

# Moringa leaf extracts as plant biostimulants in Africa and beyond

Utilisation, Composition, and Efficiency

Silvia Faravelli  
[sifi0001@stud.slu.se](mailto:sifi0001@stud.slu.se)

Supervisor:  
Erik Alexandersson, SLU

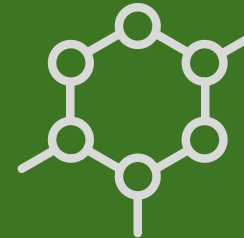
Co-supervisors:  
Sajeevan Radha Sivarajan, SLU  
Anna Manourova, SLU  
Salmina Mokgehle, UMP  
Lerato Tsalaemang Matsaunyane, ARC Pretoria

# Research questions



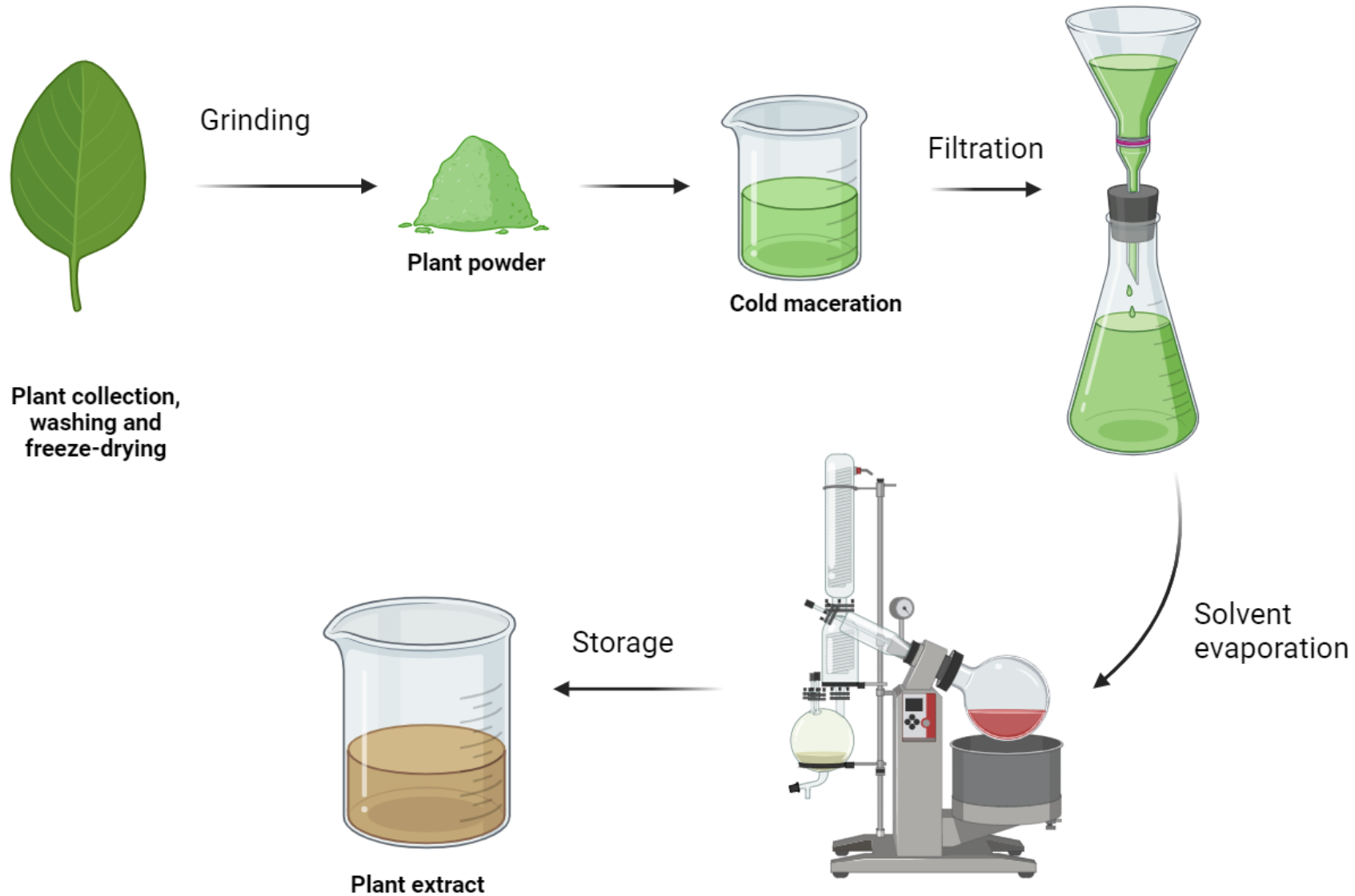
To what extent do local communities in South Africa and Ethiopia recognize the traditional beliefs and practical uses of Moringa, as well as its potential as a biostimulant?

Do different Moringa species, geographical regions of growth, and extraction methodologies have impacts on the chemical composition of Moringa leaf extracts?



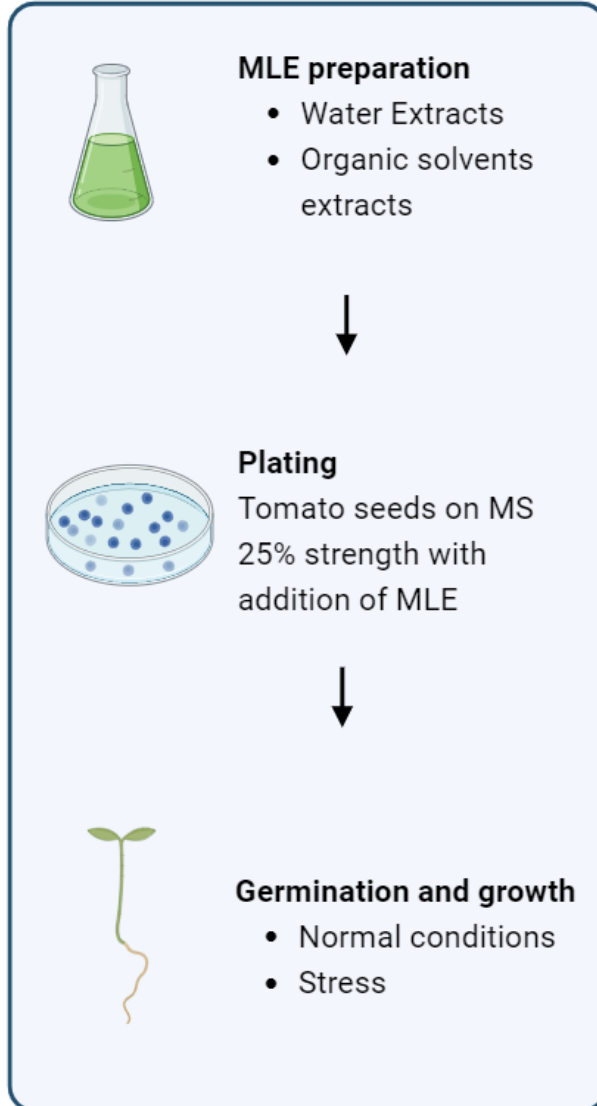
Can the application of Moringa leaf extracts positively influence the germination and growth of tomato plants, particularly under conditions of abiotic stress such as drought?

# Moringa extracts

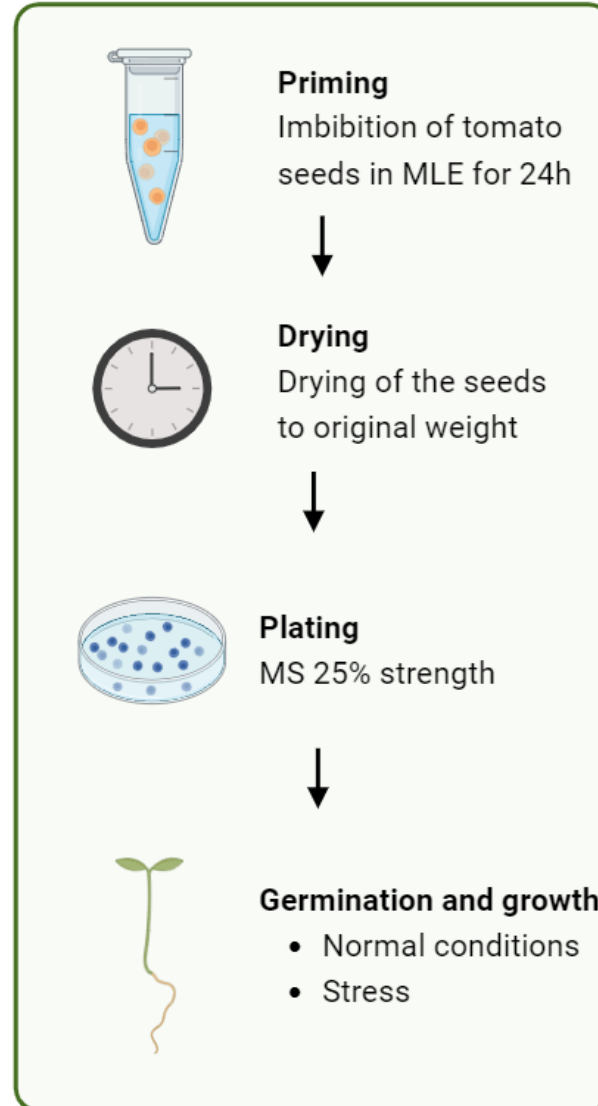


# Experimental setup - 1

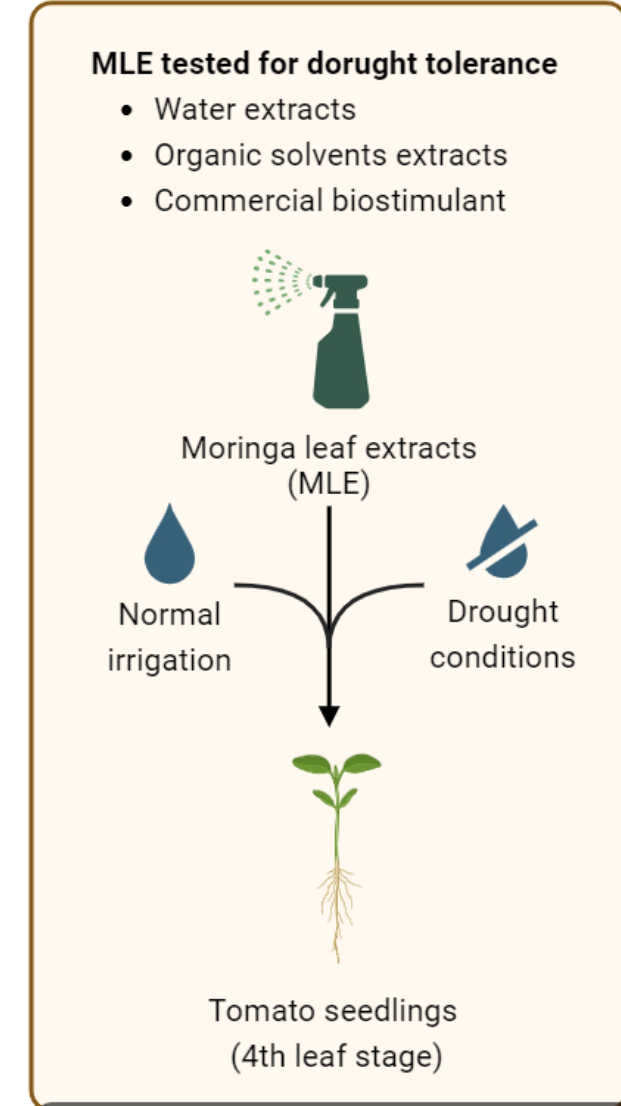
## Germination study



## Biopriming



## Greenhouse study





The participants to the survey in South Africa and Ethiopia showed low knowledge related to Moringa leaf extracts as plant biostimulant.



Different Moringa species, geographical regions of growth, and extraction methodologies impact the chemical composition of Moringa leaf extracts.



Organic solvents used for the germination study and biopriming at 100mg/ml concentration resulted in no germination.



Moringa water extracts showed a significant positive effect regarding fruit weight in the greenhouse experiment.