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CHEMICAL CONTROL OF *RADOPHOLUS SIMILIS* ON PLANTAINS [CONTROL QUIMICO DE *RADOPHOLUS SIMILIS* EN PLATANOS]

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Large quantities of plantains (*Musa* AAB) are eaten in some African countries; however, they are not usually grown commercially but are found planted near to dwellings or in fields, frequently interplanted with other crops. A few yrs ago some African governments asked IRFA to extend the planting of this crop to promote local supplies for the population. As a part of this program it was necessary to obtain information regarding the nematode problems of plantain.

The first stage was to determine the seriousness of the damage caused by *Radopholus similis*. This was carried out at the IRFA station in Cameroon on fertile soils of volcanic origin formerly planted with bananas and infested with *R. similis*. The variety "vert sombre," belonging to the French plantain group which is a triploid (genome AAB), was planted. The chemical treatments were: a) 3 applications/yr of 3 g phenamiphos/plant, b and c) 3 and 6 applications/yr of 3 cc DBCP a.i./plant.

The effectiveness of these treatments was assessed by comparing the yields of treated and untreated plots. The populations of *R. similis* in the root systems were counted each mo.

When compared to the untreated, all 3 treatments showed good nematode control (Table 1). However, these results cannot be considered of great significance since the low *R. similis* infections in the untreated plot could have been due to the variety of plantain used in the experiment, or that the Cameroon race of *R. similis* is better adapted to bananas than plantains. The results were surprising because previous observations on varietal collections seemed to indicate that plantains were highly susceptible to attack by the burrowing nematode.

In the absence of heavy infections, the differences in yield between treated and untreated plots are of little significance. Due to an increase in the number of plants/ha after the first cycle, the plants which would have produced the second cycle were weak and therefore were cut down. Discrepancies in the third cycle result from a wind-storm which broke the pseudostems of many plants causing a loss of bunches.

Although the infections of *R. similis* were lower than expected, DBCP gave the best nematode control of the 2 chemicals. Overall yield seemed to indicate that the 6 applications/yr of 3 cc DBCP a.i./plant was the best treatment used in this experiment.

Table 1. Populations of *Radopholus similis* per 100 g of plantain roots.

	Untreated	Phenamiphos	DBCP 3 applications	DBCP 6 applications
1st cycle	4,000-8,000	1,000	1,000	1,000
3rd cycle	10,000-20,000	2,000-6,000	1,000	1,000
4th cycle	15,000-25,000	2,000-6,000	1,000-3,000	1,000
5th cycle	15,000-35,000	3,000-6,000	3,000-6,000	2,000-5,000

Table 2. Results of yield.

	Untreated	Phenamiphos	DBCP 3 applications	DBCP 6 applications
Bunch weights (Kg)				
1st cycle	27.6	27.2	27.1	27.2
3rd cycle	20.0	22.5	22.4	23.0
4th cycle	20.5	21.0	21.4	22.5
Production (MT/ha)				
1st cycle	27.3	26.4	26.4	26.8
3rd cycle	21.1	24.2	22.9	29.2
4th cycle	27.3	30.4	31.7	33.0