GrowerFacts

PanAmerican Seed™

Grass Juncus effusus Spiralis Twister

(*Juncus effusus spiralis*)

Germination

Germination takes about 10 to 13 days.

Soil temperature: 70 to 78°F (21 to 26°C).

Light: Light is optional.

Moisture: Keep soil wet (level 4) during Stage 1.

Humidity: Maintain 100% relative humidity (RH) until radicles emerge.

Plug Production

Media
Use a well-drained, disease-free, soilless media with a pH of 5.5 to 6.2 and a medium initial nutrient charge (EC 0.75 mmhos/cm).

Sowing
Can be produced in a 288, 128, 72 liner (European size: 264) or a similar size plug tray. Do not cover pellets.

Stage 1 – Germination takes about 10 to 13 days.

Soil temperature: 70 to 78°F (21 to 26°C).

Light: Light is optional.

Moisture: Keep soil wet (level 4) during Stage 1.

Humidity: Maintain 100% relative humidity (RH) until radicles emerge.

Stage 2
Soil temperature: 68 to 70ºF (20 to 21ºC).

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

Moisture: Reduce soil moisture slightly (level 3) to allow the roots to penetrate into the media.

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.

Stage 3

Soil temperature: 68ºF (20ºC)

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

Moisture: Allow media to dry until the surface becomes light brown (level 2) before watering. Do not allow the seedlings to wilt.

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

Growth Regulators: Not needed.

Stage 4

Soil temperature: 64 to 66°F (18 to 19°C).

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

Moisture: Maintain wet/dry cycle. Do not allow the seedlings to wilt.

Fertilizer: Same as Stage 3.

Growing On to Finish

Media
Use a well-drained, disease-free, soilless media with a pH of 5.5 to 6.2 and a medium initial nutrient charge (EC 0.75 mmhos/cm).

Transplanting
Do not bury the plugs too deep when transplanting.

Temperature
Nights: 59 to 64°F (15 to 18°C)

Days: 66 to 74°F (19 to 23°C)
Twister can be grown under temperatures as low as 50°F (10°C) but the crop time will increase significantly.

Light
Maintain light levels as high as possible if temperature can be controlled.

Irrigation
Maintain medium moisture conditions. Twister can be even grown under saturated condition.

Fertilizer
Apply fertilizer at rate 3 (175 to 225 ppm N/1.2 to1.5 mS/cm EC) once a week from nitrate-form fertilizer with low phosphorus. Avoid using excessive ammonia nitrogen-form fertilizers and overfeeding, as these will

result in less upright plants.

Growth Regulators
PGRs are not needed.

Pinching
Pinching is not needed.

Spacing
Can be grown pot tight.

Container Size
306 premium pack: 1 plug per cell
2.5-in. (6-cm) pot: 1 plug per pot
4-in. (10-cm) pot: 1 plug per pot
6-in. (15-cm) pot: 1 to 3 plugs per pot
1-gallon (18-cm) pot: 1 to 3 plugs per pot

Crop Scheduling
Sow to transplant (406 to 288-cell plug tray):
7 to 8 weeks. Add one more week for a 128-cell plug tray.

Transplant to saleable size:

Container Size: 306 premium pack

Plants per Pot/Basket: 1

Weeks from Transplant: 6-7

Total Weeks: 13-15

Container Size: 2.5-in. (6-cm) pot

Plants per Pot/Basket: 1

Weeks from Transplant: 5-6

Total Weeks: 12-13

Container Size: 4 to 4.5-in. (10 to 11-cm) pot

Plants per Pot/Basket: 1

Weeks from Transplant: 7-8

Total Weeks: 14-16

Container Size: 6 to 6.5-in. (15 to 16-cm) pot

Plants per Pot/Basket: 3

Weeks from Transplant: 7-8

Total Weeks: 14-16

Container Size: Gallon

Plants per Pot/Basket: 3

Weeks from Transplant: 7-8

Total Weeks: 14-16

NOTE: The transplant to finish time for 6-in. (15-cm) and gallon containers is based on 3 plugs per pot. Add 2 more weeks to the crop time when planting 1 plug per 6-in. (15-cm) and gallon (18-cm) container.

Common Problems
No major insect or disease issues.

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.

Garden & Landscape Information
Location: Full sun to full shade

Garden height: 12 to 14 in. (30 to 35 cm)

Garden spread: 12 to 14 in. (30 to 35 cm)

USDA Hardiness Zone: to 5 (-20°F/-29°C minimum temperature)

PanAmerican Seed™

PanAmerican Seed Co.
622 Town Road,West Chicago, Illinois, USA, 60185-2698
630 231-1400 Fax: 630 231-3609 PanAmSeed.com

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