

Cut Flower Culture Guide: African/American F1 Marigold "White Swan"

Scientific name:	<i>Tagetes erecta</i>
Use:	Cut Flower
Plant Type:	Annual
Seed count approx:	300 seeds/gram
Sowing to transplant:	15 – 25 days (2 – 3 weeks)
Transplant to flowering:	35 – 45 days (4 – 5 weeks)
Minimum Germination rate:	85%
Seed form:	Natural and De-tailed

Plug Production:

Media

Use well-drained media with a pH 6.5-7.0 and a soil EC 0.75-1.0 mmhos/cm. Seeds may be covered with a thin layer of media to maintain moisture levels. Recommended **plug tray size 200 or 288 cells**

Temperature

Optimum temperature **22-24 deg C (72-75 deg F)**. Low temperatures tend to delay plug growth whilst higher temperatures will induce plant stretch.

Stage 1 – Germination and radicle emergence takes approximately **3-5 days**. Light is not required for germination. Keep media moisture medium wet to saturated, moisture level 4-5. No fertilizer needed at this stage.

Stage 2 – Expanding stem and cotyledons take approximately **5-7 days**. Extra lighting can be supplied at 2,500-foot candles (25,000 lux). Keep media moisture medium (level 3) to medium wet (level 4).

Stage 3 – Development of first true leaves approximately in **7-10 days**. Extra lighting can be supplied at 2,500 f.c. (25,000 lux). Keep media moisture levels medium and medium wet. Alternate dry to wet, level 3 to 4. Apply fertilizer at rate 75-100 ppm N – less than 0.7 EC) with a nitrate-form fertilizer ratio 2:1:3. Media that is too wet encourages the development of a weak root system and disease.

Stage 4 – 4-6 true leaves approximately taking **15-18 days**. Low temperature tends to delay transplanting by 7-10 days. Moisture as per stage 3. Feed 1-2 times per week 100-150 ppm N 2:1:3 – 0.7 to 1.2 EC. Growth regulator may be used to reduce stretch. Do not hold the plugs too long, as this may induce premature flowering.

Growing On:

After 2-3 weeks plants can be transplanted directly into beds with a spacing of 40-45 cm (15-18 ins).

Temperature

Night: 20-25 C (68-77 F)

Day: 25 deg C and above (77 deg F).

Low temperatures may result in flowering delay and a reduction of first flower quality.

High temperatures will reduce flower size.

Light

Extra lighting can improve yields and flower quality

Moisture and Irrigation

Keep optimal media moisture between medium (level 3) to medium wet (level 4). Allow media to dry between watering and then re-saturated. Avoid overhead irrigation directly on to flowers as this will encourage disease.

Fertilizer

Once a week after transplant at 150-200 ppm N using nitrate-form of fertilizer ratio 2:1:3. Optimum EC level is 1.0 – 1.2 mmhos/cm. Micronutrients can also be applied.

Insects

Trips, Red spider mite, Leaf miner, Beet armyworm, Common cutworm, Snails, and slugs

Common Diseases

Botrytis, Pythium, Alternaria, Fusarium, Ralstonia.

Day length and Plant Height

	Short Days	Long Days
Plant Height	60-65 cm	70-80cm
Plant Width	30-35 cm	35-40 cm
Total crop time	50-100 Days	60-120 Days

Note: The information given is intended for guidance. Crop times may vary depending on location, climate, seasons, height above sea level and other environmental conditions. Application of chemicals are subject to local and state regulations. Always follow manufacturer's instructions when applying horticultural chemicals.