

Equipping Cut Flower Producers in Tennessee: 2023-2025 Summary

OVERVIEW



Extension Specialists in the University of Tennessee Departments of Plant Sciences and Agricultural and Resource Economics are helping cut flower farmers in Tennessee make informed decisions about production and marketing with funding provided by the USDA Specialty Crop Block Grant in cooperation with the Tennessee Department of Agriculture. The project, “Equipping Cut Flower Growers to Expand their Markets in Tennessee,” will include production and cultivar trials as well as producer and consumer perspective surveys to provide new and regionally-specific research. Enterprise budget tools and publications to assist producers in exploring the various market channels for cut flowers will also be developed to assist producers in assessing marketing strategies and developing a profitable farm and financial plan.

In cooperation with the Tennessee Department of Agriculture, this project is funded in part by a U.S. Department of Agriculture Specialty Crop Block Grant.

PROJECT TEAM



Dr. Natalie Bumgarner, Plant Sciences, Professor
Dr. Alicia Rihn, Agricultural and Resource Economics, Assistant Professor
Celeste Scott, Plant Sciences, Western Region Horticulture
Eryn Bell, Agricultural and Resource Economics, Farm Management
Rachel Painter, Agricultural and Resource Economics, Farm Management

Get Involved



The information and resources developed will be shared throughout the three-year project at conferences, workshops, and field days. Additionally, educational videos on production and business management for cut flower farmers will also be available to support producers at UTHort.com.

If you are a cut flower farmer in Tennessee, help us develop these programs and resources! Complete the survey by scanning the QR code or visit tiny.utk.edu/flowerfarmersurvey.



Production Trials 2024-2025

CULTIVAR NOTES

*REPEATED IN 2025 **NEW 2025

ZINNIA

Zinderella Peach- highest % culls, low number of pincushion type blooms

*Queenly Lime Orange- most fert trends showed higher counts with higher fert,

Queenly Lime Peach- in '24, fert trends more distinct in east than west TN

Benary Giant Lime- grown in '24 only, trends toward higher stem counts with fert both sites

*Benary Giant Mix- Strongest tall straight stems, compare all other cultivars to this quality

**Agave- large, mixed color, cactus type bloom, trends of increased stems count with higher fert, late harvest greatly impacts vase life

**Ballerina- lighter color mix, in single plot trials rather than fertility, late season powdery mildew in Jackson, growth habit is billowy

**Aurora- traditional type bloom, good color mix, single plot trials

CELOSIA

Flamingo Feather- wheat type celosia, low cull, stem counts but little apparent fert effect

*Pampas Plume- mixed plume type celosia that performed well across fertility levels

*Sunday Green (also grew Sunday Orange)- consistent fert effect, thin-stemmed cultivar

Act Pink & Mix- single stem cultivars that showed variable performance and little fert impact

**Kurume- small cockcomb cultivar mix grown in '25, consistent across fert treatments

Shimmer- new cultivar trialed in '25, large plant, long stems, large plumes, not in fert trials

SUNFLOWER

*ProCut Gold Lite DMR

ProCut White Nite

ProCut Orange DMR

Sunrich Lime

*Sunrich Orange-Summer DMR

**ProCut Peach

**Vincent Fresh- strong straight neck

GOMPHRENA

QIS Purple & Orange- both in '24 trials, trends of stem increases with higher fert

**QIS Carmine- not in fertility trial in '25

COSMOS

*Versailles Mix- best foliage, tallest

Rubenza

Sensation Mix- strong stems

*Double Click Rose- longest vase life

Apricot Lemonade

Cupcakes Blush

FOLIAGE

Frosted Explosion

Limelight Millet

Majestic Purple Millet

Basil:

*Lemon, *Purple Ruffles, Holy, Cinnamon

All foliage has been excellent so far



OTHER NEW CULTIVARS 2025

Ageratum Tall Blue Planet

China Aster- Hagan Blue, Souffle Light Pink

Rudbeckia hirta, Indian Summer

Rudbeckia triloba

Sweet William: Sweet Magenta Bicolor, &

Amazon Neon Duo

Equipping Cut Flower Producers in Tennessee: Production Trials 2024-2025

WHAT DID WE EVALUATE?

2024

Fertility: Compared the effects of Low N (1 lb N/1000 sq ft) and Medium N (2 lb N/1000 sq ft) applications delivered via drip irrigation on a weekly basis throughout the growing season, collecting data on stem length and stem count for all cultivars.

2025

Fertility: Based on results from 2024 trials, Zinnia & Celosia were chosen as the primary flower groups to continue fertility trials. We are now looking at Low N (1 lb/1000 ft²) and High N (3 lb/1000 ft²) collecting data on stem count.

Spacing: Single-stem sunflowers were grown on 3 spacings: 6", 6" double planted, and 9" double planted, to compare the effect on bloom size. Collecting data on 3 flower head diameter ranges: 4" and below, above 4", and 6" and above.

RESULTS

Fertility

In east TN...

- Increases in fertility levels showed trends of more stems per plot in 2024 and 2025 but high levels did not necessarily show increases over med level.
- Sunday Green celosia as well as all zinnias showed trends to higher stem counts with increased fertility.
- Fertility trends were more clear in impacting stem counts than stem lengths.

In west TN...

- The stem # response of zinnia and celosia to higher fertility was positive but the relative differences were smaller.

Spacing

- Out of the three spacing treatments, Treatment 2 with 2 plants on 6" centers yielded the highest stem count per square foot
- Treatment 3 had the highest percentage of blooms under 6" in diameter, with Treatment 2 following closely.



Equipping Cut Flower Producers in Tennessee: Budgeting

BUDGET TOOLS FOR WARM SEASON CUT FLOWER PRODUCTION IN TENNESSEE

UT Extension's Cut Flower Budget Tools were developed using a combination of on-farm visits to cut flower operations across Tennessee and data from UT cut flower production trials. Together, these efforts provided insight into common production practices, input use, labor needs, expected costs, and marketing outlets. Producer feedback was also incorporated to refine assumptions and improve the accuracy and applicability of the budget tools.

DESIGNED TO REFLECT A MULTIFLOWER OPERATION:

The budgets are based on a representative small-scale cut flower system:

- Total production area: ¼ acre
- Five summer annual flower types
- Each crop grown on 1,000 square feet

This structure allows producers to evaluate individual crops while considering how they fit within a diversified cut flower operation.

HOW THE BUDGETS WORK

Income - Variable Costs - Fixed Costs = Net Return

Net returns help determine whether an enterprise is covering break-even costs and meeting profit goals. Knowing break-even costs is essential for setting prices and making informed production and marketing decisions.

ACCESS THE INTERACTIVE BUDGET TOOLS AND PUBLICATIONS

The Tennessee Cut Flower Summer Annual Enterprise Budgets and publication are available on the UT Department of Agricultural and Resource Economics website.

As prices and production conditions vary by region and season, the budgets are intended as planning tools to guide decision-making. Producers are encouraged to adjust inputs, prices, and practices to reflect their own operations for the most accurate results.

**SCAN THE QR CODE OR VISIT
[AREC.TENNESSEE.EDU/BUDGETS](https://arec.tennessee.edu/budgets)
TO ACCESS THE BUDGETS:**

**CELOSIA
COSMOS
GOMPHRENA
SUNFLOWER
ZINNIA**

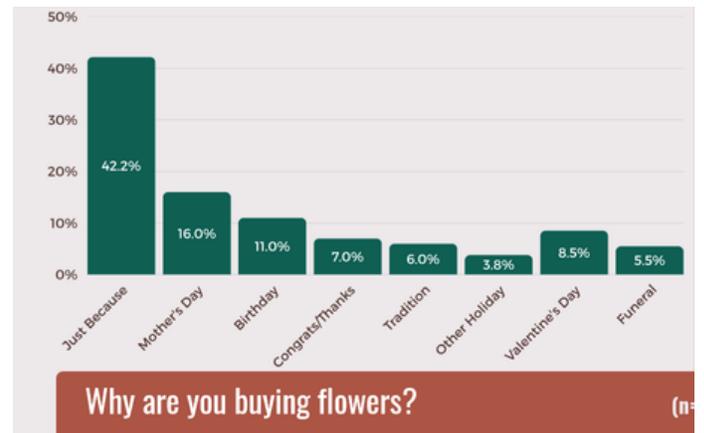
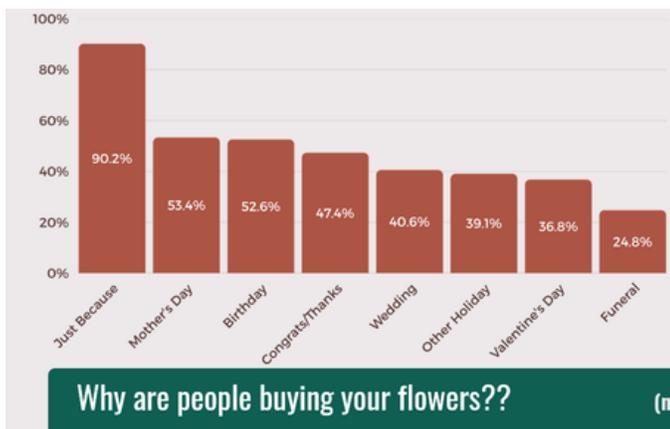
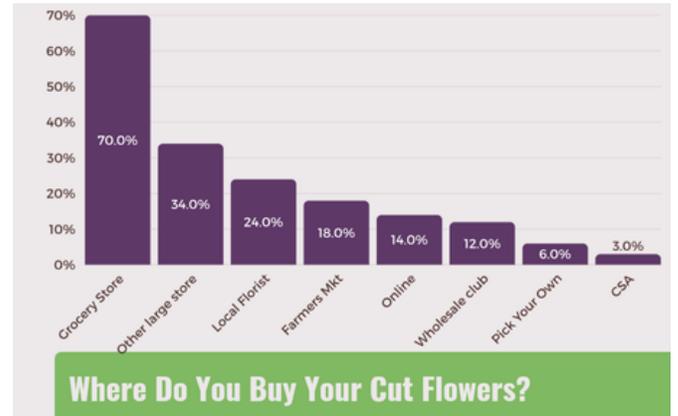
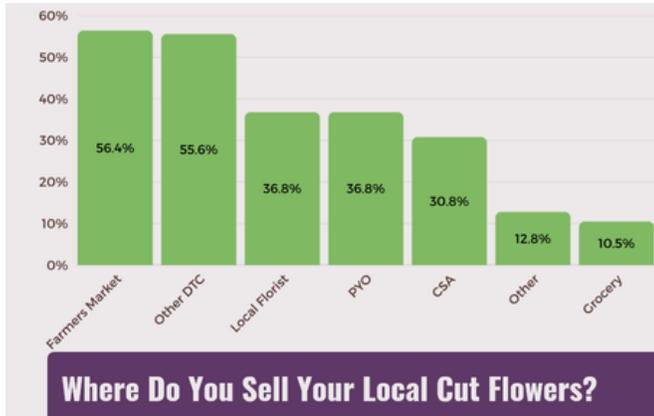


Equipping Cut Flower Producers in Tennessee: Marketing

PRODUCER PERSPECTIVES

VS.

CONSUMER PERSPECTIVES



What are most important promotion or selection attributes of local cut flowers?

Grower ranking (133)
Price
Farm/farmer info
Color
Design
Growing practices
Availability
Origin
Packaging
Loose stems
Fragrance
Lack of pollen

Customer ranking (705)
Color
Price
Availability
Fragrance
Packaging
Design
Loose stems
Origin
Pollen
Growing practices
Farm/farmer info