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Tennessee Cut Flower Summer Annual Enterprise Budgets

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Figure 1: *Tennessee cut flower budgets help producers use trial data and grower input to assess costs, yields, and market potential, guiding decisions before expanding or investing.*

Cut flowers are a rapidly expanding crop in Tennessee, driven by growing consumer interest in locally grown products and by farms diversifying to manage risk and make efficient use of limited acreage. Diversification can also allow multiple operators to manage separate enterprises on the same family farm and be grown on relatively small acreages to many crops. Population growth and increasing demand for local cut flowers have created opportunities for both new farms and existing operations to enter or expand into this specialty crop sector.

The United States Department of Agriculture (USDA) National Agricultural Statistics Service census data estimates cut flower operations in Tennessee increased by 70 percent from 2012 to 2017, with nearly 80 farms reporting sales of cut flower and florist greens exceeding $400,000 in 2017. From 2022 USDA census data, the number of cut flower operations in Tennessee increased to more than 180 cut flower farms, an increase of 133 percent in the number of cut flower farms from 2017 to 2022. These operations reported annual cut flower and florist greens sales exceeding $1.6 million in 2022 (USDA). Many Tennessee growers are focusing their marketing efforts on direct-to-consumer channels, selling cut flowers as single stems, bouquets and other products from flowers at farmers markets, on-farm stands, flower subscriptions and local event-based sales.

The Tennessee Cut Flower Summer Annual Enterprise Budgets were developed to support informed decision-making for current and prospective producers of summer annual cut flowers under Tennessee conditions. These tools allow users to evaluate the potential costs and returns of producing and marketing cut flowers.

Disclaimer

The enterprise budgets provide estimates based on assumptions and current 2025 market prices and should not be relied upon as a reflection of all circumstances. The budgets are intended to be used as planning tools and should not be relied upon as recommendations. Included practices are current at the time of publication and will be updated regularly; however, recommendations for agricultural inputs (including pesticide registrations), may be updated and inclusion in the budget should not be interpreted as a recommendation for use. Consult a county Extension agent for current seeding rates, soil amendments and weed control recommendations. All budget assumptions are informed by grower interviews conducted by Extension specialists across the state and production trials at University of Tennessee Institute of Agriculture AgResearch and Education Centers. Based on typical practices and information from current producers and trial results, budget expenses for inputs were determined based on an average of current prices for such products from agricultural suppliers. As significant regional and seasonal price variability may exist, the provided budgets are intended to be used as a tool to assist producers in making informed decisions and annual plans. Users should adjust the inputs, prices and processes to reflect a specific field or enterprise to improve the accuracy of the budget calculations.

Methods and Assumptions

The summer annual cut flower enterprise budgets provide estimates of income, variable expenses and fixed expenses for common flowers grown in Tennessee, including single-stem sunflowers, zinnias, cosmos, celosia and gomphrena. These budgets are intended to serve as a flexible planning tool and can be adjusted to reflect the practices and prices of an individual farm. Input quantities and prices in the excel-based calculator may be modified in any cell highlighted in light blue.

Each crop budget assumes the flower is grown as part of a quarter-acre specialty cut flower operation (approximately 10,890 square feet) managed by one full-time employee (40 hours per week). Each crop is assumed to occupy one of five production plots within the overall operation, with each plot measuring approximately 1,000 square feet. The budget splits shared input expenses amongst the five crops (such as labor, utilities, equipment and materials). This framework reflects a small, diversified cut flower farm producing multiple annual species during the growing season.

Production assumptions are based on current field research and production experience in Tennessee. For example, the zinnia budget assumes approximately 1,780 seeds planted as transplant plugs on 9-inch spacing within a 1,000 sq. ft. bed, with an estimated yield of 8 stems per plant based on 2024 UT Extension cut flower trials. All crops are assumed to be grown from transplants started by the grower using a standard wire rack system with artificial lighting. Costs for seed trays, growing medium and energy are included in variable expenses, while the lighting and rack system and durable supplies are reflected in fixed overhead costs.

Fertilizer and pest control expenses reflect recommended practices for field-grown flowers in Tennessee and are distributed over multiple applications. Growers are encouraged to adjust rates based on soil testing and pest pressure specific to their location. Irrigation is assumed to use two lines of drip tape per bed with 12-inch emitter spacing and weekly watering based on typical summer conditions.

Marketing assumptions are based on the prices observed from Tennessee farmers markets and interviews with experienced growers. Prices per stem vary regionally and seasonally, so growers are encouraged to modify these assumptions to reflect current applicable market conditions. Budgets include a marketed rate, which represents the percentage of flower stems successfully sold after accounting for production losses and unsold inventory. Losses can occur from crop failure, transplant issues, harvest or post-harvest damage and stems that remain unsold due to market limitations. Marketed rates typically vary depending on the producer's production skills and experience, as well as anticipated market demand. Producers are encouraged to adjust the marketed rate to reflect experience and skills regarding management practices, crop conditions and sales opportunities.

Labor is based on one full-time employee (40 hours per week on the total operation) managing the quarter-acre operation, with 20 percent of that time allocated to each crop for the number of growing weeks associated with that crop. Additional assumptions cover harvest supplies, flower netting, plastic mulch and drip tape, fuel, machinery depreciation and interest on operating capital. Marketing costs are estimated at 20 percent of gross sales and include expenses such as packaging, transportation and promotional materials.

Fixed costs include tools, irrigation infrastructure, a transplant growing and postharvest handling building, and general overhead such as insurance and utilities. Returns to land, ownership and capital are estimated at 10 percent of total variable costs to account for the opportunity cost of investing in cut flower production.

These enterprise budgets are not intended to represent all production systems but rather to serve as a guide for growers to evaluate and plan for their own unique operations. Input prices, yields and marketing assumptions should be reviewed and adjusted regularly to reflect local conditions and changing costs.

Accessing and Utilizing the Budget

The Tennessee Cut Flower Summer Annual Enterprise Budgets are Excel-based spreadsheet tools available on the University of Tennessee Department of Agricultural and Resource Economics website.

When opening the Excel spreadsheet, the user will find the Introduction page, which includes instructions and information regarding security settings that may need to be enabled for the calculator to function properly. To begin, select the Get Started button on the bottom of the introduction page to access the budget. On the Flower Production Budget page, review the existing budget and consider which default estimates may need to change to improve the accuracy of the budget calculations to better reflect currently implemented practices or potential management practices on a particular enterprise. Default prices reflect the estimated current averages in Tennessee. Modify the values in light blue or proceed to generate budget with provided prices and estimates if accurate values are unknown. A summary of the generated budget can be printed or saved by selecting the Print button on the budget page. If input prices or values on the generated budget have been modified, the Reset Default Values button can be selected to restore original values. Users should note that input prices and all estimates included in the budget may vary considerably and are current as of the version date on the Introduction page and are subject to change.

Farm management specialists are available for individual consultation and assistance utilizing enterprise budgets and decision-aid tools including the cut flower enterprise budgets.

Online Resources

Cut Flowers in Tennessee YouTube Playlist: **youtube.com/playlist?list=PL1yNe3Yb9E36k3e5uGswU79LSoEm6Tysq**

Tennessee Cut Flower Summer Annual Enterprise Budgets: **arec.tennessee.edu/extension/budgets/**

Contact information for the UT Center of Farm Management and the MANAGE program: **manage.tennessee.edu/**

References

United States Department of Agriculture, National Agricultural Statistics Service. (2024, February). 2022 Census of Agriculture: Tennessee state and county data (Tables 39 and 40). **https://www.nass.usda.gov/Publications/AgCensus/2022/Full_Report/Volume_1,_Chapter_1_State_Level/Tennessee/st47_1_039_040.pdf**

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