WATER, FERTILIZER AND LIGHT FOR PLUMERIAS

Many people visit my yard. There is usually one comment I regularly hear about Plumerias. The comments are always similar to this. “Gee, Plumeria are sure easy to care for, they grow good in small pots and you only need to water them about every 4-5 days and if you forget, well, they don’t die.” Then comes the question I always hear from people that visit my yard or look at the plants I bring to the *Plumeria Society of America* business meetings. “Your Plumerias look so good, and you have lots of flowers, I wish mine looked that good. What do you do to make your plants so nice?” As I begin to answer, I can see their eyes begin to glaze over, I can see they are thinking about how much work I have just described. I have decided to write this article to explain my way of growing Plumeria. I have over 250 Plumeria. The containers they are in run from 1 gallon to 30 gallons, new cutting to mature plants. In addition, only about 30 of the plants are named plants. I travel the world and have brought cuttings back from most of the world. When I bring the cuttings home, I know nothing about the growing personality of the cuttings, I have to learn as they grow.

It is important to remember that Plumerias are trees, not shrubs or bushes. In their natural environment the can grow several stories high and can have a trunk 1 or 2 or more feet in diameter. They are not really designed to grow in pots. Yet we put them in pots and expect them to flower. It is as if we were trying to grow big, red, juicy apples on an apple tree planted in a pot. We are lucky that Plumeria are robust and that they can actually flower in a pot.

Plumerias like any other plant are sensitive to light, water and fertilizer. Generally we tend to focus on the water and fertilizer part so I will discuss those first. Watering for most people means about every three days. If you want a strong flowering plant, that attitude is not good enough. Plants in pots are not able to develop a good deep root structure. Therefore, the plant must depend on the grower for proper soil moisture. Among my Plumeria, each plant needs a different water schedule depending on the size of the plant and the size of the pot in which it is planted and the type of plant in the pot. Naturally a large plant growing in a small pot needs more water and visa-versa. Also, the type of plant is important. My Singapore White always needs water it can never seem to get enough. I have a pink Plumeria of the same pot and plant size that needs watering only once a week. To complicate matters, we are all afraid of over watering because we know if we do over water, the leaves turn yellow and fall off. So we usually let the plant run too dry. My answer to the soil moisture problem is to use a moisture meter.

The moisture meter is a small electric meter mounted on a thin probe. The meter has a red, yellow and green section. Every day or, every other day if I know the plants growing pattern, I stick the meter in to each pot to check the moisture in the soil. I push it all the way in so I am checking about 6 inches down. If the meter does not move at all and stays in the red, I water the plant. If the meter indicates in the yellow or green area, it does not get watered. When I water, I soak the pot. I usually water at night so the plant can get the moisture it needs for the following day. I have also noticed that when I water a dry plant, the soil near the center of the pot does not get damp. It seems that the dry soil does not absorb the water as well as damp soil so, I water twice in a row. If I water a plant at night, then it gets watered again in the morning. By now you are beginning to get an idea of how I treat my plants. I have run a few informal tests to determine the effect of watering Plumeria with chlorinated city water. To run the test I watered several plants in my normal manner using water from my swimming pool. It did not make a noticeable difference, so I water with city water. Also, I use only the plastic pots. I have never had good luck keeping the soil moisture right in clay pots and besides, it is almost impossible to repot successfully from a clay pot because the plant roots have attached them selves to the porous pot material.

As you might expect, fertilizer is an important part of plant care. I believe that how you fertilize your Plumeria this year affects how your Plumeria grow and flower next year. I fertilize my plants with two different types of fertilizer. Now I know that everyone that reads this article has opinions about fertilizer, that's fine. This is what I do. At the beginning of each year when I take my plants out of the greenhouse I put about ¼ inch of manure on top of the soil of each pot. I do this so the plant will get its trace elements. Then after about 3 weeks I fertilize the plants with some time release fertilizer. I like something that is about 10-10-10. This allow the tree to always have some nitrogen available. That is all the fertilizer I use for the soil. The rest of the fertilization I accomplish using a foliar fertilizer. It is the most efficient way to fertilize. Here is why. My plants are in pots. When it is hot, I need to water the trees heavily, twice a day to keep the root ball wet. Watering that way leaches out, over time, most of the fertilizer added to the soil. So, I have found that foliar feeding is best. I use *Hasta Gro* by Medina. I use it according to directions and apply it at least once a week. I cover both sides of the leaves. It is best to do in the cool of the evening.

Now we get to the interesting part, light. In my travels I have noticed that a dormant Plumeria will have leaves and flowers on any part of the tree that is near a light. It does not have to be a strong light. I have seen leaves and flowers on part of dormant tree located near a 60 watt pole lamp. I believe light is an important factor in Plumeria flowering. So, this is what I do. When I plant cuttings I arrange so that they get light about 20 hours a day and I do that until the plant is well established. For a light source I use a work light on a pole.

Once a plant is established it gets included in my normal growing routine. During the long light summer months I do not use any additional lighting. As winter approaches I begin to move all my plants into the green house area in anticipation of the first freeze. The nights are getting cool and the sunlight is decreasing. About two weeks after I finally enclose my greenhouse because of freezing temperatures, I start providing artificial light so the total light on the plants is about 20 hours per day. I also add heat to the green house in an attempt to keep moderate night and day temperatures inside the greenhouse. The leaves fall off and the plants go dormant for about two weeks and then they begin to slowly put on new growth. This year I had flowers by mid January and now by the end of February I have several plants in bloom. But, you say, I don't have a green house. If I did not have a green house I would still use artificial light at the start of the growing cycle.

If you don't have a greenhouse, I suggest that when you take the plants out of storage and put in the back yard, you place them around one of those double headed work lights on a pole. Put the lights on a timer and try to give the plants about 20 hours a day of light. Keep this up for at least one month or until the plants have put on lots of new growth. I believe that will encourage more blooms.

Remember, Plumerias are trees that we are trying to grow in pots. Because we are forcing an artificial soil environment on the plant, truly healthy and blooming Plumeria require attention to detail regarding water, fertilizer and light. If you have had any interesting experiences in these areas of Plumeria growing, I would be interested in learning about your activities. You can contact me at 281-499-3468 or email me at: rick@plumeria.org

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