

Plant Care & Maintenance -

This is a summary of ideas and recommendations to keeping plants successfully. Further reading is still highly recommended to obtain a broader picture and detailed information to assist in understanding the reasons to how and why in maintaining aquatic plants.



Cabomba



Amazon

One of the biggest challenges in keeping aquariums is maintaining plants. Not just in keeping them alive, but to propagate them and tastefully arrange them in an aquarium without spending hours every week and spending large volumes of money. But to know what is required and maintaining those requirements are two steps, the latter, (maintaining the constant, best conditions for a variety of plants) is the most difficult.

Aquarium: The "length" of the aquarium will depend on both the room size and budget. The "width" (front to back) is critical - a minimum of 400 mm (~14"), to obtain some form of foreground / background differentiation and for practicality's sake, no more than 36 inches wide. Also for practicality, the "height" should be less than 36 inches, but above 18 inches.

Lighting: For fluorescent lights, Daylight, High Grade Triphosphor or similar tube that exhibits good colour rendition, one tube for every 6 - 10 inches of width depending on total depth (the deeper the tank, the more tubes.). For mercury vapour lamps, request a lamp with the best colour rendition and have one lamp for every 24 inches of tank length. The wattage will depend on the depth again. As a guide, use 80 watt lamps for less than 24 inch deep tanks and 125 watt lamps for tanks over 24 inches. Keep these lamps at least 40 cm above the aquarium at all times due to the amount of heat that they emit. For all plants, 10 - 12 hours of light is sufficient.



Filtration: A biological filter is not necessary in a heavily planted aquarium. An efficient mechanical filter would be required to remove visible waste and dirt, preventing excessive build-up of mud in the gravel. Water movement will facilitate the constant supply of nutrients to the leaves of the plants. Turning the water over once every hour is sufficient.

Heating: Maintain the temperature anywhere between 18 and 30 degrees Celsius for most plants.

Gravel: Use neutral or dark colour with average grain size of 3 mm. Make the gravel bed approximately 2 inches deep in the front and up to 5 inches in the back. Use a moderate number of rocks or wood to terrace the gravel. It is not necessary to put additives in the gravel, though some additives such as clay or tablet forms of aquarium plant fertilisers may be used in moderation.

Water Conditions: Water should be relatively soft; approximately 4 kH (80 ppm carbonate hardness), especially if Carbon Dioxide (CO₂) is being used. Nitrate (NO₃) should be kept below 10 ppm. Phosphates (PO₄) should also be kept below 2 ppm. Iron (Fe) should be maintained at 1.0 mg/l. In this system, the pH should not fluctuate outside the values of 6.5 to 7.5.

Test Kits: In order to maintain constant water quality the following tests should be carried out fortnightly; Nitrate (NO₃) - Phosphate (PO₄) - Iron (Fe) - Carbonate hardness (kH) If Carbon Dioxide is being used then adjust the flow to maintain the pH at approximately 6.5.

Following are recommendations for maintaining the water conditions:

Maintaining Hardness: If your water is too hard (10 kH or 180 ppm), use ion exchange resins (softening pillows) before adding water to the aquarium. For too soft water, add kH buffer tablets or powder.

Maintaining Nitrates: For high Nitrate levels, do more regular water changes, remove excess fish, and feed less food. Do not allow the nitrates to fall to 0 ppm, the plants still need regular quantities of nitrogen in their diet!

Maintaining Phosphates: If phosphate levels rise, do more regular water changes, cut down on food, especially tablet food.

Maintaining Iron: Daily additions of liquid aquarium plant fertilisers should maintain a constant level of soluble iron. Increase or decrease the daily dosage according to test results.

TROUBLE SHOOTING GUIDE:

Some plants don't grow while others are doing well: To begin with, avoid the difficult species. Some plants available in shops are bog plants, and do not grow in aquariums. Experiment with new species and purchase more of those that do well.

Fish are eating or digging up plants: Read up on your fish first! When seeking opinions, ask more than one person.

The leaves of new plants are going brown and rotting away: Remove these leaves and as long as the water quality is correct and other plants are doing well, the affected plant should re-grow.

Sick Fish? Do not use medications here! Remove affected fish and treat elsewhere.

Too many snails: Introduce a clown loach or two.