



AVRDC - The World Vegetable Center

# Fact Sheet

## Pepper Diseases

# Alfalfa Mosaic Virus

*Aphid-Transmitted Bacilliform Virus*

Found worldwide



### Symptoms

The foliage has a distinct bright yellow to white mosaic that sometimes causes large areas of interveinal leaf tissue to be bleached in appearance. Chlorotic line patterns and veinal necrosis also may occur. Generally, the leaves are not distorted in shape. If infected when young, the plants may be stunted and their fruit will be misshapen.

### Conditions for Disease Development

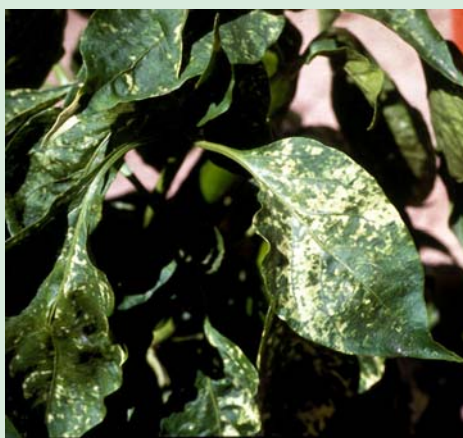
Alfalfa mosaic virus (AMV) is found most commonly in pepper crops that have been planted near alfalfa, clover or other legumes. It is generally considered to be a minor threat to pepper production.

Transmission by seed is the primary means of establishment of the virus while aphid transmission is more important for the subsequent spread in field plantings. AMV is transmitted by many species of aphids including the green peach aphid, *Myzus persicae*. The aphid can acquire the virus by feeding on an infected plant for less than a minute and can transmit

## How to Identify Alfalfa Mosaic Virus



*Bright yellow to white mosaic patterns on interveinal regions of leaves; sometimes large areas may be affected*



*Bleaching of leaves*

it as quickly, but the aphid actually retains the virus for only a short period of time. The virus is also readily transmitted mechanically and by grafting.

## Control

Pepper varieties resistant to AMV are not available.

Various control measures are required because AMV is transmitted by seed, aphids, and mechanically. Control measures must take into account the disease's wide host range (alfalfa, pepper, tomato, tobacco, potato, clover, many cucurbits and beans, and several other crops and weeds) and numerous aphid vectors.

Use virus-free pepper seed. Check transplants for any symptom development and discard those with symptoms. One or two transplants on either side of the affected plants should also be discarded. Avoid touching or handling healthy plants after handling plants suspected of virus infection. Wash hands with soap afterwards or use disposable gloves when handling infected plants.

AMV-infected vegetable seedlings are potential primary sources of the virus. Cover seedlings with mesh size of 32 or higher to prevent aphids. Do not clip or damage young seedlings since this increases the

possibility of mechanical transmission of the virus from contaminated tools or hands.

Aphid control may be difficult because the virus is transmitted very rapidly by these insects. Use fast-acting insecticide sprays since aphids may move to other nearby unsprayed plants when disturbed.

Disinfect tools, stakes, and equipment before moving from diseased areas to healthy areas. Work in diseased areas last, after working in unaffected parts of a field.

Other less effective measures include: planting barrier crops that are not susceptible to AMV such as corn, applying sticky traps, or covering the ground with an aphid deterrent material like aluminum foil strips. Another control strategy is to grow trap crops nearby that attract aphids and then spray these plants with a contact insecticide to destroy the aphid populations. Also, spray the pepper crop with mineral oil to delay virus spread in the field by interfering with aphid transmission of the virus.

**For more information on the production of pepper and other vegetables, go to [www.avrdc.org](http://www.avrdc.org).**