Celosia Century Cut Flower

Cultural Information for: Celosia Century Annual
Common Name: Celosia
Botanical Name: Celosia plumosa
Seed Count: 40,000/ounce 1,400/gram
Optimum Germination Temperature: 70-75ºF / 21-24ºC
Optimum Growing Temperature: 65-75ºF / 18-24ºC

Plug Stage – 3 weeks (392 / 14 x 28 tray)

Stage 1 (days 1-7) - Sow seeds in a 392 deep cell using a well-drained soil mix and cover lightly with vermiculite. Provide a soil temperature of 70-75ºF / 21-24ºC. Germination takes place in 5-7 days. Since the root system is very delicate, avoid sowing in open flats and instead sow directly into plug cells.

Stage 2 (days 8-15) - After seedlings emerge, place plug flats under long day conditions***** in a well ventilated area and reduce the temperature to 65-70°F/18-21°C during the day and 61-65°F/16-18°C at night. Fertilize plugs lightly with 50-100 ppm N. Over watering will promote disease; especially damping off and botrytis.

***Note:** Short days (< 13 hours) promotes flowering so it is necessary to provide long day conditions after seedlings emerge to promote vegetative growth. Extend the day to 16 hours or interrupt the night from 22:00 – 02:00 hours.*

Stage 3 (days 16-20) - Maintain good air circulation and keep media EC levels around 1.0 to 1.4 mmhos (2:1 dilution). Avoid stressing the seedlings with moisture or high temperature which will cause premature budding and stunted growth later in production.

Stage 4 (day 21) - Seedlings are ready for transplanting. It is important to transplant seedlings at a younger stage than for bedding plant production to maximize stem length. Holding the plugs too long in the plug tray (root banding) will stunt future development and cause premature budding. ***Transplant as soon as the seedlings can be handled without causing damage.***

Cut Flower Production

Transplanting: Celosia has a soft stem and delicate root system. To avoid stem damage, **use a plug popper** to dislodge plugs and **only handle seedlings by the cotyledons or leaves.** Also **avoid deep transplanting** to prevent rhizoctonia.

Spacing: Plant at a spacing of 4 x 4 inches / 10 x 10 cm.

Media: Well-drained soil rich in organic matter and a pH of 5.5 to 6.5.

Temperature: Minimum temperature of 59°F / 18°C.

Light: High light, full sun is best.

Pinch: Do not pinch the plants.

Fertilization: Celosia must be kept growing vigorously in order to reach favorable size before flowering slows their growth. Apply 100-150 ppm N as needed to maintain the EC at 1.0 to 1.4 mmhos (2:1 dilution). ***It is important to supply sufficient amounts of potassium in the fertilizer.*** A lack of potassium causes smaller and abnormal shaped flowers. Finishing with a pot mum special (15-10-30) is a good strategy. Boron deficiency causes deformed foliage and a witch's broom effect. Supply at 0.25 ppm B at each irrigation as needed.

Diseases: Celosia is susceptible to botrytis, downy mildew, pythium and rhizoctonia.

Insects: Aphids, cut worms, nematodes and thrips.

Culture Watch Point: Celosia is sensitive to vaporized gases of certain herbicides like methylurea, methoxy, dichlorophenyl and dichlorobenzonitrile.

Schedule:

Plug Stage	Transplant (Long Days)*****	Finish
2-3 weeks	11 weeks	2 weeks

***** *Extend the day to 16 hours or interrupt the night from 22:00 – 02:00 hours.*

Natural Season Production:

Northern Hemisphere	Sow early April*
Southern Hemisphere	Sow early October*

*****allows 11 weeks of increasing day length before the days begin to shorten.

"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."

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