

Cultural Information for: Marigold 'Proud Mari' Annual
Common Name: Marigold
Botanical Name: Tagetes erecta
Seed Count: 7,000-11,500/oz. 250-400/gr.
Optimum Germination Temperature: 72-75°F / 22-24°C
Optimum Growing Temperature: 65-70°F / 18-21°C

Media: Peat-lite mixes work well at a soil pH of 6.2 - 6.5.

Temperature: Optimum day temperature is 65-70°F/18-21°C with nights between 55-65°F/13-18°C. High temperatures (>80°F/27°C) promotes a reduction in flower size.

Plug Culture - 4 weeks (288 / 12 x 24 tray)

Stage 1 (days 1-5) Select a well-drained media with a pH between 6.2 and 6.5 with a soil EC of 0.5 mmhos (1:2 dilution). African Marigold is sensitive to iron toxicity at a pH below 5.8, characterized by lower yellow leaves with edge browning/burning. Providing 10-100-foot candles/100-1,000 lux will improve germination. Optimum soil temperature is 72-75°F/22-24°C.

Fertilizer: Weekly applications of 150-200 ppm N using a well-balanced calcium nitrate-based fertilizer produce plants of high quality.

Alternating with 20-5-20 or as needed works well to balance the pH. Optimum EC level is 0.76 - 1.25 mmhos (1:2 slurry). As mentioned earlier, African Marigold is an iron efficient plant and requires a pH above 6.0 to guard against iron toxicity.

Stage 2 (days 6-10) Marigolds germinate quickly. After emergence place the plug trays in a well-ventilated greenhouse with up to 2,500 f.c./27,000 lux. Reduce moisture and maintain a day temperature of 70°F/21°C and a night temperature of 65°F/18°C. A light application of fertilizer at 75-100 ppm of nitrogen will greatly benefit in helping to establish strong and healthy seedlings.

Flowering: Marigold Proud Mari is sensitive to photoperiod, although less so than other African Marigolds. For earlier flowering direct sow in a 50 \-cell tray and apply short days (9 hours of light) for two weeks starting on day 21.

Disease: Alternaria, blight, botrytis, leaf spot, pythium, root rot

NOTE: African Marigold is an obligate short-day plant. Provide long day conditions (> 14 hours) in the plug stage to prevent pre-mature flower bud initiation.

Pests: Aphid, leaf miner, spider mite, thrip, whitefly

Stage 3 (days 11-21) Fertilize at 100-150 ppm N at least once a week. Watering just before wilt is recommended to avoid lush growth. One should water thoroughly to prevent high EC levels, (> 1.25 mmhos 1:2 slurry). Watering early in the morning allows the foliage to dry thoroughly and prevents potential disease problems. If necessary, one can apply B-9 at 2,500 ppm's to check growth 15-17 days after sowing.

Scheduling:

Container	Weeks from Sow	Comment
Cell Pack	8 weeks	Best sold green
4 inch/10 cm.	10-12 weeks	1 plant per pot
6 inch/15 cm.	10-12 weeks	3 plants per pot

Stage 4 (days 21-28) African Marigolds develop rapidly and are often ready to transplant after three weeks, (depending upon the plug cell size used). One can drop the air temperature to 62°F/17°C to hold plug trays for a few days. Avoid temperatures below 60°F/16°C as this will invite disease problems. Do not delay transplanting.

Garden Height: Plants ultimately will reach 10-12 inches/25-30 cm. tall by 10-12 inches/25-30 cm. wide.

"All information given is intended for general guidance only and may have to be adjusted to meet individual needs. Cultural details are based on North American conditions and Sakata cannot be held responsible for any crop damage related to the information given herein. Application of recommended growth regulators and chemicals are subject to local and state regulations. Always follow manufacturer's label instructions. Testing a few plants prior to treating the entire crop is best."

Finished Production: 6-8 weeks

Container Size: Proud Mari is a dwarf variety with strong basal branching and can be grown and sold in high-density cell packs (606 and up), 4 inch, pints and quarts.