

Edible Flowers

Introduction

Edible flowers, which have been used in the culinary arts for centuries, are experiencing renewed popularity. Flowers can serve as an essential ingredient in a recipe, provide seasoning to a dish, or simply be used as a garnish.

Marketing and Market Outlook

Edible flowers can complement a cut flower or herb business, providing additional opportunities for value-added products. However, they require a specialized niche market that may take some time to develop. Flowers intended for human consumption must be grown without pesticides, providing organic growers a production edge. Plant material obtained from most commercial florists, garden centers, and nurseries is not pesticide-free and, therefore, is NOT suitable for consumption.

Flowers may be marketed fresh, dried, candied, or in prepackaged salads. Market research conducted in Michigan indicates that packaging different colors and varieties of fresh edible flowers in the same container appeals the most to consumers. Including varieties with more appealing fragrances in the mix also encourages positive consumer reaction. Value-added products that feature edible flowers offer additional marketing opportunities. Minced flowers make a colorful and flavorful addition to herbal butters, cheese spreads, jellies, and jams. Dried flowers could be used in teas or to add flavor to wines.



SELECT CULTIVARS OF PANSY ARE POPULAR AS EDIBLE FLOWERS.

Potential growers could talk to upscale restaurant chefs and caterers. Because edible flowers are highly perishable, growers must be willing to frequently (usually daily) deliver smaller quantities to restaurants. Fine bakeries may be interested in candied flowers. Growers will need to be able to demonstrate an ability to provide a dependable supply of consistently high quality product to meet buyer demand. Producers commonly “break in” to this market by selling squash blossoms at farmers markets or to local chefs. Expanding to a colorful and diverse range of edible flower varieties is a way for a producer to increase offerings to existing customers.

Retail marketing through farmers markets is also a viable option. Fresh edible flowers or value-added edible flower products have the potential to perform quite well in some markets. Interested growers should visit local farmers markets and consult with their County Extension Service to determine the market potential of edible flowers in their area.



Production Considerations

Plant selection

Many commonly cultivated annuals and perennials can be raised for their edible flowers. Because some flowers are edible but not palatable and others may be poisonous, it is important that only those known to be edible should be grown for this purpose. Differences in edibility may also exist between cultivars of the same species. Common garden plants with poisonous flowers include anemone, autumn crocus, calla lily, daffodil, delphinium, foxglove, hyacinth, hydrangea, iris, lily of the valley, morning glory, ranunculus, sweet pea, and wisteria. Some popular edible flowers include chrysanthemum, daylily, lilac, mint, nasturtium, pansy, rose, tulip, and violet. Blossoms from various vegetable and fruit crops are also enjoyed for culinary purposes. Refer to the resources at the end of this profile for information on additional edible flower species.

Site selection and planting

The cultural requirements for edible flowers are very similar to those of ornamental flowers. In general, edible flowers prefer fertile, well-drained soil and full sun throughout the day. Many producers prefer growing plants in raised beds to improve drainage and increase ease of harvest. A soil test is recommended before planting. Two to 3 inches of mulch will help to reduce weed pressure, maintain soil moisture and temperature, as well as reduce soil splashing in heavy rains. A source of water for irrigation is essential to production. Trickle or drip irrigation is preferred to overhead irrigation since keeping the foliage dry reduces the incidence of fungal and bacterial diseases.

Planting dates depend on the market and type of plant being grown. Annuals are planted as soon as danger of frost has passed in the spring and staggered plantings are common. Because transplants come into flower sooner than direct-seeded plants, growers may choose to use transplants to capture the early market and then direct-seed later plantings. Transplants can be started in a greenhouse or cold frame. Perennials,

such as daylily, should be planted in late summer or fall for the best yield of blooms.

Pest management

Buyers of edible flowers will want their product to be free of diseases and insect pests. This could present a challenge since edible flowers must be grown without the use of any chemical pesticide. Insect control consists of hand picking harmful insects and the use of beneficial insects to help decrease insect populations. Following good cultural practices and diversifying plantings will aid in the control of both insect and disease problems. Weed control is critical since weed competition not only reduces plant quality and quantity, but also raises labor costs by increasing the time required for harvest.

Harvest and storage

Edible flowers are harvested in the cool of the day during the peak of bloom. Only flowers free of insect and disease problems should be selected. Generally, unopened flowers or those past their prime are not suitable. To maintain freshness, flowers should be cooled immediately after harvest.

The stems, sepals, pistils, and stamens of most flowers are removed prior to use. Pollen may detract from the flower's flavor and may cause allergies in some people. The sepals should be removed from all flowers except violas, pansies, and johnny-jump-ups. In many flowers (including rose, lavender, tulip, calendula, and chrysanthemum) only the petals are edible. If the petals have a white base, this area should be removed as it may have a bitter taste. For example chrysanthemum, dianthus, marigold, and rose have bitter petal bases.

To produce value-added flower products, the flowers must be dried or utilized immediately after harvest. Flowers can be used in a number of products to add aesthetic value in addition to flavor. As a general rule, flowers from herbs have a flavor similar to the leaves and may be used in the same way. Candied flowers are prepared by

painting each petal with *pasteurized* egg white, then sprinkling with granulated sugar. Once the sugar has crystallized, flowers are stored in an airtight container.

Labor requirements

Edible flower production is labor and management intensive. Planting, weeding, and harvesting all require trained labor. Since an edible product is being handled, extra time and care will be needed to transport the product from field to market. Packaging different edible flower varieties and/or colors together will require additional packing labor.

Economic Considerations

Profitability from edible flowers will range widely due to differences in species, handling, marketing, and delivery. Producers should target markets that are willing to pay \$6 per pound or more for an edible flower mix to generate reasonable returns to land and management. Much higher prices on a per pound basis may be necessary to reasonably compensate a producer for their harvest and handling labor.

Edible flower market research conducted in Detroit in 2004 showed consumers and chefs were interested in purchasing a well-packaged product. Consumers were most willing to pay \$2.99 for an 8-ounce plastic container with varying colors of six nasturtiums and 14 violas. The addition of other edible varieties to a mix, especially those with desirable fragrance, enhanced consumer interest. A package of 20 flowers sold at \$3 would require growers to be able to harvest and package 20 flowers in 10 minutes or less to generate a \$1.50 return to pre-

harvest costs of production. Considering the cost of an 8-ounce plastic container (about \$0.20) and the minimal cost of material to produce flowers, a \$3 per 8-ounce retail price would return \$0.90 to \$1.15 to land, labor, and management per 20 flowers.

Selected Resources

- Edible Flowers (University of Kentucky School of Human Environmental Sciences, 1997) <http://www.ca.uky.edu/hes/fcs/factshts/FN-SSB.025.pdf>
- Edible Flowers (ATTRA, 2004) <https://attra.ncat.org/attra-pub/summaries/summary.php?pub=38>
- Edible Flowers (What's Cooking America, 2010) <http://whatscookingamerica.net/EdibleFlowers/EdibleFlowersMain.htm>
- Edible Flowers (About.com) <http://homecooking.about.com/library/weekly/blflowers.htm>
- Edible Flowers (Colorado State University, 2009) <http://www.ext.colostate.edu/pubs/Garden/07237.html>
- Specialty Cut Flower Production and Marketing (ATTRA, 2006) <https://attra.ncat.org/attra-pub/summaries/summary.php?pub=39>

The inclusion of a commercial Web site as a resource is for information purposes only and does not represent an endorsement of the company or its products by the University of Kentucky.

*Reviewed by Robert Anderson, Extension Specialist (Issued 2005); Reviewed by Rebecca Schnelle, Extension Specialist (Revised 2009); Reviewed by Sandra Bastin, Extension Specialist (Revised 2012)
Photo by Joseph M. DiTomaso, University of California-Davis, Bugwood.org* **September 2012**

For additional information, contact your local [County Extension](#) agent