GROWERTALKS

Features

6/30/2026

A Resilient Industry Requires More Than Basic Inputs

Laura Barth



Growers are trained to recognize deficiencies quickly—yellowing leaves, weak roots, reduced vigor, slower growth, etc. We all know that healthy crops rarely thrive on basic inputs alone. Long-term crop quality depends on balanced fertility programs, strong root systems, optimal growing environments and other consistent investments throughout production.

In many ways, the floriculture industry works the same way. Like any living system, floriculture requires continuous investment to remain healthy, productive and resilient. Research, workforce development, sustainability initiatives and industry collaboration all play important roles in supporting the long-term strength of floriculture, even if their impact isn't always immediately visible from the greenhouse floor.

For 65 years, the American Floral Endowment (AFE) has helped cultivate the floriculture industry through research funding, scholarships, internships and educational resources designed to strengthen the floriculture industry as it continues to grow and evolve—because healthy industries, like healthy crops, don't happen by accident.

Research: Developing strong roots

Every grower understands the importance of root development. Healthy roots determine how efficiently a crop can absorb water and nutrients, tolerate stress, and, ultimately, perform at finish. Research functions the same way within floriculture.

Many of the industry's most important advancements begin long before we see the results in production. Improvements in disease management, water-use efficiency, postharvest longevity and sustainable growing practices all start with research designed to strengthen the industry below the surface.

AFE invests in research projects that address both immediate production concerns and long-term industry challenges. Funded projects have explored topics ranging from biological controls and peat alternatives to labor-saving technologies, postharvest improvements and production efficiencies. Many of today's production practices are the direct result of AFE-funded research. (For a short history of some of AFE's important research investments since the 1960s, see the July 2025 issue of *GrowerTalks*.)

Importantly, AFE translates this research into practical, research-based information growers can use in their operations. Through resources like Grow Pro webinars, the Thrips & Botrytis Research library, educational

materials and updates from funded projects, growers have access to tools designed to translate university research into real-world application. Visit endownment.org to access our free, research-based grower resources.

Internships: Encouraging new growth

One of the clearest signs of a healthy crop is active new growth. The same is true for the floriculture industry. Internships play a critical role in cultivating the next generation of growers, researchers, breeders, educators and industry leaders. Much like a slow-release fertilizer program, these investments are designed to support growth long after the initial application.

AFE internships help students build practical skills, industry connections and real-world experience before entering the workforce full time. These programs also help introduce students to the wide variety of career paths available within floriculture.

Our industry continues to face workforce challenges and increasing competition for talent. Supporting students and young professionals is a long-term investment in the future. Some of you reading this have hosted AFE interns—maybe even some who've gone on to be employees at your company. If you would like to know more about our internship program or want to host an intern, visit endownment.org.

Sustainability resources: Environmental controls

Crop success depends on carefully managing the growing environment. Sustainability initiatives function similarly for the industry to help growers improve efficiency, conserve resources and adapt to changing production pressures. Also, sustainability doesn't just apply to production systems and the environment, but the people you employ, as well.

Through Sustainabloom, AFE continues to support sustainability-focused research, educational resources and industry conversations to help connect growers with science-based information they can apply directly in their own operations. Much like environmental controls inside the greenhouse, these resources help growers make informed adjustments that improve the long-term performance of plants, operations and people.

Sustainabloom offers a number of free resources to help growers adopt more sustainable practices in their operations, including "Sustainaguides," webinars and industry success stories, which can be found at Sustainabloom.org.

Also, we'd love to hear the sustainability practices you're implementing in your operation! Your experiences, challenges and lessons learned can help others better understand what sustainability in the floral industry looks like in practice. Use the QR code to check out the resources and connect with us.


Energy Efficiency Guide for Floral Industry *Growers*

Part of the American Floral Endowment's **Sustainabloom** Program

Sustainabloom™ by the American Floral Endowment

Why Care About Energy Efficiency?

Improving energy efficiency can allow floriculture businesses to reduce their environmental footprint, and when done correctly, also save on energy expenses. Energy is often one of the top operating costs for growers, second only to labor (Runkle and Both, 2012).

1 COST REDUCTION:
Energy expenses constitute a significant portion of the operational costs in floriculture. Advances in energy-efficient technologies, such as LED lighting and smart irrigation systems, offer opportunities for floriculture businesses to improve efficiency through reduced electricity use for lighting and watering systems (Trivellini et. al, 2023).

2 ENVIRONMENTAL SUSTAINABILITY:
Energy production often relies on burning fossil fuels, contributing to greenhouse gas emissions and environmental degradation. Conserving and using less fuels help mitigate these negative impacts.

3 COMPETITIVE ADVANTAGE:
Consumers increasingly favor products from environmentally concious and sustainable businesses, including use of energy-saving practices (Etheredge et al., 2023).

Where to Start with Sustainable Practices

1 CONDUCT ENERGY AUDITS:
Energy audits can provide insights into potential efficiency opportunities. Start by assessing current energy usage patterns and identifying areas with the highest energy consumption.

2 INVEST IN ENERGY-EFFICIENT EQUIPMENT:
Consider upgrading to energy-efficient technologies such as LED lighting and high-efficiency HVAC systems. While the initial investment may be high to purchase new technology or retrofit existing systems, the long-term savings often outweigh the upfront costs (see the "Measuring Changes in Energy Efficiency" section of this guide). When selecting lighting, consider the specific photoperiod and intensity required for the flowers you are growing (Runkle and Both, 2012).

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Guide For:
- Growers
- Wholesalers
- Transporters
- Suppliers
- Retailers / Florists

ENERGY EFFICIENCY AT A GLANCE

Floriculture production consumes energy primarily for heating, cooling, lighting, and irrigation purposes. With growing concerns about climate change and rising energy costs, improving energy efficiency – "using less energy to get the same job done" – is not only environmentally responsible but can also be economically beneficial for businesses (US EPA, undated). In addition, lowering energy consumption can help reduce use of fossil fuels, which is a primary driver of climate change (IPCC, 2023). This guide aims to provide insights into why energy efficiency matters, where to begin implementing efficiency measures, and how to measure and monitor improvements.

GUIDE NO. 017 PREPARED BY:
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Industry partnerships: An integrated approach

Successful IPM programs rely on multiple tools working together rather than a single corrective solution and the same principle applies to strengthening the floriculture industry.

Growers, researchers, breeders, suppliers, educators and industry organizations all contribute different perspectives, expertise and resources that help move floriculture forward. Collaboration between segments creates systems where ideas, innovation and support can move more efficiently.

AFE's work is built around these collaborative relationships. By connecting with growers and allied industry companies (like those of you reading this right now), we can better identify emerging challenges, support relevant research and create educational opportunities that benefit the industry as a whole.

Like effective IPM programs, strong industries aren't built around a single strategy. Long-term success depends on systems-based approaches, communication, monitoring and consistent assessment over time.

A balanced program for long-term growth

Healthy industries, much like healthy crops, are shaped by the investments made long before the finish stage. AFE has remained committed to supporting essential industry inputs through research funding, educational resources, scholarships, internships and targeted collaboration designed to strengthen floriculture at every level and segment. While many of these investments happen behind the scenes, their impact continues shaping greenhouse production, workforce development and industry innovation across the country.

But like any successful growing program, long-term results depend on consistent participation and support from the entire industry. Whether it's through tax-deductible gifts, supporting internship opportunities, utilizing educational resources, staying engaged with emerging industry challenges or simply coming up to chat with us at Cultivate, growers and industry partners all play a role in cultivating the floriculture industry.

The future of floriculture will be shaped by the investments we make today and AFE, with your help, remains committed to cultivating our industry. Visit endowment.org to learn how you can get involved. **GT**

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> **If you're at Cultivate'26, you can see AFE-funded research on stage!**
> Beyond the Bog: Greenhouse Crop Production in Peat-Reduced Growing Media
> Dr. Brian Jackson, North Carolina State University
> Sunday, July 12, 1:15-2:15 p.m., Room A223
>
> From Promise to Performance: Understanding Factors that Influence Biostimulant Efficacy
> Dr. Michelle Jones, The Ohio State University
> Monday, July 13, 2:45-3:45 p.m., Union Station Ballroom A