

## SECTION B

### 8 - 33 STUDIES ON A VIRUS DISEASE OF PUMPKIN (*CUCURBITA MAXIMA*)

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A mosaic type virus has been increasingly observed in recent years infecting pumpkin, mainly in the low country dry and intermediate zones. It has also been recorded in other widely separated locations such as Trincomalee, Batticaloa, Maha Illuppallama, Kataragama, Piliyandala, Maharagama, Mawanella and Peradeniya.

The disease is characterised by prominent leaf symptoms of mosaic and vein clearing. Diseased plants are reduced in size and bear less flowers. Fruits are malformed and do not develop normally to maturity.

A virus isolated from diseased plants using extracts prepared with phosphate buffer from leaf tissue with prominent symptoms had a narrow host range infecting only cucumber (*Cucumis sativus*), ridge gourd (*Luffa acutangula*), snake gourd (*Trichosanthes anguina*) and bitter melon (*Momordica charantia*) of several host species tested.

In pumpkin sap, the virus had a thermal inactivation point (10 min) of 50-55°C and a dilution end point  $10^{-8}$  to  $10^{-4}$ . Buffered sap extracts remained infective for up to 18 days at room temperature.

Attempts to transmit the virus with *Aulacophora intermedia*, a beetle commonly found in cucurbits, were unsuccessful. The virus was, however, transmitted by whiteflies (*Bemisia tabaci*), given an acquisition feeding period of 6 hr after a 3 hr starvation period and then transferred to pumpkin seedlings. Symptoms were observed one week after the inoculation feeding.

The incidence of the disease in locations widely separated and the history of affected plants being produced from seeds originating from marketed fruits suggests that the virus may also be transmitted in seed.