Lilium Oriental Culture

General Forcing Instructions:

Forcing Oriental hybrid lily is not difficult if a few basic cultural requirements are followed. Forcing instructions are intended to provide growers with general guideline for growing Oriental lilies. Adjust this information to reflect your growing environment based on your experience and data

Production:

A wide variety of soils and growing media are suitable for growing lilies. The growing medium should be treated with aerated steam to control pests, disease organisms, and weeds, especially if trouble is anticipated. The growing medium must be porous for good aeration and water drainage. A pH of 6.0 to 6.5 is recommended, too low of a pH tends to increase leaf scorch susceptibility. Lilies have been forced successfully in several types of growing media. Two successful media are as follows: 1.) 50% sandy loam, 25% sphagnum peat, 25% sharp sand. 2.) 25% sandy loam, 50% peat, 25% pumice.

Oriental Hybrid lilies must be planted deep. The top of the bulb must be covered with a minimum of 2" of media, 3" to 5" is not too deep depending upon growing environment temperatures. The maximum depth is recommended for warm summer months. Minimum soil depth under the bulb should be 1". Water the bulbs in well when planting to compact the soil around the bulb.

The bulb itself has enough stored energy to begin shoot growth. Once the shoot begins to grow, it will develop a root system from the top of the bulb toward the media surface. The roots growing above the bulb are referred to as stem roots. It is these stem roots which provide the nutrients and moisture required by the growing plant to support it. If adequate stem roots do not develop, the plant will be deprived of sufficient nutrients and moisture. Sufficient planting depth is of utmost importance, as are proper growing temperatures to allow this stem root system to develop, especially in the first 4 to 6 weeks after planting.

Moisture and Fertilization:

Uniform moisture is important, especially during the first three weeks after planting. Watering must be carried out sparingly at this time, not letting the media dry out, while at the same time not over watering. As the plant grows and the stem roots become more developed water can then be safely increased.

Due to variations in soils, it is best for growers to use their judgment, as well as soil samples. A well-balanced liquid fertilizer containing 200 to 350 ppm nitrogen, depending upon the season, should be applied once the sprouts have reached a height above the media of 3" to 4", followed by subsequent applications at 200 to 350 ppm depending upon the season. Avoid over fertilizing, especially with high nitrogen levels, which can produce a lush appearance, but soft stems. Avoid fertilizers with superphosphate.

Insects and Diseases

Root rots caused by the pathogens Phythium and Rhizoctonia are likely to occur when bulbs are grown under wet conditions. Sound irrigation practices and/or using preventative fungicide drench applications can prevent root roots. Botrytis may occur on dead flower petals and can quickly attack the entire plant. Prevent Botrytis by providing adequate air movement, avoiding overhead irrigation while plants are blooming and watering early in the day. Once the plants are blooming, it is beneficial to apply preventative fungicide applications using chemicals that are effective at controlling Botrytis. Aphids, fungus gnats and shore flies are the insects observed most frequently. Growers should have routine scouting programs to determine the presence of these pests.

Growth Regulation

We recommend that a lower application rates be used first to determine efficacy per variety, as there can be wide response differences between the colors. Remember when using the PGR's, shorter days make taller lilies and longer days make shorter lilies.

A-Rest

- Drench- When shoots are 1-2 inches above the soil- 2-3 ppm
- Spray- When shoots are 3 inches above the soil- 20-50 ppm

Sumagic

- Drench- When shoots are 1-2 inches above the soil-1-2 ppm
- Spray- When 3 inches above the soil- 6-10 ppm

** Depending on the variety, a second application of spray could be needed as visible bud to limit late season stretch.

*** From visible bud to open flowers is usually 45 days***

Temperature and Scheduling:

In Oriental lilies, shoot emergence and forcing time are dependent upon several factors: bulb maturity, duration of cold storage, planting date, greenhouse temperatures, and light intensities. It is best to keep temperatures between 60°-65° F night and 75° F -85° F day.

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