

Aster Matsumoto

Crop	Aster
Series	Matsumoto
Botanical name	<i>Callistephus chinensis</i>
Plant type	Annual
Seed type	F-Coat
Seed count	450-600 seeds / gr
Germination	20°C light favored
Growing	16-25°C
Optimum pH	5.5-6.5

Plug Culture: 4 weeks (288 cell tray)

Stage 1 (day 1-7) Select a well-drained sterile media. 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 20°C. Water the seedlings as needed allowing the media to dry slightly in between watering. An overly wet soil decreases germination. Note: For optimum germination, especially for Blue, Blue Tipped White and Rose Tipped White, maintain 25°C for 12 hours in the day and 15°C for 12 hours at night.

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 16-21°C. Lightly feed with 100 ppm nitrogen 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 seedlings as needed to maintain healthy tissue with 100-150 ppm nitrogen 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) Seedlings 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!

Transplanting to finishing: 9-10 weeks

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

Transplanting: Space plants 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.

Growing: Maintain good air circulation and temperatures between 16-25°C. Fertilize as needed to maintain healthy growth. Low fertilizer levels will cause lower leaves to yellow. High fertilizer levels 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 16°C with final development under short day conditions. In general, Aster Matsumoto flowers in 13-14 weeks after sowing. Short days following flower bud initiation, although not required, promote faster and more uniform flowering.

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.

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 seedlings have 3 true leaves to ensure enough vegetative growth. To ensure proper development and enough 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 1-2°C. Solutions that contain sugar increase the vase life.

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

All information given is intended for general guidance only and may have to be adjusted to meet individual needs. Cultural details are based on Asian conditions such as in Japan and Sakata cannot be held responsible for any crop damage related to the information given herein. Always follow manufacturer's label instructions. Testing a few plants prior to treating the entire crop is best.