

# BIOECOLOGICAL STUDIES ON THE CASSAVA MITE *MONONYCHELLUS TANAJOA* (Bondar) (Acarina: Tetranychidae)

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## SUMMARY

Two mites, *Mononychellus tanajoa* and *Tetranychus telarius* attack cassava in Uganda. The former is a recent introduction and is causing severe damage during the dry seasons. Biological studies suggest a possibility for biological control by either *Stetnorus* sp. or *Oligota* sp. The use of acaricides present continuing problems and it is concluded that carefully conceived integrated control will be necessary.

## RESUME

Deux acariens, *Mononychellus tanajoa* et *Tetranychus telarius* attaquent le manioc en Ouganda. Le premier, d'apparition récente cause des dégâts importants pendant la saison sèche, Des études biologiques indiquent la possibilité de lutte biologique soit par *Stetnorus* sp. ou *Oligota* sp.

L'utilisation d'acaricides entraîne des problèmes permanents et on tire la conclusion qu'il sera nécessaire de concevoir une lutte prudente et intégrée.

## RESUMEN

Dos ácaros, *Mononychellus tanajoa* y *Tetranychus telarius* atacan a la yuca en Uganda. El primero es una introducción reciente y causa daños severos durante las estaciones secas, Los estudios biológicos sugieren la posibilidad de controlarlos biológicamente bien sea con *Stetnorus* sp. o con *Oligota* sp. el uso de acaricidas presenta problemas continuos y se concluye que es necesario un cuidadoso control concebido de manera integral.

## INTRODUCTION

The green cassava mite, *Mononychellus tanajoa* Bondar is a neotropical species. It is believed to have been introduced into the Ethiopian region of Africa in 1971. It belongs to the Caribbeanae group of mites (Paschoal<sup>6</sup>) characterized by irregular, anastomised striae at the mediodorsal portion of propodosoma, around the setae bases and at other hysterosomal areas. They are further characterized by having clavate dorsal body setae and a conical stylophore with the anterior margin rounded and with longitudinal striae. The other Tetranychid pests of cassava are *Mononychus planki* (McGregor), *M. caribbeanae* (McGregor) and *Tetranychus cinnabarinus* (Boisduval). A very comprehensive key separating the more closely related species of this group has been provided by Paschoal<sup>6</sup>.

Although both *M. tanajoa* and *Tetranychus telarius* L. (= *T. urticae*) attack cassava in Uganda, their identity and damage are quite distinct. The former is green and smaller in size and attacks young leaves preferentially up to the thirteenth leaf. *T. telarius* is red and bigger in size and normally found on the old leaves.

## DAMAGE

Cassava leaves infested by *M. tanajoa* develop mosaic symptoms. The leaves show pin point pricks and mottling and fold dorsally without any signs of necrosis. Badly infested leaves drop off leaving only the apical growth. Severe damage to cassava occurs in the dry season but subsides during rainy periods.

## CLIMATOLOGY IN UGANDA

Temperature and humidity are well known to affect the survival and the reproductive potential of mites.

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