

A STUDY OF EMPLOYMENT OPPORTUNITIES AND CHARACTERISTICS
DESIRED FOR GAINFUL EMPLOYMENT IN ORNAMENTAL
HORTICULTURAL OCCUPATIONS IN OKLAHOMA

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CHAPTER I

INTRODUCTION

American agriculture is undergoing a period of dynamic change--the revolution of science, mechanics and heavy capital investment. The improved agricultural picture with the efficiency of near total machinery production from planting to harvest is as fabulous as the conquest of outer space. It is a well known truth today that fewer farmers are required to produce food and fiber for the nation.

The consequences of this complex chain of scientific discoveries and technological advances is a large decrease in the number of farm workers needed. Hence, the paramount problem is the plight of those released and those interested in a future career in agriculture.

One of the possible areas of interest and attraction could be ornamental horticulture occupations. Ornamental horticulture is becoming an important segment of Oklahoma agriculture. This importance is attributed to the population movement to suburban areas, population increase and the increased amount of leisure time available to most families. The production of ornamental horticulture crops has probably been influenced less by the machine age than other phases of agricultural production.

Statement of the Problem

Since the opportunities to own a large scale farming acreage continues to decrease, the opportunity may exist for those interested in the business of concentrated farming under greenhouse conditions and raising nursery stock on limited acreages. Many students of vocational agriculture might enter into ornamental horticulture occupations if an accumulation of guidance materials about the future needs and trends of the industry were available. The questions important to this study, concerning the various levels of employment, are the following:

1. What will be the trend of employment?
2. What is the normal beginning and highest wage potential?
3. What is the desired educational level?
4. What is the preference of residential background?
5. Would experience be required to enter into various levels of employment?
6. Are there any limitations or restrictions imposed by labor unions, labor laws, licensing or certification and others?
7. What sources are utilized for employees to acquire technical short courses or training required to advance in the job?

Purpose of the Study

Several studies have been made concerning the actual training needed and the desired characteristics in the area of ornamental horticulture occupations. No specific information, based upon the opinions of managers, regarding the general characteristics desired to enter at various levels is available in Oklahoma.

The purpose of this study is to determine what characteristics are desired for gainful employment, the employment trends and the status of the normal salary schedule in Oklahoma. The information reported herein should add in some measure to broaden the guidance knowledge of vocational agriculture teachers and others who may find it useful.

Scope of the Study

This study includes selected greenhouse and nursery business firms throughout Oklahoma. Therefore, the information obtained in this study may be applicable to the entire state.

Selection was accomplished by taking a random sample of 346 greenhouse and nursery businesses which were licensed to operate by the State Board of Agriculture. The random sample consisted of 112 business firms or 32 per cent of the total. No delineation was made as to size of business, number of employees, or location.

Greenhouse and nursery businesses were studied under one grouping since many operate under one management.

Definition of Terms

Urban: All the population residing in the urban-fringe areas and unincorporated places of 2,500 or more.¹⁶

Farm and Rural-Nonfarm: The rural population is subdivided into the rural farm, which comprises all rural residents living on farms, and the rural-nonfarm population, which comprises the remaining rural population.¹⁶

Professional: Occupations that predominately require a high degree of mental activity by the worker and are concerned with theoretical or practical aspects of complex fields of human endeavor. Such occupations require for the proper performance of the work either extensive and comprehensive academic study or experience of such scope and character as to provide an equivalent background, or a combination of such education and experience.¹⁴

Managerial and Official Occupations: Occupations that are involved primarily with responsible policy making, planning, supervising, coordinating or guiding the work activity of others.¹⁴

Clerical: Occupations concerned with the preparation, transcribing, transferring, systematizing or preserving of written communication and records in offices, shops, and other places of work where such functions are performed.¹⁴

Sales: Occupations concerned with the sale of commodities, investments, real estate, and services, and occupations that are very closely identified with sales transactions, even though they do not involve actual participation in such transactions.¹⁴

Skilled: Includes craft and manual occupations that require predominately a thorough and comprehensive knowledge of processes involved in the work, the exercise of considerable independent judgment, usually a high degree of manual dexterity, and, in some instances, extensive responsibility for valuable products and equipment. Workers in these occupations usually become qualified by serving apprenticeships or extensive training periods.¹⁴

Semi-Skilled: Occupations that are characterized by one, or a combination of parts, of the following requirements: The exercise of manipulative ability of a high order, but limited to a fairly well defined work routine; major reliance, not so much upon the worker's judgment or dexterity, but upon vigilance and alertness, in situations in which lapses in performance would cause extensive damage to products or equipment; and the exercise of independent judgments limited either by (a) application over a relatively narrow task situation or (b) having important decisions made by others. These occupations may require the performance of part of a craft or skilled occupation, but usually to a relatively limited extent.¹⁴

Technical: Persons having the qualifications necessary for work which involves the capacity to acquire and apply systematized knowledge in scientific study, research, and technical information to all phases of production. Advises others on technical matters concerning plant growth, care and development.

Supervisory: Supervises a group of workers. Determines procedures of work. Issues written and verbal orders or instructions. Maintains harmony among workers. Adjusts errors and complaints. May perform essentially the same duties as other workers, as a regularly assigned duty, or assist subordinates in performing only the more difficult and complicated duties. May keep time reports and other personnel records of quantity and quality of work performed, and may employ, train, and discharge workers.³

Ornamental Horticulturist: Conducts experiments and investigations on methods of improvement in quality and production of ornamental plants, such as flowering bulbs, herbaceous annuals and perennials, woody flower-bearing shrubs and trees, cacti, aquatic plants, vines, shrubs and trees: Seeks such results as improved color or shape, increase in number of blooms, resistance to disease and adaptability to conditions of shipping and storage. May be more specifically known as FLORICULTURIST, specialist in flower culture; ARBORICULTURIST, specialist in the culture, artistic planting, and trimming of trees and shrubs.³

The foregoing levels of employment and primary duties may not be represented in many ornamental horticultural businesses in such clearly defined terms. Many managers of small business, as well as other employees, perform at many levels of employment. Larger business organizations usually have more clearly defined job responsibilities where employees perform in one specific area.

Limitations of the Study

Several limitations may be present on an opinion gathering study. The major limitations tend to be realized as follows:

1. Uncertainty of the future may cause employment trends to be considerably over or under the expressed number.
2. The location of businesses could have some influence on the type of residential background which is preferred.
3. Size of business may influence the categorization of various job titles into different levels of employment.

Procedure of Securing Information

The following procedure was used to secure information for this study:

1. A list was obtained of greenhouse and nursery business firms licensed to operate by the State

Board of Agriculture in Oklahoma.

2. A random sample totaling 32 per cent was drawn from 346 businesses. A total of 112 businesses were drawn for the sample.
3. A letter was sent to the local Vocational Agriculture teacher requesting an interview appointment be arranged with the manager of the selected business. A stamped, self-addressed post card was enclosed for return confirmation of the interview date and time. When a Vocational Agriculture Teacher was not in the location of the business, the same procedure was used in contacting the County Agricultural Extension Agent. Arrangements were made by the interviewers when a Vocational Agriculture teacher or a County Agricultural Agent was not available.
4. Another business was randomly selected from the list when an original selection was out of business.
5. A personal interview with the manager was made after confirming an appointment. The next highest responsible employee was interviewed when managers were absent.
6. Only those employees needing agricultural competencies were considered in this study.
7. An interview form containing the different areas under study was used to reflect the opinions of the manager.

CHAPTER II

REVIEW OF LITERATURE

A limited amount of information is available with direct application to this study. However, some studies proved helpful in terms of general relationships.

Phipps and Cook¹² in discussing problem areas which should be considered in farming and related occupations listed the determining of occupations needing training in agriculture and understanding major qualifications for entering each type of employment as important for guidance information.

In 1951, Byram and Nelson² were encouraging much more research in related occupations, particularly on the opportunities available. They stated that:

We need to know much more about opportunities in occupations related to farming before we can present reliable and valid information to pupils and be in a position to counsel them wisely.

Richardson¹³ found through a study in determination of training needs for selected farm related occupations some important information relative to this study. His study was based on a four county area in Oklahoma. It clearly indicated that nursery production would need many more qualified workers in the near future. Four years of training in vocational agriculture was considered important by 71 per cent of the

nurseries. Most felt additional training in horticulture was needed in order to work in their type of business. A farm background was considered almost important in nursery production while the average total rating revealed salesmanship highly important and bookkeeping was rated as almost important.

A California¹⁵ study showed a need for higher education to succeed in the nursery business is recognized by nurserymen. Over half indicated a four year college degree was needed by the supervisor-manager of a modern nursery. Another one-fourth indicated that a degree in ornamental horticulture from a junior college should be a prerequisite for supervisors. High school graduation was adequate for up to 50 per cent of skilled employees. A minimum of high school graduation was recommended for all employees other than laborers.

Salaries reported in the California study revealed that skilled workers start between \$225 and \$299 per month, with a top of \$450 to \$524 per month in some companies. Sales people, supervisors and managers started somewhat higher and also had a higher ultimate salary in most companies. Almost one-third of the managers earned over \$600 per month. The study commented that nursery operators will have to raise salaries at all levels to keep competent employees and to attract individuals of the caliber they say they want.

In the area of education to advance, many nurserymen in California indicated that evening adult courses were valuable for themselves and their workers. Many had participated in evening classes at local junior colleges.

A survey of certain aspects of the retail florist business in Oklahoma, which would be a phase of ornamental horticulture, by Irving and Payne⁹ disclosed the gradual upgrading of wage levels of trained personnel might serve to aid the industry and reduce employee turnover, since wage differences between trained employees and extra help utilized during peak production periods or holidays in many cases was very slight. The average hourly wage paid for extra help was \$1.02. Also, a large majority of the participating florists indicated they kept their own books.

This may account for the small number of employment opportunities in clerical levels of employment.

Hoover⁷ reports the starting place for most workers in the greenhouse and nursery businesses is as a laborer or helper. Gaining experience on a part-time basis while in high school can pave the way for future employment. Also, after graduation from high school, a short course at an agriculture college or a correspondence course along with some practical experience is helpful for advancement. Opportunities for advancement depend upon abilities, interest in the work and willingness to accept responsibility. Farm work or experience in greenhouse and nursery work was considered a good background for these occupations.

Byram¹ says the kind of experiential background needed is not just any kind of farm background, but experience basic to the occupation.

A study of occupational requirements in business and industry in Ohio⁶ reported that:

Personal characteristics desired in employees include honesty, initiative, ambition, cooperation, neatness and cleanliness, dependability, willingness to work, ability to work with others, common sense, responsibility, desire to work for what they get, and good moral character.

Many of these same personal characteristics were desired in prospective employees by managers of ornamental horticultural business establishments in Oklahoma.

Horticulture presents great opportunities to women and has been one of the fields of agriculture most frequently chosen by them according to a Horticultural Careers bulletin.⁸

Matthews¹¹ reports that interested and capable students have excellent opportunities for work experiences in nursery work, landscaping, home maintenance and related agriculture businesses in California.

Fick and Wotowiec⁴, teachers in Vocational Agriculture in Cleveland, Ohio, report a close relationship with respect to industry needs for employees and their required skills and abilities. They have found the field of horticulture too broad to develop into a three-year program of study which will provide the technical background needed for employment.

Griffin⁵ found in a study of agricultural workers needed in Missouri, a large majority of the jobs needed a farm background and a high school education was considered sufficient. Considerable differences existed among industries as to the

proportion of workers needing agricultural backgrounds. Seventy-nine per cent needed an agricultural background in plant products and services.

Jergenson and Davis¹⁰ report neither insurance nor union regulations were found to be impediments to a work experience program for students in California.

Venn¹⁷ reveals in a very interesting book some recommendations on the need for occupational guidance and counseling. He states that:

Freedom to choose one's occupation in a technological society is conditioned by the individual's understanding of the educational requirements demanded by various occupations and the relationship between those requirements and one's interests, abilities and aptitudes. The changing nature of work means that most young people and adults have too limited a knowledge of occupational opportunities. The development of understanding of one's future occupational role begins at the intermediate grade levels, and it is at that level that the interaction between education and occupation should be presented to the pupil. Occupational guidance and counseling must become a responsibility of elementary, secondary, and higher education.

In summary, it seems quite evident that continuous education either on the job or through schooling or a combination of both in all phases of ornamental horticulture production and services will be a requirement for those desiring to advance into more favorable positions. In reviewing results from research within the industry, it appears that some satisfactory arrangements should be made to pay higher wages or salaries to worthy employees as it becomes possible. Also, it appears that good employment

opportunities will always be available to those who exhibit desired characteristics and proper work habits. A farm background would prove quite beneficial in most cases. However, the place of original residence would not be a limiting factor for individuals with the interest and desire to learn.

CHAPTER III

PRESENTATION AND ANALYSIS OF DATA

This study attempts to show trends in employment, salary schedules, and the general characteristics desired for gainful employment in ornamental horticulture occupations. Managers of 112 businesses were interviewed to secure the information. Managers of randomly selected businesses were considered to be in the best position to provide the necessary information to complete this study.

Data in Table I reveal the least employment changes are likely to occur in clerical and professional ranks. Conversely, skilled and semi-skilled levels show the largest employment potential in the next five years. Many jobs held at higher levels of employment are attained by starting in the skilled or semi-skilled areas and working up in the business. This would account, in part, for the high rate of employment opportunities in the skilled and semi-skilled levels of employment. Since the data in Table I is representative of only 32 per cent of the nursery and greenhouse businesses in Oklahoma, it may be assumed that each level of employment could logically be multiplied by three to indicate the total employment opportunities for the industry in the next five years. Hence, the total expected to replace

present workers and to be hired in addition to present workers for all levels of employment is 796. Three times this amount shows 2,388 employment opportunities for employees needing agricultural competencies within the next five years in ornamental horticultural occupations. Most managers estimated the number of employees needed to replace or in addition to present workers on the assumption that our country would not experience depression or severe inflation during the next five years. Employment opportunities for females were very low in all levels of employment needing agricultural competencies.

Table II reveals highest average wages are paid to professional levels of employment and the lowest wage is paid to semi-skilled employees. Supervisory positions for part-time employment are paid substantially higher than other part-time employee levels. No part-time wages were indicated for professional, technical and clerical levels of employment. It is interesting to note that in sales a greater increase can be made from beginning salary to high salary than in supervisory levels.

Table III reveals the minimum and maximum age at which one could feasibly expect to enter the various levels of employment. Also, it indicates a preference as to whether experience would or would not be required for employment at the specific level indicated. Managers could normally expect to be hired at the oldest age and at the same time rank first in needing experience to enter the job.

TABLE I

ESTIMATED NUMBER OF EMPLOYMENT OPPORTUNITIES IN THE NEXT FIVE YEARS FOR
ORNAMENTAL HORTICULTURAL OCCUPATIONS IN OKLAHOMA

Level of Employment	Number Presently Employed			Addition Number Expected to be Employed in Next Five Years					
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Professional	2	2	0	0	0	0	1	1	0
Technical	15	14	1	3	3	0	5	5	0
Managerial	139	117	22	13	11	2	27	23	4
Supervisory	50	50	0	34	34	0	22	22	0
Sales	45	34	11	23	19	4	15	12	3
Clerical	4	3	1	0	0	0	0	0	0
Skilled	192	171	21	150	147	3	110	105	5
Semi-Skilled	<u>316</u>	<u>299</u>	<u>17</u>	<u>205</u>	<u>202</u>	<u>3</u>	<u>188</u>	<u>188</u>	<u>0</u>
Total	763	690	73	428	416	12	368	356	12

TABLE II

AVERAGE SALARY SCHEDULES FOR ORNAMENTAL HORTICULTURAL OCCUPATIONS IN OKLAHOMA

<u>Level of Employment</u>	<u>Average Monthly Salary Full-Time Employee</u>		<u>Average Hourly Wage Part-Time Employee</u>		
	<u>Beginning</u>	<u>Highest</u>	<u>Av. Weeks Paid</u>	<u>Beginning</u>	<u>Highest</u>
Professional	600.00	800.00	--	--	--
Technical	345.33	464.33	--	--	--
Managerial	393.75	536.90	17.3	1.40	2.06
Supervisory	299.18	368.06	26	1.87	1.87
Sales	286.00	403.60	19	1.00	1.50
Clerical	293.33	380.00	--	--	--
Skilled	285.51	386.01	17.8	1.16	1.48
Semi-Skilled	195.28	251.73	16.9	1.04	1.28

Workers at semi-skilled levels of employment would most likely be accepted at an average of 19 years of age. At this point, the importance of finishing a high school education should be emphasized, since most individuals are approaching the desired employable age at the time of their graduation. The widest range of acceptable age was determined as from 21.9 to 49.4 for technical levels of employment. The skilled level of employment was rated second in acceptable total age range with 26.8 years, and was followed closely by managerial, sales, and semi-skilled in order of narrowing acceptable age range.

Most managers expressed concern because of the lack of available training establishments which offer programs that would be helpful to their business.

The levels of employment requiring the least amount of experience to enter the job were determined as being at the professional and semi-skilled levels. Most managers expressed the opinion that professionals would be performing in a capacity demanding a large amount of knowledge best acquired through schooling at the higher level. A more limited knowledge is needed by semi-skilled workers to perform their job responsibilities.

An analysis of data in Table IV indicates the level of education desirable for the various levels of employment. Individuals with less than a high school education enjoy very sparse opportunities for employment in ornamental horticultural occupations. Twenty per cent of the managers

interviewed who anticipated employing workers at the semi-skilled level indicated that less than a high school education would be sufficient. None of the respondents indicated employment of workers with less than a high school education in professional, technical, supervisory, clerical or skilled areas. Only one manager indicated that training of less than high school graduation would be desirable for managerial levels of employment. Respondents indicated that they felt a number might find work in sales even though they were not high school graduates.

A high school graduate was deemed desirable for employment in clerical areas, while 70 to 75 per cent of present employers stated a high school graduate is desired for supervisory, sales and semi-skilled levels of employment.

Technical, supervisory and skilled levels of employment proved to be the areas where a post high school technical education had the highest significance in terms of desirability.

Some college education without the degree, was considered important by four of the nine respondents anticipating employment of workers at the technical level. In the same manner, over 20 per cent indicated some college education may be desirable for successful performance upon initial employment at managerial, sales and skilled job levels. Five and one-half per cent also indicated some college education desirable for semi-skilled employment. The desire for employment of persons with some college education in the semi-skilled jobs was perhaps a result of their experience

TABLE III

AGE AND EXPERIENCE DESIRED FOR INITIAL EMPLOYMENT IN
ORNAMENTAL HORTICULTURAL OCCUPATIONS IN OKLAHOMA

	<u>Average Age for Initial Employment</u>		<u>Whether Experience Would Be Required for Employment</u>	
	<u>Minimum</u>	<u>Maximum</u>	<u>Yes</u>	<u>No</u>
Professional	30.0	50.0	0	1
Technical	21.9	49.4	7	2
Managerial	24.4	50.8	97	11
Supervisory	24.0	45.0	16	0
Sales	21.2	46.7	8	9
Clerical	20.6	43.3	1	2
Skilled	22.0	48.8	48	20
Semi-Skilled	19.0	43.6	4	51

with college students working at these levels during the summer and in part-time situations.

College graduation was most desired for prospective employees at the professional level, while 36 per cent of the managers anticipating such employment expressed an opinion that completion of a college education would be desirable for those entering managerial positions. A college education was desired only to a limited extent for technical and skilled levels of employment and was not thought necessary for employees at supervisory, sales, clerical or semi-skilled levels.

Managers expressed the opinion that, in their judgment, establishment of area vocational schools providing appropriate and useful training at the local level would be of great assistance to the industry.

In analyzing data presented in Table V, a farm background proved to be the most important factor to be considered at all levels of employment, except in professional, where no preference was expressed. It is interesting to note that all managers indicated an urban background would perhaps be less desirable than a farm or rural-nonfarm background. In most instances, managers either desired employees with a farm background or had no preference on the type of residential background for the respective levels of employment.

TABLE IV

EDUCATIONAL LEVEL DESIRED FOR INITIAL EMPLOYMENT IN
ORNAMENTAL HORTICULTURAL OCCUPATIONS IN OKLAHOMA

<u>Level of Employment</u>	<u>Less Than High School</u>	<u>High School Graduate</u>	<u>Post High School Technical Education</u>	<u>Some College No Degree</u>	<u>College Degree</u>
Professional	0	0	0	0	1
Technical	0	1	3	4	1
Managerial	1	29	14	25	39
Supervisory	0	12	4	0	0
Sales	1	12	0	4	0
Clerical	0	3	0	0	0
Skilled	0	35	14	14	5
Semi-Skilled	<u>11</u>	<u>40</u>	<u>1</u>	<u>3</u>	<u>0</u>
Total	13	132	36	50	46

TABLE V

PREFERENCE OF RESIDENTIAL BACKGROUND DESIRED FOR
ORNAMENTAL HORTICULTURAL OCCUPATIONS IN OKLAHOMA

<u>Level of Employment</u>	<u>Farm</u>	<u>Rural Nonfarm</u>	<u>Urban</u>	<u>No Preference</u>
Professional	0	0	0	1
Technical	5	1	0	3
Managerial	53	7	0	48
Supervisory	15	0	0	1
Sales	12	0	0	5
Clerical	2	0	0	1
Skilled	44	1	0	23
Semi-Skilled	34	0	0	21

Table VI reveals no restrictions are imposed by labor unions, labor laws, or others on all levels of employment. Licensing affected managerial and skilled levels because a few managers considered obtaining certain licenses with the State Board of Agriculture would be a limitation. The license indicated as a limiting factor were mainly for the business rather than for the job position. Two managers indicated city ordinances restricting advertising as a limitation mainly for the business.

Table VII shows the resources drawn upon to provide education needed to advance within the level of employment or to the next higher level. Public schools were considered to be the least used for the needed short courses or technical training. The low use of public schools was attributed to the lack of programs proving useful to workers in ornamental horticultural occupations. No other sources were utilized besides the business or industry, on-the-job training, a public school or an agricultural college. Training programs from the business or industry, on-the-job training and an agricultural college were used most often for each level of employment.

In analyzing the data presented in Table VIII, a sizable projected number of employees will be needed in the next five years with a high school education. A significant number will be needed with some college and post high school technical levels of education. Many managers indicated they

TABLE VI

LIMITATIONS IMPOSED ON LEVELS OF EMPLOYMENT IN ORNAMENTAL
HORTICULTURAL OCCUPATIONS IN OKLAHOMA

<u>Level of Employment</u>	<u>None</u>	<u>Labor Union Restrictions</u>	<u>Labor Law Restrictions</u>	<u>Licensing or Certification</u>	<u>Other</u>
Professional	1	0	0	0	0
Technical	9	0	0	0	0
Managerial	92	0	0	16	0
Supervisory	16	0	0	0	0
Sales	17	0	0	0	0
Clerical	3	0	0	0	0
Skilled	66	0	0	2	0
Semi-Skilled	55	0	0	0	0

TABLE VII

SOURCES OF TECHNICAL TRAINING OR SHORT COURSES UTILIZED IN
ORNAMENTAL HORTICULTURAL OCCUPATIONS IN OKLAHOMA

<u>Level of Employment</u>	<u>Business or Industry</u>	<u>On-The-Job Training</u>	<u>Public School</u>	<u>Agricultural College</u>	<u>Other</u>
Professional	1	1	0	1	0
Technical	5	6	1	7	0
Managerial	46	64	4	66	0
Supervisory	11	15	4	12	0
Sales	6	14	2	6	0
Clerical	1	3	1	1	0
Skilled	32	62	10	34	0
Semi-Skilled	13	45	12	18	0

TABLE VIII

TOTAL PROJECTED EMPLOYMENT OPPORTUNITIES FOR AGRICULTURAL WORKERS IN THE NEXT FIVE YEARS
IN ORNAMENTAL HORTICULTURAL OCCUPATIONS IN OKLAHOMA BY DESIRED LEVEL OF EDUCATION

<u>Level of Employment</u>	<u>Total</u>	<u>Less Than High School</u>	<u>High School Graduate</u>	<u>Post High School Technical Education</u>	<u>Some College No Degree</u>	<u>College Degree</u>
Professional	3	0	0	0	0	3
Technical	24	0	3	8	10	3
Managerial	120	1	32	16	28	43
Supervisory	168	0	126	42	0	0
Sales	114	6	81	0	27	0
Clerical	0	0	0	0	0	0
Skilled	780	0	401	161	161	57
Semi-Skilled	<u>1,179</u>	<u>236</u>	<u>857</u>	<u>21</u>	<u>65</u>	<u>0</u>
Total	2,388	243	1,500	248	291	106

did not know where they could secure the needed employees in the next five years with sufficient levels of technical training. A large majority of individuals with less than a high school education will be utilized for semi-skilled levels of employment. It was interesting to note the number that will be needed with a college education. It appears doubtful this need can be adequately fulfilled with the present rate of persons graduating with degrees in horticulture from Oklahoma colleges.

A total of 644 employees will be needed with above a high school education in the next five years. Several managers expressed the opinion that employment of persons with some college education in unrelated fields might be desirable because of the limited availability of potential employees possessing appropriate horticultural training.

CHAPTER IV

SUMMARY AND CONCLUSIONS

The main purposes were to determine what characteristics are desired for gainful employment, the employment opportunities and the status of the normal salary schedules in ornamental horticultural occupations in Oklahoma. A total of 112 managers of greenhouse and nursery businesses were personally interviewed to obtain the needed information.

Employment opportunities appear to be fairly abundant within the next five years, particularly at skilled and semi-skilled levels. The large number of opportunities indicated at skilled and semi-skilled levels of employment could be attributed to anticipated expansion in the size and volume of business throughout Oklahoma. Potential employment opportunities for women were very low in all levels of employment. Most managers estimated the employment opportunities within their business on the assumption that depression or severe inflation would not occur in the next five years.

It was noted that many jobs held at higher levels of employment are attained by starting in the semi-skilled or skilled areas and working up in the business. An estimated total of 2,388 employment opportunities will be available for employees needing agricultural competencies within the

next five years in ornamental horticulture occupations. This estimate could be considerably over or under actual employment opportunities which may prevail in the period.

It was found highest wages are paid to professional levels of employment and the lowest wages are paid to semi-skilled employees. Managers of the businesses, which were visited, realized the need for better salaries in order to compete with other industries for high quality personnel.

It was interesting to find the normal average age desired and if experience would or would not be required for employment. Most managers expressed that age, many times, is not a limiting factor as long as the person is in good health and has the knowledge to properly perform job responsibilities. Normally, managers could expect to be hired at the oldest age and at the same time rank first in needing experience to enter the job. Semi-skilled workers were the lowest paid group. Also, employers expressed an opinion that a minimum of 19 years of age would be desired for semi-skilled workers. Thus, the importance of finishing a high school education should be of major interest since most individuals are approaching the desired age at the time of graduation. High school dropouts place themselves in an almost unemployable status for occupations in ornamental horticulture.

The desired educational attainment varied for each level of employment. Individuals with less than a high school education have very limited opportunities for employment in

ornamental horticultural occupations. No person with less than a high school education would be desired for employment in professional, technical, supervisory, clerical or skilled levels. A high school graduate was considered necessary for employment in clerical jobs. A post high school technical education and some college education without a degree were desired most in technical, supervisory and skilled levels of employment. Many managers expressed concern regarding the few persons available for technical levels of education, other than college students. Establishment of area vocational schools, offering appropriate courses, might aid in alleviating this situation. A college graduate was desired to a limited extent for technical and skilled levels of employment. A college education was not considered necessary for supervisory, sales, clerical or semi-skilled levels of employment. Many managers expressed the judgment that a college education would be desired for managerial positions.

A farm background or no preference of residential background was desired by most managers for all levels of employment.

No restrictions were imposed by labor unions, labor laws, licensing or any other limitation for the various levels of employment. A few managers considered obtaining certain licenses from the State Board of Agriculture for the business as a limitation for managerial and skilled positions.

The sources used to provide education needed to advance within the level of employment or to the next higher level indicates that public schools are generally utilized the least. This was attributed to the lack of programs proving useful to workers in ornamental horticultural occupations. Therefore, it may be concluded that ornamental horticulture has not been given emphasis in local school programs. Again, perhaps establishment of area vocational schools could provide appropriate and useful training at the local level.

Training programs from the business or industry, on-the-job training and an agricultural college were used most often for each level of employment. A large majority of managers indicated short courses or other training offered by agricultural colleges were not locally available, so it would seem reasonable to assume that their employees do not participate in college sponsored training programs mainly because of time and travel limitations. Many managers expressed the need for adequate training programs other than from the sources now available and those investigated in this study.

A projected total need for 644 employees having above a high school education is indicated as likely to occur in ornamental horticultural occupations during the next five years. Many managers expressed concern regarding the possibility that potential employees with the desired training would not be available.

Conclusions

It can be concluded from data presented in this study that employment will be relatively active in the next five years for all levels of employment, except clerical, in ornamental horticultural occupations in Oklahoma.

It appears evident that those who possess farm backgrounds and skills in horticultural work will be in the best position to take advantage of employment opportunities.

Salary levels tend to be commensurate with skills and abilities which are most beneficial to the business.

It is evident that individuals below the age of twenty will have limited success in finding jobs in higher levels of employment.

This study shows a high school education, with additional technical training, would be most advantageous for potential employees.

It appears the needs in employment will be greater than the number of persons available with the required educational backgrounds in the next five years.

From the many comments made by business managers while this study was being conducted, it seems logical that appropriate training programs, possibly through area vocational schools, should be organized to help supply more and better qualified people for jobs that will be available in ornamental horticulture.

Recommendations

It is recommended, due to the information from this study, that more research be conducted to gather managers opinions on the different types of training programs needed for upgrading present skills and teaching new skills to present and prospective employees. This would help in designing training programs which may be available upon the establishment of area vocational education schools in Oklahoma.

The information from this study certainly leaves little doubt regarding the importance to potential employees of obtaining at least a high school education. Some college, post high school technical education or their equivalents will provide even greater assistance to persons desiring entry in or advancement to higher levels of employment. Experience on a part-time basis while in high school is unquestionably an excellent way to assure better employment opportunities. Therefore, vocational agriculture teachers and agricultural extension agents should do all that is possible to help provide job experience for students interested in ornamental horticulture.

The following basic assumption is considered as being evidenced throughout the study: The limitations for employment are imposed upon individuals largely by the individuals themselves because of such factors as, indifference to the job, failure to work for desirable relationships with the employer and a tendency to ignore or failure to recognize the need for continuing education.

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APPENDIX

APPENDIX A

Agricultural Education Department
Oklahoma State University
Stillwater, Oklahoma

Mr.
Vocational Agricultural Instructor

Dear Mr.

The Agricultural Education Department and the State Department of Vocational Education is conducting a study to determine training and educational needs in "off-farm" agricultural occupations.

The following businesses in your community were chosen to participate in this study. Will you please contact them for us and make an appointment for an interview during the times indicated. The interview time should take about an hour. Would you try to schedule two or three for each half day.

Dates:

Businesses:

We invite you to be with us on at least one interview, if possible. Please return the enclosed card as soon as possible.

Sincerely,

RLB

Roy L. Butler
Graduate Assistant

Enclosure

APPENDIX B

Interviewer _____

Date of Interview _____

EMPLOYMENT OPPORTUNITIES AND NEEDED COMPETENCIES IN AGRICULTURAL OCCUPATIONS OTHER THAN FARMING

FORM II

Type of Agricultural Business _____

I. Identification of Business or Service, Level of Employment and Job Title

A. Name of business or service _____

Address _____ County _____

B. Level of employment from Form I, Page 2 _____

C. Job title from Form I, Page 2 _____

II. Employees in This Job Title

A.	Employment Status	Number of Persons		Additional Number Expected To Be Employed in Next Five Years			
		Presently Employed		To Replace Present Workers		In Addition To Present Workers	
		Male	Female	Male	Female	Male	Female
	Full-time	_____	_____	_____	_____	_____	_____
	Part-time	_____	_____	_____	_____	_____	_____
B.	Employment Status	Average Weeks Paid Per Year		Beginning Wage or Salary		Highest Wage or Salary	
		Year		Per Hour	Per Week	Per Hour	Per Week
	Full-time	_____	_____	_____	_____	_____	_____
	Part-time	_____	_____	_____	_____	_____	_____

C. Activities and duties of persons with this job title

IV. Characteristics desired in those who enter this job title.

A. Age: Minimum _____ Maximum _____

B. Educational level (Check one only)

- _____ 1. Less than high school graduation
- _____ 2. High school graduation
- _____ 3. Post high school technical education
- _____ 4. Some college education but less than a baccalaureate degree
- _____ 5. College baccalaureate degree

C. Residential background

- _____ 1. Farm background
- _____ 2. Rural, non-farm background
- _____ 3. Urban background
- _____ 4. No preference

D. Experience required to enter this job title: Yes _____ No _____

V. Limitations on entering this job title.

- A. Labor union restrictions
- B. Labor law restrictions
- C. Licensing or certification
- D. Other (specify)

VI. Education required to advance in this job title.

A. Technical short course or training provided by:

- _____ 1. Your business or the industry as a whole
- _____ 2. On-the-job training
- _____ 3. A public school
- _____ 4. An agricultural college

B. Other types of education required _____

VITA

Roy Lynn Butler

Candidate for the Degree of
Master of Science

Report: A STUDY OF EMPLOYMENT OPPORTUNITIES AND CHARACTERISTICS
DESIRED FOR GAINFUL EMPLOYMENT IN ORNAMENTAL
HORTICULTURAL OCCUPATIONS IN OKLAHOMA

Major Field: Agricultural Education

Biographical:

Personal Data: Born four and one-half miles south of
Mooreland, Oklahoma, February 6, 1937, the second
of five sons to Everett and Ethel (Ramey) Butler.

Education: Attended grade school at Curtis Public
Grade School, Curtis, Oklahoma; graduated from
Mooreland High School in May 1955; attended
Panhandle A&M College, Goodwell, Oklahoma from
September 1955 to May 1957; completed require-
ments for the Bachelor of Science Degree from
Oklahoma State University, with a major in
Agricultural Education, in January 1960;
completed requirements for the Master of
Science Degree in May 1965.

Professional Experience: Served in the United States
Army as Lieutenant from July 1960 to December
1963.

Name: Roy Lynn Butler

Date of Degree: May 23, 1965

Institution: Oklahoma State University Location: Stillwater, Oklahoma

Title of Study: A STUDY OF EMPLOYMENT OPPORTUNITIES AND CHARACTERISTICS
DESIRED FOR GAINFUL EMPLOYMENT IN ORNAMENTAL HORTICULTURAL
OCCUPATIONS IN OKLAHOMA

Pages in Study: 35

Candidate for Degree of Master of Science

Major Field: Agricultural Education

Scope and Method of Study: Personal interviews were conducted with managers of 112 randomly selected greenhouse and nursery business establishments throughout Oklahoma to determine probable employment opportunities in the next five years and the characteristics desired of potential employees needing agricultural competencies at various levels of employment.

Findings and Conclusions: Opportunities appear fairly abundant for the various levels of employment in ornamental horticultural businesses in Oklahoma. The greatest opportunities appear to be at the skilled and semi-skilled levels. Managers responding recognized the need for increasing wages at various levels in order to compete with other industries for high quality personnel. Age was not recognized as a limiting factor for employment if good health and adequate knowledge was possessed by potential employees. High school graduation was most often cited as the desired minimum level of educational attainment. Some college and post high school technical education were recognized as desirable for positions at a number of levels. A college graduate was desired in most professional and managerial positions. Employees with either a farm background or no preference of residential background with a part-time experience in all ornamental horticultural business were desired in most cases. It appears that few, if any, restrictions are imposed by labor unions or labor laws. Minor restrictions may be imposed concurrent to obtaining license for the business operation. Ornamental horticultural businesses use their own training programs or training offered by the industry in most cases. Offerings by an agricultural college are used to advance on the job or to secure a related position. Many managers placed great emphasis on the need for more training programs within reasonable proximity of their business. A projected total of 644 employees, qualified with above a high school education, will be needed in ornamental horticultural businesses in the next five years. Many managers expressed concern regarding the possibility that potential employees with the desired training would not be available.

It appears that Vocational Agricultural teachers and County Agricultural Agents need to stress certain training programs in ornamental horticulture and provide counseling and encouragement for interested students. It seems evident that some type of training programs need to be offered at the local level to provide the education which managers feel would be of help to the industry.

ADVISER'S APPROVAL

Robert L. Price