

“Wrap & Plant”, novel nematode management

Management of *Radopholus similis*
on banana using banana papers
in Sub-Saharan Africa

Kanan Saikai





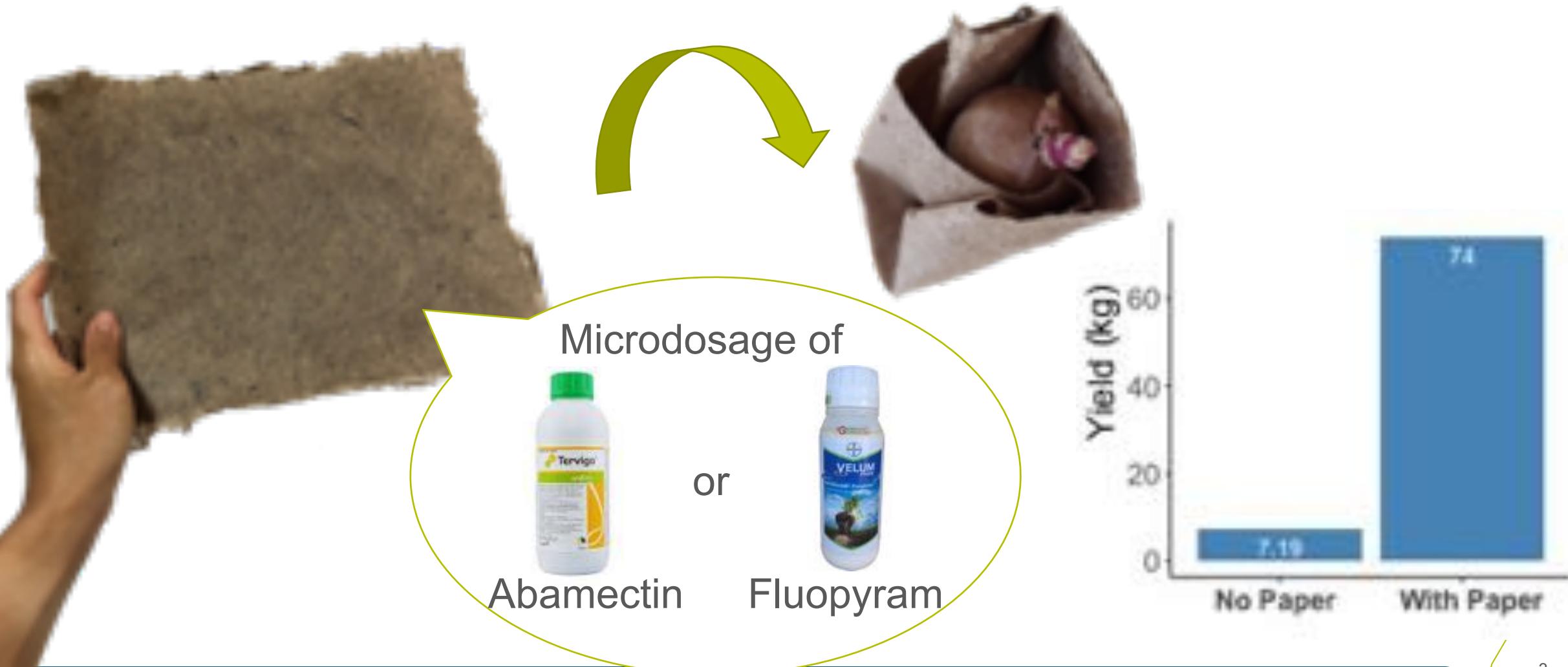
Joint nematology lab unit between IITA and ICIPE based in Nairobi, Kenya



@NemAfrica

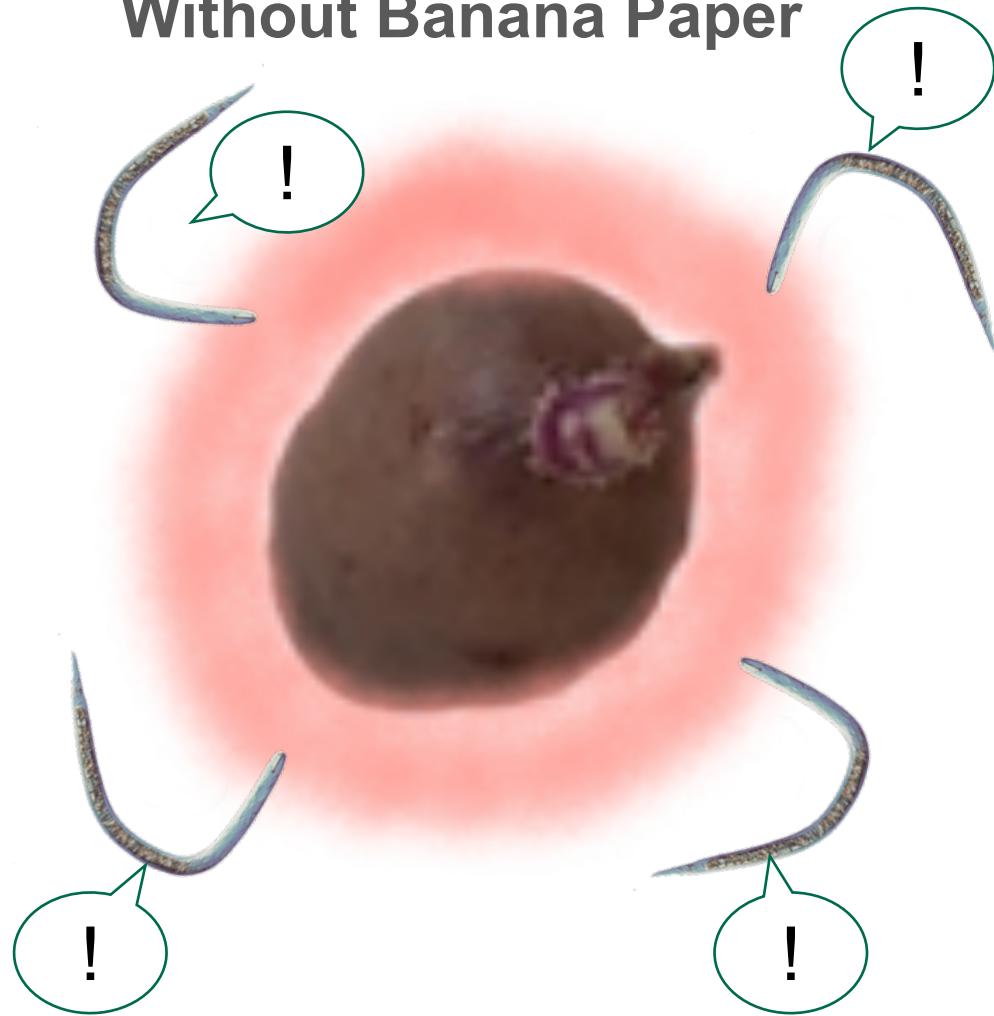
Background of Wrap & Plant project

Banana papers infiltrated with nematicides for nematode management.



Background of Wrap & Plant project

Without Banana Paper



With Banana Paper



Banana paper for nematode management on banana

Banana and plantains are staple food crops in SSA but...

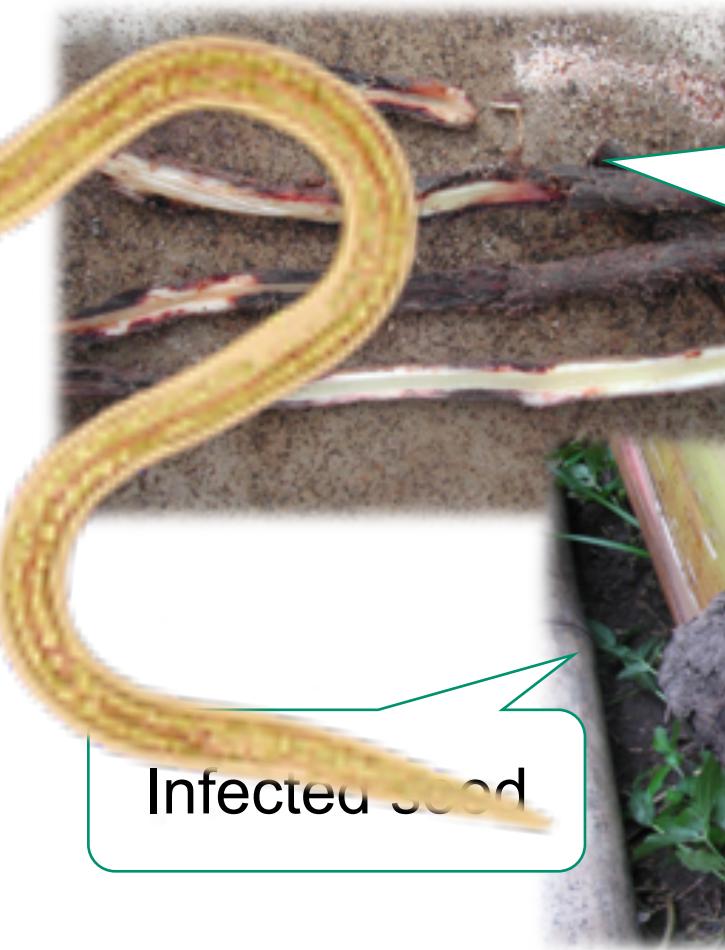


Photo credit: Dr. Danny Coyne

Q. Does the Wrap & Plant technology work to control nematodes on banana?

The objective: to test banana papers infiltrated with nematicides in the management of *Radopholus similis* on banana.



Materials and methods

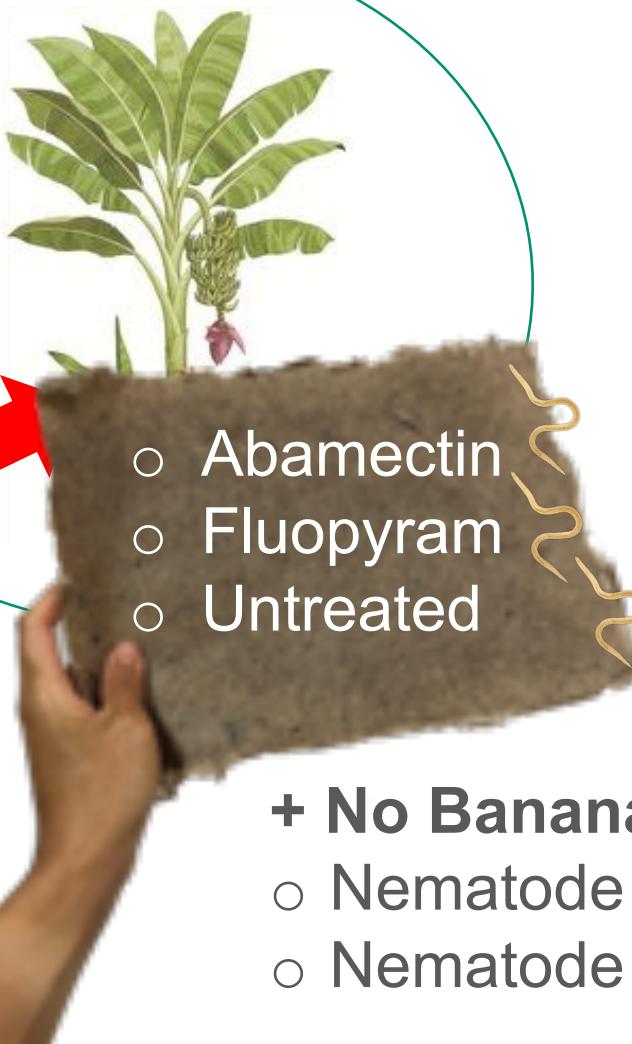
Vegetative propagation
(Uganda)

CV - Mbwazirum

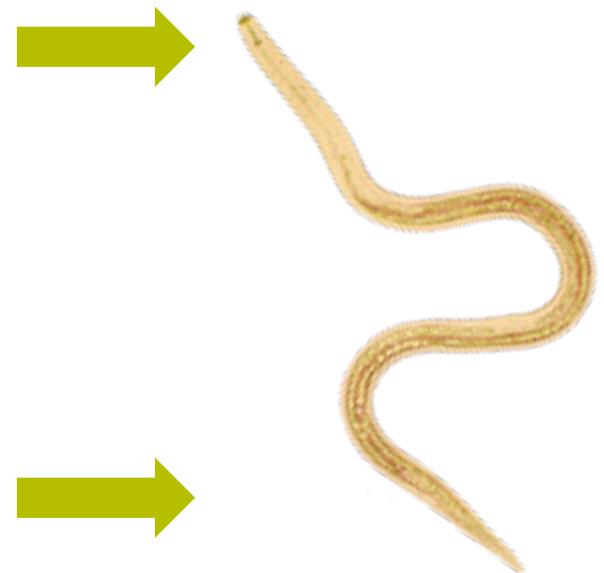


Tissue culture (Kenya)

CV - Williams



- Abamectin
- Fluopyram
- Untreated



+ No Banana paper

- Nematode +
- Nematode -



+ chemical trt.

- Abamectin
- Fluopyram

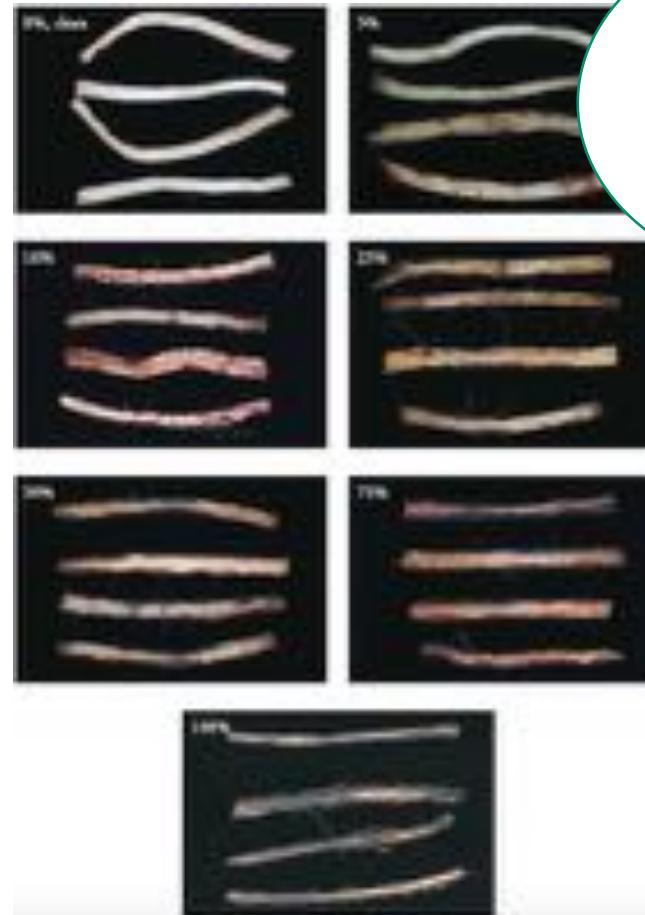
Kenya only

Materials and Methods cont.

Vegetative propagation
(Uganda)



Necrosis rating



R. similis in roots



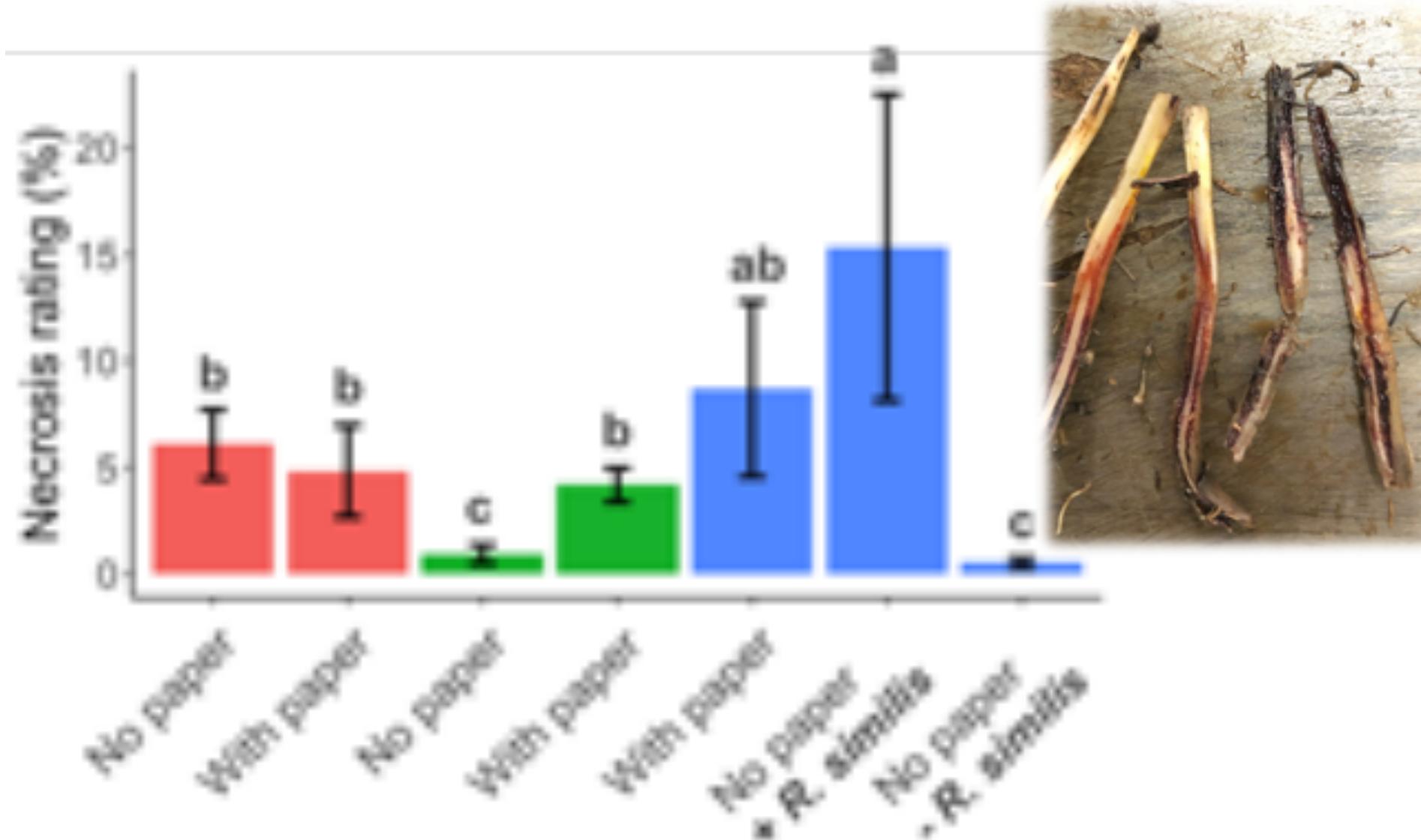
Tissue culture (Kenya)



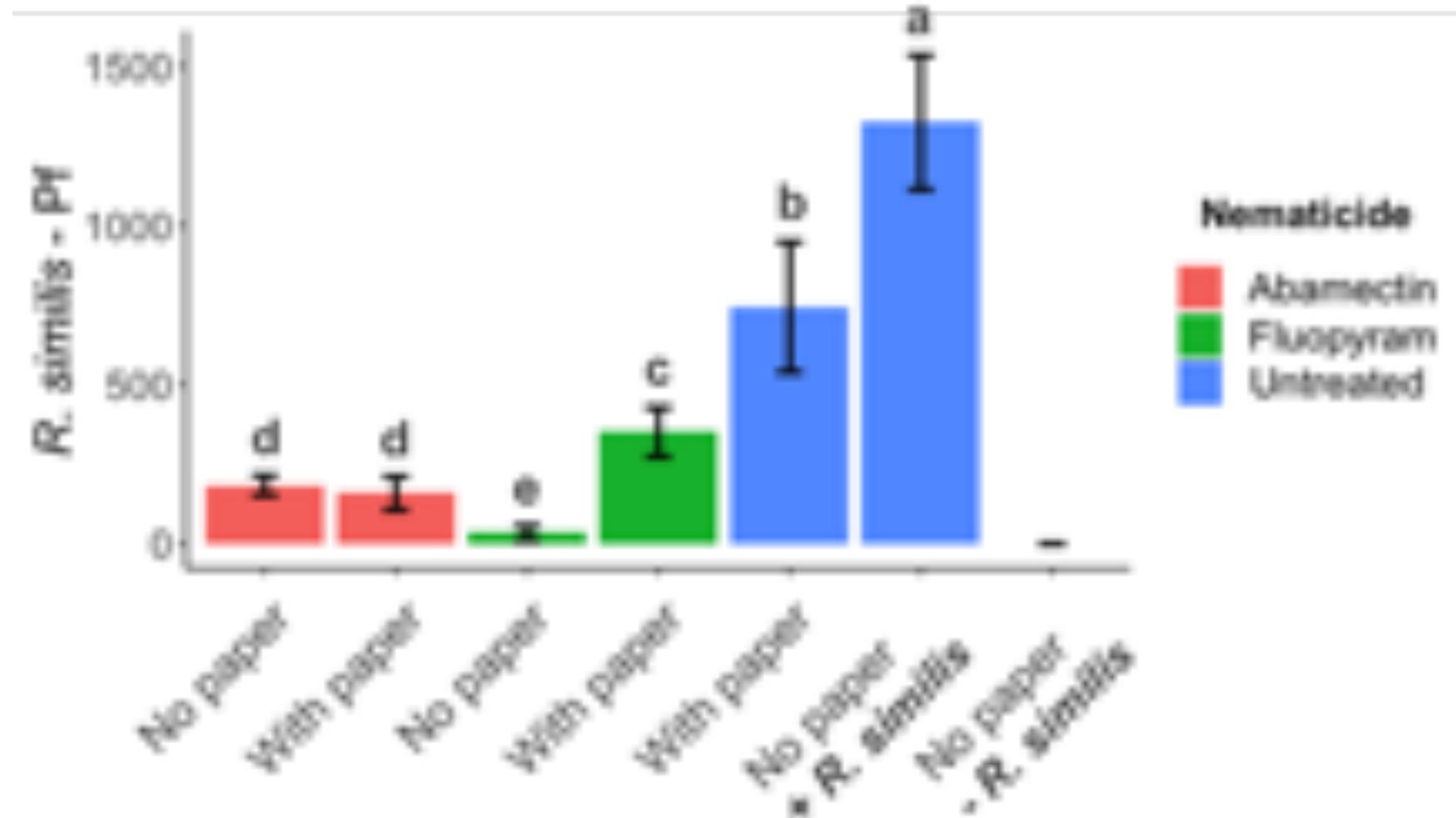
Plant growth



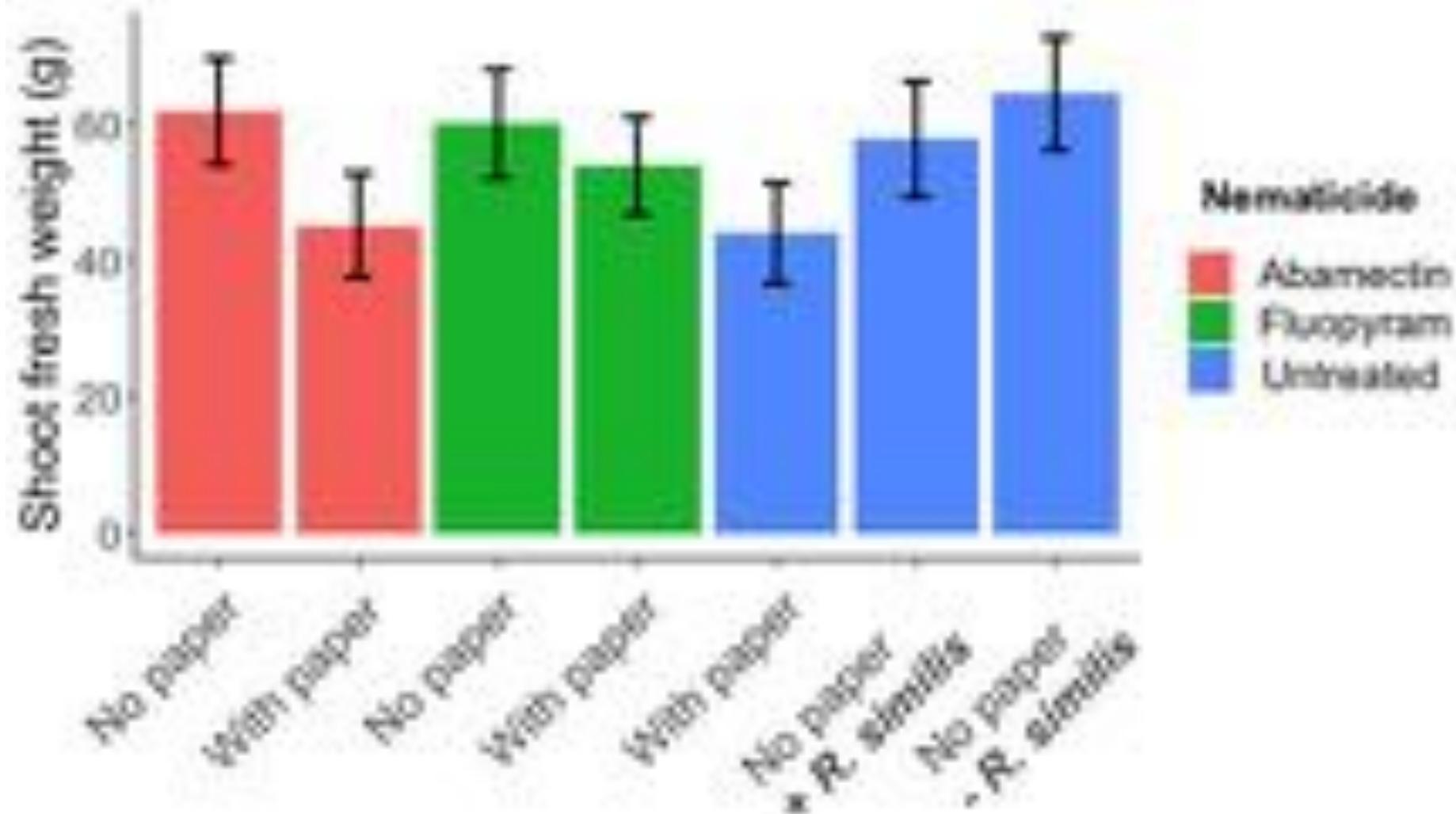
Results – Kenya: Root necrosis rating



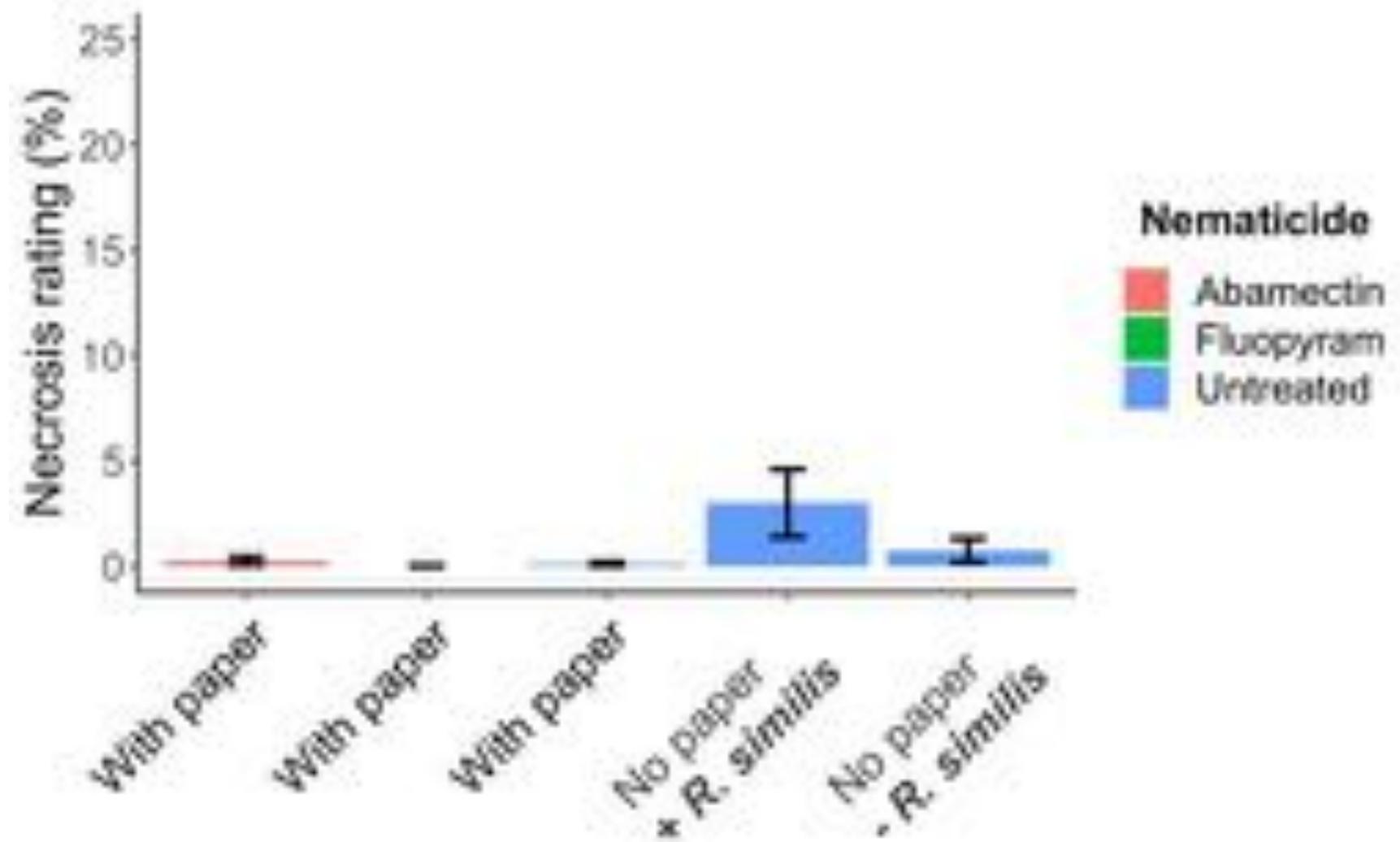
Results – Kenya: *R. similis* in roots



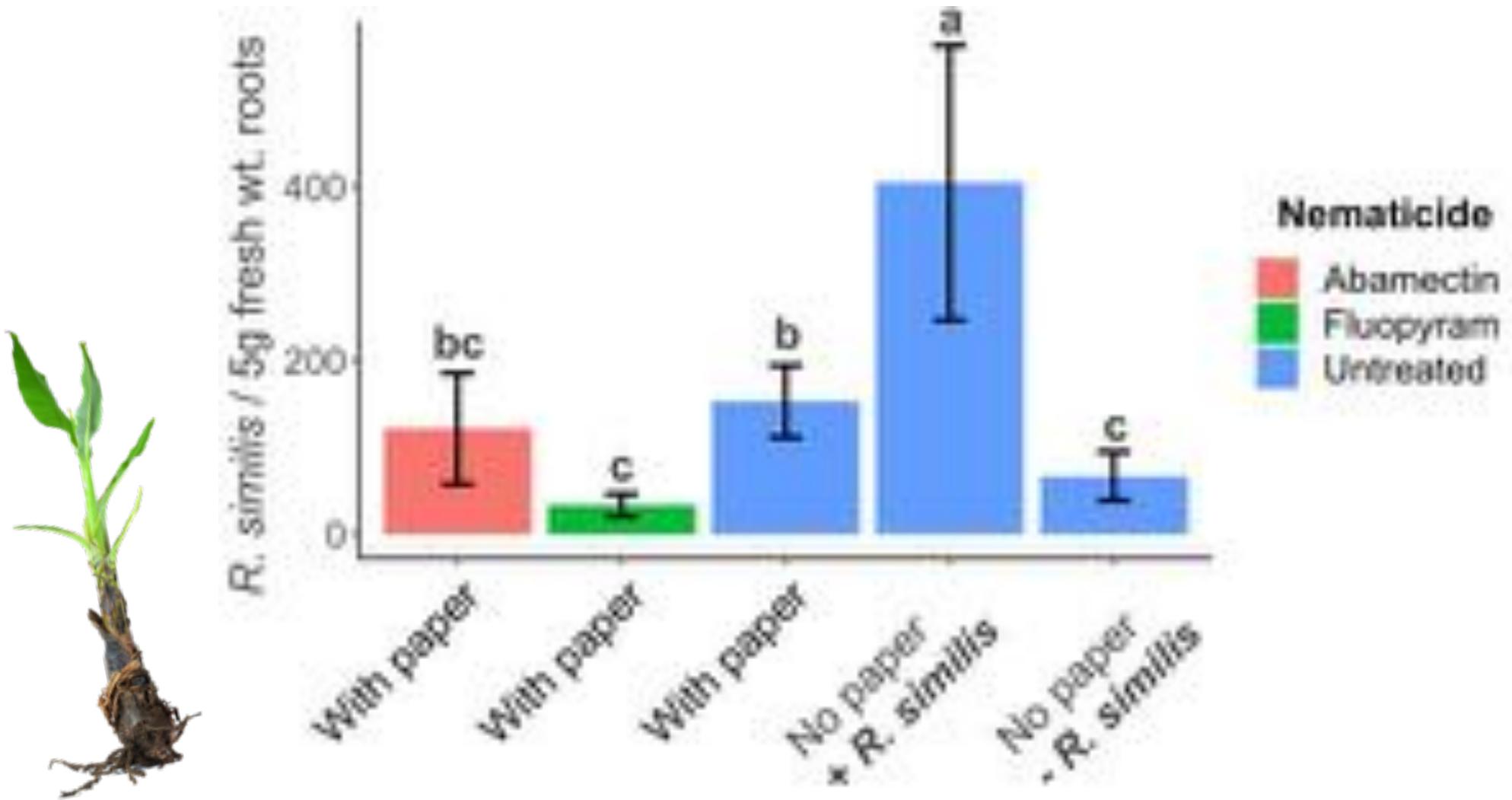
Results – Kenya: Shoot weight



Results – Uganda: Root necrosis rating



Results – Uganda: *R. similis* in roots



Conclusions



**Banana plants wrapped with
nematicide infiltrated banana papers**



Lower nematode infection

Next steps:

- Try under farmer's conditions.
- Local production of papers

My vision of future direction for nematology



Photo credit: Dr. Danny Coyne

Future direction for nematology

What can we do for smallholder farmers, for their better livelihood?



Sustainable
management
options



Photo credit: Dr. Danny Co



Establish
effective transfer
pathways

Future direction for nematology



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