

Annuals

Impatiens walleriana F₁

Lollipop

Product Use: Packs, hanging baskets and mixed containers

Minimum Germination Rate: 95 %

Seed Form: Raw

FLOWERING

Flowering Type: Day neutral plant, will flower regardless of day length.

Flowering Mechanism: Irradiance will not affect flowering. Supplemental lighting during germination will be beneficial but is not necessary. Temperature will have a greater affect on the total crop time.

PLUG CULTURE

Germination: Maintain optimal conditions for seedling development, should begin on the day of sowing until root emergence. Expect radicle (root) emergence in 3-5 days.

Cover: Seeds may be covered very lightly with a layer of vermiculite to maintain proper moisture levels. When trays are watered-in the media should be visible through the vermiculite.

Sowing method: 1 seed per plug.

Media: pH 6.2-6.5. A low pH below 5.5 can promote shoot tip abortion and cause sodium toxicity. EC 0.5-0.75.

Light: Light is necessary for germination. If utilizing a germination chamber provide 10-100 ft. candles (100-1,000 lx) to aid in germination and

reduce stretch upon germination.

Moisture: Keep media saturated (5) for the first 1-2 days or until radicle (root) emergence. On day 3 the moisture level can be decreased to a wet (4). Maintain a moisture level of wet (4) until approximately day 8, then reduce to a moist (3). By day 11 start to alternate between a wet (4) and a medium (2), allowing the media to reach a medium (2) before resaturating to a wet (4). Never allow any free moisture on top of the seedlings going into the night as this can cause tip abortion.

Humidity: Maintain 95-100 % until radicle emergence; then reduce to 40-70 % humidity. Provide proper ventilation and horizontal airflow to help dry back the media. This will allow more oxygen to the roots improving seedling quality.

Temperature: Maintain 22-24 °C until day 6 then reduce slightly to 21-22 °C. A germination temperature below 21 °C will slow the speed and uniformity of germination. Excessive temperatures above 25 °C can cause a thermodormancy. Temperatures below 18 °C may cause tip abortion and malformed seedlings.

Fertilizer: Begin fertilizing early on day 3 with low rates of 25-5 ppm nitrogen using a calcium based feed (14-0-14). Maintain an EC less than 0.75 for the first 7-10 days.

Plug Bulking and Flower Initiation: Maintain optimal conditions during the vegetative stage from cotyledon expansion to flower initiation. When the seedlings root to the edge of the plug and reach the 2-4 true leaf stage flower initiation will occur.

Media: Keep pH 6.2-6.5, EC 0.75. Maintain an EC of less than 1.0. If the EC levels are greater than 1.25 shoot tip abortion may occur.

Light: Provide light levels of 8 mol/m²/day (2,500 ft. candles or 25,000 lx). Supplemental lighting can be used to produce sturdy seedlings, especially under low light conditions. Lighting for the first two weeks supplying 350-400 ft. candles (3,500-4,000 lx). Lighting for more than two weeks in the early stages of production can result in yellowing of the leaves (phyto-oxidation).

Temperature: Maintain 19-20 °C until the first set of true leaves. Thereafter grow at 17-18 °C to hold and tone the plugs. A temperature of 19.5 °C will give the shortest crop time.

Note: Using DIF can result in yellow leaves that can be eliminated by discontinuing DIF for approximately one week.

Moisture: Alternate between moisture levels wet (4) and medium (2). Let the media approach a medium (2) before re-saturating to a wet (4). Proper moisture management is effective in controlling growth.

Humidity: 40-70 %

Fertilizer: Fertilize with a calcium based feed (14-0-14, 15-2-15) at 75-100 ppm nitrogen. Fertilize every second or third watering using a feed containing both potassium nitrate and calcium nitrate. Minimal use of fertilizer will keep seedlings compact and promote flowering. Avoid the use of phosphorous to prevent seedling stretch. Injection of phosphoric acid to control pH can result in seedling stretch.

Growth Regulators: Early applications of growth regulators are the best approach to control growth. In the later stages proper management of temperature, light and moisture will result in the highest quality plugs. Growth regulators that can be used effectively are B-Nine (daminozide), Bonzi (paclobutrazol) and Sumagic (uniconazole).

Fungicides: Applications of fungicides can be made, especially under low light and cooler conditions.

GROWING ON

Media: pH 6.2-6.5; EC 0.75-1.0.

Light: Provide light levels of 8 mol/m²/day (2,500 ft. candles or 25,000 lx). Supplemental lighting can be used to produce sturdy seedlings.

Temperature: Maintain 17-18 °C nights, 21-24 °C days. An ADT (average daily temperature) of 19.5 °C will give the fastest finished crop.

Moisture: Alternate between moisture levels wet (4) and medium. Allow the moisture level to approach a medium (2) before re-saturating to a wet (4).

Humidity: 40-70 % humidity is ideal. Providing good ventilation and horizontal airflow to help lower the humidity levels and dry back the media.

Fertilizer: Fertilize every second or third watering with a calcium based feed at 75-100 ppm nitrogen (13-2-13, 14-4-14). Minimal fertilization will result in more compact plants and promote flowering. Tall lush plants with flowers below the foliage or late flowering indicate too much fertilizer.

Growth Regulators: B-Nine (daminozide), Bonzi (paclobutrazol) and Sumagic (uniconazole) are most effective. In the later stages of production, after transplanting the best means of controlling growth is the proper management of temperature, light, moisture and fertilization.

Fungicides: Apply fungicides during long periods of low light and high humidity.

Common Diseases: Pythium, rhizoctonia, alternaria leaf spot, botrytis, tomato spotted wilt virus, pseudomonas, downey mildew and impatiens necrotic virus.

Pests: Primarily aphids, fungus gnats, spider mites and thrips.

Post Harvest: Fertilize with potassium nitrate at 100-150 ppm 1-2 weeks prior to shipping.

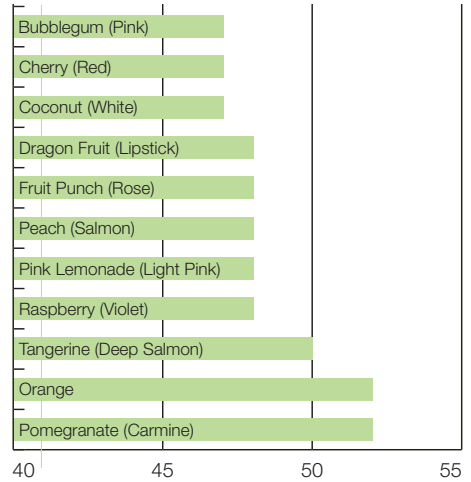
↑	↔	☀
30-35 cm	20-35 cm	Partial Shade

Plug Crop Time	
288 tray	4-5 wks
Finished Crop Time (from 288 tray)	
Packs	5-6 wks
10 cm pots	6-7 wks
25 cm baskets	7-8 wks

Timing Lollipop

Days from sowing

■ 50 % Flower



Expert Tip

Lollipop Impatiens were bred to have a compact habit and only require growth regulators in the seedling stages. After transplanting maintain a good dry back between watering and use lower rates of fertilizer applications.

– Michael, Area Sales Manager

