

## The Water Dilemma

*To water or not to water... that is the question*

Many questions arise when it comes to the best practices of watering. There is no hard and fast rule. Every grower has a personal preference. Yet, we still question each other about how much water, how often, what method, what temperature, whether local tap water is okay – and the questions go on.

Before I got serious about growing African violets, watering seemed so easy. I watered once per week on Sunday mornings. I used tap water and added a liquid fertilizer, if I remembered. The plants were top watered and seemed happy enough. You may ask, how did I know that the plants were happy? Well, they bloomed! And yes, there were some marks and culture changes that I didn't understand, but the plants and I were content. That's when a little extra knowledge can become a dangerous thing.

Once I learned more about how to "successfully" grow African violets, I discovered that there were several choices in the how to get water to your plants. I'm sure many of you reading this article have tried one or even all of these methods. A lot depends upon how many plants you care for and how much time you have to spend on routine watering. Instead of extolling the values of each technique, let me briefly explain when I think these methods work effectively and move on to understanding the impact that water, and the lack thereof, has on the culture of your plants.

### Watering Basics: A Primer

As with any approach you take in growing plants, you must make sure that it works well in **your** growing environment. Each method has its pros and cons. However, watering is all about getting to know your plants. One simple rule of thumb seems so obvious. When in doubt, pick up the pot. Feeling how light or heavy the plant feels can give you a clue as to how often water may be needed. Getting a feel for a well-watered plant, versus one that needs a drink, helps you keep track of how quickly water is being used.

**Top Watering** – a simple method for those of us who don't believe the old wives tale that African violets shouldn't be watered this way. Top watering is best performed if it can be done over a sink or tub. That way, the excess water runs through the pot and doesn't remain in the saucer. Unfortunately, most of us don't have a sink at our disposal each time we



water. It's more than likely that excess water will collect in the saucers. Just remember to go back and empty any unused water after an hour, because African violets don't like wet feet. Also, dab up any water drops that may have spilled on the foliage or in the crown. By doing so, you will prevent marks and spots developing on the foliage later.

**Bottom Watering** – an excellent method to allow the plant to take up the water it needs. The drawback here is the fact that you may not get enough water to the root system. Much depends on the relationship of the saucer to the pot. If it's a tight fit, there's not much space for water. If it's too large, there's often excess water left behind. When using this method, it's best to monitor how much water is being absorbed each time you water. If the pot feels too light after its initial drink, try adding a bit more water to the saucer. Again, remember to remove excess water that the plant hasn't used after one hour.

**Wick Watering** – this is a method where a little preparation goes a long way. Choosing the material of the wick is essential. Some materials take up more water than others. I've had the most success with thin strips of pantyhose. I find that once the wick is in place, all it takes is some water from the top to help begin the capillary action. Many folks are creative about the water reservoirs – I've seen everything from clear plastic containers with a hole cut in the lid to cut-off soda bottles. Keeping the water reservoirs filled ensures your plants can draw water as needed. Watch out for a couple of changes when wick watering. If the plant seems to take up significantly less water than normal, make sure the wick is operating properly. A wick that dries out may need to be restarted. Pour water from the top until the wick drips water, and it should be good to go again. If the plant remains too wet, consider lightening up the potting soil or changing the wicking material.

**Mat Watering** – this approach offers one of the fastest means of getting water to multiple plants at the same time. When I first attempted this method, I

thought it would be much quicker to have a tray of plants taken care of in one watering action. I found out there's no free lunch. Good contact with the mat is critical. To achieve good contact, the bottom of the pot must rest flat on the surface of the mat. Some people also wick their plants to be sure. The mat should remain consistently moist to ensure capillary action. That means that when you water, the mat must be consistently wet – but not submerged in water. Keeping the mats clean is important too. Remove dirt, fertilizer salts, and algae by washing the mats and trays on a periodic basis.

**Self Watering Pots** – a method that blends the best of bottom watering with individual plant attention. Those of you that are familiar with my articles know that I am partial to Oyama pots. I found that the performance of my plants improved with the more consistent method of accessing water. Today there are many styles of self watering pots. Experiment with a few to see if this is a choice for you. However, this method is not for everybody. While self-watering pots offer many positive results, all problems with over and under watering do not magically disappear. The potting mix used does make the difference. Just like wick watering, you must prepare a lighter soil mix so the plant takes up the water it needs without sitting in a soggy pot. Also, plants can dry out if not monitored. In a self watering pot, you typically don't see how much water remains in the reservoir because the outer pot is opaque.

### *The Error of Our Ways*

We control many aspects of our growing environments. When it comes to water, we have to work a bit smarter to gain more control. Here are a few things to monitor and gain a better understanding to assess the impact on your plants.

- **Water Temperature.**

The temperature of the water used can affect the culture of the plant. African violets don't like cold water. You may see their reaction in the foliage later. Use water that feels slightly warm to the touch or has been standing at room temperature. During colder months, I find water temperature more of a challenge. I typically leave my water in containers overnight before use. At room temperature, the water feels cold. Instead, I have made a bit of room on my growing shelves to enable the water to take advantage of the warmth generated by the lights. My plants seem to enjoy the change.

- **Water Quality.**

Most of us prefer to use local tap water as our water source. Every community has very different water quality. It's an interesting adventure to try to under-

stand what your water contains. Today, there are fluorides and chlorine in much of our country's water supply. However, each part of the country has unique amounts of other minerals and compounds. Check your local water authority to learn more about your water quality. African violets like a soft water that has no chlorine present. To eliminate chlorine content, let water stand overnight in a container to allow gases to evaporate. As for some of the other minerals that may be lurking, monitor your plant behavior before taking action. There are alternatives for improving water quality including the use of bottled spring water or specific systems to treat the water. Before heading in this direction, make sure you match your water situation to the plants' needs. A local Agricultural Extension service may be able to assist in identifying a workable solution.

- **Water pH.**

Are you aware of your water's pH? Most of us have never measured it. Yet, African violets require a neutral pH around 7.0. Our local African violet club decided to try to figure this out for ourselves. We each brought a sample of fertilized water and tested it by using a small kit available (typically found at the local garden center or pet store). Wow, what we found! We all live in close proximity, yet the results were all over the spectrum – some too alkaline and many too acidic. What we learned was that our local water is directly affected by the amount of fertilizer we use. Measuring the unfertilized water as well as the fertilized solution enabled us to understand what we had to work with. Check out your water with the various fertilizers you use – it's a fascinating exercise. From there you can make any needed adjustments.

- **Fertilizer – a brief note.**

This is a topic that requires much more discussion. However, when adding fertilizer to water, be sure you consider the watering method. Wick watering and self watering methods provide much more access to water and fertilizer. Avoid over-fertilization by reducing the amount of fertilizer used. I often use 1/8 teaspoon of fertilizer per gallon of water for the self watering pots.

- **Symptoms of a Problem.**

The toughest problem to decipher is whether a plant is getting too much or too little water. A wilting plant can be a result of either. If the pot is heavy and the plant is drooping, there's an obvious diagnosis. If you are unsure, add water sparingly to determine how the plant responds. Plants that have been under-watered are experiencing a different stress. When most of us find a plant in that situation, we give it a healthy drink. However, the plant can't take up much water when it's in a drought condition.

## Humidity *The Secret Weapon*



ometimes it feels like there are way too many elements you have to control to grow happy, blooming African violets.

While it's true that there are many factors contributing to the health and beauty of the African violet, there is one important fundamental we have a tendency to overlook – humidity. No matter where you live, humidity is one of those thorny conditions. You either can't get enough or you have much too much.

### What's up with humidity?

Believe it or not, humidity in the air is just as important to African violets as moisture in the soil. While you won't see the impact of a lack of humidity as quickly as a plant crying for a drink of water, the right level of humidity promotes bloom and long term plant development. That's because African violets draw moisture from both the air and the soil.

Think about it. In their native Africa, environmental conditions offer African violets plenty of moisture to thrive in the wild. It's logical that the plants need moisture from the air to keep their thick foliage in tip-top condition. Fortunately, here in the home environment, our favorite plant is able to survive in a pretty wide range of humidity levels – from 40 to 70 percent. However, they seem to prefer levels closer to 60%. Funny, so do we humans.

Here's the rub. Every day plants lose water through their leaves – the process is called transpiration. This process speeds up when humidity levels are too low. Problems occur when the plant loses more moisture than the root system can deliver to the plant tissue. That's why controlling humidity can become the missing link to growing fabulous looking, heavy blooming plants.

### Raising or lowering the bar on humidity levels

Almost every grower experiences shifts in humidity levels. Most people in my neck of the woods have difficulty keeping humidity at a consistent level during the winter months. We experience a significant drop in moisture levels inside the home once we fire up our heating systems. On the flip side, many people located in warmer climates have the opposite situation during the summer months. They must deal with too much moisture in the air making both plants and people uncomfortable.



No matter what your condition, here are a few ideas to satisfy the need for the right level of humidity.

### Got too little?

**Group plants** – cluster plants in a growing area to create a bit of a microclimate. That doesn't mean crowd your plants. Good air circulation is critical to maintain at all times. While grouping will only create a slight increase in moisture level, nearby

plants can take advantage of the process of moisture being released into the air by their neighbors.

**Pebble trays** – a simple solution for a finite collection. Place plants on a tray containing stones or pebbles at the base. Fill the tray half way with water. Care must be taken to make sure plants never sit in water – that can create a set of different problems. The plants should sit well above the water line. The idea is to have the water evaporate into the air around the plants to increase humidity. Rinse the trays and pebbles periodically to avoid any salt build-up, or place the pots on saucers to avoid direct contact.

**Capillary matting** – line a tray with capillary matting or a thick, absorbent and washable material. Keep the mats moist without becoming soggy. Wash the mats periodically to avoid any salt, soil, or fertilizer build-up. You can also place the pots on saucers to avoid direct contact with the matting.

**Misting** – use a fine spray to add humidity to the growing area. This is the least effective, but most often practiced approach. Be careful to use warm water when misting. It is important that water does not build up on the foliage or in the crown of the plant. Remove any excess water that collects on the foliage and be especially watchful of moisture in the crown. Please make a distinction between spraying and misting – there is an important difference between the two.

**Humidifier** – a very effective approach that tackles a designated area. During the colder months, use a warm water system. If needed during warmer months, use a cool water system.

### Got too much?

**Dehumidifier** – this system is effective when water needs to be drawn out of the air in an effort to reduce humidity levels. In my basement growing area, a de-humidifier offers relief when summer temperatures heat up and humidity levels increase.

### **The humidity factor: signs to notice**

As you regularly monitor your plants' performance, recognize some of the effects humidity levels can have on your plants.

**Brown Tips on Foliage** – I was wondering why some of my plants had developed brown tips on the younger leaves during the cooler months. After eliminating a number of potential conditions that could have caused the problem, I realized that a lack of humidity was the culprit. New growth consistently produced damaged foliage until moisture levels changed.

**Bud Dropping** – this condition is probably the most frustrating symptom of the lack of humidity. Fully formed or emerging buds turn brown and drop before opening when humidity levels are low. If you're like me, I look forward to watching the plants put on their show.

**Dull foliage** – when your evaluation has eliminated all the other factors of lackluster foliage color, consider lack of humidity as a contributor.

**Powdery mildew** – this white powdery disease enjoys changes in temperature and humid conditions. In my growing area, I use plastic plant stand covers to control winter temperatures. At times, the combination of added moisture, warmth and limited air circulation gives powdery mildew the environment to form. Managing the temperature change from lights-on to lights-off is the key to maintaining control.

### **Tricks of the trade**

I was comparing notes with a fellow New England African violet grower as we were preparing to get plants ready for

show. Some of her plants were covered with buds, but the blossoms weren't showing signs of opening. She searched for solutions and found one that I found germane. The advisor recommended increasing the level of humidity to move the buds along.

You probably want to know if this worked. Well, yes and no. By slightly warming up the growing environment and increasing the humidity level, she was able to get the blossoms to move a little faster. There just wasn't enough time for these stubborn plants to achieve full bloom. Now, here's the fine print warning. Significantly changing conditions, even temporarily, can backfire. Whenever you try to "move things along," be aware that your plant may react unexpectedly and not always the way you've envisioned.

However, the advice to increase humidity is well grounded. Giving plants the proper humidity level throughout the growing cycle ensures production of plenty of lovely blossoms.

### **Final note**

Establishing consistent growing conditions offers the most benefit to your African violets. Humidity is typically a condition we growers find troublesome to control. Yet, our plants are harbingers of indoor conditions. When they are happy, we are happy (or should that be the other way around?). Extreme levels of humidity – too much or too little – cause each of us to be less comfortable. Think of controlling indoor moisture levels as a way to improve the comfort zone for all. Your reward will be very happy plants, and people too.

***Grow smart. Grow well.***