

“Wrap & Plant”, novel nematode management

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

Kanan Saikai





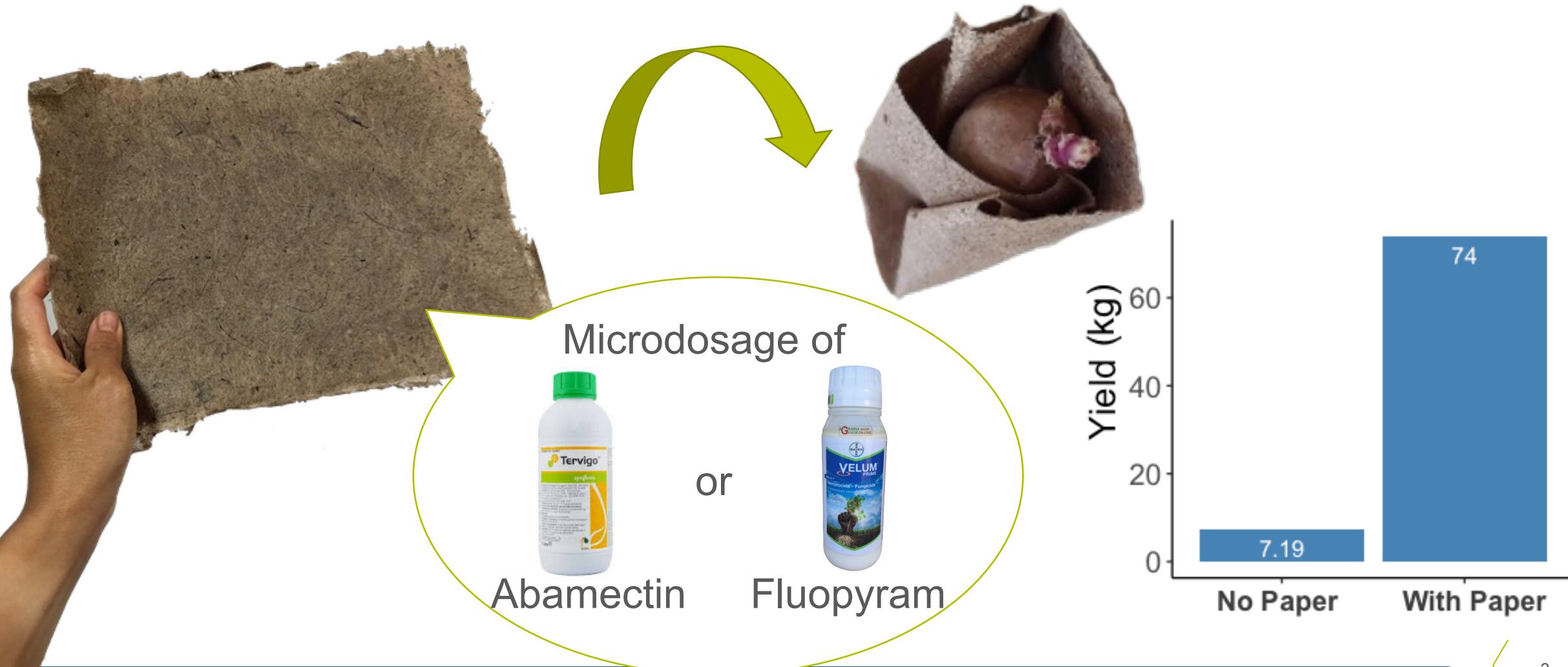
Joint nematology lab unit between IITA and ICIPE based in Nairobi, Kenya



@NemAfrica

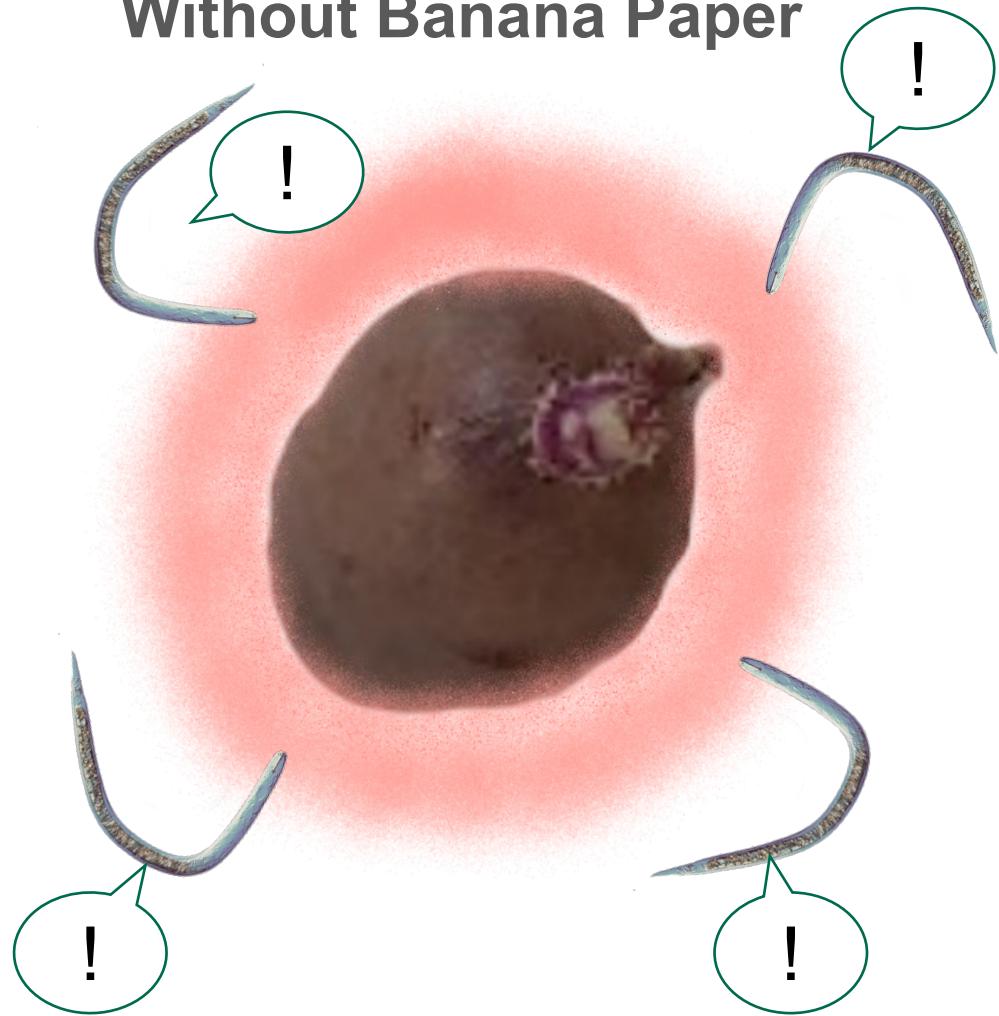
Background of Wrap & Plant project

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

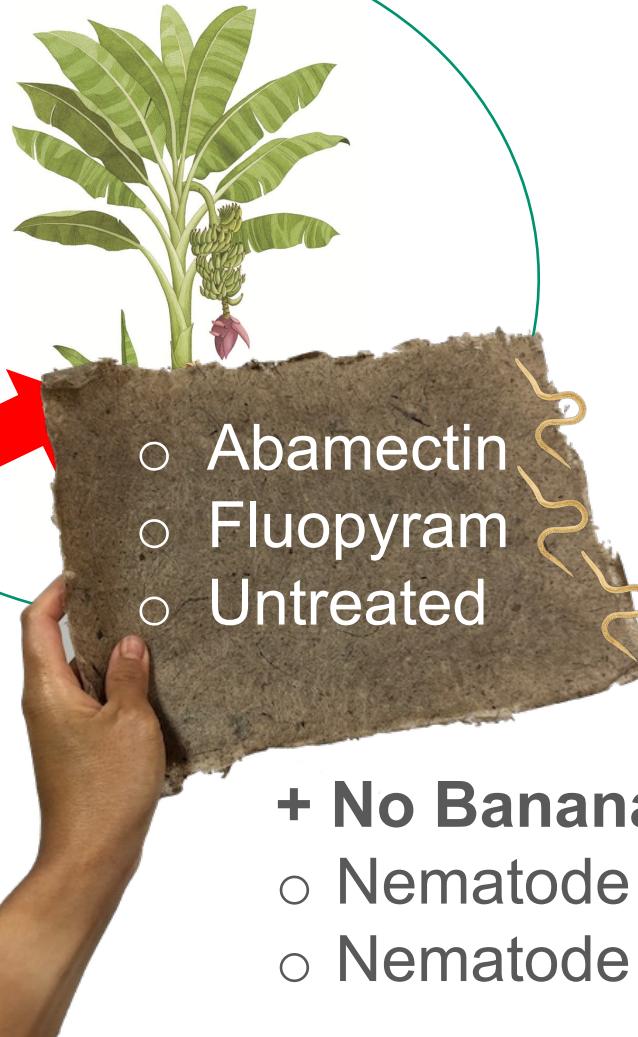


Tissue culture (Kenya)

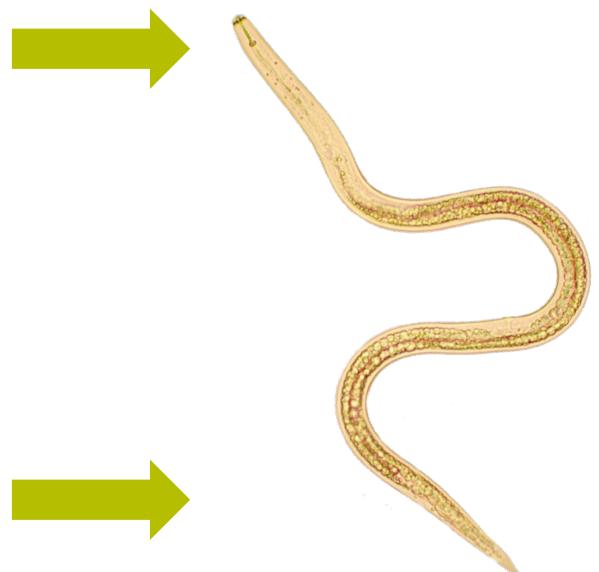
CV - Williams



Kenya only



- Abamectin
- Fluopyram
- Untreated



+ No Banana paper

- Nematode +
- Nematode -



+ chemical trt.

- Abamectin
- Fluopyram

Materials and Methods cont.

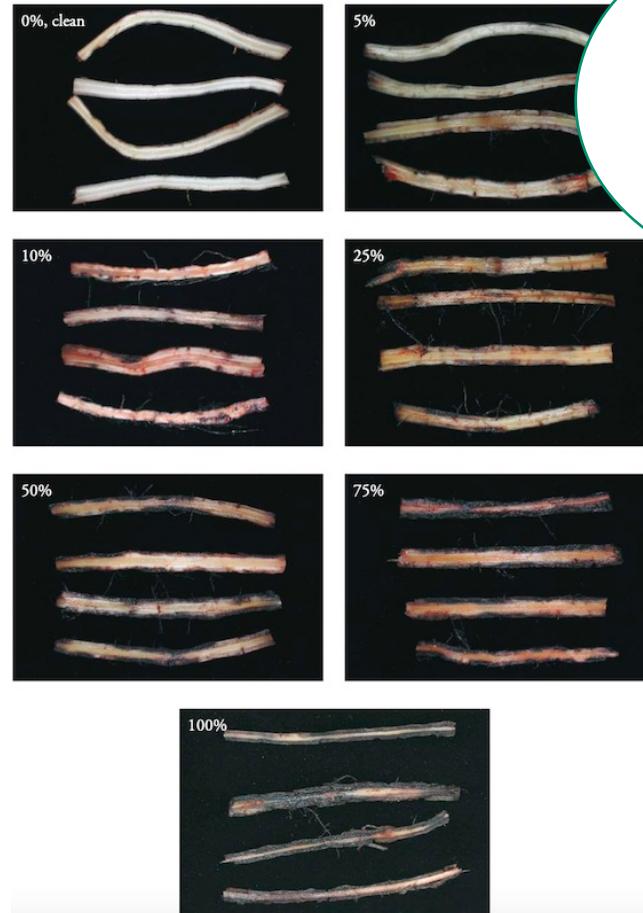
Vegetative propagation (Uganda)



Tissue culture (Kenya)



Necrosis rating



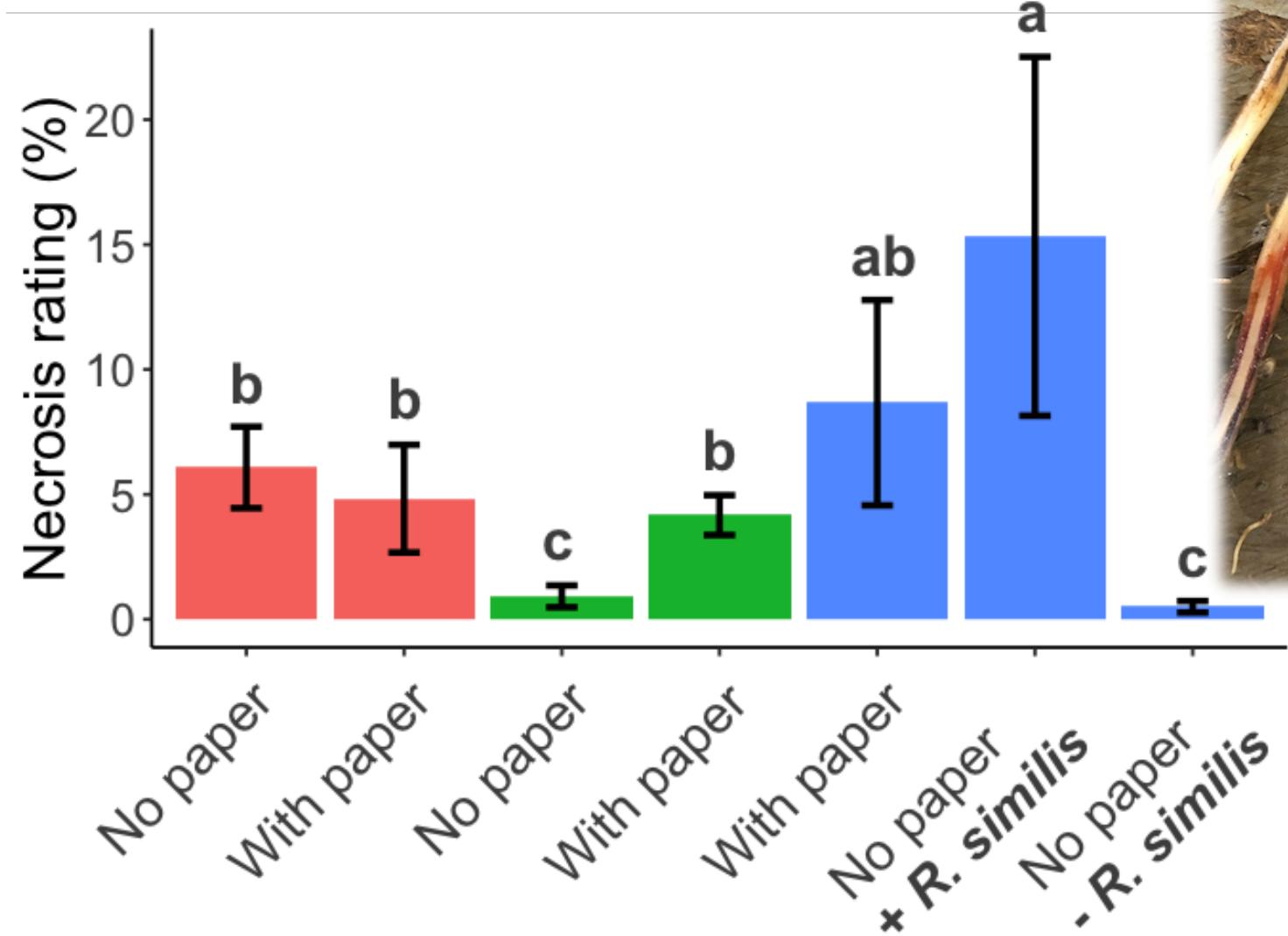
R. similis in roots



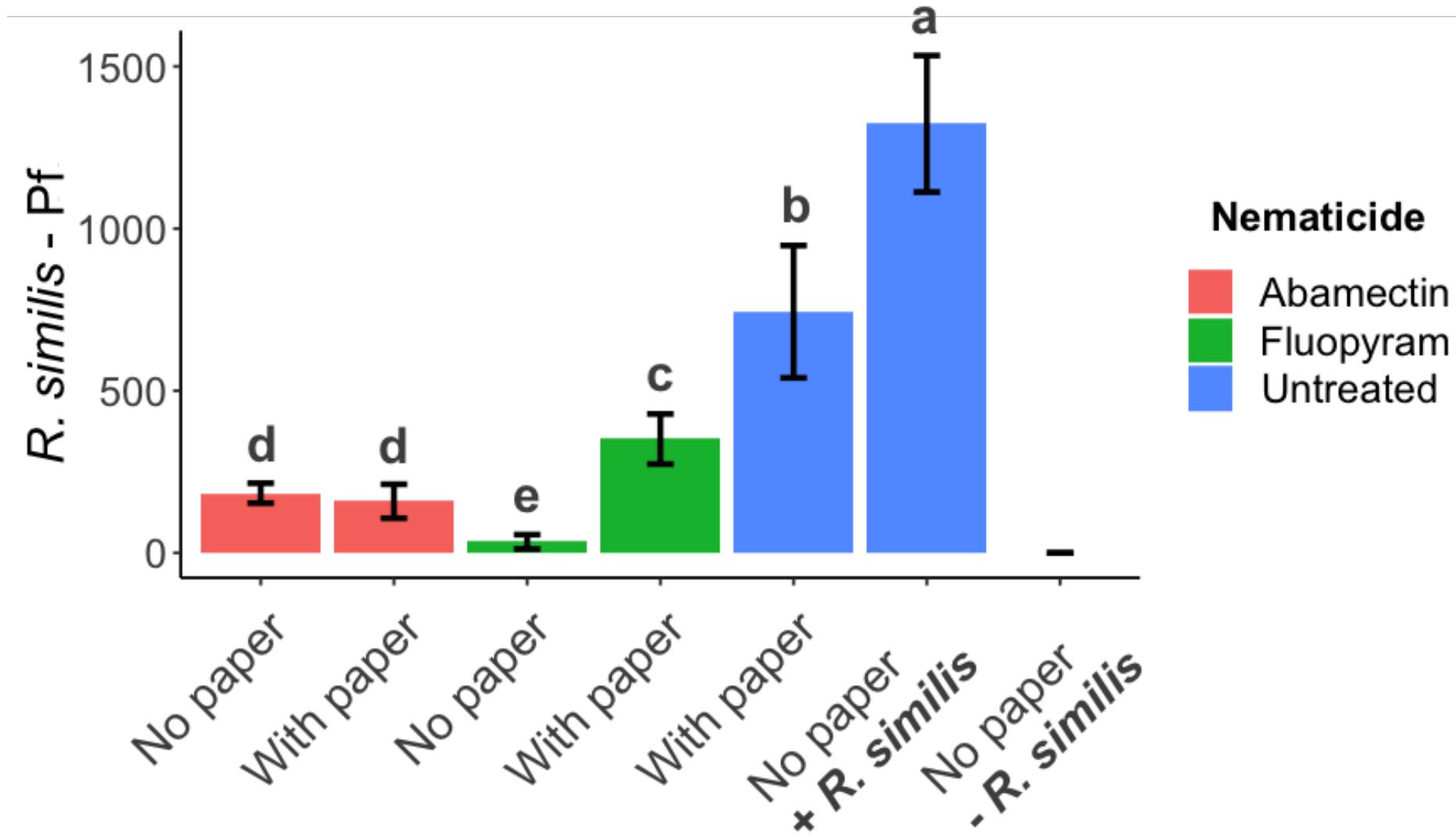
Plant growth



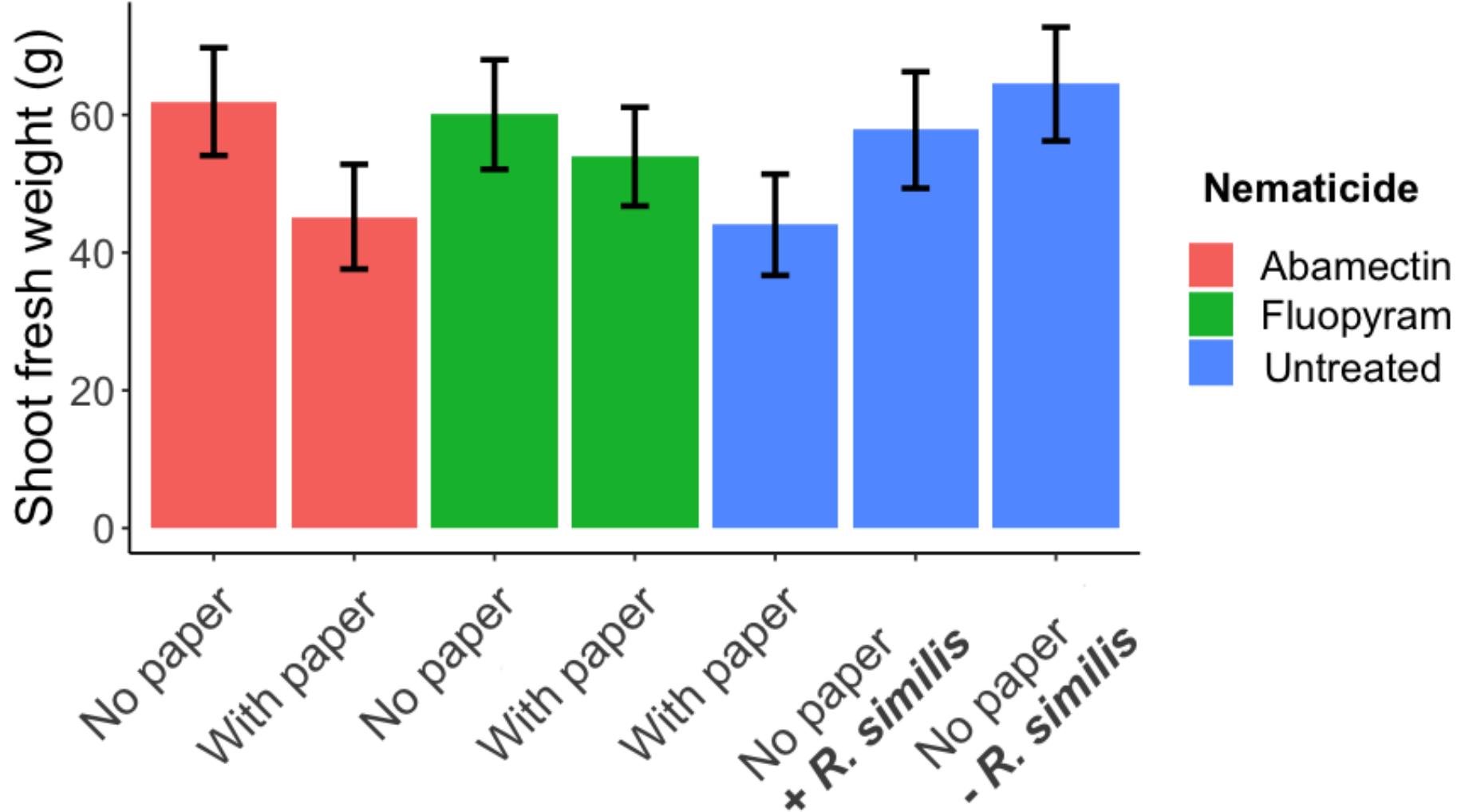
Results – Kenya: Root necrosis rating



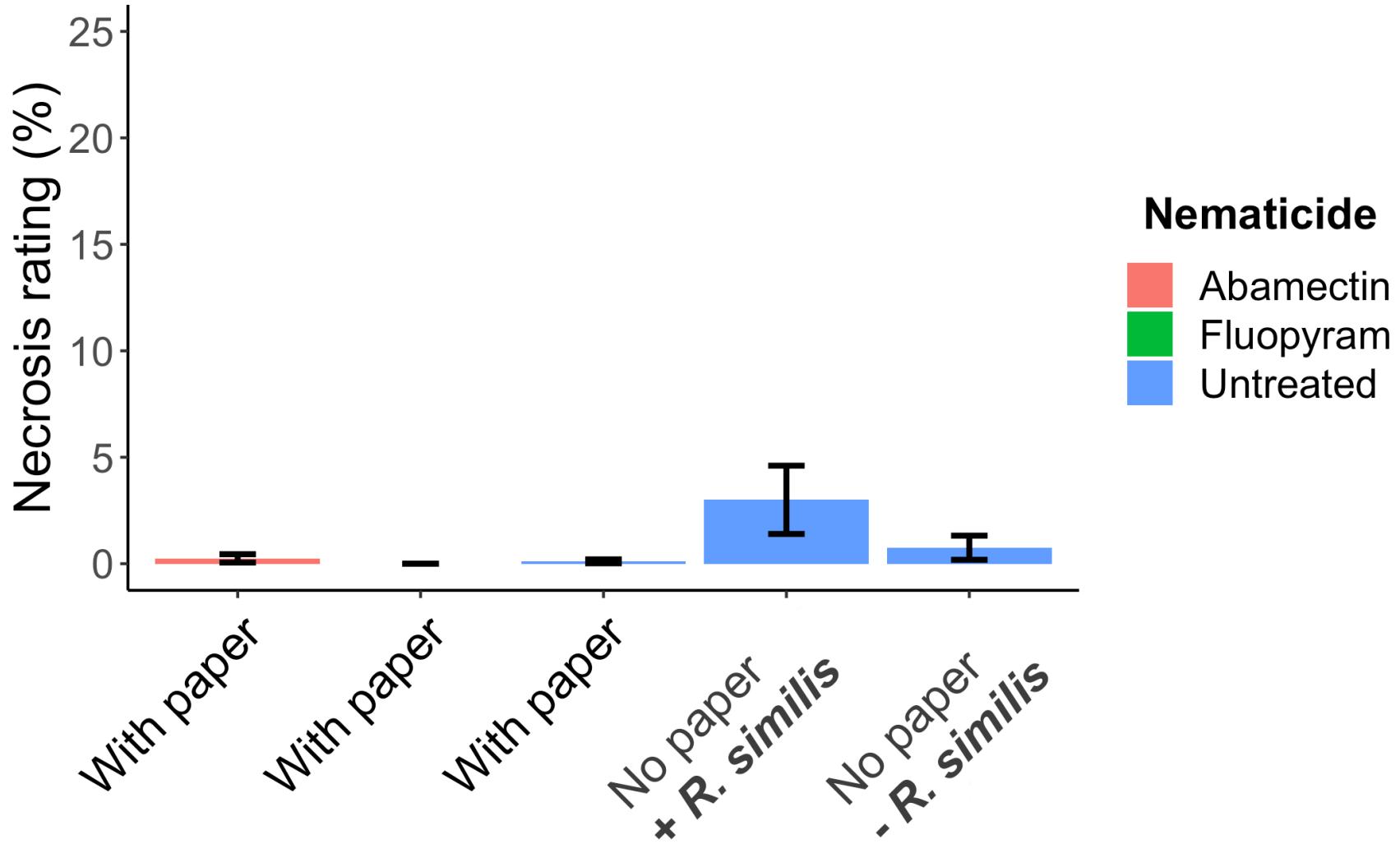
Results – Kenya: *R. similis* in roots



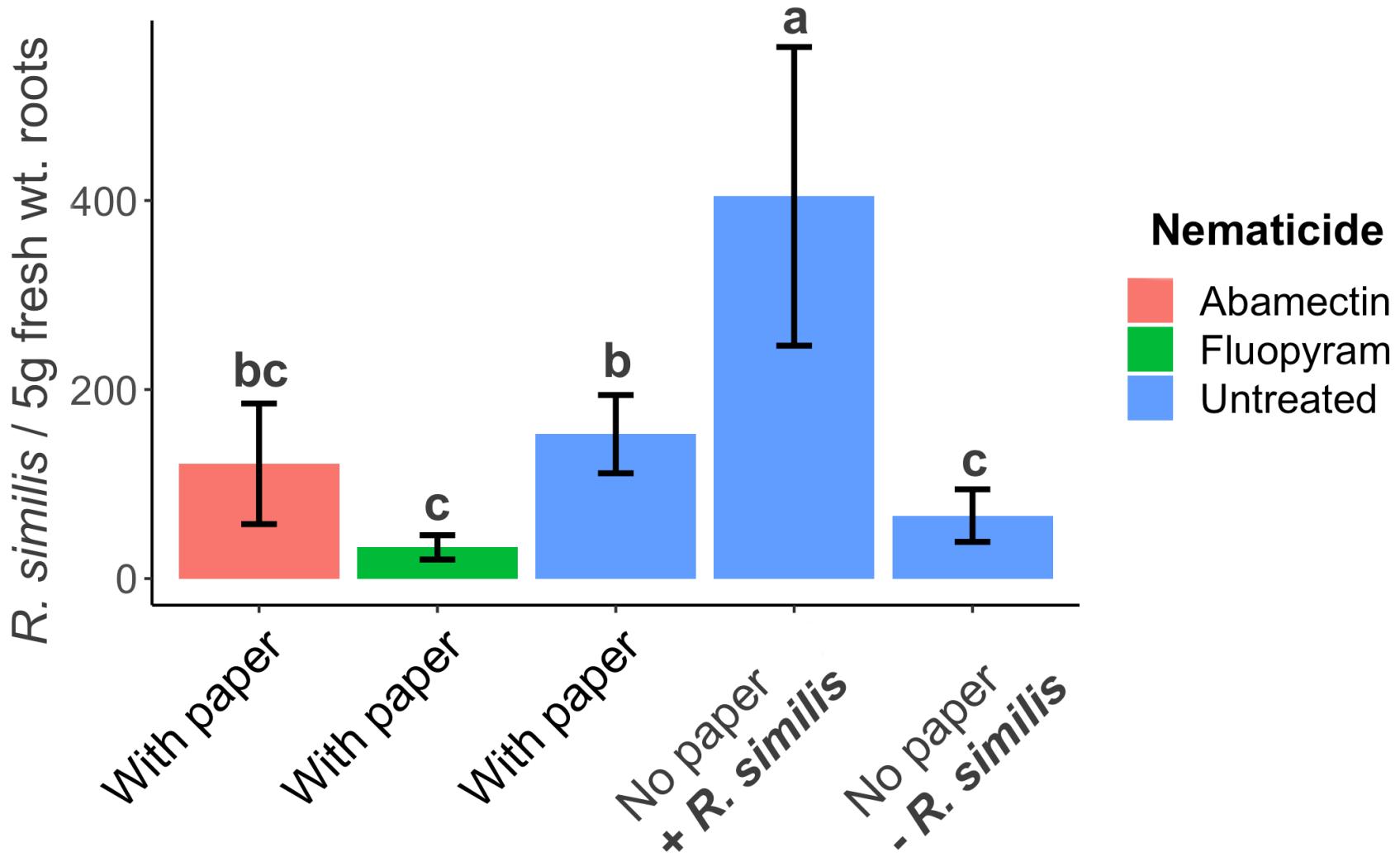
Results – Kenya: Shoot weight



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

A photograph showing a large group of African children of various ages standing outdoors in a rural setting. They are dressed in casual clothing, with some wearing traditional patterns. In the background, there is a large, rugged, light-colored rock formation or mountain. The sky is clear and blue.

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

Establish
effective transfer
pathways



Photo credit: Dr. Danny Co

Future direction for nematology



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