



# Aster

Available in Plugs  
& Seed unless  
otherwise listed

## Cut Flower varieties 2009

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Highsun Express

### Aster *C.chinensis* (*Callistephus*)

#### Hana

Aster Hana has very small 3.5cm flowers, very suitable for bouquets and flower arrangements. Single flowers contrast nicely between bright yellow centres and petals. Height 65-75cm tall.

450 Seeds/gram



4460 blue



4437 blue tipped



4461 deep blue



4432 deep rose



4462 pink



4434 rose



4438 rose tipped



4435 scarlet



4436 white

#### Matsumoto

Exciting Japanese Aster with Pompom spray type flowers. The complete plant can be harvested at once. Matsumoto is also very good for spring and autumn glasshouse production. It is uniform and offers a large colour range. Very early flowering strain with half double, medium size flowers and bright cream yellow centres. Little branched, upright plant habit and long, strong stems. Height 70cm. 500 Seeds/gram

1158 mix -not shown



1150 apricot



1151 blue



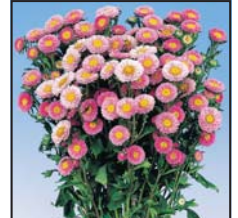
1154 blue tip white



1153 blush - soft pink



1157 light blue



1159 pink



1160 pink tip white



1161 rose



1162 salmon



3590 scarlet



1163 white



1164 yellow

#### Maggie

Maggie has a single white flower with a yellow disk similar to a Marguerite Daisy. The stems branch well for an ideal spray habit and can be used as a filler in mixed bouquets. Maggie is very productive with a profusion of blooms on each stem. Flower size is approximately 3-4cm in diameter. 500 Seeds/gram



1155 white

#### Rainbow Doubles

Full colour mix, each flower has several rows of petals with a bright yellow centre. 450 Seeds/gram



1147 mix

# Aster Cut Flower Product Notes 2009

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## Common Name:

Annual Aster, Japanese Aster.

## Family Name:

Asteraceae.

## Genus:

Callistephus.

## Species:

chinensis.

## Country of Origin:

Japan.

## Plant Type:

Annual.

## Transplant Date:

Field: September - November

Field cool areas: October - December

Glasshouse: Spring, Autumn, Winter. (Plants can be grown year round).

## Flower Date:

Field: December - March.

Field cool areas: December - February.

Glasshouse: Spring transplant = Nov - Jan. Autumn transplant = July - October.

Winter transplant = October - November.

## Field Production:

Transplant into the field in mid November through to December. Warm areas would benefit from an earlier transplant with flowering in November, and cooler areas transplant in October for harvest in December through to January. Bud formation is initiated under longday lengths (16 hours +) and with temperatures over 15-21 °C. Final development of flowers will come under shorter day lengths.

## Glasshouse Production:

In Glasshouse, plants may be grown year round, with up to three crops being achieved each year. Timing for summer flowering is similar to field growing, with transplanting in September and harvest during the warmer months. For winter and autumn harvests, lighting is important and must be maintained with the use of incandescent lights during the darker months. Plants require at least four hours each evening after sunset from March to November to maintain a day length of 16 hours. Transplanting in Autumn will crop in 4 to 5 months. Temperatures should not go below a minimum of 10 °C. Changes from this daily routine may result in premature flowering and abnormalities. The warmer temperatures as Spring arrives, with the corresponding reduction in the use of lights, will finish the crop appropriately.

## Crop Time:

**Hana series** is approximately two weeks later to flower than the **Matsumoto series** and blooms in about 10 weeks from transplant. Grown outdoors the main harvest period is from December to March. For production outside this period, artificial lights are required to ensure sufficient stem length and flower quality.

**Matsumoto** blooms in about 9 weeks after transplant. Grown outdoors the main harvest period is from December to March. For production outside this period artificial lights are required to ensure sufficient stem length and flower quality.

## Growing Conditions:

To escape the abnormal petals caused by short daylight, the warmer temperature at night than greater 10 °C (50 °F), ideally 15 °C (60 °F) is required. Bud formation begins under long-day (16 hours) at temperature over 10 °C (50 °F) with final development under short-day conditions. After buds come out, control water and ventilate the field/area to make the stems harder. Disbud 1st centre flower to promote lateral shoots flowering at the same time, otherwise upto 3 weeks until all flowers open.

## Optimum Growing Temperature:

15 - 25 °C (60 - 75 °F).

## Soil Conditions:

Soils must be free of pathogens. Prepare a field/area which should be sterilised and rich with plenty of organic matter and the field/area where Asters were not previously grown. Sakata's Asters are bred to be tolerant against Stem Rot (Fusarium) and can be grown in the same field every other year. Never grow in the same bed two years in succession.

## Transplant:

When seedlings are at stage of 6 - 8 true leaves, this is the best time to plant.

Root bound seedlings will often flower prematurely on short stunted stems.

## Plant Density:

Plant carefully into production bed spacing 10 x 12.5 cm (4 x 5"), 80 plants per m<sup>2</sup>, avoid planting too deep. Keep at 15 - 20 °C (60 - 70 °F) and water not letting it become dry.

## Height/Support:

**Hana** 65-75cm tall. It is advisable to use at least one tier of support. A major characteristic of the **Hana series** is that it displays a strong basal branching habit. There is no requirement to pinch but pinching can be used to achieve a target of approx. 60 stems/m<sup>2</sup>. A pinch should be applied about 5cm above the plant base about 40 days after planting. Leave 3-7 side shoots after pinching and disbud others.

**Matsumoto** approximately 75cm tall depending on transplanting time and colour. Asters stretch appreciably if grown under shade cloth. There is no requirement to pinch as **Matsumoto** have an excellent natural branching habit. Use one tier of support.

## Spacing:

**Normal culture (no pinching)** - Transplant 20 x 20cm outdoors and 12-15 x 12-15cm indoors.

**Forcing culture** - Transplant 12-15 x 12-15cm if not pinching 20 x 20cm if pinching.

## Harvest:

**Hana** harvest terminal when 3 flowers per stem have developed colour or outside ray florets begin to open. Treat stem with ethylene inhibiting agent like STS. For dried flowers harvest when flowers are fully open.

**Matsumoto** harvest terminal when outside ray florets begin to open. For dried flowers harvest when flowers are fully open. With pinching the lighting will need to be extended. Thus harvest will delay 1-2 weeks

## Fertiliser:

Fertilise with alternate applications of calcium nitrate and potassium nitrate to supply 125 - 150 ppm N. Decrease nitrogen and increase potassium-containing fertilisers when flower buds appear.

## Lighting:

Crop timing is affected by the ratio of long days (LD) to short days (SD). Increasing LD treatments will increase stem length, but lengthen time to harvest. LD consists of 16 hours of light. Cyclic lighting of 7½ min per ½ hr is commonly used.

## Environmental Factors:

Natural flowering usually takes place after the longest day. Asters need long days for stem elongation and bud initiation. **Hana** In principal minimum day length is 15 hours and temperature is 21 °C. **Matsumoto** in principal minimum day length is 16 hours and temperature is 15-21 °C. If temperatures are higher and light intensity stronger, shorter day lengths are possible (eg Qld and WA). After buds are initiated, flowering is hastened by short days. To grow out of season expose seedlings to long days for about two months or until flower buds are visible. Start treatment one week after transplant. After flower buds appear lighting can be stopped. Flowers are ready for harvest about 3 weeks later.

## Pest/Diseases:

Common diseases of Asters include Petal blight (Botrytis); damping off (Pythium; Rhizoctonia); Tomato Spotted Wilt virus, Aster wilt (Fusarium, Verticillium: Use crop rotation or fumigation). Caterpillars, leaf hoppers can infect the crop with virus like organisms. Throughout growing, appropriate prevention from Cut Worm or Mite is critical. Never grow in same bed 2 years in succession to prevent Fusarium.

## General Comments:

**Hana** Suggested pH 5.5-6.5. Water in well immediately after transplanting. Asters are frost tender so outdoor transplants must take place after all danger of frost has passed. During production use a complete N:P:K fertiliser with the majority of nitrogen in the nitrate form and containing extra micronutrients. Nitrogen is important in the early stages of growth but reduce after buds become visible. At the bud stage increase Potassium for better stem strength, flower quality and flower colour Asters are sensitive to high soluble salts. **Matsumoto** pH 5.5-6.5. Water in well immediately after transplanting. Asters are frost tender so outdoor transplants must take place after all danger of frost has passed. Nitrogen is important in the early stages of growth but reduce after buds become visible and increase Potassium for better stem strength, flower quality and flower colour.



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