IDRC - 063e

The International Exchange and Testing
of

CASSAVA GERM PLASM

in

AFRICA

Proceedings of an interdisciplinary workshop
held at IITA, Ibadan, Nigeria
17-21 November 1975

Editors: Eugene Terry and Reginald MacIntyre

Cosponsored by the
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International Institute of Tropical Agriculture

Postal Address: Box 8500, Ottawa, Canada K1G 3H9
Head Office: 60 Queen Street, Ottawa
Microfiche Edition $1
ISBN: 0-88936-082-0
UDC: 633.682

IDRC-063e

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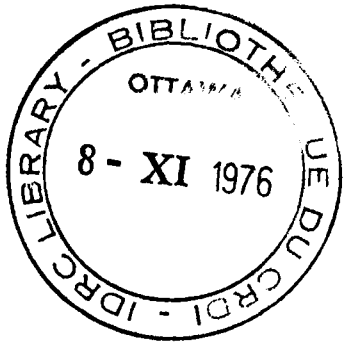

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Part B
Description and evaluation of cassava mosaic disease in Africa

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At present, there is limited information on cassava diseases and even more limited data from reliable studies on yield losses due to these diseases. This lack of information has led to the assumption that cassava diseases are of minor importance.

There are several cassava diseases caused by bacteria, fungi, virus, and other unknown agents. In Africa, although cassava mosaic disease is one of the most widespread, cassava bacterial blight which has been recognized to date in Zaïre, Nigeria, and Cameroon, is considered to be more serious in terms of its severity, ease of spread, and the loss of yield and planting material that it causes.

The following is a brief description, with photographs, and suggested procedures for evaluating the severity of cassava mosaic disease. These descriptions should be considered only as tentative aids to field recognition of the disease, and the scoring procedures merely as suggested guidelines to evaluating the severity of the disease and the reaction of cassava plants to it.

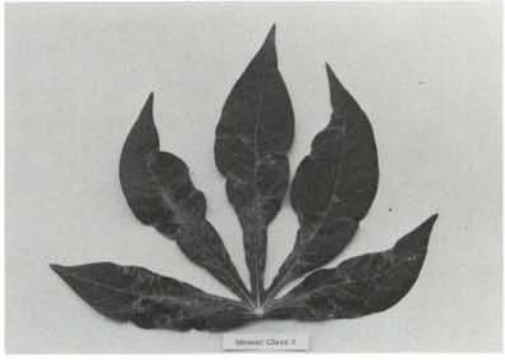
Symptoms The disease is characterized primarily by chlorosis of discrete areas of the leaf lamina and these areas fail to expand fully so that stresses set up by unequal enlargement of adjacent areas cause distortion of the leaflets. The typical picture is a leaf reduced in size, misshapen and twisted with bright yellow areas separated by normally green areas. All leaflets may show a nearly uniform mosaic pattern or the mosaic pattern may be localized in a few areas only.

Classification of disease severity The scoring system for evaluation of test plant reaction to CMD is based on the following five classes of severity:

Class 1 — Apparent field resistance, no symptoms seen.

Class 2 — A mild chlorotic pattern over entire leaflets, or mild distortion only at the base of leaflets, with the remainder of the leaflets appearing green and healthy.

Class 3 — Strong mosaic patterns all over leaf, narrowing and distortion of lower one-third of leaflets.



Class 4 — Severe mosaic pattern, severe distortion of two-thirds of leaflets, and general reduction of leaf size.

Class 5 — Severe mosaic, severe distortion of four-fifths or more of leaflets, twisted and misshapen leaves, and severe reduction of leaf size.