GrowerFacts

Gaillardia Mesa™

(*Gaillardia x grandiflora, Gaillardia aristata x Gaillardia pulchella*)

Germination

Approximate seed count (clean): 7,080 to 9,900 S/oz. (250 to 350 S/g)

Key flowering facts:

- Mesa Gaillardia is a first year-flowering perennial.
- Photoperiod response: Mesa Gaillardia is a facultative long-day plant. All Mesa colors except Red require 14 hours or longer daylength for uniform and faster flowering. Mesa Red is less sensitive to daylength. It can successfully flower under 10-hour short-day conditions, with only about 7 to 10 days later flowering than when grown under 13 hours or longer.

Media
Use a well-drained, disease-free, soilless media with a pH of 5.8 to 6.2 and a medium initial nutrient charge (EC 0.75 mmhos/cm).

Sowing
Sow seed in 288 or larger plug tray. In Europe, 264-cell trays can be used. Covering seed with vermiculite is recommended.

Stage 1 – Germination takes 4 to 5 days.
Soil temperature: 68 to 73°F (20 to 23°C)

Light: Optional.

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

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

Plug Production

Stage 2
Soil temperature: 68 to 73°F (20 to 23°C)

Light: Up to 2,500 f.c. (26,900 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 mS/cm EC) from nitrate-form fertilizers with low phosphorous.

Stage 3
Soil temperature: 65 to 67°F (15 to 19°C)

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

Moisture: Allow media to dry further 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).

Growth Regulators: Generally not needed. If necessary, B-Nine/Alar (daminozide) 2,500 ppm (3.0 g/l 85% formulation or 4.0 g/l of 64% formulation) can be applied at Stage 3.

In northern European conditions: Use Alar/B-Nine 1,300 ppm (1.5 g/l 85% formulation or 2.0 g/l of 64% formulation).

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
5-in. (13-cm) square or quart pots: 1 plant per pot

6-in. (15-cm) or gallon (18-cm) pots: 1 plant per pot

NOTE: In a 10-in. (25-cm) pot, 3 plants per pot are recommended; however, using 1 plant per pot is possible when sown in early Spring and grown under moderate temperature conditions.

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).

Temperature
Nights: 50 to 61°F (10 to 16°C)

Days: 59 to 70°F (15 to 21°C)
Mesa Gaillardia can be grown at lower temperatures (frost-free cold frame/poly house in Spring), however crop times will increase.

Light
Maintain light levels as high as possible while maintain moderate temperature.

Photoperiod
Mesa Gaillardia is a facultative long-day plant. All Mesa colors except Red require 14 hours or longer daylength for uniform and faster flowering. Mesa Red is less sensitive to daylength. It can successfully flower under 10-hour short-day conditions, with only about 7 to 10 days later flowering than when grown under 13 hours or longer.

Irrigation
Maintain media moisture. Plants can dry out quickly when they are large. Water thoroughly when irrigation is needed.

Fertilizer
Apply fertilizer at rate 3 (175 to 225 ppm N/1.2 to 1.5 mS/cm) using predominately nitrate-form fertilizer with low phosphorus and high potassium. Maintain the media EC at 1.5 to 2.0 mS/cm and pH at 6.0 to 6.5.

For constant fertilizer program, can apply fertilizer at rate 2 (100 to 175 ppm N or 0.7 to 1.2 mS/cm) while maintaining the above recommended EC and pH ranges.

Growth Regulators
PGRs are not necessary if grown under cooler temperatures. If necessary, B-Nine/Alar (daminozide) 5,000 ppm (6.0 g/l 85% formulation or 8.0 g/l of 64% formulation) is good for plant size control.

In northern Europe conditions: 2,500 ppm Alar (3.0 g/l 85% formulation or 4.0 g/l of 64% formulation) works well.

Pinching
Pinching is not needed.

Spacing
Space plants when foliage is touching.

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

Transplant to flower: 11 to 14 weeks

Total crop time: 16 to 20 weeks.

Generally, Mesa Red flowers about 1 to 2 weeks earlier than other Mesa varieties. Mesa Bright Bicolor and Mesa Peach flower about 1 to 2 weeks faster than Mesa Yellow, depending on daylength conditions. The longer daylength (longer than 14 hours) they are grown under, the bigger the difference in flower timing.

Note: The total crop time of about 16 to 18 weeks is based on Spring production under night temperatures of about 50 to 61°F (10 to 16°C) and day temperatures of about 59 to 70°F (15 to 21°C) with natural daylength. Crop time will be shorter under warmer temperature and long day conditions, or longer under cooler and short day conditions.

Spring to Autumn Production: Sow from early February to July, for finishing May to September.

Spring Production: Sow in January for natural flowering in later May to early June.

Overwinter Production: Sow in July to early September for natural flowering late April of the following year.

Common Problems
Insect: Watch for fungus gnat larva and thrips.

Disease: INSV, white smut, powdery mildew.

Germination: Occasionally there are albino seedlings which will not develop into viable plants. Frequency can vary up to 9%

Garden and Landscape Information

- Mesa Yellow Gaillardia is first year-flowering perennial to USDA Hardiness Zone 5 (-20 to -10° F/-29 to -23°C minimum temperatures). No

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vernalization is required.
- 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.
- After plants are established, Mesa Gaillardia is quite drought tolerant.
- Garden height is 16 to 18 in. (40 to 45 cm); spread is 20 to 22 in. (50 to 55 cm).

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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