ABSTRACTS OF PAPERS PRESENTED AT THE VI ANNUAL MEETING OF OTAN IN MARACAY, VENEZUELA, OCTOBER 1-6, 1973.

RESUMENES DE TRABAJOS PRESENTADOS EN LA VI REUNION ANUAL DE ONTA EN MARACAY, VENEZUELA, 1-6 DE OCTUBRE, 1973.

INCREMENTOS EN LA PRODUCCION DE PIÑA (VAR. CAYENA LISA) POR MEDIO DE APLICACIONES FOLIARES DE NEMATICIDAS SISTEMICOS [YIELD INCREASES OF PINEAPPLE (SMOOTH CAYENNE VAR.) BY MEANS OF FOLIAR APPLICATIONS OF SYSTEMIC NEMATICIDES]. Alejandro Ayala & Frank Sequeira, University of Puerto Rico, Mayaguez Campus, Mayaguez, Puerto Rico 00708 - - - En Puerto Rico, la piña (*Ananas comosus* (L.)) es la fruta de mayor importancia económica. La producción total en el 1971 fue de #3.3 millones con un rendimento promedio por hectárea de 35.16 toneladas métricas. La planta de piña, en todas sus fases de crecimiento y producción sufre el embate de un gran número de insectos, enfermedades y nemátodos. Se ha probado experimentalmente que el factor biológico de mayor importancia son los nemátodos. Atravez de la fumigación de los suelos con dicloropropanos-dicloropropenos se ha logrado aumentar la producción significativamente. Sin embargo, estos nematicidas son relativamente caros y difíciles de manejar, al mismo tiempo que su acción en el suelo dura muy poco. Las poblaciones de nemátodos fitoparasíticos alcanzan niveles nocivos a la planta en pocos meses, afectando asi la producción de un segundo y tercer cosecho. En un empeño por remediar esta condición desfavorable que ha obligado a los productores a hacer siembras nuevas anualmente, se evaluaron dos nematicidas sistémicos en aplicaciones foliares en distintos tratamientos en combinación con aplicaciones pre-siembra y baños al material de propagación. Se utilizaron 17 tratamientos, incluyendo parcelas testigo. Al final de la primera cosecha los tratamientos en que se usó D-D a base de 49.4 galones/hectárea aplicados en bandas de dos pies de ancho, antes de la siembra y se hicieron aplicaciones foliares de 5.62 kilogramos/hectárea del ingrediente activo de Nemacur cada 6 meses resultó superior (63.71 toneladas métricas por hectárea), seguido de,la aplicación de 11.23 kilos/hectárea de Nemacur al suelo con 5.62 kilos/hectárea de Nemacur al follaje cada 6 meses (63.06), la aplicación pre-siembra de D-D y 5.62 kilos/hectárea de Vydate cada seis meses (61.06) y cuando se sumergió la semilla en 1200 ppm de Nemacur (59.35). Aunque se aumentó la producción con la sola fumigación del suelo con D-D (49.4 galones/hectárea) los resultados fueron muy inferiores a los ya mencionados y no arrojaron diferencias significativas sobre el control (47.44). La apariencia de los retoños parece indicar que los resultados del segundo cosecho serán mas marcados demonstrando asi la efectividad del tratamiento.

CONTROL OF GOLDEN NEMATODE (*HETERODERA ROSTOCHIENSIS)* WITH SYSTEMIC NEMATICIDES [EL CONTROL DEL NEMATODE DORADO *(HETERODERA ROSTOCHIENSIS)*CON NEMATICIDA SYSTEMICA]. Martin B. Harrison, Cornell Nematode Laboratory, State University, Farmingdale, New York 11735 U.S.A. - - - Evidence was obtained for the systemic activity of the nematicides oxamyl and carbofuran. The foliage of a golden nematode susceptible variety of potatoes growing in nematode-infested soil was sprayed with applications of the nematicides. The rates of application were 2.24 or 8.96 kg per ha for carbofuran

and 1.12, 3.36 or 6.72 kg per ha for oxamyl. Precautions were taken to avoid contact of the soil with the spray materials. Based on the counts of immature females developing on the plant roots, it was determined that over 99% control could be obtained with these materials by foliar applications alone.

SYSTEMIC ACTIVITY OF PHENAMIPHOS ON CONTROL OF *MELOIDOGYNE ARENARIA* ON *GARDENIA JASMINOIDES* [ACTIVIDAD SISTEMICA DEL PHENAMIPHOS EN EL CONTROL DE *MELOIDOGYNE ARENARIA* EN *GARDENIA JASMINOIDES*] R. Inserra, J. H. O'Bannon, and W. A. Yuhl, Southern Region, Agricultural Research Service, U. S. Department of Agriculture, Orlando, Florida 32803, U.S.A. - - - Experimental trials to test the systemic activity of phenamiphos (ethyl 4-(methylthio)-m-tolyl isopropylphosphoramidate) were conducted in 1973, on *Gardenia jasminoides* cv August Beauty 50 cm tall, selected from a commercial nursery infested with *Meloidogyne arenaria* (Neal, 1889) Chitwood, 1949. Infected plants were transplanted into 20 cm pots and grown in a greenhouse. Phenamiphos paste (40% active ingredient (a.i.) plus emulsifier VA) was painted in a 5 cm band, without scraping bark, around trunk and main stems of 15 gardenia plants at a rate of 2.5 g per plant (1g/plant a.i.) 2 and 3 months after transplanting. An additional 15 plants served as controls. Leaf chlorosis and partial defoliation were observed on treated plants after the second application, indicating mild phytotoxicity. Two months after the second treatment, squash *(Cucurbita pepo* cv Butternut) seeds were planted in each pot containing the gardenia plants. Squash plants were used for making root-knot ratings, since galls were still present in old gardenia roots, and the deformed roots could not be used to determine effect of treatment on nematode control. All plants were harvested from pots 2 months after squash was planted, and the soil replaced in the same pots. Squash roots were separated from gardenia roots, washed and given a visual root-knot rating from 0 to 4; 0 = no galling, 1 = trace, 2 =light, 3 = moderate, 4 = severe galling. These roots were placed and incubated in 453 cc jars. Larvae and males of *M. arenaria* were collected after 48 hours. No galling and no larval stages and males of *M. arenaria* were found on roots grown with treated gardenia plants. A mean root-knot index of 2.6 and an average of 2,413 *M. arenaria* per gram of moist root were obtained from squash roots grown with untreated gardenia plants. The pots containing only soil with root pieces from former treated and untreated gardenias were replanted with squash seeds to provide an additional check on nematode control. After 45 days, squash plants were harvested, and a visual root-knot rating and nematode count was made. No galling or larvae and males of *M. arenaria* were found on plants growing in soil formerly containing treated gardenia plants. A mean root-knot index of 2.7 and 393 *M. arenaria* per gram of root were obtained from squash roots growing with untreated gardenias.

PRESENCE OF *APHELENCHOIDES BESSEYI* IN FOLIAGE AND TUBERS OF YAM *(DIOSCOREA TRIFIDA)* IN THE FRENCH WEST INDIES [PRESENCIA DE *APHELENCHOIDES BESSEYI* EN FOLLAJE Y TUBERCULOS DE ÑAME *(DIOSCOREA TRIFIDA)* EN LAS INDIAS OCCIDENTALES FRANCESAS]. A. Kermarrec and A. Anais, I.N.R.A., C.R.A.A.G., Guadeloupe, West Indes - - - *Aphelenchoides besseyi* was found in foliage and tubers of yam *(Dioscorea trifida)* in Guadeloupe (F.W.I.). Its morphology and morphometric data are similar to those of the North American and African races. A review of hosts and geographical dis-

tribution shows that yam is a new host for this pest and that the French West Indies is a new location for its presence. The rice race of *A. besseyi* was detected in almost all parts of Santo Domingo during a survey conducted in that country previous to the present work.

LABORATORY STUDIES ON APPLICATION AND MOVEMENT OF 1,2-DIBROMO-3-CHLOROPROPANE IN A FLORIDA SOIL [ESTUDIOS DE LABORATORIO SOBRE LA APLICACION Y MOVIMIENTO DEL 1,2-DIBROMO-3-CHLOROPROPANE EN UN SUELO DE FLORIDA]. J. H. O'Bannon, A. T. Tomerlin, and G. K. Rasmussen, Southern Region, Agricultural Research Service, U.S. Department of Agriculture, Orlando, Florida 32803, U.S.A. - - - A technique for detecting 1,2-dibromo-3-chloropropane (DBCP) using gas-liquid chromatography was used to study DBCP movement in columns of Astatula fine sand. DBCP was applied (i) as an aqueous drench in irrigation treatment, (ii) by soil injection, and (iii) by surface application. Physical characteristics of the soil were 94-96% sand, 3-4% silt and clay, 5.5% moisture holding capacity, pH 6.2. Top soil contained 1.4-1.6% organic matter (OM) and subsoil had 0.20-0.25% OM. Experimental results were: 1. Downward movement of DBCP in 5 cm (2 acre-inches) of irrigation water increased only slightly from 0.5 hour to 14 days after application. Maximum DBCP penetration in topsoil was 18 cm; maximum water infiltration was 115 cm. 2. Percent OM in Astatula fine sand determines depth of DBCP penetration. Greatest penetration occurred in soils containing 1/8% OM (48-50 cm) and least penetration in 2% OM (6 cm) when applied in 5 cm water. 3. Depth of DBCP penetration in Astatula fine sand is limited by OM in the top soil, and amount of irrigation water applied. Initial concentrations of 30 ppm DBCP applied in 5 cm of water were detected at 22 cm; in 10 cm of water, detection depth was 26 cm, and in 15 cm detection depth was 45 cm. 4. Thirty ppm DBCP injected 18 cm in top soil penetrated to greater depth in soils with higher moisture content (3.7% compared to 2.5%). 5. Flooding soils following injection increased penetration, but limited surface diffusion. 6. Injected DBCP was detected in lethal concentrations (2 ppm) up to 3 weeks, and in non-lethal concentrations at 4 weeks. 7. DBCP applied to the soil surface of columns of either topsoil or subsoil diffused to a depth of 20 and 25 cm in each soil, respectively. When 5 cm of water was applied following surface application, penetration depth in top soil was only slightly greater, but 5 cm of water applied to the columns of only subsoil resulted in penetration of lethal concentrations of DBCP to 40 cm.

EFFECT OF NEMATICIDES AND TEMPERATURE ON *PARATYLENCHUS* AND *BASIROIDES* ASSOCIATED WITH *PHILODENDRON*. [EFECTO DE NEMATICIDAS Y TEMPERATURA SOBRE *PARATYLENCHUS* Y *BASIROIDES* ASOCIADOS CON *PHILODENDRON*]. A. J. Overman, Agricultural Research & Education Center, IFAS, University of Florida, Bradenton, Florida 33505, U.S.A. - - - Plants of *Philodendron* sp., cv. 'Red Princess', grown in raised benches filled to an 8-inch depth with peat were drenched with nematicides to reduce the populations of *Paratylenchus* sp. which infested the roots and soil. Carbofuran (2,3-dihydro-2,2-dimethyl-7-benzofuranyl N-methylcarbamate) (Furadan) applied at the rate of 10 lb ai/A (11.2 kg/ha) in a single 1/10 acre-inch of water gave 92% control of the nematodes for 12 weeks; when the dose was divided into 2 drenches 4 weeks apart,

control at 12 weeks increased to 99%. Similar applications of ethoprop (0-ethyl *S,S*-dipropyl phosphorodithioate) (Mocap) resulted in 92% control when the dose was applied in a single drench and 82% when the chemical was split into 2 applications. Additions of Compex Spreader (Stauffer Chemical Co.) to the nematicidal drenches did not alter the efficacy of carbofuran; however, 6 oz of the spreader per 100 gal water did reduce the effectiveness of ethoprop.

The effect of temperature on *Paratylenchus* sp. and *Basiroides* (a nematode species also associated with *Philodendron*) was evaluated in growth chambers maintained at 10, 15, 21, 26 and 32 ± 2 C. *Paratylenchus* was favored in a temperature range of 21-26 C; no reproduction occurred at 10 or 32 C. *Basiroides* reproduced best at 10 C; populations decreased with higher temperatures.

NEMATODE CONTROL ON TURFGRASSES [CONTROL DE NEMATODOS EN GRAMA FINA]. V. G. Perry and D. W. Dickson, Department of Entomology and Nematology, University of Florida, Gainesville, Fla. 32611, U.S.A. - - - Five granular nematicides and one soil fumigant were evaluated for the control of nematodes on bermudagrass, *Cynodon Dactylon*, growing on a golf course fairway. In another test on a golf course green of bermudagrass, 3 granular nematicides were evaluated. Materials and raters were: carbofuran (2,3-dihydro-2, 2-dimethyl-7-benzo-furanyl methylcarbamate) 22kg a. i./ha; aldicarb (2-methyl-2[methyl thio] propionaldehyde 0-[methyl carbamoyl] oxime) 7 and 11 kg a. i./ha; fensulfothion (0.0-diethyl - 0-P[methyl sulfinyl] phenyl phosphorothioate 22 kg a. i./ha; ethorop (0-ethyl, S,S-dipropyl phosphorodithioate) 22 kg a. i./ha; phenamiphos (ethyl 4-[methylthio]-M-tolyl isopropyl phosphoramidate) 17 kg a. i./ha; and DBCP (1,2-dibromo-3-chloropropane) 39 kg a. i./ha. The 7 kg rate of aldicarb was not included in the fairway tests and only aldicarb, furadan and phenamiphos were tested on the golf green. Major nematode pests in the fairway were *Belonolaimus longicaudatus* and *Hoplolaimus galeatus*; the green had high populations of *Dolichdorus heterocephalus* and *H. galeatus*. The granular materials were applied to the surface and DBCP was injected 7.5-10 cm deep on 17.5 cm centers. Approximately 2.5 cm of irrigation was applied immediately following application. The grass responded quicker in the granular treatments and early response was best in the aldicarb and phenamiphos treatments. After 8 weeks the fairway in the DBCP treated plots was best. The aldicarb and phenampihos treated plots were excellent and only slightly better than the furadan plots. Fensulfothion and ethoprop treatments resulted in moderate turf responses. On the golf green the responses to phenamiphos and 11 kg rate of aldicarb were excellent followed in order by the 7 kg rate of aldicarb and furadan. Nematode counts were lowest in the DBCP treated plots.

CONTROL DE LOS NEMATODOS DEL PLATANO POR ROTACION CON YERBA PANGOLA [NEMATODE CONTROL IN PLANTAINS WITH A PANGOLA GRASS ROTATION]. J. Román, Xiomara Rivas, J. Rodriguez, Estación Experimental Agricola, Universidad de Puerto Rico, Río Piedras, Puerto Rico 00928. - - - Varios investigadores han indicado que la yerba Pangola (*Digitaria decumbens)* es un medio muy eficaz para obtener el control de algunas especies de nematodos

fitoparasíticos. Esta gramínea, aunque sirve para controlar algunos de los nematodos que atacan el plátano (*Musa acuminata* X *M. balbisiana,* AAB) tales como el *Radopholus similis, Meloidogyne incognita, Rotylenchulus reniformis* y *Helicotylenchus dihystera,* no es efectiva, sin embargo, contra el *Pratylenchus coffeae* que es otro parásito de importancia en este cultivo. Con el propósito de obtener información sobre los beneficios que pudiera tener una rotación de Pangola con plátanos, se efectuó un ensayo utilizando la variedad de plátano Enano. El experimento se llevó a cabo en un terreno previamente sembrado de plátanos que posteriormente se dividió en parcelas donde se cultivó la Pangola por 6, 12 y 18 meses y en otras testigos donde nunca se sembró esta yerba. Finalmente, el predio completo se sembró nuevamente con plátanos. En las parcelas con Pangola se incluyeron tratamientos en los cuales esta gramínea se controló con el yerbicida Paraquat y otros donde la Pangola se dejó crecer libremente desyerbándose solamente la corona en un área de aproximadamente 1 m de radio alrededor de cada planta de plátano. Los resultados de la cosecha, en términos de plátanos por acre, fueron los siguientes: Pangola 18 meses (desyerbo corona), 24,610; Pangola 18 meses (yerbicida), 29,710; Pangola 12 meses (desyerbo corona), 25,190; Pangola 12 meses (yerbicida), 26,080; Pangola 6 meses (desyerbo corona), 13,730; Pangola 6 meses (yerbicida), 24,160, Testigo, 12,460. Todos los tratamientos, con excepción de aquél donde se cultivó la Pangola por 6 meses con desyerbo de corona, produjeron resultados significativamente superiores a los de los testigos.

CONTROL QUIMICO DE LOS NEMATODOS DEL PLATANO [CHEMICAL CONTROL OF THE NEMATODES OF PLANTAINS] J. Román, Xiomara Rivas y J. Rodríguez, Estación Experimental Agrícola, Universidad de Puerto Rico, Río Piedras, Puerto Rico 00928. - - - Los nematodos se consideran como una de las plagas más importantes que atacan al plátano (*Musa acuminata* X *M. balbisiana,* AAB). En Puerto Rico se ha encontrado que este cultivo es atacado mayormente por las siguientes especies: *Radopholus similis, Pratylenchus coffeae, Meloidogyne incognita, Rotylenchulus reniformis* y *Helicotylenchus dihystera.* El *R. similis* es considerado como el más nocivo entre las especies mencionadas. Generalmente el uso de substancias químicas va dirigido hacia el control de este nematodo causante de la caída prematura de las plantas y por lo tanto, de grandes pérdidas. Tomando esto en consideración, se efectuó un ensayo de evaluación de nematicidas utilizando la variedad de plátano Enano. Se determinó que, en la mayoría de los casos, las plantas tratadas produjeron un rendimiento significativamente mayor que las no tratadas. Los mejores tratamientos, que produjeron sobre 30,000 plátanos por acre, fueron aquellos en que se usaron nematicidas granulados tales como el Phenamiphos (Nemacur 15 G), 20 g. (ethyl 4-(methylthio)-m-tolyl isopropylphosphoramidate), Fensulfothion (Dasanit 15G), 40 g. (0,0-diethyl 0-(p-methylsulfinyl) phenyl) phosphorothioate), Ethoprop (Mocap 10G), 30g. (0-ethyl S,S-dipropyl phosphorodithioate), Aldicarb (Temik 10G), 30 g. (2-methyl -2(methylthio) propionaldehyde 0-methylcarbamoyl) oxime) y Furadan 10 G, 30 g (2, 3-dihydro-2,2-dimethyl-7-benzofuranyl methylcarbamate), aplicados cada 6 meses a la superficie del suelo alrededor de la planta. También resultó muy eficaz el DBCP o Nemagon (1, 2-dibromo-3-chloropropane) (emulsión concentrada al 70%) inyectado al suelo cada 4 y 6 meses a razón de 9 ml. por planta. Debido a que en Puerto Rico al plátano generalmente se cultiva en terrenos accidentados, el use de nematicidas granulados parece ser el tratamiento más fácil y económico hasta el presente.

PLANT–PARASITIC NEMATODES OF SUGARCANE IN NORTHWESTERN VENEZUELA [LOS NEMATODOS FITOPARASITICOS DE LA CAÑA EN EL NOROESTE VENEZOLANO]. Mohammad Rafiq Siddiqi, Commonwealth Institute of Helminthology, St. Albans, Hertfordshire, England. - - - The following 34 species were identified from samples of sugarcane soil and/or roots collected during 1969-1972 in Cumanacoa, Portuguesa, Tacarigua, Trujillo, Urena, Valle de Turbio, Yaracuy and Yaritagua in northwestern Venezuela: *Aglenchus costatus* (de Man, 1921) Meyl, 1961; *Tylenchus (Aglenchus) parvus* Siddiqi, 1963; *Basiria graminophila* Siddiqi, 1959; *Basiria* n. sp.; *Ditylenchus* sp.; *Pseudhalenchus anchilisposomus* Tarjan, 1958; *P. minutus* Tarjan, 1958; *Sakia* n. sp.; *Tylenchorhynchus crassicaudatus* Williams, 1960; *T. parvus* Allen, 1955; *Quinisulcius acutus* (Allen, 1955) Siddiqi, 1971; *Paratrophurus loofi* Arias, 1970; *Pratylenchus brachyurus* (Godfrey, 1929) Filipjev & Schuurmans Stekhoven, 1941; *P. zeae* Graham, 1951; *Helicotylenchus concavus* Román, 1961; *H. conicephalus* Siddiqi, 1972; *H. curvatus* Román, 1965; *H. dihystera* (Cobb, 1893) Sher, 1961; *H. flatus* Román, 1965; *H. pseudorobustus* (Steiner, 1914) Golden, 1956; *H. tropicus* Román, 1965; *Macroposthonia onoense* (Luc, 1959) De Grisse & Loof, 1965; *M. sphaerocephala* (Taylor, 1936) De Grisse & Loof, 1965; *M.* sp.; *Paratylenchus curvitatus*–group of Geraert (1965); *P. microdorus* Andrássy, 1958; *Meloidogyne incognita* (Kofoid & White, 1919) Chitwood, 1949; *M. javanica* (Treub, 1885) Chitwood, 1949; *Aphelenchoides bicaudatus* (Imamura, 1931) Filipjev & Schuurmans Steknoven, 1941; *A.* sp.; *Aphelenchus avenae* Bastian, 1865; *Xiphinema* sp.; *Paratrichodorus (Nanidorus) minor* (Colbran, 1956) Siddiqi, 1974; *Diphtherophora* n. sp. Descriptions and relationships of the three new species are given.

VARIATION WITHIN POPULATIONS DERIVED FROM SINGLE FEMALES OF *PRATYLENCHUS COFFEAE* [VARIACIONES EN LA DESCENDENCIA DE HEMBRAS SELECTAS DEL *PRATYLENCHUS COFFEAE*]. A. C. Tarjan and J. J. Frederick, University of Florida Agricultural Research and Education Center, Lake Alfred, Florida 33850, USA. - - - Sour orange seedlings *(Citrus aurantium* L.*)* growing in Astatula fine sand in 15-cm diam clay pots were inoculated with single fertilized females of *Pratylenchus coffeae* (Zimmermann, 1898) from 2 populations obtained from citrus groves near Orlovista and Lake Alfred, Florida, USA. Progeny of the females were maintained for 44 and 48 months, respectively at greenhouse temperatures averaging between 21.0 - 27.6C (69.8 - 81.7F). The nematodes were then isolated from the roots of one plant originally infected with a female from Lake Alfred and from 2 plants inoculated with females from Orlovista. Adult female specimens were killed, fixed, and mounted in glycerine for microscopic study. Variables measured were distance between vulva and anus (VA), and length of the stylet (ST), post-uterine sac (PU), and tail (TA). Measurements are given as means ± standard deviation, followed by the range in parenthesis. The population produced by the single female originating from Lake Alfred measured (n = 57): ST = 15.9 ± 0.6µm (15 - 17µm); PU = 22.7 ± 5.7µm (8 - 38µm); VA = 85.4 ± 11.5µm (65 - 113µm); and TA = 29.2 ± 4.4µm (22 - 38µm). The progeny of one of the females from Orlovista measured (n = 85): ST = 15.6 ± 0.5µm (15 - 17µm); PU = 24.7 ± 6.0µm (17 - 47µm); VA = 89.6 ±10.5µm (70 - 127µm); and TA = 30.2 ± 3.9µm (20 - 40µm), while the progeny of the second female from Orlovista measured (n = 54): ST = 15.5 ± 0.5µm (15 - 17µm); PU = 24.0 ± 5.5µm (16 - 37 µm); VA = 87.8 ± 7.7µm (70 - 104µm); and TA = 30.0 ± 4.2µm (22 - 40µm).

Under conditions of this test, the mean data show *P. coffeae* females to have stylets 17 - 18μm long, tails 29 - 30μm long, post-uterine sacs 22 - 24μm long and the distance between the vulva and anus to be 85 - 88μm. There appeared to be no major biometric differences between progeny from females of different populations reared under identical conditions. The most radical differences were in shapes of tail termini which were flattened, knobbed, cleft or slightly digitate.

OTHER CONTRIBUTIONS – – – OTRAS CONTRIBUCIONES

DEPTH OF PENETRATION OF PHYTOPARASITIC NEMATODES IN YAM TUBERS [PROFUNDIDAD DE PENETRACION DE NEMATODOS FITOPARASITICOS EN EL TUBERCULO DEL ÑAME]. Nelia Acosta, Assistant Nematologist, University of Puerto Rico, Mayaguez Campus Agricultural Experiment Station, Río Piedras, Puerto Rico 00928.

ABSTRACT

Phytoparasitic nematodes, especially *Pratylenchus coffeae* (Zimmermann), were concentrated mainly in the outer 6 mm of tissue, but penetration up to 15 mm was found in the Guinea yam tuber. The oldest portion, adjacent to the stems, contained the highest population while few specimens were recovered from the distal portion of the tuber.

INTRODUCTION

The Guinea yam *Dioscorea rotundata* Poir, is one of the most important cultivated root crops in West Africa, Southern Asia and the Caribbean (5). The crop is severely damaged by several biological agents, among which phytoparasitic nematodes are known to destroy the tuber, decreasing considerably its appearance and hence its commercial value.

There are reports on nematodes associated with yam tubers. This association was first observed by Steiner (9), who described *Hoplolaimus* n. sp. feeding on yam tubers. This species was later classified as *Scutellonema* by Andrassy (1). West (10) observed that yams infected by *Scutellonema* had a loosened cortex, which he called "dry rot of yam".

Several other nematode species have been found in association with yam tubers. Ayala (2) and Ayala & Acosta (3) found *Pratylenchus coffeae, Scutellonema bradys, Meloidogyne* sp., *Rotylenchulus reniformis* and *Helicotylenchus* sp. associated with *D. rotundata* in Puerto Rico. Jenkins and Bird (8) found *Meloidogyne incognita, Pratylenchus brachyurus* and *Criconemoides* sp. associated with the wild yam.

In an attempt to improve production and the quality of yam tubers used for propagation, several tests have been performed to rid them of pathogenic nematodes. Bruhn and Wolfgang (4) obtained effective nematode control by immersing the