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Society. Vol. XV, 1978

Maize -- Pests, diseases and weeds.

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A MECHANICALLY TRANSMISSIBLE VIRUS ISOLATED FROM MAIZE IN HAITI.

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In december 1977 (Toribio and Marchoux, 1977) numerous plants on one field collection of maize (Touvin, 1978) in southern of Hait exhibited typical mosaic with dark and light green striped areas. Affected plants are more or less stunted, probably depending on the age at which they are infected. Incidence of the virus-like diseases seems to reach a high incidence.

METHODS AND RESULTS

Mechanical inoculation.

Young leaves of one diseased plant were triturated in 0.01 M phosphate buffer pH 7.0 (1:5 W/V). Inoculations were made with 75 mg/ml of carborundum as an abrasive and XL50 Activit carbon as an anti inhibitor.

Maize.

small chlorotic spats and later yellow mosaic running parallel to the veins.

Three Haitian ecotypes (426 C, 480 C, 393) are sensitive.

Sorghum.

Mottle or mosaic, sometimes later with necrotic reaction on old leaves KS 18, SC 170.6.8.8, SCHALLU MP 10, SDR 040 and SDB 006 from INRA-Duclos collection-are more or less sensitive.

Aphid transmission.

Isolate maintained onto SC 170.6.8.8., corn is transmitted to new young SC 170.6.8.8. or 480 C sorghum seedlings by *Myzus persicae* aphid in the nonpersistent manner.

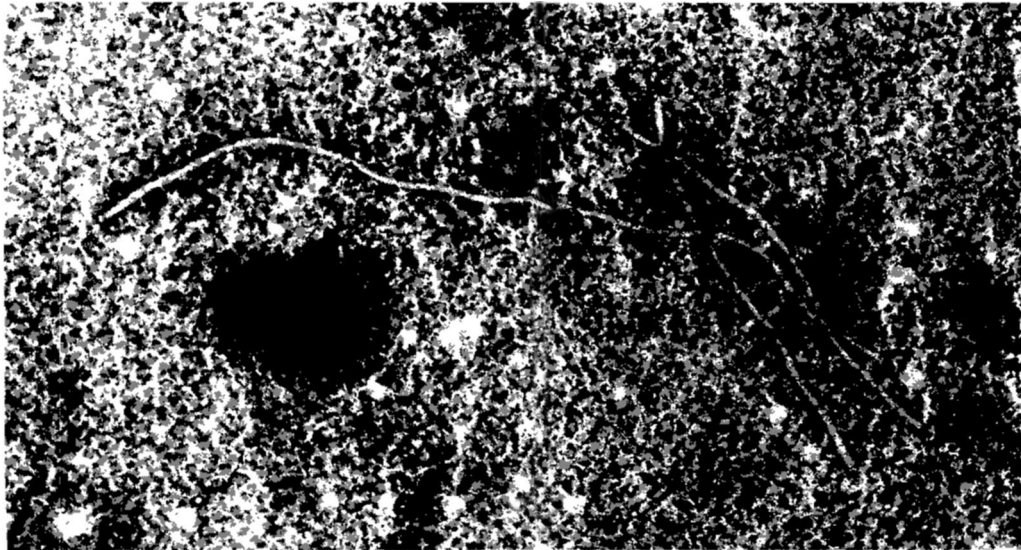


Fig 1: Filamentous particles observed in leaf-dip preparation from maize sample from Haiti.

Electron microscopy.

Preparations obtained by the leaf-dip method showed viral particle is flexuous filament of approximately 750 nm in length. (fig 1)

DISCUSSION

A sap and aphid-transmissible virus was isolated from mosaic-affected maize plants grown in south of Haiti.

The potyvirus is suspected to be Maize Dwarf Mosaic Virus (MDMV) already identified on maize and sorghum in USA (Williams and Alexander, 1965; Williams et al., 1977). MDMV is a strain of sugarcane mosaic virus suspected in many parts of the caribbean area where susceptible varieties of cane are grown. (Pirone, 1972; Snazelle et al., 1971).

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