

## Fuseables™ Utopia

*Sutera cordata*

Approximate Seed Count (multi-seed pellets):  
12,675 to 19,845/oz. (500 to 700/g)

### Plug Production

#### Media

Use a well-drained, disease-free plug media with a pH range of 5.5 to 6.0, and EC less than 0.75 mS/cm (2:1 extraction).

#### Plug Tray Size

Can be produced in a 288, 105/128, 72 liner (European size: 128) or a similar size plug tray.

#### Sowing

Do not cover the multi-seed pellets with vermiculite at sowing, and make sure to pass the plug trays through the misting/watering tunnel after sowing, as this will help in faster dissolution/breakdown of the pellet.

**Stage 1** – Germination takes approximately 4 days

**Germination temperature:** 68 to 73°F (20 to 23°C).

**Light:** Required during germination (10 f.c./100 Lux or more).

**Media moisture:** Keep the media medium wet (level 4) during germination.

**Relative humidity:** Maintain 95 to 97% relative humidity until cotyledons emerge.

#### Stage 2

**Soil temperature:** 68 to 70°F (20 to 21°C)

**Light:** Up to 2,500 f.c. (26,900 Lux) during Stage 2 & 3.

**Media moisture:** Keep the media medium (level 3) to medium wet (level 4) during Stages 2 and 3.

**Fertilizer:** Apply fertilizer at rate 1 (less than 100 ppm N/less than 0.7 mS/cm EC) with a nitrate-form fertilizer with low phosphorous. Maintain a media pH of 5.8 to 6.2 and EC at 0.5 to 0.7 mS/cm (1:2 extraction).

#### Stage 3

**Soil temperature:** 65 to 70°F (18 to 21°C)

**Fertilizer:** Increase the fertilizer rate to 2 (100 to 175 ppm N/ 0.7 to 1.2 mS/cm EC). Maintain a media pH of 5.8 to 6.2 and EC at 0.7 to 1.0 mS/cm (1:2 extraction).

**Plant Growth Regulators:** Generally PGRs are not required during plug production if plants are shipped/transplanted on time.

**Under Northern European conditions,** foliar sprays of B-Nine/Alar (daminozide) at 640 to 950ppm (1 to 1.5g/l of 64% formulation or 0.75 to 1.15 g/l 85% formulation) worked well in toning the plugs.

#### Stage 4

**Soil temperature:** 59 to 65°F (15 to 18°C)

**Light:** Light levels can be up to 5,000 f.c. (53,800 Lux) if temperatures can be maintained.

**Media moisture:** Keep the media medium (level 3) wet. Do not let the seedlings wilt, as they will not recover favorably.

**Fertilizer:** Same as Stage 3.

### Growing On to Finish

#### Container Size

**10-in. (25-cm) to 12-in. (30-cm) color bowl or baskets:** 3-4 plugs per color bowl or basket

#### Media

Use a well-drained, disease-free media with a pH of 5.8 to 6.2, and a medium initial nutrient charge.

#### Temperature

**Night:** 56 to 61°F (13 to 16°C)

**Day:** 59 to 76°F (15 to 24°C)

Utopia can be grown as low as 50°F (10°C), but the crop time will be longer.

#### Light

Keep light levels as high as possible while maintaining appropriate temperatures.

**Fertilizer**

Starting 1 week after transplant, apply fertilizer at rate 3 (175 to 225 ppm N/1.2 to 1.5 mS/cm) using predominantly nitrate-form fertilizer with low phosphorus. If needed, a balanced ammonium and nitrate form fertilizer may be used as needed to encourage growth and balance the media pH. Maintain the media EC at 1.50 to 2.00 mS/cm and pH at 5.8 to 6.2.

**Irrigation**

Do not let the plants wilt as this will result in flower/bud drop.

**Plant Growth Regulators**

**In North American conditions:** It is not necessary when grown under cool temperatures with high light conditions. In warmer conditions, if needed, one application of B-Nine/Alar (daminozide) at 1,000 -1500ppm (1.2-1.8 g/l 85% formulation or 1.5-2.3 g/l 64% formulation) spray at 2 weeks after transplanted works well.

**In Northern European conditions:** Can use foliar sprays of B-Nine/Alar (daminozide) at 2,500 ppm (2.9 g/l 85% formulation or 3.9 g/l 64% formulation), and if necessary can follow-up with Cycocel (chlormequat) at 375 ppm (0.5ml/l 75% or 3.1ml/l 11.8% formulation).

**Crop Scheduling****Sow to transplant:**

**288 cells:** 4 week

**105/128 cells:** 5 weeks

**72 cells:** 5 to 6 weeks

**Transplant to flower:**

6-7 weeks from **288 cells**

5-6 weeks from **105/128 cells**

4-5 weeks from **72 cells**

Container Size	Number of Plants	Total crop time (Weeks)
10 to 12-in. (25 to 30-cm) color bowl or basket	4 plugs per basket	10 to 12

**Common Problems**

**Insects:** Whiteflies

**Diseases:** None

**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. Chemical and PGR recommendations are only guidelines. It is the responsibility of the applicator to read and follow all the current label directions for the specific chemical being used in accordance with all regulations.

630 231-1400  
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