Early Sunrise, Rising Sun, Sunfire & Sun Up Coreopsis

Coreopsis grandiflora
Approximate seed count (raw): 10, 700 S./oz. (375 S./g)

Key flowering facts:
- First-year-flowering perennial.
- Vernalization: not required.
- Daylength response: Long day crops with critical daylength from 12.5 to 14 hours dependent on variety.
  - Early Sunrise: 14 hours
  - Rising Sun and Sunfire: 13 hours
  - Sun Up: 12.5 hours

Plug Production
Media
Use a well-drained, disease-free, soilless media with a pH of 5.8 to 6.2 and a medium initial nutrient charge (EC 0.75 mmhos/cm).

Sowing
Sow 1-2 seeds per cell in 288; 2-4 seeds per cell in larger plug tray. Covering seed with vermiculite lightly is recommended.

Stage 1 – Germination takes about 5 to 6 days.
Soil temperature: 65 to 68°F (18 to 20°C)
Light: Light is optional.
Moisture: Keep soil wet (level 4) during Stage 1.
Humidity: Maintain 95 to 97% relative humidity (RH) until radicles emerge.

Stage 2
Soil temperature: 71 to 73°F (21 to 22°C)
Light: Up to 2,500 f.c. (26,900 Lux)
Moisture: Reduce soil moisture slightly (level 3 to 4) to allow the roots to penetrate into the media.
Fertilizer: Apply fertilizer at rate 1 (less than 100 ppm N/less than 0.7 mS/cm EC) from nitrate-form fertilizers with phosphorous.

Stage 3
Soil temperature: 68 to 70°F (20 to 21°C)
Light: Up to 2,500 f.c. (26,900 Lux)
Moisture: Allow media to dry further until the surface becomes light brown (level 2) before watering. Keep the moisture level to wet-dry cycle (moisture level 4 to 2).
Fertilizer: Same as Stage 2.
Growth regulators: Generally not needed.

Stage 4
Soil temperature: 65 to 67°F (18 to 19°C)
Light: Up to 5,000 f.c. (53,800 Lux) if temperature can be controlled.
Moisture: Same as Stage 3.
Fertilizer: Same as Stage 2.

Growing On to Finish
Container Size
4 to 5-in. (10 to 12-cm) square/quart pots: 1 plug per pot
Gallon (18-cm) pots: 1 to 3 plugs per pot

Media
Use a well-drained, disease-free, soilless media with a pH of 5.5 to 6.2 and a medium initial nutrient charge (EC 0.75 mmhos/cm).

Temperature
Nights: 55 to 60°F (13 to 16°C)
Days: 60 to 70°F (16 to 21°C)

Light
Maintain light levels as high as possible while maintaining moderate temperature.

Photoperiod response
Coreopsis is long-day crop with critical day length from 12.5 to 14 hours dependent on variety.
  - Early Sunrise: 14 hours
  - Rising Sun and Sunfire: 13 hours
  - Sun Up: 12.5 hours
In Spring production, Sun Up flowers about 1 week earlier than Sunfire and Rising Sun and about 2 to 3 weeks earlier than Early Sunrise.

Irrigation
Maintain media moisture wet-dry cycle (moisture level 4 to 2). Avoid both excessive watering and drought.
Fertilizer
Apply fertilizer at rate 3 (175 to 225 ppm N/1.2 to 1.5 mS/cm) using predominately nitrate-form fertilizer with low phosphorus and high potassium. Maintain the media EC at 1.5 to 2.0 mS/cm and pH at 5.8 to 6.2.

For constant fertilizer program, apply fertilizer at rate 2 (100 to 175 ppm N or 0.7 to 1.2 mS/cm) while maintaining the above recommended EC and pH ranges.

Growth Regulators
Coreopsis is responsive to B-Nine/Alar at 2,500 to 5,000 ppm (3.0 to 5.9 g/l 85% formulation or 3.9 to 7.8 g/l of 64% formulation) spray at bud initial stage if necessary.

Pinching
Pinching is not needed.

Spacing
Coreopsis can be grown pot tight, but assure good ventilation and air flow.

Crop Scheduling
Sow to transplant (288-cell): 5 to 6 weeks

Transplant to flower:
Sun Up: 7 to 9 weeks
Rising Sun and Sunfire: 8 to 10 weeks
Early Sunrise: 9 to 12 weeks

Common Problems
Insect: Aphid, Thrips, White fly
Disease: Powdery mildew

Garden and Landscape Information
- Coreopsis is first-year-flowering perennial in USDA Hardiness Zones 4 to 9.
- Plant in full sun after all danger of frost has passed.
- Space plants at 10 to 14 in. (25 to 36 cm) apart in well-drained soil.
- After plants are established, Coreopsis is quite drought tolerant.

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.