# Cut Flower Purchasing and Market Segments within the US Flower Industry

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KEYWORDS. consumer behavior, floral preferences, gift-giving, market segmentation, purchasing trends

ABSTRACT. Cut flower sales in the United States have experienced significant growth in recent years because of increased consumer demand for both gifting and personal enjoyment. This study examined consumer behavior within the cut flower market and focused on purchasing occasions, flower preferences, and market segmentation. Using data from a nationally representative online survey of 8502 consumers in the United States, we identified key words that come to mind when people think of cut flowers, where people are purchasing for different occasions, gift pairings by occasion, where people get information about cut flowers for different occasions, and the different type of cut flowers purchased by occasion. We further examined the impact of cut flowers on morale (workplace and home), health, and stress levels. Finally, we identified 13 distinct market segments associated with gift-giving. The results indicated that roses are the most popular flower across most segments, although preferences for other flowers, such as tulips and lilies, vary by occasion. Furthermore, key findings indicated that most people gravitate to specific gift-giving occasions and do not give cut flowers across multiple occasions. For instance, 100% of segment 1 gives flowers for an anniversary, while segment 2 predominantly gives flowers for birthdays. Segments 12 and 13 were the multiple-occasion givers and spent the most on cut flower gift-giving. Consumers consistently reported positive effects of cut flowers on mood, morale, and stress reduction. These findings provide valuable insights for producers, retailers, and marketers who seek to gain a better understanding of consumer preferences, enhance marketing strategies, and expand the cut flower industry.

Cut flower sales in the United States have increased dramatically during recent years. Cut flower sales by domestic producers increased by $90 million from 2017 to 2022 to approximately $800 million (US Department of Agriculture, Economic Research Service 2024). Additionally, imports of cut flowers were up $783 million from 2017 to 2022 to approximately $1.9 billion (US Department of Agriculture, Economic Research Service 2024). Of the $1.9 billion in imports, $800 million were fresh-cut roses. In 2022, the top three countries exporting cut flowers to the United States included Columbia, Canada, and Ecuador, with sales of $1.2 billion, $700 million, and $450 million, respectively (US Department of Agriculture, Economic Research Service 2023).

As sales have increased, so have the number of cut flower growers and acreage devoted to US cut flower production. In 2022, the number of commercial cut flower operations was approximately 10,800 firms, which was up 50% from 2017 (US Department of Agriculture, Economic Research Service 2024). Although production under protected areas stagnated between 2017 and 2022, open production acreage more than doubled from approximately 15,000 acres to more than 30,000 acres (US Department of Agriculture, Economic Research Service 2024). Many of the US firms are growing crops that are not highly imported, such as Zinnia, Peony, Snapdragon, Sunflowers, Dahlia, and others (Loyola et al. 2019).

Cut flowers are an important part of US culture (Ziegler 2007). As noted by Yue and Hall (2010), cut flowers are generally purchased for one's own enjoyment or given as gifts. Furthermore, the choice of cut flower depends on the occasion. For instance, lilies are for home decorations, roses are for birthday occasions, carnations are for bereavement, lilies are for weddings, and roses are for expressing love and apologizing. The preferred flower color differs among men and women as well as by occasion (Yue and Behe 2010). Interestingly, willingness to pay and beauty ratings were not significantly different across expensive and inexpensive flower species, and there were few differences in willingness to pay for expensive and inexpensive floral arrangements (Knuth et al. 2019).

Regarding the impacts of receiving flowers, most consumers perceive flowers as a "cannot go wrong" gift, although younger consumers are more likely to see floral gifts more negatively than older consumers (Rihn et al. 2011). Sensory hedonics, showing care for others, and emotion conditioning were the main reasons for giving flowers (Huang and Yeh 2009). However, as noted by Lai and Huang (2013), consumers who are more satisfied with their romantic relationship were less likely to give flowers compared with consumers who felt a need to give flowers.

Although there is a wealth of research, few studies have focused on the impact of cut flowers on a variety of situations (e.g., workplace morale, home morale). Furthermore, few studies of whether consumers can be clustered (segmented) based on the occasions for which they purchase cut flowers exist. This study examined these two questions. The results offer a detailed look into cut flower purchasing, such as where consumers get cut flower information and where they purchase cut flowers.

## Data and methods

In Jun 2021 a national online survey was implemented to gain a better understanding of the cut flower market in the United States. Participants were recruited from the online panel database of Toluna, Inc. (Dallas, TX, USA). The database has millions of panelists from throughout the United States; Toluna conducts several checks within the database to help ensure a quality sample, such as eliminating duplicate panelists and speed checks. Toluna randomly contacted members of its panel and provided a link to the survey. Upon entering the survey, panelists read and agreed to the university-approved institutional review board

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**Table 1. Demographics of a sample of US households from a national online survey of 8502 respondents during Jun 2021.**

| | Means | |
|---|---|---|
| | Sample | Census[i] |
| Median age (years) | 43.0 | 38 |
| Generation[ii] | | |
| Silent Gen | 9% | |
| Baby Boomers | 28% | |
| Gen X | 19% | |
| Millennial | 30% | |
| Gen Z | 14% | |
| Region[iii] | | |
| Far West | 11% | 17% |
| Rocky Mountains | 7% | 4% |
| Southwest | 11% | 13% |
| Plains | 8% | 7% |
| Great Lakes | 4% | 14% |
| Mideast | 21% | 15% |
| New England | 7% | 5% |
| Southeast | 32% | 26% |
| Race | | |
| Caucasian | 72% | 76% |
| African American | 14% | |
| Hispanic | 6% | |
| Other race | 9% | |
| Male | 45% | 49% |
| Political affiliation | | |
| Democrat | 26% | |
| Republican | 39% | |
| Independent | 27% | |
| Political other | 8% | |
| Education | | |
| High school or less | 27% | 38% |
| Some college | 31% | 28% |
| Bachelor's degree | 22% | 22% |
| Greater than bachelor's degree | 21% | 13% |
| Kids in household (no.) | 0.8 | |
| Adults household (no.) | 2.4 | |
| Urbanicity | | |
| Metro | 26% | |
| Suburban | 46% | |
| Rural | 28% | |
| Median household income | $55,000 | $62,843 |
| Primary plant buyer | 79% | |

[i] US Census Bureau (2021); US Census Bureau (2023).
[ii] Baby Boomers are those born in 1964 or before; Gen X are those born between 1965 and 1984; and Millennials are those born in 1985 or later.
[iii] US regions are based on the Bureau of Economic Analysis definitions (Abadi 2018).

consent form and proceeded to complete the survey questions. Participants were asked a variety of cut flower usage and purchasing questions, including the following: for what occasions do you purchase/have received cut flowers?; where do you purchase cut flowers from?; where do you get information about cut flowers?; what types of cut flowers do you purchase for different occasions?; and what other gifts do you purchase when buying cut flowers?

A total of 8502 panelists completed the survey. Respondent demographics closely mirrored the U.S. population (Table 1). The median age of the sample was 43 years, which is older than the US Census estimates; however, the US Census accounts for persons younger than 18 years of age, who were excluded from this study (US Census Bureau 2023). The regional make-up of the sample was similar to that of the US population. The median household income, educational attainment, gender, and race were also similar to US Census estimates.

Much of this study was descriptive in nature; however, a paired $t$ test was performed to assess differences in how cut flowers impact a variety of situations (e.g., workplace morale, overall mood) associated with recent (within the last year) and nonrecent purchasers of cut flowers using an impact scale of 0 to 100 (0 = negative impact; 50 = neither negative nor positive impact; 100 = positive impact). A word cloud was produced using Qualtrics software (Seatle, WA, USA) to gain a better understanding of what words come to mind when thinking about cut flowers overall and the advantages/disadvantages of cut flowers in different environments. Then, a cluster analysis was used to assign participants with like purchasing occasions into clusters (or market segments). A cluster analysis is a quantitative tool used to group participants with like purchasing occasions into groups together. Ward's linkage was used as the cluster algorithm, with both the pseudo-J criterion and pseudo $t^2$ criterion used to help identify the optimal number of clusters.

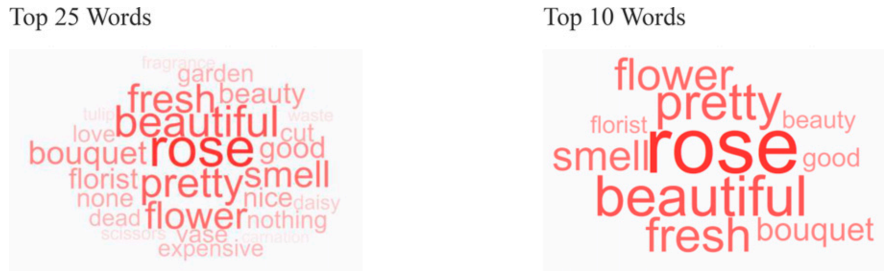


**Fig. 1. Word cloud: What is the first word that comes to mind when you think about cut flowers?**

## Results

### *How consumers view flowers: a word cloud approach*

When respondents were asked about the first word that comes to mind when thinking about cut flowers, "rose" was the number one response (as noted in Fig. 1, with "rose" being the largest and center word in the word cloud). Other words that were often noted were "pretty," "beautiful," "smell," and "flower." Interestingly, several negative words also were in the top 25 words, including "expensive," "waste," and "dead." Although positive words comprised most of the top 25 words (and all of the top 10 words), the negative connotation perceived by some consumers was most likely attributable to nonrecent buyers who had a bad experience with cut flowers.

When asked about advantages of cut flowers in your home, "smell" was

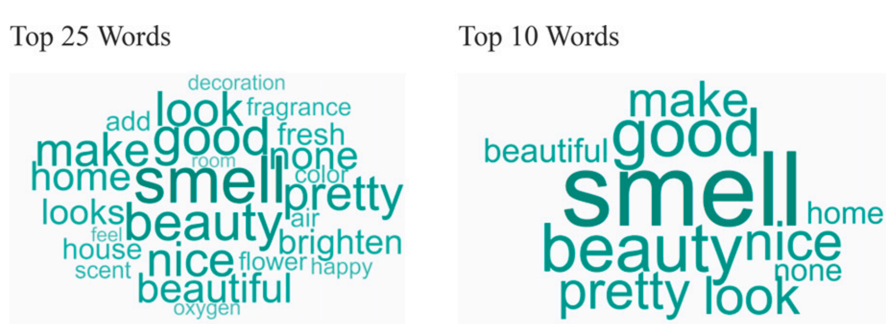


**Fig. 2. Word cloud: What is a major advantage of having flowers in your home?**

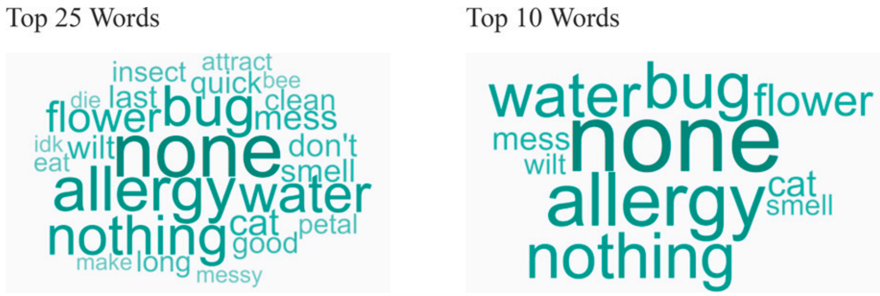


**Fig. 3. Word cloud: What is a major disadvantage of having flowers in your home?**

the most commonly provided word (Fig. 2). Other words that were often provided as advantages for cut flowers in your home were "good," "beauty," and "nice." The overwhelmingly common word that came to mind for disadvantages associated with cut flowers in your home was "none" (Fig. 3). However, "allergy," "bug," "smell," "wilt," and "mess" were some of the top disadvantages associated with having cut flowers in "your home." From a cut flower retailer perspective, finding ways to eliminate bugs, increase vase life, or find ways to decrease the potential for a mess could mean increased cut flower sales for home use. The notion of increasing vase life to increase sales is not new (Mayorga-Gomez et al. 2024; Rihn et al. 2014). Consumers desire longer vase life for single-species and mixed flower arrangements for both themselves and for gifts.

When examining the workplace, "none" was the top listed word for the advantages of flowers in the workplace (Fig. 4). Additionally, "brighten," "good," "smell," and "pretty" were frequently used. Similar to workplace advantages, "none" was the most listed word for disadvantages of flowers in the workplace (Fig. 5). This was interesting because it appears that many participants did not foresee any advantages or disadvantages of cut flowers in the workplace. Other disadvantages included "allergy," "bug," and "mess," which were similar to the disadvantages listed for cut flowers in "your home."

### *For what occasions do consumers purchase and receive cut flowers?*

Fifty-one percent of the sample indicated they had purchased cut flowers for some reason during the last 6 months (Table 2). Additionally, 49% of the sample had purchased cut flowers between 6–12 months ago and 55% had purchased cut flowers between 1–2 years and 2–5 years ago. For this question, a respondent could have provided answers for various time periods, such that respondents could have chosen the last 6 months and 6–12 months ago if they had purchased during each of those time periods.

Having received cut flowers had a smaller percentage across each of the time periods (Table 2). Only 43% of participants had received cut flowers during the last 6 months, with 40% to 41% having received cut flowers between 6 months and 5 years ago. Interestingly, 20% of participants had not purchased flowers at any point within the last 5 years, and 32% had not received flowers during that period. Interestingly, Yue et al. (2016) noted that high prices were a major barrier for many consumers, especially for Millennials, associated with not purchasing cut flowers. The top four reasons for which participants purchased cut flowers were Mother's Day (51%), Valentine's Day (44%), birthday (44%), and for your home (43%) (Table 3). These also corresponded to the top four reasons why a participant received cut flowers. Although the percentage of those who received cut flower was approximately 10% lower than that of those who purchased cut flowers.

### *Where do consumers purchase cut flowers?*

There is substantial diversity in where participants purchased cut flowers. Although a florist/floral shop tended to be the primary location for purchasing cut flowers (28% for other occasion to 52% for bereavement) (Table 4). Major grocery stores, mass merchandisers, and online were generally the next three most common locations where cut flowers were purchased; however, it varied by occasion. For instance, major grocery stores were the location where most purchases of cut flowers for your home occurred, but more cut flowers for bereavement were purchased online than from major grocery stores. Online purchasers tended to increase when the gift needed to be delivered, such as those for bereavement. As noted by Rihn et al. (2024), increasing online spending satisfaction can increase plant/flower purchases compared with in-person spending. Direct from the grower, independent garden centers, and independent grocery stores had the highest percent of purchasers of an "I'm sorry" gift, which may imply that when apologizing, the purchaser may choose to put in extra effort to differentiate the gift from that purchased at a major/larger store.

### *Where do consumers get their cut flower information?*

Past experience is the primary source of current cut flower purchases (Table 5). Notably, more than 30% of participants indicated past experience as where they obtained cut flower information, with "for a wedding" and "I'm sorry" being the only sources with rates less than 30%. Store displays and social media were also highly used sources, with approximately 25% of participants using both of these sources. The linkage between where a person gets information and social media use has been addressed by previous research. Notably, Rihn et al. (2024) found that social media use increased in-store flower spending but did not impact online

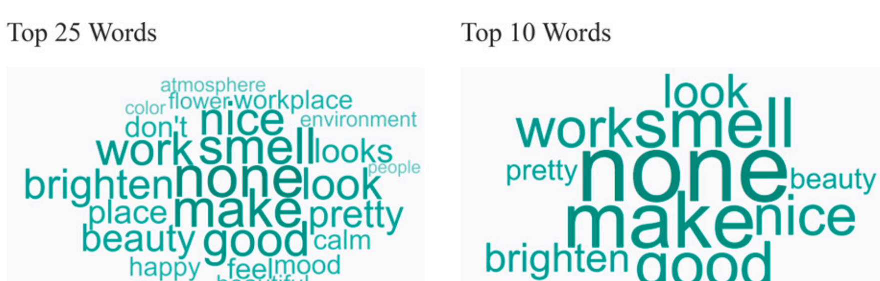


**Fig. 4. World cloud: What is a major advantage of having flowers in your workplace?**

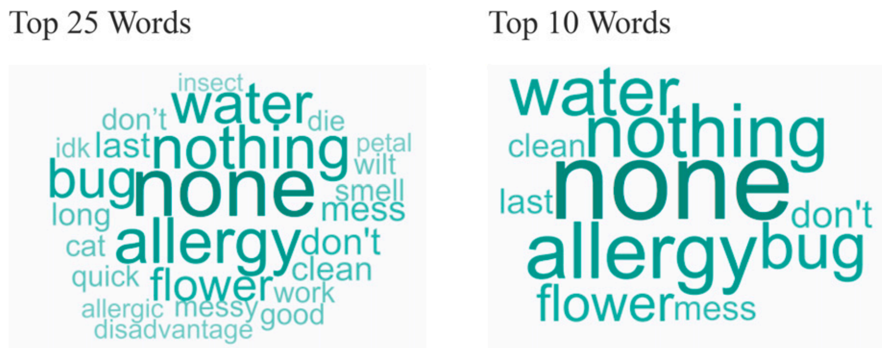


**Fig. 5. World cloud: What is a major advantage of having flowers in your workplace?**

**Table 2. Purchasing/receiving cut flowers based on a sample of US households from a national online survey of 8502 respondents during Jun 2021[i].**

| | Purchased[ii] | | | Received[iii] | | |
|---|---|---|---|---|---|---|
| | Yes | No | Not Sure | Yes | No | Not Sure |
| Last 6 months | 51% | 46% | 4% | 43% | 53% | 4% |
| Last 12 months | 49% | 46% | 5% | 40% | 55% | 6% |
| Last 2 years | 55% | 37% | 8% | 41% | 50% | 9% |
| Last 5 years | 55% | 32% | 13% | 41% | 47% | 12% |

[i] Total sample = 8502.
[ii] 20% of the sample had not purchased cut flowers at any point during the past 5 years.
[iii] 32% of the sample had not received cut flowers at any point during the past 5 years.

spending. They also found that using Amazon and Google increased in-store and online flower spending.

However, television (TV) and magazine ads impacted fewer participants (Table 5). Notably, 5% to 19% of participants indicated that TV ads were a source of information, with Christmas and/or Hanukkah comprising the highest percentage of TV ads. Magazine ad usage ranged from 5% to 18%, with wedding and I'm sorry gift comprising the highest percentage of magazine ads.

### With what do consumers pair cut flowers?

As noted by Lai and Huang (2013), a portion of cut flower purchasers give flowers on Valentine's Day to their romantic partner as part of a pairing (i.e., cut flowers plus an additional gift). With regard to Valentine's Day, jewelry and chocolate were paired with flowers most often, followed by nonflower gifts such as apparel (Lai and Huang 2013). The results of this study are similar to those of Lai and Huang (2013); only 13% of participants did not pair cut flowers with another gift for Valentine's Day (Table 6). However, a card was the major pairing item, with 46% of participants pairing cut flowers with a card. Other items paired with cut flowers were occasion-specific. For instance, 34% of participants paired balloons with cut flowers for a birthday gift, while 32% and 29% paired wine with a wedding gift and anniversary gift, respectively. A stuffed animal was paired with cut flowers for 25% of participants when giving an I'm sorry gift.

### What types of cut flowers are purchased for different occasions?

Roses were the most purchased flower type for most occasions, with tulips and lilies being the next two most popular flower types (Table 7). Roses were purchased by a majority of participants for a Valentine's Day gift (60%) and anniversary gift (53%). Mother's Day and birthday were also occasions when roses were a popular purchase, with 46% and 47% of participants purchasing roses for these occasions, respectively. Lilies were a popular choice (33%) for Easter, although 26% of participants purchased lilies for the home. Almost one-third of participants purchased tulips for Easter. Carnations, daisies, and tulips were also popular for the home.

The results of the survey differed from those of Yue and Behe (2010); roses and lilies were more preferred than carnations for bereavement, and roses and tulips were preferred to lilies for weddings. However, roses were preferred for Valentine's Day and I'm sorry gifts, as well for birthday occasions, similar to Yue and Behe (2010).

### How do cut flowers make you feel?

As noted by Huang and Yeh (2009), cut flowers are given because of their sensory hedonics, to show care for others, and for emotion conditioning. Our results indicated that, across the board, participants are purchasing cut flowers for similar reasons (and more), as noted by Huang and Yeh (2009). Notably, "your overall mood" scored the highest, with "overall household mood" ranking second for the purchasers within the last year, purchased within the last 5 years, and nonpurchaser groups (Table 8). Interestingly, even nonpurchasers had average scores in the positive range, indicating that even though they did not purchase, they perceived some positive benefit to having/giving cut flowers. This may be an avenue for increasing cut flower sales if retailers can increase the value of cut flowers associated with bettering mood,

**Table 3. When respondents purchased/received cut flowers based on a sample of US households from a national online survey of 8502 respondents during Jun 2021.**

| | Purchased | Received |
|---|---|---|
| Birthday gift | 44% | 35% |
| Anniversary gift | 34% | 25% |
| For your home | 43% | 25% |
| For a bereavement | 19% | 10% |
| For a wedding | 21% | 13% |
| Valentine's Day gift | 44% | 33% |
| I'm sorry gift | 17% | 13% |
| Get well gift | 27% | 17% |
| Mother's day | 51% | 32% |
| Christmas and/or Hanukkah | 21% | 14% |
| Easter | 22% | 15% |
| Other | 11% | 8% |

**Table 4. Where respondents purchased cut flowers based on a sample of US households from a national online survey of 8502 respondents during Jun 2021.**

| | Online | Mass merchandiser | Major grocery store | Independent garden center | Independent grocery store | Florist/ floral shop | Direct from grower | Other |
|---|---|---|---|---|---|---|---|---|
| Birthday gift | 21% | 22% | 30% | 14% | 17% | 41% | 11% | 2% |
| Anniversary gift | 20% | 23% | 24% | 16% | 16% | 41% | 15% | 2% |
| For your home | 14% | 27% | 35% | 16% | 18% | 31% | 14% | 3% |
| For a bereavement | 24% | 18% | 19% | 14% | 14% | 52% | 14% | 3% |
| For a wedding | 22% | 23% | 19% | 20% | 17% | 46% | 18% | 3% |
| Valentine's day gift | 18% | 22% | 24% | 13% | 15% | 41% | 12% | 2% |
| I'm sorry gift | 22% | 26% | 23% | 20% | 19% | 37% | 20% | 3% |
| Get well gift | 20% | 23% | 26% | 16% | 18% | 38% | 16% | 4% |
| Mother's day | 19% | 22% | 25% | 12% | 14% | 40% | 11% | 2% |
| Christmas and/or Hanukkah | 23% | 26% | 29% | 17% | 17% | 39% | 14% | 4% |
| Easter | 20% | 25% | 30% | 16% | 16% | 34% | 15% | 3% |
| Other | 14% | 19% | 34% | 10% | 16% | 28% | 8% | 14% |

improving morale, and strengthening relationships.

With respect to comparisons across purchasers, participants who purchased cut flowers within the last year had an average score of 80.2 (0 = negative impact; 50 = neither negative nor positive impact; 100 = positive impact) for "your overall mood" (Table 8). This was a significantly higher score compared with that for purchased within last 5 years but not within the last year group (score = 77.1) and that for the not purchased in the last 5 years group (score = 67.5). Overall, the purchased within the last year group had all scores higher than 70, except for that for sex appeal (score = 65.9), whereas the last 5 years group had scores in the ranges of 50, 60, and 70, with scores significantly lower than that for the purchased within the last year group. The lowest scores were for the nonpurchaser group, which had no score in the 70s range and more scores in the 50s range.

### Clustering by occasion

A total of 13 clusters or market segments were identified by a performing a cluster analysis. Compared with other studies in the horticultural spectrum, this is substantial amount of clusters or market segments. However, this study had more than 8000 responses, which was larger than that of other studies of this type. Furthermore, the market segments all met the following criteria of Kotler and Armstrong (2001) for what constitutes a credible market segment: measurable, accessible, substantial, differentiable, and actionable.

**Market segment 1: Anniversary.** The anniversary segment included 100% of respondents who give flowers for anniversaries (Table 9). The next highest gift occasions were birthday, Mother's Day, and Valentine's Day, with rates of 44%, 42%, and 32%, respectively. Sixty-three percent of the segment purchased roses, followed by tulips (33%) and lilies (29%), respectively (Table 10). This segment purchased cut flowers an average of 4.4 times per year and spent an average of $43.76 per purchase (Table 11). Therefore, this segment may be purchasing flowers for different anniversaries and not just what is typically thought of as an anniversary (e.g., wedding anniversary). The anniversary segment liked cut flowers because it not only helped their overall mood but also helped the overall mood of their household (Table 12). Sex appeal is the lowest scoring impact of cut flowers, although it is in the positive impact range. With regard to the demographic make-up, the anniversary segment does not have the lowest or highest values

**Table 5. Where respondents obtained information about cut flowers based on a sample of US households from a national online survey of 8502 respondents during Jun 2021.**

| | Past experience | Store display | Web search | Social media | Store/friend recommendation | Television ad | Magazine ad | Other |
|---|---|---|---|---|---|---|---|---|
| Birthday gift | 36% | 29% | 20% | 25% | 20% | 13% | 12% | 6% |
| Anniversary gift | 36% | 27% | 20% | 23% | 22% | 14% | 14% | 7% |
| For your home | 36% | 31% | 17% | 21% | 21% | 13% | 11% | 7% |
| For a bereavement | 38% | 22% | 25% | 20% | 26% | 13% | 12% | 7% |
| For a wedding | 29% | 26% | 25% | 31% | 26% | 16% | 18% | 6% |
| Valentine's Day gift | 35% | 28% | 19% | 24% | 20% | 13% | 13% | 5% |
| I'm sorry gift | 28% | 28% | 26% | 29% | 27% | 17% | 18% | 6% |
| Get well gift | 32% | 28% | 22% | 25% | 23% | 17% | 15% | 7% |
| Mother's day | 36% | 29% | 18% | 20% | 20% | 13% | 11% | 7% |
| Christmas and/or Hanukkah | 37% | 29% | 23% | 25% | 22% | 19% | 15% | 7% |
| Easter | 38% | 30% | 21% | 23% | 21% | 16% | 15% | 6% |
| Other | 41% | 27% | 13% | 8% | 11% | 5% | 5% | 23% |

Table 6. Gift pairings with cut flowers based on a sample of US households from a national online survey of 8502 respondents during Jun 2021.

| | Balloons | Wine | Card | Stuffed animal | Present | Other | No other purchase |
|---|---|---|---|---|---|---|---|
| Birthday gift | 34% | 21% | 47% | 18% | 28% | 5% | 16% |
| Anniversary gift | 22% | 29% | 46% | 17% | 28% | 7% | 16% |
| For your home | 15% | 18% | 16% | 11% | 12% | 7% | 52% |
| For a bereavement | 16% | 16% | 39% | 14% | 16% | 8% | 31% |
| For a wedding | 27% | 32% | 42% | 17% | 32% | 7% | 10% |
| Valentine's Day gift | 28% | 27% | 46% | 23% | 27% | 8% | 13% |
| I'm sorry gift | 28% | 25% | 42% | 25% | 26% | 9% | 12% |
| Get well gift | 28% | 17% | 45% | 21% | 22% | 6% | 17% |
| Mother's day | 23% | 18% | 49% | 14% | 29% | 8% | 17% |
| Christmas and/or Hanukkah | 22% | 23% | 39% | 18% | 28% | 9% | 22% |
| Easter | 22% | 21% | 33% | 20% | 19% | 9% | 25% |
| Other | 7% | 7% | 18% | 8% | 9% | 9% | 61% |

for most demographics (Table 13). The only exception is that this segment has the lowest percentage of Southwest respondents of any segment and the highest percentage of suburban respondents.

**Market segment 2: Birthday.** The birthday gift segment had 100% of respondents who give cut flowers as a birthday gift (Table 9). This segment had few other cut flower purchases across occasions, except for 33% who purchased on Mother's Day. Roses were the most purchased flower (44%) (Table 10). The birthday segment purchased cut flowers an average of 3.4 times per year and spent $37.56 per purchase (Table 11). Your overall mood and the household's overall mood were the most positive reasons for purchasing flowers (Table 12). This segment had the highest percentage of Far West respondents compared with the other market segments and the lowest percentage of respondents with education greater than a bachelor's degree (Table 13).

**Market segment 3: Valentine's Day.** Valentine's Day was a popular cut flower purchase occasion for this segment because 100% purchased for Valentine's Day (Table 9). Birthday and anniversary gifts were other purchase occasions, but they were only purchased by between 25% and 37% of respondents in this segment. Roses were the overwhelming flower type for this segment, with 62% purchasing roses (Table 10). This segment had slightly more than four purchases per year, with an expenditure of $46.72 per purchase occasion (Table 11). Your overall mood and the household's overall mood were the most important positives of having cut flowers by this segment (Table 12). Notably, and as expected, sex appeal had its highest rating from this segment. The Valentine's Day segment had the highest percentage of Gen X purchasers compared with that of the other segments (Table 13). This segment also had the highest percentage of Plains residents and lowest percentage of New England residents. Interestingly, and as expected, 65% of this segment was male, which implies that men are primary purchasers of Valentine's Day flowers.

**Market segment 4: Mother's Day.** Almost every respondent in this segment purchased cut flowers for Mother's Day (99%) (Table 9). Furthermore, 41% of respondents purchased flowers for Valentine's Day. Roses were the primary flower purchased (59%), although tulips were purchased by 33% of this segment (Table 10). The Mother's Day segment perceived flowers would increase their overall mood as well as the household's mood (Table 12). This segment did not have any demographics that were the minimum or maximum compared with those of the other segments (Table 13).

**Market segment 5: Bereavement.** In this segment, 100% purchased flowers for bereavement (Table 9). This

Table 7. Types of cut flowers purchased based on a sample of US households from a national online survey of 8502 respondents during Jun 2021.

| | Lilies | Carnations | Roses | Daisies | Gardenias | Orchids | Sunflowers | Tulips | Peonies | Mums | Other | Not sure |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Birthday gift | 23% | 20% | 47% | 19% | 13% | 13% | 16% | 28% | 11% | 12% | 6% | 7% |
| Anniversary gift | 18% | 15% | 53% | 13% | 11% | 12% | 13% | 21% | 11% | 13% | 6% | 6% |
| For your home | 26% | 24% | 38% | 24% | 16% | 16% | 22% | 31% | 13% | 16% | 10% | 7% |
| For a bereavement | 22% | 20% | 33% | 14% | 14% | 15% | 14% | 19% | 12% | 16% | 9% | 12% |
| For a wedding | 22% | 16% | 42% | 17% | 20% | 17% | 17% | 27% | 15% | 17% | 4% | 5% |
| Valentine's Day gift | 15% | 13% | 60% | 12% | 10% | 10% | 10% | 20% | 9% | 10% | 4% | 5% |
| I'm sorry gift | 20% | 19% | 33% | 17% | 16% | 16% | 14% | 24% | 14% | 15% | 5% | 7% |
| Get well gift | 19% | 20% | 28% | 20% | 14% | 14% | 17% | 23% | 12% | 13% | 6% | 9% |
| Mother's day | 17% | 16% | 46% | 15% | 12% | 12% | 12% | 23% | 10% | 11% | 6% | 7% |
| Christmas and/or Hanukkah | 17% | 18% | 35% | 14% | 17% | 15% | 14% | 21% | 13% | 19% | 15% | 8% |
| Easter | 33% | 19% | 26% | 17% | 15% | 13% | 13% | 31% | 14% | 15% | 7% | 6% |
| Other | 14% | 17% | 31% | 15% | 7% | 8% | 10% | 16% | 9% | 11% | 17% | 23% |

Table 8. Impact of cut flowers on various indicators based on a sample of US households from a national online survey of 8502 respondents during Jun 2021.

| | Purchased within the last year (PR) Mean | Significance (PR vs. PL) | Significance (PR vs. NP) | Purchased but not within the last year (PL) Mean | Significance (PL vs. NP) | Not purchased within the last 5 years (NP) | Overall sample |
|---|---|---|---|---|---|---|---|
| Workplace morale | 75.5 | *** | *** | 71.7 | *** | 62.5 | 71.2 |
| Getting over being sick | 70.8 | *** | *** | 68.1 | *** | 60.5 | 67.5 |
| Your overall mood | 80.2 | *** | *** | 77.1 | *** | 67.5 | 76.2 |
| Connections with people | 72.5 | *** | *** | 67.5 | *** | 60.3 | 68.5 |
| Overall household mood | 78.4 | *** | *** | 74.5 | *** | 64.1 | 73.9 |
| Stress reduction | 75.5 | *** | *** | 71.3 | *** | 61.7 | 71.1 |
| Strengthen relationships | 73.1 | *** | *** | 67.4 | *** | 59.5 | 68.7 |
| Sex appeal | 65.9 | *** | *** | 59.0 | *** | 51.1 | 61.1 |
| Overall health | 72.1 | *** | *** | 65.8 | *** | 57.9 | 67.5 |
| Your energy level | 74.4 | *** | *** | 61.1 | *** | 56.8 | 68.5 |

*, **, *** Significant at $P \leq 0.1$, 0.05, or 0.01, respectively.

segment also purchased for their home (34%), birthday gifts (26%), and Mother's Day (24%). Roses were the flower purchased by a majority of segment members (59%), although carnations (37%), tulips (36%), lilies (35%), and daisies (30%) were also purchased (Table 10). The bereavement segment spent an estimated $45.56 per purchase, with an average of 4.6 purchase occasions per year (Table 11). Their overall mood and workplace morale had the highest scores, at 80 and 77, respectively, for the benefits of cut flowers (Table 12). This segment had the most respondents from the Rocky Mountains and the lowest percentage from the Southeast (Table 13). Furthermore, this segment had the highest percentage of respondents with some college education compared with the other segments.

**Market segment 6: Holiday.** The holiday segment had a 100% purchasing rate for Christmas and/or Hanukkah, followed distantly by Mother's Day (39%) (Table 9). Fifty-two percent of respondents purchased roses, with tulips and lilies both having purchase rates more than 40% (Table 10). This segment spent an estimated $228 spread over 4.8 purchasing occasions (Table 11). Their overall mood had the highest score, implying that cut flowers were perceived to improve a person's mood (Table 12). The holiday segment had the highest percentage of Republicans and lowest percentage of independents within the segment (Table 13).

**Market segment 7: Easter/wedding.** Fifty-eight percent of this segment's members purchased for a wedding, and 55% purchased for Easter (Table 9). No other occasion had a purchasing rate more than 25%. Roses were the most purchased flower, although only 52% purchased roses (Table 10). Lilies (40%) and tulips (43%) were also purchased by this segment. This segment spent an estimated $263, with an average purchase expenditure of $53 (Table 11). As with the other segments, their overall mood was perceived to increase the most, and the household's overall mood and workplace morale were also positively impacted (Table 12). Gen Z respondents comprised 20% of this segment, while Caucasians comprised only 62% (Table 13). However, respondents with a bachelor's degree comprised only 20% of this segment.

**Market segment 8: Sorry.** As noted by Yue and Hall (2010), cut flowers are given to say I'm sorry. In the sorry segment, 100% of the members indicated that they had purchased cut flowers as an I'm sorry gift (Table 9). This segment also purchased for Valentine's Day and Mother's Day. Similar to the findings of Yue and Hall (2010), roses were the primary flower purchased as an I'm sorry gift (Table 10). The sorry segment spent the second most amount of money on flowers, with an estimated annual expenditure of $303 (Table 11). This segment also perceived that their overall mood as well as their energy levels benefited from cut flowers (Table 12). Compared with the other segments, Baby Boomers comprised the lowest percentage of the sorry segment (4.8%) (Table 13). However, in contrast, Millennials comprised more than 54% of this segment, which was more than 14% more than that of the segment with the next closest rate of Millennials. Rocky Mountain consumers were less likely to be in this segment, but Mideast consumers were more likely to be in the segment. Consumers with a bachelor's degree comprised 27% of the segment, while consumers living in a metro environment comprised only 16% of the sample.

**Market segment 9: Wellness.** Everyone in the wellness segment purchased flowers as a get well gift; however, 58% purchased for Mother's Day and 46% purchased for their home (Table 9). Roses and tulips were the most popular purchases, at 63% and 51%, respectively (Table 10). Their overall mood, household mood, stress reduction, and workplace morale were perceived benefits of having flowers (Table 12). Only 3% of this segment was from the Silent Generation; this was the lowest percentage of a population in any segment (Table 13). This segment had the highest percentage of African American consumers (19%).

**Market segment 10: Home.** In the home segment, 100% purchased flowers for the home; however, almost everyone in this segment did not purchase for any other occasion (Table 9). Roses were purchased by 46% of consumers in this segment, with lower

Table 9. Market segments by gift-giving occasions based on a sample of US households from a national online survey of 8502 respondents during Jun 2021.

| | Segment 1 Anniversary | Segment 2 Birthday | Segment 3 Valentine's Day | Segment 4 Mother's Day | Segment 5 Bereavement | Segment 6 Holiday | Segment 7 Easter/wedding | Segment 8 Sorry | Segment 9 Wellness | Segment 10 Home | Segment 11 Other | Segment 12 Several | Segment 13 Everything |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Birthday gift | 44% | **100%** | 37% | 25% | 26% | 29% | 15% | 30% | 43% | 18% | 20% | **61%** | **88%** |
| Anniversary gift | **100%** | 0% | 25% | 7% | 12% | 18% | 12% | 15% | 21% | 0% | 3% | **62%** | **83%** |
| For your home | 15% | 0% | 3% | 4% | 34% | 26% | 24% | 36% | 46% | **100%** | 30% | **68%** | **86%** |
| For a bereavement | 4% | 0% | 3% | 2% | **100%** | 1% | 16% | 11% | 12% | 0% | 3% | 14% | **50%** |
| For a wedding | 5% | 0% | 0% | 25% | 2% | 14% | **58%** | 19% | 18% | 0% | 1% | 24% | **65%** |
| Valentine' Day gift | 32% | 0% | **100%** | 41% | 15% | 15% | 11% | 42% | 39% | 0% | 13% | **88%** | **91%** |
| I'm sorry gift | 9% | 0% | 0% | 2% | 1% | 15% | 9% | **100%** | 4% | 0% | 1% | 5% | **66%** |
| Get well gift | 7% | 0% | 8% | 1% | 17% | 19% | 20% | 29% | **100%** | 0% | 6% | 13% | **85%** |
| Mother's Day | 42% | 33% | 0% | **99%** | 24% | 39% | 16% | 42% | 58% | 21% | 15% | **81%** | **87%** |
| Christmas and/or Hanukkah | 0% | 0% | 16% | 0% | 15% | **100%** | 9% | 4% | 2% | 0% | 6% | 29% | **71%** |
| Easter | 3% | 0% | 15% | 0% | 13% | 20% | **55%** | 10% | 11% | 0% | 1% | 42% | **66%** |
| Other | 3% | 0% | 0% | 0% | 4% | 4% | 5% | 4% | 7% | 0% | **99%** | 8% | 12% |

Table 10. Type of cut flowers given by each market segment based on a sample of US households from a national online survey of 8502 respondents during Jun 2021.

| | Segment 1 Anniversary | Segment 2 Birthday | Segment 3 Valentine's | Segment 4 Mother's | Segment 5 Bereavement | Segment 6 Holiday | Segment 7 Easter/wedding | Segment 8 Sorry | Segment 9 Wellness | Segment 10 Home | Segment 11 Other | Segment 12 Several | Segment 13 Everything |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lilies | 29% | 18% | 22% | 25% | 35% | 40% | 40% | 43% | 44% | 23% | 18% | **51%** | 72% |
| Carnations | 23% | 19% | 22% | 21% | 37% | 43% | 33% | 35% | 38% | 21% | 26% | 46% | **62%** |
| Roses | **63%** | 44% | **62%** | **59%** | **59%** | **62%** | **52%** | **58%** | **63%** | 46% | 48% | **84%** | **88%** |
| Daisies | 19% | 17% | 19% | 22% | 30% | 41% | 31% | 37% | 38% | 19% | 23% | 39% | **63%** |
| Gardenias | 16% | 6% | 15% | 15% | 21% | 28% | 29% | 36% | 27% | 8% | 8% | 33% | **56%** |
| Orchids | 18% | 11% | 15% | 13% | 23% | 34% | 29% | 28% | 31% | 11% | 9% | 34% | **56%** |
| Sunflowers | 21% | 12% | 15% | 14% | 26% | 34% | 29% | 37% | 32% | 16% | 14% | 33% | **59%** |
| Tulips | 33% | 18% | 27% | 33% | 36% | 44% | 43% | 47% | **51%** | 22% | 24% | **59%** | **78%** |
| Peonies | 15% | 7% | 12% | 13% | 19% | 28% | 28% | 32% | 25% | 10% | 10% | 26% | **54%** |
| Mums | 18% | 9% | 16% | 15% | 25% | 37% | 28% | 35% | 24% | 11% | 12% | 31% | **54%** |
| Other | 8% | 10% | 9% | 6% | 17% | 17% | 9% | 9% | 16% | 11% | 23% | 19% | 29% |
| Not sure | 11% | 9% | 5% | 9% | 17% | 8% | 7% | 10% | 17% | 10% | 26% | 16% | 18% |

purchase rates for the other flower types (Table 10). This segment spent approximately $33 per purchase, with an average of 4.4 purchases per year (Table 11). Their overall and household mood were the primary benefits of having flowers (Table 12). This segment had the lowest percentage of males (25%) (Table 13).

**Market segment 11: Other.** In the other segment, 99% of members purchased for another (not listed) occasion (Table 9). Roses were purchased by 48% of the sample, with carnations being the second most purchased (26%) (Table 10). This segment spent the least of any segment both in dollars per purchase and total amount spent, although this segment did not have the lowest number of purchases per year. Notably, the other segment had an average of 4.2 purchase occasions per year and spent $28 per occasion, for an estimated total cut flower expenditure of $132 (Table 11). Their overall mood, overall household mood, workplace mood, and stress reduction were the primary benefits of having flowers (Table 12). This segment was demographically diverse compared with the other segments. Notably, this segment had the largest percentages of Silent Generation consumers, Baby Boomers, Caucasians, Independents, and consumers living in a metro area; however, it had the lowest percentages of Gen X and Millennials, Republicans, rural consumers, and primary plant buyers, as well as the lowest average household income (Table 13).

**Market segment 12: Several.** The several segment had a large number of purchasers for Valentine's Day (88%), Mother's Day (81%), for their home (68%), anniversary gift (62%), and birthday gift (61%) (Table 9). Eighty-four percent of consumers in this segment purchased roses, with tulips (59%) and lilies (51%) comprising more than 50% of purchases (Table 10). This segment had an average of six purchasing occasions per year, with an estimated total annual expenditure of $272 (Table 11). With regard to the benefits of having flowers, their overall mood, household mood, stress reduction, energy level, and workplace morale had high scores (Table 12). Gen Z did not comprise a large percentage of this segment compared with its representation in other segments (Table 13). African Americans were not well-represented

Table 11. Number of purchases and expenditures by market segment based on a sample of US households from a national online survey of 8502 respondents during Jun 2021.

| | Segment 1 Anniversary | Segment 2 Birthday | Segment 3 Valentine's Day | Segment 4 Mother's Day | Segment 5 Bereavement | Segment 6 Holiday | Segment 7 Easter/wedding | Segment 8 I'm sorry | Segment 9 Wellness | Segment 10 Home | Segment 11 Other | Segment 12 Several | Segment 13 Everything |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Times purchased | 4.4 | 3.4 | 4.2 | 4.0 | 4.6 | 4.8 | 4.6 | 5.5 | 5.1 | 4.4 | 4.2 | 6.0 | 7.3 |
| Amount spent per purchase | $43.76 | $37.56 | $46.72 | $42.39 | $45.56 | $46.66 | $53.34 | $52.25 | $45.34 | $33.15 | $28.08 | $44.70 | $57.03 |
| Total spent | $201.54 | $144.74 | $215.80 | $193.14 | $223.37 | $228.59 | $263.95 | $303.05 | $243.95 | $152.06 | $132.99 | $272.75 | $429.67 |

Table 12. Impact of cut flowers on various indicators by market segment based on a sample of US households from a national online survey of 8502 respondents during Jun 2021.

| | Segment 1 Anniversary | Segment 2 Birthday | Segment 3 Valentine's Day | Segment 4 Mother's Day | Segment 5 Bereavement | Segment 6 Holiday | Segment 7 Easter/wedding | Segment 8 I'm sorry | Segment 9 Wellness | Segment 10 Home | Segment 11 Other | Segment 12 Several | Segment 13 Everything |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Workplace morale | 73 | 73 | 72 | 72 | 77 | **74** | 72 | 70 | 76 | 78 | 79 | 77 | 80 |
| Getting over being sick | 70 | 71 | 69 | 66 | 71 | 69 | 70 | 65 | 70 | 74 | 71 | 73 | 75 |
| Your overall mood | **78** | **78** | **77** | **77** | **80** | **76** | **76** | **74** | **81** | **84** | **82** | **83** | **85** |
| Connections with people | 73 | 70 | 70 | 70 | 72 | 68 | 69 | 67 | 73 | 74 | 72 | 75 | 79 |
| Overall household mood | **78** | **76** | **76** | **75** | 77 | **74** | **73** | 71 | **78** | **83** | **81** | **82** | **84** |
| Stress reduction | 73 | 74 | 73 | 73 | 74 | 72 | 72 | 71 | 76 | 78 | 77 | 79 | 80 |
| Strengthen relationships | 74 | 70 | 72 | 72 | 72 | 68 | 70 | 69 | 73 | 73 | 71 | 76 | 80 |
| Sex appeal | 66 | 63 | 68 | 65 | 64 | 64 | 67 | 64 | 66 | 62 | 59 | 68 | 73 |
| Overall health | 71 | 70 | 69 | 69 | 71 | 71 | 71 | 71 | 73 | 72 | 69 | 74 | 79 |
| Your energy level | 71 | 73 | 71 | 73 | 72 | 72 | 71 | **73** | 75 | 75 | 70 | 77 | 83 |

in this segment and comprised only 6% of the segment.

**Market segment 13: Everything.** Members of the everything segment were purchasing across almost all occasions. Purchasing rates for six occasions (Valentine's Day, Mother's Day, get well, for your home, anniversary gift, and birthday gift) were all more than 80%, and the purchasing rates of another five occasions were all more than 50% (bereavement, wedding, I'm sorry, Christmas/Hanukkah, Easter) (Table 9). This segment was also all over the board with regard to what flowers they purchased, with every flower option provided comprising more than 50% of purchases (Table 10). On average, this segment had seven purchasing occasions per year (the most of any segment), spent $57 per occasion (the most of any segment), and spent an estimated $429 per year (the most of any segment) (Table 11). The mass purchasing of flowers is most likely a direct result of the benefits that the members in this segment perceived as a result of having flowers around. For instance, every benefit category listed had a rating greater than 70, and 6 of the 10 categories had a rating of 80 or more (Table 12). This segment had the highest education level (39% had greater than a bachelor's degree) (Table 13). Furthermore, this segment had the largest households (largest number of children and number of adults), lowest percentage of suburban consumers, highest percentage of rural households, and highest average income ($98,873, which was more than $13,000 more than the next closest average).

## Conclusions

Cut flower demand has grown substantially over the last decade as consumers increasingly purchase cut flowers as gifts or for personal use. While existing research has explored purchasing occasions, little was previously known about the distinct market segments within the cut flower industry. Understanding market segments can be critical to growing the cut flower demand because understanding whether consumers are purchasing for like occasions could expand marketing options to elicit increased

**Table 13. Demographics by market segment based on a sample of US households from a national online survey of 8502 respondents during Jun 2021.**

| | Segment 1 Anniversary | Segment 2 Birthday | Segment 3 Valentine's Day | Segment 4 Mother's Day | Segment 5 Bereavement | Segment 6 Holiday | Segment 7 Easter/wedding | Segment 8 Sorry | Segment 9 Wellness | Segment 10 Home | Segment 11 Other | Segment 12 Several | Segment 13 Everything |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average age (years) | 46.9 | 44.3 | 45.2 | 41.5 | 50.5 | 43.1 | 41.4 | 37.8 | 41.4 | 47.2 | 55.3 | 46.5 | 40.9 |
| Age generation | | | | | | | | | | | | | |
| Silent Gen | 11.3% | 6.5% | 6.4% | 5.1% | 10.6% | 6.7% | 8.0% | 4.8% | **3.9%** | 7.1% | **13.2%** | 6.9% | 4.5% |
| Baby Boomers | 25.9% | 24.4% | 20.9% | 14.9% | 32.8% | 20.5% | 13.4% | **4.8%** | 17.5% | 28.7% | **46.2%** | 26.2% | 14.3% |
| Gen X | 15.1% | 18.4% | **26.5%** | 23.5% | 19.1% | 16.8% | 15.4% | 17.6% | 23.5% | 23.2% | **14.6%** | 22.1% | 22.7% |
| Millennial | 33.1% | 33.2% | 35.5% | 41.8% | 27.4% | 38.1% | 42.7% | **54.6%** | 36.4% | 29.2% | **16.2%** | 34.8% | 42.3% |
| Gen Z | 14.6% | 17.5% | 10.7% | 14.7% | 10.1% | 17.9% | **20.5%** | 18.2% | 18.7% | 11.8% | 9.8% | **10.1%** | 16.2% |
| Region | | | | | | | | | | | | | |
| Far West | 12.9% | **14.7%** | 10.3% | 9.8% | 10.9% | 13.1% | 9.8% | 13.1% | 10.5% | 11.3% | **9.0%** | 12.3% | 12.3% |
| Rocky Mountains | 7.4% | 5.5% | 3.4% | 7.0% | **9.0%** | 6.7% | 3.3% | **3.2%** | 6.6% | 6.3% | 8.1% | 5.6% | 6.3% |
| Southwest | **9.1%** | 11.1% | 10.7% | 10.0% | 10.6% | 9.3% | **11.9%** | 11.2% | 8.7% | 10.0% | 10.1% | 10.6% | 10.2% |
| Plains | 8.6% | 9.7% | **11.5%** | 7.7% | 8.5% | 6.0% | **5.3%** | 6.1% | 7.5% | 8.4% | 7.3% | 6.2% | 6.6% |
| Great Lakes | 5.8% | 2.8% | 3.4% | 3.8% | 4.7% | 3.4% | 4.5% | 4.2% | **2.3%** | 4.7% | **5.9%** | 2.8% | 2.9% |
| Mideast | 20.9% | 19.4% | 24.4% | 23.0% | 19.9% | 22.0% | 23.7% | **24.6%** | 24.4% | 18.7% | **16.8%** | 20.9% | 21.1% |
| New England | 6.0% | 6.9% | **4.3%** | 5.3% | 7.5% | 6.0% | 6.8% | 5.8% | 5.5% | 6.8% | **9.0%** | 6.3% | 6.3% |
| Southeast | 28.8% | 30.0% | 32.1% | 32.4% | **28.7%** | 32.8% | 34.4% | 31.6% | 34.2% | 33.7% | 33.3% | **34.8%** | 34.0% |
| Race | | | | | | | | | | | | | |
| Caucasian | 71.0% | 71.0% | 74.4% | 62.3% | 75.7% | 68.3% | **62.0%** | 63.3% | 64.5% | 71.6% | **82.1%** | 79.6% | 73.3% |
| African American | 13.9% | 15.2% | 15.4% | 15.6% | 12.1% | 16.0% | 16.3% | 19.8% | **19.6%** | 14.7% | 6.7% | **6.6%** | 11.8% |
| Hispanic | 7.0% | 5.1% | 4.7% | 10.2% | 7.0% | 7.5% | 11.9% | 7.7% | 8.0% | 4.5% | 4.5% | 6.0% | 7.1% |
| Other race | 8.2% | 8.8% | 5.6% | 11.9% | 5.2% | 8.2% | 9.8% | 9.3% | 8.0% | 9.2% | 6.7% | 7.8% | 7.8% |
| Male | 60.7% | 39.2% | **65.0%** | 48.2% | 40.1% | 47.0% | 49.3% | 56.5% | 39.6% | **25.8%** | 33.9% | 56.5% | 49.9% |
| Political affiliation | | | | | | | | | | | | | |
| Democrat | 27.8% | 26.3% | **29.5%** | 24.7% | 27.6% | 22.8% | 22.6% | 23.3% | 21.4% | 26.3% | 29.7% | 28.8% | **21.4%** |
| Republican | 42.2% | 39.2% | 43.6% | 40.5% | 39.0% | **52.6%** | 48.4% | 46.6% | 48.7% | 41.1% | **30.3%** | 42.1% | 47.6% |
| Independent | 24.2% | 30.4% | 23.1% | 27.3% | 28.2% | **20.5%** | 22.6% | 22.7% | 23.5% | 25.8% | **32.5%** | 24.1% | 25.1% |
| Political other | 5.8% | 4.1% | **3.8%** | 7.5% | 5.2% | 4.1% | 6.5% | 7.3% | 6.4% | 6.8% | **7.6%** | 5.0% | 5.8% |
| Education | | | | | | | | | | | | | |
| High school or less | 22.8% | **30.4%** | 26.5% | 31.8% | 17.1% | 21.3% | 24.0% | 21.1% | 24.4% | 27.1% | 23.5% | 18.3% | **16.7%** |
| Some college | 25.7% | 33.6% | **20.1%** | 28.6% | **34.4%** | 26.5% | 24.3% | 24.0% | 28.9% | 32.6% | 36.1% | 28.2% | 21.1% |
| Bachelor's degree | 24.7% | 25.8% | 24.8% | 23.2% | 25.8% | 25.7% | **20.2%** | **27.8%** | 22.6% | 24.2% | 20.7% | 25.1% | 22.5% |
| Greater than bachelor's degree | 26.9% | **10.1%** | 28.6% | 16.4% | 22.7% | 26.5% | 31.5% | 27.2% | 24.1% | 16.1% | 19.6% | 28.4% | **39.7%** |
| Kids in household (no.) | 0.9 | 0.8 | 0.9 | 1.1 | 0.8 | 1.3 | 1.4 | 1.5 | 1.0 | 0.8 | **0.5** | 1.0 | **1.6** |
| Adults in household (no.) | 2.5 | 2.4 | 2.4 | 2.6 | 2.5 | 2.7 | 2.6 | 2.6 | 2.4 | 2.4 | **2.2** | 2.5 | **2.8** |
| Urbanicity | | | | | | | | | | | | | |
| Metro | 20.4% | 29.0% | 22.6% | 22.6% | 27.9% | 22.0% | 18.7% | **16.9%** | 25.1% | 27.1% | **28.3%** | 21.8% | 19.6% |
| Suburban | **53.0%** | 45.6% | 40.6% | 43.5% | 44.7% | 44.4% | 45.4% | 41.5% | 42.6% | 45.5% | 48.2% | 45.8% | **34.2%** |
| Rural | 26.6% | 25.3% | 36.8% | 33.9% | 27.4% | 33.6% | 35.9% | 41.5% | 32.3% | 27.4% | **23.5%** | 32.4% | **46.2%** |
| Average household income | $82,086 | $61,635 | $77,905 | $70,298 | $76,537 | $78,899 | $83,249 | $85,239 | $74,088 | $66,513 | **$64,523** | $85,740 | **$98,873** |
| Primary plant buyer | 84.7% | 80.6% | 87.2% | 84.0% | 85.3% | 89.6% | 85.8% | 86.3% | 87.7% | 84.5% | **80.1%** | 88.5% | **90.0%** |

purchasing. This study addressed this gap by identifying 13 market segments based on occasion-driven purchases.

The results of the national survey indicated that there are indeed market segments within the cut flower market. Notably, we identified 13 distinct market segments that varied by the purchasing occasion. These segments were distinct not only in occasion but also in the type of flowers purchased (rose was the most frequently purchased across all segments), amount spent, benefits, and demographics associated with each segment. The results showed that roses were the most popular flower across all segments, although preferences for other flowers, such as tulips, lilies, and carnations, varied by occasion. Each segment exhibited unique purchasing behaviors, including differences in the number of annual purchases, spending per purchase, and total expenditures. For instance, segments such as "everything" and "several" reflected a high level of engagement with cut flowers, thus presenting opportunities for targeted marketing campaigns.

Additionally, the perceived benefits of cut flowers extended beyond esthetic appeal. Survey respondents consistently noted positive impacts on their overall mood, household morale, and workplace atmosphere. Addressing common concerns such as vase life, allergens, and maintenance could further enhance consumer satisfaction and drive sales. Retailers and producers may also consider emphasizing the emotional and psychological benefits of flowers in their marketing efforts to attract new customers and retain existing ones. Cut flower producers and retailers can use these results to improve the marketing of their flowers. Notably, they can target specific segments based on their occasion of purchase and location where the flowers will be used. Using the word clouds, cut flower retailers can focus on words that elicit positive images (e.g., smell, beauty, happy) while counteracting negatives (e.g., allergy, wilting, smell).

Future research could expand these findings by exploring consumer preferences for locally grown and sustainable flowers, which are gaining popularity. Investigating the role of digital marketing and social media in shaping purchasing decisions could also provide actionable insights for the industry. Understanding these dynamics will allow producers, retailers, and marketers to cater to the evolving consumer preferences and expand the reach of the cut flower market.

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