Cosmos sulphureus

Cosmic

Red

Item no.: CS0103D



- Compact, round shaped habit
- Floriferous plants
- Double flowers in happy colors
- Attracts beneficial insects

Crop Time	Spring: 7 - 8 weeks
Height ⌀	11 " / 28 cm
Width ⌀	8 " / 20 cm
Exposure	Sun - Partial shade
Seed Form	Detailed Seed
Product Use	Pots, Mixed Containers, Bedding, Landscape
Family, Origin	Asteraceae, Central & South America
Minimum Germ. Rate	85 %

TECHNICAL GUIDE

Cosmos sulphureus Cosmic

Flowering

Flowering Type: Facultative short day plant. Under short days, the plants will initiate and flower more quickly. Short day treatment will result in a more compact plant.

Flowering Mechanism: High light intensity and warmer temperatures shorten the total crop time.

Plug Culture

Germination: Optimum conditions for seedling development, beginning on the day of sowing until radicle emergence. Expect radicle emergence in 5-7 days.

Cover: Cover seed with vermiculite or substrate after sowing.

Sowing method: 1-3 seeds per plug

Media: pH: 5.7-5.9, EC <0.5.

Temperature: 18-20°C (64-68 °F) until radicle emergence. Afterwards, ensure 16-18 °C (60-64 °F) during night and day. Once the roots reach the bottom of the cell, the temperature can be lowered to 14-16 °C (57-60 °F). At higher temperatures, the seedlings tend to stretch quickly.

Moisture: Begin with a wet (4) until radicle emergence. In the second stage, alternate between wet (4) and moist (3). Once the seedlings are well established, further reduce the moisture level to moist (3) to medium (2). Allow the media to dry back before re-saturating.

Humidity: 95-100% until radicle emergence, then reduce to 40-60%. Provide proper ventiliation and horizontal airflow to improve oxygen levels in the media.

Light: Light is not required for germination and is optional during the plug stage. Supplemental lighting of 1,000-2,500 ft. candles (10,000-25,000 lx) improves the seedling quality, but keep short days for optimal results.

Fertilizer: Fertilized water should not exceed an EC of 0.7. Begin fertilizing early at 50-75 ppm N using a complete balanced fertilizer. When the plants are well established, maintain an EC of 0.7-1.2 by feeding 100-175 ppm N per spray.

Plug Bulking and Flower Initiation: Optimum conditions during the vegetative stage from cotyledon expansion to flower initiation. This stage is when the seedlings root to the edge of the plug.

Growth Regulators: No growth regulators are required as growth can be controlled by temperature and moisture management. If needed, sprays of B-nine (daminozide) at 2,500 ppm can help control stretch in the plug.

Fungicides: Preventative applications of fungicides are recommended under cooler conditions and low light levels.

Growing On

Media: pH: 5.8-6.2, EC 1.2-1.5.

Light: As facultative short-day plant, keep the days short for early flowering. Day lengths above 14 hours help avoiding premature flowering. High light levels will shorten the crop time and produce the best quality. Light levels of 3,000-4,500 ft. candles (30,000-45,000 lx) are recommended.

Temperature: Maintain an ADT (average daily temperature) of 16 °C (60 °F). Cool temperatures promote a stable, compact, well-branched plant habit in pots. An outdoor production is also possible, but Cosmos does not tolerate frost.

Moisture: Cosmos requires a rather dry cultivation. High moisture levels or overwatering can cause root rot and black foliage. Alternate between moisture levels moist (3) and medium (2). Allow the media to dry back before re-saturating.

Humidity: 40-60 % humidity is ideal. Providing good ventilation and horizontal airflow will help lower the humidity and dry back the media. **Fertilizer:** Moderate fertilization levels are required. Fertilize the crop weekly at 100-150 ppm N, using a complete balanced fertilizer. Avoid high ammonium and nitrogen levels.

Growth Regulators: Not required, as growth can be controlled by temperature and moisture management. If required, apply light sprays of B-nine (daminozide) or Cycocel (chlormequat chloride) to control stretch. Avoid overdosing!

Fungicides: Preventative applications of fungicides are recommended under cooler conditions and low light levels.

Common Diseases: Root rot, powdery mildew, botrytis.

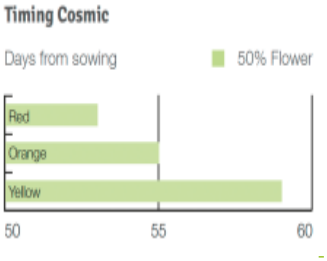
Pests: Aphids, mites.

Plug & Finished Crop Time
Plug Crop Time
288 tray: 3-4 weeks

Finished Crop Time (from 288 tray)
Packs (1*): 4-5 weeks
10-12 cm (4-5") pots (2*): 5-6 weeks
13-15 cm (5-6") pots (3*): 6-7 weeks

*plants per pot

Timing & Positioning Charts



Moisture Codes

Saturated (5)	Water is easily observed when finger is pressed on cell. Water moves freely from the top of the plug to the bottom.
Wet (4)	Media looks black and is not glistening. The media feels wet to the touch but there is very little water movement.
Moist (3)	Water is not easily visible. When finger is pressed on the cell there is very little movement from top to bottom.
Medium (2)	Media is not black, but now looks medium brown. There is no water movement when pressed with finger.
Dry (1)	Media has changed color to a very light brown and is dry to the touch.

All information in our technical guide is based on our own trials and would therefore be as guideline only. Detailed cultivation aspects vary depending on climate, location, time of year and environmental conditions. Benary expressly disclaims any responsibility for the content of such data/information and makes no representation or warranty for the cultivation of any products listed. It is recommended that growers conduct a trial of products under their own conditions.

COLORS OF THE SERIES

Cosmos sulphureus Cosmic



Yellow
CS0102D



Orange
CS0104D



Red
CS0103D



Mix
CS0199D