

## Lilium Asiatic Culture

### Production

Most growers will receive pre-cooled, frozen bulbs packed in peat moss. It is used to help retain bulb moisture, preventing drying during storage and shipping. It is important to gradually defrost bulbs that are frozen and thaw them at 55°-60°F (13°-16°C) for several days before potting. Frozen bulbs can be stored for up to two weeks in a cooler at 34°-36° F (1°-2°C). Warmer storage temperatures and storing them for extended time periods may cause bulbs to sprout prior to planting. As soon as the bulbs have thawed, carefully separate them from the peat moss packaging. It is recommended to submerge the bulbs in water for at least 10 minutes before planting them. Bulb dipping helps to re-hydrate the bulbs, bringing them to a uniform moisture level. Plant immediately after re-hydrating. The number of bulbs used depends on the container size, customer specifications, etc. Asiatic lilies perform best when grown in a moist, well-drained, porous growing medium with a slightly acidic pH: 5.8-6.4. Most commercially available peat- or bark-based growing mixes work well, provided there is adequate drainage. Asiatic lily bulbs must be planted deeply with a minimum of 2 inches (5cm) of growing mix above the bulb. There should be a minimum of 1-inch (2.5cm) of growing mix under the bulb. Place the bulb(s) near the center of the pot with the bulb(s) pointed up, not sideways, to help the stems come up near the center. Although some roots grow from the bulb, a majority of the roots develop on the stem between the bulb and the top of the soil surface (stem roots). A proper planting depth is important to provide adequate stem root development, which serves as the primary source of nutrition and moisture uptake as well as supporting and anchoring the plant.

### Moisture and Fertilization

During emergence, uniform moisture is important. Watering must be carried out sparingly until they have emerged. The amount of irrigation can be increased when the shoots are 3-6 inches (7.5-15cm) tall, as the stem roots are usually well formed at this time. When providing irrigation, water thoroughly and let them dry out slightly between waterings. Once the flower buds are visible, the growing media should never dry out, as overly dry conditions at this stage could cause the flower buds to abort. Asiatic lilies are light feeders.

Early in production, fertility should not be an issue. As they reach 2-3 inches (5-7.5cm) tall, fertilizers can be applied to the crop. Water-soluble fertilizers can be applied as needed using 100- to 150-ppm nitrogen or with a constant liquid fertilization program using rates of 50 to 75-ppm nitrogen with each irrigation. Many growers incorporate time-release fertilizers into the growing medium prior to planting at a rate equivalent to 1 lb. elemental nitrogen per yard of growing medium. Controlled-release fertilizers work rather well for lily crops, as it often takes a couple of weeks for the fertilizer to start releasing. This coincides with the period of time the plants naturally derive their food from the nutrient reservoirs of the bulbs.

### 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 rots. *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 and if and when control strategies are necessary.

### Growth Regulation

Depending on the environmental conditions and crop spacing, container growers may need to use PGRs to maintain adequate plant height. The main factor influencing proper timing of an Asiatic lily crop is temperature. It is best to keep temperatures between 50-55 night, 65-75 day

### A-Rest

- Drench- When shoots are 1-2 inches above the soil- 1-2 ppm
- Spray- When shoots are 3 inches above the soil- 10-30 ppm

### Sumagic

- Drench- When shoots are 1-2 inches above the soil- .5-1.0 ppm
- Spray- When shoots are 3 inches above the soil- 2.5-7 ppm

\*\* From Visible bud to open flower is usually 30 days\*\*