

# Water Gardening

*Information adapted from  
www.urbanext.uiuc.edu/watergarden  
by Greg Stack*

Basically, a water garden is just a pool of water that is home to plants and possibly fish and other water creatures. They can consist of a fountain, half barrel, plastic tub or sunken liner that can hold water.

Site selection is first and most important. Most aquatic plants and fish need plenty of sun, so a site that gets 6-8 hours of direct sun is best. Choose a site that will not accumulate lots of debris from the rest of your landscape.

**Aquatic Plant Selection** Plants used in small aquatic gardens are grown in separate pots and then these pots are placed into the water-filled container. Heavy, clay garden soil is used as a potting media. After the plant is potted, top the soil with a 1/2 to 3/4 inch layer of pea gravel to help keep the soil in place. Don't use a commercial potting soil mix or any type of soil mix containing fertilizer. Fill the tub with water and set your plants in place. Some aquatics prefer to be placed at certain depths in the water.

Adjust the depth of your plants by placing bricks under the pot so the crown of the plant is at the preferred depth. About 50 - 60% of the water surface should be covered with plant material. Take note of the type of water used to fill

your container. City water supplies are commonly treated with chlorine. It is a good idea to let the tub sit for 24-48 hours before adding plants to allow the chlorine to evaporate. Many city water supplies are now using chloramine, a more stable form of chlorine. If this is the case, you might want to purchase a product to remove the chlorine. Don't use water from a water softener and don't add chemicals to the water.

**Plants for the Aquatic Garden** Aquatic gardens need a mix of plants to attain a balanced system. These plants can be a combination of marginals, submerged and floaters.

**Fish and Snails for Water Gardens** Pond creatures can be added to your water container for added interest and to help in maintaining the ecosystem balance. Several small snails are very helpful as they eat algae, fish waste, and decaying organic matter. Fish such as mollies, guppies, platys or gambusi are good choices. They do well in the variable water temperatures of a small patio pond plus they eat mosquitoes. Larger containers of 20 gallons or more can handle one to two goldfish.

**Placing Plants in the Pond** Hardy water lilies will grow well at water depths of 12-18 inches over the top of the pot. If the pond is in the shade (less than six hours of sun a day), then six inches of water is sufficient in order for the growing tip to receive enough light. Tropical water lilies prefer to grow at water depths of 12 inches but will tolerate 6-8 inches of

water. Lotus is usually grown with 4-6 inches of water over them while marginal water plants can be grown in soil that is constantly wet or with 2-4 inches of water over the top of them.

In order to conveniently adjust the water depth over the pots, bricks or inverted pots can be used as props under the plants to position them. As plants grow, the depth can be easily adjusted by adding or taking away supports.

**Fertilizing Aquatic Plants** Fertilizers contain minerals that are used by plants for growth and development. Also remember that overfertilization can lead to algae problems.

Generally, slow release tablets or granular fertilizers with an analysis similar to 10-12-8 are good. Monthly applications can be made up until about August. Tablet forms of fertilizer are the most convenient to use as they can be pushed into the soil. Marginal water plants can be fertilized at planting and once at midseason at about half the rate recommended for water lilies.

**Overwintering and Storing Aquatic Plants** There are several ways to store hardy water lilies and emergent aquatic plants. The plants must go dormant by keeping them in a cool location (50 degrees maximum). Also, they must not be allowed to dry out and, their roots must not be allowed to freeze.

In-ground ponds at least 24 inches deep

allow you to lower the dormant plants to the bottom for the winter; raise them slowly as water temperatures increase in the spring.

In shallow ponds and container aquatic gardens, plants will need to be brought in for the winter. Just after the first frost, lift the containers from the pond and leave the plants in the pot. Trim off all dead leaves and stems. Place the container in plastic bags to retain moisture and store in a cool basement or other area where the temperatures don't go above 50 degrees or below freezing. Check periodically to make sure that there is plenty of moisture in the bag. Maintain these conditions until spring.

Another way to overwinter these plants is to remove the rhizomes from the pots, prune all old leaves and stems, and store them in damp sphagnum moss placed in plastic bags. Store in an area that is cool (50 degrees) until spring. Tropical water lilies are handled differently. Prior to the first frost, trim off most of the leaves and roots. Repot into smaller containers and store in an aquarium tank or other container where they get plenty of light and where the temperature can be maintained at about 68 degrees.

#### **Algae Problems in Water Gardens**

Algae problems in water gardens are generally caused by the action of the sun and excess nutrients in the water. If ponds are established properly and balanced with the correct ratio of plants, fish and scavengers, algae control and algae problems are not difficult to control. When first establishing a water

garden, green water conditions will exist for about 2-3 weeks but will clear as the water balances. The general cause of algae in ponds is excess nutrients from either the overstocking or overfeeding of fish, overfertilization of plants, or too few plants in the pond. A general rule for stocking fishponds is to use 4-6 goldfish and one water lily for every square yard of water surface, or one inch of fish for every 3 gallons. Feed fish a specified amount of food per day. Most fish can survive on naturally occurring foods within a balanced system.

General methods for reducing algae in ponds include the reduction of nutrients causing the algae. To reduce nutrients, reduce the feeding of the fish, the level of fish stocked in the pond or the fertilization of the plants. Other methods to reduce algae problems are flushing the pond and adding new water; adding additional aquatic plants to allow as much as 50 percent of the water surface to be covered; and adding some type of mechanical or biological filter system in larger ponds. Natural barley straw products can be quite effective at maintaining an algae-free pond.

The use of algae reducing chemicals should be the last resort in small ponds. Injury to both plant and animal life in the pond can easily result with misapplication. AlgaeFix and copper compounds are the most often used but must be used in strict accordance with label directions. It is often better to look at the cause of imbalance and correct it before resorting to chemicals.

## **Water Gardening Basics**



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