

**Crop: Crossandra**  
**Scientific Name: Crossandra infundibuliformis (Acanthaceae)**

**I. Introduction**

- A. The family acanthaceae also includes aphelandra, fittonia and thunbergia.
- B. *C. infundibuliformis* originated in southern India and Ceylon.
- C. Plants reach a height of 90 cm (3 feet) and have a terminal flower cluster consisting of tubular, salmon red flowers.

**II. Cultivars, Clones, Breeding, Development**

- A. 'Mona Wallhed' is a Swedish clone with compact form of 38-45 cm (15-18 inch) height, dark green, shiny leaves, and salmon-rose flowers.
- B. 'Florida Summer' and 'Florida Sunset' (also known as 'Dania') are two different crossandra species than 'Mona Wallhed'. They have narrower leaves, are more cold tolerant and grow best in full sun or semi-shade.

**III. Flower Induction Requirements**

- A. The plant is day neutral. Irregardless of 8 or 16 hour days, the expected time to flower is 100-105 days.
- B. In northern Europe, the plant normally is marketed from April to October.

**IV. Environmental Requirements**

**A. Light**

- 1. Photoperiod has no effect on flower induction and growth.
- 2. Flower buds will only develop at light intensities of 2,000 foot-candles ( $400 \mu\text{mol s}^{-1}\text{m}^{-2}$ ) or higher. The plant will remain vegetative at light levels below 1,800 foot-candles ( $360 \mu\text{mol s}^{-1}\text{m}^{-2}$ )

## **B. Temperature**

1. Plants should not be grown at temperatures below 16°C (60°F). Plants will die at 13°C (55°F). Best temperature for growth and development is 18-21°C (65-70°F) night and 21-28°C (70-82°F) day.
2. Flowering will occur 9 days earlier at 24°C (75°F) versus 21°C (70°F).

## **C. Watering**

1. Tube watering or subirrigation is preferred as crossandra is susceptible to disease.

## **D. Nutrition**

1. Constant feed at 100-120 ppm nitrogen and 150-175 ppm potassium give good growth.
2. Add superphosphate to the medium or add phosphorus at 30 ppm.
3. Magnesium at 30-50 ppm is also desirable.
4. Plants have high requirement for iron and manganese so trace elements should be added to the soil.

## **E. Gases**

1. During vegetative growth, the plants grow best at high relative humidity. During later stages 30-40% relative humidity is suitable.

## **V. Cultivation**

### **A. Propagation**

1. Crossandra is propagated by seed or cuttings.
  - a. Seed
    - (1) The seeds are often sold by the 100s.
    - (2) Recommended temperature for germination is 24-27°C (75-80°F).

- (3) Germination starts 3-4 weeks after sowing and continues over a 2-month period.

b. **Cuttings**

- (1) Maintain soil temperature between 23-24°C (73-75°F) with bottom heat and air temperature of 20-22°C (68-72°F). Rooting occurs in 12-14 days. Mist enhances disease.
- (2) Stock plants are propagated in August.
- (3) Direct stick two cuttings per 9 cm (3 1/2 inch) pot and 3 cuttings per 10 cm (4 inch) pot.
- (4) Root under high humidity without mist to reduce disease.
- (5) Dust cuttings with a fungicide.

B. **Media and Planting**

1. Use a well drained media with a pH 6.2 - 6.5 or a limed peat.

C. **Spacing**

1. Space sufficiently so that the leaves do not overlap.

D. **Pinching**

1. Pinch as soon as cuttings are rooted. If cuttings are desired, the plant needs 5-6 leaves as 2-3 leaves are needed for a cutting when pinched.
2. Pinching delays flowering by one week.

E. **Growth Regulators**

1. One spray of B-Nine at 500 ppm active ingredient is sufficient for pinched plants. Unpinched plants may need 2 applications of B-Nine at 500 ppm. B-Nine is active for 6 weeks and has no effect on flowering date.
2. Gibberellic acid produces taller plants and delays flowering.

## **VI. Problems**

### **A. Insect**

1. White fly is the major insect problem.
2. Mites and aphids may also be a problem.

### **B. Disease**

1. Crossandra is susceptible to *Rhizoctonia* and *Pythium*. A fungicide drench at first watering after transplanting is recommended.

## **VII. Harvesting, Handling, Marketing**

- A. The plants are sensitive to cold temperatures which may cause problems during marketing. At temperatures below 7°C (45°F), the leaves turn black.
- B. Flower spikes will continue to develop in the consumer's home when placed close to a window under reasonably good light conditions.

### VIII. Scheduling

Growing Time for Cultural Segment	Cultural procedure	Temperature
	Propagate cutting	23-24°C (73-75°F)
2 weeks	↓ V	
	Cuttings rooted, vegetative growth	23-24°C (73-75°F)
2 weeks	↓ V	
	Reduce temperature	22°C (72°F)
2 weeks	↓ V	
	Space	22°C (72°F)
2 weeks	↓ V	
	Reduce temperature	21°C (70°F)
2 weeks	↓ V	
	Flower (3-4 months after propagation)	