

## Impatiens Expo™

(*Impatiens walleriana*)

### Germination

Do not cover seed. Impatiens require more than 10 f.c. (100 Lux) of light for optimum germination.

### Plug Production

#### Stage 1 – Time of radicle emergence (3 to 5 days)

- Keep media very moist and near saturation.
- Do not cover or bury the seed.
- Germination temperature: 72 to 76°F (22 to 24°C).
- Light levels at 100 to 400 f.c. (1,000 to 4,000 Lux) will enhance germination.
- Keep soil pH at 6.0 to 6.2 and soluble salts (EC) less than 0.75 mmhos/cm (2:1 extraction). Keep ammonium levels less than 10 ppm.
- Impatiens are sensitive to high salts during germination.

#### Stage 2 – Stem and cotyledon emergence (10 days)

- Reduce moisture levels once radicle emergence occurs. Allow the soil to dry out slightly before watering for best germination and rooting.
- Soil temperature should be 72 to 75°F (22 to 24°C).
- Light at 450 to 700 f.c. (4,500 to 7,000 Lux) using supplemental HID lights for two weeks after cotyledons have expanded (12 to 18 hours/day) decreases plug crop time.
- Maintain ammonium levels at less than 10 ppm and soil pH at 6.0 to 6.2 with an EC of less than 1.0 mmhos/cm.
- Begin fertilizing with 50 to 75 ppm N from 14-0-14 or a calcium/potassium nitrate feed once cotyledons are fully expanded.
- Alternate feed with 2 to 3 clear water irrigation.

#### Stage 3 – Growth and development of true leaves (14 to 21 days)

- Allow the soil to dry out thoroughly between irrigations, but avoid severe wilting to promote root growth and control shoot growth.
- Soil temperature should be between 68 to 72°F (20 to 22°C).
- Maintain soil pH 6.0 to 6.2 and EC less than 1.0 mmhos/cm.
- Increase feed to 100 to 150 ppm N from 20-0-20 alternating with 14-0-14 or other calcium/potassium nitrate fertilizer.
- Fertilize every 2 to 3 irrigations.
- Use DIF (temperature differential) whenever possible to control plant height – especially the first 2 hours after sunrise. A-Rest, B-Nine, Bonzi or

Sumagic can also be used.

#### Stage 4 – Plants ready for transplanting or shipping (7 days)

- Soil should still be allowed to dry thoroughly.
- Temperature should be maintained at 62 to 65°F (17 to 18°C).
- Keep soil pH at 6.0 to 6.2 and an EC less than 0.75 mmhos/cm.
- Fertilize with 14-0-14 or calcium/potassium nitrate feed at 100 to 150 ppm N as needed.

**Note:** Impatiens require low to moderate feed levels. Excessive amounts will result in lush, vegetative stretched plugs.

### Growing On to Finish

#### Temperature

**Night:** 62 to 65°F (17 to 18°C)

**Day:** 65 to 75°F (18 to 24°C)

#### Light

Maintain light levels as high as possible while maintaining moderate temperatures.

#### Media

Use a well-drained, disease-free soil less medium with a medium initial nutrient charge and a pH of 6.2 to 6.8.

#### Fertilization

Fertilize every other irrigation with 15-0-15, alternating with 20-0-20 at 150 ppm nitrogen.

Maintain medium electrical conductivity around 1.0 mmhos/cm (using 1:2 extraction).

#### Controlling Height

Once plants are rooted to the sides of the containers, they can be allowed to wilt prior to irrigation to provide some height control.

Height can also be controlled by withholding fertilizer, especially phosphorus and ammonium-form nitrogen.

Impatiens are responsive to day/night DIF and shorter with a negative DIF

B-Nine, Bonzi and Sumagic are effective for height control, but not labeled for use in all locations. Always follow label instructions. B-Nine and Bonzi can delay flowering.

**In northern European conditions:** A tank mix of Alar 5 g/l and Cycocel 0.5 ml/l has been tested and shown to provide good control.

## **Light**

Impatiens are shade plants and should not be exposed to excessive amounts of sun. If properly hardened, impatiens can handle up to 4 hours of morning sun.

## **Common Problems**

**Insects:** Aphids, thrips

**Diseases:** Pythium, Rhizoctonia, Botrytis, TSWV/INSV (Impatiens Necrotic Spot Virus)

**Other:** Boron deficiency, high media pH

The most important disease and insect problem associated with impatiens is Impatiens Necrotic Spot Virus (INSV), which is transmitted by thrips. Control of thrips is necessary to avoid INSV.

## **Impatiens Crop Schedule & Uses** (Crop Schedule In Weeks)

**Sow to Transplant (406 plugs):** 4-5 weeks

**Transplant to Flower (4-in./10-cm pot or 36 tray):**  
5-6 weeks

**Note:** Growers should use the information presented here as a starting point. Crop times will vary depending on the climate, location, time of year and greenhouse environmental conditions.

