NOTE D'INFORMATION

Problems of banana weevil and nematodes in the Southern Highlands of Tanzania.

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PROBLEMS OF BANANA WEEVIL AND NEMATODES IN THE SOUTHERN HIGHLANDS OF TANZANIA.

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ABSTRACT - Bananas are an important food crop in the Southern Highlands of Tanzania. Banana weevils *Cosmopolites sordidus* and banana root nematodes namely *Hoplolaimus angustalatus, Pratylenchus* spp., *Meloidogyne* spp., *Helicotylenchus multicinctus* are the major pest problems of the zone. Good crop husbandry practices and the use of carbofuran are being encouraged as control measures of the problems. «Nemacur O» is being tested for the control of the banana weevils and the nematodes. It is suggested that more emphasis in research is put into screening varieties for resistance to these pests and that collaboration with international organisations working on banana resistance to the pests be initiated.

PROBLEMES CAUSES PAR LE CHARANÇON DU BANANIER ET PAR LES NEMATODES DANS LES HAUTES TERRES DU SUD EN TANZANIE.

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RESUME - La banane est une part importante dans l'alimentation dans la partie sud des Hautes Terres en Tanzanie. *Cosmopolites sordidus, Hoplolaimus angustulatus, Pratylenchus* spp., *Meloidogyne* spp., *Helicotylenchus multicinctus* posent les problèmes les plus importants dans cette zone. Des pratiques culturales suivies ainsi que l'usage du carbofuran sont recommandés comme moyens de lutte. Le Némacur «O» est en cours d'essai pour combattre le charançon et les nématodes. On suggère d'accorder une importance accrue à la recherche de variétés résistantes à ces ravageurs et de collaborer sur ce sujet avec les organisations internationales.

INTRODUCTION

Bananas are an important food crop in the Southern Highlands of Tanzania. They are grown in nearly all the districts of the four regions namely Iringa, Mbeya, Rukwa, Ruvuma. Mbeya region however is the largest producer of bananas in the zone. In Rungwe and Kyela and parts of Ileje, Mbeya and Mbozi, the crop is used as a staple food and, recently increasingly, as a cash crop. Among the food crops, bananas rank fourth in the cultivated area they occupy in Mbeya region after maize, beans and paddy and in terms of production they rank second after maize. With the cultivated area under bananas of 26,900 ha and a production of 74,200 t, Mbeya is the third, most important banana producing region in Tanzania, after Kagera and Kilimanjaro (Kassam, 1990).

The problems limiting increased productions of the crop in the zone include inavailability of improved cultivars which are suited to the different ecological localities of the zone, poor crop management, and a variety of diseases and pests (Nsemwa *et al.*, 1990). Currently, banana weevils and root nematodes, the subject of this presentation, are considered to be the most important problems of the crop in the zone.

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BANANA WEEVIL PROBLEM

The banana weevil *Cosmopolites sordidus* (Germar) has, for a long time now, been considered to be an important pest of bananas in East Africa and Tanzania (Harris, 1947 ; Bujulu *et al.*, 1983). As noted by Bohlen (1973), the pest was to be found only in some of the banana growing areas in Tanzania. In the Southern Highlands in the past, it appears the pest was restricted only to Kyela district. In their surveys, Nsemwa (1975) and Lindqvist (1981) did not observe the pest in Rungwe district. In Kyela district, the pest was found in association with Panama disease incited by the fungus *Fusarium oxysporum* f. *cubense* (Lindqvist, l.c.). In recent years however, the pest has also been observed in Rungwe district. It thus appears it is spreading to areas where hitherto it was absent. There is a need to establish the extent of spread of the pest in the zone and the level of damage in the various producing areas, as the ecological conditions vary considerably.

THE PROBLEM OF NEMATODES

The problem of nematodes in bananas in the Southern Highlands was first reported by Whitehead (1959) who noted the occurrence of *Hoplolaimus angustalatus* Whitehead in banana roots which were showing symptoms similar to root knot nematode damage at Rutengano and Makete in Rungwe district. Other nematodes in addition to the above, which have been reported in the area include *Pratylenchus* spp., *Meloidogyne* spp. and *Helicotylenchus multicinctus* (Cobb) Golden (Nsemwa, 1975 ; Lindqvist, 1981). The problem of nematodes is widespread in the banana growing areas of the Southern Highlands although the composition of genera varies from one locality to another. Similarly the extent of damage caused by the nematodes. These variations could possibly be attributed to the composition of the different varieties grown in the different localities. Unfortunately, no variety evaluations have been made so far to determine whether there are available varieties which are resistant to the nematode genera present in the zone.

CONTROL EFFORTS

The combined damage by banana weevils and nematodes seriously affects the production of bananas in the region. In order to improve production of the crop these two pest problems have to be controlled. Since the worst damage by banana weevils is generally associated with neglected fields (Acland, 1971), the agricultural extension department in the region is currently making efforts to advise farmers to practice good crop husbandry. The farmers are also encouraged to use carbofuran for the control of both banana weevils and nematodes as recommended by Bujulu *et al.* (1982). The problem of inavailability of the recommended pesticides needs serious consideration if the above mentioned extension effort is to bear any fruits.

In subsequent years for instance, isazophos was recommended for the control of the nematodes and banana weevils ; it has however not been made available to farmers. The farmers are, unlikely to accept the recommendation of using pesticides if their prices are unrealistically too high.

RESEARCH EFFORTS

The Uyole Agricultural Centre is undertaking research on bananas for the Southern Highlands. The objective of the ongoing research on banana weevils and nematodes control is to evaluate the efficiency of «Nemacur O», a combination product of fenamiphos and isophenphos on the above mentioned pest problems in the cultivars Paz, Kambani, Ndyali, Uganda and Robusta (Nsemwa *et al.*, 1990). The product is being compared with carbofuran, isazophos and an untreated control. The trial is in its first season this year.

In future, other control measures, other than the use of chemicals will have to be investigated. In the variety evaluations, begun by Hansen (1975) and currently underway (Nyomora and Yongolo, 1989) more emphasis will have to be put on evaluating their resistance to banana weevils and banana root nematodes. In addition collaboration with international institution developing banana varieties resistant to these pests will have to be intensified in future.

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PROBLEMAS CAUSADOS POR EL GORGOJO DEL BANANO Y LOS NEMATODOS EN LAS TIERRAS ALTAS DEL SUR DE TANZANIA.

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RESUMEN - El banano constituye una parte importante de la alimentación en la parte sur de las Tierras Altas en Tanzania. *Cosmopolites sordidus*, *Hoplolaimus angustulatus*, *Pratylenchus* spp., *Meloidogyne* spp., *Helicotylenchus multicinctus* provocan los problemas más importantes en esta zona. Las prácticas culturales conducidas así como la utilización del carbofuran son recomendadas como medios de lucha. Nemacur «O» está en vias de ensayo para el control del gorgojo y los nemátodos. Se sugiere darle una gran importancia a la investigación de variedades resistentes a estos parásitos y colaborar sobre este aspecto con los organismos internacionales.