Errata

In the following publications :

QUÉNÉHERVÉ, P. Populations of nematodes in soils under banana, cv. Poyo, in the Ivory Coast. 3. Seasonal dynamics of populations in mineral soils. *Revue Nématol.*, 12 (2) : 149-160 (1989),

the line 7 of the " Résumé " should read :

« ... l'espèce endoparasite pionnière. Dans ces conditions, l'infestation racinaire par *H. multicinctus* apparaît secondairement. Cette... »

QUÉNÉHERVÉ, P. Populations of nematodes in soils under banana, cv. Poyo, in the Ivory Coast. 4. Seasonal dynamics of populations in organic soils. *Revue Nématol.*, 12 (2) : 161-170 (1989),

the Fig. 1 (p. 164) has to be replaced by the figure below.

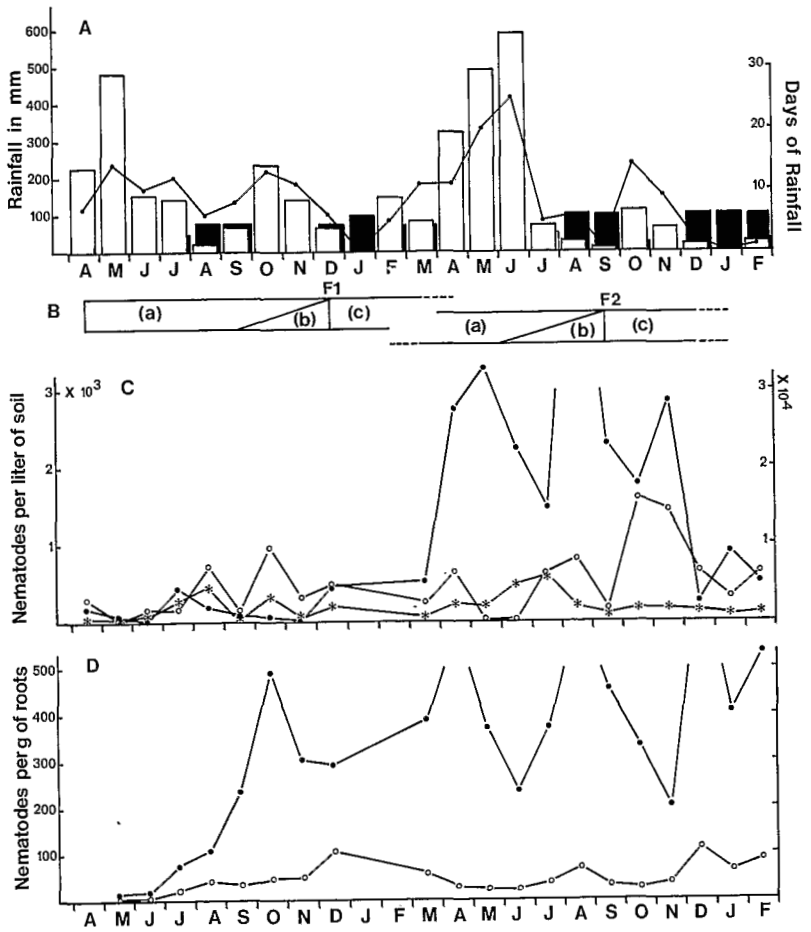

Fig. 1. Nematode population dynamics on site 1 (Agbo). A : Rainfall and irrigation (white bar : monthly rainfall; black bar : monthly

An electron microscopy study of cell wall lysis by *Meloidogyne javanica* gelatinous matrix

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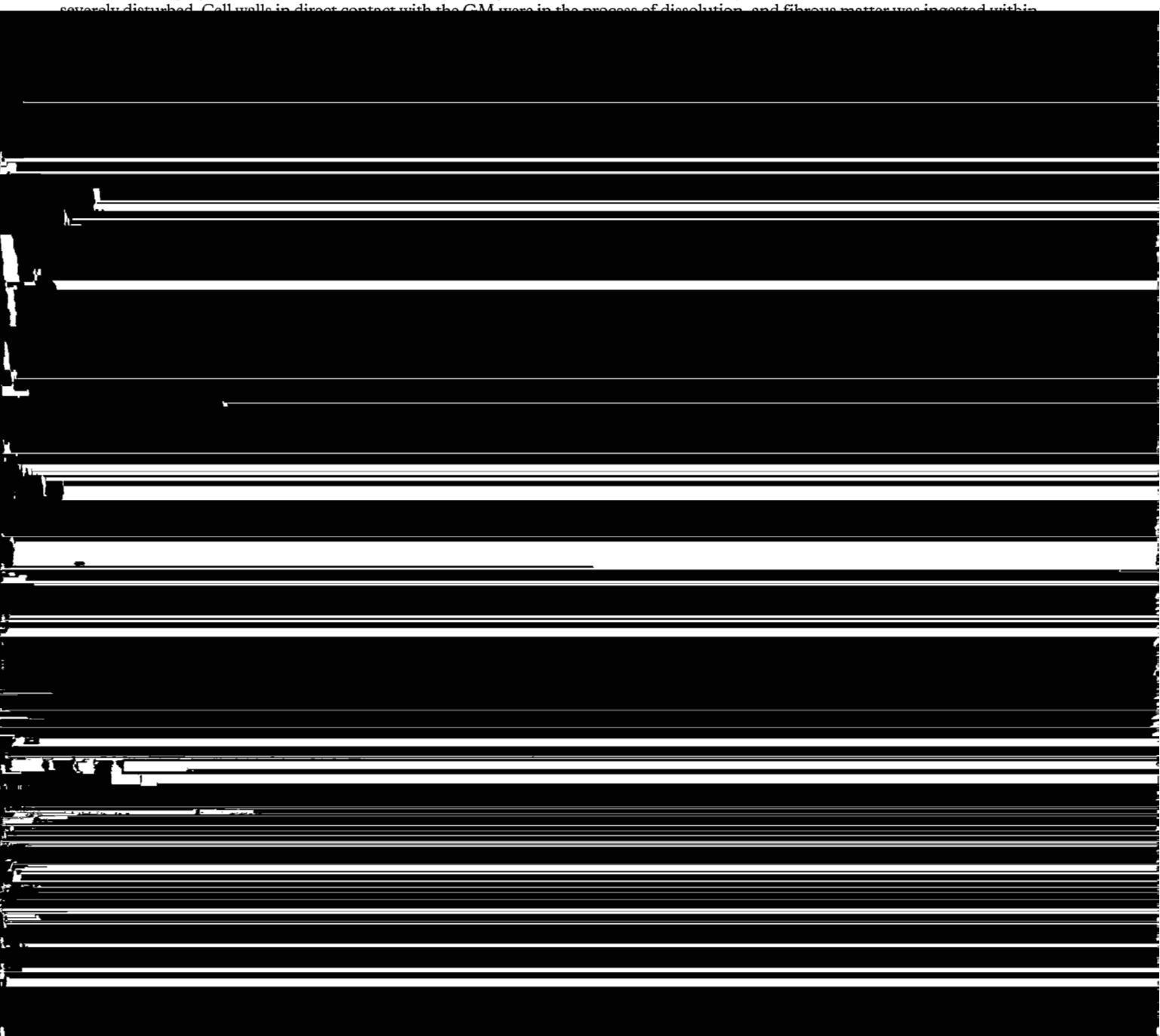
SUMMARY

The effects of the gelatinous matrix (GM) of *Meloidogyne javanica* on tomato cells were demonstrated in thin sections made in galls at the stage of early GM secretion. Cells adjacent to the GM border line were in a state of collapse and compression. Electron-micrographs of this area showed that cell walls adjacent to the GM were extremely swollen and their fibrous structure was severely disturbed. Cell walls in direct contact with the GM were in the process of dissolution, and fibrous matter was ingested within



GM borderline were several times thicker than those of parenchyma cells in the same gall which were not exposed to the GM (Fig. 1 D). In the swollen cell walls the middle lamella seemed to be destroyed, vacant spaces could be seen instead, and the fibrous structure of the secondary wall was severely disturbed, resembling turbulent movement. These phenomena probably reflected the dissolution of the matrix in which the cellulose fibrils are embedded and which consisted mainly of pectins. This process occurred not only in cells in direct contact with the GM but also in cells farther away, suggesting that the substance(s) responsible for the pectin dissolution diffused beyond the GM borderline. Due to this activity the cell walls lost their rigidity, the entire cell collapsed, and the cytoplasm, cytoplasmic organelles and remnants of the vacuole were all compressed. Secondly, swollen cell walls directly exposed to the GM were in the process of lysis and fibrous material, probably cellulose microfibrils, was shown dissolved within the mass of the GM (Fig. 1 C). In this area detached cytoplasmic organelles such as plastids and endoplasmic reticulum units could be observed and could well be remnants of cells already dissolved by the GM. These organelles were found near the GM front line, suggesting that in time they would be completely destroyed and ingested by the GM, which appears to be a homogenous substance. From the findings presented in this study it can be concluded that the GM contained substances of pectolytic, celluloytic and proteolytic activity, some of which were reported by Bird and Rogers (1965). It is possible also that some of the carbohydrates and proteins found in the GM were actually derived from the host cells dissolved by the GM. As cell lysis is directed to form a canal (Orion, Loots & Orion, 1987), it could be argued that the most intensive lysis potential was concentrated at the GM front line, consisting of freshly secreted material, while the old, inactive GM is pushed to the edge of the cavity, not harming the host cells, and thus a canal of limited width leading to the gall surface was formed.

Accepté pour publication le 18 juillet 1989.

Refererences

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