GrowerFacts

Spreading Petunia Shock Wave®

(*Petunia x hybrida*)

Germination

NOTE: Because their spreading habit begins after transplanting, Shock Wave plugs can be produced like other petunia plugs.

Media
Use a well-drained, disease-free seedling medium with a pH of 5.5 to 6.0 and EC about 0.75 mS/cm (1:2 extraction).

Sowing
Covering Shock Wave seed is not recommended. Water adequately after sowing to completely dissolve the pellet.

Stage 1 – Germination takes approximately 4 days.

Soil temperature: 71 to 76°F (22 to 24°C)

Light: Lighting is optional. Denim and Red will benefit from lights in Stage 1.

Moisture: Keep soil very wet (level 5) during Stage 1 for optimal germination.

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

Plug Production

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Stage 1 – Germination takes approximately 4 days.

Soil temperature: 72 to 76°F (22 to 24°C)

Light: Lighting is optional. Denim and Red will benefit from lights in Stage 1.

Moisture: Keep soil very wet (level 5) during Stage 1 for optimal germination.

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

Stage 2
Soil temperature: 68 to 76°F (20 to 24°C)

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

Moisture: Start to slightly reduce soil moisture (level 4) to allow root 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: 65 to 70°F (18 to 21°C)

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. Keep the moisture to wet-dry cycle (moisture level 4 to 2).

Fertilizer: Increase fertilizer to rate 2 (100 to 175 ppm N/0.7 to 1.2 mS/cm EC). If growth is slow, apply a balanced ammonium and nitrate-form fertilizer with every other fertilization. Maintain medium pH of 5.8 to 6.2 and EC between 1.0 and 1.5 mS/cm (1:2 extraction).

Plant growth regulators: Control Shock Wave plug growth first by environment, nutrition and irrigation management, then with chemical plant growth regulators if needed. Minimize ammonium-form nitrogen fertilizer to avoid seedling elongation. Temperature differential (DIF) can also be used to minimize height. Test all chemical plant regulators first.

In North American conditions: Apply B-Nine/Alar (daminozide) 1 to 2 applications at 5,000 ppm (6.0 g/l 85% formulation or 7.8 g/l 64% formulation) as a spray. The first application should be made when plugs have 2 to 3 true leaves. A second application can be made 7 days later. This treatment can improve basal branching of mature plants.

In Northern European conditions: 1 to 3 applications of B-Nine/Alar (daminozide) at 1,250 ppm (1.5 g/l 85% formulation or 2.0 g/l 64% formulation) spray have been tested and shown effective if needed.

Stage 4
Soil temperature: 59 to 64°F (15 to 18°C)

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

Container Size
1801 flats & Wave-Pink 306-Packs: 1 plant per cell

4 to 4.5-in. (10 to 11-cm) pots: 1 plant per pot

6-in. (15-cm) pots: 1 to 3 plants per pot

10-in. (25-cm) baskets: 3 to 4 plants per basket

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: 57 to 65°F (14 to 18°C)

Days: 61 to 75°F (16 to 24°C)

Shock Wave can tolerate temperatures as low as 35°F (2°C); however, keep in mind that crop timing (time to flower) is related to daily average temperature when grown under proper daylength. Shock Wave plants will take longer to flower when grown in cooler conditions.

Note: Shock Wave Dark Purple may get some leaf burn under cold temperature at about 35°F (2°C) but do not significantly suffer in plant development and will grow out of this when temperatures rise.

Light
Keep light levels as high as possible while maintaining temperature.

Fertilizer
Shock Wave petunias require more fertilizer than is usually recommended for petunias. For best results, apply nitrate-form with low phosphorus fertilizer at rate 4 (225 to 300 ppm N/1.5 to 2.0 mS/cm EC) every other irrigation. Apply a balanced ammonium and nitrate-form fertilizer with low phosphorus as needed to encourage growth and maintain a balanced medium pH of 5.8 to 6.2.

For constant fertilizer program, can apply fertilizer at rate 3 (175 to 225 ppm N or 1.2 to1.5 mS/cm EC) while maintaining the above recommended EC and pH ranges.

Prior to shipping the finished product – particularly baskets and large containers – it is recommended to add a slow-release fertilizer. Due to the dense canopy and the tremendous branching that result in a high amount of foliage and flowers and the overall strong plant growth, Shock Wave plants are heavy feeders. For best consumer success, we encourage incorporation of NutriCoat or Osmocote into the fertilizer program. Please check the label for application quantities based upon the container size.

Plant Growth Regulators
In North American conditions: Use B-Nine/Alar (daminozide) at 5,000 ppm (5.9 g/l, 85% formulation or 7.8 g/l, 64% formulation) 7 days after transplant. Follow with a Bonzi drench about 3 ppm (0.8 ml/l, 0.4% formulation) in Illinois environment, similar to that recommended for Easy Wave varieties. Since Shock Wave Ivory and Pink Vein are genetically more vigorous than other varieties in the Shock Wave series, it is recommended to apply a heavier Bonzi drench rate similar to that recommended for Wave petunias about 5 ppm (1.3 ml/l, 0.4% formulation) in Illinois environment.

For 9-packs, it is recommended to follow the PGR regimes above and to ship product on time.

If additional PGRs are needed, a Bonzi (paclobutrazol) spray at 30 ppm (7.5 ml/l, 0.4% formulation) will help hold the finished crop.

In northern European conditions: Use the same PGR regime but slightly heavier in Bonzi drench, i.e.; 3 to 4 ppm for Shock Wave Coconut, Coral Crush, Denim, Deep Purple, Pink Shades, Red and Rose IPD, 6 to 8 ppm for Shock Wave Ivory and Pink Vein.

Note: Topflor can be used in place of Bonzi at 2/3 the rate of Bonzi.

To determine the best rate for your conditions, we

Ball Horticultural Company
622 Town Road, West Chicago, Illinois, USA, 60185-2698
630 879-BALL www.ballseed.com

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recommend that you run an in-house trial.

Photoperiod
Shock Wave petunia lighting requirements vary by location, variety and production week.

Shock Wave petunias are less sensitive to daylength than Wave petunias. Shock Wave varieties will flower successfully at 10 hours. The crop time at 10 hours will be about 10 to 14 days longer than at 12-hour daylength.

When producing Shock Wave petunias early in the year when days are short, decrease crop times by using Photoperiodic lighting after transplanting. Day extension or night break lighting are acceptable.

Crop Scheduling
Sow to transplant (288-cell plug): 5 to 6 weeks

Transplant to flower: 4 to 7 weeks

Total Crop Time:
Container Size: 1801 flat, Wave-Pink 306-pack

Number of Plants: 1 plant per cell

Spring: 9 to11 weeks

Summer: 8 to10 weeks

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

Number of Plants: 1 plant per pot

Spring: 9 to 11 weeks

Summer: 8 to10 weeks

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

Number of Plants: 1 to 3 plants per pot

Spring: 10 to 12 weeks

Summer: 8 to10 weeks

Container Size: 10-in. (25-cm) basket

Number of Plants: 3 to 4 plants per basket

Spring: 10 to 13 weeks

Summer: 8 to 11 weeks

Note: While Shock Wave can successfully flower under short-day conditions, it takes about 10 to 14 days longer to flower compared to long-day conditions at the same temperature. In addition to daylength, temperature also affects crop time. Therefore, when producing Shock Wave outdoors during early Spring, it should be considered that both daylength and cool temperature will delay flower time.

Common Problems
No major problems will occur if good cultural and IPM practices are used.

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.

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