

## Producing Cut Flowers - Florist Statice

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by

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This article is one in a series "Enterprise guide for Southern Maryland, providing information about alternative agricultural enterprises for growers. These trials were conducted in Maryland, and some of the information may have to be adjusted for the climate where you are.

### General Information

Annual statice cultivars (*L. sinuatum*) originating from the Mediterranean region, are becoming more popular in the U.S. Statice is commonly used either dried or fresh as a filler flower in arrangements. The multiple uses of statice make it an ideal crop for certain climatic areas. Growers can produce statice for the fresh cut market and sell the crop during the early spring.

They also can harvest the drop and dry it for winter sales. Optimum growth of statice occurs during the cool seasons of the year when most growers have time to devote to production of this crop.

Statice may be produced year round, anywhere cool temperatures are found. Planting statice in different climatic zones influences time of flowering. In temperate climates, it is generally grown as a summer crop, while in tropical regions, statice is grown in highland areas during the winter.

Florist statice is an annual plant which as a rosette plant habit. The plant has deeply lobed leaves which grow parallel to the soil. The 12 to 24" flower stems have colored bracts which surround the white flower. The bract colors include white, yellow, lavender, peach and shades of blue.

### Choosing a Variety

A number of varieties of *L. sinuatum* are available, with most seed producers having their own strains. The varieties range from white (alba), to various shades of pink, blue and deep purple -- see statice varieties table.

### STATICE VARIETIES

Variety	Color
Fortress apricot	Pastel oranges
Fortress dark blue	Dark blue
Fortress heavenly blue	Light blue
Fortress purple	Purple
Fortress rose	Rose
Fortress yellow	Yellow
Blue river	Deep blue
Bondeuelli	Bright golden yellow
Kempf's blue imp.	Dark blue
Lavandin	Clear lavender
Market grower's blue	Deep blue
Midnight	Deep blue
Surworowii (Rattail statice)	Rose

Source: Fred Gloeckner Catalog, 1986.

**Producing the Crop:** The total production time from sowing to setting the plants in the field is about 8-10 weeks. Use husked (or decorticated) seeds whenever possible to prevent fungal diseases. Husked seeds

germinate quickly and uniformly and can be sown easily. Broadcast the seeds over a tray of potting soil and cover lightly. Use a sterile mixture such as 1:1:1 (by volume) of peat, sand, and vermiculite. You can also successfully plant seeds by machine into plug flats.

Keep the trays moist during germination, which takes up to 7 days, at 25°C. The germination rate is reduced at lower temperatures. After germination, reduce irrigation to prevent damping off. Decrease temperatures after germination to 20°C during the day and 10°C at night.

Transplant the seedlings when the first true leaves have fully expanded, usually 14 to 18 days after seeding. Transplanting before true leaves have expanded reduces seedling survival. Seedlings can be grown in individual pots, cell packs, or Speedling trays.

During the last 4 weeks before field planting, grow the plants at a temperature of 10°C or below to encourage the plants to mature and start budding. Consider the likelihood of cool temperatures in the field to determine the planting date. The earliest time you should plant is late January, if you sowed seeds in November. The last sowing should be made at the beginning of March, although this late sowing is not practical if the weather is warm in April.

Remember that cool temperatures and long days (LD) promote flowering. Temperature greatly affects growth, budding and flower development. Stem elongation, leaf initiation, and growth are promoted by high temperatures while flower growth is promoted by low temperatures.

**Fertilizing the Soil:** Based on the differences between the location and time of the year when statice is produced, it is difficult to recommend a specific fertilizer program. Use dolomite or limestone to maintain a pH level of 6.0 to 6.5. It is important to avoid high salt levels in the soil, since this reduces plant vigor to the point where flower stem length is adversely affected.

After transplanting, fertilize the plants to simulate rapid growth. Add Osmocote 14-14-14 to the soil at 8 pounds per cubic yard or use 400 parts per million (ppm) weekly liquid injection of 20-20-20 fertilizer. Before planting in the field, broadcast superphosphate at 500 pounds per acre, and apply nitrogen at 30 pounds per acre over the field and cultivate into the soil. Band either 500 to 600 pounds of nitrogen per acre of Osmocote 18-6-12 on the center of the bed.

Freely water statice after planting, and keep the soil moist until 3 to 4 weeks before harvest begins. After that, do not water until the first harvest is complete, otherwise it is very difficult to keep the humidity low, and botrytis mold may develop. Once the first harvest is complete, make a single application of water if necessary.

## Controlling Pests:

### Insects

**APHIDS** - Aphids can rapidly develop to the point where chemical control is necessary. Many species of insects attack statice, but there are many other insects that could seriously damage statice. (Contact Dr. Will Healy for current chemical control recommendations at 1-301-405-4356)

**LEPIDOPTEROUS LARVAE** - This insect group includes armyworms, cutworms, and loopers. These caterpillars usually attack the tender terminal growth

**SUCKING & RASPING INSECTS** - This insect group includes aphids, mealy bugs and thrips. The damage these insects cause is minimal, and large populations rarely appear.

**MITES** - Spider mites cause the most serious damage to statice. They may appear in large numbers on the underside of the leaves. Populations of these insects usually peak during flower harvest and large numbers migrate from the leaves to the flower spike.

## Diseases

Foliage, flower and soil borne pathogens are limiting factors in the field production of quality statice.

The major foliage and flower diseases are Anthracnose, Cercospora, and Botrytis. Crown rots may be caused by Colletotrichum, Rhizoctonia, and Southern blight (*Sclerotium rolfsii*).

Use a preventive maintenance spray program which alternates combinations of fungicides, insecticides, and acaricide every 10 to 14 days for statice, since spray on demand practices are undeveloped. B

Botrytis is a problem with greenhouse grown statice. It can attack at any time from the propagation stage to flowering, and can cause serious losses if it is allowed to become established. To maintain a clean crop, combine watering, heating and ventilating techniques to keep the atmospheric humidity as low as possible at all times.

## Weeds

Oxidazon, EPTC, and DCPA are the most acceptable herbicides for use in statice production. The use of EPTC requires mechanical incorporation which limits its usefulness for many planting procedures. Considering this constraint, most statice growers would be limited to Oxidazon or to DCPA. Plastic weed barriers can be successfully used to control weeds.

## Planting the Crop

### Field Plant Spacing

Grow two to three rows of statice plants per bed, and space the plants 12 to 14 inches apart across the bed (alternate space), and 14 to 16 inches apart down the bed. The plant density will be about 14,500 per acre with beds on 54 inch centers.

### Greenhouse Plant Spacing

For glazings with poor light transmission, or for early production plantings, the density should be one or fewer plants per square foot. At this spacing, the plants will produce strong

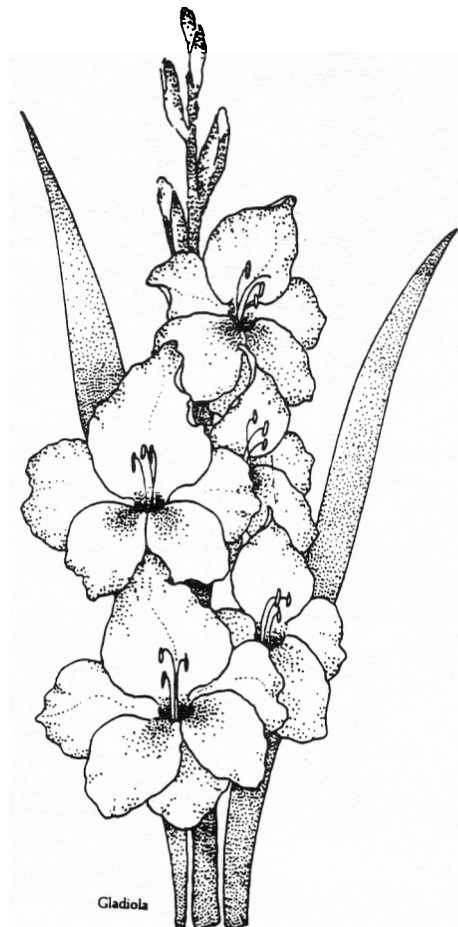
stems, although the overall yield per unit area may be reduced. The weaker growth which results from close spacings requires support, and a single layer of wire mesh is commonly used.

## Harvesting the Crop

Cut the flower when 75% of the calyces show color. Cut the stems with knives or scissors as low as possible to the plant without removing leaves. Dip the stems into a bactericide solution (such as Constant at 200 ppm) immediately after harvest to prevent stem decay and increase water uptake. Leaves stems in warm (20°C) water overnight before grading the stems into bunches.

## Selling The Flowers

Flowers are sold normally in 1 pound bunches, which contain 7 to 16 stems depending upon the variety. Yield may range from 10,000 to 40,000 pounds per acre.



**Returns Per 10,000 Square Feet of Bed Area Planted**

**Market Price (per bunch)**

<b>Bunch Number</b>	<b>\$5.00</b>	<b>\$4.00</b>	<b>\$3.00</b>	<b>\$2.00</b>
2,000	\$10,000	\$ 8,000	\$ 6,000	\$ 4,000
3,000	15,000	12,000	9,000	6,000
4,000	20,000	16,000	12,000	8,000
5,000	25,000	20,000	15,000	10,000

**Cash Cost Per 10,000 Square Feet of Bed Area Planted**

Trickle tube	\$200.00
Fertilizer pre and post plant	\$55.00
Mulching film and herbicide	\$500.00
Cover crop	\$17.00
Transplants	\$2,500.00
Planting labor (60 hour)	\$360.00
Harvest labor (700 hour)	\$4,200.00
Buckets	\$400.00
Bunching supplies	\$600.00
Floral preservative	\$240.00
<b>TOTAL</b>	<b>\$9,072.00</b>

Statice is sold in 1 pound bunches which contain approximately 10 stems. The table indicates the anticipated harvest income per 10,000 square feet of bed area planted. If stems are dried and sold at a later date, the anticipated income may be higher. The number of salable bunches may represent only 50% of the stems produced by the plants. Yield is significantly affected by cultivar and planting date.

