

PRODUCING FIELD-GROWN SPECIALTY CUT FLOWERS: AN OVERVIEW

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Field-grown specialty cut flower production represents a rapidly increasing form of alternative agriculture in New England. Outdoor cut flower production is not new to floriculture, but the practice has experienced a nationwide rebirth in recent years. Commercial growers can produce and sell not only fresh cut flowers, but also dried flowers, seed heads, stalks or any other plant part which can be used in decorative displays.

Annuals, perennials and biennials can all be used for specialty cut flower production. Cold-hardy perennials that have storage organs, such as lilies, can be dug, stored and then planted on a staggered schedule (i.e. every two to three weeks) in order to lengthen the production harvest period. Non-hardy perennials with storage organs, such as dahlias and gladioli, must be dug at the end of each season, but the same staggered planting scheme used for hardy bulbs can also be used. Staggered plantings are not used for cold-hardy perennials with rhizomes or those that tend to form large clumps. With these types of perennials, the clumps may need to be divided every few years.

Transplants are a necessity when annuals are grown for cut flowers in the field. Annuals are planted as soon as the danger of frost is past, or even earlier if protective field structures such as row covers or high tunnels are used. Staggered plantings are possible with annuals which have a limited production period. Growers should take care to use cut flower cultivars as opposed to the compact cultivars bred for bedding plant use.

Biennials have limited use as specialty cut flowers because they tend to bloom together and only for a relatively brief period of time. Staggered production is difficult to achieve because biennials must be planted in the fall in order to ensure adequate cooling for flower bud initiation and development.

The species or cultivars a grower chooses to use should meet some of the following criteria: low

cost; high value; high consumer demand; long production period; long post-harvest life; resistance to insect and/or disease; easy to harvest and handle; long stems; tolerant to local environmental stress (i.e. heat or drought in the south or cold and rain in the north); suitable for secondary uses such as drying; or possessing attractive stems or foliage. No single cultivar will meet all of these criteria. However, growers should attempt to blend enough different characteristics (i.e. cultivars) in the overall crop so that it is productive, marketable and, above all, profitable.

As is the case with most minor crops in the trade, research on the field performance of many potential cut flower species or cultivars is limited. As a result, growers must gather their own data by constantly testing new material and keeping careful records on production, culture, weather, postharvest quality, marketability and profitability. The need to conduct trials and keep records cannot be overemphasized.

Specialty cut flowers can be marketed through several channels, including selling to other wholesalers, selling to retailers or retailing directly to the public. Growers just getting started will find direct sales to the consumer the easiest market to enter.

Although cultural requirements may vary from crop to crop, the following recommendations can be used as a general guideline for the majority of specialty cut flowers.

Grow cut flowers in full sun on a well-drained soil. Use raised beds to maximize drainage on poorly-drained soils. For reliable crop performance, irrigation is essential. However, overhead irrigation should be avoided since it can facilitate the spread of disease or may physically damage flowers, thus reducing crop quality. Use soil testing to determine fertilizer requirements before spring growth begins. Growers must also have the ability to fertilize at critical

stages during the crop (i.e. during flower bud development).

Protect specialty cut flowers from wind, animal damage and early or late frosts as needed. In New England, deer and vole damage may be of special concern. Insect and disease control are also essential (See page 12). An integrated pest management (IPM) approach featuring sanitation and early detection works best. Weed control is important. Weed barriers or mulches (i.e. plastic or paper mulch, or 2" to 4" of straw or wood chips) can be used effectively.

Production beds are generally 3 to 4 feet wide and 100 to 120 feet long. In a pick-your-own situation, use narrower beds (2 1/2 to 3 feet) and limit row length to approximately 25 feet. Mowed, sod aisles also work well with pick-your-own traffic. Optimal plant spacing within a bed is crop dependent, but, in general, high density plantings produce the highest yields per square foot. High spacings must be balanced with flower quality, optimal access for harvesting and adequate air movement for disease control.

Stem support may be needed with certain species to ensure straight stem development. Plastic netting can be used for support.

Harvest cuts in the morning when the plants are cool and the water content of the tissue is still high. Cut flowers should be held at a maximum temperature of 60°F (40°F is preferable) until stems are graded and packed. To process stems for shipping or storage, first dip stems into a 10% chlorox solution to reduce bacterial levels on the stem surface. Next, recut stems under water to facilitate water uptake. **Do not crush stems.** Once recut, place stems in warm water with a preservative and hold for sale at 32° to 35°F and 90 to 95% RH.

Successful specialty cut flower production requires high crop quality and an awareness of production costs. Remember the enterprise must be economically sustainable to be successful. Growers new to specialty cut flower production must recognize the level of commitment that this intensive form of agriculture requires and be willing to put in the necessary time and energy to succeed. Finally, remember the burden of testing new material and minimizing mistakes rests with the grower. Experiment on a small scale and keep records!

Additional Information

The Association of Specialty Cut Flower Growers. 1988. M.J. Vaughan. Timber Press. Portland, OR.

Refrigeration and Controlled Atmosphere Storage for Horticultural Crops. Northeast Regional Agricultural Engineering Service. #22. 1990. Cooperative Extension, 152 Riley-Robb Hall, Cornell University, Ithaca, NY 14853. \$5.25.

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Dried Flowers. C. Kopolow. November, 1989. 8 pages. Send a self-addressed, gummed label to Agri-Topics, National Agricultural Library, Room 111, 10301 Baltimore, Blvd., Beltsville, MD 20705.

Herbs. S. Whitmore and H. Shimizu. December 1989. 6 pages. Send a self-addressed, gummed label to Agri-Topics, National Agricultural Library, Room 111, 10301 Baltimore, Blvd., Beltsville, MD 20705.

Peonies. J. MacLean and S. Whitmore. n.d. 4 pages. Send a self-addressed, gummed label to Agri-Topics, National Agricultural Library, Room 111, 10301 Baltimore, Blvd., Beltsville, MD 20705.



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