

Strawberry Berri Basket®

(*Fragaria ananassa*)

Germination

- Time of radicle emergence (5-7 days)
- Soil temperature 70°F (21°C).
- Keep media evenly moist but not saturated.
- Cover the seed lightly with coarse vermiculite.
- Light at 100-400 foot-candles may be beneficial for germination.
- Soil pH 5.5-5.8 and soluble salts (EC) less than 0.75 mmhos/cm (2:1 extraction).
- Strawberry is very sensitive to high salts, particularly high ammonium, during germination.
- Keep ammonium levels to less than 10 ppm.

Plug Production

STAGE 1 - Time of radicle emergence (5-7 days)

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STAGE 2 - Stem and cotyledon emergence (16-21 days)

- Soil temperature 70°F (21°C).
- Reduce moisture levels once radicle emergence occurs! Allow the soil to dry out slightly before watering for best germination and rooting.
- Gradually increase the light intensity to 500-1500 foot-candles.
- Keep soil pH 5.5-5.8 and EC to less than 0.75 mmhos/cm.
- Keep ammonium levels to less than 10 ppm.
- Begin fertilizing with 50 75 ppm N from 14 0 14, 15-5-15 or a calcium/potassium nitrate feed once cotyledons are fully expanded.
- 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 (7-14 days)

- Soil temperature 65-68°F (18-20°C).
- Allow the soil to dry slightly between irrigations but avoid permanent wilting to promote root growth and control shoot growth.

- Gradually increase the light intensity to 1500-2500 foot-candles.
- Maintain soil pH 5.5-5.8 and EC less than 1.0 mmhos/cm.
- Increase feed to 100 150 ppm N from 20 10 20 alternating with 14 0 14, 15-5-15 or other calcium/potassium nitrate fertilizer.
- Fertilize every 2nd – 3rd irrigation.
- 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 slightly between irrigations.
- Maintain soil pH 5.5-5.8 and EC to less than 0.75 mmhos/cm.
- Fertilize with 14 0 14, 15-5-15 or calcium/potassium nitrate feed at 100 150 ppm N as needed.

Growing On to Finish

TEMPERATURE

- **Night:** 60-62°F (16-17°C)
- **Day:** 60-65°F (16-18°C)

LIGHT

Maintain high light levels while maintaining moderate temperatures.

MEDIA

Use a well-drained, disease-free soil-less medium with a medium initial nutrient charge and a pH 6.5-7.5.

WATERING

- Keep the media moist but not soggy.
- Do not allow the media to dry out.

FERTILIZATION

- Fertilize every other irrigation with 15-0-15, 15-5-15 alternating with 20-10-20 at 150-200 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.
- Strawberries are responsive to day/night temperature differential (DIF), and are shorter with a negative DIF.
- Chemical PGR's can not be used on fruit, vegetables and herbs.
- Baskets in fruit in 11-13 weeks 3-4 plugs per basket.

COMMON PROBLEMS

Insects: Spider mites

Diseases: Leaf spots, Mildew

Post Production Care

TEMPERATURE

Optimum temperatures for strawberry:

- **Night:** 60-62°F (16-17°C)
- **Day:** 60-65°F (16-18°C)

Optimum conditions may be difficult to maintain, especially if plants are displayed outside.

LIGHT

Strawberries perform best in full sun; however partial shading may be beneficial during retail display.

