Lotus Care

Genus Nelumbo; species N. nucifera, N. lutea, and hybrids

Lotuses are beautiful and surprisingly winter hardy aquatic plants. Lotus are understandably a very popular aquatic plant, both for the pond and for smaller above ground containers such as ceramic pots and whiskey barrels. Given good conditions, lotus are vigorous and long lived. They can be more sensitive to unsatisfactory water conditions than many plants and they are among the most expensive aquatics. Lotus are easy to maintain in above ground containers; at the same time, small containers are less forgiving than larger ponds when it comes to providing good growing conditions.

Here are some care tips:

Light and Heat

Lotus will handle some shade, especially in warmer climates, but to grow and bloom their best they prefer full sunlight. The main exception is in hot desert climates, where some shade cloth is desirable. Lotus require temperatures of at least 75 degrees F. for at least three months in summer to do well.

Potting

Standard lotus cultivars can grow 5' or taller. In order to do this, and to also maximize the size and frequency of bloom, they should be potted into a container a minimum of 2' across. A container of 3'-5' across will create a striking display specimen. While some people use plastic or ceramic pots on their deck or patio, others use bathtubs or small pre-formed ponds in the landscape, or create a header pond above the main pond, fill it with pea gravel and lotus, and use it as a beautiful plant filter for the main pond. If using lotus in the main pond, a container without holes, and much wider than it is high, is best. Use a good garden soil with a low organic content, either sandy or clay or anything between (a mix of clay and sand is ideal). Do <u>not</u> use a commercial house plant or garden mix, as the ingredients float. Only 4" of soil is required, leaving room for the soil to push upward as it is filled with runners and tubers. Aquatic containers for lotus are available that are about 2' across and only 7"-10" deep.

Most dwarf lotus cultivars are capable of getting 3' to 4' tall. They can tolerate smaller containers, but will also perform better in containers about 24" across.

Moving lotus into a larger pot is most easily accomplished in the spring when lotus are just waking up. However, if you just purchased an actively growing lotus, the best time to up-pot it is now, because a larger plant performs and over-winters better; if you don't do it now you may never get around to it. Just place the lotus and its pot inside the larger pot. Slip your hand inside the pot between the pot and the root mass of the lotus. While gently gripping the root mass and pulling on it with one hand, use your other hand at the opposite edge of the smaller pot to gently lift and draw away that edge of the smaller pot. This will effectively separate the lotus root mass and soil from the pot with minimal trauma. Place the mass in the center of the larger pot, put the fertilizer around the root mass on the bottom of the pot; gently fill in the pot with soil around the root mass so that the soil level in the new pot is about the same as in the old pot. If some of the leaves don't stand as upright as before, you may stabilize them with string if you like, but the new leaves that grow will be vertical and stable.

Setting Lotus Loose in Ponds

Lotus love this and it works well if you don't mind the entire pond filling with lotus, which is what will most likely happen. For a more balanced pond with open water areas and/or other pond plants (including waterlilies), keep lotus contained. Containers must have no holes, and the occasional runner may still "jump the pot" and need trimming.

Fertilizer

Use a good aquatic plant fertilizer, either fast or slow release, and follow the instructions. Because lotus grows vigorously, use double the amount of fertilizer per gallon of soil that the label recommends for hardy waterlilies. In the spring, lotus will make floating leaves first, then standing leaves. It is best to begin fertilizing when the lotus is starting to make standing leaves, because it is hard to over-fertilize a fast-growing lotus, but it is easy to over-fertilize them when they are just beginning to sprout. In the autumn, stop fertilizing so that lotus can exhaust the fertilizer in their pot in preparation for dormancy.

Water Depth

The soil in the container should have at least 2" to 4" of water over the top of it, so that the soil is always under water. Taller standard lotus can grow in water up to 18" deep or even deeper, but it takes more energy, and in spring and in cool

climates lotus benefit from the extra warmth in shallow water. Dwarf lotus should be grown in water between 2” and 12” deep.

Water Chemistry

Lotuses are extremely adaptable to different water chemistries. However, if your water source has very hard and alkaline water full of minerals, growing lotus in above ground pots can result in a harmful accumulation of minerals in the water over time; when water evaporates, the minerals stay behind, and more are added each time water is added. To prevent this, it is important to occasionally flush out (over-fill) the pot with fresh water while re-filling to replace evaporation. This is less likely to be a problem in a larger pond, but occasional over-filling may still be beneficial. Lotus don’t tolerate much over 1000 ppm water hardness.

Pruning

When pruning or trimming, never cut flower or leaf stems below the water level, as roots and tubers use stems (even dead ones) to help provide oxygen. When lowering lotus for winter, prune after lowering.

Living with Koi and Goldfish

Goldfish are not normally a problem with lotus. Larger koi can disturb the soil, and even pick on the floating leaves. We generally recommend using enough plants in a koi pond that koi do not focus all their energy on just a few plants, and that usually works. You can also place the pots close to the surface and place rocks on the soil that are too large for the koi to move easily. For extremely large and determined koi, rocking off a corner for the lotus will work.

Overwintering

Lotus can over-winter in ponds even in Michigan or Minnesota, so long as the tubers are protected from ice. In colder climates (zone 5 or lower), this is usually provided by dropping the lotus to the bottom of a deeper pond (below the frost depth), then raising it again in the spring; or move into a frost-protected garage. In zones 6 or 7, we recommend mulching around above-ground pots in winter; pots in even a shallow pond are fine. In zones 8 or above (and often in zone 7), even lotus in above ground pots may be left outside unprotected. In all zones, our lotus will go dormant in winter; they form overwintering tubers with growing points that send out runners each spring.

Tropical Lotus

There are also lotuses adapted exclusively to tropical climates. These tropical lotus do not require a winter dormant period, but can only grow where it is warm year round. We do not sell these varieties, and to our knowledge neither does anyone else in the U.S.

Pests

Insects may differ according to geography. Because lotus leaves have fine hairs, insecticides (even organic ones) with oils or detergents will harm (even kill) lotus. For aphids, white fly and spider mites, use diatomaceous earth powder, either dry or mixed into a water solution and sprayed on (the systemic pesticide Marathon also works extremely well, but should not be used with any aquatic animals and is not labeled for aquatic use). For China mark moth, which takes big chunks out of the floating leaves, use Dipel or another brand of Bt for caterpillars. Once several standing leaves are up you may remove all floating leaves, which eliminates mark moth as a problem and also slows down aphids. If slugs or snails can get on your lotus, try moving them farther from the pond edge.

Repotting

When lotuses just begin to show leaf spikes in the spring, their tubers may be carefully divided for making new pots. This may also be necessary every few years for older pots that are overcrowded and have exhausted their soil. The growing points on lotus tubers are very fragile and easily snap off. While there are usually a couple of growing points on each tuber, if you break them all off the tuber will not sprout, no matter how big or fat it is.

Springtime Hints

Lotus love warmth. If you pull your lotus container out of the pond and place it in full sun in the spring (after frost danger is over), the lotus will grow faster because it will warm up more. Keep some water over the soil, and return it to the pond by early summer, once warm weather is here to stay. For even more accelerated growth, you may cheat by placing a small wattage (say 50 or 100 watt) submersible aquarium heater in the container for a month or so. This will cost almost nothing to run and will really speed up the growth. With dwarf lotus, you may even use a 70 watt ThermoPlanter for a container, and leave it in the pond. The ThermoPlanter is an electrically heated aquatic pot (about 2.75 gallons capacity). It is thermostatically controlled and inexpensive to operate.

Edibility

In various cultures, most of the lotus plant is eaten, including the tuber, seed, stem, and leaf. Leaves are also used as wraps in cooking. While the tuber of ornamental lotus may be eaten, various cultivars grown specifically for tuber production are superior for this purpose.

Article supplied by Oregon Aquatics, Inc. and Southwest Aquatics, LLC.

Care Issues

Here are the three biggest lotus care issues Walter Andersen Nursery professionals see:

1. Hard Water – Lotus are sensitive to water with a hardness over 1000ppm and or added salt. In California, hard water is common coming directly from the tap and even if it is not hard initially, it can quickly become hard through evaporation. Most people don't realize that when water evaporates, minerals stay behind. This means that each time you add water to replace evaporated water, you are adding more minerals. At some point, this will add up to a lethal amount. This will happen slowly if you start out with soft water and quickly if you start out with hard water. Most filters will not remove hard water (only reverse osmosis filters) and water softeners usually use sodium ions to replace other minerals. Unfortunately, the sodium will likely kill the lotus much faster than the minerals it replaces. Above ground containers are prone to this because water evaporates more quickly given their smaller size. They also lack the more complex ecosystem that tends to balance the water chemistry. This is easily fixed by overflowing the water a little to flush the container and dilute the minerals each time you add water.

2. Fertilizer – Lotus are heavy feeders to sustain their blossoms and foliage. We follow the fertilizing directions for hardy water lilies, then fertilize tropical water lilies twice as heavy as hardy water lilies; lotus are fertilized twice as heavy as tropicals (this works if you are similarly sized pots). Don't start feeding in the spring until you have leaves starting to transition from floating to standing leaves unless you are using a slow release fertilizer. Be sure you are flushing the container to prevent excessive mineral hardness or else fertilizing may just add to the hardness.

3. Temperature – Lotus love heat and sun so they can take both if they are submerged in a pond. If you are in extreme heat, for instance Palm Springs or Las Vegas, provide some shade. If lotus are in a container it is important to be mindful of how hot the water can get. Lotus need sunlight to bloom so it can be a balancing act between giving them as much sunlight and heat as they can take without burning. Partial shade or dappled light will work best for inland lotus in containers.