

## Cucumber mosaic virus in Adenium (Desert rose)



Adeniums infected with CMV

*Desert rose or Adenium is a member of family Apocynaceae. This popular exotic ornamental originated in south east Africa and is now widely grown in warm climates.*

Adenium plants frequently develop light and dark green mosaic and mottling patterns on leaves. These symptoms are usually more evident on younger leaves.

The most common cause of these symptoms is *Cucumber mosaic virus* (CMV). This virus occurs throughout the world and Adenium is one of hundreds of host plants of the virus. The host range of CMV is one of the largest of any plant virus and includes vegetables, ornamental, grain and weed species.

The virus is spread by sap-sucking aphids. Many different aphid species can transmit the virus and can do so very quickly. Aphids only need to feed on an infected plant for

less than a minute to acquire virus and can then spread the virus immediately to another in the same short feeding time.

Aphids retain the virus for only a few hours unless they feed on another infected plant.

The virus can also be spread by propagation, for example by grafting or establishing cuttings from infected plants. Some spread is also likely to occur when handling and trimming infected plants and then handling healthy plants.

CMV is distinct from *Cucumber green mottle mosaic virus* (CGMMV) which was found in watermelon and several other cucurbit species in the NT and Queensland in 2014. CGMMV is very easily spread by contact, has a host range largely confined to the cucurbit family and does not infect Adenium.

Adenium is also a host of several other viruses and symptoms of these can be similar to those produced by CMV. Testing may be required to determine the specific virus present in plants

Control of CMV in Adenium very largely depends on preventing infection as diseased plants cannot be cured.

- » Plants with disease symptoms should not be used to produce new stock.
- » Healthy plants should be segregated from plants with symptoms.
- » If working with diseased plants wash hand thoroughly with soap and water before moving to other stock or wear disposable gloves.
- » Dispose of infected plants and plant parts by placing in refuse bin, incineration or other method that removes the material from the nursery.
- » Tools can be cleaned in a 10% standard bleach solution (1% by volume) then thoroughly rinsed as the bleach is corrosive. Contaminated blades etc need to be in contact with the bleach solution for several minutes if the cleaning is to be effective.



Symptoms of Adenium infected with CMV.

*This factsheet was written by Denis Persley (Queensland Department of Agriculture and Fisheries, Ecosciences Precinct, GPO Box 267, Brisbane QLD 4001). It has been produced as part of the Hort Innovation, Nursery Levy and Queensland Government funded project 'Resourcing, supporting, and assessing biosecurity in nursery production (NY20000)' in 2021. All photos by DAF.*