

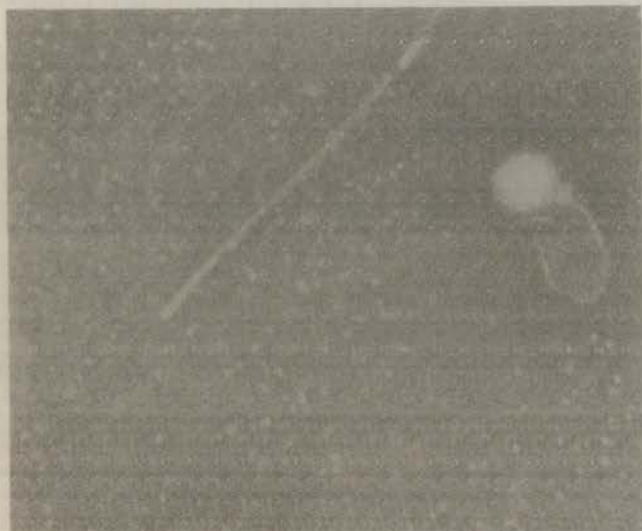
## PLANT PATHOLOGY NOTE NO. 32

### A virus disease of peanut

By E. C. Philemon, Plant Pathologist,  
Department of Agriculture and Livestock, Konedobu.

#### INTRODUCTION

Peanut or groundnut (*Arachis hypogaea*) is an important food crop in Papua New Guinea. Recently a survey for virus diseases of this crop was conducted. Among the virus diseases recorded the cowpea mild mottle virus (CMMV) was new to peanut. This disease was found on a few plants at the Agricultural Research Centre Bubia. CMMV is caused by a flexuous or filamentous rod-shaped virus belonging to the carlavirus group.



*Electron micrograph of a single particle of CMMV from field infected peanuts plants, showing flexuous rod shape.*

#### SYMPTOMS

Plants infected by CMMV may show the

following symptoms on leaves

- mild mottling, (small spots on the surface of the leaf)
- vein clearing, (veins on the leaf lose their natural colour)
- necrosis, (death of the leaf tissues)
- chlorosis, (loss of green colour of the leaf)
- bronzing, (showing bronze colour on the lower surface)
- upward rolling of leaves.

Severely infected plants do not grow well.



*Bronzing symptoms on lower surfaces of leaves in older field infected plant.*

## SPREAD OF THE DISEASE

Two types of disease transmission are known. The virus can be transmitted through seeds collected from the diseased plants. Another way of spreading the disease is by an insect known as whitefly (*Bemisia tabaci*). This insect while sucking the sap (juice) from the infected plants takes the virus in its mouth parts and transmits to the healthy plants when it sucks sap from them. The whitefly is present in Papua New Guinea.

Besides peanut CMMV is also known to infect many other leguminous plants. These plants also act as alternative hosts for the disease.

## CONTROL

CMMV is a disease of minor importance at present. However, necessary precaution must be taken to control the disease.

1. Diseased plants should be pulled out and destroyed by burning.
2. Alternative hosts (other leguminous plants) should be checked and destroyed if found diseased.
3. Avoid using seeds for sowing from CMMV infected plots.
4. Control whitefly by spraying with an effective insecticide.

## FURTHER INFORMATION

For further information about this disease contact your nearest D.A.L. Plant Pathologist.

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