



Apollo™ Lovesong

syngenta®flowers

# Cosmos Apollo™

## Culture Guide

**Botanical name:** *Cosmos bipinnatus*

**Product form:** Seed

**Containers:** Packs, Pints, Quarts, Gallons, Hanging Baskets

**Habit:** Upright

### Garden Specifications

**Garden Height:** 18–26" (45–65 cm) tall

**Garden Width:** 20–24" (50–60 cm) wide

**Exposure:** Full sun

**USDA zone:** 11–2

**AHS zone:** 1–12

**Product use:** Packs, Containers, Landscapes

### Germination

Stages 1 & 2

**Germination time:** 3–4 days

**Media temp:** 61–65 °F (16–18 °C)

**Chamber:** Optional

**Light:** Not required for germination

**Seed cover:** Yes

**Moisture level: 4 - WET:** Soil is dark brown but not shiny, no free water is seen at the surface of the soil, when pressed or squeezed water drips easily, and trays are heavy with a visible bend in the middle.

**Rec. tray size:** 288-cell tray

**Seeds per cell:** 1

### Young Plant Production

Stages 3 & 4

#### **Temperature**

**Day:** 62–64 °F (17–18 °C)

**Night:** 62–64 °F (17–18 °C)

**Average daily temperature:** 63 °F (17 °C)

#### **Lighting**

**Day extension lighting:** Necessary to 14 hours

**Light intensity:** 2,000–3,000 foot candles (400–600 micro mols).

**Day length response:** Facultative short day

**Daily light integral:** 8–10 mols/day

**Media pH:** 5.5–5.9

**Media EC:** SME 0.25 to 0.5 mS/cm

**Fertilizer:** 75–125 ppm N

**Moisture level:** Media should be allowed to dry between irrigations. Alternate between moisture level 2 and 3.

**2 - MEDIUM:** Soil is light brown in color, no water can be extracted from soil, and soil will crumble apart.

**3 - MOIST:** Soil is brown in color, strongly squeezing the soil will extract a few drops of water, and trays are light with no visible bend.

**Pinching:** No

**Plant growth regulators (PGRs):** Spray with Bonzi® at 15 ppm during stage 1 to help prevent stretch during propagation.

**Plug grow time:** 4–5 weeks in a 288-cell tray

**Comments:** Cosmos will flower early under short days, so to allow bulking of the plug provide a 14 hour day length during propagating.

### Finishing

#### **Temperature**

**Day:** 66–68 °F (19–20 °C)

**Night:** 60–62 °F (16–17 °C)

**Average daily temperature:** 64 °F (18 °C)

#### **Lighting**

**Day extension lighting:** Not necessary

**Light intensity:** 4,000–6,000 foot candles

**Day length response:** Facultative short day

**Daily light integral:** 10–12 mols/day

**Transplanting:** Transplant directly into the finished container. Place the rooting media slightly below the level of media in the container. Make sure the root ball is covered and that the plug is situated in the center of the pot.

**Media pH:** 5.5–5.9

**Media EC:** SME EC: 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm

**Fertilizer:** 125–175 ppm N

**Pinching:** No. Pinching is not recommended or needed.

**Plant growth regulators (PGRs):** Containers 1 pint and larger, PGRs are usually not necessary. If needed, for pack production spray with B-Nine® WSG at 2,500 to 5,000 ppm to help control plant height.

**Tech tip:** Cosmos flower faster under short days. For early spring production, do ensure that the plugs are grown under a 14-hour day length so finished plants will bulk properly.



Try Chrysal Alesco®, a postharvest foliar spray, to protect ethylene sensitive crops during shipping and retail

**Moisture level:** Media should be allowed to dry between irrigations. Alternate between moisture level 2 and 4.

**2 - MEDIUM:** Soil is light brown in color, no water can be extracted from soil, and soil will crumble apart.

**4 - WET:** Soil is dark brown but not shiny, no free water is seen at the surface of the soil, when pressed or squeezed water drips easily, and trays are heavy with a visible bend in the middle.

**Common pests:** Aphids, Thrips

**Common diseases:** Powdery mildew, Botrytis

## Scheduling

Size	Crop Time	Plants Per Pot
Large Packs	4–5 weeks	1 ppp
1.0 pint (4 inch)	6–7 weeks	1 ppp
1.0 quart (4.5 to 5 inch)	6–7 weeks	1 ppp
1.25 to 2.5 quart (5.5 to 6.5 inch, trade gallon)	7–8 weeks	1 ppp

Estimated finish crop time is from transplant of a 288-cell tray and finished at an average daily temperature (ADT) of 64 °F (18 °C).

## Example crop schedule for a large pack

Weeks From Transplant	Description
3 weeks	Spray with B-Nine® WSG at 2,500–5,000 ppm if needed
6 weeks	Ready to ship



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