



Costa™ Mix

syngenta®flowers

Calendula Costa™

Culture Guide

Botanical name: *Calendula officinalis*

Product form: Seed

Containers: Packs, Pints, Quarts, Gallons

Habit: Mounded

Garden Specifications

Garden Height: 10–12" (25–30 cm) tall

Garden Width: 10–12" (25–30 cm) wide

Exposure: Full sun

USDA zone: 2–11

AHS zone: 6–1

Product use: Packs, Containers, Landscapes

Germination

Stages 1 & 2

Germination time: 5–10 days

Media temp: 70–72 °F (21–22 °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: 60–62 °F (16–17 °C)

Average daily temperature: 62 °F (17 °C)

Lighting

Day extension lighting: Beneficial to 14 hours

Light intensity: 3,000–4,000 foot candles (600–800 micro mols).

Day length response: Facultative long day

Daily light integral: 10–12 mols/day

Media pH: 5.5–5.9

Media EC: SME 0.5 to 0.75 mS/cm

Fertilizer: 75–125 ppm N

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.

Pinching: No

Plant growth regulators (PGRs): Under ideal growth conditions, PGRs are generally not necessary. However, if needed, Costa responds well to B-Nine® WSG sprays at 1,000–1,500 ppm.

Plug grow time: 3–4 weeks in a 288-cell tray

Comments: Grow on the cool side. Calendulas are not recommended for fall crops where cool conditions cannot be maintained.

Finishing

Temperature

Day: 66–68 °F (19–20 °C)

Night: 52–54 °F (11–12 °C)

Average daily temperature: 60 °F (16 °C)

Lighting

Day extension lighting: Beneficial to 14 hours

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

Day length response: Facultative long day

Daily light integral: 12–14 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): High light, cool temperatures, and proper water management is the best way to control growth. Under warmer conditions, B-Nine® WSG sprays at 2,500–3,500 ppm can be effective to prevent stretch.

Tech tip: Growing cool, on the dry side, and under high light will produce the best quality finished plants. Don't grow too cold though; Costa stops growing when temperatures drop below around 46 °F (8 °C). Avoid using high ammonium fertilizers because they promote soft, leafy growth. A preventative spray program for Powdery mildew is recommended.

Scheduling

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

Estimated finish crop time is from transplant of a 288-cell tray and finished at an average daily temperature (ADT) of 60 °F (16 °C).

Example crop schedule for a 1.0 pint

Weeks From Transplant	Description
1 week	Start preventative Powdery mildew spray program
3 weeks	Spray with B-Nine® WSG at 2,500–3,500 ppm if needed
5 weeks	Ready to ship



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

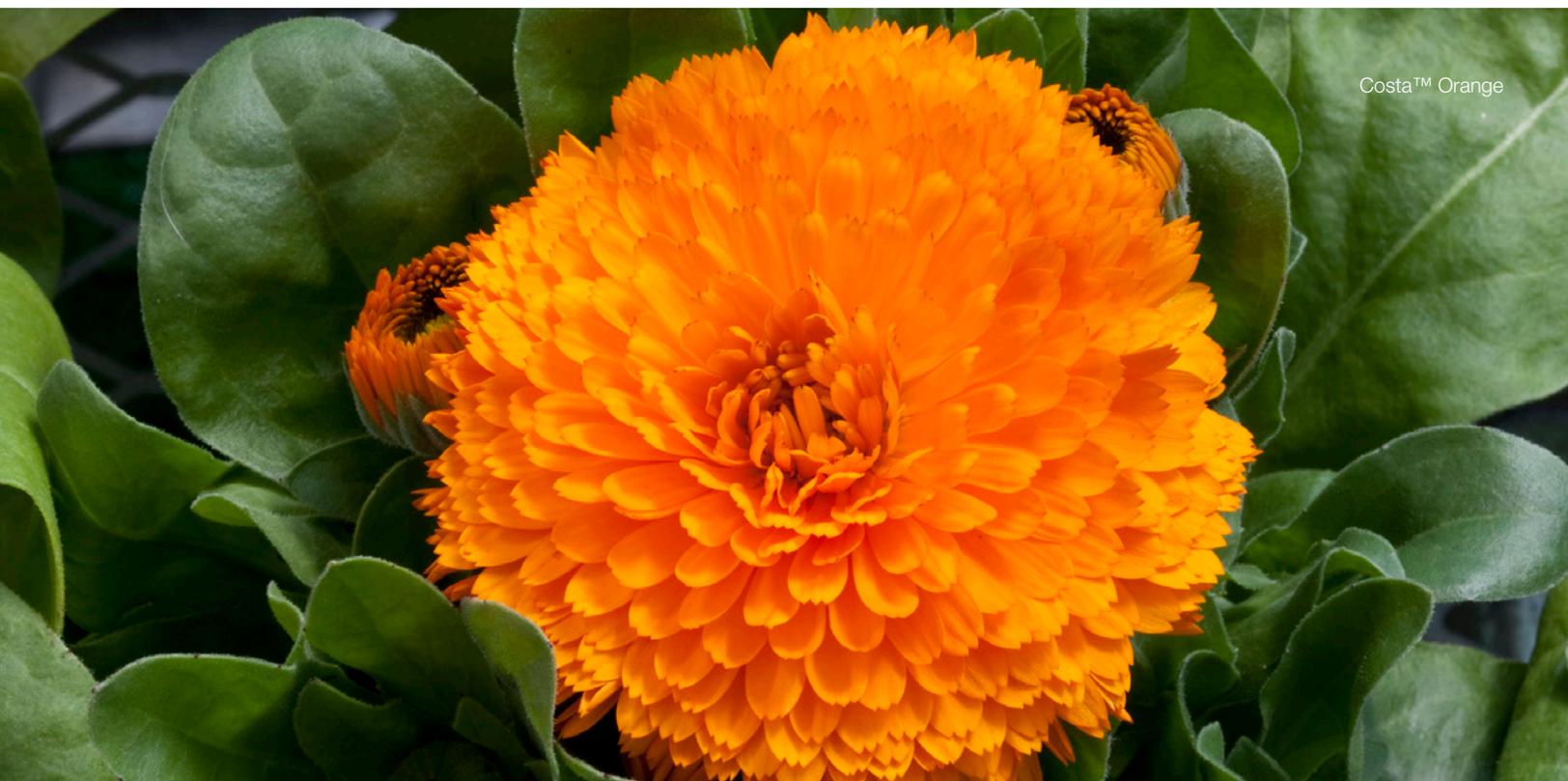
Moisture level: Media should be allowed to dry between irrigations. Alternate between moisture level 2 and 3.

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.

Common pests: Whiteflies, Thrips

Common diseases: Powdery mildew, Botrytis, Pythium



Costa™ Orange

syngenta® flowers

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