# Cut Flower Production of Field-Grown Herbaceous Perennials at UConn

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There is increasing interest across the United States in growing field-grown, specialty cut flowers on small parcels of land (U.S.D.A. 1991). This has been helped, in part, by our foreign competition. Unique species which have been introduced to the United States by overseas growers and distributors have increased the popularity and demand of specialty cut flowers. American growers have been finding that their product is in greater demand than imports because of the better quality stems and the greater production volume we offer.

New Englanders, who are accustomed to the "cottage industry" environment, are especially interested in field-grown cut flowers because cut flowers offer an economical way to maximize the use of their limited land (Armitage 1992; Perry 1989). Herbaceous perennials last three to five years in the field, and the yield per square foot can be very high.

A major problem with field-grown cut flower production is marketing. For example, limited crop selection can lead to several problems (Bridgen 1990a,b) including:

1. **Uneven Production.** The price of the flowers may be low due to overproduction at that time of the season.

2. **Uneven Labor Requirements.** The grower is very busy when the crop comes into flower and later, there is nothing to do when the crop is not in flower.

3. **Marketing.** It is difficult to convince a local retailer to buy the product and/or to give a competitive price when

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there is limited variety from which to choose, and he may be more inclined to work with a large wholesaler.

In order to maximize space, time and labor, these individuals should grow several species of plants on their land. They can produce flowers all season (April until October) for a continuous supply of product to the local market. They can also improve their quality, and they can have a continuous income during the growing season (Bridgen 1991).

Nationally, the wholesale value of standard cut flower crops such as roses, carnations, chrysanthemums and gladioli remained level or declined from 1987 to 1990. In comparison, the wholesale value of specialty cut flowers increased 56% during the same period (U.S. Dept. of Agriculture 1989, 1991). This increase was spurred by the American consumers' demand for novel and long-lasting (ie. fresh) cut flowers. Few studies have reported production data on field-grown herbaceous perennials as cut flowers (Armitage 1987, 1992; Perry 1989).

Studies have shown that production of specialty cut flowers can be profitable if done efficiently (McIntosh and Kingman 1980). Riall et al. (1988) concluded that specialty flowers were economical when grown in the field. However, as with any business endeavor, the ability to make a profit is dependent on keeping the costs of production down and finding a market.

Seals (1990) has outlined three niche markets that can be utilized by growers who are interested in growing herbaceous perennials for cut flowers:

1. Direct sale to consumers through farmers' markets, hotels, catering service, and restaurants. In this situation, markup is high, but volume is low.

2. Sale through retail outlets such as traditional "real" florists, mail order catalogs, craft shops and supermarkets (mass markets). The profit per item decreases in this market, but the assortment of items need not be as large as with direct sales. This is the most rapidly growing market segment and, as a result, the most lucrative.

3. Wholesale markets such as auctions, wholesalers and growers' cooperatives offer the grower the opportunity to sell large volumes with a limited crop selection, but the markup is low.

**Research at the University of Connecticut**

During the late summer and fall of 1991, thirty species of herbaceous perennials (Table 1) were planted at the University of Connecticut Research Farm. The objectives of this study were to (1) evaluate the flower production, quality and postharvest longevity over two growing seasons; (2) to develop practical production schedules and (3) to determine the economic potential of growing these species as field-grown cut flowers.

All plants in our study were donated by Sunny Border Nurseries in Kensington, CT, and White Flower Farm in Litchfield, CT. Each species or cultivar was planted in a plot of nine plants; plots were replicated three times. All plants were covered with wood chip mulch. Rows between plots were planted in perennial rye grass to minimize maintenance and to allow easy access to the plots. Nutritional levels were monitored during the study and fertilizer was applied as needed.

During the 1992 and 1993 growing seasons, data on the number of flowers produced per plant, the dates of flower production, flower diameter or length (when appropriate), flower stem diameter, postharvest longevity (1992 only), winter survival and flower stem length were recorded for each of the species or cultivar.

This work has considerable practical implications to growers who are interested in specialty cuts. Yield and stem quality are basic components of profitability; knowledge of longevity and spacing influence those components. The final choice of species and cultivars by growers will be determined by flower marketability, longevity and productivity.

**Summary**

Specialty cut flowers have a great potential in the United States market. There is no doubt that the market for and the field production of specialty flowers will continue to rise. American growers are capable of producing a large variety of flowers with quality equaling or surpassing that of imports. If the American grower is to compete with international growers, competition must be based on the quality of the product and effective marketing.

All U.S. growers of cut flowers are concerned about imports; low overseas prices make competition difficult. However, if American growers produce high-quality cut flowers,

provide the best service and establish market niches, they can remain profitable. The quality of the American product, as well as postharvest storage and handling practices have steadily improved. Growth of the specialty cut flower industry is inevitable as the demand for specialty cut flowers increases. However, additional research needs to be supported in this area.

**Table 1. Species of Herbaceous Ornamental Plants used as Field-Grown Cut Flowers.**

1. *Achillea* x 'Moonshine'
2. *Achillea ptarmica* 'The Pearl'
3. *Allium sphaerocephalum*
4. *Anthemis tinctoria* 'E.C. Buxton'
5. *Aster x frikartii*
6. *Boltonia asteroides* 'Snow Bank'
7. *Chrysanthemum coccineum*
8. *Chrysanthemum x superbum* 'Alaska'
9. *Echinacea purpurea* 'Magnus'
10. *Echinops banaticus* 'Blue Globe'
11. *Eremurus* x 'Shelford Hybrids'
12. *Gaillardia x grandiflora* 'Dazzler'
13. *Helenium* 'Redgold Hybrid'
14. *Heliopsis helianthoides* 'Karat'
15. *Heuchera x brizoides* 'White cloud'
16. *Ixiolirion pallasii*
17. *Kalimeris integrifolia*
18. *Kniphofia uvaria* 'Royal Castle Hybrids'
19. *Liatris scariosa* 'Summer Glory'
20. *Liatris scariosa* 'White Spires'
21. *Limonium latifolium*
22. *Patrina scabiosifolia*
23. *Penstemon digitalis*
24. *Physostegia virginiana* 'Pink Bouquet'
25. *Platycodon grandiflorus mariessii*
26. *Ratibida columnaris pulcherina*
27. *Rudbeckia fulgida sullivantii* 'Goldstrum'
28. *Scabiosa caucasica* 'Isaac House'
29. *Stokesia laevis* 'Silver Moon'
30. *Veronica spicata alba*

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