

Portulaca Happy Trails™

(*Portulaca grandiflora*)

Germination

Media

Use a well-drained, disease-free, soilless medium with a pH of 5.8 to 6.2 and an EC less than 0.75 (mmhos/cm with a 1:2 extraction). Portulaca is very sensitive to high salts, particularly high ammonium, during germination.

Sowing

Happy Hour and Happy Trails portulaca is offered as multi-seeded pellets and as raw seed. Each multi-seeded pellet will generally yield 2 to 4 plants. Suggested plug tray size is a 288-cell tray. Do not cover the seed.

Photoperiod

Portulaca is sensitive to short days, even during the plug stage. When daylength is shorter than critical, plants can rosette (stop growing without flowering). Once plants rosette, they will not recover even when given long day treatment.

To prevent plants from rosetting, sow seed when the natural daylength is longer than 10 hours and 30 minutes for Happy Hour (10.5 hours) and 10 hours for Happy Trails. If sowing earlier than suggested, provide long day conditions (daylength extension to 12 to 13 hours) during all phases of production until critical natural daylength is achieved.

Media

Use a well-drained, disease-free, soilless medium with a pH of 5.5 to 6.2 and a medium initial nutrient charge.

Stage 1 – Germination takes 2 to 3 days.

Soil temperature: 71 to 79°F (22 to 26°C)

Light: Light (more than 10 f.c.) is not required, but beneficial for germination.

Moisture: Keep soil moist but not saturated (level 4) during Stage 1 for optimal germination.

Humidity: Maintain 95% relative humidity (RH) until radicles emerge.

Plug Production

Stage 2

Soil temperature: 71 to 73°F (22 to 23°C)

Light: Up to 2,500 f.c. (26,900 Lux)

Moisture: Start to slightly reduce soil moisture (level 3) to allow the soil to dry out slightly before watering for best rooting.

Fertilizer: Apply fertilizer at rate 1 (less than 100 ppm N/less than 0.7 mS/cm EC) from nitrate-form fertilizers with low phosphorous. Keep ammonium levels less than 10 ppm.

Stage 3

Soil temperature: 68 to 73°F (20 to 23°C)

Light: Up to 2,500 f.c. (26,900 Lux)

Moisture: Allow media to further dry until the surface becomes light brown (level 2) before watering. Keep the moisture to wet-dry cycle (moisture level 4 to 2). Portulaca prefers warm, high light and dry conditions. Best root growth will be obtained under these conditions.

Irrigate early in the day so foliage is dry by nightfall to prevent diseases. Damping off (*Rhizoctonia*) is the most common problem when the plants are grown too wet.

Fertilizer: Increase fertilizer to rate 2 (100 to 175 ppm N/0.7 to 1.2 mS/cm EC).

Growth Regulators: None. Growth regulators are not needed.

Stage 4

Soil temperature: 65 to 67°F (18 to 19°C) to reduce stretching.

Light: Up to 5,000 f.c. (53,800 Lux) if temperature can be controlled.

Moisture: Same as Stage 3.

Fertilizer: Same as Stage 3.

Growing On to Finish

Media

Use a well-drained, disease-free, soilless medium with a pH of 5.5 to 6.2 and a medium initial nutrient charge.

Temperature

Nights: 65 to 67°F (18 to 19°C)

Days: 68 to 76°F (20 to 25°C)

Flower buds may not develop or open if temperatures are too low.

Light

Maintain light levels as high as possible while maintaining recommended temperatures. Flower buds may not open if light levels are too low.

Photoperiod

If transplanting plugs when the daylength is shorter than 10 hours, 30 minutes (10.5 hours) for Happy Hour and 10 hours for Happy Trails, provide long day conditions after transplanting. Daylength extension to 12 to 13 hours can be used. Make sure that the plugs/plants have been produced with the proper daylength as noted under Plug Production – Photoperiod.

Irrigation

Do not overwater. Allow the media to dry thoroughly between watering. Plants can be allowed to wilt slightly after the roots reach the side of the container.

Fertilizer

Fertilize every other irrigation with 15-0-15 alternating with 20-10-20 at 150 to 200 ppm N.

Growth Regulators

PGRs are generally not needed unless grown under very warm conditions. Height can be controlled by allowing the soil to dry thoroughly between waterings. Plants can be allowed to wilt slightly after the roots reach the side of the container.

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

Crop Scheduling

Sow to transplant (288-cell plug tray): 4 to 5 weeks.

Portulaca is very sensitive to cool temperatures and low light levels. Plants grown under these conditions are likely to have longer crop times than noted below.

Container Size: 606 flat

Plugs* Per Flat/Pot: 36

Weeks From Transplant: 5

Container Size: 4-in. (10-cm) pot

Plugs* Per Flat/Pot: 1

Weeks From Transplant: 5 to 6

*Plugs are grown from multi-seeded pellets. Each multi-seeded pellet will generally yield 2 to 4 plants.

Common Problems

Insects: Spider mites, thrips

Diseases: Rhizoctonia, Pythium

Tips for Landscapers and Gardeners

Plant in full sun after all danger of frost is past. Space plants 10 to 12 in. (25 to 30 cm) apart in well-drained soil. Flowers close at night.

