

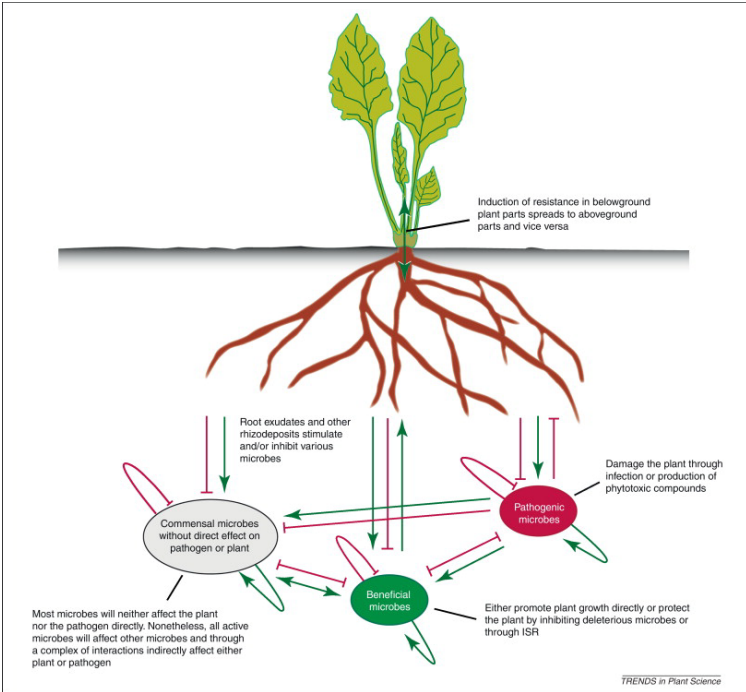
# The Plant Microbiome to the Rescue

## Gewasbeschermingsmanifestatie

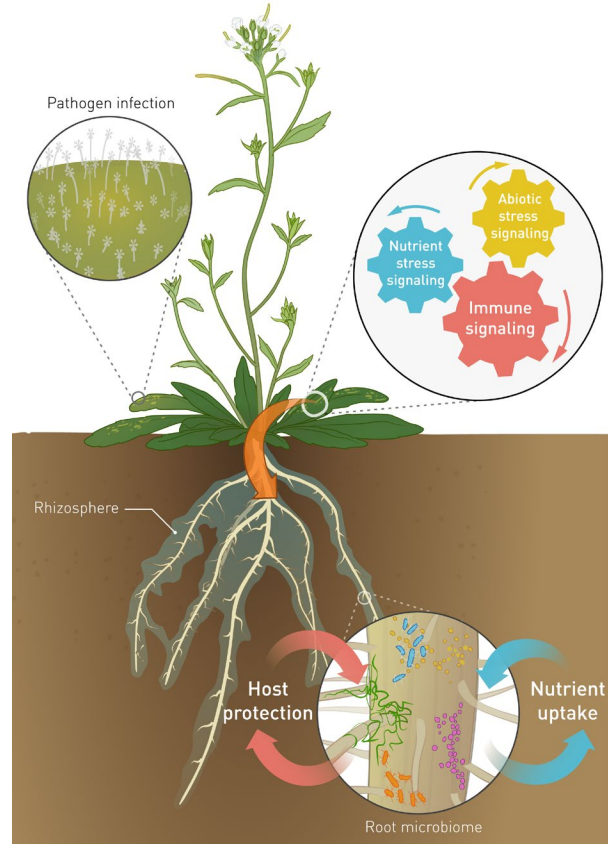


# The Plant Microbiome to the Rescue

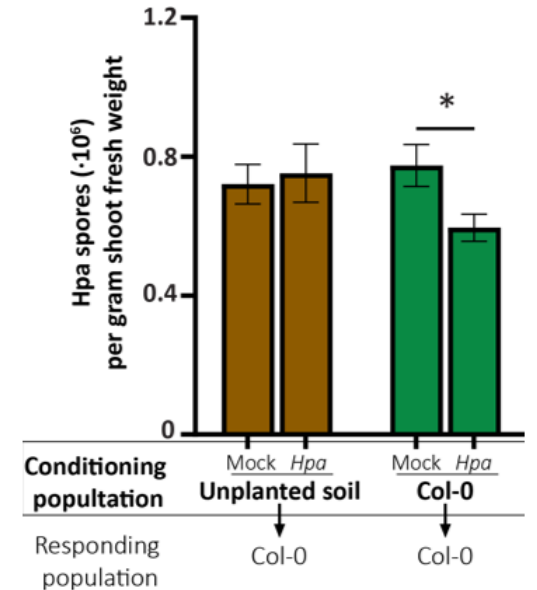
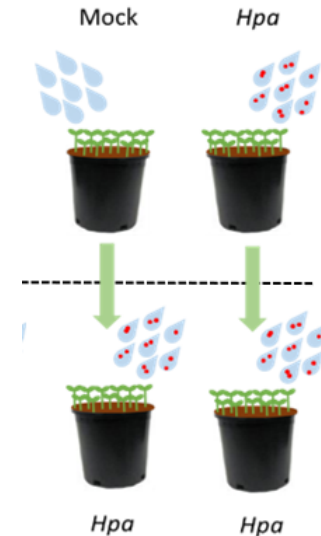
## Pathogenic and beneficial microbes drive plant health



## Disease-induced recruitment



## Soil-borne legacy of disease

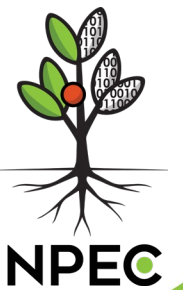


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Utrecht University



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## Seed tuber microbiome can predict growth potential of potato varieties

[Yang Song](#), [Elisa Atza](#), [Juan J. Sánchez-Gil](#), [Doretta Akkermans](#), [Ronnie de Jonge](#), [Peter G. H. de Rooij](#), [David Kakembo](#), [Peter A. H. M. Bakker](#), [Corné M. J. Pieterse](#), [Neil V. Budko](#) & [Roeland L. Berendsen](#) 

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Yang Song

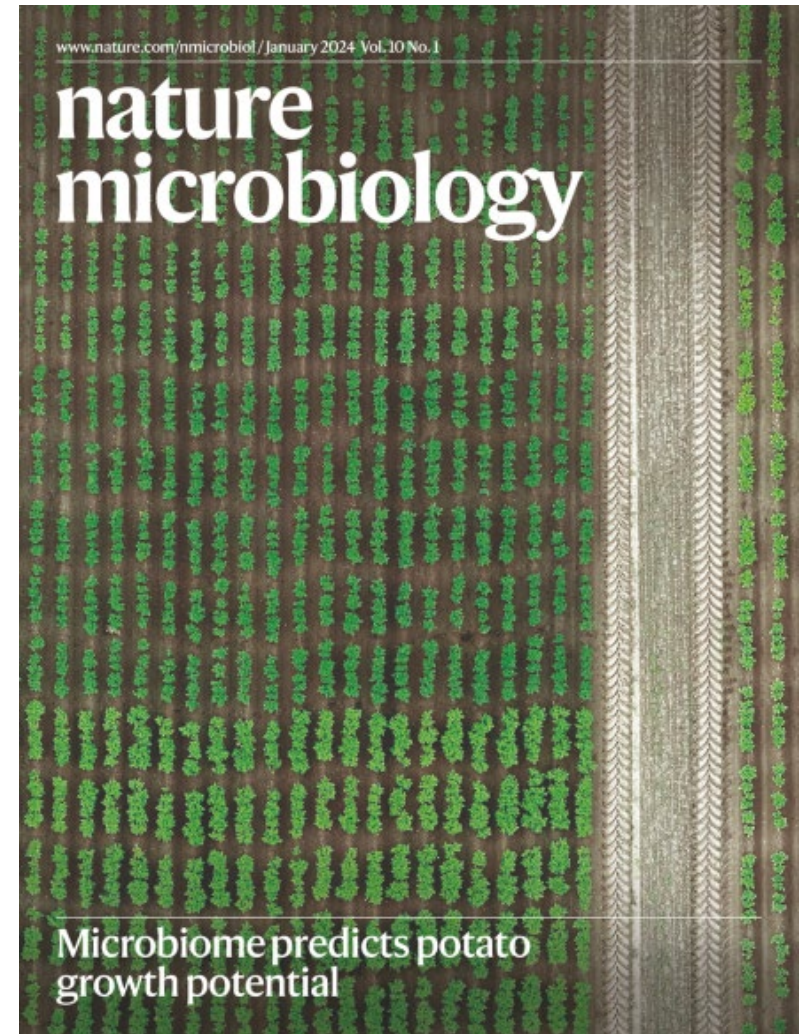


Juanjo  
Sanchez-Gil

## Flight to vitality

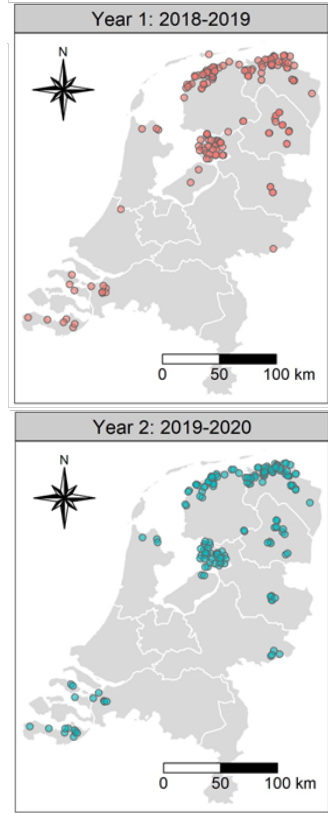


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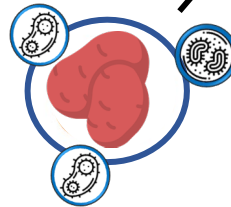
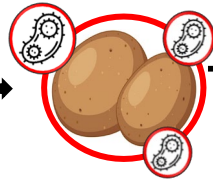
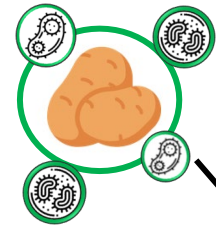
# Seed tuber microbiome can predict growth potential of potato varieties



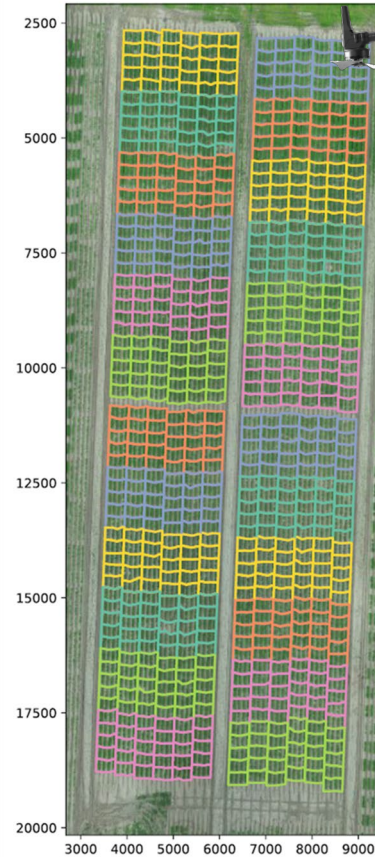
Years  
(2 years)



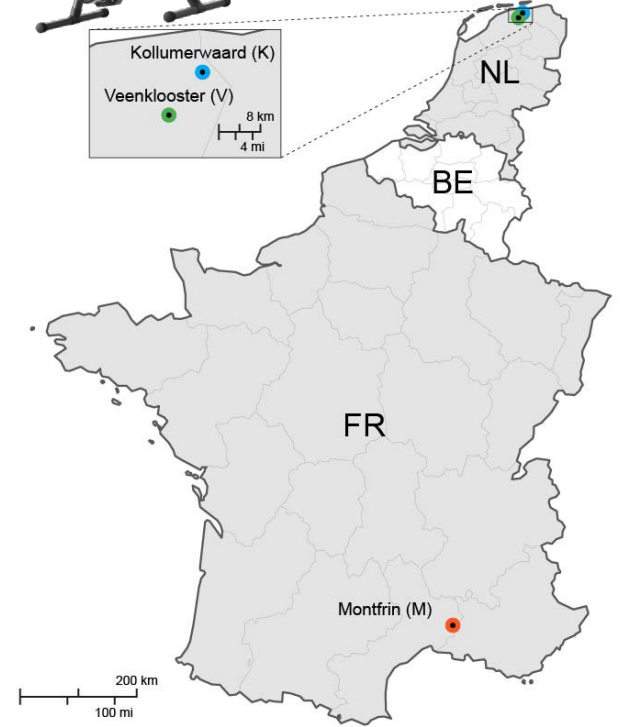
Fields of production  
(30 fields / variety)



Seed tubers  
(6 varieties)



Trial field in  
Veenklooster (2020)



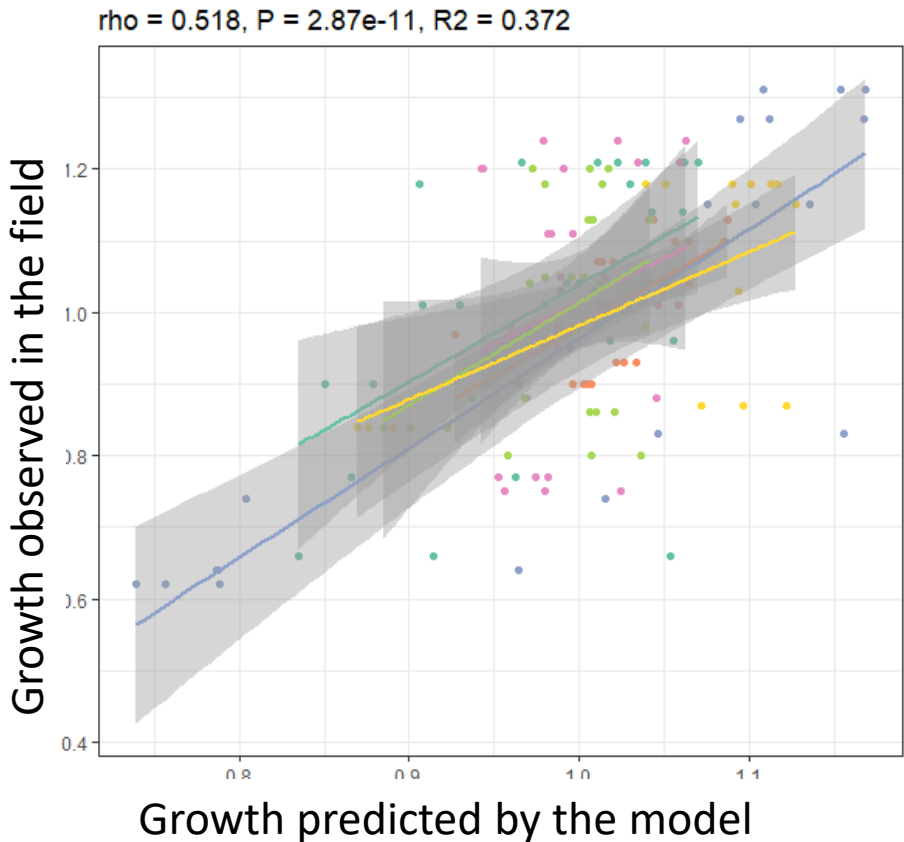
Trial fields  
(3 fields)

Gewas  
beschermings  
manifestatie

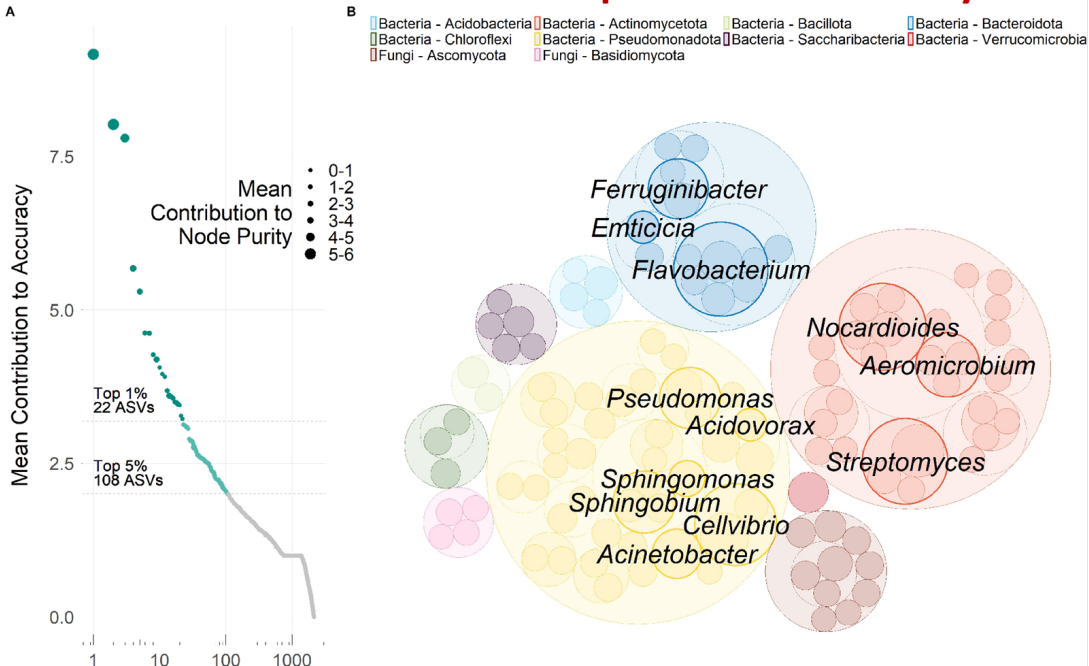


360 seedlots

# Seed tuber microbiome can predict growth potential of potato varieties



## Identification of microbial predictors of vitality



Yang Song



Juanjo Sanchez-Gil

# Integrated crop management for microbiome-optimized agriculture

1. **Probiotics:** Elite microbes with enhanced rhizosphere competence and functioning. **Personalized medicine** for plants.
2. **Prebiotics:** **Metabolites** (plant- or microbe-produced) selectively stimulating beneficial microbes and their activities
3. **Microbiome-optimized crops:** **Plant genetics** for enhanced microbiome functionality
4. **Microbiome-based prediction models**
5. **Soil management practises** in support of microbiome functioning

