

Portulaca Tutti Frutti Mix

(*Portulaca grandiflora*)

Germination

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

- Soil temperature 78-80°F (26-27°C).
- Keep media evenly moist but not saturated.
- Do not cover or bury the seed.
- Light is not necessary for germination until radicle emergence.
- Soil pH 5.5-5.8 and soluble salts (EC) less than 0.75 mmhos/cm (2:1 extraction).
- Portulaca is very sensitive to high salts, particularly high ammonium, during germination.
- Keep ammonium levels less than 10 ppm.

Plug Production

STAGE 2: Stem and cotyledon emergence (7 days)

- Soil temperature 72-75°F (22-24°C).
- Reduce moisture levels once radicle emergence occurs! Allow the soil to dry out slightly before watering for best germination and rooting.
- Keep soil pH 5.5-5.8 and EC less than 0.75 mmhos/cm.
- Keep ammonium levels less than 10 ppm.
- Begin fertilizing with 50 75 ppm N from 14 0 14 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 (14-21 days)

- Soil temperature 68-72°F (20-22°C).
- Allow the soil to dry thoroughly between irrigations but avoid permanent wilting to promote root growth and control shoot growth.
- Portulaca prefers warm and dry conditions, and best root growth will be obtained under these conditions.
- 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 or other calcium/potassium nitrate fertilizer
- Fertilize every 2 3 irrigations.
- 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.

- Portulaca responds to B-Nine.

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

- Soil temperature 65-68°F (18-20°C).
- Allow soil to dry thoroughly between irrigations.
- Moisture control is the best method for preventing damping off and controlling height.
- 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 - 60-65°F (16-18°C)

Day - 65-70°F (18-21°C)

WATER

Do not overwater! Allow the media to dry thoroughly between irrigations.

LIGHT

Maintain light levels as high as possible while maintaining moderate temperatures. Full sun for growing on and toning.

MEDIA

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

FERTILIZATION

- Fertilize every other irrigation with 15-0-15 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.
- Portulaca are responsive to day/night temperature differential (DIF), and are shorter with a negative

DIF.

- Portulaca responds to B-Nine.

Post Production Care

TEMPERATURE

Optimum temperatures for Portulaca:

Night - 60-65°F (16-18°C)

Day - 65-70°F (18-21°C)

- 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.

WATER

Allow the soil to dry between watering. Portulaca does not respond well to excessively wet media.

LIGHT

Full sun.

