

Contest Entry —

Before You Spray...

Try Integrated Pest Management

By Dr. Stephanie Suesan Smith Dallas, Texas

Integrated pest management (IPM) is the art of using the least toxic alternative to prevent and manage pests and diseases. Sometimes, that means spraying an African violet with a pesticide. Often, it involves nipping the problem in the bud before you must spray. In fact, if you apply IPM principles to your African violet care, you will have better control than you would get just using pesticides.

The three pillars of IPM are cultural controls, biological controls and chemical controls. Each of these pillars plays a part in protecting your violets.

Cultural Controls

Cultural controls are the easiest type of control. Here are cultural control steps that will improve an African violet's life and appearance:

- Water from the bottom of the violet. Water droplets on the leaves can cause burned spots. Many nice containers come with a wick or other bottom-watering system.
- Trim and remove dead blooms.
- Trim and remove dead or diseased tissue.
- Quarantine all new plants for 90 days to make sure they are not carrying pests or diseases into your house.
- Use sterile soil or soilless potting medium when planting or repotting your violets.
- Soak all soiled pots in a 10% solution of bleach and water for 30 minutes to sterilize them before reuse.
- Have a fan running in your violet room to keep the air circulating.
- If you spot a disease or pest on your violet, remove it to quarantine to prevent the problem from spreading.
- When you repot an African violet, discard the old soil, roots, blossoms and leaves in a closed plastic bag. For a drastic restart of a plant, wash the crown

in soapy water or a weak bleach solution, blot the leaves and center dry, and plant the crown in fresh soil. Place in an enclosure, out of direct sunlight, while the plant develops new roots.

Putting cultural controls in place helps prevent a problem you must address later.

The three pillars
of IPM are cultural
controls, biological
controls and chemical
controls.

Biological Controls

Most people are aware that you can buy predators such as lacewings, lady beetle eggs and other pest-eating organisms to control the pests in your garden. It is possible to buy predators and use them indoors as well. Biological controls work well for the person who has a room full of African violets. Biological controls do not produce immediate results; you must be able to tolerate a low-level pest presence. If you have a heavy pest load and biological controls have not helped, you should consider chemical control. If you cannot tolerate any pests on your prized show plants, it is best to skip the biological controls and move on to chemical controls.

Chemical Controls

Think about the level of pest control you need. Can you tolerate one or two pests per plant, or is any pest damage too much to take? Even if you decide

you can tolerate one or two pests, are they regularly surging out of control? In that case, you will have to use a chemical control.

IPM chemical controls are all about using the least amount of the safest pesticide to eliminate the pest. First, you must identify the pest. Then pick through the controls for that pest until you find the safest product that will work on your pest.

Never resort to spraying everything that moves. Quarantine the affected plants and treat them — while leaving the other plants untreated. That way, the pest cannot spread, and you will not build up pesticide-resistant pests. Pesticide resistance happens when the pest lays eggs in the presence of a pesticide. Most of the eggs die, but some live. Those pests that survive are immune to that pesticide. They might be quite vulnerable to other pesticides. For this reason, you should use different pesticides in rotation.

Before using a given pesticide, read and understand the label. The label is the law. Using a pesticide not scheduled for African violets can kill the plants. Be sure that you stay away from the sprayed violets for the prescribed rest period. Keep children and pets away, too.

Even organic products such as Neem oil are considered pesticides by the agents who enforce pesticide regulations. People are tempted to believe that these are not dangerous because they are organic. This is not always the case. Because of this, you must follow the law when using them.

Want to know what to spray? Because pesticides come and go, I cannot recommend a specific line of treatment. However, contact your county extension agent for options. Once a pest is wiped out, fall back on cultural and biological controls to keep it away.

In summary, IPM is using the least toxic alternative to eliminate pests on your African violets. This keeps you, members of your household, and your violets safe.

Tips and Techniques: Leaf Problems

African violet leaves add to the beauty of the plants we love and they also are important to health. Here are a few tips for problem-solving issues with leaves:

- If leaves at the base of the plant are going soft or rotting, the problem most likely is soil that is too wet. It might be too wet because of overwatering, the watering method you are using or the soil mix. Be sure to follow advice about soil mix based on watering method, such as 50 percent or more perlite in soil mix of plants that are wick watered. When purchasing or making African violet mix, look for or ask about how the mix works for various watering methods. It also can help to adjust watering based on humidity and other environmental conditions.

- If young leaves in an African violet are white, you probably have a variegated variety. The variegation can vary even more based on temperature. Specifically, many variegated leaves are whiter when weather is cool and greener when the temperature around them is warm.

And remember, the green in African violet leaves (or any plant's foliage) contributes to chlorophyll and the energy the plants need to bloom. So, even if you love the color of mostly white leaves, too much light variegation affects plant energy and flowering. It can be challenging to learn how to control the variegation, but there are several methods you can try. See this helpful online answer on the AVSA website (in FAQs).