 15 peat bogs in 5 countries



# Result from one heap

Incubation test





# Running RHP projects

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# RHP Hygiene protocol



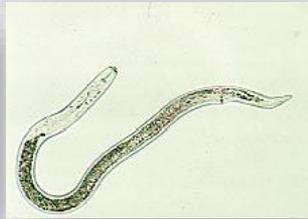
Hygiene in horticulture is getting more and more important





# Risks - pathogens

## risks for plants



## risks for humans



Legionella bacteria can be commonly found in water, soil, compost, and potting mix and can cause Legionnaires' disease



# Risks – where are they ?

Extensive research at the companies by sampling at unusual places for analysing indicators





# Risks – where are they ?

## Old storage corner

- 50 nematodes
- *5 Pratylenchus*

## Remains in a bunker

- 402 nematodes
- *5 Helicotylenchus*

## Stored substrate (open and long)

- 1006 nematodes
- *Salmonella*

## Puddle

- *Fungus gnats (Sciara)*





# Risks – how to get grip ?

Based on the experiences RHP developed a model to assess factories



*Hygiene protocol*



The model calculate a score which is compared with previous measurement and the average of the industry



# Risks – how to get grip ?

By measuring and monitoring, risks can get reduced and a lower chance of damages





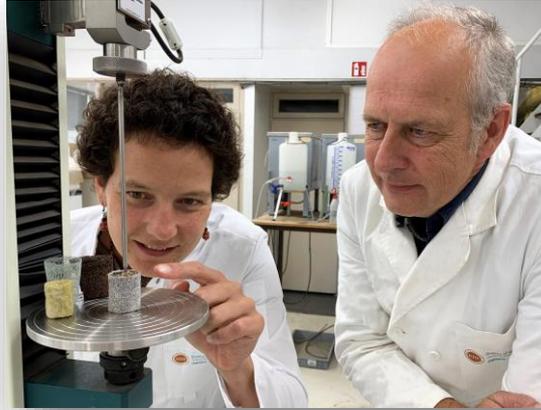
# RHP

To stay connected with the market and continue to meet their changing demands, knowledge about the products (raw materials and growing media) and their behavior is needed.

## We need to develop !



# Thank you



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# Nematode Project

Goals of the project:

- ✓ Risk assessment on peat bogs concerning nematodes
- ✓ Influence of the weeds spots on the nematode population
- ✓ Relation between nematodes and weeds groups
- ✓ Determination of the 'harmless' nematodes (discussion during export)



# Countries and samples

Country	Totaal
Germany	10
Estonia	8
Finland	3
Ireland	14
Latvia	23
Lithuania	5
Russia	1
Sweden	17
<b>Total</b>	<b>81</b>





# Degree of coverage

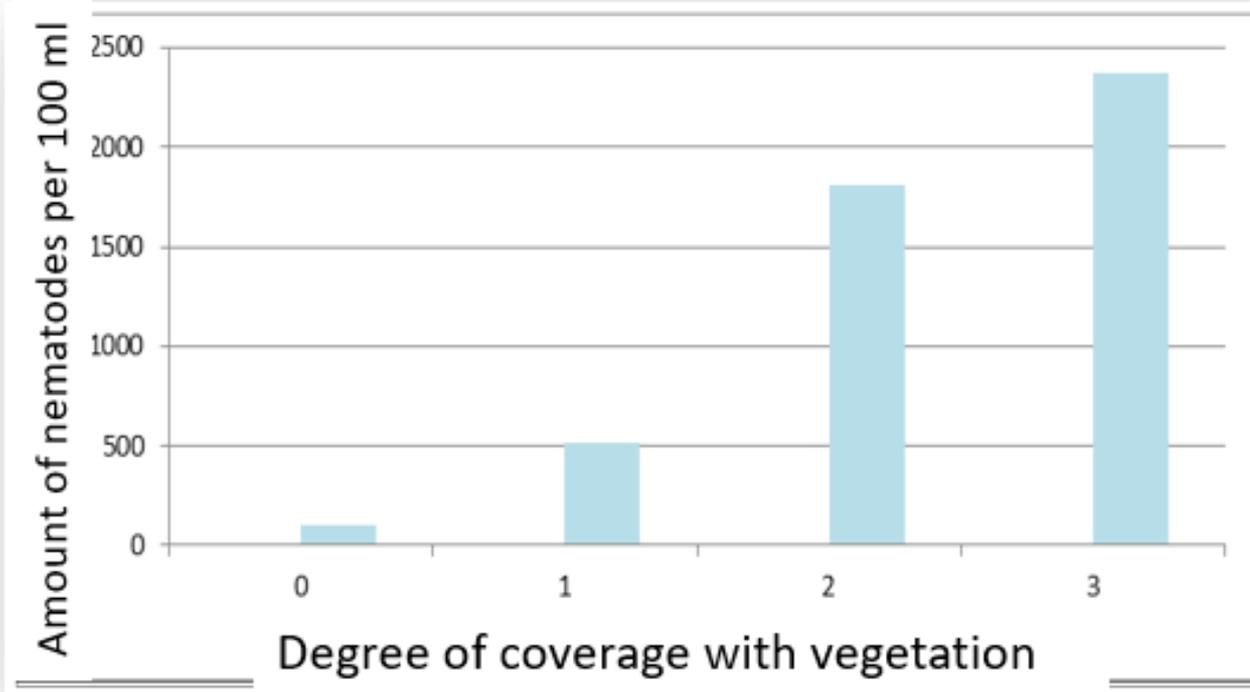


## Vegetation

- 0 No coverage
- 1 Less covered
- 2 Moderate covered
- 3 Heavy covered



# Degree of coverage



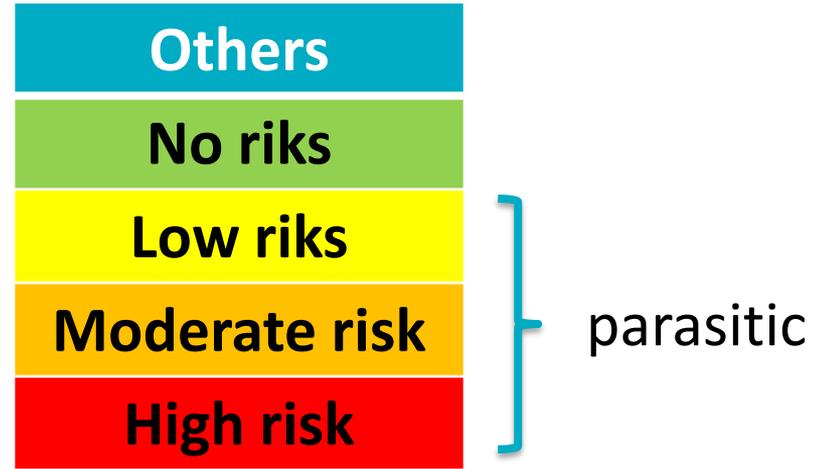
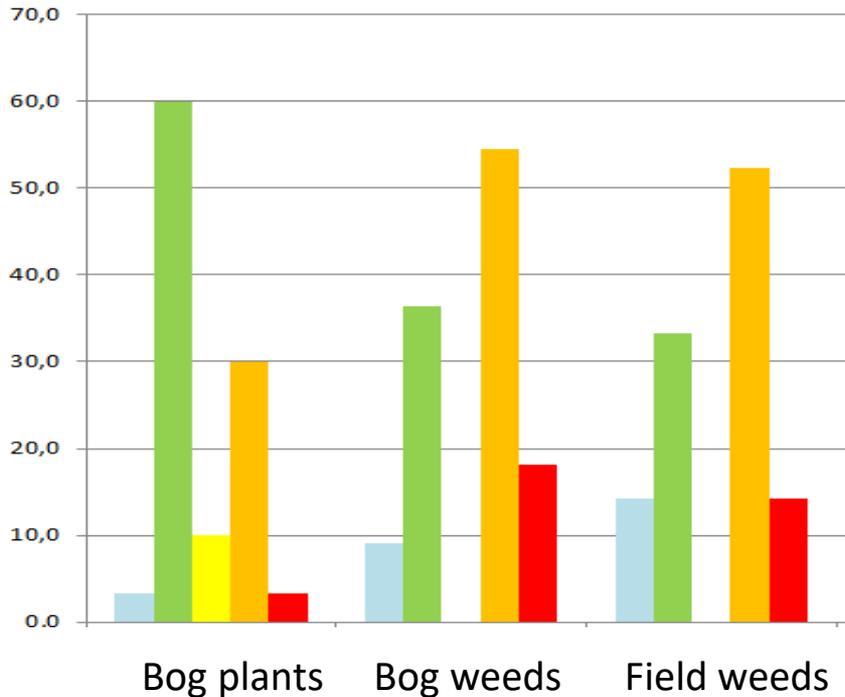
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# Risk groups vs. vegetation

Relative distribution of risk groups in relation to type of vegetation





# Most risky places





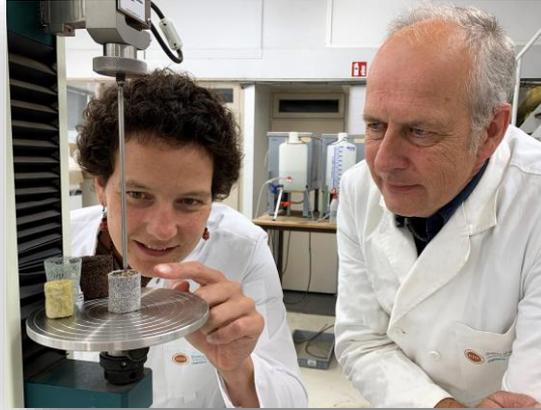
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