

## Lighting for Plants

**Bonus content from the November 2009 AFI magazine article "Illuminating Plant Lighting."**

Lights that are suitable for growing plants in your aquarium can be much different than many of the lights that are currently available on the market. You may have a light over your tank already and think it will work for growing the many plants you see at your local fish store. However, chances are, if you didn't do research on the light you purchased, you aren't getting adequate light for plant growth. For example, if you bought an all-in-one aquarium set, a light was probably included in the hood. These lights are great for looking at fish, since they improve the vividness of fish colors, but they do not emit the light waves needed for plants to carry out photosynthesis. Certain lights do certain duties, and you must know which light will help your plants grow before you go to the store.

Choosing lights for your planted tank depends on many factors, such as the species of plants you intend to keep, and your aquarium's water conditions, temperature, substrate, depth and bioload. You have to ask how many watts you'll need and what kind of lights you'll need. To calculate the wattage your tank will require, use the easy-to-remember rule of 2 to 4 watts per gallon. This rule works with standard-sized tanks, not long or high tanks. As far as what kind of light you'll need, you will need to read about the many light bulb choices for today's aquarist. The most common bulbs used for plant lighting are normal output fluorescent bulbs, but there are many others to choose from, such as T5 high output bulbs, compact fluorescents and many more.

Once you've chosen your lights, keep them on for 10 to 12 hours each day over tanks containing plants needing medium or bright light. Deeper tanks need brighter light because light intensity decreases with depth. With your first planted tank, keep it simple, and use a standard tank. Remember that leaving the lights on longer than 12 hours a day does not make up for inadequate lighting.

There are many choices out there, so make sure to do your research before investing in lights and plants. There are some great resources available, such as your local fish club, Aquatic-Gardeners.org, the FishChannel.com forums, Freshwater and Marine Aquarium's "The Planted Tank" column, or Aquarium Fish International's "The Aquabotanist" column. Don't be shy at your local fish store, either. Ask questions to make sure you get the right lights in your tank. You don't want to put a bunch of prized plant specimens under a small light made for fish viewing just because you didn't ask. It will prove to be a big waste of money and a disaster for your fish!

Want to read the full story? Pick up the November 2009 issue of Aquarium Fish International, or subscribe to get 12 months of articles just like this.