

# RECOGNITION OF LENTIL VIRUSES

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## INTRODUCTION

In a recent survey of lentil crops a number of virus diseases new to New Zealand (1) were found.

Brief descriptions of the virus disease symptoms are given means of transmission, and possible control methods are outlined.

## THE VIRUSES

**Alfalfa Mosaic Virus (AMV):** Leaves are small, often curled, the growing point may be distorted, plants may be stunted with some stem die-back. AMV is aphid transmitted from surrounding clover pastures and volunteer legume plants. Yield losses of up to 74 % have been recorded overseas (Kaiser, 1973).

**Cucumber Mosaic Virus (CMV):** Leaves are often small, mottled, yellow, vein banded, and curled. Plants may be stunted with many basal shoots. CMV is aphid transmitted probably from surrounding weeds and horticultural crops. Yield losses of up to 87 % have been recorded overseas (Kaiser, 1973).

**Luteoviruses - Soybean Dwarf Virus (SDV) and Beet Western Yellow Virus (BWYV):** Symptoms are similar for both viruses. Leaves, particularly the lower leaves, turn yellow then red. Plants are stunted and stems are red. SDV and BWYV are aphid transmitted from surrounding pastures, weeds, and brassica crops. Yield losses are not documented.

**Pea Seed-Borne Mosaic Virus (PSbMV):** Leaves develop a slight mottle, twisting and cupping. Plants may be slightly stunted and flowering can be delayed. PSbMV is both seed-borne and aphid transmitted from surrounding pea or lentil crops. Disease incidences of up to 16 % (Goodell & Hampton, 1984) have been recorded overseas.

## DISEASE CONTROL

To control PSbMV clean seed lines need to be sown. Control of aphids infesting lentils (e.g. *Aphis fabae*) is important to reduce spread of all the viruses described (AMV, CMV, SDV, BWYV and PSbMV). Crops sown in autumn require chemical protection if aphids are still flying. Systemic insecticides such as 'Disyston' and 'Thimet' can be used. During spring growth (September-December) crops require monitoring for the presence of aphids. If five or more aphids are found on plants at five or more sites than 'Pirimor' or 'Mavrik' sprays can be used for protection.

## REFERENCES

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Kaiser, W.J. 1973. *Phytopath Med.* 12(1), 7-14.  
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