



Diversity of plant-parasitic nematodes involved in the development of fusarium wilt on cotton and control methods development in Benin

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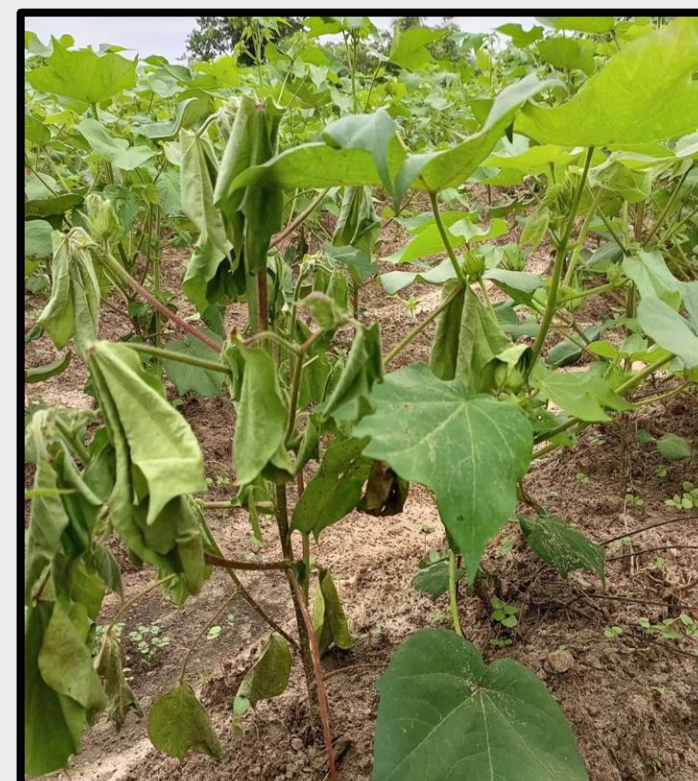
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Introduction

Very little attention is often paid to diseases such as fusariosis caused by *Fusarium oxysporum*, often associated with plant-parasitic nematodes in Benin. Together they cause complex-disease that can constitute a limiting factor in cotton production.

Fusarium oxysporum can easily spread (Hillocks and Kibani, 2002) and survive (Planchon, 2018) for decades without completing an infestation cycle.



Fusarium-wilted plant



Fusarium symptom on cotton leave



Nematode



Root galling caused by nematodes

Plant-parasitic nematodes are microscopic organisms that can impair the normal root growth, root lesions, necrosis and galling.

Methodology

• Interviews

• Fusarium incidence and severity assessment on cotton field (infestation situation map)

• Leaves, roots and soil samples collection

• Nematode extraction from soil; morphological and molecular identification
• Fungus isolation from leaves and roots samples and identification

• Greenhouse and field experiments

Research questions

- How can nematodes and fusarium develop complex disease?
- How can the complex disease developed could be managed?



Objectives

- Determine cotton producers knowledge of cotton wilt, nematodes and methods used to control them
- Establish the diversity of cotton parasitic nematodes in Benin
- Characterize nematodes associated with cotton and their synergistic effect with *Fusarium oxysporum*
- Develop integrated control methods for plant parasitic nematodes, *Fusarium oxysporum* and their complex disease management

Outputs of the research

Better understanding of complex disease development on cotton

Map of cotton infestation situation

Knowledge of cotton nematodes in Benin

Awareness of *Fusarium* wilt diseases

Best management *Fusarium* wilt disease

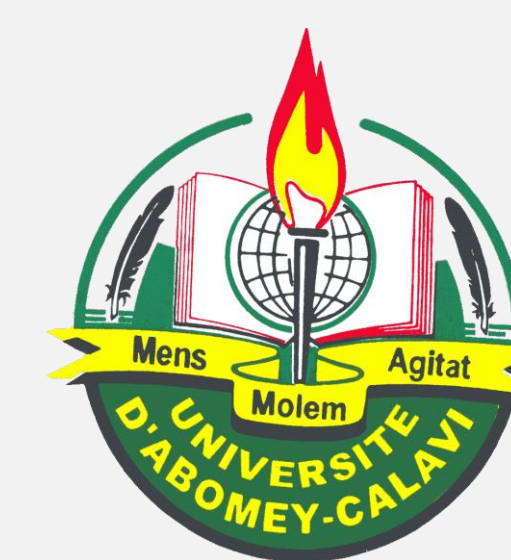
Huge quality and quantity of yield

References

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