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**Annual
Statice
in Nebraska**

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by
Ellen T. Pappozzi



**The Agricultural Research Division
Institute of Agriculture and Natural Resources
University of Nebraska-Lincoln
Irvin T. Omtvedt, Director**





A fall door wreath made from annual statice. Statice retains its vivid color even when preserved.



Annual statice drying in a home-made black polyethylene lean-to.

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ANNUAL STATICE IN NEBRASKA

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SUMMARY

STACKS

Annual statice can be successfully grown, harvested, and preserved under Nebraska's climatic conditions. Start plants from seed nine weeks before they are field or garden planted. The earlier in the season that planting occurs, the greater the yield. Apply fertilizer before and after planting. Herbicides are recommended to eliminate hand weeding and allow maximum yield. Flowers should be harvested when all florets are fully open and can be used fresh, or dry stored at 2 °C (36 °F). Statice can also be preserved by drying or soaking fresh cut stems in 1:2 or 1:3 glycerine to water solution for 48 hours and then microwaving for 1 minute at 34 °C (97 °F) (medium high setting).

INTRODUCTION

Annual statice (*Limonium sinuatum* Mill.) is a floricultural crop used as a filler flower in floral designs. Its rosette growth habit and range of flower color from white, buff, and peach to lavender, blue, and purple make it an attractive home garden plant as well as a commercial product. Research was conducted on all phases of statice production so that this crop can be used as an alternative crop for small acreages and as part of the home garden.

CROP PRODUCTION

While annual statice can occasionally be purchased as a bedding plant, reliable color and flowering is more consistently attained when a grower selects seeds from a commercial seed catalog. Seed should be decorticated and will be listed by a 'cultivar' name which also designates the color (Kampf's Blue - statice will be bluish-purple in color). However, within the plant population there will be a range of colors such that a purple-colored variety may vary from light purple to very blue purple. For the home gardener, mixtures that encompass the range of color are available.

Experiments which served as the basis for these crop production recommendations were performed using Kampf's Blue, Iceberg, and Gold Coast cultivars. Cultivars Purple Monarch, Modra Dark Blue, and Rosea Superba

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were also grown, but only Purple Monarch gave consistent stems of long length and high quality.

Sow seed nine weeks before anticipated field or garden planting using the following schedule:

Week 1 - Sow seed thinly in rows in a flat containing pasteurized medium consisting of one part peat and one part perlite or vermiculite. Cover seed lightly with mix or with sphagnum moss if available. Keep moist using commercial seed germinator or a light, frequent mist cycle. If grown in the home, use artificial lights for 12 to 16 hours per day and keep moist, but not wet. Germination temperature should be around 24 °C (75 °F).

Week 4 - By this time, seed should have germinated and formed true leaves. True leaves can be identified by the lobed leaf margins as compared to entire margins of the cotyledons. Once true leaves have formed, move flats to a controlled environment where 16 °C (61 °F) day and 13 °C (55 °F) night temperatures with 16 hours of light per day can be maintained for two weeks. Gold Coast statice is the only cultivar that does not require this cool period to flower. However, giving Gold Coast this treatment does not negatively affect its flowering ability. Plants may turn red during this period.

Week 6 - After the cool period, return plants to the greenhouse and transplant into cell packs which have 48 cells per flat. Smaller cell packs (more cells per flat) may restrict rosette growth. Three to four days after transplant, drench plants with a fungicide.

Week 7 - Fertilize all plants with a starter fertilizer that is high in phosphorus, e.g. 9-45-15 at the rate of 100 ppm of nitrogen (see appendix for formula to compute amounts needed).

Week 8 - Fertilize all plants with the same starter fertilizer but at a rate of 200 ppm nitrogen.

Week 10 - Transplant carefully into field in rows with plants 2 ft. apart within rows and 2 to 4 ft. between rows. Crowns of plants must not be below soil surface.

FIELD PREPARATION AND PLANTING

Choose a protected field site as statice flowers will blast if exposed to continual hot, dry winds. Before field planting, prepare the field by disking and harrowing. Sample and test soil for % total N, ppm P and K, and for pH. One week before planting, surface apply and water in oxadiazon (2 G) at 4.5 kg active ingredient per acre (225 g, or 0.5 lb of granular material per acre). This herbicide gave excellent residual broadleaf and grass weed control for a minimum of 60 days after application over three years of field trials on Sharpsburg silty clay loam (Typic Argiudoll) soils. Similar results were obtained in a one-season field trial on Cozad silt loam (Typic Haplustoll) soils.

When statice is planted on soils such as Sharpsburg silty clay loam with an analysis of 0.12% nitrogen, 86 ppm extractable phosphorus and 608 ppm potassium, fertilizer applications of 45 to 68 kg nitrogen per hectare (18 to 28 kg nitrogen per acre) will promote increases in mean fresh weight and yield of Iceberg and Kampf's Blue cultivars. Gold Coast plants performed well without the additional field fertilizer applications. Granular fertilizer used can be a complete type of fertilizer, e.g. 12-12-12, which can also be used on turf and vegetables. If fertilizer is needed, it should be band applied on both sides of the rosettes two weeks after planting and then watered in.

DISEASE AND PEST CONTROL

Statice has a prostrate, rosette form of growth and is subject to crown and stem rot diseases. These diseases may often result from situations where the soil is too wet or plants have been planted too deep. These diseases often appear within the first few weeks after transplanting and can be alleviated by spraying a fungicide into the center of the rosette.

Another serious problem for statice is called MLO, mycoplasma-like organism. This disease results in purpling of the foliage with malformation of the flower heads producing unsalable flowers and resulting eventually in plant death. This disease is transmitted by leaf hoppers. Once statice plants show these symptoms, rogue them from the field. To control the problem, control leafhoppers by mowing or eradicating grasses, weeds, or other plants in the vicinity which may harbor the insects and by spraying for the insects in these areas. There is no useful purpose served by spraying the statice.

HARVESTING

Flowering time is generally determined by cultivar with Gold Coast blooming first in June and July and other cultivars flowering two to four weeks later. In general, the purple colors bloom later, usually starting in late July. Harvest flowers when all florets are fully open by snapping the stem at the base of the plant with your fingers. The best time to do this is in the morning. Yields for research field trials are listed in Table 1. Higher yields than these could be anticipated as the rose and certain purple cultivars did not perform as well as others. Recommended cultivars include Purple Monarch, Kampf's Blue, Iceberg, and Gold Coast. For commercial sale, bunch stems in 454 gm (1 lb) bunches, usually 7-16 stems depending on the cultivar, tied with rubber bands or string and then held dry in a cool place or cold storage until shipping.

Table 1. Flowering dates and yield from rose and purple cultivars of statice—1040 plants planted in early June.

Date	Yield (bunches)
7-21-83	6
7-28-83	19
8-4-83	23
8-11-83	24
8-18-83	24
8-23-83	24
9-2-83	24
9-9-83	10
9-16-83	18
10-7-83	15
Total 187 bunches	

STORAGE AND PRESERVATION

Commercially, statice is usually stored dry at 2°C (36°F) in a cooler to keep it fresh. Statice can be preserved by air drying. However, this method increases the longevity of the statice only slightly as once the statice is completely dried it tends to become brittle and break apart when handled.

Research has shown that, if statice is preserved when it is fresh, flexibility of florets and stems is increased. To preserve statice, soak fresh cut stems in 1:2 or 1:3 glycerine to water solution for 48 hours. Then microwave for 1 minute at 34°C (97°F) (medium high) with a cup of water at the back of the oven. When statice has been dry stored at 2°C (36°F) for up to 21 days or less, preservation is effective but not as effective as when preserved fresh.

ECONOMIC ASPECTS

Fresh statice wholesales for between \$1.50 and \$4.00 per 454 g (1 lb) bunch. If commercial production is to be attempted, contact wholesale florists to determine actual prices and production needed. While seed, fertilizer, and herbicide costs are minimal for this crop, irrigation and labor requirements may be extensive. Thus, it is recommended that growers try a small area first before attempting large acreages.

APPENDIX

Formula for determining amounts of dry fertilizer based on ppm recommendations:

$$\left(\frac{\text{ppm N recommended}}{\%N \times 75} \right) \times 9 = \text{teaspoons to be added to 1 gallon of water}$$

e.g. 9-45-15 the % N value used would be 9, the first number.

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