



# Celosia Chief

|                |                                  |
|----------------|----------------------------------|
| Crop           | Celosia                          |
| Series         | Chief                            |
| Botanical name | <i>Celosia cristata</i>          |
| Plant type     | Annual                           |
| Seed type      | Raw                              |
| Seed count     | 1,200 seeds / gr                 |
| Germination    | 25 °C - 5-7 days light inhibited |
| Growing        | 18-24°C                          |
| Optimum pH     | 5.8-6.2                          |

**Direct Seeding:** Celosia Chief may be sown directly to outdoor beds. Select a sunny location and prepare rows 90 cm. apart and sow seed in double rows on each furrow. Do not allow the soil to dry out anytime during the germination period. A plastic or paper mulch may be used to maintain moisture until germination is complete. After germination thin out to stand 10 cm apart.

## Plug Culture: 4 weeks (288 cell tray)

**Stage 1** (days 1-10) Sow seeds in a well-drained soil mix and cover lightly with vermiculite. Provide a soil temperature of 21-24°C. Germination takes place in 7-10 days. Since the root system is very delicate, avoid sowing in open trays and instead sow directly into plug cells.

**Stage 2** (days 10-19) After seedlings emerge, place plug trays in a well-ventilated area and reduce the temperature to 18-21°C during the day and 16-18°C at night. Fertilize plugs lightly with 50-100 ppm nitrogen. Over watering will promote disease; especially damping off and botrytis.

**Stage 3** (days 20-27) Maintain good air circulation. Celosia is sensitive to day length and any type of stress, (moisture, high temperature root banding), will

cause premature budding and stunted growth later in production. Celosia will bloom more quickly under short day conditions. To avoid pre-mature flowering produce plugs under increasing day-length with a minimum of 13 hours.

**Stage 4** (day 28) Seedlings are ready for transplanting at the 2-3 leaf stage. Holding the plugs too long in the plug tray will stunt future development of the plant and cause premature budding.

## Transplanting to finish: 8-9 weeks

**Transplanting:** Celosia has a soft stem and delicate root system. When dislodge seedlings, please handle it carefully to prevent damage and only handle seedlings by one leaf. Also avoid deep transplanting to prevent rhizoctonia.

**Bed Preparation:** Select a sunny, well-drained site with a soil high in organic matter and low in salts. Celosia grows best in lean soil and excess nitrogen will cause overgrowth.

**Temperature:** For greenhouse production maintain the plants at a temperature of 18-24°C. Avoid temperatures below 16°C.

**Spacing:** Space plants 10 cm apart.

**Pinching:** Do not pinch the plants.

**Fertilizer:** Celosia must be kept growing vigorously before flower formation slows their growth. Apply 100 ppm nitrogen, as needed, to maintain strong growth. It is important to supply sufficient amounts of potassium in the fertilizer. A lack of potassium results in smaller and abnormal shaped flowers. Boron deficiency causes deformed foliage and a witch's broom effect.

**Support:** Plants require staking to avoid lodging.

**Diseases:** botrytis, downy mildew, pythium and rhizoctonia.

**Pests:** 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 which causes phytotoxicity.

**Scheduling:** 12 (direct sowing) to 13 weeks (transplanting).

**Harvesting:** Cut when plumes are fully developed. Premature harvesting results in poor quality cut flowers and weak stems.

**Bunching:** For best transportation, bunch cut flowers when foliage shows signs of some wilt.

*All information given is intended for general guidance only and may have to be adjusted to meet individual needs. Cultural details are based on Asian conditions such as in Japan and Sakata cannot be held responsible for any crop damage related to the information given herein. Always follow manufacturer's label instructions. Testing a few plants prior to treating the entire crop is best.*