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# Assessment of Product Development and Market Opportunities in Michigan's Floriculture Sector

By

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# Executive Summary

The purpose of the present study is to conduct product development and market opportunity assessment to assist Michigan entrepreneurs in the identification of product lines, markets and services with high profit potentials. Specific objectives of the study are to (1) explore the structure of the floriculture industry to identify and understand major production and consumption trends, and (2) to examine demand drivers, new product introductions, market channels and other related issues that affect entrepreneurial successes in the floriculture sector of Michigan.

A mix of primary and secondary data has been collected to conduct the study. Available public data have been utilized to assess production and consumption and industry trends. A survey questionnaire was sent to 600 Michigan floriculture growers. Eight seven growers responded to the survey and 66 completed surveys were used to analyze demand drivers, product development trends and market opportunities. Views and opinions on industry trends and floriculture supply chains were also collected from key informants including growers and experts that have experience and professional expertise in the industry.

**Michigan's floriculture industry**
Michigan's floriculture industry is diverse. State-level statistical data show that bedding plants remain the largest segment in the finished floriculture sector followed by potted flowering plants. Cut flowers and foliage plants have a very small market share. In recent years, sales from foliages, potted flowering plants and bedding plants have experienced growth. The sales trend in cut flowers shows a decline. In terms of production space, production in open ground is also declining. Production in greenhouse covered area has remained unchanged. Survey results show that Michigan's floriculture industry is characterized by a larger share of older operators who continue to farm even after they reach their retirement age. Most of the growers surveyed (89%) were age 45 and above. Of these, 20 percent were 65 years old and above. Also, 88 percent of the surveyed growers have been operating a floriculture business for more than ten years. Greenhouses were primary production spaces for the growers (84%), and bedding plants were found to be the dominant products produced by the surveyed growers. The majority of the surveyed growers appeared to be small and medium-size operations. In 2007, more than half (55%) of the surveyed growers had annual estimated gross sales of less than $100,000. The remaining 45 percent had sales $100,000 and above. This is in line with the structure of the state's floriculture sector.

**New ornamental plant introductions**
A majority of the growers surveyed have introduced new flowers and plants in the past few years. Product introduction included different kinds of Proven Winner varieties. The list included new varieties in cut flowers, orchids, petunias, marigold, zinnias and others. A majority of the surveyed growers do not have specific plans to introduce new plants in the coming years. The growers mentioned (1) lack of adequate knowledge and information on new plant varieties, (2) policies and regulations that make purchase arrangements difficult, (3) market outlet and logistics related risks and uncertainties, and (4) lack of skilled manpower to maintain and manage the required growing environment for the new plants as key challenges in introducing new flowers and plants.

**Market drivers for Michigan's floriculture products**

A combination of factors such as home ownership and improvement, convenience, value, ethnicity, indulgence, wellness and fashion/design influence consumption patterns and demand for floriculture products. The survey results indicate value, convenience and home ownership and improvement as key market drivers that play a very important role in raising sales from floriculture products in Michigan. Michigan growers who can introduce new cultivars and make large-volume sales through mass merchandise stores and supermarkets can have broad opportunities to raise sales from bedding plants. Growth in new homes and home improvements in Michigan will create and expand markets for annual bedding plants, foliages and potted flowering plants. Convenience will have an important role in raising sales from cut flowers and potted flowering plants. The indulgence and fashion/design market segment appear to play a moderately important role in selling flower and plant products. These market segments could provide broad opportunities for cut flower products that are mainly used as gift items, especially during calendar holidays and for special occasions. Cut flowers and potted flowering plants also fit into the coordinated and seasonal fashion trend and mostly they are a key element in indoor designs and decorations. As foliage plants continue to be widely used for interior decorations, the fashion and design market segment would also play a significant role in selling these plants. Compared to the other market drivers, wellness and ethnicity as market drivers have little or no importance in selling flowers and plants in Michigan.

**Market channels and opportunities for Michigan's floriculture products**

Retail operations at greenhouses are the most dominant market channel used by the surveyed growers. Farmers' markets are also viewed as important retail outlets. Also, garden centers and landscapers were found to be important market outlets for Michigan floriculture products. Garden centers are currently facing fierce competitions from supermarkets, home centers and mass merchandise stores. Some national chains have also started establishing garden center chains. This business model, if expanded, would impact the operations of independent garden centers. Due to the current difficult economic condition in the state and its impacts on new home building and improvements, at least in the short term, landscapers and professional services are not expected to make significant purchases of flowers and plants from Michigan growers.

Most surveyed growers are not selling flowers and plants directly to mass merchandisers, home centers and supermarkets. These growers may not have the required quantity to supply mass merchandisers and home centers. Price could also be another factor that limits sales through these channels. Very few surveyed growers used other market outlets such as the Internet, retail florist shops and sales at trade fairs and special events. Michigan floriculture growers are faced with many challenges when selling products. These include low product prices, competition mainly from other growers and mass merchandisers, and fuel and delivery costs, which affect product transportation and also customer visits to retail stores. Growers who can make efforts to introduce new product innovations that meet the market need will have broad opportunities to increase sales from their products.

# Introduction

The increasing globalization and liberalization of markets and new product introductions have played a significant role in creating new trends and demands for goods and services including floricultural products. Currently, there is not only an increasing demand for more varieties, qualities and convenience on the marketplace but also for more information on how these products are produced and marketed. In particular, this trend is becoming a challenge for businesses that want to expand their current operations or potential entrepreneurs who want start new businesses in the floriculture sector.

The purpose of the present study is to conduct product development and market opportunity assessment to assist Michigan entrepreneurs in the identification of niche floricultural products and services with high profit potentials and to increase their awareness and understanding of the supply chain and distribution system for these products and services. Specific objectives are to (1) explore the structure of the floriculture industry to identify and understand major production and consumption trends, and (2) to examine and discuss demand drivers, new product introductions, market channels and other related issues that affect entrepreneurial successes in the floriculture sector of Michigan.

# Research Approach

A mix of primary and secondary data has been collected to conduct the study. Available public information and consumer reports have been used to review production and consumption trends, and to assess and analyze demand drivers, product development trends and markets opportunities. In 2005, the authors conducted a Rapid Opportunity Assessment (ROA) in the nursery and greenhouse sector to broadly identify market drivers and product lines with high market potentials (Abate and Peterson 2005). The ROA has been developed considering global and national market and production trends. Some of the information in the ROA that is relevant for Michigan’s floriculture industry has been revised, updated and incorporated in the present study. Primary data has been collected and used to revise and update this information and to assess market drivers, market channels and distribution patterns within the state’s floriculture sector.

Primary data collection focused on Michigan’s floriculture growers. A survey was conducted to learn about production and marketing practices of floricultural products in the state. In 2007, the state had 628 growers that operated in the floriculture industry (Michigan Agricultural Statistics Service 2008). Altogether a survey questionnaire was sent out to 600 Michigan floriculture growers. A reminder postcard was sent to increase the number of respondents. Of the 600 survey questionnaires distributed, 87 responses were received. About 21 respondents did not complete a large part of the survey, resulting in 66 returned surveys that have been considered for the analysis. Survey questions included topics related to key products, market channels, delivery systems, contractual arrangements, new product development activities, competitions and challenges and opportunities in marketing floriculture products. The Michigan Agricultural Statistics Service (MASS) provided assistance in identifying and selecting the sample for the study. Views and opinions on industry trends and floriculture supply chains were also collected from key informants including growers and experts that have the experience and professional expertise in the industry. In addition, a wide range of data and information on new product development, and market and industry trends in the floriculture sector has been collected from companies and professionals participated at the 2008 Ohio Florist Association (OFA) Short Course.

## Michigan's Floriculture Industry

Michigan's floriculture industry is diverse. The sector includes bedding garden plants, potted flowering plants, cut flowers and foliage plants. In 2007, wholesale value of finished floriculture products in the state has been estimated at $382.5 million (Table 1). The sector has seen a significant growth until 2005 before showing a slight increase in the last two years.

**Table 1: Floriculture crops - Wholesale value of sales by category**

| Year | Total cut flowers | Total potted flowering plants | Total foliage for indoor or patio use | Total bedding garden plants | Expanded wholesale value of reported crops[1] |
|---|---|---|---|---|---|
| | *1,000 dollars* | | | | |
| 2003 | 8,797 | 32,400 | 3,375 | 230,322 | 342,190 |
| 2004 | 8,711 | 32,074 | 4,152 | 238,508 | 384,655 |
| 2005 | 9,240 | 33,979 | 4,453 | 237,125 | 385,402 |
| 2006 | 6,608 | 33,329 | 4,504 | 239,301 | 380,500 |
| 2007 | 7,484 | 35,183 | 5,280 | 239,182 | 382,457 |

Source: MASS

Bedding garden plants remain the largest segment in the state's floriculture sector. In 2007, they represented about 63 percent of the wholesale value of finished floriculture products in the state. Over the last five years, wholesale value from these plants has seen a 4 percent increase. Despite a significant sales increase over the years, the share of foliages remained very small at 2 percent. On average, potted flowering plants represented about 12 percent of sales of floriculture products. Sales from these plants have shown a slight increase over the last five years. Cut flowers had on average a 3 percent market share. Sales of these flowers have experienced an increase between 2003 and 2005 before showing a significant decline in 2006. Sales were $7.5 million in 2007, up from $6.6 million in 2006. In general, the foliage and potted plant categories have experienced growth in the last five years, and growth in foliage plants appeared to be faster than other segments of finished floriculture products.

In terms of production area, production in open ground has seen an increase between 2003 and 2005 before it started declining in 2006 (Table 2). Total production in greenhouse covered area has remained unchanged. More than 80 percent of the greenhouse production comes from production in plastic film greenhouses. With slight variations, production area in this greenhouse

[1]Wholesale value of sales as reported by growers with $100,000 or more in sales of floriculture crops plus a calculated wholesale value of sales for growers with sales below $100,000 (MASS).

remained unchanged over the last five years. Production in glass greenhouses has seen a steady decline during the same period. Production in shade and temporary cover has also seen a declining trend. Fiberglass area has seen a slight increase until 2006 before it declined in 2007.

**Table 2: Floriculture crops growing area by type of cover**

| Year | Glass green-houses | Fiberglass and other rigid greenhouses | Plastic film greenhouses | Total greenhouse cover | Shade and temporary cover | Total covered area | Open ground |
|---|---|---|---|---|---|---|---|
| | *1,000 sq ft* | | | | | | *Acres* |
| 2003 | 4,657 | 4,191 | 37,424 | 46,272 | 1,569 | 47,841 | 3,237 |
| 2004 | 4,549 | 4,616 | 38,692 | 47,857 | 1,353 | 49,210 | 4,687 |
| 2005 | 4,327 | 4,614 | 36,937 | 45,878 | 1,183 | 47,061 | 4,958 |
| 2006 | 4,149 | 5,684 | 37,364 | 47,197 | 1,170 | 48,367 | 3,484 |
| 2007 | 3,807 | 4,575 | 37,902 | 46,284 | 1,023 | 47,307 | 3,409 |

Source: MASS

The number of floriculture growers in Michigan has a declining trend. There were 743 growers in 2003. This number was 628 in 2007 (Table 3). On average, half of the growers have gross sales below $100,000. Of these, a quarter (25%) have annual sales less than $50,000. The remaining 50 percent have sales $100,000 and above. These indicate that the majority of Michigan’s floriculture growers are small-to-medium size operations.

**Table 3: Number of floriculture growers by gross value of sales**

| Year | $10,000-$19,999 | $20,000-$39,000 | $40,000-$49,000 | $50,000-$99,999 | $100,000-$499,999 | $500,000 or more | Total growers |
|---|---|---|---|---|---|---|---|
| | *Number* | | | | | | |
| 2003 | 58 | 96 | 47 | 188 | 220 | 134 | 743 |
| 2004 | 49 | 89 | 46 | 182 | 216 | 139 | 721 |
| 2005 | 46 | 94 | 41 | 173 | 203 | 140 | 697 |
| 2006 | 60 | 83 | 42 | 154 | 193 | 139 | 671 |
| 2007 | 39 | 77 | 43 | 155 | 176 | 138 | 628 |

Source: MASS

**Structure of surveyed floriculture growers**

This section highlights the findings from the floriculture grower survey in Michigan. Most of the surveyed respondents (74%) were growers, 23 percent were growers and propagators, and 3 percent had some breeding activities. About 52 percent of the operations were individually or family-owned farms. Twenty six percent were organized as corporations, while 14 percent were structured as partnership. Most of the large growers had a corporate or partnership structure.

Eighty nine percent of the surveyed growers were age 45 and above. Of these, 20 percent were 65 years old and above. Only 11 percent of the surveyed growers were under 45 years old. Also, eighty eight percent of the surveyed growers have been operating a floriculture business for more than ten years. Of these, 27 percent have experience in the floriculture business for more than 30 years. Only 12 percent of the respondents have been farming for less than 10 years. These age and business experience data indicate that floriculture growing in Michigan is characterized by a larger share of older operators who continue to farm even after they reach their retirement age. This trend may have an impact on the future growth and operation of the floriculture sector in the state.

Michigan growers produce floriculture products in greenhouses, outdoors or using both. About 47 percent of the growers surveyed reported outdoor floriculture operations. In 2007, the average acreage for these growers was found to be 2.23 acres. Greenhouses were the primary production operations for the surveyed growers (84%). The average greenhouse area was estimated at 72,000 square feet. Bedding plants appear to be the dominant products produced in greenhouses. About 64 percent of the surveyed growers reported growing these plants and more than three quarter (78%) of the greenhouse space appears to be devoted to these plants. Potted flowering plants came in second, with 27 percent of the growers devoting production space for these plants. Eighteen percent of the respondents reported foliage production. Herbaceous perennials have been grown by 17 percent of the surveyed growers, and nearly 10 percent of the growers reported growing cut flowers. These survey results are in line with the current structure of Michigan’s floriculture industry, which shows the dominance of bedding and potted flowering plant operations.

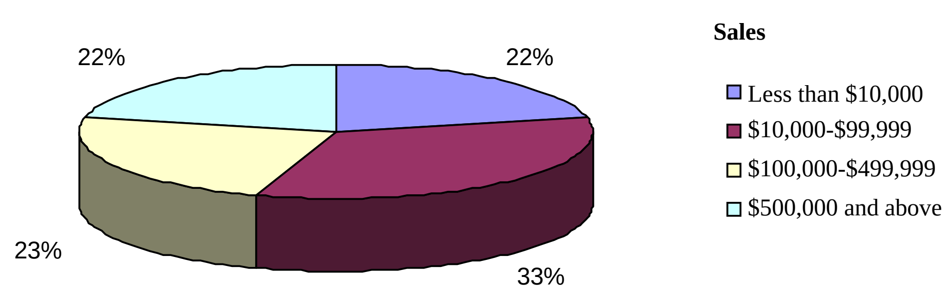


**Figure 1: Gross sales - Percentage of respondents in each sales category, n=60 (2007)**

In terms of sales, in 2007, more than half (55 percent) of the surveyed growers had annual estimated gross sales of less than $100,000 (Figure 1). Twenty three percent had gross sales between $100,000 and $499,999. Another 22 percent exhibited gross sales of $500,000 and above. Sales data from the growers surveyed show similar trends with the state level data presented in the previous section. About 50 percent of the surveyed growers provided information on their employees. In 2007, nearly 70 percent of the respondents had one to three employees. Twenty percent had four to nine employees. Just 10 percent had more than ten employees. This includes part-time and permanent employees.

Growers were asked to provide information about their recent expansions and future expansion plans. A majority of the respondents (55%) reported that their operation has not changed in the last five years. Twenty nine percent said their operation has expanded during the same period, while another 14 percent reported a decline in operation. Regarding future expansion plans, 58 percent reported that they do not have expansion plans in the coming years. Another 42 percent were, however, cautiously optimistic about their future operations and mentioned that they plan to expand their floriculture operation in the coming years. Of these, 54 percent plan to expand just one operation. In most cases this happened to be retail operations followed by wholesale operations. Another 46 percent plan to expand two operations, focusing mainly on wholesale and production. Growers were also asked if they are interested in out-of-state markets. Since most respondents operate a small-to-medium size floriculture business, a majority of them (84%) are not interested in expanding out-of-state market. Just 15 percent were interested in expanding their out-of-state market. Of these, most of them are interested in expanding markets in the Midwest region focusing on neighboring states (e.g., Ohio, Indiana, Illinois and Wisconsin). Very few have online sales and want to expand this market access. Others want to expand their market in other regions using brokers.

## Trends in New Ornamental Plant Introductions

Surveyed growers were asked if they introduced new species, varieties or new crop categories of flowers and plants in the last five years. More than three–fourth (79%) of the respondents reported that they have introduced new flowers and plants. The remaining 21 percent have not introduced new flowers and plants during this period of time. Of those respondents who introduced new flowers and plants, just a very small number provided examples of a list of flowers and plants they introduced. Some listed common names include cut flowers (e.g., new gladiolus, lisianthus), orchids, petunias and marigold. Others mentioned frost Euphorbia, zinnias, snapdragons, and swamp candles (lysimachia terrestris). Most respondents generally reported that they introduced different kinds of new Proven Winner varieties.

Survey respondents were also asked if they plan to introduce new floriculture flowers and plants (new species or varieties) in the near future. A majority of them (88%) do not have specific plans to introduce new plants in the coming years. Only 12 percent plan to introduce new plants. A majority of these are large size growers interested in introducing new plants in the bedding and potted plant categories. Some also wanted new plants in the herbaceous perennials category. Overall, the survey results show that a majority of the growers have experience in introducing new flowers and plants. It also indicated a challenge in planning future introductions of new plants and flowers. Growers get information on new flowers and plants at trade fairs and through different magazines and newsletters. In particular, pack trials have evolved as places where breeders and suppliers showcase their product lines and introduce new varieties for the next season (Hall 2005). This situation may allow growers to plan new flower and plant introductions just for the coming year, and this normally happens after attending these pack trials. But this does not provide enough information to the growers to make long-term plans and decisions on new plant introductions. This situation might have affected survey responses in the present study on plans for introducing new plants in the coming years.

In general, there are different kinds of new flowers and plants that are currently coming into the marketplace (Abate and Peterson 2005). Following are some of the recent trends in new ornamental plant introductions and innovations in the floriculture sector.

(1) Flower and foliage color sophistications, harmony, texture, size and shapes continue to be dominant characteristics of many new ornamental plants. Therefore, many new flowers are entering the market with some new big, bold flowers and unique, bright, vibrant colors and shapes. For example, Flori Midi Bicolor (a premium Gerbera) offers a mix of unusual bicolors and unique flower forms (White et al. 2006). The new Begonia “BIG” series offers big flowers, and big garden performance (Greenhouse Growers 2008).

(2) High energy cost and limited greenhouse spaces have compelled some breeders and growers to focus on fast growing varieties or on plants that require less space in the greenhouses. This has led to the development of plants that grow fast, are compact and require less space. For example, Proven Winner’s Mini Molimbas (Argyranthemum frutescens hybrids) stays compact during production, and reaches a nice garden height when planted out (White et al. 2006). Altogether currently many new plant varieties are coming into the marketplace requiring less space per bench and are ready for sale faster than other related varieties. This could be a solution to reduce costs per unit greenhouse area.

(3) New ornamental plant varieties are entering the market as plants suitable for specific seasons; e.g., spring, summer or fall varieties. In addition, many new varieties are designed to be suitable for specific geographical locations or climatic conditions (e.g., plants for dry, wet, cold or warm climate). For example, the Greenhouse Product News website[2] lists new varieties suitable for different seasons. Examples include Andropogon, a seed strain, developed for more intense fall color, and a new Cyclamen series suitable for growing under winter conditions.

(4) Convenience in shipping and transporting now plays an important role in developing new varieties. For example, a new Gerbera Festival series features shorter flower stems for easier shipping. And two new Osteospermum introductions to the Astra series have a compact habit. They are well suited to be grown in 4-to-10-inch hanging baskets. They will grow to fit the pot size (Greenhouse Product News)[3].

(5) With the increasing interest in environmentally friendly and sustainable products (Kuack 2008), a wide range of growers and breeders are now introducing and offering different

[2] http://www.gpnmag.com/gpn/index.cfm?&fuseaction=showSpotlightItemGroup&GroupID=1531
[3] http://www.gpnmag.com/index.cfm/fa-showSpotlightItemGroup/GroupID/1532/

plants including local, organic, and natural plants or plants that reduce shipping costs. Other introductions include biodegradable containers, sleeves, soil-less media, labels or natural plant tags and display signs, and reuse or recycling of plants and materials (Hudson et al 2008).

(6) Different geographical regions are now focusing on exploiting their native floral diversity. For example, Argentina is currently using its indigenous genetic resources to obtain homebred varieties. This involves exploration and collection of native plants with ornamental value, germplasm characterization and breeding (Facciuto et al. 2008). Some recent activities include collection of more ornamental pot flower varieties from native plants and searching for compact plants that blossom after a short period of cultivation.

Despite these broad new product development trends and opportunities, the results from the present survey indicate that Michigan floriculture growers have a wide range of challenges in introducing new flowers and plants in their operations. Following are some of the key challenges reported by the respondents: (1) Lack of appropriate varieties and species that could grow well under Michigan climate. (2) Lack of adequate knowledge, information and access to new plant varieties including growing methods, cultural practices and flower or plant performances. (3) Different procedures and regulations that make it difficult to make orders and purchase arrangements with new plant suppliers. (4) Market channel related risks and uncertainties in introducing these products (i.e., where and how to retail and wholesale these new products). (5) Policies and regulations that prohibit plant and seed importation and/or transfer from other countries, regions and states. (6) Lack of skilled manpower to maintain and manage the required growing environment for the new plants. Some respondents have also the perception that there is less demand for new plant varieties or species in the floriculture sector.

## Market Drivers for Michigan Floriculture Products

A combination of factors such as home ownership, convenience, value, ethnicity, indulgence, wellness and fashion/design, acting interdependently or independently, influence consumption patterns and demand for floriculture products. Besides these major market drivers, weather is the other most important factor that has an impact on the production and marketing of flowers and plants in Michigan. A wet, dry or cold weather may force growers to scale back from planting or marketing specific crops. Similarly, consumers may partly depend on the weather to buy flowers and plants. Since most of the plants grow only under certain climatic and natural conditions, Michigan’s geographic location is the other factor that affects flower and plant production.

Survey respondents were asked to rank the importance of key market drivers in selling flowers and plants. A Likert scale with ordered categories ranging from one being “not important” to five being “very important” has been used to identify key demand drivers for Michigan’s floriculture products. In this ranking, the higher the mean, the more positive is the total response. The following sections highlight the general trends and importance of each market driver in selling Michigan floriculture products.

**Home ownership and home improvement**

Home ownership is one significant market driver that affects the market for flowers and plants. Homeownership rates in the United States have been increasing in recent decades (Mintel, Gardening, 2003). As homeowners continue to take care of their lawns and gardens, the rise on home building and improvement will have a positive effect on flower and plant marketing. This activity will further be supported by the increasing number of people who would be staying at home (e.g., the soon-to-retire baby boomer generation) and work in their backyards.

With a mean response of 3.6, home ownership and improvements as a market driver have been provided high importance in selling floriculture products. Sixty four percent of the respondents reported that this demand driver is important or very important in selling their products (Figure 2). Seventeen percent provided a moderate importance, while 19 percent considered the demand driver to play little or no importance in selling floriculture products.

Growth in new homes and home improvements in Michigan will particularly create and expand markets for annual bedding plants, foliages, and potted flowering plants. Also, herbaceous perennial will continue to be priority products for new homeowners who want to decorate their garden using different plant mixes. However, the current difficult economic situation and the declining housing market in the state will limit sales growth in this market segment at least in the short term. Homeownership would play a limited role in raising gains from sales of cut flowers in Michigan. Cut flowers are not priority products that could be widely purchased by new homeowners.

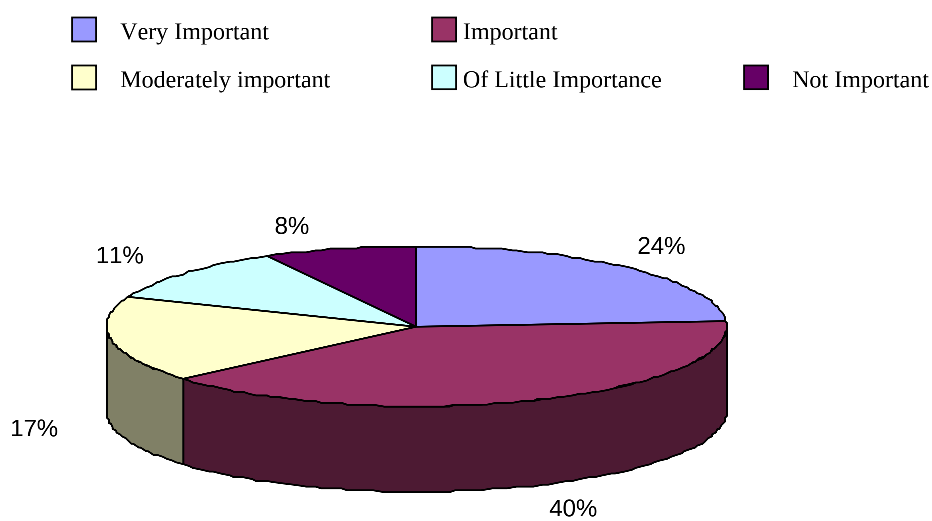


**Figure 2: Home ownership and improvement as a market driver: Percentage of respondents, n=66**

**Value**
Value in terms of prices has a significant effect on flower and plant expenditures and eventually plays an important role in explaining part of the trends in marketing these products. For example, the flats in the bedding and garden segment are assumed to be cheaper flower products compared to the others. Therefore, they are increasingly available in mass merchandise stores. People with low income who tend to buy these flowers are attracted to these low-price super centers.

For most survey respondents, value appears to be the most important market driver in selling floriculture products. The mean response for this demand driver was 4.03. Over three-quarter (76%) of the respondents provide high or very high importance to value as a market driver in determining their sales (Figure 3). Fifteen percent considered value to play a moderate role, while just 9 percent felt that price plays an insignificant role in selling floriculture products.

These results indicate that value will play an important role in raising sales from floriculture products in Michigan. Michigan growers who can introduce cheaper bedding plant cultivars and make large-volume sales through mass merchandise stores and supermarkets can have broad opportunities to raise gains from sales. Price will play a selective role in raising sales from potted flowering plants, foliages, cut flowers and herbaceous perennials. Herbaceous perennials tend to be less of a commodity than annuals. With the increasing demand for large containers that have high-quality combinations of annuals and perennials, these plants would continue to be expensive for value-oriented consumers. Michigan growers can use different market outlets to expand sales of high-value floriculture products.

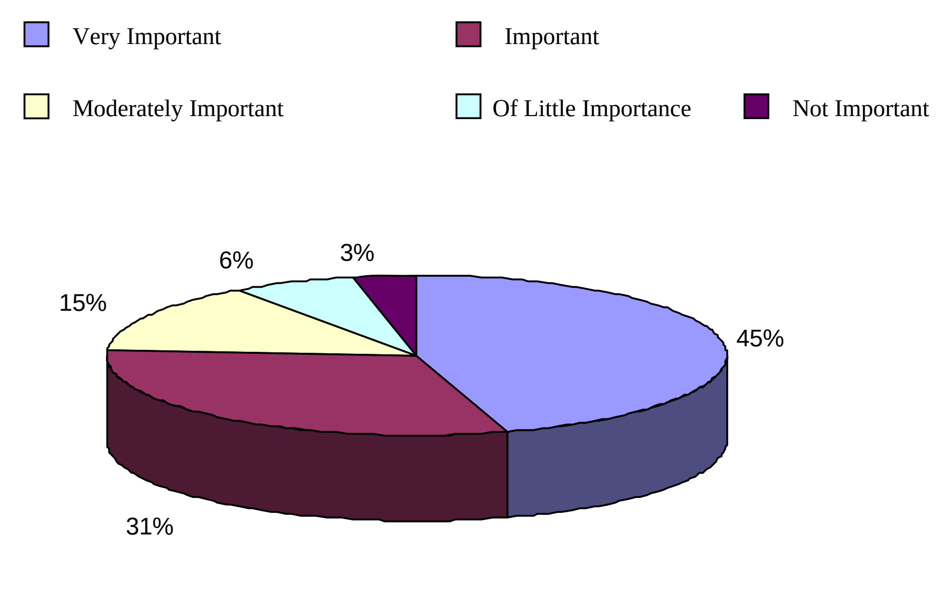


**Figure 3: Price as a market driver: Percentage of respondents**

**Convenience**
Convenience is becoming increasingly important for consumers when buying different flower and plant products. An increasing number of consumers are busy and perceive that they have less time for feeding and watering plants. Or some consumers want to buy plants and flowers that do not take weeks and months to mature. Others want to buy them in convenient containers and pots or they want products that are easily portable from one place to the other. One stop shopping is the current trend that affects flower and plant marketing (Mintel, Lawn and Garden Power Tools, 2007). The convenience provided by one-stop shopping enables consumers to complete all their purchases in one shop or grocery that offers different food and non-food items including flowers and plants. This change in lifestyles has a significant influence on the production and marketing of flowers and plants.

Convenience comes second to value in terms of its importance in selling Michigan floriculture products. The mean response was 3.83. Sixty four percent of the survey respondents reported that convenience plays an important or very important role in selling floriculture products (Figure 4). A quarter (25%) felt it is moderately important, while 11percent provided little or no importance to this market driver.

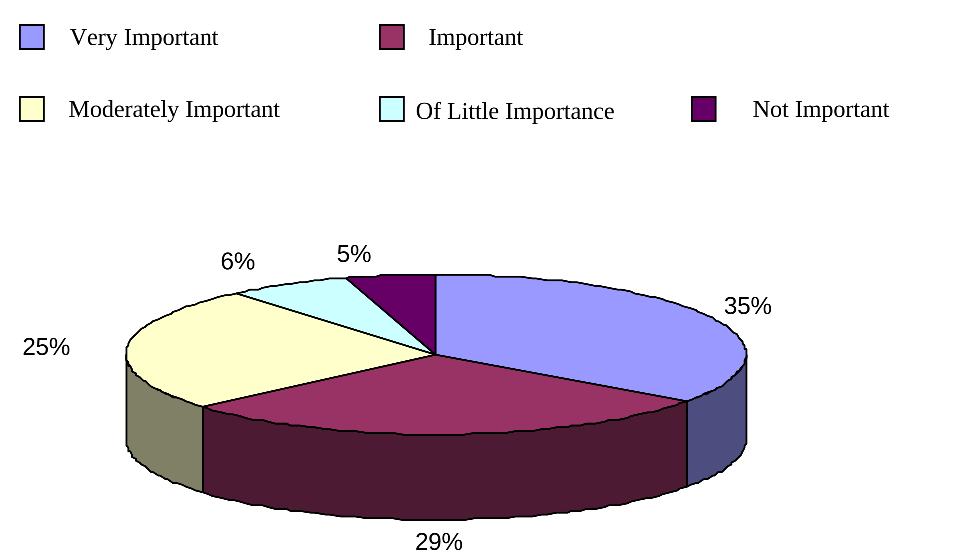


**Figure 4: Convenience as a market driver: Percentage of respondents, n=66:**

These responses indicate that convenience is one of the key factors in selling Michigan floriculture products. In particular, convenience would have an important role in raising sales from cut flowers and potted flowering plants. Convenience-oriented consumers will not be attracted to some of the bedding and garden plants, particularly the flats. Because these consumers do not have the time to continuously water and feed plants and flowers. They rather look for larger near-mature potted flowering plants or cut flowers. Large container and pot innovations that make plant handling and growing easier or packaging innovations that improve the outside look of the container maintaining and improving plant quality would help to increase sales in this market segment. Cut flowers are coming well prepared and ready for use in arrangements, boutiques or consumers can buy them in single stems and they are easily transportable products. In the future, packaging and vase innovations that help to create better feeding and watering technologies would make the products more convenient and help growers and retailers to increase sales. In terms of herbaceous perennials, since many of these plants are currently coming as container plants, they are becoming easier for the consumer to handle.

**Wellness**

Wellness reflects the impacts of flowers, plants and gardening on the consumer's health and wellbeing. Literature has dealt with therapeutic plants, therapeutic landscape, therapeutic gardening etc. that have effects on human health and wellbeing (Khan et al. 2001).

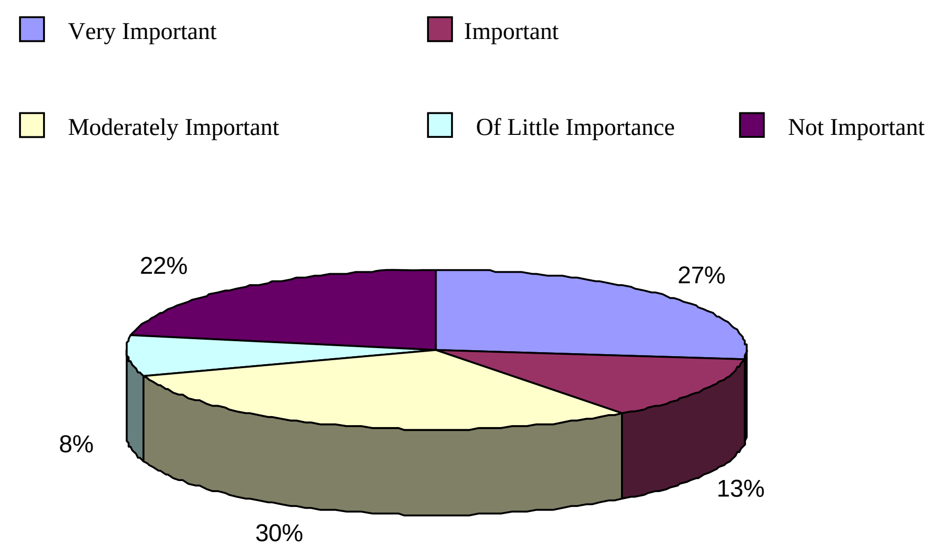


**Figure 4: Wellness as a market driver: Percentage of respondents, n=66**

Compared to the other market drivers, wellness as a market driver does not appear to play a significant role in selling floriculture products in Michigan. The mean response for this demand driver was relatively small (3.16). Thirty percent of the surveyed respondents mentioned that it has little or no importance in selling their products. Another 30 percent considered it to play a moderate role, while 40 percent provided high or very high importance to this market driver in selling floriculture products. Despite these moderate responses from the survey, there are now some trends in which garden plants are perceived by health some conscious consumers as plants that keep the environment clean and prevent pollution.

The presence of flowers and plants at workplaces, for example, could create a better environment that improves employees' idea generation ability, and their performances and problem-solving skills[4]. Thus, currently there are different promotional and consumer education programs that focus on flower therapy. For example, the Society of American Florists[5] has launched flower therapy campaigns using local radios, newspaper advertisements, banners and organizing different events to educate consumers. It has also developed different flower therapy tools and color palettes that focus primarily on the emotional benefits of flower colors expressed through color combinations in floral arrangements. With these promotional efforts, in the future, those annual and perennial varieties and cultivars that could be developed and introduced especially targeting this consumer group could broaden the market share in this market segment. Gardening is also viewed by many as the best way to stay active, improve health and relieve stress. Concerted efforts to educate consumers and develop different health- and wellness-related advantages of floricultural products and innovations would thus help Michigan growers to rise in this market segment.

The other important trend is ornamental organic. Although sales of and consumer demand for organically grown flowers and plants are still low, there are individuals or grower groups that are currently focusing on growing these products. For example, Florganic[6], a subsidiary of the Dutch Flower Group, is a wholesaler of organic floricultural products in the Netherlands. It is distributing these products to retail chains in Europe. Ecological ornamental production has also started to grow in the United States. Organic flowers are currently appearing in some specialty food shops. For example, the California Organic Flowers lists a number of organic flower varieties on its website.

**Indulgence**

Indulgence considers a broad array of flower and plant attributes designed to meet consumers' desires, as opposed to their needs. In this market segment, the consumers have unique attachment to the products, and they are buying not the item but the experience expressed in some ways. These consumers will buy the product because they might have connection to the products since childhood, they may like gardening and working with the plants, etc. In this group, there are also luxury or impulse buyers who pursue their intense emotion in purchasing flowers and plants. Holidays and special occasions are other aspects of indulgence that influence the market for flowers and plants.

The indulgence market segment appears to play a moderately important role in selling Michigan products. The mean response for this market driver was 3.62. Twenty five percent the respondents felt indulgence as a key market driver in selling their products (Figure 5). Thirty percent felt it is important, while 33 percent felt it is moderately important. Twelve percent indicated little or no importance of this market driver in selling floriculture products.

The results indicate that the majority of the growers surveyed are not expecting broad market opportunities in the indulgence market segment. This might be attributed to the relatively large number of survey respondents that grow bedding plants. Generally, bedding plants are not

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[4] http://www.aboutflowers.com/workplace/research.htm
[5] http://safnow.org/flowertherapy.cfm
[6] http://www.natuurenmilieu.nl/pdf/0100_bioflora__growth_in_organic_floriculture_definitief_januari_2006.pdf

suitable products for the impulse consumer. In addition, bedding plants are not popular products for sale on most of the calendar and special holidays. However, consumers who do have experience with some of these plants and flowers could come back every year to buy them. But this market size does not seem to be large.

Also, potted flowering plants are not suitable products for the impulse purchaser and purchase of these plants during holidays does not appear to be broad. Main purchasers of these plants in this market segment are those consumers who have some kind of experience and connection with the plant. But again their numbers may not be very high. Therefore, the indulgence market segment will not provide broad product development opportunities for these plants. But there is still a potential to expand sales in this market segment, if Michigan growers are innovative enough to expand the use of these plants in different occasions by creating plant combinations or containers that are appealing to this consumer group. If that happens, growers of these plants have the potential to expand sales to the impulse purchasers that currently focus on cut flowers.

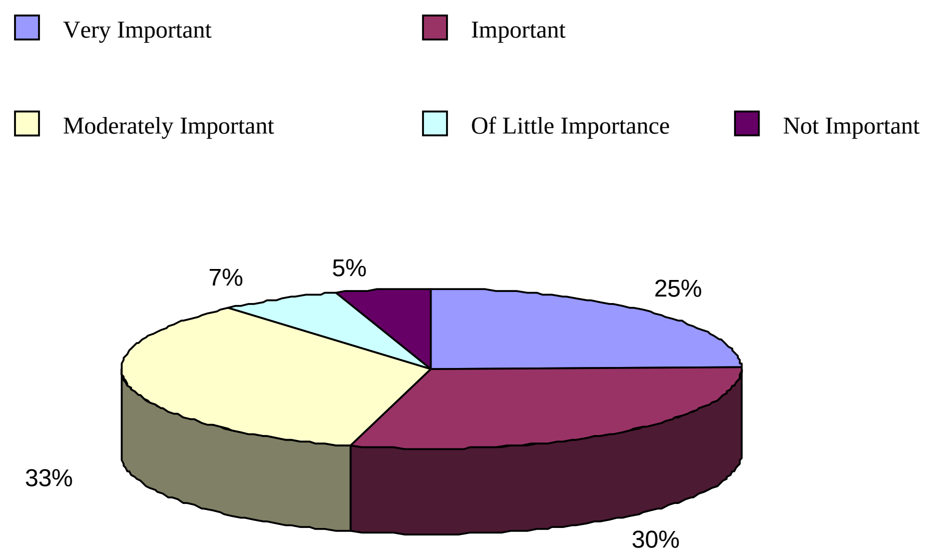


**Figure 5: Indulgence as a market driver: Percentage of respondents, n=66**

Cut flowers are the leading floral products that are used as gift items, especially during calendar holidays and for special occasions. They are also becoming increasingly appealing to the impulse purchaser. Therefore, the indulgence market segment can provide broad product development opportunities for cut flower growers. In the indulgence market segment, foliage plant growers can benefit from different consumer groups that purchase these plants for different purposes. Some consumers may want to have these plants, simply because they like them from experience or they know the performances of the plant from previous years. The indulgence market segment could also provide broad product development opportunities for herbaceous perennial plants. Consumers who see these plants in garden shows or in gardening magazines would continue to buy them to add more diversity in their garden plant selections. These plants, however, may not be frequently purchased by the impulse purchaser. However, Michigan growers who could tie their perennials with other gift items designed for this consumer group can raise sales.

**Ethnicity**

This market driver focuses on products that arise from the flower and plant traits of specific ethnic groups. In the 1950s and 60s, consumer products were marketed to the predominant, largely homogenous middle class. But since the mid 1980s, U.S. consumers have become more diverse, with distinctly different consumption habits and the market is breaking up along regional, ethnic and demographic lines (Senauer et al. 1991). Today, there is a significant growth and change in the ethnic mix of the U.S. population, with Hispanics and Asians being the fastest growing ethnics groups. The U.S. Hispanic population has grown fast between 2003 and 2008, becoming an increasingly important demographic target. This ethnic population is expected to grow 12.9 percent between 2008 and 2013 (Mintel, Hispanic and Beverages, 2008).

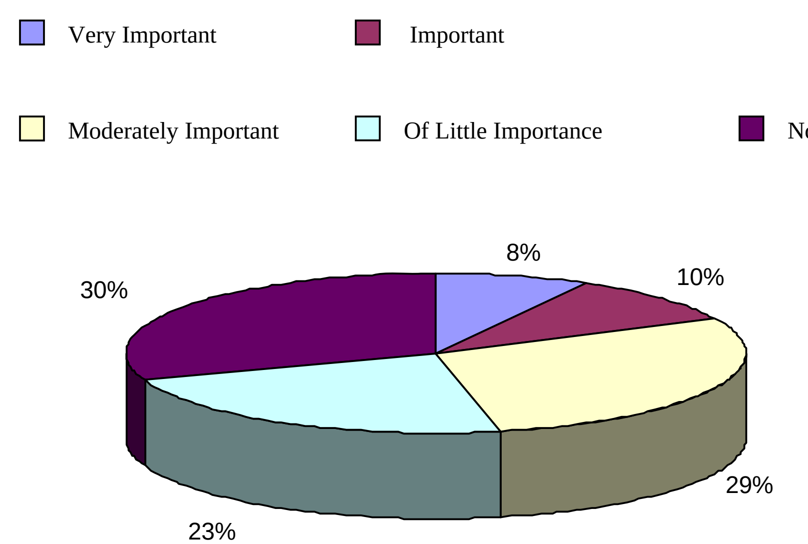


**Figure 6: Ethnicity as a market driver: Percentage of respondents, n=66**

Survey respondents considered ethnicity to be a market driver with the lowest importance in selling floriculture products in Michigan. The mean response was found to be 2.48. Just 18 percent of the respondents provided high importance to this market driver in selling floriculture products (Figure 6). Twenty three percent felt that it is moderately important. The majority of respondents (53%), however, view ethnicity as a market driver that has little or no importance in selling floriculture products of Michigan. These results could be attributed to the relatively small size of the ethnic population in the state. In 2006, Michigan's ethnic population was estimated at 19.8 percent (U.S. Census Bureau 2008).

Overall, the ethnic market segment will not have a significant role in raising sales from Michigan floriculture products. There may be some ethnic groups interested in certain flowers and plants, and there may be some varieties, colors or plant sizes and shapes that may meet demands of different ethnic groups. But this market segment is not expected to be large. The size of this market in the state would still remain small, at least in the coming years.

**Fashion, design and decoration**

Trends in the fashion industry and in home and garden design and decoration are significant lifestyle trends that directly affect the consumption of and demand for flowers and plants. Today, the idea of fashion goes beyond the selection of casual cloths, cosmetics or jewelry for many consumers. Stressing the need for changes in the U.S. flower and plant marketing, Pohmer (2004) notes that floriculture is no longer in the plant and flower business. Rather it is in the fashion, decorating, lifestyle, and well-being and emotion communication business.

The new home and garden decoration trends are also supported by a variety of shows and promotional activities through TV networks such as the Home and Garden Television (HGTV) and the Food Network, which are becoming an effective medium for promoting plants and spotting potential trends. There are also a wide range of magazines and books that contributed to the awareness and increase in sales of plants and flowers. The Internet is also becoming an important medium not only in promoting flower and plant sales, but also in educating consumers how to use and arrange them in a very creative way. For example, the Flower Alive with possibilities web site presents different seasonal 'flower recipes' focusing on flower arrangements that are based on different home decoration concepts.

Results from the present survey indicate that the fashion design market segment is not playing a significant role in selling Michigan floriculture products. The mean response was 3.21. Less than half of the respondents (41%) view that this market segment has high or very high importance in selling Michigan floriculture products (Figure 7). Thirty one percent provided a moderate importance. Twenty eight percent reported that this market driver plays little or no importance in selling floriculture products.

This market segment would not provide broad market opportunities for annual bedding plant growers. However, in this market segment, individual consumers and offices, hotels, malls, etc. that can come up year after year with new interior and patio design and decoration concepts would continue to buy potted flowering plants to use them in their plant mixes. Cut flowers fit into the coordinated and seasonal fashion trend and mostly they are the key element in indoor designs and decorations. As foliage plants continue to be widely used for interior decorations, the fashion and design market segment would also play a significant role in selling these plants. Herbaceous perennial growers will continue to benefit from this trend. Therefore, if Michigan growers and retailers offer a wide range selection of colors, shapes and textures that meet different demands and trends in the fashion industry, they can raise sales from potted flowering plants, foliages and cut flowers. In particular, innovative growers who can create unique combinations using different flowers and plants have broad opportunities to raise sales in the fashion/design market segment.

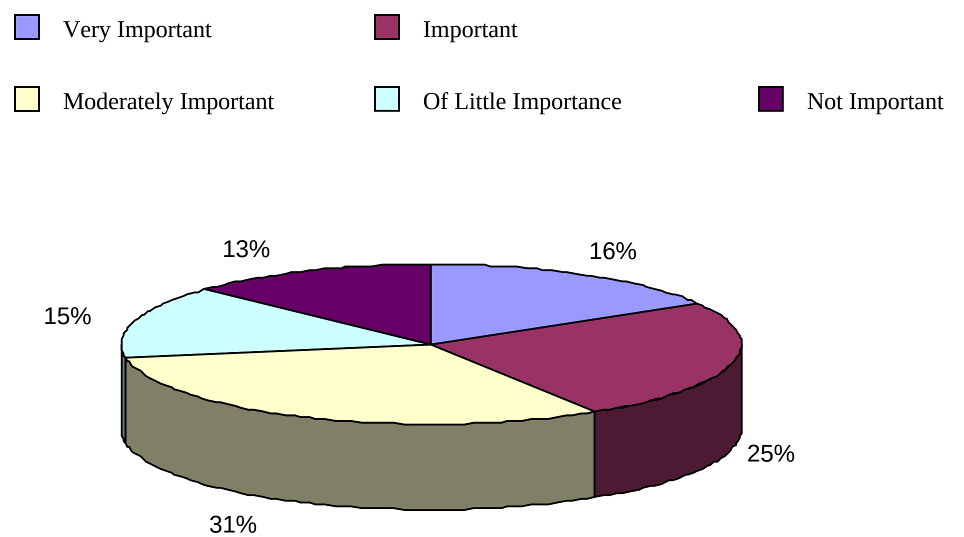


**Figure 7: Fashion/design as a market driver: Percentage of respondents, n=66**

## Market Channels and Opportunities for Michigan's Floriculture Products

Surveyed floriculture growers were asked to provide information on their current market outlets. Results show that growers use a wide range of market outlets to sell their products. Direct marketing (e.g., on-farm retail and sales at farmers' markets) and wholesale to other growers, landscapers and garden centers were found to be important market outlets for the majority of the survey respondents. Most growers are not selling flowers and plants directly to mass merchandisers, home centers and supermarkets. Results from the survey also show different patterns and share of sales through each market channel. About 36 percent of the surveyed growers used just one channel to sell their floriculture products, 32 percent used two channels and 23 percent used three channels. A very small number of respondents (4%) used four different market channels to sell flowers and plants.

Following are details of the responses from the surveyed growers and trends in using different market outlets for Michigan's floriculture products.

**Greenhouse retail operations**
Retail operations at greenhouses appear to be the most dominant market channels by the surveyed growers. About 58 percent of the survey respondents used this channel to sell their flower and plant products. For 60 percent of the growers who used this channel, this channel has been used for more than 50 percent of their sales. Thirty percent of the growers surveyed used farmers' markets to sell their products. For the majority of the growers (58%) who used this channel, more than 75 percent of their sales come from sales through this market channel. These

operations would continue to be instrumental in selling flowers and plants for Michigan growers. As shown earlier, most of the surveyed growers with expansion plans want to expand their retail area. Generally, a retail operation on the front of a greenhouse is not only becoming a way to generate revenue for a grower, it also has become a comprehensive marketing tool to raise sales of flowers and plants. Growers are using this sales area increasingly to test the market for their new products and trials, and get feedback to plan productions for the coming seasons. Some greenhouses have become very innovative in using these stands. In addition, some floriculture growers have expanded beyond greenhouses and are also selling tools and other related gardening products. Some have even added cafes and antique shops; others are providing how-to workshops that include landscaping advice (Wall Street Journal 03/03/05).

**Garden centers**

Garden centers appear to be important market outlets for Michigan floriculture products. Twenty four percent of the growers surveyed use garden centers to sell their products. For 56 percent of these growers, half (50%) of their sales have been attributed to sales through this channel. Michigan floriculture growers can continue to expand sales of flowers and plants through this channel. However, growers need to pay a great deal of attention to developments and trends of sales through this specific market channel. Two significant trends, in particular, could affect sales through this market channel.

First, garden centers are currently facing fierce competitions from supermarkets, home centers and mass merchandise stores. There is a general migration of shoppers from garden centers and traditional shops to home centers and mass merchandisers. Consumers who want to combine their purchases of seeds, plants and other garden supplies such as garden tools and decorative items normally go to mass merchandise stores or home centers (Mintel, gardening, 2003). These stores are also primary choices for those consumers who want to buy cheap plant products. So, in order to remain competitive, garden centers are changing themselves. They are not only adding more flowers and plants to their sales, but they are also focusing on high-quality products, new varieties, colors and flower and foliage textures. Therefore, Michigan growers can use garden centers to expand sales of high-value floriculture products. In particular, growers of potted flowering plants could have an increased access through these market outlets. In addition, garden centers that offer different varieties of herbaceous perennials in combination with annuals that are attractive to consumers will have broad opportunities to raise sales. Garden centers' role in raising sales from cut flowers would be limited. But garden centers that can expand their gift intended articles and focus on holiday sales could broaden their market share from selling cut flowers.

Second, there is one recent development that will affect future use of garden centers. Until very recently, garden centers have been independently owned retail businesses. However, recently Urban Outfitters – a national clothing chain – moved into the garden center market by opening the "Terrain At Styer's" garden center in Pennsylvania last Spring (Today's Garden Center, 2008). The focus of this garden center is to offer high-quality floriculture products. This business model, if succeeded, would likely impact the operations of independent garden centers and growers in the region. Future expansion of the model would generally affect the floriculture sector particularly the garden center industry.

**Mass merchandisers, supermarkets and home centers**

Most Michigan floriculture growers are not selling flowers and plants directly to mass merchandisers, home centers and supermarkets. Just about 6 percent mentioned that they use this channel to sell their products. This may be attributed to the size of the floriculture operations in the state. Most surveyed growers are small-to-medium-sized floriculture operations that may not have the required quantity to supply mass merchandisers and home centers. Price could be another factor that limited sales through these channels.

Despite this current trend, in the future, Michigan growers could use mass merchandise stores and home centers if they want to supply large quantities of bedding and garden plants at discount prices. Market opportunities for potted flowering plants through these channels would be selective. Since these products are relatively expensive the channels would focus on selected products or suppliers that can provide volume products at cheaper prices. Also, customers who want to buy high-quality potted flowering plants may not frequently use these market outlets. Mass merchandise retail stores could also be outlets for selected herbaceous perennial varieties and assortments that are available in relatively large quantities and at discount prices. Mass merchandisers and home centers are also now selling cut flowers especially during calendar holidays. There may be some impulse purchasers who buy flowers in these stores, but they may not be in large numbers. Consumers who want to buy high-quality cut flower arrangements and bouquets would not buy them in these stores.

Michigan growers would also have the opportunity to raise sales of potted flowering plants and cut flowers through supermarkets and specialty stores like drug stores that tend to expand their garden offerings on a seasonal basis. Supermarkets tend to be attractive destinations for impulse flower purchasers and for those who prefer one stop shopping. Some experts estimate that impulse purchases account for 80 to 90 percent of the supermarkets total floral sales (Hall 2008). Sales of herbaceous perennials through supermarkets could be raised, if Michigan growers offer different combinations of annuals and perennials as container plants that are attractive for the consumer who normally wants to make one stop shopping in these markets.

One future challenge for Michigan’s bedding and garden plant growers to sell flowers and plants through mass merchandisers, home centers and supermarkets would be the increasing demand for services. Nowadays these stores are demanding a lot of service from plant suppliers. Increasingly retailers are using pay-by-scan, and they expect growers to use smaller but more frequent deliveries to their stores, which ensure that the product looks a lot better (Ecke 2005).

**Landscapers and professional service providers**

Twenty percent of the growers surveyed used this channel to sell their plants and flowers. Among those who used this channel, 69 percent mentioned that less than 25 percent of their sales were attributed to sales through this channel. Michigan’s landscape contractors and designers including lawn services generate nearly $927 million sales per year (Michigan Nursery & Landscape Association 2008). These services are normally provided to existing home owners and new home builders on contractual basis. Due to the current difficult economic condition in the state and its impacts on new home building and improvements, at least in the short term, these services are not expected to make significant purchases of annual bedding plants and potted flowering plants from Michigan growers. Therefore, Michigan growers would not have broad opportunities to sell bedding plants and potted flowering plants through landscapers and professional garden services. Some herbaceous perennials will benefit from a continued use of professional service providers who want to add these plants in their garden design and decoration elements. Cut flowers will have very limited access through this channel.

**Retail florist shops**

Survey results show that sales of Michigan floriculture products through florist shops appear to be very minimal. Retail florist shops are generally suitable market outlets for plant products that are high quality, expensive and require complex plant arrangements. In addition, these outlets are commonly used for gift products. Bedding plants, which are produced by most respondents, are not suitable products for sale through this market outlet. Florists may have space problems to carry large quantities and different varieties of herbaceous perennials. But they need them in their flower arrangements for different purposes. Herbaceous perennial growers would particularly benefit from those florists who can come up with unique ideas and flower recipes that enhance the use of herbaceous perennials in different plant mixes and container combinations. Michigan foliage and cut flower growers could expand sales through this market channel. Retail florist shops would use foliages as additions in their pot plant designs and arrangements.

Despite these opportunities, in recent years, the market share of retail florist shops has experienced a steady decline. For example, their dollar market share declined from 34.5 percent in 1993 to 24.4 percent in 2003 (Pohmer 2004). The major challenges for these shops include energy prices, online marketing and lack of customer loyalty. The situation in Michigan would not likely be different. The other key factor for the success of these operations is location. Retail florist shops maintain a significant presence in the urban and suburban areas, and their successes are partly attached to the existence of other businesses and large consumer base in these areas. The future existence and growth of these shops also depend on their ability to look for innovative solutions that support growth in their marketing activities.

**Online flower sales and other channels**

The survey results show that very few Michigan growers (15%) use other market outlets such as the Internet, and sales at trade fairs and special events. According to a news report in the July 2008 Today's Garden Center magazine, online home and garden shopping is growing fast. For example, Lowe's recent website traffic increased by 42 percent. The top three online home and garden shopping include the Home Depot, Lowe's and eBay Home. Michigan growers could benefit from this trend if they increase their online sales of floriculture products.

Generally, Michigan floriculture growers are faced with many challenges when selling products. Surveyed growers were asked if they are satisfied with their current market channel. Half of the respondents (50%) mentioned that their current channels help them to increase sales from their products. Thirty nine percent are, however, dissatisfied in selling their products through the current market channels. Key challenges and obstacles for those respondents who are dissatisfied with their current market cannel include low product prices, competition mainly from mass merchandisers and supermarkets that carry cheap flower and plant products, competition from other growers, and fuel cost, which affected product transportation and also customer visits to retail stores. Other challenges that affected sales include poor product quality, Michigan's struggling economy, urban sprawl that mainly affects production, labor availability and weather.

## Conclusions

The results from the present study show that a majority of the growers surveyed have introduced new flowers and plants in the past five years. Value, convenience, and home ownership and improvements were found to be key market drivers that shape consumption patterns of floriculture products. These market drivers play an important role in raising sales from Michigan's floriculture products. The indulgence market segment plays a moderately important role in selling these products. Product innovations in the fashion/design sector are also part of the solutions for the successes of the businesses in Michigan floriculture sector. Compared to the other market drivers, wellness and ethnicity do not play a significant role in selling floriculture products in Michigan.

Direct marketing (i.e., retail operations at greenhouses and sales at farmers' markets), and sales to landscapers and garden centers were found to be important market outlets for the majority of the survey respondents. Most surveyed growers are not selling flowers and plants directly to mass merchandisers, home centers and supermarkets. Very few surveyed growers used other market outlets to sell their products such as retail florist shops, the Internet, and sales at trade fairs and special events. Growers who can make efforts to introduce new product innovations that meet the market need will have broad opportunities to increase sales from their floriculture products.

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