

Growing Garden Asters

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Last year many growers tried garden asters for the first time. Asters represent a new product for the fall market, adding variety to the garden mums and pansies growers sell this time of year. Asters come in a variety of color forms including white, pink, lavender, red and blue. The blue color form may attract the most consumer interest since it is not available in garden mums and, in general, tends to be an uncommon color in the fall landscape. Another advantage for the consumer is that asters are true hardy perennials in New England. Unlike garden mums, which do not overwinter well in this region, asters will overwinter, producing larger plants the second season.

Under short day conditions, asters flower in about five weeks. This is about two weeks faster than garden mums. Asters also tend to be more vigorous than mums and can be planted about two weeks later to produce a fall crop. For many growers, the shorter cropping time will be attractive.

In general, asters require cultural conditions similar to mums. Both grow vegetatively under long days and initiate buds and flower under short days. Both require pinching to stimulate branching and to produce a full, bushy plant. As with mums, normally tall varieties of asters may require height control chemicals to produce a desirable product.

Unlike mums, asters do not respond well when grown in the field and then dug and potted for sale. Grow asters in containers using well-drained media with a pH in the 5.5 to 6.5 range. Fertilize plants with a complete formulation such as a 15-16-17 at a rate of 150 to 200 ppm in soil mixes or 250 to 300 ppm in soilless media. Alternatively, topdress with a controlled release fertilizer and supplement with a liquid fertilizer at a 1/4 to 1/2 rate. Asters are sensitive to high soluble salt levels. Reduce fertilizer rates if containers are not leached regularly.

As flowers begin to open, stop all fertilizer applications to improve flower quality and longevity.

Crop vigor will be greatly affected by the availability of water and fertilizer. Limiting fertilizer and water will limit final plant size. Asters should not be allowed to dry excessively (i.e. wilt) between irrigation or the lower leaves will yellow and drop, producing a leggy appearance.

For a fall crop, plant rooted cuttings any time between early June to mid-July. Asters planted in early June will require as many as three pinches and will produce large plants. Apply the first pinch within 10 to 14 days after planting. With this pinch leave only three to four leaves. Apply the second pinch two to three weeks after the first, leaving three to four nodes on each break. Use early plantings in large containers such as 1 1/2 to 2 gallon pots. Late plantings, mid-July, will not allow time for a pinch, since under natural light conditions asters will begin to initiate flowers around July 15 to 20. Late plantings are best suited for six-inch containers.

For a fast crop, plant three rooted cuttings in a six-inch pot in mid-July and the crop will finish in five weeks. Most of the cultivars presently available (*Table 1*) flower from late August to mid-September (five to six weeks after flower initiation begins). Mum lighting (i.e. a night break to produce a long day effect) can be used to delay flowering for later sales or shading can be used to induce flowering when natural day lengths are too long.

Daminozide or B-Nine can be used to control height of cultivars which are naturally tall. Use 2,500 ppm as a spray following a pinch (when new shoots are 1 1/2 to 2 inches long). A second application may be used 10 to 14 days after the first. B-Nine should not be applied to asters once buds become visible.

Yoders Brothers, Inc. is marketing 20 garden aster cultivars for 1993 including seven new cultivars not previously available (call 1-800-321-9573 for more details). Table 1 lists the cultivars available and some of their more important characteristics. Cultivars listed as "early season" flower toward the last week in August (under natural daylengths) while those listed as "mid-season" flower from early to mid-September. Cultivars classified as compact in habit finish in the 10- to 12-inch height range, cultivars with a medium growth habit finish in the 12- to

Table 1: Garden Asters				
<i>Cultivar Name</i>	<i>Growth Habit**</i>	<i>Natural Flowering Season</i>	<i>Flower Size</i>	<i>Powdery Mildew Susceptibility</i>
Color: White				
Butterfly White	U/T	Mid-season	Medium	Susceptible
Monte Casino	U/T	Mid-season	Small	Resistant
Sunset	C/S	Mid-season	Small	Susceptible
Color: Pink				
Butterfly Rose	S/M	Mid-season	Medium	Susceptible
Dark Pink Star	C/S	Early season	Small	Susceptible
Painted Lady	U/T	Mid-season	Medium	Resistant
Patricia Ballard	C/S	Early season	Large	Susceptible
Skipper	U/T	Mid-season	Medium	Resistant
Sun Rose*	C/S	Early season	Medium	Susceptible
Sunshir*	C/S	Early season	Medium	Susceptible
Suntop*	C/S	Mid-season	Medium	Susceptible
Color: Lavender				
Purple Dome*	C/S	Mid-season	Large	Resistant
Purple Monarch	U/T	Mid-season	Large	Resistant
Prof. Kipperberg #2*	C/S	Early season	Large	Resistant
Color: Blue				
Butterfly Blue	S/M	Mid-season	Medium	Susceptible
Lilac Blue Admiral	U/T	Mid-season	Medium	Resistant
Shone Von Dietlikon	C/S	Early season	Medium	Susceptible
Sunkid*	C/S	Mid-season	Medium	Susceptible
Color: Red				
Crimson Brocade*	C/S	Mid-season	Large	Resistant
Winston Churchill	C/S	Mid-season	Large	Susceptible
*Denotes new cultivar in 1993				
**U/T=Upright/Tall; C/S=Compact/Short; S/M=Semi-upright/Medium				

14-inch range and tall cultivars finish in the 14- to 18-inch size range.

Powdery mildew and rust are diseases which can cause serious problems on garden asters. Powdery mildew appears as a white/gray powdery coat on upper leaf surfaces and on stems. Asters are susceptible to two types of rust *Coleosporium*

asterum and *Puccinia asteris*. With both rust species, chlorotic yellowish spots appear on the upper leaf surface, while on the lower leaf surface *C. asterum* is characterized by rust-red spores and *P. asteris* is characterized by raised brown pustules. In advanced stages, foliage will turn black.

Both diseases are more likely to occur when moisture remains on leaves in late afternoon or evening. Late-day, overhead irrigation should be avoided. A less avoidable, and therefore more problematic circumstance in New England, occurs when cold nights follow warm, humid days—environmental conditions that favor the outbreak of these diseases. Growers who anticipate a problem with late season dew and disease are advised to select resistant cultivars (*Table 1*). The following fungicides can also be used:

Strike 25WP (1/2-1 oz. per 25 gallons) to control both rust and powdery mildew, or for powdery mildew control use **Domain FL** (2.5 fl.oz. per 25 gallons) or **Cleary's 3336F** (2.5 fl.oz. per 25 gallons) or **Cleary's 3336WP** (2 to 3 oz. per 25 gallons).

In addition to diseases, aphids, thrips and leafminers can also attack asters. Use the same chemical control procedures you would use to control these pests on garden mums.

Asters represent a new crop, and growers will have to build a market by educating consumers. Stress the unique colors and the perennial habit of this crop, these are strong marketing features. Also advise consumers that perennial asters will be larger (taller and wider) in the garden the second year. This information will help homeowners make wise decisions when they plant their asters in the landscape. Growers and retailers should also be aware that asters attract bees. If the plants are sold when flowers are no more than 25% open, potential problems with bees will be minimized.

