

## Osteospermum 4d

(*Osteospermum hybrid*)

### Propagation

- Choose a well-drained medium with an EC of 0.75 to 0.80 mmhos and a pH of 5.5 to 5.8.
- Stick cuttings within 12 to 24 hours of arrival. Cuttings can be stored overnight, if necessary, at 45 to 50°F (7 to 10°C).
- Soil temperature should be maintained at 68 to 74°F (20 to 23°C) until roots are visible.
- A rooting hormone can be applied to promote early, uniform rooting.
- Mist may need to be applied for up to 24 hours per day for 3 to 5 days, depending on local conditions. Frequency and run time should be reduced during the dark period, but unrooted cuttings must not be allowed to wilt.
- Begin fertilization with 75 to 100 ppm N when roots become visible. Increase to 150 ppm N as roots develop.
- Once roots are visible, the media should be kept moderately wet but never saturated. This will help prevent iron deficiency and the associated chlorotic foliage that can develop.
- Double Osteospermum 4D should not be pinched but flower buds can be removed if needed.
- Double Osteospermum 4D rooted cuttings should be ready for transplanting 28 to 32 days after sticking.

### Growing On to Finish

#### Media

- Use media with good aeration, drainage and water-holding capacity.
- Like most Osteospermum, the 4D series prefers a medium that will dry regularly between watering.
- A pH of 5.5 to 6.2 is optimum.

#### Temperature

- After transplanting, allow plants to become established for 7 to 14 days, depending on pot size, at a night temperature of 60 to 65°F (15 to 18°C). Once plants are well-established and rooted in, pinch and begin growing at recommended cool temperature.
- **Nights:** 45 to 55°F (7 to 13°C)
- **Days:** 60 to 75°F (15 to 24°C); avoid temperatures above 80°F (26°C).

### Transplanting

The rooted cutting should be transplanted at or slightly above the soil line of the final container. This will greatly reduce problems with various root and stem rots. In some situations, a preventative fungicidal soil drench may be appropriate.

### Light

Double Osteospermum 4D will perform best under moderate to high light levels of 5,000 to 9,000 f.c. (50,000 to 90,000 Lux).

### Watering

- The media should be allowed to dry regularly between watering and never saturated. However, plants should not be allowed to wilt at any time.
- Leach regularly to avoid the buildup of high soluble salt levels.

### Fertilizer

Use a balanced fertilizer at a rate of 200 to 300 ppm N. When grown excessively hungry, plants will become woody and will not branch properly.

### Pinching

Double Osteospermum 4D should be pinched once, as soon as they are well-rooted, to maximize branching and create a full plant, covered in flowers.

### Controlling Growth

- High light intensity and cool temperatures are needed for optimal habit.
- Double Osteospermum 4D are naturally compact and will require less PGR than standard vigor Osteospermum.
- Double Osteospermum 4D are responsive to Cycocel and Bonzi. Apply Cycocel as a spray (500 to 1,000 ppm). Drench applications of Cycocel have also demonstrated control (500 to 1,000 ppm). Bonzi (2 to 10 ppm) applied as a spray is also effective in reducing elongation. Begin PGR applications as new growth develops after pinching. More frequent applications will be required for smaller container sizes or if grown under warm conditions. Apply PGR sprays early in the crop cycle before buds are visible to avoid bloom delay or a reduction in bloom size.
- These recommendations for plant growth regulators should be used only as general guidelines. Growers must trial all chemicals under their particular conditions.

## Common Problems

**Insects:** Thrips, whitefly, aphids, fungus gnats.

**Diseases:** Botrytis (gray mold), Thielaviopsis, Pythium, Rhizoctonia, Powdery Mildew.

**Problem:** Plant collapse

**Causes:** Plants grown in saturated media for extended periods of time (Pythium, Thielaviopsis); Stem canker (Botrytis); Rooted cuttings transplanted too deeply

**Problem:** Excessive vegetative growth and lack of flowers

**Causes:** Excessive ammonium-based fertilizer; Over-fertilization under low light conditions; Low light and over-watering, saturated media

**Problem:** Yellowing of young foliage

**Causes:** Saturated media

**Problem:** Foliage necrosis

**Causes:** High soluble salts in media; Excessive water stress

**Problem:** Poor branching and thin plants

**Causes:** Low fertilization during early stages of growth; Low light conditions

## Double Osteospermum 4D Crop Schedule & Uses (Crop Schedule in Weeks)

### Unrooted cutting

**4-in. (10-cm) Pot 1 PPP\*:** 13-16 weeks

**6-in. (15-cm) Pots 2 to 3 PPP\*:** 14-17 weeks

**10 to 12-in. (25 to 30-cm) Pots 3 to 5 PPP\*:** 15-18 weeks

### Rooted cutting

**4-in. (10-cm) Pot 1 PPP\*:** 10-13 weeks

**6-in. (15-cm) Pots 2 to 3 PPP\*:** 11-14 weeks

**10 to 12-in. (25 to 30-cm) Pots 3 to 5 PPP\*:** 12-15 weeks

\*PPP: Plants per pot or basket

**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.

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