Aster Matsumoto

Cultural Information for:	Aster Matsumoto	Annual
Common Name:	Aster	
Botanical Name:	Callistephus chinensis	
Seed Count:	13,000-17,000/ounce	450-600/gram
Optimum Germination Temperature:	70ºF / 21ºC	
Optimum Growing Temperature:	60-77ºF / 16-25ºC	

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

Stage 1 (days 1-7) Select a well-drained sterile media with a pH between 5.8-6.2. Prior to sowing, water the plug tray to the point of drip. Sow the seed and cover with medium vermiculite. Do not water the seeds after sowing or the day following sowing. Maintain even moisture and a soil temperature of 70ºF/21ºC. Water the seedlings as needed allowing the media to dry slightly in between watering. An overly wet soil will decrease germination.

Stage 2 (days 8-15*)* After seedlings begin to emerge, move the plug trays to a bright greenhouse and reduce the air humidity and temperature to between 60-70°F/16-21°C. Lightly feed with 100 ppm N from a well balanced fertilizer. *Asters are sensitive to Boron deficiency so maintain optimum pH levels (5.8 - 6.2) and consider applying 0.25 ppm Boron with each irrigation/fertilization.*

Stage 3 (days 16-24) Provide plenty of light and air circulation and fertilize the plugs as needed to maintain healthy tissue with 100-150 ppm N from a well-balanced fertilizer. The use of Calcium Nitrate based fertilizers is recommended to help build strong stems and roots.

Stage 4 (days 25-28) Plugs are ready for transplanting into flower beds. Aster Matsumoto is sensitive to day length and stress conditions. In order to maximize stem length for cut flowers, NEVER DELAY TRANSPLANTING!

Cut flower Production

Cut Flower Bed: Matsumoto is tolerant of stem rot (fusarium), but steam sterilization and crop rotation is recommended to prevent disease.

Transplanting: Space plants 4 x 5 inches/10 x 12.5 cm apart in beds with a rich soil full of organic matter where Asters were not previously grown the year before. Optimum pH is 5.5 to 6.5.

Growing: Maintain good air circulation and temperatures between 60 - 77°F/16-25°C. Fertilize as needed to maintain a soil EC of 0.7 to 0.8 mmhos (2:1 dilution). Soil EC under 0.5 mmhos will cause lower leaves to yellow. Soil EC above 0.8 mmhos will result in large foliage, delayed flowering and shorter vase life. Asters have sturdy stems but need additional support.

Flowering: Bud formation begins under long days (>16 hours) at a temperature above 60ºF/16ºC with final development under short day conditions. In general, Aster Matsumoto flowers in 13-14 weeks (90-100 days) after sowing.

Cyclical Lighting: To save electricity the use of cyclical lighting is an option by applying light for 10 minutes followed by 20 minutes of darkness for 6 hours from 10 PM to 4 AM.

Natural Season Flowering without photoperiod manipulation

Area	Sow	Harvest
Warm Area*	March	July (16 weeks)
Cool Area*	April	July/August (14 weeks)

Northern Hemisphere

For Winter flowering, provide 4 hours of supplemental lighting from 10 PM to 2 AM for a minimum of 3 weeks starting at the 5th true leaf stage and then apply short day conditions (<12 hours). ***Stems should be 2/3rd final height at the start of short days*.**

For late Summer to Autumn flowering transplant when the plugs have 3 true leaves to ensure sufficient vegetative growth. To ensure proper development and sufficient stem length, provide long days for a minimum of 3 weeks starting at the 5th true leaf stage by lighting from 10 PM – 2 AM followed by short days when the crop is 2/3rd's the final desired height.

Post Harvest Care: Cut stems when 2-3 flowers are 1/4 open. Strip off bottom leaves and place stems in tepid water in a cool area to allow for rehydration. Store at 33-35°F/1-2°C. Solutions that contain sugar increase the vase life.

Culture Watch Points: Night temperatures below 60°F /16°C promote vegetative growth and increase the risk of abnormal flower development; especially when using cyclical lighting.

Short days following flower bud initiation, although not required, promote faster and more uniform flowering.

Use steam sterilization and crop rotation to prevent stem rot (fusarium).

"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."