

Diseases of African Violets

by Joyce Stork

While there are many possible diseases of African violets, there are only a few which may commonly plague home growers. Managing those will greatly enhance the pleasure of growing.

Most common diseases

Botrytis Blight

Fungus disease that is very common in greenhouse crops.

B. cinerea is species name.

May cause gray fuzzy sporulation (e.g. chrysanthemum) on plant or flower tissue.

In violets, it often attacks flowers which is called Botrytis Blossom Blight.

Flowers will have a gray or color-less appearance and center crown growth will be stunted.

May attack cuts and lesions in plant tissue or can colonize on healthy tissue.

Management

Avoid high humidity (sporulation occurs only in high humidity), maintaining a level of 60% or below.

Avoid short periods of high humidity (such as when temperatures cool dramatically).

Once present, use fungicide on healthy plants and destroy affected plants.

Erwinia

More commonly called bacterial soft rot. This is a bacteria disease.

Many species, but violets are susceptible to *E. carotovora* and *E. chrysanthemi*.

Early symptoms include darkening of veins in leaf.

Mid-disease symptoms include darkened water-soaked patches on leaves and wilting, rotting stems.

Late symptoms include the collapse of entire plant.

Management

Avoid high humidity.

Maintain temperatures below 80 degrees Fahrenheit.

Keep tools clean (disease spreads very quickly when tissue is wounded such as in leaf propagation.)

Nitrogen fertilizer may improve resistance.

Use copper-based bactericide such as Phyton 27 on healthy plants and destroy affected plants.

Do not reuse soil from contaminated plants.

Powdery Mildew

Fungus disease is parasitic and needs a living plant host to complete its life cycle (it does not grow on dirt).

There are several genera including *Erysiphe*, *Leveillula*, *Microsphaera*, *Sphaerotheca*, *Uncinula*, and *Oidium* (the one most commonly associated with violets).

It forms a network of hyphae (the white powder) over the plant surface which then penetrates epidermal (top) cells. Early treatment can stop the penetration of the mildew.

Symptoms include powdery white spots on foliage, flowers, stems, calyx, or pedicel which, in most severe form, cause tissue to become dry and die.

Some violet hybrids will be resistant (several Melodie and Ballet hybrids have been identified this way which may be simply because these were tested).

Management

Maintain humidity below 60%

Air must be kept moving to discourage growth.

Scout for problems during seasons when humidity or lack of air movement is favorable for growth.

Use proper fungicide at first appearance.

Phytophthora, Pythium, and Rhizoctona root and crown rots

All three fungal diseases are commonly associated with rot in African violets.

Severity of the diseases is enhanced by the use of non-organic or soil less potting mixes (which lack microorganisms that attack these spores).

All three may be controlled by fungicides (specific to the fungal disease in question) and should be used if multiple cases are diagnosed in a short period of time.

Rhizoctona

Most commonly associated with propagation and sometimes described as damping off.

May also cause ends of leaf stems and flower stems to blacken and separate from the plant.

Violet growing environment is often perfect conditions for the growth of this fungus.

Sanitation is best protection since it usually enters the plant area via contaminated tools, containers, potting medium, or infected plants.

Never reuse potting medium.

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Sanitize tools and containers before reusing.

Dispose and destroy affected plants.

Pythium (several species)

Probably the most common plant pathogen associated with rot worldwide.

Typically results in wilting of above-ground portion of plant while roots have lesions and/or are decayed.

Cortex (outside skin) of the roots may be easily stripped away from the center vascular part of the roots.

Advances up the plant system, beginning in the roots, into the main stalk, and finally onto the stems (at the worst stage).

Fungus gnat larvae and shore flies may contribute to disease spread.

Sporangia produces a zoospore that is motile (can move) with flagella that propel the spore in water.

It isn't vigorous in soil but survives there in a dormant state until conditions of significant soil saturation occur (allowing spore to germinate).

Spore germination can occur within 90 minutes.

Very efficient at attacking a new root growth.

Sanitation of growing medium is important but method of watering is critical to preventing problems.

Sanitize used pots and, when rot is present, potting mixes should be heated to 180 degrees Fahrenheit for 30 minutes to eliminate the pathogen.

Properly fertilized plants are more resistant to disease.

Phytophthora parasitica (plus several other species and variants)

Also worldwide and may be the most common root rot disease in African violets.

Symptoms are very similar to *Pythium* but also may have a black lesion at the crown when disease is fully developed.

Often travels inside the main stalk causing a discolored or corky center in pith of the stalk beginning just above the root.

Similar to *pythium* zoospores that are motile (can move) with flagella in water.

Grows especially fast at temperatures above 80 degrees Fahrenheit and generally depends on water or contaminated potting mix to spread.

Leaves in contact with growing medium may develop water-soaked lesions from same disease.

Sanitation procedures for *Pythium* apply here too.

Management

Pythium and *Phytophthora spp* can be eliminated by cutting away all diseased tissue and repotting if done promptly before disease reaches crown of violet.

Tools must be kept clean using bleach or disinfectant solutions.

If disease is present, isolation using plastic bags, hoods, or containers is recommended to prevent disease spread.

Watering is always critical factor in the rot diseases. When water saturation is controlled, the disease will remain dormant!

Good source for more information

Compendium of Flowering Potted Plant Diseases, Margery L. Dauthrey, Robert L. Wick, Joseph L. Peterson, APS Press, 1995.

(Available from Amazon.com in both used and new form).