

Tomato La Roma II

(*Lycopersicon lycopersicum*)

Germination

- Time of radicle emergence (2-3 days)
- Soil temperature 70-72°F (21-22°C).
- Keep media evenly moist but not saturated.
- Cover the seed lightly with coarse vermiculite.
- Light is not needed for germination until radicle emergence.
- Soil pH 5.5-5.8 and soluble salts (EC) less than 0.50 mmhos/cm (2:1 extraction).
- Tomato is very sensitive to high salts, particularly high ammonium, during germination.
- Keep ammonium levels less than 10 ppm.

Plug Production

STAGE 1 - Time of radicle emergence (2-3 days)

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STAGE 2 - Stem and cotyledon emergence (7 days)

- Soil temperature 68-72°F (20-22°C).
- Reduce moisture levels once radicle emergence occurs! Allow the soil to dry out slightly before watering for best germination and rooting.
- Light levels can be increased to 1000-1500 foot-candles.
- Keep soil pH 5.5-5.8 and EC less than 0.50 mmhos/cm.
- Begin fertilizing with 50 75 ppm N from 14 0 14 or a calcium/potassium nitrate feed once cotyledons are fully expanded.
- Keep ammonium levels less than 10 ppm.
- Alternate feed with clear water.
- Irrigate early in the day so foliage is dry by nightfall to prevent diseases.

STAGE 3 - Growth and development of true leaves (7 days)

- Soil temperature 60-65°F (16-18°C).
- Allow the soil to dry thoroughly between irrigations but avoid permanent wilting to promote root growth and control shoot growth.
- Increase light intensity to 1000-2500 foot-candles.

- Maintain soil pH 5.5-5.8 and EC less than 0.75 mmhos/cm.
- Increase feed to 50-75 ppm N with 14 0 14 or other calcium/potassium nitrate fertilizer.
- Fertilize every 2-3 irrigations.
- If using 15-0-15 supplement with magnesium 1 2x during this stage, using magnesium sulfate (16 oz/100 gal) or magnesium nitrate. Do not mix magnesium sulfate with calcium nitrate as precipitate will form!
- Use DIF whenever possible, especially the first 2 hours after sunrise, to control plant height.

STAGE 4 - Plants ready for transplanting or shipping (7 days)

- Soil temperature 60-62°F (16-17°C).
- Allow soil to dry thoroughly between irrigations.
- Maintain soil pH 5.5-5.8 and EC less than 0.75 mmhos/cm.
- Fertilize with 14 0 14 or calcium/potassium nitrate feed at 100 150 ppm N as needed.

Growing On to Finish

TEMPERATURE

Night: 50-60°F (10-16°C)

Day: 55-65°F (13-18°C)

LIGHT

Maintain light levels 4000-5000 foot-candles while maintaining moderate temperatures.

MEDIA

Use a well-drained, disease-free soil-less medium with a medium initial nutrient charge and a pH 5.5-6.2.

FERTILIZATION

- Tomatoes respond to increased fertilization with increased growth.
- Earliest garden yield comes from plants which have not been stressed from insufficient nutrition.
- Fertilize every third irrigation with 15-0-15 at 100-150 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 phosphorous and ammonium-form nitrogen.
- Tomatoes are responsive to day/night temperature differential (DIF), and are shorter with a negative DIF.
- Although Sumagic is labeled for use on Tomatoes in many states, we do not recommend its use until the grower has at least trialed it on a limited basis. Application rates, timing and variety response may affect growth for the home gardener.

Post Production Care

TEMPERATURE

- Tomatoes will tolerate warm temperatures, however temperatures below 75°F (24°C) are recommended during retail display.
- Optimum conditions may be difficult to maintain, especially if plants are displayed outside.
- Using a negative DIF will help keep the plants short and of high quality.

LIGHT

Tomatoes grow best in full sun; however partial shading may be beneficial during retail display.

COMMON PROBLEMS

Insects: Aphids, Thrips, Whitefly

Diseases: Botrytis, TSWV(INSV), Pythium, Rhizoctonia

