

perennial solutions

Asiatic Lily: Lily Looks Series

Lily Looks, a new series of Asiatic lilies, contains numerous dwarf cultivars with various flower colorations that are all well suited for commercial production.



By Paul Pilon

In recent years, Asiatic lilies have become more popular as cut flowers, potted plants and landscape perennials. Many perennial producers have increased their production of these easy-to-grow plants, as they provide an impressive display of color at the retail site and fit nicely into current production plans.

Many Asiatic lily cultivars being grown today are tall, cut flower cultivars that are not advantageous for commercial potted plant and perennial growers to produce and ship over long distances. A new series of Asiatic lilies called Lily Looks contains numerous dwarf cultivars with various flower colorations that are all well suited for commercial production.

As shown in Figure 1, below, Lily Looks cultivars reach 12-20 inches when in bloom and produce large, 6- to 8-inch-diameter flowers. Some cultivars have speckled flowers (Tiny Bee, Tiny Skyline and Tiny Todd) or blooms with secondary colorations (Tiny Skyline and Tiny Todd). These cultivars can be produced throughout USDA Hardiness Zones 3-9 and AHS Heat Zones 12-1.

Propagation

It is not economical or practical for growers to propagate Asiatic lilies vegetatively or from seed, grow them to maturity and produce a finished crop. Commercial growers obtain fully mature, pre-cooled and ready-to-plant bulbs of the Lily Looks series to pot into their final containers.

Production

Most growers receive pre-cooled, frozen Lily Looks 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 for several days before potting. Frozen bulbs can be stored for up to two weeks in a cooler at 34-36° F. 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. I recommend submersing 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.

For container production, the Lily Looks series is suitable for 1-qt. to 1-gal. containers. The number of bulbs used depends on the container size, customer specifications and the product's price point.

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 of growing mix above the bulb. There should be a minimum of 1-inch 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

Lily Looks Series Cultivars

Cultivar	Flower Color	Avg. Bud Count*	Plant Height (inches)	Avg. Finish Time (days)**
Tiny Bee	Yellow, speckled	5-7	12-14	50
Tiny Dino	Orange, no speckles	5-7	12-14	60
Tiny Ghost	Purple, no speckles	5-7	12-14	60
Tiny Hope	Red, no speckles	5-7	14-16	54
Tiny Kissed	Deep red, no speckles	5-7	18-20	52
Tiny Nanny	White, no speckles	6-9	14-16	55
Tiny Skyline	Orange, speckled	4-6	14-16	58
Tiny Snowflake	White, no speckles	5-8	16	55
Tiny Todd	Soft pink/white, speckled	6-9	16-18	52
Tiny Toes	Unique pink, no speckles	5-7	16	65

* Average flower bud count when using roughly 4½- to 5½-inch bulbs.

** Average days to finish when produced at 60° F average 24 hour temperatures.



These dwarf cultivars are available in various flower colorations that are all well suited for commercial production. (Photos: Langeveld)

Figure 1. These are the characteristics and cultivars of the Asiatic lily Lily Looks series

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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 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 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-



Lily Looks cultivars have flowers that open individually and create an impressive display of flower power when numerous blooms are open simultaneously.

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 for shipping and aesthetic purposes. A few of the commercially available PGRs are effective at controlling plant height when applied using the appropriate rates, frequency and timing. I recommend foliar applications using Concise or Sumagic (uniconazole) at 2½ ppm. This is a northern rate; higher rates may need to be applied in southern locations. It is best to begin PGR applications when the plants reach 2-3 inches high; reapply them if necessary in 7-10 days.



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Lily Looks cultivars reach 12-20 inches when in bloom and produce large, 6- to 8-inch-diameter flowers.

Asiatic lilies are particularly sensitive to PGR applications.

Temperature And Scheduling

The main factor influencing proper timing of an Asiatic lily crop is temperature. It is best to force Asiatic lilies at cool temperatures.

During emergence, it is important to maintain soil temperatures of 55° F; the air temperature is not important during this stage. After the majority of the lilies have emerged, usually within 2-3 weeks of potting, air temperature becomes more important to control than soil temperature. Following emergence, maintain 24-hour average temperatures at around 60° F. Cooler temperatures dramatically delay crop development, and warmer temperatures hasten development and most often reduce the quality characteristics of the crop.

I recommend growers maintain 50-55° F nights and 63-68° F days. High daytime temperatures (more than 85° F) dramatically reduce crop performance and quality characteristics.

Each cultivar in the Lily Looks series requires a slightly different production time (from 50 to 65 days), as shown in Figure 1, page 55. Remember, these are just guidelines and may vary dramatically from location to location and year to year.

With most of these cultivars, it takes about 30 days from visible bud to open bloom. Growers can use this rule of thumb as a guideline to help determine if the temperatures need to be increased or decreased.

All Lily Looks cultivars are available from Langeveld (www.langeveld.com) and Zabo Plant Inc. (www.zaboplant.com). There is only a 7-10 day time period to get from the greenhouse to the retail site and purchased by the customer. When the flowering is done, the potential to sell them at a premium price is gone.

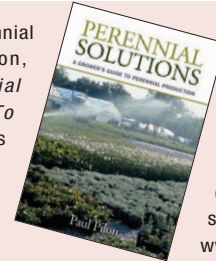
To dramatically increase the flowering duration and shelf life of this crop, I recommend applying 100 ppm of the plant growth regulator Fascination (benzyl adenine + gib-

berellins) to the lily crop just as the first flowers are beginning to show color. This application has been shown to extend the length of bloom and shelf life from 7 to 21 days. **GPN**

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Paul Pilon is president of Perennial Solutions Consulting, Jenison, Mich., and author of *Perennial Solutions: A Grower's Guide To Perennial Production*. The book is a guide to propagation and growing containerized perennials with chapters on media, fertilization, insect and disease



management, weed control, propagation, forcing, plant growth regulators, overwintering, and individual cultural programs and schedules for many of today's most popular perennial species. Pilon can be reached at (616) 366-8588 or paul@perennial-solutions.com. Get a copy of his book at www.perennial-solutions.com.



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