GrowerFacts

Gomphrena Fireworks

(*Gomphrena pulchella*)

Germination

Media
Use a well-drained, disease-free media with a pH range of 5.8 to 6.2, and EC less than 0.75mS/cm (2:1 extraction).

Sowing
Can be produced in a 406, 288 (European size; 264) or a similar size plug tray with 1 seed per cell. Cover the seed with vermiculite.

Germination takes approximately 2 to 3 days.
Germination temperature: 68 to 75°F (20 to 24°C).

Light: Light is required for germination.

Media Moisture: Keep the media medium wet (level 4) during germination.

Relative Humidity: Maintain 95 to 97% relative humidity until cotyledons emerge. Avoid excess humidity later-on in the plug production, as this will create conditions favorable for disease incidence.

Plug Production

Media
Use a well-drained, disease-free media with a pH range of 5.8 to 6.2, and EC less than 0.75mS/cm (2:1 extraction).

Sowing
Can be produced in a 406, 288 (European size; 264) or a similar size plug tray with 1 seed per cell. Cover the seed with vermiculite.

Stage 1 – Germination takes approximately 2 to 3 days.

Germination temperature: 68 to 75°F (20 to 24°C).

Light: Light is required for germination.

Media Moisture: Keep the media medium wet (level 4) during germination.

Relative Humidity: Maintain 95 to 97% relative humidity until cotyledons emerge. Avoid excess humidity later-on in the plug production, as this will create conditions favorable for disease incidence.

Stage 2

Temperature: 72°F (22°C) days; 68°F (20°C) nights.

Light: Can be up to 2,500 f.c. (26,900 Lux) during Stages 2 and 3.

Media Moisture: Keep the media medium (level 3) to medium wet (level 4) during Stage 2.

Fertilizer: Apply fertilizer at rate 1 (less than 100 ppm N/less than 0.7 mS/cm EC) with a nitrate-form fertilizer with low phosphorous. Maintain a media pH of 5.8 to 6.2 and EC at 0.5 to 0.7 mS/cm (1:2 extraction).

Stage 3

Temperature: 72°F (22°C) days; 68°F (20°C) nights.

Light: Can be up to 5,000 f.c. (54,000 Lux) while maintaining temperatures.

Media Moisture: Moisture level can be reduced to medium to medium dry (level 3 to 2). Do not allow the seedlings to wilt.

Fertilizer: Increase the fertilizer rate to 2 (100 to 175 ppm N/0.7 to 1.2 mS/cm EC). Maintain a media pH of 5.8 to 6.2 and EC at 0.7 to 1.0 mS/cm (1:2 extraction).

Stage 4
Temperature: 68°F (20°C) days; 64°F (18°C) nights.

Light: Can be up to 5,000 f.c. (54,000 Lux) while maintaining temperatures.

Media Moisture: Moisture level can be reduced to medium to medium dry (level 3 to 2). Do not allow the seedlings to wilt.

Fertilizer: Keep the fertilizer rate to 2 (100 to 175 ppm N/0.7 to 1.2 mS/cm EC). Maintain a media pH of 5.8 to 6.2 and EC at 0.7 to 1.0 mS/cm (1:2 extraction).

Plant Growth Regulators
Generally not required in young plant stage. If needed, young plants react well to B-Nine/Alar.

Growing On to Finish

Media
Use a well-drained, disease-free soilless media with a pH of 5.5 to 6.2 and an EC of 0.75 mmhos/cm.

Temperature

Night: 63° to 66°F (17° to 19°C)

Day: 65 to 75°F (18 to 25°C)
Gomphrena can be grown under moderate to cooler temperature conditions (50°F/10°C minimum); however, crop time increases.

Light
Light level should be as high as possible while maintaining proper temperature.

Irrigation
Avoid both excessive watering and drought.

Fertilization
Apply fertilizer at rate 4 (225 to 300 ppm N/1.5 to 2 mS/cm EC) once a week from a nitrate-form fertilizer with low phosphorus. A balanced ammonium and nitrate-form fertilizer may be applied as needed. Maintain the media EC at 1.5 to 2.0 mS/cm and pH at 5.8 to 6.2.

For constant fertilizer program, can apply fertilizer at rate 3 (175 to 225 ppm N or 1.2 to 1.5 mS/cm) while maintaining the above recommended EC and pH ranges.

Plant Growth Regulators
High light levels, spacing on time and cooler temperatures will keep plants from stretching. However, Gomphrena does stretch quite easily after transplant, therefore PGRs are necessary to maintain acceptable plant height.

North American conditions: Apply Bonzi 4 to 10 ppm (1 to 2.5 ml/l) drench about 2 to 3 weeks after transplant. The exact rate depends on circumstances. In the PanAmerican Seed Santa Paula, California facility, a 4 to 6 ppm (1 to 1.5 ml/l) Bonzi drench was sufficient.

Northwestern European conditions: In the PanAmerican Seed Rijsenhout, Holland facility, a 4 to 6 ppm (1 to 1.5 ml/l) Bonzi drench was sufficient.

A Bonzi spray is less efficient and needs to be repeated several times.

Under all conditions Bonzi sprays can be used after the drench to maintain plant structure.

Fireworks Gomphrena plant response to PGRs is variable with container size and different environmental conditions. We recommend that you run an in-house trial to determine the best rate or method for your conditions.

Pinching
Pinching is not required.

Container Size
Gomphrena can be produced in 5-in. (13-cm) pots with 1 plant per pot or in 1-gallon (18 to 19-cm) containers with 2 to 3 plants per pot.

Crop Scheduling
Sow to transplant (400 or 288/264-cell plug tray): 5 to 6 weeks.
Transplant to finish: 8 to 9 weeks at recommended temperatures/conditions. If grown under moderate conditions, crop time can be up to 10 to 12 weeks.

Common Problems
No major problems when using good culture and IPM practices.

Garden and Landscape Tips

- Gomphrena Fireworks is very heat and drought-tolerant once established.
- Plant in full sun after all danger of frost is past.
- Space plants 12 to 18 in. (30 to 45 cm) apart in well-drained soil.
- Mature height is 4 ft. (1.2 m); mature spread is 4 ft. (1.2 m).

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.

Ball

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