A MANPOWER SURVEY OF VARIOUS SEGMENTS OF THE MICHIGAN FLORICULTURE INDUSTRY

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THESIS

ABSTRACT

A MANPOWER SURVEY OF VARIOUS SEGMENTS OF THE MICHIGAN FLORICULTURE INDUSTRY

by Donald Arthur Dunbar

In 1966 and 1967, the Michigan floriculture industry (flower growers, wholesalers, and retailers) was studied.

The purpose of this study was (a) to determine the total manpower shortage now and the manpower needs within the next five years, (b) to determine the specific job needs, (c) to determine the educational requirements for each job, and (d) to determine the present and future wage scale for each position.

Information was collected through (a) two mail questionnaires to Michigan floriculture establishments, (b) interviews with a selected number of key industry employees, (c) an extensive search of industry literature and publications, and (d) correspondence and discussions with industry leaders.

In 1967, an estimated 314 additional employees were needed by the Michigan floriculture industry. Fifty percent of the flower growers, sixteen percent of the wholesalers, and fifty-two percent of the retailers needed help. By 1972, 1980 additional employees should be needed with sixty-six percent of the growers and all the wholesalers and retailers

needing an average of at least one employee. Floral designers will be in greatest demand with eighty-five percent of the retailer establishments needing at least one.

The educational requirements established by the employers were variable. Sixty-three percent of the respondents to the second questionnaire felt management personnel should have a two or four year college education. A high school education was required for less responsible positions.

Industry yearly salaries are rising and are expected to increase. Grower management salaries averaged $9,200 and will likely increase to $12,500 by 1972. Wholesale salesmen earned an average of $10,000 while the designers employed by wholesalers averaged $6,000. Retail management personnel averaged $8,000 and were expected to increase to $11,340 by 1972. Designers averaged $6,000 and should increase to $7,499 per year by 1972.

There was a trend for the larger establishments to have a higher wage scale than smaller establishments for comparable positions.

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By

Donald Arthur Dunbar

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Gathering confidential data can be a difficult process, especially when the information deals with a businessman's financial transactions. Therefore, I am grateful to those many individual wholesalers, growers and retailers who so freely gave me confidential information.

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INTRODUCTION

The purposes of the Michigan Floriculture Manpower Survey were (a) to determine the total manpower shortage now and the needs within the next five years, (b) to determine the specific job needs, (c) to determine the educational level employers require for each job, and (d) to determine the present and future wage scale for each position.

This study was designed to measure the extent of Michigan's floriculture labor problems rather than to seek solutions. However, several suggestions were offered as possible solutions.

The shortage of trained personnel has long been a problem with individual floral establishments. But since there has never been a survey in Michigan to determine the state's total present and future personnel needs, no coordinated industry measures could be taken which might help alleviate the problem.

Due to the large number of retail florists, greater emphasis was placed on them in this study. The survey was designed to include those businesses involved in only one area of activity: growing, wholesaling or retailing.

It is hoped that the information gathered in the survey will be useful to the floral industry, the industry press, floral organizations and colleges and universities.

Part of this study was conducted through two mailed ques-

tionnaires. The first questionnaire was general and was sent to 1,200 of Michigan's floral establishments. The second questionnaire required specific information and was sent to those who responded to the first instrument. Questionnaires were also distributed at statewide meetings of florists and growers and in personal interviews with floral shop proprietors. Additional information was gained through correspondence and conversations with industry leaders and through an extensive study of industry publications.

The term "floral industry", as used in this study, means the distribution system composed of the "commercial flower grower," the "floral wholesaler" and the "retail florist" (Corfield, J., unpublished data). "Commercial flower growers" grow floriculture products for the purpose of distribution to either wholesale houses or retail outlets. The "floral wholesaler" is a distributor buying all types of floral merchandise in quantity and reselling it to the "retail florist." The business of the "retail florist" is supplying the floral needs of people for such occasions as births, anniversaries, weddings, parties, funerals, and for gifts as well as for everyday living (26).*

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*Numbers in parenthesis refer to the numbered items in the Literature Cited

REVIEW OF RELATED LITERATURE

Development and Growth of the Floral Industry

Men have been employed for thousands of years to both cultivate flowers and to create floral designs. Even before Christ, historians recorded a shortage of flower growers in Imperial Rome and in Greece (39). Historically, flowers were grown by and for the affluent rather than for sale to the general public.

Growers

The first commercial greenhouse in the United States began early in the 19th century near Philadelphia. Early greenhouses were small, usually family operated. By 1900, flower growers had specialized. Growth continued and between 1930 and 1950, wholesale value of florist crops more than doubled to a record $218,521,723 (28). By 1964, the value increased to about $306 million, up about nin percent from 1959 (41). Michigan flower growers have had periods when the demand for flowers exceeded the supply. They have been expanding their facilities to remedy this situation (27).

1954 --- 6,887,827 sq. ft. of glass in floriculture crops.

1964 --- 9,079,375 sq. ft. of glass in floriculture crops.

The nations floral industry is composed of about 12,000 growers (36). According to a United States Department of

Agriculture (U.S.D.A.) 1964 census, there were more than 21,000 "farmers" engaged in the production of floral crops (41).

The U.S.D.A. figure included small and part-time growers.

In 1967, the U.S.D.A. reported Michigan with approximately 950 flower growers of varying sales volumes (41).

150 wholesale growers

450 retail growers

350 small farm growers

In this manpower survey the number of Michigan growers was listed at 525 (Dunbar, unpublished survey). This include only those individuals engaged full time in the occupation of commercial flower growing.

Wholesalers

The need for floral middlemen arose in the early 1900's due to increased flower production and sales. Wholesalers emerged initially as cut flower brokers. They have diversified and now handle fresh, dried and artificial flowers; floral equipment and supplies; and hundreds of related and non-related items. Although some employed a large specialized staff, others were family operations. There were about 450 floral wholesalers in the United States doing an estimated billion dollar volume in 1967 (15). Twenty-one of these 450 floral wholesalers were in Michigan (Dunbar, unpublished survey). This did not include the hundreds of small growers who wholesale their crops locally.

Retailers

To handle grower production, retail florist began operating in the early to mid 1800's. Retail florists are still generally classified as small businesses and are usually family operated (26). A 1964-65 survey indicated that fifty percent of them were owner initiated (22).

In this manpower study the retail florists were classified according to their annual gross sales. This grouping is the one established by Havas (22) and utilizes four classes:

(Class)	Annual Sales Volume
Small	under $50,000
Medium	$50,000 to $99,999
Large	$100,000 to $249,999
Very large	$250,000 and above

The nation's 22,000 retail florists have an annual sales volume which now exceeds $1.5 billion. Floral sales have been on the increase as indicated by Figure 1. Due to inflationary pressure, the accent has been on volume development. Bodette (6) states that retailers must increase their volume fifty percent between 1966 and 1976 just to maintain their normal profit margin.

Both large and small shops were increasing their annual volume. In 1954, there was one U.S. shop grossing over a million dollars; in 1966, there were a minimum of six. Between 1954 and 1963, the number of shops grossing between

$500,000 and $1,000,000 had more than tripled to twenty-eight. In 1954, there were 600 shops with a volume between $100,000 to $500,000; in 1963, the number had more than doubled to 1,323 (1). With this increased growth came a need for more trained personnel in every job category.

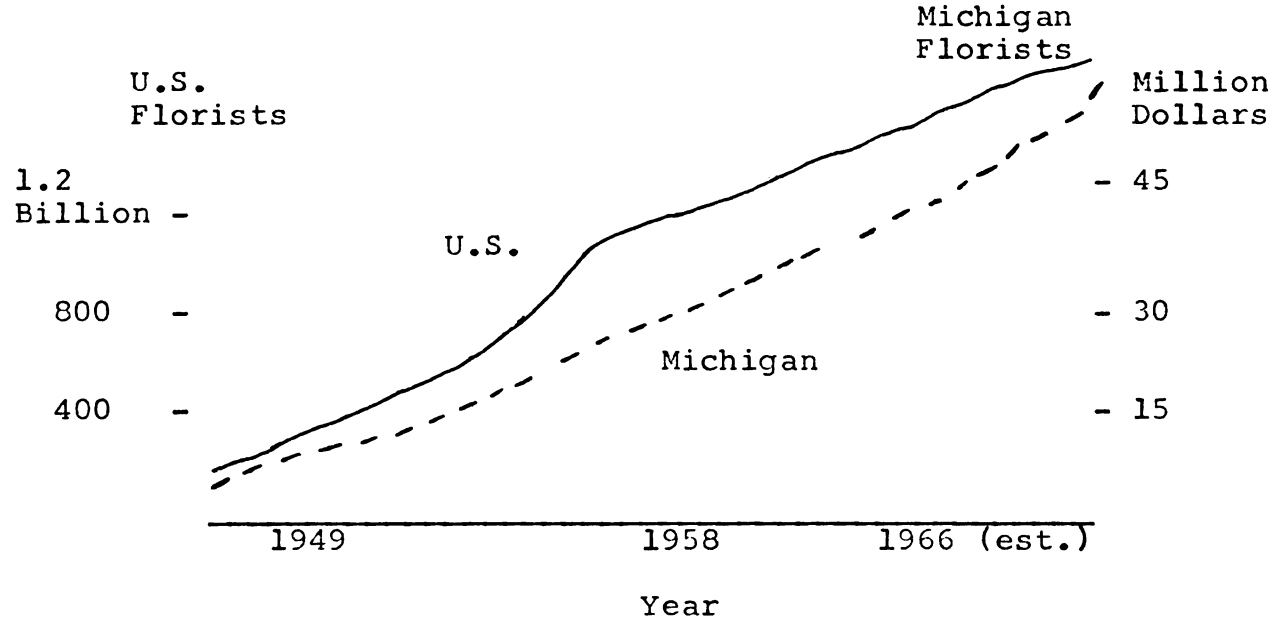


Figure 1. Retail Florists: Annual floral sales in the United States and Michigan (Krone, J., unpublished speech, June, 1968)

Even though floral sales are increasing, sales are not equally divided among all the florists and a 1964 U.S.D.A. survey taken by F.T.D. revealed this breakdown:

Sixty-six percent of the florists do thirty percent of the business - with volumes under $50,000.

Twenty-five percent of the florists do thirty percent of the business - with volumes between $50,000 - $99,999.

Nine percent of the florists do forty percent of the

business - with volumes over $100,000 (22).

Industry Manpower Situation

Growers

Labor force. The U.S.D.A. classifies flower production, retailing and wholesaling employment under "Agriculture" and gives the following figures. Between 1961 and 1966, farm employment dropped over six percent per year. Out of the total "farm" employment in 1966, there was a drop from the previous year of about 400,000 employees.

It is estimated that Michigan's agricultural industries between 1960 and 1980 will have an annual 2.6 percent decline in the rate of employment (31). Also, there are fewer people entering "Agricultural" carrers now than ever before. Even though agricultural employment is decreasing the floriculture employment is increasing; therefore, growth alone could cause a manpower shortage. But growth along with employee deaths, injuries, marriages and retirements would greatly increase the personnel requirements.

Not only is there a shortage of workers but according to Walker (43) "the industry is in desperate need of younger personnel to fill managerial and supervisory positions." As of January, 1966, the average greenhouse employee was over forty-five years of age. The average age for management personnel was higher (43). The older management personnel

cannot or are not being replaced. In many family operations, the children assume full responsibility when the parents retire. Ecke (2) in California comments that most of that state's leading growers are sons of growers.

Wages and hours. Small greenhouse operators cannot compete with large operators in the labor market. The small grower cannot afford top wages, or the many fringe benefits. Consequently, small growers are usually understaffed, or must hire very young or elderly, or untrained personnel.

The Fair Labor Standards Act (Federal Wage Hour Law) classifies greenhouse employees, other than management, as agricultural employees. As such, the minimum wage is $1.25 per hour. There is no provision for an increase and no overtime pay is required (33). Management wage scales vary greatly with the size and progressiveness of the firm. With the advent of Federal wage and hour laws competition with forty-hour work week industries, the floral industry will be forced into a shorter work week. In spite of low wages, labor costs have doubled in the last twenty years and now average about 48-58 percent of sales (27).

Training. Training for this profession can be secured through: (a) on-the-job training, (b) high school vocational programs, (c) post high school vocational programs, (d) one- or two-year college courses or, (e) four-year college programs.

Too few people are being trained for this profession.

Some feel that college costs are not justified considering the industry wage scale. Conversely, the average greenhouse operator couldn't afford many college trained employees.

New greenhouse operations have been mechanized and simplified to permit the use of untrained female help in all but a few heavy jobs (Helbling, L., personal communications). This becomes significant since only one or two "management" personnel in an establishment may be required to have any formal training and employees may be easily recruited.

Competition. Competition to survive permeated the industry. Many growers began wholesaling while others became grower-shippers (2). The advantages of this situation are many:

a. Labor. If a grower also wholesaled his own products, better control of sales could be obtained, thus, labor needs could be better distributed over a twelve month period.

b. Crop scheduling. If a grower also wholesaled his own products, retailers would more likely "contract" a portion of his production. This would be done a year in advance, thus, guaranteeing gross sales and allowing grower management better utilization of production space.

c. Profit. A grower wholesaling could have greater control of prices and save the commission charges of the normal wholesaler.

An increasing number of growers have contracted their crops to retailers and to large chain stores. In 1952, twenty percent of all flower products distributed were sold through non-floral outlets; by 1966, these sales had increased to thirty-three percent (2). As an example, a chain of 140 California supermarkets began selling flowers in its stores nine years ago. It is now the largest buyer of cut flowers and potted plants in the state (2). As more non-florist outlets increase their floral sales more trained people will be needed to grow, deliver and merchandise these flowers.

Efficiencies. For a grower to be efficient, he must realize the importance of having flower crop production information. To be able to gather information concerning production and value of flower crops, the U.S.D.A. established the Crop Reporting Service. Every three years, the U.S.D.A. publishes a report entitled Cut Flower Production and Sales (13) which includes the amount and value of the Carnation, Standard Chrysanthemum, Spray Chrysanthemums, Gladiolus, Roses, Potted Chrysanthemums, and foliage plants in the major crop producing states of Massachusetts, New York, New Jersey, Pennsylvania, Ohio, Indiana, Illinois, North Carolina, Florida, Colorado, and California. Recently, the crop reporting service has been expanded to include Michigan and eleven other states.

Related to this service is the Floriculture market

reports. These are published reports on the current activity of the flower market. Industry leaders, feeling the need for price and supply information at production and market levels, financed a brief study to determine the practicality of obtaining such market information. The results indicated a market news program would be both useful and feasible (23). As a result of this study, the Market Report is published each Monday, Wednesday and Friday by the U.S.D.A. in San Francisco (14). Federal funds will no doubt be appropriated to expand this program to other cities (5).

For the past thirty-one years the Department of Agriculture of New York has been publishing a daily cut flower market report covering the prices, receipts and market conditions of the New York City wholesale flower market (15). Market reporting is another employment area requiring men and women trained both in business and/or horticulture.

All labor and production efficiencies known are of interest to cost conscious growers. One method of reducing costs involves modernization. Many growers, especially large ones, are trimming their labor costs as much as possible by such labor saving devices as:

a. steam sterilization and rototilling of soil in the benches
b. automatic soil handling systems

c. automatic environmental control devices

d. overhead conveyor belt systems.

Using modern growing techniques and higher yield flower varieties, growers increased production ten-fold in the past twenty years (2).

Wholesalers

Labor force. Wholesalers employment needs have increased due to their increased and larger size operations. The actual number of individuals engaged in floral wholesaling is unknown. The labor force needed by individual wholesalers varies less than it once did due to many factors:

a. Promotional attempts by the industry to increase retailers sales in his "slow" months.

b. Supply and demand are now more equally balanced; flower gluts are less prevalent.

c. Many wholesalers sell "standing orders" to retailers enabling growers to better plan their crops.

d. The growing and wholesaling industry is more efficiently organized and operated today than in previous years.

The old concept of the wholesalers as strictly a buyer and seller is no longer true. For example, the wholesaler is now manufacturing permanent and dried floral arrangements for retail customers (Muncenti, Wm., personal communications) as well as other ready made items. It is possible that the

wholesaler with his lower labor costs and broader market could more profitably mass produce flower arrangements and assume more of the retailers high labor consuming functions.

Wages and Hours. The federal minimum wage law (38) (Fair Labor Standards Act) applies to firms with an annual gross over $500,000 (The enterprise concept). Effective February 1, 1969 the coverage will include firms grossing over $250,000 annually. An establishment is also covered if it has two or more employees engaged in interstate commerce (the individual concept). Therefore, most wholesale establishments are all covered by the minimum wage law. The Michigan Minimum Wage Law carries the lower rate of $1.25 per hour consequently for wholesalers it is relatively obsolete. Wages vary between cities and between size of the establishments. It is also determined by experience, the labor market, responsibility and the value of the employee to the firm.

The management of the wholesale house usually work the longest hours. Again, the work week varies between establishments.

Training. Training can be secured from the same institutions of learning offering courses to growers or retailers. Most employees, however, receive on-the-job training.

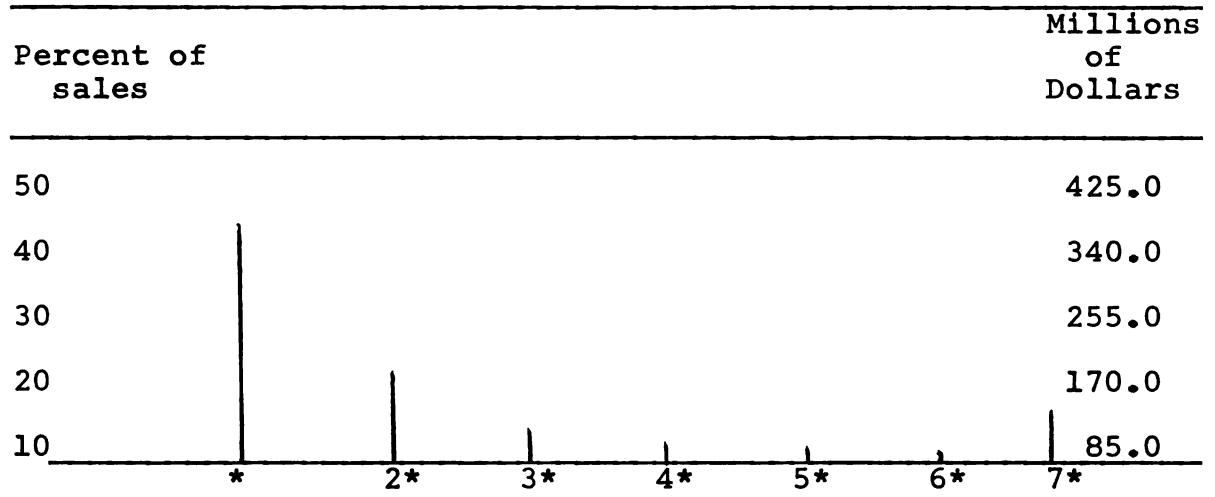
Competition. Competition from other wholesalers and with related industries both for men and materials has produced some interesting results. One of these is an emphasis on a more

efficient operation.

Efficiencies. To increase their efficiency and offset rising costs, wholesalers have engaged in "pool" deliveries, and have established minimum deliveries and delivery charges. They are adopting modern labor-saving selling techniques, such as the punchcard phone dialing system and daily sales meetings with truck and phone salesmen. Another recent development of vital importance to the industry is that of grades and standards. Several universities and floral organizations have worked on a system for standardizing the grades of all cut flowers and blooming plants. If a standard grading system could be put into effect on a national basis, market reports and wholesalers telephone selling could be made infinitely more accurate. As modern technology and business principles are put into practice, wholesalers will require more skilled and better trained employees.

Retailers

Labor force. The employees of Michigan's 1300 retail florists comprise a sizeable labor force. Assuming the states retail florists employ one person for each $20,000 of its estimated $50,000,000 volume, the labor force would amount to 25,000 people. Since the bulk of flower consumption is tied to occasional uses such as funerals, births, marriages, anniversaries, and sicknesses, the labor demands are irregular. This is illustrated by Figure 2 (21 and 22).



*1. Funeral and Memorial. $225 spent for flowers for each funeral.
*2. Hospital. $5. spent for flowers for each hospital patient and birth.
*3. Home use. Slightly under $2 spent for flowers by each householder.
*4. Wedding. $50 spent on flowers for each wedding.
*5. Convention and Business Openings.
*6. Church use. $2.50 spent for flowers for each Church per week.
*7. All others

Figure 2. Retail florists: Annual sales by occasion or use in the United States in 1966.

To solve this labor and flower use problem and help educate the consumer in everyday use of flowers, the S.A.F.. launched a very successful Youth Educational Program (Y.E.P.) in 1957 (47).

Another more graphic illustration of the seasonality of sales in the flower shops is shown in Figure 3. It records sales fluctuations for a full calendar year with figures indexed to a "normal" month represented by the 100 figures (40).

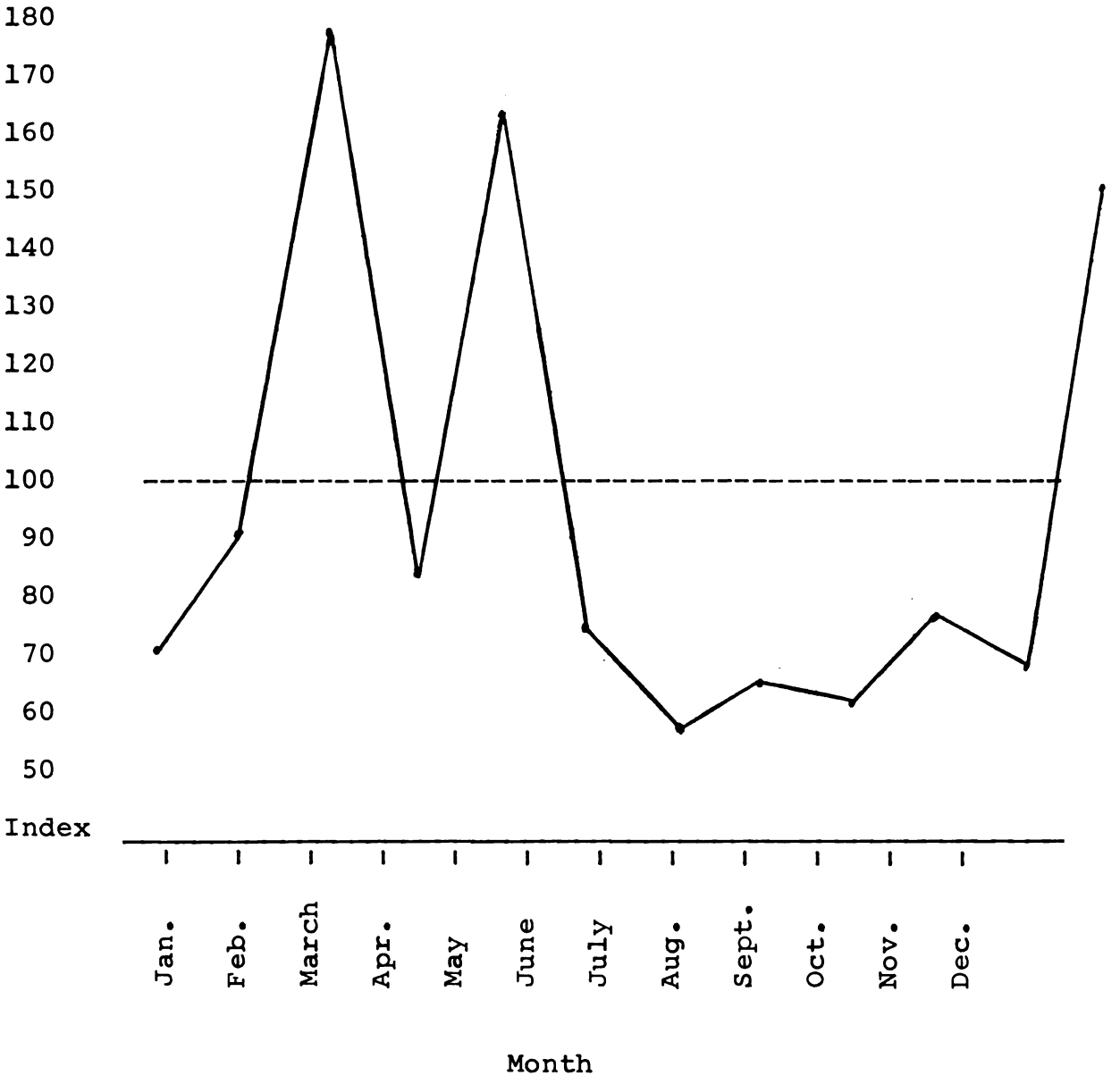


Figure 3. Retail Florists: Seasonal patterns of retailers sales.

In spite of fluctuations in sales from month to month, a retailer must be able to utilize his personnel efficiently. Table 1 records the employment differences between peak and low employment periods.

Table 1. Retail Florists: Average number of employees by employment and size of business

Employees		Sales volume (000)			
		Less than $30	$30 to $70	$90 to $125	$125 & Up
Full-time	Normal season	1.0	2.6	4.5	13.3
	Busy season	1.2	3.3	6.5	16.9
Part-time	Normal season	0.3	1.1	1.3	4.1
	Busy season	1.4	3.9	4.8	10.3

Usually, as the figures in Table 1 point out, the normal number of employees must be supplemented by the addition of full and part-time personnel in high business periods (40).

Wages and hours. The minimum wage applies also to non-management in the retail florist shop. It provides a minimum wage of $1.25 per hour to be raised to $1.30 per hour as of February 1, 1969. Wages paid to labor have been on the rise and now amounts to 28-35 percent of the retail florists income and gross sales (27).

Another reason for a labor shortage is the long hours

associated with the retail area of floriculture. In 1958, small florist shops in Iowa were open an average of 67,5 hours per week. Medium and large shops were open 62.0 hours per week (37). According to a survey taken in 1964 (23), one-third of the flower shops in the country were open regularly on Sundays.

Different classifications of employees had different work weeks. Owners averaged over fifty hours per week, other full-time employees, forty-four hours per week, and part-time employees averaged twenty hours per week. Designers worked a longer week than the non-production personnel (23).

Business and industry have forced the floral industry to become more competitive in the area of wages and hours. The factory work week averaged 41.4 hours including 3.9 hours of overtime pay, plus more and better fringe benefits (17).

Training. Retail florists have not always felt a need for training, especially in business administration. Mitchell (32) stated,

> "I soon learned that ninety-nine percent of the florists were in the same situation as I. They, too, had put all the accent of designing, and they sincerely believed they were correct. However, it was amazing to hear so many florists admit they were unable to meet their bills as they should This leads one to the belief in the importance of business management in the florist industry."

Industry leaders now are urging people interested in entering the floral profession to acquire a good business

education.

There are many methods of securing training in this profession:

(a) On-the-job training

(b) High or post-high school vocational program

(c) Short term design schools

(d) One, two or four year college course

Competition. Due to competition both from within and from without the industry, the mortality rate for retail florists establishments was increasing. It was especially evident in the smaller sized shops. After 1963, there was a steady decline in the number of shops doing less than $30,000 per year gross volume (4). Inflationary factors pushed some into higher volume brackets. This (combined with employment opportunities elsewhere) pushed many individuals into better paying jobs outside the industry.

In Michigan, between 1958 and 1963, the total number of retail shops increased but the number of small shops with only family payroll declined (35). In Flint, Michigan, between 1958 and 1963, there was a decline of six florist shops (16).

Corfield (11) stated it another way. The retail florists he surveyed doing less than $50,000 during the years 1964-66, averaged 4.60 percent loss before income taxes. Those shops grossing above $250,000 had an average profit of 9.68 percent of sales.

This trend of fewer but larger retail florist shops affects the labor situation both qualitatively and quantitatively. The additional personnel needed will have to be more skilled and better trained. Mass marketing, or the practice of selling large quantities of flowers and plants to non-floral outlets such as supermarkets, has made inroads into the retailers sales. In 1966, twenty-three percent of all flowers produced were sold through non-floral outlets (2, 8). Since retail sales were up the results of this competition were not fully recognized.

Another area competing for trained florists are industries manufacturing "artificial" or permanent floral designs to be rented by the month for professional offices (Young, T., personal communication).

Efficiencies. Bodette, in a 1966 speech entitled "Getting Ready for Tomorrow's Business Today", said that a florist's challenge is to his ability to manage and to secure added sales volume (6).

Business machine companies have computerized bookkeeping and cost accounting systems available to florists and will work with florists in setting up personalized programs. Several large Michigan florist's have devised a cooperative system and one large wire organization began promoting a bookkeeping service several years ago.

Occasionally, one heard about some medium to large

retail florists who engaged in cooperative advertising or buying. In 1964 they accounted for only three percent of the total floral purchases (23).

Factors affecting growth. Even though most people appreciated flowers, this alone did not account for the industry's growth. In 1954, 1958, and 1963 Michigan consumers only spent about .2 of their disposable income on floral products (27). This is close to the national average, but it has not kept pace with the increase in retail sales per capita (12).

The Gross National Product. It is the measure of the total value of the goods and services produced in the United States. The G.N.P. has more than doubled between 1948 and 1963, to approximately 585 billion dollars. By 1970 it is estimated to reach one trillion dollars (25) or it will increase about sixty-five percent between 1965 and 1975 (18).

The Disposable Personal Income (D.P.I.). It is the income after taxes and it has quadurpled since 1939. By 1975 the D.P.I. should be about sixty percent above the 1965 level. The middle income market has greatly expanded and now for the first time these people can afford flowers (25).

Educational Level. The educational level of the general public has soared in the last decade. By 1974 there will be a projected thirty million college-age people in the United States (25). This means a high income and cultural level, more

leisure time, and generally a greater appreciation for the beauty which flowers provide.

Suburbia. Floriculture saw its greatest period of development in the past one hundred years with the advent of great population shifts from rural to urban centers. Suburbia contained fifty-eight percent of the total population and their families average income was $1,100 more than their city counterparts. Seventy-five percent of the floral business was conducted in urban area (23).

Advertising. Industry advertising creates or intensifies a desire within people for flowers. The Society of American Florists with its National Product Promotion and Florist Transworth Delivery Association with its million dollar plus television campaign, are leaders in this field. As yet the individual florist has not felt the need to advertise. Twenty-five percent of the retailers spend nothing for advertising; fifty percent have no advertising plan for 1968. The large and very large shops plan an advertising program (5).

Average for 1963-64	
	% of sales
Under $30,000 gross sales	1.5
$30,000 - $70,000 gross sales	2.2
$70,000 - $125,000 gross sales	2.1
Over $125,000 gross sales	3.1

Figure 4. Retail Florists: Percent of net sales, invested in advertising (34)

There can be no doubt that advertising, however little, is partly responsible for the industries growth.

In addition to growers, wholesalers, and retailers, the allied organizations such as the Society of American Florists (S.A.F.), the florist wire organizations, the state and regional associations, and the clubs are continually looking for individuals with a horticultural background. Other expanding industries competing for the horticulturally trained are the seed companies, government agencies, and the U.S. Department of Agriculture, who hire agricultural college graduates at excellent starting salaries. "Schools...are producing potential growers, but they usually stay on campus to teach, join large chemical companies, or go into business for themselves" (11). Vocational schools and colleges are also seeking vocational agriculture teachers. The need for high school vocational horticulture teachers is enormous. In March, 1964, Pennsylvania had a specialized high school vocational horticulture program, including flower crop production and retail flower store operation. (Love, G. M., personal communications). There will shortly be over thirty such programs in operation (43).

Sources of Personnel

Floral design schools. One of the fastest and least expensive methods for a non-florist to enter the profession is through the door of a floral design school. The schools are usually of one to four weeks duration, and the cost varies from

$50 to $80 per week. A cooperative search by Dr. Peter Phahl of Pennsylvania State University and this author revealed about forty public short-term schools teaching floral design in this country. There are three in Michigan (Appendix Table C).

A 1968 random sampling of thirteen of the forty design schools revealed an increase in the number of graduates from 446 in 1964 to 630 in 1967. In 1967, an average of forty-seven people graduated from each of the responding schools, Projecting this nationwide, almost 1,900 individuals would have been exposed to florist training in 1967. The design school owners estimate that seventy-five percent of the graduates remain in or enter the floral industry.

Colleges and Universities. About one-half of our land grant colleges and universities in America have courses of study leading to a B.S. or B.A. degree in Floriculture. Most of these institutions are in dire need of high quality students (45). Graduates in floriculture (production and retailing) in a four-year institution are "...qualified for commercial positions as managers...of flower shop operations, or in production or quality control...Or can prepare for graduate study leading to careers in research, teaching, and extension in horticulture and related plant sciences" (44).

There are over 800 community colleges which offer certificates, or Associate of Art degree courses. The Executive Director of the Community and Junior Colleges Association

reports these colleges are interested in cooperating with the floral industry to inaugurate educational programs (45). The majority of junior colleges in California offer courses in Horticulture (10).

At universities one can enroll in short courses from one day to two weeks, or in two or four year academic programs. (See Appendices, Table D and E for list of universities teaching growing, or retailing). The number of graduates from all these programs were insigificant in comparison to the personnel needed. For example, in 1966, six of the leading universities: Pennsylvania State, Wisconsin, Cornell, Ohio State, Illinois and Michigan State graduated a total of only 132 men and women in Floriculture. The number is actually less since the Cornell and Illinois figures include both Floriculture and Landscape Horticulture majors (Carew, J., unpublished data).

Dr. Gene Love at Pennsylvania State University conducted an experimental research project, "Project Dimension", approved by the Division of Vocational and Technical Education, United States Department of Health, Education, and Welfare. The project was responsible for developing and evaluating instructional units in ornamental nursery, floriculture and turf occupations. This vocational teacher training program will be promoted in all sections of the country and will be a positive force in upgrading the quality of industry (45).

Vocational technical courses. There are approximately 300,000 high school students enrolled nationwide in agricultural

courses. In Michigan about 200 teachers in 180 departments teach agricultural courses. The Vocational Education Act of 1963 broadened the occupational base of the law. It allowed schools to teach any courses where knowledge and skills were lacking (Haslich, Clifford, Personal correspondence). The passage of the Act, combined with the movement of people from rural areas, has increased the interest in and emphasis on horticultural courses in Michigan. Of the 36 schools with vocational agricultural programs, twelve have greenhouses. Michigan's most advanced floricultural program is being carried on at Jackson Parkside High School in Jackson under the direction of Dr. Warren Parsons.

Broecker (Meaders, D., unpublished data) the assistant director of the Jackson, Minnesota Area Vocational School, reported in June, 1965, on the sixteen vocational-technical schools in that state. He stated that only one had a retail floriculture course; another one had a fifteen hour floriculture evening course; and another school was planning a six month course in greenhouse crop production.

The education received from high school courses usually prepares one to enter either the growing or retail field as an apprentice. (Appendix, Table D).

The immediate contribution of these schools to the labor market is unknown, but their value otherwise cannot be underestimated. They provide a latent labor pool for future years, and introduce hundreds of young people to the field of

horticulture.

Vocational-technical schools may be pre- or post-high schools, and usually teach general agriculture and ornamental horticulture. These schools are relatively uncommon. Their contribution to the industry labor market is limited.

Industry related schools. The manpower situation is so critical that some companies have felt a need to institute their own training schools. George J. Ball, Inc., of West Chicago, Illinois, initiated the Du Page Horticultural School, Inc. at which a person can receive practical training in either greenhouse production or retail flower shop management.

It is impossible to know the number, but some retail florists have pre-holiday design sessions to enlist and train designers. This serves a dual purpose for it also builds a "pool" of trained help available as business requires.

Private foundations, however few, play a role in the manpower situation. The Mott Foundation of Flint, Michigan, for example, offers short term classes in floral design for those interested.

The Federal government's G.I. Bill and Distributive Education (D.E.) programs were designed to train people for the industry. The D. E. programs are conducted by high schools and colleges and are a state-federal cooperative endeavor under the 1963 Vocational Education Act. It is designed to serve the educational needs of individuals preparing for careers in distribution and/or marketing and those who are trying to

restrain and upgrade themselves in a specialized field. With education and on-the-job experience, D.E. can equip florists and their employees to perform their duties with greater skill and productivity (44).

The Bureau of Apprenticeship and Training, U.S. Department of Labor, Washington, D.C. is working with S.A.F. to develop floriculture skills. The Manpower Development and Training Program is a program of education which combines instruction and on-the-job training. This program prepares persons, including the unemployed, to work in the industry. Successful floriculture programs have been operated in Baltimore, Detroit, South Bend and several other cities in the United States (44).

Federal aid is also available under the Economic Opportunity Act of 1964 for a wide range of activities. The headquarters of the S.A.F. has worked with the Job Corps in Poland, Maine and Excelsior Springs, Missouri in setting up courses of study in Floriculture (44). No doubt more people enter this field due to an interest rather than the necessary training.

Manpower Surveys

Non-industry surveys. There have been several non-related industry manpower surveys conducted by the Federal government, universities, private organizations, companies, and individuals. One such study was conducted by the Department of Labor working with the telephone communications system to determine the relationship new technology will have on its manpower needs,

training and utilization.

The report, Technology and Manpower in the Telephone Industry 1965-75 (18) is illustrative of how an industry composed primarily of relatively few large employers may be studied through the use of information based on Standard Industrial Classifications and data from management. One of the most significant parts of that report is the section dealing with new technology and its impact on employment.

Two other industries in which technology will most likely affect their manpower training and needs are also being surveyed in a similar manner. The report, Technology and Manpower in the Health Service Industry, and Technology and Manpower in Design and Drafting are now being compiled (18).

In November, 1966, the State of Michigan contracted the Battelle Memorial Institute, Columbus, Ohio, to undertake an extensive manpower study. The study was financed jointly by several government departments. The objectives of this study were (31):

> "(a) to develop improved methods for the analysis of characteristics of the labor force (including occupation and industry of employment)
>
> "(b) to provide estimates of Michigan's labor force during the next ten years - which industries will be needing workers, the occupations the workers will have and the educational level which will be required for them to attain, and
>
> "(c) to collect data for educational planning in Michigan."

In early 1967, a Michigan Technical Need Study (30) by several government departments and Ferris State College was completed. The purpose of the study was to determine the present and future needs of technicians and in what areas of occupation or industry they will be needed.

A technician was defined as an employee whose job required basic scientific and mathematical knowledge, or other specialized education. He is usually employed in a job function that requires a level of education between secondary school but less than four years of college. This study did not include any manpower information relating to the floral industry, but was concerned mainly with other more general areas. This study was also designed as a framework for understanding the impact of technical changes in the type of skills that will be demanded by Michigan industry in the 1970's. The changing economy seemed to point the way to what has been termed the "Human Resources Era" or brainpower over machine power. The report concluded that between 1960 and 1980, total employment will increase 1.9 percent per year; population will increase 1.5 percent per year. Many industries and professions will grow faster than the annual employment or population rate of growth.

Industry Surveys

In federal government surveys, florists are often classified as agricultural occupations. This was the case in the Manpower Report of the President, 1967 (17). The Department of Labor was requested to determine the country's manpower requirements, resources, training, and their utilization. The

report provides actual and projected employment by industry divisions for 1965 and 1970.

Employment in flower production, retailing and wholesaling is most likely found under titles such as "Agriculture" and "Services and Miscellaneous". These categories of data are far too general to be of much use to our industry.

General employment information is available through the ten year Census of Agriculture, Horticulture Specialties, 1959 (24).

The U.S. Department of Commerce, Bureau of Census takes a survey of retail and wholesale outlets every five years, 1958 and 1963 (16). This survey includes the number of outlets, number of employees in each job category, number needed, or the training desired. There is also an extensive survey to determine the number of growers in the United States. In 1954, the U.S. Department of Commerce released figures on the value of flowers and flowering plants grown by some "farms" in the United States.

Many smaller state or local studies have been conducted on this manpower subject but seldom in this specific field. Some of the studies are noted below.

The study by Dillon and Cain (19) of non-farm agricultural occupations in Appalachia was designed to determine present and future employment opportunities and to determine the agricultural competencies needed by the workers. The study included some florists, gladiolus growers, and greenhouse operators.

There have been many related studies to determine curriculum needs for fields other than floriculture. A project at Farmindale, New York, is directed at the preparation of a teacher's guide for a two year post secondary ornamental horticulture program. This includes such areas as floriculture, flower shop and greenhouse management (Meaders, D., unpublished data).

Love, (unpublished personal communications) of Pennsylvania State University has developed instructional units in three areas: (a) Nursery Production and Landscape Maintenance, (b) Turf Maintenance and, (c) Poinsettias, Easter Lily, and Bedding Plant Production.

White (46) studied the occupational opportunities and educational needs of ornamental horticultural technicians in Ohio. He stated there were more job openings than qualified horticultural technicians. From 1966 to 1972 he expects a three-fold increase in the number of technical positions open. The employment needs were so great the report recommended sixteen continuing post secondary education programs in Ohio.

Parsons, Byram, and Lindstrom (9) have made a study of the greenhouse grower: an analysis of training needs and career information for instructional planning in Michigan.

The U.S. Office of Education in conjunction with Ohio State University is planning an agriculture industry manpower survey. Since this study probably will not adequately survey the floriculture industry, funds have been requested for a

separate industry survey (3, 7).

Non-industry manpower surveys serve as a method guide in planning surveys. As yet there are no known all industry manpower surveys detailing the type of information needed.

METHODS OF CONDUCTION THE STUDY

Developing the Instrument

The first questionnaire. A committee of six industry and university personnel met October 3, 1966 to specify the objectives of this study and formulate a questionnaire. The committee consisted of Dr. William Carlson, Assistant Professor in Secondary Education; Dr. Don Meaders, Assistant Director of Research and Development in Vocational and Technical Education; Mr. Gordon Anthony of Gordon Anthony's Florist, Flint; Mr. Lloyd Thompson of Arcade Florist, Flint; and Mr. Hal Pumphrey of Barnes Floral of East Lansing, Michigan.

The questionnaire devised was tested by six florists and found to be lacking some specific questions needed. Between January and February, 1967 it was revised three times with the help of Dr. Dan Sturt, Director of the Rural Manpower Center, Michigan State University and Dr. Don Meaders. It was decided to use two questionnaires. The first one to be very brief with general background information.

The second questionnaire. The second questionnaire (Appendix Table B) was developed along with the first one with only slight modifications by Dr. Don Meaders and the author. This second instrument was more detailed and sought information such as: (a) number of employees needed now and

in five and ten years in each job category, (b) employees hours and wage scales, and (c) employee educational requirments.

Developing a Mailing List

A mailing list was compiled from the Michigan Florist Directory, the Florist Transworld Delivery News (F.T.D. News) Membership List, the Florafax Directory, the Red Book, the Society of American Florists Directory, mailing lists from various floral publishers, the John Henry Company and many of Michigan's Cooperative Extension agents. Every name and address was listed and cross-checked. It was apparent from the start that there was no complete up-to-date list of Michigan's growers, wholesalers, and retail florists.

Since many types of wholesalers and growers were categorized by the same identification number, it was impossible to secure any mailing list assistance from the State Employment Securities Commission in Detroit.

The first questionnaire (Appendix Table A). The first questionnaires were sent to 1,200 of the 1,750 establishments on the mailing list. Approximately seventy percent of the State's growers (280), and retailers (900) were selected at random and sent a questionnaire. Since the number of wholesalers were small, questionnaires were mailed to twenty of them. During the first week in June, the questionnaire was sent to those who had not responded and to those whose letters

had been returned due to incorrect addresses. At this time additional names were added to the mailing list and in each case a stamped return envelope was enclosed with the questionnaire. Many Agricultural Cooperative Extension personnel aided the effort by helping distribute questionnaires to growers.

The second questionnaire (Appendix Table B). The second questionnaire was sent in September, 1967, to each of the 306 respondents of the first questionnaire who were classified solely as a grower, a wholesaler or a retailer. Questionnaires were sent to twelve grower establishments, 10 wholesale florists and 284 retail florists. The response was poor. Additional contact other than a mailed questionnaire was needed. Consequently at almost every scheduled florist meeting this survey was explained and a copy given to those in attendance. These meetings were scheduled and attended as follows:

Date	Meeting Place	Number Questionnaires Distributed
Oct. 24	Flint	45
Oct. 25	Saginaw	38
Nov. 1	Detroit	54
Nov. 6	Bay City	18
Nov. 8	Petosky	25
Dec. 2	Detroit	20
Dec. 5	Detroit	15
		215

In November and December, trips were made to Battle Creek, Grand Rapids, Lansing, East Lansing, St. Johns, Jackson, Flint, Ithaca, Alma, and Traverse City. These

trips were made to balance out the respondents by area of the state, and by sales volume. In some instances, appointments were made with management while other interviews were unscheduled. After explaining the purpose of the interview and establishing rapport, the author asked the questions and recorded the responses. The interviews averaged about an hour in duration and were very positive.

Gathering and Analyzing Data

First questionnaire. Of the 1,200 questionnaires mailed, 540 responded and 100 were returned unopened due to incorrect addresses and dissolved firms. The 540 respondents were classified as follows:

Retailers	284
Retailers and Growers	103
Retailers and Wholesalers	101
Growers and Wholesalers	26
Growers	12
Wholesalers	10
Wholesalers and Retailers	4

For the most part, only those respondents involved in one phase of the industry (growing, wholesaling or retailing) were considered when compiling this survey. This distinction eliminated 43.3 percent of the respondents. The returned questionnaires were key punched for statistical analysis and a program was established for the computer. It was the standard frequency program with forty variables - part of the Act 1.01 program (29).

Second Questionnaire. This instrument was distributed

to a total of 536 firms: 306 by mail, 215 through group meetings, and 15 in personal interviews. Possibly because of its length or the financial nature of some questions, the response to the first two methods of distribution was very poor. The total response was broken down into the following table.

Table 2. Distribution and response to the second questionnaire

Number Questionnaires Distributed	Method of Distribution	Total Responses	Percent Response	Number of Respondents by Occupational Group		
				G*	W*	R*
306	Mail	72	23	1	4	13
215	Meetings	34	16	4	0	17
15	Interviews	15	100	1	2	12

*G = Grower; W = Wholesaler; R = Retailer

Sixty-seven questionnaires could not be used as the respondents were involved in more than one area of the business. The questionnaires were divided into four volume categories, and the data was compiled, analyzed and put into table form. The responses were not programmed for the computer because of insufficient numbers for valid analysis.

FINDINGS

In this section the findings of both questionnaires were reported. The lowest number of respondents was from the growers, and the largest number of responses was from retail florists.

Of the 540 respondents of the first questionnaire, sixty-seven percent came from fifteen percent of Michigan's eighty-three counties. Twenty-four percent of the firms responding were located in Wayne County (Detroit). The majority of the respondents were concentrated in counties with large metropolitan centers. One could assume that the Michigan floral industry was concentrated in urban areas.

Flower Growers

It appears that the flower growers surveyed fit the overall industry location pattern. This is indicated in Table 3.

The largest growers are located in the larger cities. In many cases, natural city growth and enlargement brought the cities closer to them; in others it was by choice.

Table 3. Flower Growers: Number of respondents by size of city and annual volume of business

Population of city	Annual Volume of Business				
	Under $50,000	$50,000-99,999	$100,000-249,999	$250,000 & above	Total
50,000-99,999	1	0	4	0	5
100,000-249,999	0	0	0	0	0
250,000 499,999	0	0	0	1	1
Total	1	0	4	1	6

In the future, with high land costs, mass marketing, an excellent highway system, and the ability to use less skilled help, growers may be less concerned about locating in the proximity of large cities.

Employment. The total number of employees in the six firms was forty-two, an average of seven each. The average firm did about $50,000 volume, had one manager or owner, and approximately five grower personnel. Generally only the largest firms had bookkeping help. Most employees in the smaller firms had multiple job responsibilities, but specialization existed in the largest volume establishments as the following table illustrates.

Table 4. Flower Growers: Average number of employees by job classification and annual gross sales

Job Classification	Annual Gross Sales			
	Under $50,000	$50,000-99,999	$100,000-249,999	$250,000-499,999
Management Personnel	2	0	1.25	3
Growing Personnel	2	0	1.75	4
Stock Handlers	1	0	3.9	10
Office Personnel	1	0	.25	2
Accounting Personnel	0	0	.25	1
Delivery Personnel	0	0	.35	4
Maintenance - Firemen	0	0	.50	3
Average	6	0	9	27

In the Under $50,000 volume category, the maximum volume per employee was $8,266. This compared with $27,777 and $18,518 for the next two larger volume categories, respectively. These figures were arrived at by dividing the average number of employees into the maximum volume. This would indicate that the largest gross sales per employee was in the businesses with an annual gross sales of $100,000 to $249,999.

The growers felt unqualified to estimate the number of employees they might need by 1977. Two of the six respondents estimated their additional manpower needs for 1972,

but with only one percent of the growers surveyed the results represented a minimum reliability.

Table 5. Flower Growers: Number of employees needed in 1967, estimated needs for 1972 and projected numbers needed the during next four years, by job classification

Job Classification	Employees Needed		Projected Number Needed During Next 4 years (1968-72)
	1967	1972(est.)	
Management Personnel	0	0	0
Growing Personnel	1	1	100
Stock Handlers	1	1	100
Office Personnel	0	0	0
Delivery Salesmen	1	0	0
Maintenance - Firemen	0	0	0
Total	3	2	200

In 1967, one-half of the respondents needed one employee; two out of every five firms indicated they would need additional help in 1972. These figures represent minimums.

The most important minimum would be 200 employees needed by Michigan growers by 1972. This assumes the surveys sample was representative of the state's flower growers, and that between 1967 and 1972 there would be no decrease in the number of existing employees for any reason. The grower

personnel and the stock handlers were most often mentioned as having been in short supply.

Compensation. In any employment situation, salary was a factor of great, but unmeasured, importance. Questions relating to this particular subject were often not answered or were answered incompletely. Management personnel estimated salaries would continue rising with managements increasing thirty-five percent and growers about twenty percent by 1972. After that time, the respondents called it a guess. It was significant that the salary increases were not equal but rather widened the gap between management, growers and the other personnel.

Since Tables 6, 7, and 8 all concerned financial matters, they were grouped together and viewed as one unit.

According to Table 7, sixty percent of managerial personnel were on a salary basis while about the same percentage of all other personnel were on an hourly basis and none of the respondents received overtime pay.

Table 6. Flower Growers: Weekly and annual wages received and hours worked by various employee groups

Work			Job Classification				
			Management Personnel	Growing Personnel	Stock Handlers	Delivery Salesmen	Maintenance Firemen
Hours per week		Range	40-60	24-60	44-60	44-50	44-48
		Average	53	45	49	47	46
Wages	1967	Range	$6,000-10,000	$5,000-6,500	$3,500-5,000	$4,500-6,500	$5,000
		Average	$9,200	$5,500	$4,250	$5,500	$5,500
	1972 (est.)	Range	$10,000-15,000	$6,000-8,500	-	-	-
		Average	$12,500	$6,750	-	-	-

Table 7. Flower Growers: Average wage rates and methods of compensation

Job Classification	Average Wage Rate		Numbers of Growers Reporting Varied Methods of Compensation		
	Hourly	Weekly	Hourly	Weekly	Overtime
Management Personnel	$3.34	$177	2	4	0
Growing Personnel	2.33	105	4	2	0
Stock Handlers	1.67	82	4	2	0
Delivery Salesmen	2.20	105	0	0	0
Maintenance - Firemen	2.00	96	0	0	0

Table 8. Flower Growers: Number of employees reporting various employee benefits by job classification

Benefits	Job Classifications							
	Management Personnel		Growing Personnel		Stock Handlers		Delivery Personnel	
	Yes	No	Yes	No	Yes	No	Yes	No
5-day Week	2	1	2	1	1	0	3	0
Profit Sharing	2	1	1	2	0	2	0	7
Paid Vacation								
1 week	2	0	2	0	2	0	4	0
2 weeks	0	0	1	0	0	0	4	0
3 weeks	1	0	1	0	0	0	0	0
4 weeks	1	0	0	0	0	0	0	0

Management worked the longest week; with sixty-six percent working a five-day week. Sixty-six percent of the growers worked a five-day forty-five hour week. Most of the wholesale delivery personnel worked a five-day week. About half of the employees received a two week paid vacation and half, one week. Sixteen percent of management took a four week vacation, while another sixteen percent took three weeks. Sixteen percent of the growers took a three week vacation.

Sixty-six percent of the managerial personnel were involved with some profit sharing plan; twice the number of growers that were involved.

Educational Requirements

Some employers prefer college trained personnel in selected positions. As a general rule the more responsibility a person had, the more training or education was required. (Table 9)

Owners generally required a college education of their managerial or grower personnel while only half of the respondents required both to have a college education.

As a possible indication of the growers outlook toward the industry's future, less than thirty-three percent of the respondents are planning an expansion within the next five years. Less than fifty percent of the respondents plan an enlargement by 1977.

Table 9. Flower Growers: Number of employers reporting various educational requirements by job classification

Educational Requirement	Job Classifications			
	Management Personnel	Growing Personnel	Stock Handlers	Wholesale Deliverymen
4-Year College	1	1	0	0
2-Year College	1	1	0	0
Post High School Training	0	1	0	0
High School	2	1	3	5

Floral Wholesalers

Of the state's twenty-one wholesalers, ten responded to the first questionnaire and six to the second one. The respondents ranged in annual volume from $250,000 to over $1,000,000. One-third of the respondents of the second questionnaire were located in cities with a population between 50,000 and 100,000; a third were located in cities with a population between 100,000 and 999,999, and the remaining third was composed of the largest wholesalers in cities with populations over one million. Since about seventy percent of the retail floral business was conducted in urban areas, it was logical for wholesalers to similarly locate.

Employment

The six wholesale respondents employed approximately eight-two people as the following table illustrates.

Table 10. Floral Wholesalers: Number of full-time employees per establishment

Job Classification	Total Number Employed	Average Number per Establishment
Management Personnel	15	2.5
Office Personnel	9	1.5
Accountants	3	.5
Designers	2	.33
Salesmen	22	3.66
Stock Handlers	15	2.5
Delivery Personnel	16.25	2.83
		14

The number of employees per establishment ranged from three to thirty-one and averaged fourteen. Two-thirds of the businesses had ten or more employees. Approximately seventy percent of the wholesalers had no full-time office personnel even though the average number per establishment was one- and one-half. The largest wholesale houses employed four to seven salespeople and averaged three each.

Two wholesalers employed a designer whose chief responsibility was to create permanent arrangements. This is an area relatively untouched by wholesalers until recently.

Some establishments had a fleet of trucks with as many as twelve salesmen selling in every area of Michigan and some of the surrounding states. The salesmen used either sample merchandise or a catalog as their main sales tool.

As the wholesalers volume of sales increased, so did their number of employees. (Table 11)

It appeared that sales volume doubled to $500,000 with relatively few additional employees. When volume doubled to $1,000,000 the number of employees needed also doubled.

The six wholesalers surveyed expect to have openings for thirty people, or five each, within the next five years. Since no industry volume figures were available, it was impossible to knowingly determine a representative sample or accurately project the total manpower needs of Michigan's

Table 11. Floral Wholesalers: Relationship of number of employees to annual gross sales

Annual Gross Sales	Average Number of Employees
$100,000 - $249,999	6.0
$250,000 - 499,999	6.5
$500,000 - 1,000,000	12.0
Over $1,000,000	27.5

wholesale florist establishments either now or in 1972. The fifteen unsurveyed wholesalers ranged in size from very large to small operations just as did the sample group. Even though the sample may not be representative, it would seem to be indicative of the labor needs of this state's wholesalers.

Table 12 lists the sampled group's 1967 and 1972 manpower needs by job classification. Michigan's 1972 labor needs are approximated by projecting the sample group's needs.

In 1972 the greatest need among wholesalers will be for non-technical personnel: wholesale salesmen, stock handlers and sales people. Management personnel will be needed but to a lesser degree. In 1967, wholesalers appeared not to have any serious manpower problems. (Table 13)

Table 12. Floral Wholesalers: Number of employees needed in 1967, estimated needs for 1972 and projected numbers needed by Michigan's 21 wholesalers during the next four years by job classification

Job Classification	Employees Needed		Projected Number Needed During Next 4 years (Est.) (1968-1972)
	1967	1972 (est.)	
Management Personnel	0	4	13
Office Personnel	0	0	0
Accountants	0	2	7
Designers	0	1	3
Stock Handlers	1	8	27
Salesmen	0	6	20
Wholesale Salesmen	0	9	30
Totals	1	30	100

Table 13. Floral Wholesalers: Employees 1967 salary and estimated salary for 1972 by job classification

Job Classification	1967		1972 (est.)	
	Range	Average	Range	Average
Management Personnel	$10,000-15,000	$12,400	-	$14,500
Office Personnel	$5,000-10,000	$7,700	-	$10,000
Accountants	-	$12,000	-	$14,000
Designers	-	$6,000	-	$6,000
Salesmen	$7,000-10,000	$9,000	$10,000-12,000	$11,000
Stock Handlers	$5,000-$7,000	$5,700	$6,000-7,500	$6,850
Wholesale Salesman	$8,000-$12,000	$10,000	-	$10,000
Delivery Personnel	$6,000-7,000	$6,500	$6,000-9,000	$7,800

Compensation

Wages may rise an average of 15.5 percent between 1967 and 1972, or three percent per year, with office personnel commanding the largest raise, almost thirty percent.

Salaries were tied to gross sales of an establishment, as sales increased, so did the wage scale. (Table 14)

Table 14. Floral Wholesalers: Relationship between annual gross sales and average annual wages by job classification

Job Classification	Annual Gross Sales			
	$100,000-249,999	$250,000-499,999	$500,000-999,999	Over $1,000,000
Management Personnel	9,100	10,000	15,000	12,500
Office Personnel	6,500	0	5,000	9,000
Accountants	6,500	0	0	12,000*
Designers	6,000	0	0	0
Stock Handlers	5,600	5,000	5,000	6,500
Salesmen	0	0	10,000	8,500
Wholesale Salesmen	7,500	8,000	12,000	9,000*
Delivery Personnel	6,000	0	0	7,000*

*One respondent

There seemed to be no definite pattern of wages other than a general salary increase as volume increased. Also, as gross sales increased there was a greater difference between the wages of management and labor.

Table 15 gives a more complete picture of the employee work situation: the work week and employee benefits.

Aside from delivery personnel, management worked longer hours than any of the other employee classification. Management was salaried whereas other personnel, with the exception of designers and delivery men, were paid by the hour. The extra hours and responsibilities of management were compensated by a higher salary and extra fringe benefits. Few employees, except office, sales and stock personnel received overtime pay. Sixty-four percent of the employees worked more than a five day week. Half of the office and delivery personnel were on a short week. Eighty-three percent of the workers received a two-week paid vacation, whereas eighty percent of management took a single week vacation. Profit sharing was enjoyed by thirty-two percent of the employees: sixty-five percent of management, and twenty-six percent of the other employees. About one out of six employers distributed a Christmas bonus to everyone. Half of management received paid hospitalization and one-third received paid life insurance. Sixteen percent of the other employees received paid life insurance.

Table 15. **Floral Wholesalers:** Employee work week, methods of compensation and percentage of employers reporting employee benefits by job classification

Job Classifications	Work Week (hours)		Percent										
			Method of Pay			Employee Benefits							
				Hourly			Paid vacation						
	Range	Average	Salary	Only	+overtime	5 day week	1 wk	2 wks	3 wks	Profit sharing	Xmas bonus	Paid hospt.	Paid Life ins.
Management-Personnel	40-50	48.5	80	0	20	25	80	0	20	65	16	50	33
Office Personnel	40-44	42	0	40	60	50	0	100	0	33	16	33	16
Accountants	40-44	42	20	30	50	33	0	100	0	20	16	33	16
Designers	35-50	42.5	50	30	20	33	25	75	0	20	16	33	16
Salesmen	40-45	42.6	20	20	60	33	0	100	0	33	16	33	16
Stock Handlers	40-50	51	0	20	80	33	0	100	0	33	16	33	16
Delivery Personnel	45-50	51	80	0	20	50	0	100	0	20	16	33	16

Educational Requirements

Floral wholesalers were aware of the importance of a college education for a limited number of their staff as indicated by the figures in Table 16.

The only position which required most of the individuals to be college trained was management. Eighty percent of the respondents wanted men with a minimum of two years of college training for that position. Management of wholesale firms estimated that twenty-six percent of their positions required men with a college education.

Expansion Plans

To meet estimated business needs by 1972, the three largest wholesalers, which consisted of fifty percent of the respondents, planned physical enlargments of their operations. By 1977, a third of the respondents plan a second physical enlargement of their facilities, thus indicating a very strong confidence in the future - both theirs and the industries.

Retail Florists

Sixty-nine percent of the forty-two responding retail florists were located in cities with a population over 50,000. The breakdown is shown in Figure 5.

Table 16. Floral Wholesalers: Percent of employers reporting various educational requirements by job classification

Educational Requirements	Job Classifications						
	Management Personnel	Office Personnel	Accts.	Designers	Salesmen	Stock Handlers	Wholesale Salesmen
4-Year College	60		50				
2-Year College	20			33	33		
Post-High School Training		25		33	33		
High School	20	75	50	33	33	100	100

Figure 5. Retail Florists: Distribution of the 42 respondents by city size

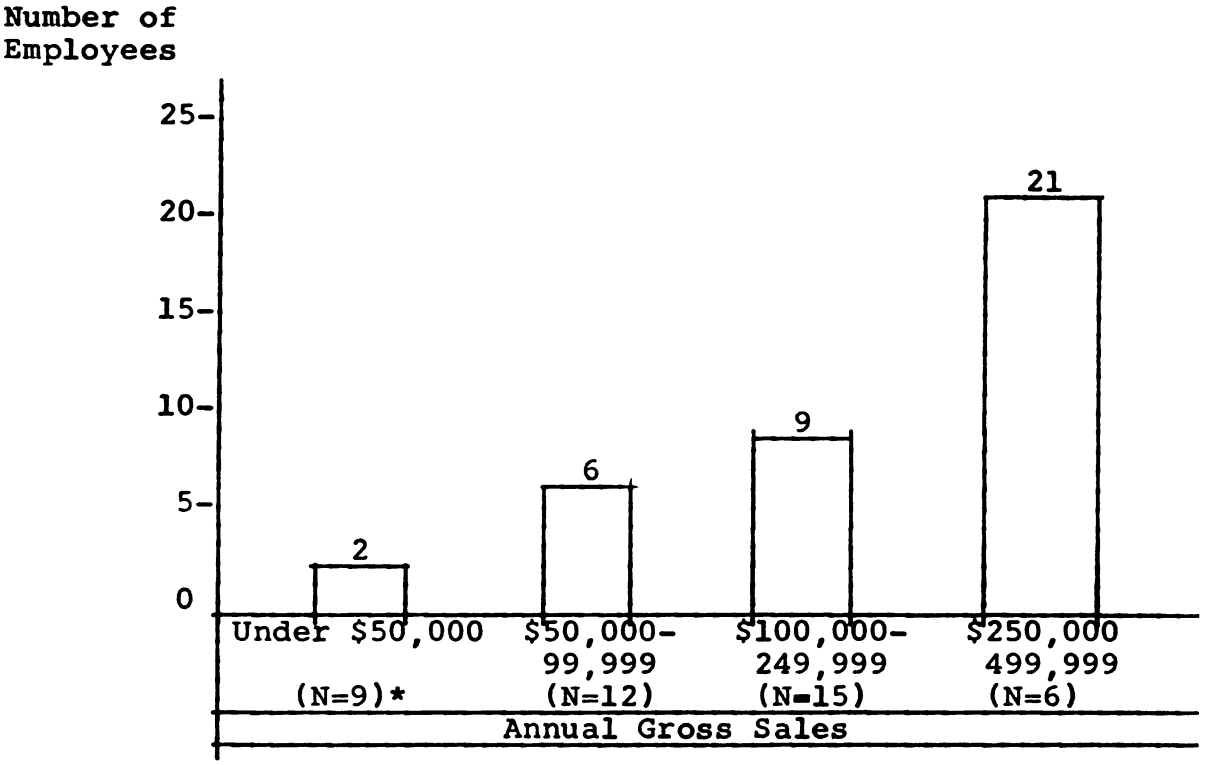
Forty-three percent of the responding shops were located in cities with a population between 100,000 and 500,000. All the shops with gross sales of $250,000 to $499,999 (nine percent) were located in this size town. Forty percent of the national volume was accomplished by this group of large size retail florists.

Table 17 illustrates the distribution of each size shop by the size of the city in which it was located.

Table 17. Retail Florists: Percentage distribution of 42 respondents by city size and annual gross sales

Annual Gross Sales	City Population			
	Under 50,000	50,000-99,999	100,000-249,999	Over 250,000
Under $50,000	75	12.5	12.5	0
$50,000-99,999	45	38	17	0
$100,000-249,999	14	50	35	0
$250,000-499,999	0	0	50	50

Large floral establishments existed only in large population centers. Seventy percent of the florists with gross sales between $50,000 and $250,000 were located in cities with a population over 50,000. Conversely, seventy-five percent of the small florists with an annual gross of less than $50,000 were located in towns with a population of under 50,000.



*N = The number of responding retail florists in the specific size classes

Figure 6. Retail Florists: Average number of full-time employees per establishment by annual gross sales

Employment

The number of employees in a retail shop seemed to be in a direct proportion to its volume. If volume doubled, so did the number of employees. The exception to this was the largest volume shops.

Figure 7 illustrates the average number of employees per shop in 1967 and the projected needs in 1972 by annual gross sales.

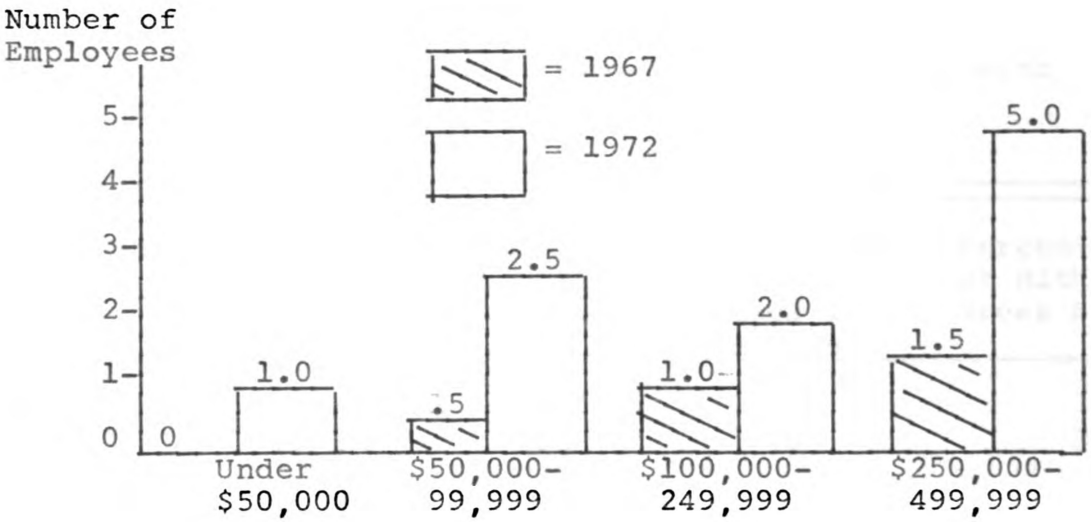


Figure 7. Retail Florists: Average number of employees needed per establishment in 1967, and the estimated needs for 1972 by annual gross sales

In 1967 the small volume shops needed fewer employees than did the medium and large size shops. Shops with a volume under $50,000 either did not need or could not afford additional employees.

To project the number of personnel needs in Michigan's 1,300 retail flower shops in 1967 and 1972 the information in Figure 7 must be used as a base. The following national statistics were also used (Table 18).

Table 18. Retail Florists: Number and percentage with various characteristics

Shop Size	Annual Gross Sales	Number of Michigan Florists	Percentage of Total Shops in Michigan	Percentage of Michigan Gross Sales
Small	Under $50,000	858	66	30
Medium	$50,000-99,999	325	25	30
Large	Over $100,000	117	9	40

Source: 1964 F.T.D., U.S.D.A. Survey

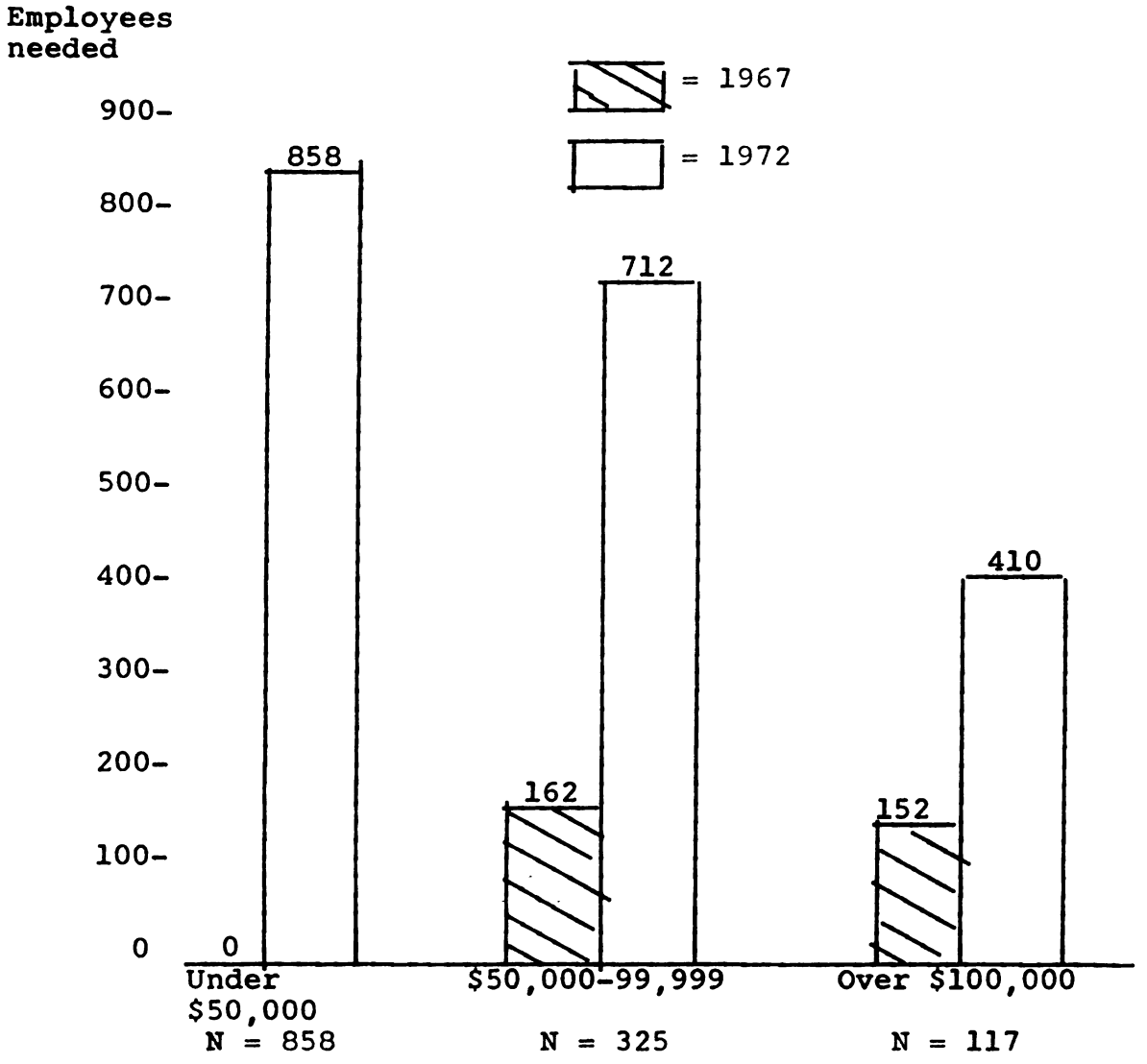


Figure 8. Retail Florists: The projected number of employees needed by Michigan's 1,300 retail florists in 1967 and 1972 by annual gross sales

While only 314 employees were needed in 1967, 1980 additional employees may be needed by retail florists by 1972; one by each of the small florists, 2.5 each by the medium-sized florists and 3.5 each by the large florists.

According to the first questionnaire, there were 969 floral designers employed in the Michigan floral industry; sixty-six percent by retailers, eighteen percent by retailer-growers and seventeen percent by firms that perform all three major functions. Almost four times as many floral designers were employed in strictly retail shops than were employed by any combination. More were located in retail shops than all the other combined. An average of two designers per shop were employed by retailers.

Some categories of workers in the retail shop were more in demand than others. Table 19 classifies the labor needs.

Floral designers were and may continue to be the most needed category of workers. By 1972, an average of over ninety percent of the respondents may need one. Fifty percent of the shops may need a sales person and an overall average of over four percent of each category of worker may be needed each year between 1967 and 1972.

Table 19. Retail Florists: Number of employees needed in 1967, estimated needs for 1972 by job classifications

Job Classifications	Employees Needed 1967	1972 (est.)
Management Personnel	6	5
Designers	11	39
Sales people	5	9
Office Personnel	3	9
Accountants	1	3
Stock Handlers	1	1
Delivery Personnel	1	3

Compensation

The respondents estimated that the salary scale for each category of worker would increase between 1967 and 1972. The following figure is a compilation of management estimates.

Wages may increase an average of four percent per year with salespeople receiving a seven percent raise; management a 5.6 percent raise and designers a 4.4 percent wage increase per year. Management may receive the largest monetary increase: $500.00 a year.

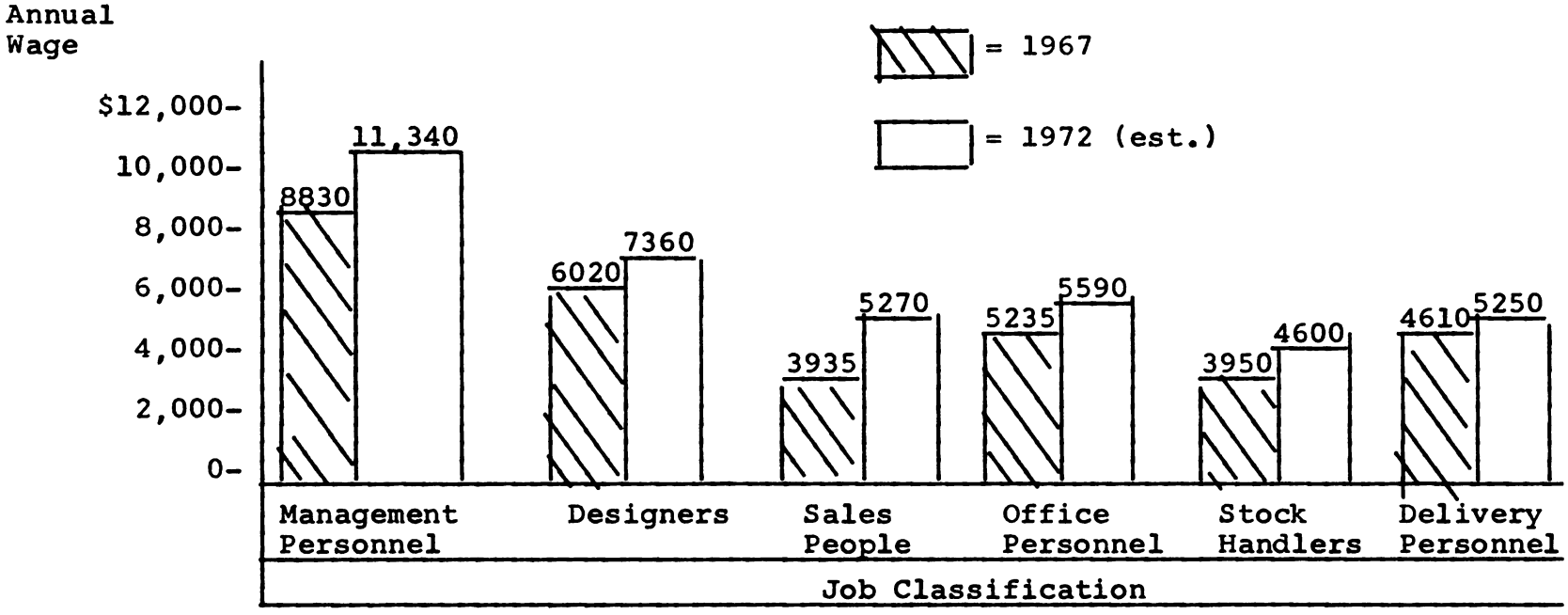


Figure 9. Retail Florists: Employees 1967 average wage and estimated 1972 wage rate by job classification

Salaries vary greatly with the volume of the retail shop. Salaries usually increase as the shop volume increases. (Table 20).

Small shops cannot afford large salaries or a large staff. Consequently there were considerable salary differences between small and medium-sized shops. There was less of an increase in salaries between medium and large shops. The largest salary increase was evident between the large and the very large shops, an increase of 19.1 percent. (Table 21)

In the retail flower shop, management personnel worked four hours each week longer than anyone else. Each worker category in the very large shop had as long or longer work week than similar jobs in a large or medium-sized shop. However, personnel in the small shops worked as many hours as did employees in the very large shops. In small shops the owner or manager worked most every job. There was no job specialization as existed in larger shops. The increased sales volume in the large shops necessitated a longer work week. No doubt some efficiencies were lost with the larger number of employees.

As a general rule, management and about half of the accountants in the retail flower shops were salaried. Other employees were paid by the hour. Management generally did not receive overtime pay but part of each other group did.

Table 20. Retail Florists: Relationship between annual gross sales and average annual wage by job classifications

Job Classification	Annual Gross Sales							
	Under $50,000		$50,000-99,000		$100,000-249,999		$250,000-499,999	
	Range	Average	Range	Average	Range	Average	Range	Average
Management Personnel	$2500-7500	$4650	$6240-15,000	$10,100	$5500-18,000	$10,150	$8000-20,000	$12,450
Designers		*	$3600-6500	$5020	$4000-8300	$6,150	$3600-8500	$8,000
Sales people	$3120-4680	$3630	$3120-4500	$4040	$3120-4500	$4040	$3800-4500	$4250
Office Personnel		*	$3500-6800	$5240	$3000-6500	$4600	$5600-8200	$8060
Stock Handlers		*	*		$3000-3500	$3400	$4160-5850	$4235
Delivery Personnel		*	$4680-5200	$4965	$4160-5850	$4235	$5120-6000	$5350

*No response

Table 21. Retail Florists: The relationship between employees average work week and annual gross sales by job classification

Job Classification	Work Week (hours)		Annual Gross Sales			
	Range	Average	Under $50,000	$50,000 99,999	$100,000 249,999	$250,000 499,999
Management Personnel	40-70	52	54.4	52.5	48	54.5
Designers	30-70	44	46	41	43	47
Sales people	30-50	41.5	0	40	43	43
Office Personnel	30-50	48	43	36	39	43
Accountants	30-55	36	0	0	30	42
Stock Handlers	25-50	41	0	0	40	41
Delivery Personnel	27-56	41	39	38	42	45

Like other industries, the floral industry offered more than a salary to its employees. Fringe benefits other than those listed in Table 22 were retirement, insurance programs, bonus systems, plus several others found almost exclusively in the very large retail shops.

Management had a longer vacation and more profit sharing advantages than other workers. Profit sharing, which at one time was limited to management, was being enjoyed by many other workers. In some establishments, everyone shared in the profits. Table 23 indicated the employee benefits by shop size. This was a further breakdown of Table 22.

Educational Requirements

There was a great diversity of opinion as to the amount of training employers thought their employees should have. The availability of labor very often dictated the choice as did the wage scale.

Employers varied greatly in their desire to have college trained employees. Management usually expected their accountants to be their best trained workers. Twenty-seven percent of the respondents wanted their floral designers to have either a two or four year college education while forty-eight percent believed a high school education was satisfactory. The response to the last question on the

Table 22. Retail Florists: Methods of compensation and percentage of employers reporting employee benefits by job classifications

Job Classification	Percent						
				Employee Benefits			
	Salary Only	Hourly +Overtime		5 day week	Profit Sharing	Paid vacation (wks) Range	Average
Management Personnel	81	7	12	42	40	0-4	2
Designers	13	42	45	22	32	1-4	2
Salespeople	11	51	38	17	21	1-3	2
Office Personnel	32	35	33	40	18	1-4	2
Accountants	46	27	27	46	25	1-3	2
Stock Handlers	16	54	30	45	10	1-3	2
Delivery Personnel	7	57	36	33	25	0-3	2

Table 23. Retail Florists: Percentage of employers reporting various employee benefits by annual gross sales

Job Classification and Annual Gross Sales (In 000's)	5 day Week	Profit Sharing	Weeks of Paid vacation (ave.)
Management Personnel			
0-50	66	25	2.5
50-100	66	50	2.5
100-250	33	30	2.5
250-500	75	40	2.2
Designers			
0-50	0	25	2.5
50-100	0	0	1.7
100-250	42	88	2
250-500	50	40	1.8
Sales people			
0-50	0	33	2.6
50-100	0	0	1.6
100-250	33	0	1.7
250-500	25	50	2
Office Personnel			
0-50	0	33	3
50-100	40	0	2
100-250	32	0	1.7
250-500	25	80	1.8
Delivery Personnel			
0-50	0	0	2.2
50-100	0	0	1.7
100-250	60	0	1.7
250-500	75	60	2

Table 24. Retail Florists: Percentage of employers reporting various educational requirements by job classification

Educational Requirements	Job Classification						
	Management Personnel	Designers	Sales People	Office Personnel	Accountants	Stock Handlers	Delivery Personnel
4 Year College	32	3	0	14	40	0	0
2 Year College	44	24	4	16	36	0	0
Post High School Training	15	25	8	31	14	1	1
High School	8	48	88	39	10	99	99

second questionnaire concerning future expansion was positive as Figure 10 indicates.

Expansion Plans

Retail florists believed their future was excellent and fifty-four percent of them were planning to remodel or expand by 1972. Of this group seventeen percent were planning another expansion within a second five year period. However, as Table 26 indicates, it was mainly the larger florists who were enlarging their operations. The small florists, for the most part, had no desire or plans to physically enlarge their operations. Many were satisfied with the status quo.

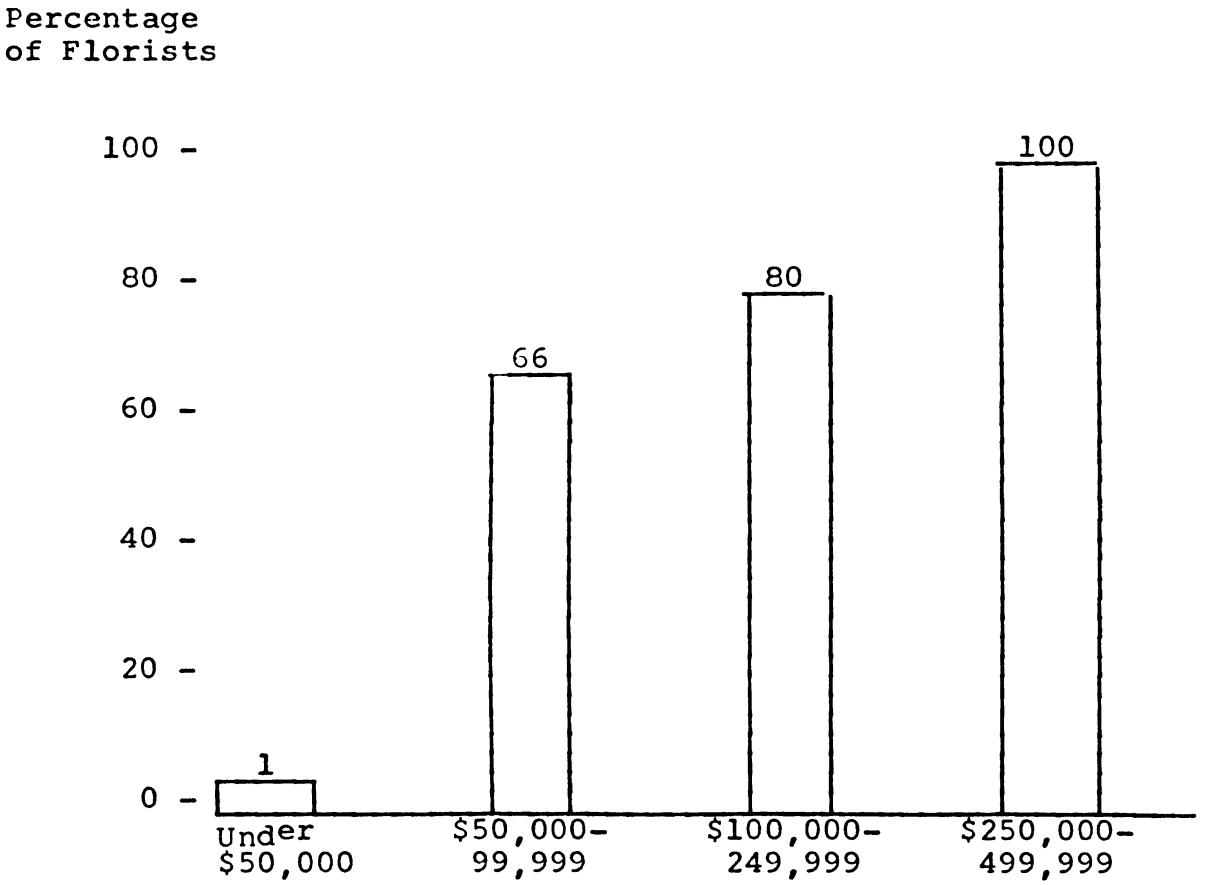


Figure 10. Retail Florists: Percentage of respondents planning to expand or remodel by 1972 by annual gross sales

SUMMARY, CONCLUSIONS AND IMPLICATIONS

There appears to be a great confidence within the total floral industry and barring an unexpected economic recession, the industry should continue to expand and develop. However, manpower shortages in some areas may limit expansion. Increasing in size and complexity it should also become more efficient and businesslike and, hopefully, more professional. By 1972 a total of 2,280 employees may be needed; 200 by the 525 growers, 100 by the 21 wholesalers, and 1,980 by the 1,300 retailers.

Labor will probably become increasingly difficult to obtain. One reason, of course, is greater competition in the labor market. The United States population is increasing at a rate of 1.5 percent per year, Michigan employment is increasing at a rate of 1.9 percent per year and Michigan retail florists employment should increase 4 percent per year. Some personnel will be obtained from educational institutions and others will have to be recruited by the industry. A promotional campaign through high schools and universities should be helpful in urging more young people to enter the profession. One great potential source is the large number of college students who are non-preference and have not decided on a major field of study.

Flower Growers

A minimum of 200 additional flower growers will be needed in Michigan by 1972. Due to installation of labor-saving equipment, the adoption of more efficient growing methods and the use of faster growing, more productive varieties of flowers, less labor will be needed per square foot of glass. However, since the amount of glass is increasing, the number of employees needed by 1972 will also increase.

Growers will become larger, better merchandisers, develop more mass market outlets and perform much of their own wholesaling function.

Salaries should continue rising by 1972 with managements increasing about seven percent and growers about four percent per year. By 1972 managements salary should average $12,500. In addition to increased salary, profit sharing is becoming quite common with management and being introduced to some growers. Sixty-six percent of the managerial personnel were involved with it while only thirty-three percent of the growers had that option. It was frequently used as an incentive to reward and keep a person of excellence.

It appears there is going to be a much greater emphasis on college trained personnel since half of the respondents wanted their managers and growers to be college educated.

The large growers are becoming larger and by 1972 a projected one-third of them will enlarge their operations. By 1977 another forty percent will expand to meet the challenges of the future.

Floral Wholesalers

Wholesalers should become larger, more diversified and more cost conscious. According to personal conversations with the respondents, a limited number of wholesalers will perform some functions normally associated with the retail florist. Some will manufacture, or have manufactured, permanent flower and green arrangements and may experiment in the fresh flower field in high volume seasons.

Lack of trained personnel will become a more serious problem by 1972. An average of five employees per firm will be needed but only twenty-seven percent of these will be "technical". Wholesale salesmen, stock handlers, and salespeople will be the most needed by 1972.

Wages will increase about three percent per year with management earning the largest salary. Other benefits enjoyed by management were profit sharing, paid hospitalization, and paid life insurance.

The necessity of a college education was stressed for managerial personnel but only twenty-six percent of all positions required college training.

Fifty percent of the respondents planned to expand by 1972 and two-thirds of these planned a second expansion by 1977.

Retail Florists

Retail florists, perhaps because of their numbers, were especially troubled with labor shortages and by 1972 about 1,980 more employees may be needed. This would be about a four percent increase per year in the number of personnel needed between 1967 and 1972. The very large shops should be needing five persons each by 1972; the small shops, one each.

Floral designers were and will continue to be in great demand, with over half the shops needing an additional one by 1972. The next most needed worker will be salespeople; half of the retailers will need one by 1972.

Wages will increase an average of four percent per year with management averaging 5.6 percent and designers averaging a 4.4 percent wage increase per year. The largest volume shops pay the best wages; the smaller shops the least. About a third of the designers and forty percent of management personnel received profit sharing. To be competitive in the labor market, wages will have to be increased. Presently industry wages are increasing at just about the same rate as the cost of living is increasing.

Twenty-seven percent of the respondents felt their

designers should have some college training while seventy-six percent thought management should be college trained. With the retail business becoming more complex, college training will become more essential for management personnel. The larger shops prefered college trained personnel, especially designers, while the smaller shops continued to rely on design school personnel.

Workers will become more specialized as the shop size increases. All labor efficiencies known will be utilized.

Large shops will become larger and small shops will increase their sales volume or cease to exist. Economic pressures and fierce competition will force many small retailers out of business.

This survey does not attempt to solve the manpower problems of the floral industry, but attempts to focus on them. It is hoped that the appropriate individuals and organizations can take the necessary corrective action.

APPENDIX TABLE A

INITIAL QUESTIONNAIRE AND COVER LETTER

Dear Sir:

As floral industry people, it is to our advantage to encourage more people to choose floriculture as their career. But, of course, we all need trained people! Just how many trained people do we need and what type of training is necessary?

We do not have all the answers but we do have some questions as part of a state floriculture industry manpower survey to determine the answers. Don Dunbar is working on this project.

We hope you will help yourself and your industry by completing the short, attached questionnaire in detail and returning it in the franked, self-addressed envelope provided.

The results we obtain will be only as accurate as the information received; therefore, please answer the questions to the best of your knowledge. We at Michigan State are proud to be part of the floral industry and are constantly trying to do our part in helping the industry progress.

Thank you for your time and assistance in helping to obtain this needed information.

Sincerely,

William H. Carlson
Extension Specialist
Horticulture, Marketing

WHC:ss
Enclosures

APPENDEX A (Continued)

1. Name of Business_____Tel. _____

2. Address _____
Street Town Zip

3. Location: Not in a Town_____; In a Town_____

4. What is the nature of your business? (Check as many as apply.)

Growing_____ Wholesaling_____ Retailing_____

5. What is the number of employees (full time and part time) you now have? (Please list)

Job Title (Or brief description of the work)	Number Now Employed Full time	Part time
1. Owner-Manager		
2. Greenhouse Grower		
3. Floral Designer		
Others (Please Specify)		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		

APPENDIX TABLE B

SECOND QUESTIONNAIRE AND COVER LETTER

October 25, 1967

Dear

You and other members of the floriculture industry in Michigan have been extremely cooperative in filling out the first of a series of two questionnaires.

This Manpower Survey is a very serious attempt to determine the extent of our labor shortage. How many growers and assistant growers - how many designers - how many managers, etc.? We are also attempting (with your help) to project these needs through the next ten years.

It would also be of great value to know the approximate present wage scale of each job within each business.

All information received is confidential and your name need not appear on the questionnaire if you so desire.

Again this is the last questionnaire on the Manpower Survey and we sincerely hope you will again take fifteen minutes within the next week to fill it out and return it to me.

Thank you so much for your interest in the industry.

Sincerely,

Don Dunbar
109 Horticulture Bldg.
Michigan State University
East Lansing, Mich. 48823

MICHIGAN STATE UNIVERSITY
DEPARTMENT OF HORTICULTURE
EAST LANSING, MICHIGAN

1. Name of Business

2. Address: Street, Town, County, State, Zip

3. Telephone Number

4. Name of person(s) completing the questionnaire and his title

5. Circle the size of town in which you are located:

   a. Not in town--rural area
   b. Under 10,000
   c. 10,000-50,000
   d. 50,000-100,000
   e. 100,000-250,000
   f. 250,000-500,000
   g. 500,000-1,000,000
   h. Over 1,000,000

6. The Business:
   Approximate gross dollar volume of business in 1966 for EACH category listed below.

Growers:	Wholesalers:	Retailing:
____ Under $5,000	____ Under $5,000	____ Under $5,000
____ $5,000 to $10,000	____ $5,000 to $10,000	____ $5,000 to $10,000
____ $10,000 to $20,000	____ $10,000 to $20,000	____ $10,000 to $20,000
____ $20,000 to $50,000	____ $20,000 to $50,000	____ $20,000 to $50,000
____ $50,000 to $100,000	____ $50,000 to $100,000	____ $50,000 to $100,000
____ $100,000 to $250,000	____ $100,000 to $250,000	____ $100,000 to $250,000
____ $250,000 to $500,000	____ $250,000 to $500.000	____ $250,000 to $500,000
____ $500,000 to $1,000,000	____ $500,000 to $1,000,000	____ $500,000 to $1,000,000
____ More than $1,000,000	____ More than $1,000,000	____ More than $1,000,000

7. Total number of people now employed full time (2 ½-time people counted as 1 full time). Consider a person in a particular category if he spends 50% or more of his time with that responsibility.

Growers:	Wholesalers:	Retailers:
____ Management Personnel	____ Management Personnel	____ Management Personnel
____ Office Personnel (other than acct.)	____ Office Personnel (other than acct.)	____ Office Personnel (other than acct.)
____ Accounting	____ Accounting	____ Accounting

7.

	Growers:	Wholesalers:	Retailers:
____	Designers	Designers	Designers
____	Salespeople	Salespeople	Salespeople
____	Stock, Flower Handlers & Assisiting Personnel	Stock, Flower Handlers & Assisting Personnel	Stock, Flower Handlers & Assisting Personnel
____	Growers & Assistant Growers	Growers & Assistant Growers	Growers & Assistant Growers
____	Wholesale Delivery Salesman	Wholesale Delivery Salesman	Wholesale Delivery Salesman
____	Delivery Personnel	Delivery Personnel	Delivery Personnel
____	Janitorial	Janitorial	Janitorial
____	Maintenance	Maintenance	Maintenance
____	Others, Specify	Others, Specify	Others, Specify
____	_____	_____	_____
____	_____	_____	_____
____	_____	_____	_____

8. Number of employees NEEDED in each category:

1967	1972 EST	1977 EST	Growers:	1967	1972 EST	1977 EST	Wholesalers:	1967	1972 EST	1977 EST	Retailers:
____	____	____	Mgm. Personnel	____	____	____	Mgm. Personnel	____	____	____	Mgm. Personnel
____	____	____	Office Personnel	____	____	____	Office Personnel	____	____	____	Office Personnel
____	____	____	Accounting	____	____	____	Accounting	____	____	____	Accounting
____	____	____	Salespeople	____	____	____	Designers	____	____	____	Designers
____	____	____	Stock, Flower Handlers, etc.	____	____	____	Stock, Flower Handling	____	____	____	Stock, Flower H Handlers
____	____	____	Growing Personnel	____	____	____	Salespeople	____	____	____	Salespeople
____	____	____	Wholesale Delivery Salesman	____	____	____	Wholesale Delivery Salesman	____	____	____	Delivery Personnel
____	____	____	Delivery Personnel	____	____	____	Delivery Personnel	____	____	____	Janitorial
____	____	____	Maintenance	____	____	____	Janitorial	____	____	____	Maintenance
			Others, Specify	____	____	____	Maintenance	____	____	____	OOthers, Specify
____	____	____	_____				Others, Specify				
____	____	____	_____	____	____	____	_____	____	____	____	_____
				____	____	____	_____	____	____	____	_____

9. Annual Salary of each category of employee

Grower:			Wholesaler:			Retailer:		
1967	1972	1977		1967	1972	1977	1967	1972	1977	
____	____	____	Mgm. Personnel	____	____	____	____	____	____	Mgm. Personnel
____	____	____	Office Personnel	____	____	____	____	____	____	Office Personnel

9.

Growers: 1967	1972	1977		Wholesalers: 1967	1972	1977		Retailers: 1967	1972	1977	
___	___	___	Accounting	___	___	___	Accounting	___	___	___	Accounting
___	___	___	Salespeople	___	___	___	Designers	___	___	___	Designers
___	___	___	Stock, Flower Handlers, etc.	___	___	___	Stock, Flower Handling	___	___	___	Stock, Flower Handlers
___	___	___	Growing Personnel	___	___	___	Salespeople	___	___	___	Salespeople
___	___	___	Wholesale Delivery Salesman	___	___	___	Wholesale Delivery Salesman	___	___	___	Delivery Personnel
___	___	___	Delivery Personnel	___	___	___	Delivery Personnel	___	___	___	Janitorial
___	___	___	Maintenance	___	___	___	Janitorial	___	___	___	Maintenance
___	___	___	Others, Specify	___	___	___	Maintenance	___	___	___	Others, Specify
___	___	___	_____	___	___	___	Others, Specify	___	___	___	_____
___	___	___	_____	___	___	___	_____	___	___	___	_____
___	___	___	_____	___	___	___	_____	___	___	___	_____

10. What educational background do you require for each category of employee?

	High School	Vocat. School	2 Yr. College	4 Yr. College
Management Personnel	_____	_____	_____	_____
Office Personnel	_____	_____	_____	_____
Accounting	_____	_____	_____	_____
Designers	_____	_____	_____	_____
Salespeople	_____	_____	_____	_____
Stock, Flower Handlers & Assisting Personnel	_____	_____	_____	_____
Growers & Assistant Growers	_____	_____	_____	_____
Wholesale Delivery Salesman	_____	_____	_____	_____
Delivery Personnel	_____	_____	_____	_____
Janitorial	_____	_____	_____	_____
Maintenance	_____	_____	_____	_____
Others, Specify				
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

11. How many hours per week does each category of employees average?

_____ Management Personnel
_____ Office Personnel
_____ Accounting
_____ Designers
_____ Salespeople
_____ Stock, Flower Handlers & Assisting Personnel
_____ Growers & Assistant Growers
_____ Wholesale Delivery Salesman
_____ Delivery Personnel
_____ Janitorial
_____ Maintenance
Others, Specify
_____ _____
_____ _____

12. By category

	Hourly Worker (Yes or No)	Receive time & 1/2 Overtime (Yes or No)
Management Personnel		
Office Personnel		
Accounting		
Designers		
Salespeople		
Stock, Flower Handlers & Assisting Personnel		
Growers & Assistant Growers		
Wholesale Delivery Salesman		
Delivery Personnel		
Janitorial		
Maintenance		
Others, specify		
_____		
_____		

13. By category, what benefits do employees receive?

	5 Day Week (Yes or No)	1,2,3,4, or 5 Week Paid Vacation (List Which)	Paid/Partially Paid Vacation (List P or PP)	Profit Sharing (Yes or No)	Other (Specify)
Management Personnel					
Office Personnel					
Accounting					
Designers					
Salespeople					
Stock, Flower Handlers & Assisting Personnel					
Growers & Assistant Growers					
Wholesale Delivery Salesman					
Delivery Personnel					
Janitorial					
Maintenance					
Others, Specify					
_____					
_____					

14. Do you plan on enlarging your operation in the next -

	5 years	10 years	(answer Yes or No)
Wholesale			
Growing			
Retailing			

APPENDIX TABLE C

SHORT TERM FLORAL DESIGN SCHOOLS (PUBLIC)

ALABAMA

Southeastern School of Floral Design
P.O. Box 2285
Birmingham, Ala.

CALIFORNIA

Abbott's School of Modern Floristry
821 N. Lemon St.
Anaheim, California

California School of Floral Design
2085 Chestnus St.,
San Francisco, California

Elva May Floral School
1500 West Commonwealth
Fullerton, California

Esther's School of Floral Design
7625 S. Vermont Ave.
Los Angeles, California 90044

Penny's School of Floral Designing
3420 W. Magnolia Blvd.
Burbank, California

COLORADO

Cliff Mann School
2011 Glenarm
Denver, Colorado

WASHINGTON, D.C.

Mr. Charles Frick
Charles Frick School of Floral Design
1407 H. Street, N. W.
Washington, D.C.

APPENDIX TABLE C (continued)

FLORIDA

Bay Point School of Floral Design
38 S. E. 8th St.
Miami, Florida

Rose S. Cobb Floral Design School
1234 McDuff Ave.
Jacksonville, 5 Florida

Miss Pansy Flaum
Pansy Flaum's School of Floral Designing
69th St. off the Ocean
Miami Beach, Florida 33131

Miami School of Floral Design
3219 S. S. 8th St.
Miami, Florida 33135

South Florida School of Floral Design
620 S. Dixie Highway
Lantana, Florida

Witt's School of Floral Design
112 W. Flagler St.
Miami, Florida

GEORGIA

Brooks School of Floral Design
Atlanta, Ga.

ILLINOIS

American Floral Art School
539 South Wabash Ave.
Chicago 5, Illinois

DuPage Horticultural School, Inc.
P.O. Box 342
West Chicago 5, Illinois 60185

LOUISIANA

New Orleans School of Floral Designing
8129 Maple St.
New Orleans, Louisiana

APPENDIX TABLE C (continued)

MASSACHUSETTS

Mr. Carl Rittner
Rittner's School of Floral Design
345 Marlborough St.
Boston, Mass.

Henry J. Simmons School
31-B Central St.
Wellesley, Mass.

MICHIGAN

Chuck Bannow Floral Design School
6244 Second Ave.
Detroit, Michigan
(Manpower Div. Trng. Act for the Det.
Bd. of Ed.)

Belen's School of Floral Design
626 W. Kalamazoo
Lansing, Michigan

De Petis Florist School
262 E. Montcalm
Detroit, Michigan 48201

MINNESOTA

Wagner's Decorating School
St. Paul, Minnesota

NEW JERSEY

Newark School for the Deaf
West Trenton, N. J.

NEW YORK

Dean Trout School of Floristry, Inc.
Penn-Garden Hotel
7th Ave., & 31st St.
New York, N.Y. 10001

New York School of Floral Designing
160-9th Ave.
New York, N. Y. 10011

APPENDIX TABLE C (continued)

NORTH CAROLINA

McFarland School of Floristry
Louisburg, N.C.

OHIO

Bill Hixon's School of Floral Design
14125 Detroit Ave.
Lakewood, Ohio 44107

Myles School of Flower Design
North Main and Clay
Bowling Green, Ohio

Shepard's School of Professional Floral Design
205 Martin Ave.
Pemberville, Ohio

OREGON

Hutchinson School of Floral Design
6316 N. E. 26th Ave.
Portland, Oregon 97211

PENNSYLVANIA

Albrecht's School of Floral Design
701 Montgomery Ave.
Marbeth, Pa. (to start in 1968)

Jay Wilson's School of Floral Design
458 Wyoming Ave.
Kingston, Pa.

TEXAS

Benz School of Floral Design
535 Lovett Blvd.
Houston 6, Texas

Dallas School of Floral Design
3800 San Jacinto at Washington Ave.
Dallas, Texas

APPENDIX TABLE C (continued)

Seymour Carron's School of Floral Design
4341 Lovers Lane
Dallas, Texas

WISCONSIN

Florist Design School
617 N. Second St.
Milwaukee, Wisconsin

APPENDIX TABLE D

PARTIAL LIST OF VOCATIONAL SCHOOLS

STATE	LOCATION	NAME OF INSTITUTION
Arkansas	Morrilton	Petit Jean Vocational Technical School
California	Los Angeles	Lifetime Career School
Canada	Hamilton	Briarwood Vocational Collegiate
	Ontario	Bendale School
	Quebec	St. Hyacinthe School
Connecticut	Starrs	Ratcliff Hicks School of Agriculture (U. of Conn.)
Delaware	Newark	S. Hollock duPont School of Applied Agricultural Science
Florida	Daytona Beach	Mary Karl Vocational Division Daytona Beach Junior College
Illinois	West Chicago	DuPage Horticultural School
Massachusetts	Hathorne	Essex Agricultural and Technical Institute
	Walpole	Norfolk County Agricultural School
Michigan	Akron	Public School
	Bad Axe	" "
	Bath	" "
	Caledonia	" "
	Capac	" "

APPENDIX TABLE D (continued)

	Clinton	Public School
	Detroit	" "
	Durand	" "
	East China	" "
	Goodrich	" "
	Grand Blanc	" "
	Greenville	" "
	Harbor Beach	" "
	Hartford	" "
	Hartland	" "
	Holland	" "
	Holton	" "
	Jackson	Jackson Parkside High School
	Lapeer	Public School
	Marlette	" "
	Marshall	" "
	Mayville	" "
	Montegue	" "
	Mt. Pleasant	" "
	Niles	" "
	Okemos	" "
	Olivet	" "
	Owosso	" "
	Rockford	" "

APPENDIX TABLE D (continued)

	Romeo	Public School
	Saline	" "
	Sandusky	" "
	Sebewaing	" "
	Sparta	" "
	Tecumseh	" "
	Union	" "
	West Ottawa	" "
New Hampshire	Durham	Thompson School of Applied Science
New Jersey	Penns. Grove	Salem County Technical Institute
North Carolina	Hickory	Catawba Valley Technical
	Winston-Salem	Forsyth Technical Institute
North Dakota	Bottineau	North Dakota School of Forestry
Ohio	Cleveland	Cleveland Technical Institute
	Shelby	Pioneer Joint Vocational School
Pennsylvania	Doylestown	Delaware Valley Agricultural College
Texas	Waco	James Connally Technical Institute
Washington	Bellevue	Bellevue Public Schools
	Lakewood Center	Clover Park Vocational Technical Institute
Wisconsin	Kenosha	Kenosha Technical School

APPENDIX TABLE E

COLLEGES AND UNIVERSITIES OFFERING COURSES IN HORTICULTURE
(One, Two and Four year)

STATE	LOCATION	NAME OF INSTITUTUION
Alabama	Auburn	Auburn University
Arizona	Yuma	Arizona Western College
California	Bakersfield	Bakersfield College
	Costa Mesa	Orange Coast College
	Fresno	Fresno State College
	Fullerton	Fullerton Junior College
	Los Angeles	University of California
	Modesto	Modesto Junior College
	Oakland	Oakland Community College
	Reedley	Reedley College
	San Bernardino	San Bernardino Valley College
	San Francisco	City College of San Francisco
	San Luis Obispo	California State Polytechnical
	San Mateo	College of San Mateo
	Stockton	San Joaquin Delta College
	Ventura	Ventura College
	Visalia	College of the Sequoias
	Walnut	Mt. San Antonio College
	Woodland Hills	Los Angeles Pierce College

APPENDIX TABLE E (continued)

Colorado	Fort Collins	Colorado State University
Florida	Bartow	Polk Junior College
	Daytona Beach	Daytona Beach Junior College
	Fort Lauderdale	Broward County Junior College
	Gainsville	University of Florida
Georgia	Tifton	Abraham Baldwin Agricultural College
Idaho	Boise	Boise Junior College
Illinois	Chicago	Chicago City Junior College Woodrow Wilson Branch
	Danville	Danville Junior College
	Urbana	University of Illinois
Iowa	Cedar Rapids	Cedar Rapids Community College
Kansas	Manhattan	Kansas State University
Kentucky	Lexington	University of Kentucky
	Morehead	Morehead State University
	Richmond	Eastern Kentucky University
Maryland	College Park	University of Maryland
Massachusetts	Amherst	Stockbridge School of Agriculture University of Massachusetts
Michigan	Dowagiac	Southwestern Michigan College

APPENDIX TABLE E (continued)

	Flint	Flint Community College
	East Lansing	Michigan State University
	Union Lake	Oakland Community College
Minnesota	Crookston	University of Minnesota Technical Institute
Mississippi	Lorman	Alcorn College
	Raymond	Hinds County Junior College
	Senatobia	Northwest Mississippi Junior College
New Hampshire	Durham	University of New Hampshire
Nebraska	Curtis	University of Nebraska School of Technical Agri.
New Mexico	University Park	New Mexico State University
New York	Alfred	Agricultural and Technical College
	Cobleskill	Agricultural and Technical College
	Delhi	Agricultural and Technical College
	Farmindale	Agricultural and Technical College
	Ithaca	Cornell University
	Morrisville	Agricultural and Technical College
	Syracuse	New York State University of Agricultural and Technology

APPENDIX TABLE E (continued)

North Carolina	Greensboro	N.C. College of Agricultural and Technology
	Kingston	Lenoir County Community College
	Winston-Salem	Forsyth Technical Institute
Ohio	Columbus	Ohio State University
Oklahoma	Tishomingo	Murray State Agricultural College
	Miami	Northeastern Oklahoma A & M College
		Oklahoma State University
Oregon	Corvallis	Oregon State University
Pennsylvania	Ambler	Temple University
	Doylestown	Delaware Valley College of science and Agriculture
	University Park	Pennsylvania State University
Tennessee	Columbia	Columbia State Community College
Texas		Texas A & M University
Virginia	Blacksburg	Virginia Polytechnical Institute
	Petersburg	Virginia State College
Washington	Auburn	Green River Community College
	Longview	Lower Columbia College
	Seattle	Seattle Community College
	Spokane	Spokane Community College
	Wenatchee	Wenatchee Valley College
Wisconsin	Kenosha	Kenosha Technical Institute

LITERATURE CITED

1. Anonymous. 1967. Aiming for a Million. Kansas State Florists Association.

2. _____. 1967. The Customers Don't Say It Enough. Business Week. April 1. pp. 98-102.

3. _____. 1968. Education Committee may ask for a Separate Floriculture Manpower Survey. American Florist, June-July, p. 3.

4. _____. 1967. Should Florists Diversify? Florist. August 7. Vol. 1, No. 3.

5. Baccala, Frank J. 1968. Florist Ad Budgets For Many Florists A Big Joke. Vol. 1, No. 8, January. 21.

6. Bodette, John. 1966. Getting Ready for Tomorrow's Business Today. Florist Review. July 14.

7. _____. 1968. F.T.D. Marketing Program Featured. Florist. Vol. 2, No. 2, July. p. 78.

8. _____. 1968. Supermarket Flower Sales Increasing. Florist. Vol. 2, No. 3, August. p. 14.

9. Byram, Harold, Richard Lindstrom, Warren Parsons. 1966. The Greenhouse Grower: Analysis of Training Needs and Career Information and Instructional Planning. Michigan State University.

10. California State Florists Association. 1967. Your Career as a Florist. California State Polytechnic College.

11. Corfield, James L. 1968. A Study of Selected Financial Information and Management Practices of Michigan Retail Florists. A Master's Thesis. Michigan State University.

12. U. S. Department of Agriculture. 1953. Horticulture Specialists. Marketing Research Report No. 33. Washington, D.C.

13. _____. 1968. Flowers and Foliage Plant Production and Sales, 1966 and 1967. Crop Reporting Board. Washington, D.C.

14. _____. 1968. San Francisco Cut Flower Report. Vol. LIV. No. 27. March 4.

15. Department of Agriculture and Markets. 1968. Cut Flower Market Reporting. Market Information Service.

16. U. S. Department of Commerce. 1963. Census of Business Retail Trade Statistics. Bureau of Census. Washington, D.C.

17. U. S. Department of Labor. 1967. Manpower Report of the President - a Report on Manpower Requirements, Resources and Utilization and Training. Washington, D.C.

18. _____. 1966. Technology and Manpower in the Telephone Industry, 1965-1975. Manpower Research Bulletin No. 13, November. Washington, D.C.

19. Dillion, Roy D. and Paul S. Cain. 1966. Employment Opportunities and Usable Agricultural Skills in Non-Farm Agricultural Occupations in Appalachia. Morehead State University.

20. Fossum, Truman. 1967. Could Be a Big Bucket. Florist. Vol. 1, No. 6, November 6. p. 22.

21. _____. 1967. Illness: Up (To You). Florist Vol. 1, No. 3, August 8.

22. Havas, Nick. 1964. Profile of the Retail Florist Industry. U.S. Department of Agriculture, Marketing Research Report No. 741. Washington, D.C.

23. _____. 1965. Graphic View of the Retail Florist Industry. Marketing and Management Practices. U.S. Department of Agriculture. Marketing Research Report. No. 788., Washington, D.C.

24. Hurley, Ray. 1959. Horticulture Specialities. Census of Agriculture. Special Report. Vol. V, Part 1. Washington, D.C.

25. Kaufman, Jack. 1967. Advertising Need is Pinpointed. Flower News. March 11. p. 3-4.

26. Kiplinger, D. C. 1964. Retail Florist. Small Business Bibliography. Small Business Administration No. 74, July.

27. Krone, Paul R. 1966. Floriculture in Michigan project 80: The Nursery Industry and Floriculture. Research Report No. 43. Agriculture Experiment Station. Michigan State University.

28. Laurie, Alex., and D.C. Kiplinger. 1958. Commercial Flower Forcing. Fifth Edition. Blakiston Co., Philadelphia.

29. Lesgold, Alan M. 1967. Revised, 1968. Technical Report No. 14. Available in the Computer Institute for Social Science Research Center, 512 Computer Center, Michigan State University.

30. Michigan Department of Commerce. 1967. Michigan Technical Needs Study - A summary report.

31. Michigan Department of Education. 1966. A Brief of the Michigan Manpower Study.

32. Mitchell, Herb. 1958. On Keeping Records. Florist Review. CXXll. June 5.

33. Morfield, Kenneth. 1968. Retaining Your Sanity and Your Financial Status with Present Labor Problems. Michigan Florist. No. 448. June 7.

34. National Cash Register Co. 1963. Expenses in Retail Businesses. Dayton.

35. Pennsylvania Flower Growers Bulletin No. 6. 1954. National Trends in Floriculture and Their Effect on Pennsylvania. October 1.

36. Pennsylvania Horticulture Council. Careers and Opportunities in the Science, Business and Profession of Horticulture. Pennsylvania State University.

37. Powell, Jules V. and Victor G. Edman. 1965. Marketing Flowers: Credit and Financial Problems of Retail and Wholesale Florists in Four Iowa Cities. U.S. Department of Agriculture Marketing Research Report No. 704. April.

38. Rossmiller, George E. 1968. Time and a Half For Overtime. Michigan Florist. No. 447, May 5.

39. Schuster, Reed F. 1965. The Miracle of the Flowers. Schuster Publishing Co., Cincinnati.

40. Tolle, L. J., Jr., and Earl H. New. 1959. Seasonal Variations in Sales of Retail Florist Merchandise. Quarterly Bulletin. Vol. 42, No. 1, August, pp. 114-125.

41. Voigt, Alvi, O. 1966. Flower Marketing Information. Cooperative Extension Service. Pennsylvania State University. June 30.

42. _____. 1965. Happenings and Insights Among Retail Florists in Pennsylvania. Pennsylvania State University. July.

43. Walker, Darrell E. 1967, Flower Growers have a Role in Training Future Horticulturists. Pennsylvania State University. University Park.

44. _____. 1966. Major in Horticulture. Pennsylvania State University. University Park.

45. Walker, John H. 1967. A Look Ahead in Floriculture Education. Executive Report. Society of American Florists.

46. White, Robert H. 1967. The Education of Ornamental Technicians in Ohio. Thesis, Ph.D. Ohio State University.

47. Youth Education Program of the Society of American Florists and How to Implement it. 1957. It's Your Move, Mr. Florist. Washington, D.C.

General References

1. Brown, Sidney. 1966. The Demand for Flowers by Wire. Market Research Report No. 762. U.S. Department of Agriculture, Agric. Econ. Res. Serv., Economic Research Service. Washington, D.C. June.

2. Florists Transworld Delivery Association. 1966. 1964-1965 Profit and Expense Survey.

3. Institute for Research. 1967. Careers Research Monograph. Careers. Flower Shop Ownership, Management, and Careers in Florist Shops. Research No. 63. Chicago.

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