

Lily Growing Guide for the Cut Flower Market

What is the difference between an Asiatic and a LA Lily:

LAs are crosses between Asiatic and Longiflorum lilies. For the grower, it means that LAs tend to have fewer but larger flowers on average than do Asiatics, but LAs also tend to be above average growers. Asiatics tend not to make as much bulb size as do the LAs, but usually have a higher bud count and are a little less fragile.

Examples:

Asiatic Lilies – Montebello, Red Sensation

LA Lilies – Dazzle, Royal Sunset

Height usually increases 1-2" for each larger size and decrease 1-2" for each smaller size. Height will vary depending on location and conditions.

Average bud counts for Asiatic lilies:

10/12cm: 3-5

12/14cm: 4-7

14/16cm: 6-8

16/18cm: 8+

Average bud counts for LA lilies:

10/12cm: 2-4

12/14cm: 3-5

14/16cm: 5-7

16/18cm: 7+

What is the difference between an Oriental and an Orienpet (OT):

Orienpet (OT) lilies are crosses between Orientals and Trumpet lilies. Orienpets tend to have a lower bud count and be less up facing. Orienpets are also usually hardier and do not have as much of a cooling requirement. Orienpets often need a larger size to produce a similar bud count to an Oriental lily. The addition of the Trumpet genes in the Orienpets allows them a greater variety in colors and shapes than do Orientals.

Examples:

Oriental Lilies – Mero Star, Sorbonne

Orienpet (OT) Lilies – Yelloween, Zambesi

Average bud counts for Oriental and OT lilies:

14/16cm: 3-5

16/18cm: 4+

Oriental and OT lilies generally not commercially available in 12/14 or 18+ sizes

What does the bulb size number mean:

Bulb sizes are generally rated in centimeters circumference (distance around the entire bulb). The larger the number, the larger the bulb.

How does bulb size affect the plant:

A larger bulb size will usually increase the length and girth of the stem. Lilies will gain 1-2" of height, on average, for each larger size. As lilies produce multiple flowers per stem, a larger bulb size means more flowers per stem.

When to plant:

Lilies can be planted (or forced) throughout the year. However, they do need conditions that allow them to continue growing. Colder temperatures, shortening days, and lower light levels are all signs to the bulb that its window of opportunity for growth/flowering is closing. Plant a lily too late and it will produce a nice stem, but the flowers will likely abort.

Where to plant:

Do not plant bulbs in the shade or in soils that have standing water on them at any point. Fields that allow air to move through the crop are preferred. This allows the foliage to dry during the day which in turn reduces the chance of botrytis.

Planting depth:

Lilies are usually planted with 3 to 4 inches of soil above the bulb. Be sure to pack the soil down prior to measuring planting depth. Planting too deep can hurt the bulb's ability to produce a flower.

Planting density:

Lilies can be planted at 6 to 8 bulbs per square foot. Larger bulbs and varieties that produce above average foliage may need to be planted at a lower density. Certain varieties will gain in length when planted close together. The closer the plants are, the greater the risk of botrytis.

Preferred soil type:

Bulbs like well drained soils. You do not need Dutch style sandy soils to grow good bulbs, but you will need good drainage. If you have heavier soils, such as wet clay, planting the bulbs in raised beds or hills will help improve drainage.

Which lilies are up-facing:

Generally speaking, all lilies used in the cut flower industry (forcing lilies) are upward facing. In the heat of the summer some varieties will face out more. Some well-known varieties that are down facing are Conca D'Or and Casa Blanca.

Can lilies be used for cut flowers the following year:

Most bulbs used for cut flowers should be considered a one-year crop. Cutting a bulb reduces or eliminates their ability to make enough energy to prepare for the next year.

Lilies can, in some instances, be cut for more than one year. It is suggested to purchase a large size bulb and, when cutting, to leave *at least* 12 inches of stem/foliage standing. This will allow the bulb to recoup some of the reserves that it has spent growing the stem and flower.

Even in a best case scenario, there is no guarantee of success. Our American Roots does not have experience with such techniques; this is simply what we have been told anecdotally from various growers throughout the years. We recommend buying fresh lilies each year for the most reliable quality.

Cooling requirements:

Most bulbs have a cooling requirement; they need to go through a period of sustained cold temperatures for a certain amount of time before they begin working toward their Spring bloom. This cooling requirement protects the bulb from starting to grow in the winter. Once they have met this requirement, a bulb is ready to grow normally when Spring arrives.

The lilies we supply for Spring planting have already received their cooling requirement for the season. This process is completed by keeping the bulbs in a cooler at a certain temperature for a specified period of time. This signals to the bulb that the correct cooling time has finished, and it is time to begin their growing cycle when planted.

Blooming/Forcing time:

The longer a lily is stored, the quicker it can be forced. For example, the difference in forcing time between lily bulbs planted in January versus March is a lot, but the difference in the actual blooming time will be very little.

- Though the lily bulb planted in January has 60 more days to grow, the climate conditions in January and February are cold enough to slow down the lily's growth. While the lily bulb planted in March has received 60 extra days of cooling in storage, it will be planted in a warmer season. So, the March planted lily, with its extra cooling and the warmer season, will offset the January-planted lily's extra growing time.

-Accordingly, the difference in blooming time between lily bulbs planted in March versus June will be much greater. Lily bulbs planted in June and July are often forced 25-33% faster than if planted earlier in the year.

Climate and weather conditions will always have an effect on when a bulb will flower. That means the "normal" blooming time for Minnesota will not be the same as for Washington, nor is 2010 likely to be the same as 2009.

Which herbicides can be sprayed on or around bulbs:

To control weeds around bulbs, there are various sprays available. When spraying an herbicide make sure that it does not drift onto your crops, and that it is not an herbicide that can leach into the bulbs' root zone and be taken up by them.

Most weeds can be controlled with an application of Roundup (which is also available under different trade names). For clovers and vetch it is best to use a 2-4D product (which will control only broadleaf weeds and not grasses).

Always read and follow all chemical and pesticide labels. Check with your local farm and garden store or pesticide supplier to get more exact information on what is available and legal to use at your location.

Avoiding and containing botrytis:

Botrytis is a fungus, spread via spores, that likes cool, damp, and still air. The spores can come from other plants in the area, the soil, or bulbs.



Photo of Botrytis in lilies

Foliage that stays wet for over 24 hours in these conditions has a greater chance of being infected by botrytis. This is why it is important not to plant too densely if in a location that can expect conditions that botrytis prefers. Plants showing botrytis damage are infected with the disease. Leaving infected plants in with other tulips can lead to the disease spreading to other plants. Leaving infected bulbs or leaves near your tulip fields can also allow the disease to spread.

Placing your rows so that they are parallel to the normal direction of the wind at your location will help keep the foliage drier. For our location (west of the Cascades), the summers are very dry, so the density of Spring-planted bulbs can be increased (with the added benefit of gaining a little more length).

Crop rotation is also very important. Do not plant bulbs where you have planted the same bulbs before for at least 3 years (for peonies, 10 years!).

If you spot a plant with botrytis, remove it from your crop and dispose of it far away (do not compost!). Making sure that the old foliage from the previous year is kept to a minimum helps as well. There are various fungicides that are labeled for bulbs which can be sprayed to contain a botrytis outbreak.

Contact fungicides (kills on contact) often have noticeable residual after applying them which will wear off over time; there are also systemic fungicides (work from within the plant) on the market that can be sprayed to help prevent botrytis.

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