

Mosaic Viruses on Brassica

Recognize the problem

The two most common viruses that affect brassicas are the Cauliflower Mosaic Virus and Turnip Mosaic Virus. The viruses can occur as individual diseases or together in a plant.

When both Cauliflower Mosaic Virus and Turnip Mosaic Virus are present severe spotting will occur. Cauliflower Mosaic Virus causes unusual growths on the veins of the lower leaf surface. When plants are stored, they show black colourings with spots on leaves inside the head.

Turnip Mosaic Virus causes black spots that start as yellow rings on leaves making them fall off early. In stored cabbage, black sunken spots develop on the leaves throughout the head. The spots are larger than those caused by Cauliflower Mosaic Virus.

Background

The viruses are spread by aphids, such as green peach aphids, which have a very wide host range and multiply in warm dry weather. These should be controlled so that they do not spread the virus. Cauliflower Mosaic Virus survives in field borders and on brassica weeds. Symptoms are worse during storage. Early infection in the seedbed or soon after transplanting is seen. The earlier the infection occurs, the higher the loss of yield and quality.

Management

Non-chemical control

- Remove weeds from field margins to help limit the diseases.
- Planting time should be adjusted to avoid the time when aphid numbers are high.
- Field tools should be washed and sterilized to prevent transmission from diseased to healthy plants.
- Control aphids so they do not spread the disease.

Chemical control

- No chemical control is needed for the virus. However, chemicals can be effective in controlling the aphids that spread the virus. These include Azadirachtin (neem), Bifenthrin, Deltamethrin, Pirimicarb and Pymetrozine.

Cauliflower veins affected by Cauliflower Mosaic Virus. (Photo by Horticulture Research International)



Symptoms of turnip mosaic potyvirus on Brassica campestris. (Photo by Mitsuro Kameya-Iwaki)



When using a pesticide, always wear protective clothing and follow the instructions on the product label, such as dosage, timing of application, and pre-harvest interval.

Scientific name(s) > **Cauliflower Mosaic Virus; Turnip Mosaic Virus; Tomato mosaic virus; Lettuce mosaic virus**

The recommendations in this factsheet are relevant to: many countries where this pest or problem is present



Authors: This factsheet is based on information written for "The Brassica Farming Handbook", first published by KENGAP Horticulture 2011.
Kengap Horticulture Ltd, P.O Box 12898-00400 Nairobi, Kenya
tel: +254 722 575544; +254 723 491549 email: books@kengap.co.ke;
www.kengap.co.ke

Edited by Plantwise.