

SUSTAINABLE FLOWERS GUIDE



Sustainability



Washington University in St. Louis

“Washington University in St. Louis is fully committed to being a national leader in sustainability”

-WashU Sustainability website

Many people don't realize that the commercial floral industry has negative impacts on the environment and human health which are similar to those caused by commercial agricultural industries. Flower farming is a land and water-intensive process. Most of the cut flowers purchased in the United States are grown in Latin American countries by low-wage workers. Flowers are often sprayed with largely-unregulated chemical fertilizers, herbicides, and pesticides, which may contaminate the air, water, and wildlife— as well as having significant health consequences for workers. Since so many flowers are imported, a massive amount of energy use goes into transporting, storing, and preserving cut flowers for American consumers. Once flowers are purchased and arranged, they are quickly disposed of, along with containers and artificial support structures used for display.

While many of us consume food at least three times a day, our flower purchases are few and far between, which may make floral sustainability a less urgent concern for the average American. However, institutions like Washington University in St. Louis spend an average of \$200,000 to \$500,000 on floral arrangements each year. Given the high volume of floral consumption at WashU, it is critical that our university's floral purchasers support the most sustainable floral supply chain possible.

“Washington University in St. Louis is fully committed to being a national leader in sustainability”, according to the WashU Sustainability website. If WashU is truly devoted to this goal, floral purchasing and arranging must be considered in the university's sustainability plan. The purpose of this guide is to educate students, staff, faculty, and the community about environmental and human health considerations which must be made at each step in the floral supply chain to maximize sustainability: from farm to florist to display to disposal.



ARRANGEMENTS

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INTRODUCTION

WashU is in a unique position to promote a more sustainable floral industry as a consumer and an educator. As one of the major floral purchasers in the St. Louis area, WashU can exercise its consumer power by prioritizing local vendors, thus creating a reliable market for sustainable flowers in the area. As an educational institution, WashU can effectively generate knowledge and awareness about the environmental and human health impacts of the commercial flower industry, informing its events planners, floral vendors, and the public about how to make more sustainable choices in their floral purchasing.





Labor

About 80% of commercial cut flowers in the United States are grown in Latin American countries. Abroad and domestically, the commercial floral industry relies on low-wage labor. These workers are exposed to high levels of chemical fertilizers, herbicides and pesticides, which are sprayed on flowers to maximize uniformity and production. Where labor laws are less protective than in the United States, particularly vulnerable populations—children and pregnant women—often work in the commercial floral industry and suffer from increased exposure to these toxins.

Chemicals

Not only are chemical fertilizers, herbicides, and pesticides applied to flowers while they are grown, but when flowers are imported into the United States they are dunked in a potent fungicide to ensure they do not carry pests or diseases across the border. Workers often apply preservatives, as well, to make sure the flowers stay fresh throughout their long journeys. The Food and Drug Administration inspects flowers for insects and diseases before they cross the border, but it does not inspect them for chemical residues, which may be highly toxic.

Energy

Most cut flowers in the United States are grown abroad, which means they must be transported long distances and preserved along the way. Flowers often travel thousands of miles by truck, plane, and/or cargo ship before they reach American florists: this shipping process incurs a massive carbon footprint. To keep flowers fresh during transport, they are kept in deep-cold storage at near-freezing temperatures of 34° F. This intensive refrigeration process magnifies the carbon footprint of the commercial floral supply chain.

Materials

Flowers aren't the only components of floral arrangements: single-use plastic supports, tapes, and base materials like floral foam are often used to position and secure flowers into artful displays. Floral foam is known to contain carcinogens and does not biodegrade. Furthermore, even compostable materials like flowers and reusable materials like glass vases are often thrown in the landfill for ease of disposal or lack of waste sorting knowledge. Overall, the current floral supply chain generates a needless amount of landfill waste and toxic materials.

Sourcing

Most flowers Americans purchased are sourced from South America and imported to the United States. By buying locally sourced flower arrangements, you can cut down on the environmental cost associated with the importation of flowers.



Natives - Native flowers enhance biodiversity and have the smallest environmental impact



Local sourcing - Purchase flowers grown from within 150 miles to reduce the energy use needed to transport your arrangement



Domestically certified - When sourcing locally is not possible, try for flowers that are grown domestically on farms that participate in third-party sustainability certification programs (Veriflora, Bloomcheck, Fair Trade, Rainforest Alliance)





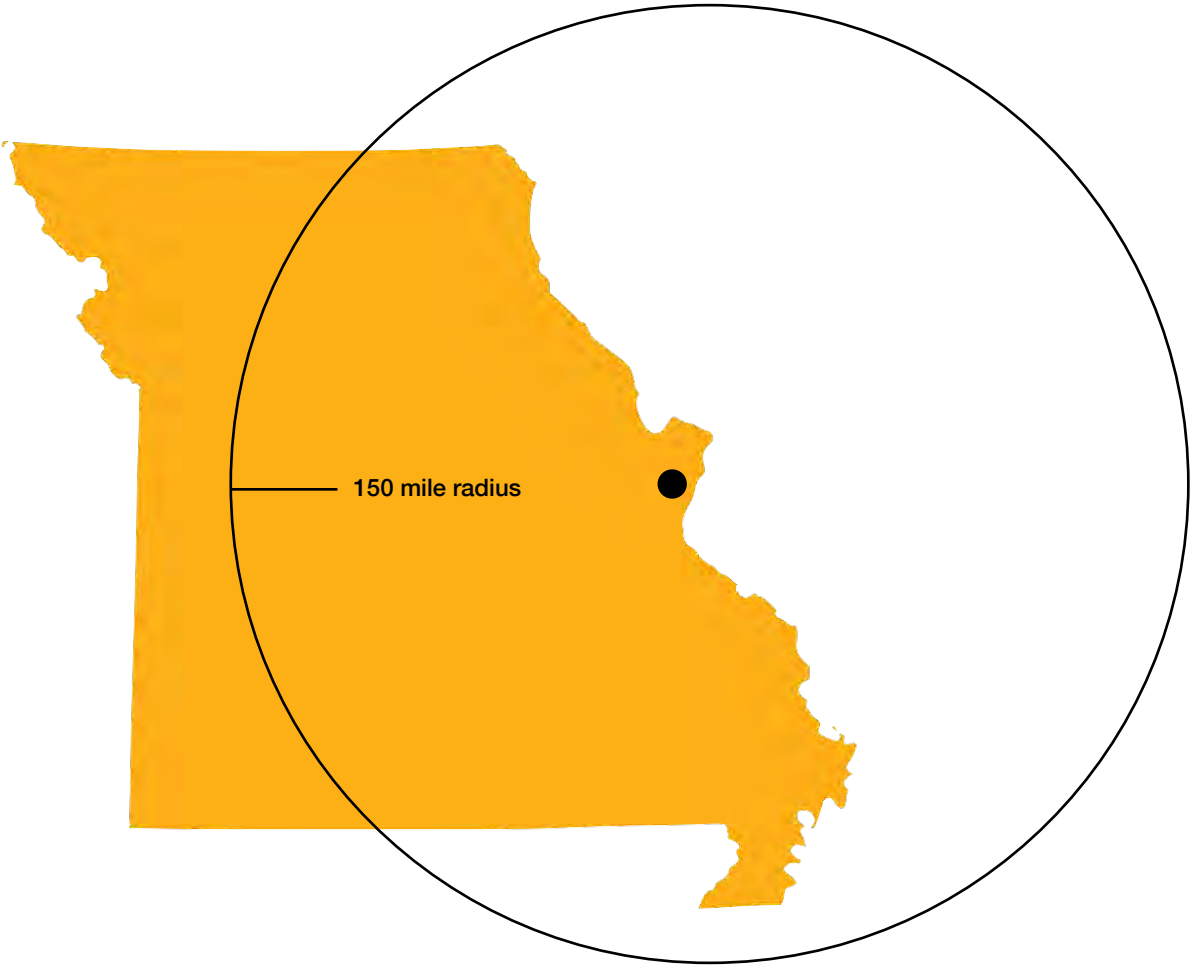
Native Flowers



Native flowers and plants are those that exist in an ecosystem naturally, without human introduction. In the Midwest, native flowers and plants form the foundation of prairies, wetlands, glades and woodlands, among other distinct habitats. They support soil, water, plant, water, pollinator and wildlife health.

Native habitat loss threatens species worldwide. Purposeful growing of natives can help restore and protect biodiversity in a community. Using native cut flowers in floral arrangements can create economic incentives to plant more natives, and build appreciation for their aesthetic beauty.

Local Flowers



Local flowers grown in open fields provide habitat and food for pollinators. Plant and animal life up and down the food chain benefit from the pollinators’ activity.

Local flower farmers typically don’t use a heavy load of chemicals, since their blooms travel shorter distances and aren’t subject to customs regulations. The short distances local flowers travel means less of a carbon footprint from field to vase: shorter time in refrigerated storage, fewer miles on the road, no time in an airplane.

Local flower farms provide employment and act as an educational resource in the community. Many farmers participate in weekly farmers markets, allowing individuals to not only buy small quantities of fresh cut flowers, but also to get to know their growers and their seasonal offerings.



Sustainable Certifications



BloomCheck

Audited to assure best practices for sustainability when it comes to water; air and soil quality; wildlife protection; and social impacts on workers and the community.



Fair Trade

Workers are given a premium to invest in the development of their community and the farms adhere to strict environmental standards around pesticides, water conservation and treatment, and ecological protection.



Veriflora

Indicates a reduction in greenhouse gases and energy usage, an avoidance of harsh chemicals in pesticides and fertilizers, while protecting ecosystems, water quality, and encouraging conservation.








Rainforest Alliance

Protects ecosystems and wildlife habitats, conserves water and soil, promotes decent and safe working conditions, and ensures that farms are good neighbors to rural communities and wildlands.

Purchasing

Working with a florist for an event? Talk to them about the below guidelines for a sustainable arrangement! Ask for:

-  **Flowers** - that were grown locally, which have a lighter carbon footprint
-  **Natives** - because they attract pollinators, maintain habitats and encourage biodiversity
-  **Materials** - that biodegrade and are reusable or compostable; avoid floral foam and plastic tape
-  **Packaging** - that's as minimal as possible, and can be recycled or composted
-  **Vases** - that are thrifted or upcycled and can be recycled





“How much more will I pay a florist if I request sustainable flowers?”

What’s the bottom line difference?

How much more should I allot in my annual event budget if I switch to local and sustainable sources?”

Many people assume that sustainable sources are more expensive than conventional sources, but this often isn’t the case. Most local flower farmers must set their prices to remain competitive with other flowers in the marketplace. Additionally, sustainable flower farmers

tend to work ferociously hard in part because they love working with flowers, but also to keep costs in line. Some sustainability practices are inherently cost-saving. For example, using repurposed and/or reclaimed vases; having short delivery distance,

and using weeds and invasives in arrangements. A better question to ask is, “How can I purchase sustainable flowers within my budget?”. As long as you communicate with your florist, arrangements can be beautiful, sustainable, and in budget.

Materials

From field to vase, avoid the following chemicals to ensure safety, fair treatment of workers and the environment.



Chemicals - Fungicides, pesticides, fertilizers



Florist Chemicals - Sprays, sheens, stabilizers, and floral foam



Waste - single use plastics in arrangements and packaging, landfill practices





Grower chemicals

Imported flowers must be dipped in fungicides to comply with import regulations. Domestic flowers aren't subject to foreign pest chemical protocols. Flowers grown with minimal pesticides and fertilizers protect the land, workers, and all who touch flowers.



Floral Foam

Floral foam (also called green foam or Oasis) doesn't reasonably biodegrade and contains known carcinogens. Alternatives to floral foam are readily available (chicken wire, curly willow and pebbles are common substitutes.)



Sprays and sheens

Sprays, sheens and stabilizers used in florist studios are unnecessary and are used to enhance the look and vase life of arrangements. There are often health hazards associated with these chemicals.



Rent arrangements

Talk to your florist about renting arrangements. Not only is this a sustainable option, it is also more cost effective.



Avoid single use plastics

Ask your florist to avoid using plastic tape and plastic decor in your arrangements.

Reuse vases

Look for vases that are thrifted or upcycled and can be recycled.



Compost

If reusing vases isn't possible, look for compostable packaging options. Compost any other materials when possible.





By creating this guide, we hope to educate consumers and make them more cognizant of various factors when purchasing flowers. We hope that this guide has been helpful in making more sustainable floristry choices!