

<b>Cultural Information for:</b>	Stock Iron	Annual
<b>Common Name:</b>	Stock	
<b>Botanical Name:</b>	Matthiola incana	
<b>Seed Count:</b>	14,000 /ounce	500 / gram
<b>Optimum Germination Temperature:</b>	65-68°F / 18-20°C	
<b>Optimum Growing Temperature:</b>	50-60°F / 10-16°C	

### 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 medium vermiculite. Maintain even moisture and a 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 target the day temperature at 60°F/16°C with a night temperature of 55°F/13°C.

**Stage Three ( days 18-25)** Maintain an EC level between 1.0 and 1.4 mmhos/cm (2:1 dilution) and provide high light and good air circulation.

**Stage Four (days 26-30)** When seedlings reach the 4-5 true leaf stage, transplant into beds. *Avoid root bound plugs and delayed transplanting.*

*\* 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 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 keep somewhat dry conditions in the soil. This will make the final selection easier. Make the final selection around day 12-13 prior to 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 lighter green color.*

*Single-flowered seedlings will be shorter, with smaller and darker green cotyledons.*

### Cut Flower Production 9-14 weeks

**Bed Preparation:** Select a sunny location with good drainage and a fertile soil with a pH between 6.0 to 7.0 and an EC less than 1.3 mmhos.

**Planting/Density:** Plant 5 inches/12.5 centimeters apart (if selection for double flower is made as mentioned above) and water regularly. Never allow the media to dry out for the first week. Avoid strong direct sunlight until the plants are established in the cut flower bed.

**Moisture:** Provide adequate water until flower buds become visible, and then reduce water gradually until harvesting. Due to its strong stem, Stock 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 on tighter stems. This is not necessary with the Iron series, so 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 65-70°F/18-21°C with a night temperature of 59-65°F/15-18°C.

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

**Flower Bud Initiation:** Stock Iron is a mid-season variety that becomes receptive to flower bud initiation when the plants have more than 10 true leaves. Optimum temperatures for flower bud initiation are 59-65°F/15-18°C during the day and 50°F/10°C at night.

**Note:** If the plants are too short when the plants approach the tenth true leaf stage, keep the day temperature above 65°F/18°C to delay initiation. The highest day temperature is the mechanism that affects flower bud initiation.

**Support:** Stock Iron needs supporting nets when the plants are about 12 inches /30 cm. tall. Add additional netting as plants grow up.

**Fertilizer:** Maintain an EC level around 2.0 mmhos (2:1 dilution) in clay soil and 1.6 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 since it promotes softer growth and thinner stems. Water sufficiently during production and then keep rather dry from visible bud to harvest.

**Insects:** Diamondback Moths and aphids

**Disease:** Botrytis and sclerotium.

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

**Scheduling:** Stock Iron will flower 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
Mid or Warm Areas	August	January / February
	October	March / April

**Variety Selection:** There is some variation in vigor between colors. Pink, Rose and White have a strong root system and can more easily achieve sufficient stem length. Apricot and Yellow have slightly weaker roots and require greater attention.

*“All information given is intended for general guidance only and may have to be adjusted to meet individual needs. Cultural details are based on North American conditions and Sakata cannot be held responsible for any crop damage related to the information given herein. Application of recommended growth regulators and chemicals are subject to local and state regulations. Always follow manufacturer's label instructions. Testing a few plants prior to treating the entire crop is best.”*