

# Fighting Off Viruses

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Indoor plants don't contract viral diseases frequently, but when they do, recognizing the symptoms will help you put a stop to them. In particular, Dasheen mosaic virus (DMV) is the most common viral disease to appear indoors. Other viruses, such as Cucumber mosaic virus (CMV) and the tospoviruses (TSWV and INSV), are less common, but they sometimes occur. This guide will help you identify the signs of and treatments for DMV, CMV, and the tospoviruses in indoor plants.

## Dasheen Mosaic Virus of Aroids

Since 1970 this disease has been reported on aroids from all over the world. The most commonly infected aroid is *Dieffenbachia*, exhibiting ring spots, mosaic and leaf distortion. Severe stunting of certain cultivars ("Perfection") can even occur. But symptoms caused by DMV vary according to the host and are not always so obvious. Symptoms may not be present on infected foliage plants or on all plant leaves. For example, *Caladium*, *Colocasia* (taro) and *Xanthosoma* show a feathery mosaic pattern, but many leaves appear healthy. In addition, *Aglaonema* and *Spathiphyllum* develop inconspicuous mosaic symptoms, which are difficult to see.

### Reported hosts of Dasheen Mosaic Virus (DMV)

Genus	Common name
<i>Aglaonema</i>	-----
<i>Alocasia</i>	Elephant's ear plant
<i>Amorphophallus</i>	Devil's Tongue
<i>Anthurium</i>	Tailflower
<i>Anthurium</i>	Jack in the Pulpit
<i>Caladium</i>	-----
<i>Colocasia</i>	Taro
<i>Cryptocoryne</i>	Water trumpet
<i>Dieffenbachia</i>	Dumb cane
<i>Philodendron</i>	-----
<i>Richardia</i>	-----
<i>Spathiphyllum</i>	Spathe flower
<i>Xanthosoma</i>	Cocoyam
<i>Zantedeschia</i>	Calla lily

## Cucumber Mosaic Virus

First reported in 1979, CMV has been identified on several foliage plants and most commonly causes a ring spot on *Maranta leuconeura*. Symptoms on other plants include small, yellow areas on leaves and severe distortion and

stunting of immature leaves. In particular, on *Calathea* spp., symptoms of CMV are less severe, with mild mosaic and etching the only evidence of infection. The most common cause of infection is aphids, but the virus is also present in some stock plants, which continue to be used for propagation. Destruction of infected plants is recommended for disease control.

### **Peperomia Ring Spot Disease**

Peperomia ring spot disease of green *Peperomia obtusifolia* (baby rubber tree) was described from Florida in 1956. Concentric ring spots and distortion, including cupping, curling, and twisting of young leaves, occurs on infected plants. Ring spots are usually chlorotic with sunken areas. Severely affected plants can be stunted. Unfortunately, little else is known concerning this unusual disease and its control.

### **Tospoviruses**

There are few plants that aren't hosts of tospoviruses - namely: rose, geranium, and poinsettia. The commonly infected foliage plants include African violet, *Aglaonema*, *Aphelandra*, Bird's nest fern, *Cordyline*, *Dracaena*, *Epsicia*, *Hoya*, Lipstick vine, *Maranta*, *Peperomia*, Swedish ivy, and *Syngonium*. Mainly, the virus spreads in greenhouses with weeds inside and surrounding the production area. The virus can infect a huge range of both cultivated and weed plants. Thrips feeding on weeds easily move the virus into the crop. When you receive a shipment, inspect new plants immediately. Keep in mind, though, that symptoms are hard to categorize because they are different for nearly every crop produced. In general, look for white, yellow or tan ring spots, distortion, black patches or spots that are not always dead, stunting, mottling and crinkling, to name a few. Also, sunken bands of wavy black or tan markings are common on some crops. To confirm your diagnosis, you can send samples to Agdia in Elkhart, Ill., for testing directly, or you can purchase a kit to do your own test. Then, always throw away all plants with tospoviruses immediately.

Unfortunately, there are no chemical cures for viral infections of plants. Control of most viruses consists of getting rid of the insect vectors like aphids and thrips and the nearby weeds that attract them. If you do have infected plants throw them away and make sure stock plants are not infected.