Stock Early Iron

Cultural Information for: Stock Early Iron Annual
Common Name: Stock
Botanical Name: Matthiola incana
Seed Count: 14,000 /ounce 500 / gram
Optimum Germination Temperature: 65-68°F / 18-20°C
Optimum Growing Temperature: 50-60°F / 10-16°C
Optimum pH: 5.8 – 6.2
EC – Plug: 0.26 – 0.5 mmhos/cm **(1:2)** / 0.76 – 1.0 **(SME)** / 1.0 - 2.0 **(Pour Thru)**
EC – Finishing: 0.5 – 1.0 mmhos/cm **(1:2)** / 0.76 – 2.0 **(SME)** / 1.0 - 2.6 **(Pour Thru)**

Plug Culture – 4 weeks (288 / 12 x 24 tray)

Stage One (days 1-10) Sow seed into trays filled with a well-drained media at a pH of 5.8-6.2 and lightly cover with vermiculite. Maintain even moisture and a soil temperature of 65-68°F/18-20°C. ***Selection for double seedlings may be done between days 8 and 13.***

Stage Two (days 11-17) After germination is complete, move seedling trays to a well-lighted area, up to 2,500 foot-candles/27,000 lux, with good ventilation. Fertilize lightly with 100 ppm N and grow at a day temperature of 60°F/16°C and a night temperature of 55°F/13°C.

Stage Three (days 18-25) Fertilize as needed to maintain strong growth and provide high light and good air circulation.

Stage Four (days 26-30) When the plugs have 4-5 true leaves, transplant to the bed. ***Therefore, it is important to avoid root bound plugs and transplant on time.***

* *Stock Iron produces 55% double flowers without selection. To increase the percentage of double flowers, use the following procedure.*
1. Triple sow a 288-plug tray with Stock Early Iron seed.
2. 8 days after sowing remove the last to germinate seedling with a tweezers. If only two seedlings germinate wait until the next step.
3. Around day 9-10 allow the soil to dry slightly. This will make the final selection easier. Make the final selection around day 14 before the emergence of the first true leaves.
- The double-flowered seedlings are more vigorous and grow more rapidly.
- Double-flowered seedlings have larger and longer cotyledons with a more irregular/elliptical shape and a lighter green color.
- Single-flowered seedlings will be shorter, with smaller cotyledons with a more round/oval shape and darker green color.

Cut Flower Production 9-14 weeks

Bed Preparation: Select a sunny location with good drainage and a fertile soil.

Plant Density: Plant 5 inches/12.5 centimeters apart (if the plugs are selected for double flowers) and water regularly. Never allow the media to dry out the first week. Avoid strong direct sunlight until the plants are established in the bed.

Moisture: Provide adequate water until flower buds become visible, and then reduce water gradually until harvesting. Due to its strong stem, Stock Early Iron tolerates higher moisture conditions than other varieties. Typically, growers reduce water later in the crop cycle and keep the greenhouse drier to induce flowering and less stem stretch. However, for Stock Early Iron series, to achieve greater stem length keep the greenhouse slightly warmer with higher moisture levels.

Temperature: To promote strong vegetative growth and greater stem length following transplant, supply abundant moisture and target a day temperature of 75°F/24°C with a night temperature of 72°F/22°C. After flowering begins, maintain the temperature below 30°F/86°C to prevent abscission.

NOTE: After flowering begins, maintain the temperature below 86°F/30°C to prevent abscission.

Light: Provide up to 5,000 foot-candles/54,000 lux.

Flower Bud Initiation: Stock Early Iron is an early-season variety that becomes receptive to flower bud initiation at the 2 true leaf stage, approximately 17 days after sowing. After flower bud initiation the plant will form an additional 35 nodes prior to flowering. Once the desired number of nodes have formed, maintain the night temperature below 70°F/21°C for a minimum of 7 consecutive days. Day length is a secondary factor in flower bud formation. Night interruption (long days) with electric lights improves the plant's temperature sensitivity to flower bud initiation.

NOTE: *Under very cold night temperatures (>50°F/10°C) flower bud initiation occurs quickly once two leaves have formed (38-40 total leaves). With moderate night temperatures (62-65°F/16-18°C) the transition to flower bud initiation will take longer, up to 2 weeks, resulting in taller stems (48-50 total leaves). As mentioned above, long days combined with low temperature sensitize the plants to the drop in temperature.*

Netting: Stock Early Iron requires support netting when the plants are about 12-inches /30 cm. tall. Add additional netting as the plants continue growing.

Fertilizer: Maintain an EC level around 1.0 mmhos* in clay soil and 1.25 mmhos* in sandy soil and fertilize as needed to maintain healthy plants. Stock has a higher need for potassium so target the N:K ratio at 1: 1.5. Avoid high rates of ammonium as it promotes softer growth and thinner stems. Water sufficiently during production and then keep drier from visible bud to harvest. *1-2 dilution*

Insects: Aphids and diamondback moths**,**

Disease: Botrytis and sclerotium.

Harvesting: Cut stems with 7-15 open flowers on the spike.

Scheduling: Stock Early Iron flowers in 13-25 weeks from sowing based on when the plants initiate flowers. Following initiation, warmer temperatures and longer days accelerate development whereas cooler temperatures and shorter days lengthen crop time.

Area	Sow	Harvest
Cool Areas	July	November
	February	May
Warm Areas	August	January / February
	October	March / April

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