

IMPATIENS WALLERANA **Xtreme™**

Minimum Germination Rate: Xtreme 95%;

Seed Product Form: Raw

FLOWERING

Time frame when plants are receptive to flower

initiation: Days 12 – 14; 2 – 4 leaves present.

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

Specific Flowering Mechanism: Irradiance has no effect. Drought stress will induce early flowering.

PLUG CULTURE

Germination: Optimum conditions for seedling development that begins the day the crop is sown until cotyledon expansion. Expect radicle emergence in 3 – 5 days.

Cover: Seeds may be covered with a light layer of medium vermiculite to maintain moisture levels.

Media: pH: 6.2 – 6.5 Low pH (<5.5) may promote shoot tip abortion and allow sodium to become toxic. EC: 0.5 – 0.75

Light: Light is necessary for germination. If utilizing a chamber, providing a light source of 10 – 100 foot candles (100 – 1,000 lux) will improve germination and reduce stretch.

Moisture: Saturated (5) for days 1 – 2 or until radicle emergence. On days 3 – 7 reduce moisture to wet (4). On days 4 – 10 reduce moisture further to moist (3). After day 11, reduce again to medium (2) until cotyledon expansion. Do not allow seedlings to go into nighttime hours with wet foliage, as this may encourage tip abortion.

Humidity: 100% until radicle emergence then reduce to 40 – 70%.

Dehumidify: Provide horizontal airflow to aid in drying down the media through evapotranspiration, allowing better penetration of oxygen to the roots.

Temperature: 72° – 75°F (22° – 24°C). Temperatures exceeding 77°F (25°C) may induce thermodormancy, which inhibits germination of Impatiens. Temperature below 71°F (21°C) will decrease the speed and uniformity of germination. Temperatures below 65°F (18°C) may cause tip abortion and leaf malformation.

Plug Bulking/Flower Initiation: Optimum conditions during the vegetative period, beginning at cotyledon expansion, needed for the root to reach the edge of the plug cell AND to make the plant receptive to flower initiation.

Media: pH: 6.2 – 6.5. EC: 0.75: The total nutrients from the water and fertilizer should not exceed 1 EC to avoid leaf malformations. If media EC is >1.25, shoot tip abortion may occur.

Light: Provide 2,500 foot candles (25,000 lux). Supplemental lighting at 350 – 450 foot candles (3,500 – 4,500 lux) for two weeks will help to produce vigorous,

strong-stemmed seedlings in regions where light levels are low. Lighting for more than two weeks during early plug stages can result in bleaching or yellowing of leaves (photo-oxidation).

Temperature: 66° – 68°F (18° – 20°C) until first set of true leaves. Reduce to 62° – 65°F (16° – 18°C) to tone and hold.

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

Humidity: 40 – 50% and higher.

Fertilizers: Fertilize from day 2 through day 9 at 25 – 50 ppm nitrogen with a calcium-based fertilizer (14-0-14). Then continue feed at 75 – 100 ppm nitrogen every 2 – 4 waterings with a fertilizer containing both potassium and calcium nitrate. Minimal use of fertilizer will keep seedlings compact and promote flowering. Avoid phosphorus, which may stretch Impatiens seedlings. Injection of phosphoric acid to water lines may also affect plug quality.

Growth Regulators: Impatiens is responsive to B-Nine (daminozide), Bonzi (paclobutrazol) or Sumagic (uniconazole). However, careful monitoring of water, light and fertilizer applications can keep growth in check. Downward cupping or twisting of immature leaves may be caused by over use of PGRs. Xtreme has a different PGR regime than other impatiens. On Xtreme, it is recommended to use PGRs in the plug stages and control growth later through water and fertilizer management in the finishing stages. Under high temperature and humidity conditions, PGRs may help tone the crop.

GROWING ON

Transplant Ready: 4 – 5 weeks from sow in a '288' tray.

Finish Bulking/Flower Initiation: Optimum conditions during the vegetative period, beginning at transplant, needed for the root to reach the edge of the container AND to make the plant receptive to flower initiation.

Media: pH: 6.2 – 6.5. EC: 0.75 – 1

Light: Provide a light shade.

Temperature: 60° – 65°F (16° – 19°C) nights; 70° – 75°F (21° – 24°C) days.

Average Daily Temperature (ADT): 67°F (19°C)

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

Humidity: 40 – 70%

Dehumidify: Provide horizontal airflow to aid in drying down the media through evapotranspiration, allowing better penetration of oxygen to the roots.

Fertilizers: 75 – 100 ppm nitrogen every 2 – 3 waterings with a calcium-based fertilizer (13-2-13 or 14-4-14). Minimal fertilizer will keep plants compact and promote flowering. Tall, lush, dark-green plants with flowers beneath the foliage, or late flowering indicates too much fertilizer.



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Techniques to Enhance Post Harvest Quality

When to Treat: 1 – 2 weeks prior to shipping

Growth Regulators: Spray application of B-Nine (daminozide) at 2,500 – 3,500 ppm

Fertilizer: Potassium nitrate at 150 ppm.

Common Diseases: Pythium Root Rot, Botrytis Blight, Tomato Spotted Wilt Virus, Impatiens Necrotic Virus, Alternaria Leaf Spot, Pseudomonas and Rhizoctonia.

Common Pests: Fungus Gnats, Thrips, Aphids and Spider Mites

PRODUCT USE

Packs, containers, hanging baskets, mass plantings

GARDEN SPECIFICATIONS

Light: Partial shade to filtered sun

USDA Hardiness Zone: 11

AHS Heat Zone: 9 – 1

Xtreme 8 – 10" (20 – 25 cm) 8 – 10" (20 – 25 cm)

Impatiens SCHEDULING in Weeks

Total crop time 10 – 11 10 – 11 11 – 12 10 – 11 10 – 11 10 – 11 9 – 10

'288' crop time 4 – 5 4 – 5 4 – 5 4 – 5 4 – 5 4 – 5 4 – 5

Transplant to finish crop time

Packs 5 – 6 5 – 6 6 – 7 5 – 6 5 – 6 5 – 6 5 – 6

4" crop 6 – 7 6 – 7 7 – 8 6 – 7 6 – 7 6 – 7 6 – 7

6" crop 7 – 8 7 – 8 8 – 9 7 – 8 7 – 8 7 – 8 7 – 8

10" hanging basket 9 – 10 9 – 10 10 – 11 9 – 10 10 – 11 9 – 10 9 – 10

Note: These suggestions are only guidelines and may have to be altered to meet individual grower's needs. Check all chemical labels to verify registration for use in your region.

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