

## Celosia First Flame™

(*Celosia plumosa*)

### Germination

Approximate seed count:

Raw: 28,350 to 42,525 S./oz. (1,000 to 1,500 S./g)

Filmcoated: 42,525 to 62,400 S./oz. (1,500 to 2,200 S./g)

#### Media

Use a well-drained, disease-free media with a pH of 5.8 to 6.2 and a medium initial nutrient charge (EC 0.7 to 1.2 mmhos/cm).

#### Sowing

Sow 1 seed per cell in a 288 or smaller plug tray. Cover seed lightly with vermiculite. Use a preventative treatment against soil-borne diseases.

#### Stage 1 – Germination takes 2 to 4 days.

**Soil temperature:** 70 to 72°F (21 to 22°C)

**Light:** Light is required.

**Moisture:** Keep soil moist (level 4) in Stage 1.

**Humidity:** Maintain 95 to 98% relative humidity (RH) until cotyledons emerge.

### Plug Production

#### Stage 2

**Soil temperature:** 68 to 72°F (20 to 22°C)

**Light:** Up to 2,500 f.c. (26,900 Lux)

**Moisture:** Maintain soil moisture at the same level (level 4); don't allow the media to dry out.

**Fertilizer:** Apply fertilizer at rate 1 (less than 100 ppm N/less than 0.7 mS/cm EC).

#### Stage 3

**Soil temperature:** 68 to 72°F (20 to 22°C)

**Light:** Up to 2,500 f.c. (26,900 Lux)

**Moisture:** Maintain the moisture level constantly medium moist to medium wet (level 3 to 4). Don't allow the media to dry out as water stress could cause premature flowering.

**Fertilizer:** Apply fertilizer to rate 2 (100 to 175 ppm N/0.7 to 1.2 mS/cm EC).

**Growth regulators:** None

#### Stage 4

**Soil temperature:** 68 to 72°F (20 to 22°C)

**Light:** Up to 5,000 f.c. (53,800 Lux)

**Moisture:** Keep plug tray uniform moisture.

**Fertilizer:** Same as Stage 3.

#### General Remark for Plug Stage:

Tips to prevent premature flowering: keep growing plugs under daylength of 14 hour or longer due to short day flowering response. Also don't allow media to dry out.

Celosia makes a taproot and is sensitive to root damage. Transplant on time and do not allow seedlings to get rootbound.

### Growing On to Finish

#### Media

Use a well-drained, disease-free, soilless media with a pH of 5.8 to 6.2 and an EC of 0.75 mmhos/cm in a well-balanced fertilizer.

#### Temperature

**Nights:** 59 to 61°F (15 to 16°C)

**Days:** 65 to 70°F (18 to 21°C)

#### Light

Maintain light levels as high as possible.

#### Photoperiod

Celosia Arrabona Red and First Flame are quantitative short day plants and will flower slightly faster under day length of 13 hours or shorter.

#### Irrigation

Maintain media constantly moist to prevent from premature flowering.

### **Fertilizer**

Arrabona Red and First Flame are moderate feeders. Apply fertilizer at lower range of rate 3 (about 175 ppm N/1.2 mS/cm). Celosia is susceptible to high salt levels.

### **Growth Regulators**

Generally, Arrabona Red and First Flame varieties do not need PGRs. But if necessary, they are responsive to B-Nine/Alar (daminozide) spray at 2,000 to 3,000 ppm (2.4 to 3.5 g/l, 85% formulation or 3.1 to 4.7 g/l 64% formulation) depending on weather. If necessary, repeat the treatment.

### **Pinching**

Pinching is not needed.

### **Crop Scheduling**

**Sow to transplant (288 cell plug):** 3 to 4 weeks

**Transplant to flower:**

**Container Size:** Pack

**Plants Per Pot:** 1

**Weeks From Transplant:** 8 to 10

**Total Weeks:** 11 to 14

**Container Size:** 4 to 5-in. (10 to 13-cm)

**Plants Per Pot:** 1

**Weeks From Transplant:** 9 to 12

**Total Weeks:** 12 to 16

**Production:** Celosia Arrabona Red and First Flame can be produced year-round under the appropriate climate conditions.

### **Common Problems**

**Insect:** Aphids, Thrips, Spider mites, Leafminers

**Disease:** Powdery Mildew, Botrytis

**Note:** Growers should use the information presented here as a starting point. Crop times will vary depending on the climate, location, time of year, and greenhouse environmental conditions. Chemical and

PGR recommendations are only guidelines. It is the responsibility of the applicator to read and follow all the current label directions for the specific chemical being used in accordance with all regulations.

