African Violet Diseases & Insect Pests

African violet diseases are easily the most popular flowering houseplants in America. Their popularity arises from the fact that they are easy to grow and can bloom for 10 to 12 months of the year. They commonly have disease and pest problems, but most of these can be avoided by following the recommended cultural practices to keep plants healthy as described in HGIC 1550, *African Violet*.

**Diseases**

**Crown & Root Rot:** One of the most serious fungal problems of African violet is usually first noticed when the crown and roots of the plant turn soft and mushy. The older leaves droop, and the younger leaves in the center of the plant appear stunted, turn black and die. The fungi *Pythium* species and *Phytophthora* species can cause this problem, especially when plants are watered excessively, have poor drainage, or are planted too deeply. Any of these conditions can contribute to rotting of the crown and roots.

*Prevention & Treatment:* Prevent disease by always using sterilized potting soil mixes and clean containers when planting. Do not plant African violets too deep. Discard severely affected plants.

**Botrytis Blight:** Botrytis blight is caused by the fungus *Botrytis cinerea* and often first appears as small water-soaked lesions on the underside of the leaf. Leaves, stems or flowers appear blighted and turn dark brown to gray, often with a fuzzy coating on the surface.

*Prevention & Treatment:* Collect and discard all dead and dying plant material. Provide better air circulation, and avoid getting the flowers and foliage wet. Botrytis often follows mite injury, so controlling this pest aids in controlling this disease.

**Insects & Related Pests**

**Cyclamen Mites:** Mites are not insects but are more closely related to spiders. Cyclamen mites (*Steneotarsonemus pallidus*) are one of the most serious pests of African violets. They are extremely small (approximately 1/100 inch long) and cannot be seen with the naked eye. Typically, damage to plants is the first indication of their presence. They feed on new growth (i.e. leaves in the center of the plant). Symptoms may include severe stunting of leaves in the center of the plant, sometimes with leaf curling. New leaves are often very hairy, making them appear grayish. Flower buds may also be stunted and misshapen or even fail to open.

Cyclamen mites develop most rapidly with high humidity (80 to 90 percent) and a temperature of 60.8 °F. To avoid light, they favor the plant crown or leaf folds located in the area where the petiole (stalk that attaches the leaf to the stem) joins the stem. As such, damage is usually seen there first. Mites feed by sucking sap from the plant. During feeding, they inject a toxic chemical that disrupts normal growth patterns. With heavy infestations, leaf and flower buds may die. If ignored, the entire plant or just the center of the plant may die. Even after infestations are controlled, some symptoms will remain. A return to a normal appearance requires time and a gradual pruning of distorted leaves.

*Prevention & Control:* Space plants so that they do not touch to prevent the spread of cyclamen mites. Also, be careful not to touch infested plants before working with non-infested plants. Isolate infested plants. Badly infested plants should be discarded. Pots of discarded plants should not be reused until they have been soaked for 30 minutes in a solution of 1 part household bleach to 9 parts water.
For valuable plants, spray with a miticide that is labeled for use on house plants. Take the plant outside during mild temperatures and spray with an insecticidal soap, or products containing sulfur or tau-fluvalinate. Two or three sprays at three day intervals may be required for mite control. See Table 1 for examples of brands and products. Follow label directions for use and safety of all products.

**Mealybugs:** Several kinds of mealybugs are pests on African violets. They include the citrus mealybug (*Planococcus citri*) and the Comstock mealybug (*Pseudococcus comstocki*). Mealybugs are about ¼ inch in length. They have soft bodies and are covered with a white waxy material that makes them look cottony. They are found on leaves, stems and in leaf-crotches. They feed by sucking plant sap. Their feeding causes stunted and distorted leaves. Heavy infestation can cause leaf and plant death. As they feed, they excrete honeydew (a sugary material) that can coat the leaves, making them sticky.

**Prevention & Control:** Avoid bringing these pests into the house by inspecting a new plant carefully, including the bottom of the pot, for mealybug eggs. Light infestations of mealybugs can be controlled by removing them with a cotton swab dipped in rubbing (isopropyl) alcohol. Repeat as needed.

Heavy infestations are more difficult to control. The waxy material that covers mealybugs protects the adults from insecticides. The immature nymphs are susceptible, however. House plant insect sprays, such as insecticidal soap or pyrethrins are the least toxic insecticides, but sprays with acetamiprid, cyfluthrin, imidacloprid or permethrin will control mealybugs. Take the plant outside during mild temperatures to spray. Two or three sprays at three day intervals may be required. Alternatively, soil-applied insecticide granules or plant spikes containing imidacloprid will also control mealybugs. See Table 1 for examples of brands and products containing these active ingredients. Follow label directions for use and safety of all pesticides.

### Other Problems

**Failure to Flower:** African violet flower buds may fail to open, turn brown and fall off. Unfavorable environmental conditions such as low temperatures, poor soil aeration, wet soil or excessively dry air contribute to flower failure. Blossoms will drop if there is the slightest presence of cooking gas.

**Petiole Rot:** The symptom of petiole rot is a rust-colored spot that appears where the stem of the leaf touches the pot. This is not a disease but is caused when fertilizer salts accumulate on the rim of the pot and the soil surface. Avoid over-fertilization of plants, and be sure to use a salt-free source for watering, such as, rainwater. Tape on the rim of the pot will prevent this problem. Leach out the remaining salts in the soil, by flushing the container with plenty of fresh water.

**Water Spots:** Yellow or white ring and line patterns on African violet leaves can be caused by contact with cold water. Keep the leaves dry when watering to avoid this problem.

**Table 1. Pesticides to Control Insect Pests & Mites on African Violets.**

<table>
<thead>
<tr>
<th>Pesticide Active Ingredient</th>
<th>Examples of Brands &amp; Products</th>
<th>% Active Ingredients</th>
<th>Pests Controlled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insecticidal Soap</td>
<td>Bayer Advanced Natria Insecticidal Soap RTU</td>
<td>1% potassium salts of fatty acids</td>
<td>Mites, mealybugs, aphids, whiteflies</td>
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<tr>
<td></td>
<td>Bonide Insecticidal Soap RTU</td>
<td></td>
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<tr>
<td></td>
<td>Concern Rose &amp; Flower Insect Killer RTU</td>
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<td></td>
<td>Espoma Earth-tone Insecticidal Soap RTU</td>
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<td></td>
<td>Natural Guard Insecticidal Soap RTU</td>
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<td></td>
<td>Safer Brand Insect Killing Soap RTU</td>
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<td></td>
<td>Garden Safe Insecticidal Soap RTU</td>
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<tr>
<td></td>
<td>Whitney Farms Insecticidal Soap RTU</td>
<td></td>
<td></td>
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</tbody>
</table>
| Neem Oil | Bayer Advanced Natria Neem oil RTU  
Bonide Rose Rx 3-in-1 RTU  
Bonide Neem Oil RTU  
Concern Garden Defense Multi-Purpose Spray RTU  
Natural Guard Neem RTU  
Monterey Neem Oil RTU  
Garden Safe Fungicide 3 RTU | 0.9% Hydrophobic extracts of Neem Oil | Mealybugs, aphids, whiteflies |
|---------|--------------------------------------------------|-----------------------------|-----------------------------|
|         | Bonide Bon-Neem II RTU  
Ferti-lome Triple Action Plus RTU | 0.9% Neem Oil  
0.02% Pyrethrins  
0.20% Pipernyl butoxide | Mealybugs, aphids, whiteflies |
| Pyrethrins & Sulfur | Bayer Advanced Insect, Disease & Mite Control RTU  
Espoma Earth-tone 3-in-1 Disease Control – Kills Fungus, Insects & Mites RTU  
Bonide Eight Insect Control Garden & Home RTU | 0.01% Pyrethrins  
0.20% Sulfur | Mites, mealybugs, aphids, whiteflies |
| Cottonseed Oil  
Clove Oil  
Garlic oil | Bonide Mite-X RTU | Cottonseed Oil 0.40%  
Clove Oil 0.20%  
Garlic Oil 0.10% | Mites, aphids, thrips |
| **Bacillus subtilis** strain QST 713 | Bayer Advanced Serenade Garden Disease Control RTU | **Bacillus subtilis** 0.074% | Leaf and flower diseases |
| **Contact & Systemic Insecticides** | | | |
| Acetamiprid | Ortho Rose & Flower Insect Killer RTU | 0.006% Acetamiprid | Mealybugs, aphids, whiteflies |
| Permethrin | Spectracide Immunox 3-in-1 Insect & Disease Control & Fertilizer for Gardens RTU | 0.02% Permethrin  
0.012% Myclobutanil  
0.2-0.2-0.2 fertilizer | Mealybugs, aphids, whiteflies |
| Imidacloprid | Bayer Systemic Houseplant Insect Control Granules | 0.22% Imidacloprid | Mealybugs, aphids, whiteflies |
| | Bayer Advanced 2-in-1 Insect Control Plus Fertilizer Plant Spikes | 2.5% Imidacloprid  
8-11-5 fertilizer | Mealybugs, aphids, whiteflies |
| | Bayer Advanced Dual Action Rose & Flower Insect Killer RTU | 0.0015% Imidacloprid  
0.012% Cyfluthrin | Mealybugs, aphids, whiteflies |
| | Bayer Advanced 3-in-1 Insect, Disease & Mite Control RTU | 0.012% Imidacloprid  
0.014% Tau-Fluvalinate  
0.015% Tebuconazole | Mealybugs, aphids, whiteflies, mites |

RTU = Ready to spray (a pre-mixed spray bottle)  
Note: Spraying of houseplants is most safely done outdoors during mild temperatures. Once plants are dry, they may be brought back indoors. Granular products are sprinkled on the soil surface and watered in.


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