

# Vegetable ~~Matter-of~~ Facts

Based on research funded by the vegetable growers levy,  
Horticulture Australia and the Department of Primary Industries-Victoria

Number 26  
October  
2005



# Vegetables



## Cucumber Mosaic Virus

### Essential points to remember about Cucumber Mosaic Virus

- It effects a wide range of vegetables and weeds
- It causes distortions and discolouration of fruit and leaves
- It is spread by aphids
- Control by planting resistant varieties
- Reduce spread by controlling weeds
- Plants that are not a host can be used to act as a barrier/ doormat for the virus



### What is Cucumber Mosaic Virus?

Cucumber Mosaic Virus is a disease that can infect many hundreds of plant species. There is no cure once a plant has become infected, but there are things you can do to stop the virus from getting to your crop. There is nothing that can be sprayed to kill the disease. Cucumber Mosaic Virus is usually referred to as CMV. It will cause symptoms on spinach, lettuce, cucurbits and capsicums as well as many hundreds of ornamental and weed species.

In cucurbit crops the disease causes symptoms to both leaves and fruit. These symptoms include.

- Distorted leaves
- Wilting
- Misshapen fruit
- Discoloured leaves and fruit



CMV symptoms show up as numerous small depressions on zucchini. Infected leaves have a mottled appearance as can be seen on the melon leaf (left) and the cucumber leaves (right).

## How does it spread?

The disease is spread from one infected plant to another by aphids. The virus sticks to the aphid's mouth parts when they probe a plant to see if they want to feed on it. When the aphid moves to the next plant and probe it, they wipe the virus off into that plant. It only takes about 30 seconds for a plant to become infected. Therefore it is likely that plants can be infected even if you have not noticed any aphids feeding.

## How can you control CMV

### Hygiene

Remove infected source plants such as old crop, other cucurbits such as paddy melon, wild melon, camel melon, weeds, and self-sown. Gardens can also be a source of host plants that may carry the virus

### Aphid management

**Reflective mulches** –white and silver plastic mulches confuse the aphid and discourage them from landing on the crop. Reflective mulches have proved effective in slowing down the rate of infection on young plants. They may be particularly useful for stopping CMV which often infects young plants.

**Oil sprays** applied to the leaves of the crop discourage feeding and probing by the aphids.

### **Don't spray to kill aphids**

Aphids that spread the virus do not usually settle and reproduce on the crop. They only require a few seconds to infect a crop. Insecticides need a much longer exposure to kill an aphid. Therefore a crop treated with insecticide will not stop the spread of the virus. Insecticides may even make the problem worse because they may encourage the aphid to move quickly from one plant to another and may actually spread the virus further.

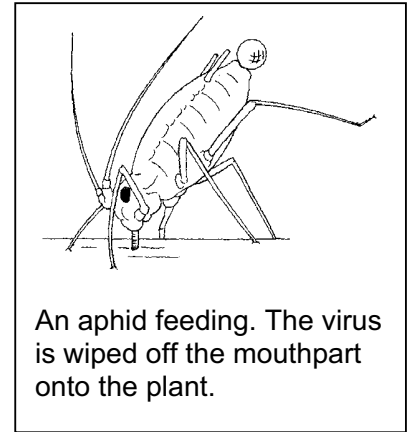
### Planting strategies

#### **Trap crops**

A few rows of taller green plants may act as a good barrier to aphids moving from one crop to another. As the virus is on the mouthpart and not in the gut of the insect it can be wiped off as it is inserted into plants. Trap crops are particularly useful between old crops and newly planted areas, home gardens and different stages within a paddock.

#### **Consider the wind.**

Plant crops so that the new crops are progressively up wind of old crops. If aphids are carried on the wind they will be moving from new crop to old and so less likely to transmit the virus.



An aphid feeding. The virus is wiped off the mouthpart onto the plant.



This greenhouse cucumber is wilting due to CMV infection

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## Are you on our mailing list?

If you would like to receive your own copy of **Vegetable Matter-of-Facts** or have changed your address, please contact the editor: **Rob Dimsey T: 03 5152 0600**

**Check us out and view our other fact sheets:** <http://www.dpi.vic.gov.au/agvic/ihd/projects/vchq.htm>

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*Vegetable Matter-of-Facts is published as part of DPI's VegCheque extension program.*

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□ The State of Victoria, Department of Primary Industries, 2005.

ISSN: 1445-5676