

Cultural Information for:	Carnation Lillipot	Annual
Common Name:	Carnation	
Botanical Name:	Dianthus caryophyllus	
Seed Count:	12,000 /ounce	420 /gram
Optimum Germination Temperature:	65-70°F / 18-21°C	
Optimum Growing Temperature:	55-65°F / 13-18°C	

Plug Stage – 288 cell (35 days)

Stage One (days 1-7) Single sow seed into a well-drained sterile media and lightly cover the seed until it is no longer visible. Ideal media pH is 5.8 to 6.2 with an EC <0.6 mmhos (2:1 dilution). Moisten the media and germinate at a temperature of 65-70°F/18-21°C. The media should be kept uniformly moist as with other seeds. Over watering while in the germination stage should be avoided to prevent damping off.

Stage Two (days 8-15) When the seedlings begin to emerge reduce moisture levels and place the seed trays in a bright greenhouse with a temperature of 65-70°F/18-21°C. When the cotyledons are fully expanded feed lightly with 75 ppm N using a well balanced calcium nitrate based fertilizer.

Stage Three (days 16-27) The first true leaves are appearing and seedlings can now be fertilized with 150 to 200 ppm of nitrogen to maintain a media EC of 0.8 to 1.0 mmhos (2:1 dilution). Provide high light and good air movement and allow the soil to dry out in between watering to reduce disease pressure.

Stage Four (days 28 – 35) Seedlings are approaching transplant stage. Lower the temperature to 60°F/15°C and reduce watering to tone the plants and maximize root hair growth.

Transplanting to Flower (105 – 165 days)

Pot Size: Carnation Lillipot is best produced in 4-6 inch/10-15 cm. pots with one plant per pot.

Media: Any media that is high in nutrient holding capacity and has a good drainage will suit the needs of Carnation Lillipot. However, the soil structure should be sufficient to support the growth of this crop for 3 ½ to 5 ½ months. Ideal pH range is 5.8 to 6.2.

Fertilization: Carnation Lillipot is a relatively heavy feeder. A constant liquid feed of 150 to 200 ppm N yields a sturdy, compact plant with a profusion of flowers. Carnations are sensitive to boron deficiency and boron levels should be monitored closely. Pansy special fertilizers, like 15-2-20 Cal/Mag, are recommended since they contain higher boron levels along with calcium and magnesium for strong stems. An application of slow release fertilizer is beneficial and if used the liquid fertilizer should be applied at 140 ppm N. Ideal EC range is 1.2 to 1.5 mmhos (2:1 dilution).

Temperature: After transplanting, the plants should be grown at a maximum day temperature of 59-64°F/15-18°C and a minimum night temperature of 40-45°F/4-7°C. Night temperatures lower than 40°F/4°C will delay growth and flowering. In general, the cooler the night temperature, within the recommended range, the greater the branching and the tighter, more compact the habit. Outdoor production is possible in mild climates. Similar to other carnations, growth can be hastened or slowed by raising or lowering the temperature.

Photoperiod: Flower initiation and development are a function of total light calorie accumulation and temperature, not photoperiod, and will occur year round if optimum temperatures are maintained.

Flowering: Flowering of Carnation Lillipot is dependent on the total amount of light calories that the plant receives. In areas where the light levels are not reduced, the crop time will vary much less as the seasons change from autumn to winter to summer. As with other carnations Lillipot will respond to supplemental lighting during the darker months of the year. This will reduce the production time and allow a grower to even out year-round cropping time. Flowering will occur in 105-165 days from transplanting depending on the season, production temperatures and grower's location. All of these factors are related to the effect of temperature and total light calories that the plants receive.

Growth Regulators: If grown with optimum temperatures and high light no growth regulator applications are needed.

Pinching: No Pinching is required as Lillipot is self-branching.

Disbudding / Center Budding: No flower bud removal is recommended for Carnation Lillipot. The plants will naturally produce an abundance of 2-inch /5 cm. flowers.

Seasonal Recommendations: As is typical for this genus, Carnation Lillipot is a cool season crop. Production will be limited to the cooler months of the year for any given production site.

“All information given is intended for general guidance only and may have to be adjusted to meet individual needs. Cultural details are based on North American conditions and Sakata cannot be held responsible for any crop damage related to the information given herein. Application of recommended growth regulators and chemicals are subject to local and state regulations. Always follow manufacturer's label instructions. Testing a few plants prior to treating the entire crop is best.”