

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

Optimum pH: 5.8 – 6.2

EC – Plug: 0.4 – 0.8 mmhos/cm (1:2) / 0.9 – 2.0 (SME) / 1.1 - 2.6 (Pour Thru)

EC – Finishing: 0.9 – 1.3 mmhos/cm (1:2) / 2.1 – 3.5 (SME) / 2.7 - 4.6 (Pour Thru)

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 70-75°F / 21-24°C. 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. 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. Transplant on time for cut flower production to maximize stem length and avoid root banding which stunts future development and causes 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.

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. **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 fertilizer high in potassium, such as 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. Do not drench plants with the chemical Mefenoxam (SubdueMaxx) which causes phytotoxicity.

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.”