

Alternanthera Purple Knight

(*Alternanthera dentata*)

Germination

Approximate seed count (raw): 22,068 S./oz. (779 S./g)

Media

Use a well-drained, disease-free, soilless medium with a pH of 5.5 to 6.3 and a medium initial nutrient charge (EC 0.75 mmhos/cm with a 1:2 extraction).

Sowing

Sow 1 seed per cell in 288 or 180 plug trays. Cover the seed lightly with coarse vermiculite.

Stage 1 – Germination takes 3 to 4 days.

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

Light: Light is beneficial for uniform germination.

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

Humidity: Maintain 95 to 97% relative humidity (RH) until radicles emerge.

Plug Production

Stage 2

Soil temperature: 68 to 72°F (20 to 22°C)

Light: 1,000 to 2,500 f.c. (10,000 to 30,000 Lux).

Moisture: Reduce soil moisture slightly (level 3 to 4) to allow the roots to penetrate into the media.

Fertilizer: Apply fertilizer at rate 1 (less than 100 ppm N; less than 0.7 mmhos/cm EC) from nitrate-form fertilizers with low phosphorous. (15-5-15).

Humidity: Maintain 80 to 85% relative humidity (RH).

Stage 3

Soil temperature: 65 to 71°F (18 to 21°C)

Light: Up to 2,500 f.c. (30,000 Lux) if temperature can be controlled.

Moisture: Allow the soil moisture to dry to level 3.

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

Growth Regulators: Not needed in plug phase.

Humidity: Maintain 75 to 80% relative humidity.

Stage 4

Soil temperature: 62 to 65°F (16 to 18°C)

Light: Up to 5,000 f.c. (54,000 Lux).

Moisture: Same as Stage 3.

Fertilizer: Same as Stage 3.

Growing On to Finish

Container Size

Premium pack, 4 to 4.5-in. (10 to 11-cm) pot, quart pots: 1 plug per pot

6 to 6.5-in. (15 to 16-cm) pot: 3 plugs per pot

Gallon (7 in./18 cm): 3 plugs per pot

Media

Use a well-drained, disease-free, soilless media with coarse parts with a pH of 5.8 to 6.2 and an EC of 0.75 mmhos/cm.

Temperature

Nights: 62 to 65°F (16 to 18°C)

Days: 65 to 75°F (18 to 24°C)

Note: Purple Prince has been noted to be more cold sensitive than Purple Knight. The foliage could be damaged at temperature below 46°F (8°C).

Light

Keep as high as possible while maintaining temperature. Higher light levels result in deeper purple foliage.

Photoperiod

Both Purple Knight and Purple Prince are short day plants. To maintain vegetative growth, plants should be grown under daylength longer than 12 hours, especially Purple Knight. Purple Prince will keep bulking after flowering under short day conditions.

Irrigation

Keep media medium moist (level 3, substrate color is brown to dark brown); let top soil dry in between waterings but do not allow medium to get too dry. Irrigate plants before they are severely wilted to avoid damage.

Fertilizer

Alternanthera generally needs moderate fertilization. Apply fertilizer at rate 3 (175 to 225 ppm N; 1.2 to 1.5 mmhos/cm), or feed plants weekly with 200 ppm N in a complete fertilizer.

Growth Regulators

Paclobutrazol (Bonzi, Piccolo) 15 to 20 ppm (3.75 to 5.0 ml/l, 0.4% formulation) or Daminozide (B-Nine, Alar) 2,500 ppm to 5,000 ppm (3.0 to 6.0 g/l 85% formulation or 3.9 to 7.8 g/l of 64% formulation) spray is effective in controlling height and spread. Repeat applications as needed. For warm conditions, Paclobutrazol (Bonzi, Piccolo) drench at 2 to 3 ppm (0.5 to 0.75 ml, 0.4% formulation) can be used. Do not use Cycocel, as phytotoxicity will occur.

Pinching

Pinching is not needed.

Crop Scheduling

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

Transplant to saleable from 288 cells:

Container Size: Premium pack

Plants per Pot/Basket: 1

Weeks from Transplant: 7-8

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

Plants per Pot/Basket: 1

Weeks from Transplant: 7-8

Container Size: Quart pot

Plants per Pot/Basket: 1

Weeks from Transplant: 7-8

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

Plants per Pot/Basket: 3

Weeks from Transplant: 8-9

Container Size: Gallon container (8-in./20-cm standard pot)

Plants per Pot/Basket: 3

Weeks from Transplant: 8-9

If producing liners (72-tray), allow 6 to 7 weeks from sow to transplant, and reduce post-transplant crop time by two weeks.

Common Problems

Insects: No serious problems.

Diseases: No serious problems.

Home Gardener “Green Thumb” Tips

Plant in full sun to light shade. Both Purple Knight and Purple Prince alternanthera can be used in mixed containers, or in the garden. Space plants 12 in. (30 cm) apart in the garden. Using mulch around the plants seems to help get them established faster by keeping the soil cool and evenly moist. Feed regularly with an all-purpose fertilizer.

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.

