

## Basic Information on Aquatic Plants

Live plants are not only beautiful, lush additions to your aquarium, they have many practical benefits as well.

- Live plants aid in water purification by removing nitrates and distributing oxygen into the water
- Live plants provide shelter and hiding places for shy, weak, and baby fish
- Live plants help prevent excessive algae growth by competing for nutrients in the water
- Live plants serve as natural decoration and help to intensify the colors of aquarium fish

### Lighting

Proper lighting (intensity, duration, color spectrum) is the most important function to a plant tank.

Light intensity or brightness is the most critical value in a plant tank. The rule of thumb is 5 watts per gallon of water, but remember these points...

- Cloudy water reduces light
- Fluorescent light tubes lose much intensity in a short period of time. Bulbs should be changed every 6 to 8 months.
- Dirt reduces light - Keep your glass top, plastic bulb covers, and bulb clean.
- The formula should be increased on tanks with a height of more than 20 inches

### Duration

The photo period (duration of light) of a plant tank should be 10 to 12 hours per day. This is the time the plants need in order to build up CO<sub>2</sub> (Carbon Dioxide) needed for the next day.

### Spectrum

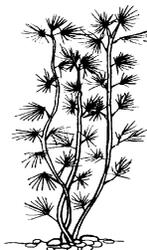
The color spectrum refers to the range of colors reflected by a particular fluorescent bulb. Plants absorb different colors with different results. The orange-red spectrum promotes upward growth. The violet-blue spectrum promotes compact bushy low growth (and algae). The yellow and green spectrum is usually reflected by green plants. Consequently, plants use very little of the yellow and green spectrum. Bulbs which are heavy in red, and to a lesser extent blue, are best. We recommend Flora-Glo, Aqua-Glo, and Power-Glo.

### Temperature

Most plants prefer cool water. A temperature between 76° – 78° is optimum.

### Substrate

The substrate, or gravel should be a fine to medium grade. A general rule of thumb is a pound of gravel per gallon of tank.



### Fertilizers

Live plants need additional nutrients besides those from fish and organics in the water. These nutrients can be supplied by the addition of various plant fertilizers. For this reason, we offer a fifty percent discount on any live plant when you purchase a plant fertilizer at the same time.

### Water Hardness & pH

Most plants found in aquariums flourish in water with a pH between 6.2 and 6.8. In harder, higher pH water, it is more difficult to deliver carbon (CO<sub>2</sub>) as a gas to plants. Without CO<sub>2</sub> plants will die.

### Filtration

Minimal water surface movement is a requirement. The reasons for this are simple. Plants produce enough CO<sub>2</sub> to meet their growth needs and too much surface movement will drive this gas from the water away from the plants. Therefore, airstones and large filters are not recommended in a well-planted tank. For smaller tanks, submersible filters are a good alternative to power filters.

### Plant Care

B&B Pet Stop has many species of plants including the rooted types, bunch types, and the floating types. When planting a "bunch" remove the rubberbands or lead weight surrounding the stems. Strip all of the leaves at the base of the stem. This will prevent the plants from rotting. Press the group of stems about an inch into the gravel or until the plants do not float to the water's surface. The rooted plants (Swordplant or Valisneria) should be planted with the crown of the plant slightly above the gravel. Once your plants are arranged to your satisfaction, place tableted fertilizer at the base of each plant. This will insure a good start.

B&B Pet Stop also offers "pre-potted" rooted plants. This can increase the plant's durability by 50 percent. These plants are grown in a special woolstone media which is impregnated with fertilizer and provides nutrients to the plant for up to six months. The pot is designed to contain the media and to reduce shock to the plants during transplanting. To plant these, just bury the pot so the top is just below the surface of the aquarium gravel. B&B Pet Stop recommends regular grooming such as stripping dead leaves from the stem and the removal of floating leaves and plant stalks from the water. Also, remove excess mulm and debris from the gravel during regular maintenance. Within a short period of time your plants may be propagated through cuttings, root division, or runners. Ask one of our salespeople about the propagation of your type of plant.

**Please Note:** The information in this handout is meant to provide basic information only. Please see a salesperson for more information.

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