

ABSTRACTS - - RESUMENES

ENSAYOS DE SELECTIVIDAD DE NEMATICIDAS EN EL COMBATE DEL *PRATYLENCHUS COFFEA* EN ALMACIGUERAS DE CAFE [SCREENING TESTS WITH NEMATOCIDES FOR THE CONTROL OF *PRATYLENCHUS COFFEA* IN COFFEE NURSERIES], Leopoldo Abrego, Departamento de Fitosanidad, Instituto Salvadoreño de Investigaciones del Café, Santa Tecla, El Salvador - - - El *Pratylenchus coffeae* parasita al cafeto en todos sus estados de desarrollo, siendo el daño más notable en las plántulas de almaciguera. En las almacigueras ocurren pérdidas de plántulas que al ser parasitadas, sufren una progresiva necrosis de las raicillas absorbentes, llegando a perder también la raíz principal. Las plántulas así afectadas no resultan aptas para su trasplante al cafetal. Considerando la importancia económica que representan las pérdidas en las almacigueras, así como la necesidad de trasplantar material sano al cafetal, se realizó un experimento de campo donde se evaluaron los siguientes productos: Phenamiphos: 44, 88 y 132 lb ia/ha; Carbofuran: 16.5, 32.5 y 49.6 lb ia/ha; Aldicarb: 11, 22 y 33 lb ia/ha; y Oxamyl: 19.8, 42 y 64 lb ia/ha. Los productos Phenamiphos, Carbofuran y Aldicarb fueron ligeramente incorporados alrededor de las plántulas 10 días después de haber sido éstas sembradas en la almaciguera. El Oxamyl se aplicó en la misma fecha, diluyendo sus dosificaciones en un gal amer de agua con las que se bañaron las 32 plántulas de cada parcela. Las dosificaciones de los productos químicos que resultaron más eficaces fueron: Oxamyl, 19.8 lb ia/ha; Carbofuran, 16.5 lb ia/ha; Phenamiphos, 44 lb ia/ha; y Aldicarb, 33 lb ia/ha. Los productos empleados influyeron notoriamente en el peso de las plantas de almaciguera. Las dosificaciones evaluadas no produjeron efectos tóxicos en las plantas.

BANANA NEMATODE CONTROL WITH DBCP AND FOUR GRANULAR NEMATOCIDES IN THE WINDWARD ISLANDS. [CONTROL DE NEMATODOS DE BANANA CON DBCP Y CUATRO NEMATICIDAS GRANULADAS EN LAS ISLAS BALOVENTOS] S. R. Gowen, Windward Islands Banana Research Scheme, P. O. Box 115, Castries, St. Lucia; On technical assistance supported by British Ministry of Overseas Development - - - On a clay loam soil in St. Lucia applications of Ethoprop 5g ai, Phenamiphos 3g ai, Oxamyl 6g ai (later changed to 3g ai), and Carbofuran 2.5g ai per plant every 4 mos. have after 20 mos. given better yields than has DBCP applied at 5.7 cm³ per plant (11.23 liters/ha) every 6 mos. Similarly on a fast-draining volcanic soil in St. Vincent, Phenamiphos 3g ai and Carbofuran 2.5g ai were superior to DBCP at 3.3 cm³, 5.0 cm³, 6.6 cm³ and 18.4 cm³ per plant. The better yields are largely a reflection of the speed of production. The time taken from planting to harvest for the first production cycle (plant crop) was between 22 - 40 days shorter than that for DBCP and untreated plots. Regular assessments of nematode populations showed that the granular nematicides were as good as, and sometimes superior to, DBCP in limiting the nematode population in roots. The greatest advantage of the granular materials (other than ease of application) is the apparent shortening of the production cycle.

COMPARATIVE RESISTANCE OF SOYBEANS TO *MELOIDOGYNE JAVANICA* [RESISTENCIA COMPARATIVA DE FRIJOLES SOJAS A *MELOIDOGYNE JAVANICA*] R. A. Kinloch and K. Hinson, Agricultural Research Center, Jay, Florida 32565 and University of Florida, Agronomy Department, Gainesville, Florida 32611 - - - Twelve soybean cultivars and 44 selected soybean breeding

lines were evaluated for resistance to *Meloidogyne javanica* in a field in northern Florida. Ten replicates of single row plots were rated on root galling and compared with adjacent companion rows of the highly susceptible cultivar 'Hardee'. 'Forrest' and 'Bragg' were the most resistant cultivars. 'McNair 600', 'Pickett', and 'Lee 74' were more resistant than the control cultivar, whereas 'Hampton', 'Cobb', 'Hutton', 'Tracy', 'Ransom', and 'Hood' were rated as susceptible as 'Hardee'. Twenty-two of the selected breeding lines were rated equivalent to 'Forrest', the most resistant cultivar in the test.

ESTUDIO PRELIMINAR SOBRE LOS NEMATODOS ASOCIADOS CON LA CAÑA DE AZUCAR EN LA REPUBLICA DOMINICANA [PRELIMINARY STUDY ON THE NEMATODES ASSOCIATED WITH SUGARCANE IN THE DOMINICAN REPUBLIC] J. Román, Estación Experimental Agrícola, Universidad de Puerto Rico y L. Grullón, Centro de Investigaciones Agropecuarias, San Cristóbal, República Dominicana - - - En un estudio que se realizó para identificar los nematodos fitoparásitos asociados con la caña de azúcar en la República Dominicana, se tomaron muestras de suelo y raíces en terrenos pertenecientes a 8 ingenios azucareros en las zonas sur y norte del país. Las especies identificadas fueron las siguientes: *Meloidogyne incognita*, *Pratylenchus zaeae*, *P. crenatus*, *P. brachyurus*, *P. scribneri*, *Tylenchorhynchus curvus*, *T. crassicaudatus*, *Helicotylenchus dihystra*, *H. curvatus*, *H. flatus*, *H. retusus*, *H. tropicus*, *H. microcephalus*, *H. concavus*, *H. truncatus* y *Rotylenchulus parvus*. Otros géneros encontrados fueron *Tylenchus*, *Aglenchus*, *Ditylenchus*, *Boleodoroides*, *Criconemoides*, *Hemicriconemoides*, *Hemicyclophora*, *Paratylenchus*, *Xiphinema*, *Longidorus*, *Trichodorus*, *Aphelenchoides* y *Aphelenchus*. Aparentemente el nematodo que más daño causa a la caña de azúcar en la República Dominicana es el *Pratylenchus*. Este nematodo se encontró con mucha más frecuencia y en mayores cantidades que los demás y estuvo consistentemente asociado con sistemas radiculares en marcado deterioro.

THE INFLUENCE OF ALDICARB IN WATER SOLUTIONS AND IN SOIL ON SURVIVAL AND DEVELOPMENT OF *HETERODERA SCHACHTII*. [LA INFLUENCIA DE ALDICARB EN LAS SOLUCIONES DEL AGUA Y EN EL SUELO SOBRE LA SUPERVIVENCIA Y EL DESARROLLO DE *H. SCHACHTII*] A. E. Steele and L. Hodges, Nematologists, Agricultural Research Service, U. S. Department of Agriculture, P. O. Box 5098, and Union Carbide Corp., 1078 Merrill, respectively, Salinas, California 93901 - - - Water solutions of 10 - 1000 ppm aldicarb or its oximes, aldicarb sulfoxide or aldicarb sulfone, inhibited hatching of *Heterodera schachtii*. Hatching and emergence of larvae occurred from cysts removed from the aldicarb solutions and treated 4 weeks in sugarbeet root diffusate. Addition of hatching agents (zinc chloride or sugarbeet root diffusate) to the aldicarb solutions did not decrease inhibition of hatching by aldicarb. Treatments of newly hatched larvae of *H. schachtii* with 10 - 1000 ppm aldicarb significantly reduced subsequent development of larvae on sugarbeet. Similar treatments of aldicarb sulfoxide or aldicarb sulfone were less effective in decreasing larval development. Survival and development of treated larvae are inversely proportional to the concentration and duration of aldicarb treatments. Development of *H. schachtii* on sugarbeet inoculated with viable cysts and grown in aldicarb treated soil is inversely proportional to the concentration of aldicarb in the tested range of 0.75 - 6.0 parts of aldicarb per million of soil. Culture of *H. schachtii* on root slices of red table beet grown in soil treated with aldicarb, revealed that the con-

centration of aldicarb in storage roots was sufficient to prevent development of the nematode on root slices from 6 of 8 plants, whereas only 2 nematodes developed on each of 3 out of 6 root slices obtained from 3 treated plants. Root slices from plants grown in untreated soil averaged 192 developing nematodes per slice 25 days after inoculation.

OTHER CONTRIBUTIONS - - OTRAS CONTRIBUCIONES

NEMATODES IN DISTILLED WATER [NEMATODOS EN AGUA DESTILADA].
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ABSTRACT

Large numbers of bacteriophagous nematodes *Rhabditis* sp. were found infesting a distilled water system. Five additional systems were examined to determine if nematode contamination was present in other systems. Two of 6 samples were bacteria infested. A sample from the original nematode-infested system yielded a single live *Rhabditis* sp. Fungi (one sample), algae (6 samples), and amoeba were also found in the samples.

INTRODUCTION

In April, 1969, a sample of discolored heat-distilled water submitted to the laboratory of the Bureau of Nematology was examined for contaminants. The water originated from a system which had been in operation for several months.

The examined water contained large numbers of a bacteriophagous nematode, *Rhabditis* sp. A survey of the distilled water storage tank yielded 359 of the nematodes from approximately 2 liters of water.

Inspection of the distilling system revealed several places where the system was open to the atmosphere and consequently to contamination by airborne and surface organisms.

In May, 1971, a second sample of discolored heat-distilled water was received for contamination analysis. Analysis revealed the following organisms in the water: *Aspergillus* sp., iron fixing bacteria, green algae filaments and unicells, blue green algae filaments and coccoid chains, one specimen of a bacteriophagous nematode (*Rhabditis* sp.) and some unidentified fungus spores.

An inspection of the distilling apparatus and storage system revealed considerable rust about the storage tank openings and fittings. This system was also found open to the atmosphere in three places.

In order to ascertain if other distilled water systems might be contaminated with living nematodes and/or other organisms, a survey was made of water from the original system evaluated and 5 other systems housed in 5 separate non-contiguous buildings.

All apparatus used in the collection and examination was autoclaved prior to using. One qt of distilled water was drawn from a dispensing tap in each system. A small volume was pipetted from each sample and transferred to a sterile nutrient