

# **An Acid Trip for Your Plants?**

**By Lee Brownson**

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Are your potted plants just not growing as well as you know they should? It just may be water you are using. At the last General Meeting, there was a lively discussion about the pH level of the water typically used in the Phoenix area.

Most of us are using water that has a very high alkaline content. Adding this water to our plants is like giving them a growth hormone in reverse. Highly alkaline water will actually retard a plant's growth. Alkali will build up on your pot. As the alkalinity of a soil increases, it prevents the plant from utilizing the nutrients in the soil. If you add fertilizer to highly alkaline soil, it will do absolutely no good. In fact, if the soil pH is high enough, it will prevent the plant's roots from absorbing any water at all!

What is the answer? Fortunately, the remedy is both simple and inexpensive (how many times does that happen?). Vinegar. That's right, plain old household vinegar. Vinegar is acidic – the opposite of alkaline. Using a slightly more acidic water will not only be absorbed more readily by the plants, will actually neutralize the alkalinity currently in the soil. Several of the most experienced growers in the CACSS testified to the benefits of vinegar. Growers like Scott McMahon, Steve and Julie Plath, Jim Elliott and Leo Martin all add vinegar when watering their plants. That is recommendation enough for me.

Elton Roberts, who has been writing articles about how to grow cacti for the Cactus and Succulent Society of America's bi-monthly "Cactus and Succulent Journal," recommends a water pH of about 6. The pH of my water directly out of the hose bib is 7.6. I can lower the pH by adding a very small amount of vinegar.

At the meeting, several people said that a good rule of thumb is to add one teaspoon of vinegar to one gallon of water. Elton suggests three teaspoons (one tablespoon) of white vinegar per five gallons. He believes it is better to err on the side of too little acid versus too much.

Here is Elton's suggestion: "If you have hard water try the one tablespoon of white vinegar to five gallons of water. Water your plants or a section of plants and see if they change for the better. This will only take seven to 10 days. If that gets your plants looking a lot better, continue to use the same amount of vinegar. Do not increase the amount of vinegar unless you have a pH meter and can determine the pH accurately. Try to keep your watering water at a pH of between 5.8 and 6.6. A pH of 6.0 is what I shoot for, as it seems to be what the plants like the best."

If you have many potted plants, you might use the hose siphon method to mix in the vinegar. Remember that the siphon dilutes the vinegar by a factor of 16. (Yes, Virginia,

you did need to learn algebra in high school.) That means that 16 tablespoons (48 teaspoons or one cup) of vinegar should be mixed with the five gallons of water.

If your plants don't look as good as you would like, give vinegar a try. If you follow the recommendation presented here, you can't hurt your plants. You might be startled at the results.