

# Lobularia

Knight<sup>®</sup> and Princess<sup>®</sup>



## NUTRITION

**pH:** 5.8 – 6.2

**EC:** (2:1 extraction method) .6 – .9

Constant feeding at 150ppm – 200ppm nitrogen with a fertilizer selected for grower's water quality and soil mix is recommended.

## TEMPERATURE

**Rooting out:** 65 – 72 F

**Growing on:** 55 – 65 F

**Holding:** 50 – 60 F

## WATERING

Maintain moderate soil moisture. Allow the soil to cycle from moist to moderate levels. Avoid both severe dry downs/wilting and long periods of wet soil, especially at cooler temperatures. Growing too dry or wilting will cause leaf yellowing and leaf drop. Large monoculture baskets and containers require above average watering frequency.

## TIMING

**4" – 5":** 4 – 5 weeks with one 84 or 104 cell plant per container.

**6"/1GL Royale™:** 5 – 6 weeks with one 84 or 104 cell plant per container.

**8":** 6 – 8 weeks with one 84 or 104 cell plant per container.

**10" – 12" Hanging Basket:** 8 – 10 weeks with three to four 84 or 104 cell plants per container.

## PLANTING

The 84 and 104 Liner plants should be planted into a well-drained soil mix selected to match individual water quality and fertilizer blends. Water in thoroughly without saturating the mix and maintain a constant moderate soil moisture level for the first seven to 10 days to establish new rooting. Plants have already been pinched and further pinching usually will not be needed, except possibly in the case of plants grown too warm, grown without use of PGRs, or when used in larger containers. This second pinch can be given for larger containers, usually three to five weeks after planting.

## LIGHT/LIGHTING

These plants should be grown in a high light area of the greenhouse for optimal flowering and plant development. Knight<sup>®</sup> and Princess<sup>®</sup> *Lobularia* flower very freely and supplemental lighting should not be required for early spring flowering.

## GROWTH REGULATORS

Both Bonzi<sup>®</sup> (paclobutrazol) and Sumagic<sup>®</sup> (uniconazole) are effective for controlling growth. These materials can be used either as a light spray or drench. Knight and Princess *Lobularia* are all vigorous compared to most plants, but the vigor does vary within the five varieties. To best grow, water, and treat with PGRs, the following grouping should be helpful.

- 1) **Snow Princess<sup>®</sup> and Blushing Princess<sup>®</sup>** – Sumagic sprays at 5ppm – 10ppm applied lightly. First application made seven to 14 days after planting and reapplied as needed. Or, a Bonzi drench at 1ppm – 3ppm can be made seven to 14 days after planting. Treatments for larger containers can be made when a desired "pre-finished" size is attained (three to four weeks after planting).
- 2) **Dark Knight™, Frosty Knight<sup>®</sup> and White Knight<sup>®</sup>** — Sumagic sprays at 5ppm applied lightly. Applications should be made based on plant development and should be used on an "as needed" basis. Or, a Bonzi drench at 1ppm can be made 14 days after planting. These three varieties start much slower compared to the two Princess varieties and plants should reach the "pre-finished" size before applications are made. Left untreated they will often attain nearly the same size as the Princess varieties. Treatments for larger containers can also be made when a desired "pre-finished" size is attained (two to four weeks before scheduled finish date).

Even the two Princess varieties are quite responsive to Bonzi and Sumagic applications. It's best to try the lower recommended rates first and adjust as needed. When spraying, be sure to apply lightly — only a misting leaf coverage instead of heavy spray. With drenches, use the lower rate and be certain to also apply only the recommended amount of solution to each container.



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The rates and chemicals listed are based on our southeast Michigan growing conditions, and are not recommended for nationwide application. Please adjust the rates and spray applications to your location and facility.



Watch for the “softening” look and lighter green appearance of new growth as an indication for PGR treatment needs. In more northern areas, the lower rates should be used as a starting base, while in more southern areas, the higher rates will probably be needed. Other materials such as Topflor® (flurprimidol) and Piccolo® (paclobutrazol) can be used at rates that correspond with the degree of treatment recommended for Sumagic or Bonzi. Applications can be increased for growers in the southern and western U.S. But, read labels closely and apply correctly.

Cooler growing temperatures, high light levels, proper spacing, and the use of a negative DIF can be very helpful at managing plant size.

## PEST and DISEASE MANAGEMENT

There should be little instance of disease if basic cultural guidelines are followed. Proper temperature, light levels, and water management will eliminate most disease issues. A broad spectrum fungicide such as Banrot® (etridiazole plus thiophanate-methyl) can be applied at transplant, if desired. Thrips and Whiteflies can be pests of concern.

- Avoid using pesticides containing spiromesifen such as Judo™ or novaluron such as Pedestal®. Princess and Knight *Lobularia* are sensitive to these products. Growth and flowering can be stunted and distorted if applied.

## OUTDOOR GROWING SCHEDULE

Princess *Lobularias* can be grown outdoors in the earliest spring conditions (approximately frost to 25 F, or early- to mid-April in Michigan), if frost protection is provided. If no frost protection is provided, they can be moved outdoors during the second earliest spring conditions (approximately frost to 28 F, or mid- to late April in Michigan). The Knight *Lobularia*, due to their slower initial growth habit in comparison to the Princess varieties, should remain indoors and move outdoors in the third earliest spring conditions (light frost or late April/mid-May in Michigan). These recommendations are based on average spring weather and should be adjusted for unseasonably severe or unseasonably mild conditions.

## OTHER TIPS

- *Lobularia* should be transplanted soon after delivery of the rooted cuttings. Stress in the 84 or 104 tray can lead to lower leaf yellowing and plant loss.
- For proper watering, fertilizing, and PGR application, group the varieties as suggested in the “Growth Regulators” recommendations.
- Lower leaf yellowing and leaf drop can occur if grown either too dry or too hungry.
- Watch for leaf “graying” in Snow Princess and White Knight as a sign of dry plants.
- Leaf “purpling” can occur if grown extremely cool (phosphorus deficiency).
- Provide high light conditions, grow cool, control high humidity, and water as needed earlier in the day to avoid prolonged periods of moisture on plant foliage, especially in poor weather.
- Blushing Princess often times will have whitish colored blooms in the greenhouse. This occurs most often in earlier spring production. Higher light levels and cool temperatures will produce the lavender blush bloom color. The blooms will quickly develop the blush when moved outdoors.
- Frosty Knight, due to its foliage coloration, is better to grow for peak week sales and later. Plants can struggle in early season production due to shorter days, lower light levels/quality, and poorer overall growing conditions.
- It is best to mix Snow Princess in combinations with other extremely vigorous plants, Blushing Princess with extremely vigorous to average vigor plants, Dark Knight and Frosty Knight with average to less than average vigor plants, and White Knight with average vigor plants.