

AN ABSTRACT OF THE THESIS OF

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Technological advances have revolutionized the field of agriculture. Today, farms are larger and more mechanized. Jobs that were once performed on the farm are now performed more efficiently in off-farm locations. Agricultural production and off-farm agricultural industries in our nation employ approximately 38 percent of the American labor force. There are more jobs and careers in agriculture today in off-farm locations than there are on the farm.

The purpose of this study is to survey the agricultural industry in Clatsop County to discover the extent of the agricultural occupations. The following points are considered pertinent in the study:

1. The identification of those firms that have employees needing agricultural competencies.
2. The determination of the educational competencies needed for entry and satisfactory performance in the agricultural occupations.

3. Determination of the continuing educational needs of those employed in these agricultural occupations and how these needs should be met.
4. The determination of the future employment opportunities in these agricultural occupations.

Information for this study was obtained through personal interviews with persons qualified to provide the desired information about the occupations and the employees.

The main sources of Clatsop County's income are forestry and forest industries, fisheries, agriculture, shipping and recreation. A survey of the occupations shows that there are a large number of firms besides productive agriculture that need employees with agricultural backgrounds. There are opportunities for both men and women. The minimum qualification for entering these occupations in most cases is a high school education. An agricultural background does increase ones chances of being employed in these occupations. Most employers are willing to provide on-the-job training, if employees have the basic background knowledge for the training.

The author concluded from this study that there is a need for high school training in vocational agriculture in Clatsop County. The program should be broad enough to include students who plan to enter off-farm agricultural occupations. Girls interested in

entering agricultural occupations should be allowed to enroll in the classes. Each instructor of vocational agriculture should be familiar with the opportunities in the field of agriculture in order to plan an effective course of study for his own local area.

AGRICULTURAL OCCUPATIONS IN
CLATSOP COUNTY

by

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AGRICULTURAL OCCUPATIONS IN CLATSOP COUNTY

Chapter I

INTRODUCTION

Agriculture as we have known it has changed. No longer does it describe only the production of food and fiber, but also includes off-farm agricultural occupations. Technological advances in agricultural production have caused shifts in jobs formerly conducted on the farm to those performed in off-farm locations. Today's farmer must concentrate on production. He can no longer afford to process and distribute his products. This can be done more efficiently by others. Also, the farmer's demands for supplies and equipment have grown. To meet these demands, many people are employed in manufacturing and in getting these supplies to the farmer.

Our farms are becoming larger and more mechanized. This creates a situation in which fewer people are needed in productive agriculture. However, more people are needed to supply and service farmers, and to process and distribute the commodities they produce.

Today, "agriculture provides more jobs and careers in the city than on the farm" (8, p. 1). It encompasses a broad field of work, and a wide range of occupations. Not only does it deal with jobs in producing, processing, distributing, and marketing of food and fiber, but, as stated by Shontz, is "involved in business,

industry, education, research, specialized services, communications, conservation, and recreation" (25, p. 2). Approximately 38 percent of the American labor force is employed in agriculture" (25, p. 9).

Our federal and state governments have long been concerned with the agricultural problems we have in our country. This is indicated by the amount of legislation that has been passed providing funds for training in this field.

The first major legislation providing for agriculture was the Morrill Act in 1862. This act granted large tracts of government land to the different states for the purpose of establishing and maintaining agricultural colleges. In 1890 federal money was appropriated to these colleges and has steadily been increased since that time through provisions of numerous bills that have been passed.

In 1914 Congress approved the Smith-Lever Act which provided funds for extension workers, or agricultural, 4-H, and Home Demonstration agents, as we commonly think of them. Their main duties are to work with rural people in advising and informing them of the best methods and latest developments to be used in agriculture.

The first legislation providing for vocational education in public schools was the Smith-Hughes Act passed in 1917. This paved the way for several additional acts that have been passed since that time. The most recent acts are:

1. The Area Redevelopment Act, approved in May, 1961, which provides for vocational training for the unemployed and under-employed in economically distressed areas (30, p. 119).
2. The Manpower Development and Training Act, approved March, 1962, expands the Area Redevelopment Act by recognizing training needs are nationwide and not confined to economically distressed areas. It authorizes the establishment of training programs for unemployed and under-employed persons who cannot obtain full-time jobs with their present skills or who are working below their occupational potential (30, p. 119).
3. The Vocational Education Act of 1963 provides that "any amounts of money allotted for agriculture may be used for vocational education in any occupation involving knowledge and skills in agricultural subjects, whether or not such occupation involves work of the farm or of the farm home" (21, p. 3).
4. The Economic Opportunity Act of 1964 has as its purpose: The elimination of poverty by opening to everyone the opportunity for education and training; also, the opportunity to work and live in decency and dignity. It is designed for educating and training capable high school age

youth with academic, social, economic, or other handicaps. Clatsop County, Oregon is fortunate in having one of the first of these schools established at the former Tongue Point Naval Station.

Statement of the Problem

Agriculture in Clatsop County has been affected by the technological changes that have been taking place. It is a big business which involves many different kinds of firms. These in turn require employees of different educational levels and experience. Some employees need a background in various kinds of agricultural experiences to be able to perform certain basic skills. Others find agricultural training in school or a background in agriculture helpful in the performance of their work.

The fundamental problem in this study is the lack of information concerning the agricultural industries in the county. To help overcome the problem, the following items appear pertinent in this study:

1. To identify those firms that have employees needing agricultural competencies.
2. To determine the educational competencies needed for entry and satisfactory performance in these agricultural occupations.

3. To determine the continuing educational needs of those employed in these agricultural occupations and how these needs should be met.
4. To determine the future employment opportunities in these agricultural occupations.

Purpose of the Study

Nationwide there has been increased emphasis upon broadening vocational agricultural education to serve the total agricultural industry. Presently, forty-two states are conducting studies to determine the agricultural education needed by non-farmers (11, p. 15).

At least three states, Texas, Florida, and California, have adapted vocational agriculture to some of their city schools. Indications are that others will be doing the same.

Recent years have brought radical changes to agriculture. "Developments in agricultural science, technology, and mechanization have resulted in two times the output per man hour since 1940" (8, p. 1). Results of this has been that the number of farms is decreasing. The size of farms, however, is increasing. Farms are becoming more mechanized. Capital investment in farming is increasing. All of this adds to fewer opportunities for young people to become established in farming.

Nationally it has been determined that for every one person farming, there are 3.75 opportunities in other agricultural occupations (8, p. 2). However, it was "found that only ten boys studied vocational agriculture for every 100 males employed in that field" (28, p. xvii). Each year agriculture could employ 15,000 agriculturally educated college graduates. The supply is only 8,500 (1, p. 3). This means that people are being employed in the agricultural industry without the proper training and background. Also, this helps to bear out the statement made to the author by three managers of different firms: "Agriculture in Clatsop County is sick." One went on to explain how we need trained persons in agriculture.

The primary purpose of this investigation is to determine the present and emerging agricultural occupations in Clatsop County, as well as to supply a basis for the following:

1. Broadening and upgrading our high school course offering to cover more of the agricultural occupations.
2. Working with industry and students in providing experience programs for gaining insight into the occupations of their choice.
3. Building our adult education program around the needs of our local population.

Venn states that "today's accelerating and changing technology

has placed man, his education, and his work in a new relationship in which education becomes the bridge between man and his work" (30, p. 73). It is this author's belief that to meet the needs of our youth enrolled in vocational agriculture, new direction should be given to our program. They should be designed to lead to employment in jobs known to exist, either in productive agriculture, or in off farm agricultural industries.

Limitations of this Study

This study is limited in the following ways:

1. To the productive agriculture and off farm agricultural occupations of Clatsop County.
2. By the way in which productive agriculture and off farm agricultural firms were isolated for study.
3. By random sampling technique used for selecting firms to be interviewed.
4. By the interview technique of gathering information.
5. By the educational level and experience background of those interviewed and their ability to give information.

Definition of Terms

Some terms used in this study may be peculiar, or used in a different context than what most people are used to seeing them.

For this reason, certain terms need to be defined:

1. Agricultural firms, agricultural industries. These terms are used synonymously in describing those businesses engaged in agricultural work, farming, or business associated with farming.
2. Agricultural business. A business which is concerned with providing services or products to farmers, or is concerned with the processing, transportation, storage, or distribution of farm products. This term could also be applied to a firm engaged in production of food and fiber.
3. Agricultural occupation. An occupation in which the worker is qualified in one or more of the primary areas of plant science, animal science, soil science, agricultural mechanization, or in agricultural business.
4. Agricultural production. This is the actual on-farm production of food and fiber, the growing of plants, and the raising of animals. Persons employed in this field are generally referred to as the farmers.
5. Non-farm agricultural occupations. An agricultural occupation other than farming or ranching.
6. Non-professional off-farm agricultural occupation. These occupations do not require a college degree, but may require technical training beyond high school. Examples

of these occupations are in the areas of sales and services to farmers, such as feed, supplies and farm machinery. Some are in the marketing and processing of farm products, others are in areas such as recreation, forestry, and soil conservation.

7. Off-farm agricultural industry. This is a business located away from the farm that is involved in supplying the farmer or handling of his products. See agricultural business.
8. Professional agricultural occupation. A college degree is usually required for entry into these occupations. This group is highly specialized in agriculture, and provide their assistance to people as an aid or service. Specific occupations in Clatsop County include: research workers, foresters, county agents, veterinarians and teachers of agriculture.

Background Information on Clatsop County

Clatsop County is located in the extreme northwestern corner of Oregon. It has a population of 27,380. The people are listed as 15,116 urban, and 12,264 rural. Urban families total 4,400, while rural families are 3,120. "Only 473 out of the 3,120 rural families have farm income. Other rural families depend on income from

off-farm resources of timber, fisheries, tourism, and related industries" (20, p. 2).

Clatsop County has a mild, temperate climate, with a mean winter temperature of 42°F., and a mean summer temperature of 60°F (22, p. 5). Temperature seldom rises over 85 degrees in summer, or falls below 20 degrees above zero in the winter (27, p. 4). Rainfall averages 77 inches annually, with 70 percent of this falling from November through March.

Forestry and forest industries, fisheries, agriculture, shipping, and recreation are the main sources of Clatsop County's income.

The county's land area is approximately thirty miles square, and totals 526,541 acres (27, p. 4). Included in this are approximately 52,000 acres in farms, and 470,000 acres in forest lands in various stages of production (22, p. 6-7). The remainder of the land is in towns, sand dunes, or land that will not grow trees or crops.

There are 162 commercial farms. Sixty-seven of these show gross incomes over \$10,000. Ninety-five show incomes from \$2,500 to \$10,000. In addition to the 162 commercial farms there are 311 listed as part-time farms, that show gross incomes less than \$2,500. Most of these have off-farm incomes (7, p. 2).

The farmland is located mostly along the Columbia river and

its tributaries, and in coastal river valleys. The county's productive agriculture from these lands amounts to about \$3 million annually. The mink industry grosses \$1,050,000. Clatsop County leads all counties in Oregon in mink production. This is followed by dairying, \$637,000; livestock, \$550,000; poultry, \$292,000; crops, including hay, bentgrass, vegetables, cranberries, and small fruit), \$181,000; and farm timber, \$101,000 (20, p. 4).

Clatsop County's forest lands have been logged for more than 100 years. In the 1850's early ox-loggers harvested trees to saw into lumber for the California gold rush boom-towns, and many overseas markets. Much of the early logging was done by loggers who thought only of the present dollar. They would come in and cut out an area, and then get out. Today this has all been changed. Most of Clatsop County's forest lands are being managed just as a farmer would manage any other crop. Attention is being given to reforestation by seeding or tree planting, thinning, and systematic harvesting so that maximum returns can be realized. Special precautions are constantly being taken to prevent fire, insect, and/or disease outbreaks.

The fishing industry is one of the oldest in Clatsop County, having been started by the Indians long before the coming of the white man. Located at the mouth of the Columbia river, the several canneries have ideal location for the harvesting, unloading

and processing of seafood. "Columbia river and offshore caught salmon, ocean-bottom fish, crabs, clams, and the albacore tuna caught off Oregon shores are all processed in the county, with Clatsop County getting a large share of the total Oregon catch" (20, p. 3).

In recent years, because of the decrease in the catch of salmon and steelhead, it has been necessary to reproduce these fish under artificial conditions. There are now two salmon hatcheries and one steelhead hatchery in the county. The past two years have shown substantial increase in the pounds of fish caught, which shows the effectiveness of the fish hatcheries.

Shipping is another of Clatsop County's main industries. Shipping figures for 1964 show a total of 622,232 tons handled by the Port of Astoria. There were 557,831 tons in outbound cargo, forest products accounting for 495,234 tons of this, which was mainly logs. The 64,401 tons of inbound cargo consists mostly of petroleum products, frozen fish, canned fish, and wood pulp. There has been a substantial increase in shipping since 1960, when the total amount of tonnage handled was 321,875 tons (24, p. 1).

Clatsop ocean beaches, Columbia river sport fishing, elk and deer hunting, resort towns, and park facilities attract a great many tourists and visitors to the county. This resource has been estimated at over one million dollars annually.

Procedures of this Study

The first step in this study was to review similar investigations in other states, as well as a study that is presently being conducted in the Dayton and Amity areas of Oregon. It is believed this study should be on a comparable basis with what has been done elsewhere. With this in mind, an instrument was developed to gather specific information from approximately 90 business firms in the county. The questionnaire is shown in the Appendix.

1. Lists of productive agricultural industries were secured from the Clatsop County agricultural agents. These were checked in the following manner: The mink farmers with the Fur Breeders Association; the dairy, livestock, and poultry with Lower Columbia Cooperative feed department, where the largest percent of the feed grain in Clatsop County is sold.
2. Lists of industries which the author believes to be associated with agriculture were secured from the Astoria City Directory, which also includes Gearhart, Hammond, Seaside, Warrenton, and rural areas. These were checked by use of county telephone directories, and by the county agricultural agents.

Agricultural firms were listed in groups according to the

product produced, or service performed. A ten percent random sampling was made of the productive agricultural firms, livestock, dairy, mink and poultry. For the groups of off-farm agricultural firms, numbering one to five, in some cases only one was interviewed. In other cases, two were interviewed. If there was a wide variation in number of personnel employed and the work being done in a group of firms, all were interviewed. In the case of grocery stores, two supermarkets were interviewed, and three stores in rural areas. It is believed that a representative sampling of all of the agricultural industry in the county was studied.

A list of the firms considered in this study is shown in the Appendix.

Chapter II

SURVEY OF RELATED LITERATURE

Many studies have been made in recent years in agricultural occupations. The result has been an increased emphasis upon broadening vocational agricultural education to serve the needs of those persons entering the agricultural industry.

Taylor of Ohio State points out that "agricultural educators and others are becoming increasingly aware that agriculture and farming are no longer synonymous" (17, p. iii). This widespread awareness is evidenced by agricultural educators in the two conferences held at Ohio State University in May, 1963 (17), and January, 1964 (18). A major purpose of the first conference was to "maximize the possibilities for coordinating and achieving commonality in state agricultural studies--and to provide opportunity for individual states to benefit from the experiences of others" (18, p. ii). Fourteen states participated in this conference. The purpose of the second conference was "to focus attention primarily on summarization procedures and guidelines for pilot programs" (18, p. iii). Twenty-one states participated in this conference. Reports of eleven studies of agricultural occupations that were currently in progress were given (18, p. 77-92).

Another significant study was made by the panel of consultants

in vocational education appointed at the request of President Kennedy in 1961 (29). Their responsibility was to review and evaluate the current National Vocational Education, and make recommendations for improving and redirecting the program. In their final report they recommended expansion of vocational education during and after the high school years to meet the needs of our people. Some of their other recommendations were: increased support by local, state, and federal governments for programs for young people who will enter the labor market immediately after high school; programs for high school age youth with academic, social, economic, or other handicaps that prevent them from succeeding in the usual high school vocational education program; post high school vocational programs for youth and adults preparing to enter the labor market; further programs for youth and adults, whether unemployed or at work; and also, provision for improved and expanded facilities, improved teacher education and expanded research development.

Dr. Walter M. Arnold points out that the provisions of the 1963 Vocational Education Act are based on six fundamental ideas:

1. The programs of vocational education are to be geared to the labor market needs, both immediate and future, on local, state, regional, and national basis.
2. The programs to be offered will prepare students for

employment in a great variety and range of jobs.

3. This service is to be available to all, from the least able and the disadvantaged, to those of a high level of technical ability.
4. Vocational education programs may be conducted in any type of school or educational institution.
5. States are required to evaluate their programs continuously in the light of labor market needs, and the needs of all groups in all communities in the state.
6. Ten percent of the total appropriations for each fiscal year is reserved for research and goes to colleges, universities, state boards and other public educational agencies.

Dr. Arnold feels that "the most striking fact about the law is a firm emphasis on human needs, and the trend away from a rigid restriction of vocational education to a few specific occupational categories (6, p. 11).

Shontz (15) states that agriculture encompasses a broad field of work, and a wide range of occupations. It not only deals with jobs in producing, processing, distributing and marketing of food and fiber, but is also involved in business, industry, education, research, communications, conservation, and recreation. He further states that the purpose of his publication is to help one to

explore some of the careers in modern agriculture. Also listed were several career opportunities giving a brief description of the work, the working conditions, educational and personal qualifications, and how to enter and advance in an agricultural career.

In the booklet entitled "Agriculture is More Than Farming" (3), there is presented a picture of the whole agricultural industry and requirements for entering the field. The chain begins with the suppliers and those that provide services to the farmers. Next come the farmers who produce the raw materials. After these we find the marketing, processing, transportation, and distribution. It is pointed out that occupational opportunities for agriculturally trained persons extend throughout the broad industry of agriculture. There is no place in agriculture for the untrained and unskilled worker, manager or operator.

For the farm youth, education in agriculture begins when he is a small boy, and continues as he grows into adolescence. He has then the opportunity to take four years of agriculture in high school, and then he may continue on into a community college, technical school, or a regular four-year college.

A study made in West Virginia (7), of non-farm agricultural employment, points out that agriculture today is composed of two major components: the farming, or production segment, and the non-farming segment, which includes the functions of agriculture

other than farming. The statement is made that vocational agricultural programs have not been designed to serve this non-farm segment, primarily due to the lack of an identification of this type of employment.

The purpose of this West Virginia study was to appraise the extent and nature of the non-farm agricultural employment in the state. The feeling is that a broadened and extended program of vocational agriculture will play a vital role in providing needed instruction for certain agricultural workers in the non-farm agricultural occupations.

Griffen in his study of "Agricultural Occupations Other Than Farming in Saline County, Missouri" (10), points out that since the passage of the Smith-Hughes Act in 1917, our concepts and requirements in agriculture have changed. The number employed in productive agriculture has decreased, but the number of people needed to supply and service farmers, and to process and distribute the commodities they produce has increased.

The purpose of Griffen's study was to determine the present and emerging agricultural occupations other than farming in which a farm background or schooling in agriculture might be advantageous to an individual seeking employment. Some of the implications of his studies are as follows:

1. The program of vocational agriculture should be expanded

to include students who are planning to enter agricultural occupations other than farming.

2. The supervised farming program should be supplemented by work experiences in agricultural occupations other than farming, for those students who plan to enter such occupations.
3. Include a unit of instruction acquainting the students with the opportunities which exist and the entrance requirements in agricultural occupations, other than farming.
4. Schools should develop better communications between departments of vocational agriculture, and agricultural businesses.

A study made in the state of Washington (8), concerning 241 businesses associated with agriculture, revealed a total of 13,494 persons employed. Of this number, 1,836, or 13.6 percent, required training in agriculture. A breakdown of employees needing agricultural training into levels of employment is shown in the following table:

Unskilled laborer -----	192
Salespeople -----	345
Semi-skilled & Skilled -----	622
Consulting personnel -----	187
Supervisory-managerial personnel --	<u>490</u>
Total	1,836

Only 42 firms felt that agricultural training was necessary

for unskilled laborers since the willingness to work was the prime requisite.

From this study it was estimated that 3,300 additional employees with agricultural training would be needed in the following five year period.

Linson and Anderson of Colorado have just recently compiled and edited a book entitled, "Handbook for Developing and Operating Agricultural Occupations Programs" (14). The book is to be used as a guide for developing new agricultural occupations programs in the public schools of Colorado. The main purpose of the program is to provide supervised training for gainful employment in occupations related to agriculture. Students in the supervised training program are from the 11th and 12th grades. Part of their school day is spent in on-the-job training, and the remainder is spent at school completing the necessary requirements for graduation.

Skean's (26) study of Post High School Agricultural Education revealed that high school graduates from Jefferson County in the past five years had been employed in an average of 2.13 different occupations since graduation, and that 45 percent had not received training beyond high school. He concluded that post high school education was needed. Also, 29 percent of the graduates were employed in agriculture, and, therefore, post high school courses should be offered in agricultural education, based on actual

employment possibilities.

A publication, "Clatsop Tree Farm" (9), covers forestry, an important segment of the agriculture in Clatsop County. A brief history of the forest industries in the county from the time of the coastal Indians until the present is given. Also explained are the methods used by Crown-Zellerbach in managing their huge tree farm. Methods of logging are discussed which include the practices known as: (1) salvage logging - the removal of down, dead, dying, or defective trees from the forest; (2) pre-logging - the removal of smaller trees before the larger ones are cut; (3) selective logging - the removal of mature trees for special purposes such as plywood, or high grade lumber; and (4) thinning - the removal of trees that are being crowded out and would eventually die.

The methods of reforestation by natural seeding, aerial seeding, and hand planting are also covered. An effort is made to keep the land growing trees. To accomplish this, methods of protecting the forest from fire and insects have been installed and practiced. A network of permanent roads has been built for fire suppression purposes and the removal of timber. When the timber has been threatened by hemlock loopers, it has been sprayed by air.

One can see that the management of a tree farm is very similar to the way a farmer manages any other crop. The long range

policy is to have the land well stocked with good trees, keep them growing at their maximum, and to cut no more trees than are grown each year.

Another publication entitled, "Your Trees--a Crop" (31), was prepared for owners of small woodland areas in the Douglas Fir region. It is pointed out that much of the land in this region is too steep, too wet, too shallow soil, or not fertile enough to grow cultivated crops. But for trees, conditions are excellent. The statement is made that 'hundreds of people are making more money growing trees than they could with any other crop on the same area.'

In a very young forest one may harvest Christmas trees. When the stand is about 35 years old, one may begin harvesting poles, piling, small saw logs, posts and fuelwood. From this time until maturity of the forest, one can do frequent thinning from which a substantial income can be realized. Also explained are methods of harvesting, estimating timber volumes, markets, taxes, state forestry laws, planting, and the protection of timber lands.

Hoover's Handbook of Agricultural Occupations (12) and The Sextant (4), are written to help one explore the fields of agriculture. They list the jobs and give requirements for entering the occupations.

One may conclude from the survey of literature that there are many opportunities in the agricultural industry. However,

automation has influenced agriculture just as it has other industries. The kinds of jobs and occupational requirements are changing. New programs are being devised to help keep our working force educated and trained in the many fields of agriculture.

Chapter III will show the findings of this study.

Chapter III

FINDINGS

The firms included in this study are engaged in numerous functions, as can be seen in Table I. A total of 359 firms are considered, with 87 being personally interviewed.

Table I - Types and Number of Firms:

Type of firm	Number
Farm production	152
Farm services	78
Grocery stores	46
Farm equipment, repair & supplies	30
Forestry	12
Fisheries	9
Processing & distributing	9
Recreation	8
Professions	7
Other services	8
Total	359

A list of these firms as grouped by the author can be found in the Appendix.

Farm Production

Farm production with the largest number of firms is the

group that most people think of when we speak of agriculture. However, when we consider agriculture in its broadest sense, we must conclude that it is much more than production. "There are now over 500 occupations involving this great institution" (4, p. v). For example, consider marketing, which includes the services of receiving,

Table II - Productive Agricultural Farms

Kinds of firms	Number of firms	Number Interviewed
Dairy	33	4
Mink	40	4
Livestock	41	5
Poultry	20	2
Cranberries	3	1
Holly growers	7	2
Nurseries	8	3
Total	152	21

grading, processing, packaging, transporting, storing, advertising, displaying and selling. These are services that were formerly performed by the producer, but have, in most cases, been transferred to off-the-farm operations where they can be handled more efficiently. These are agricultural occupations.

For a large percentage of the productive firms in Clatsop County, the owner is the only full-time employee. Approximately one-half of the dairy farms, and one-half of the mink farms have a

hired man. There are about 215 full-time employees in the county for these productive firms. Most of these firms at some time during the year hire some part-time help. Dairy and livestock firms need extra help during the haying season. Mink farms need extra help during the pelting season.

Farm Services

The farm service group shown in Table III includes those that

Table III - Farm Service Firms

Kinds of firms	Number of firms	Number Interviewed
Rural gasoline & oil distributors	9	2
Hardware stores	8	3
Building materials	6	3
Pacific Power & Light	1	1
Banks	5	2
Real estate agents	12	3
Insurance	27	4
Newspapers	3	3
Radio stations	2	2
Grading & excavating	4	1
Total	78	24

perform services for the producer. The author found the largest number in this group that felt an agricultural background was unnecessary in the performance of their duties. Since most of the

people served by this group were urban, their attitude is understandable. Also, it was found that the persons being interviewed would tend to speak from their own experiences. If they had an agricultural background themselves, it was considered desirable; if they did not have an agricultural background the majority thought it non-essential.

Insurance and real estate firms made up the largest percentage of this group. With only one exception, persons interviewed in these firms thought that an agricultural background was not necessary. Most stated that they did not handle enough insurance for farm people to be concerned. Some felt that they did not need a knowledge of agriculture in order to insure farm property. In the case of real estate, some of the comments were as follows: "We will handle farms, but only a few of these are sold," and, "We will list farms but we never go out to appraise them. We just list them for whatever the owner asks."

One insurance agent stated that a background in agriculture is definitely desirable in order to understand the farmer's problems and give him the kind of coverage he needs. The author agrees with this latter statement. It would appear that most of these firms would benefit by having an individual in their employ who understands farming and knows farm values. This would put them in a position where they could better work with and serve the

farmer and at the same time help themselves by making more sales.

Interviewed persons representing rural gasoline and oil firms felt that an agricultural background was not necessary. They maintained for their tank truck salesmen the main requirements are: being able to meet the public, good salesmanship, and a knowledge of mechanics. It is believed that persons performing this type of work could profit from an agricultural background and training in vocational agriculture in high school. We do have a mechanics program in our high school vocational agricultural curriculum. This program could serve as foundation training for those students planning to enter occupations other than farming requiring a mechanical background. From this beginning they could enter occupations giving on-the-job training, or go on to a vocational-technical school. Also, while studying vocational agriculture in high school, they could at the same time receive background training that would help them understand the farmer's problems. While making their deliveries to the farm they could see needs, do a better job of selling, and increase their own business.

Representatives of hardware stores stated that an agricultural background would be desirable for employees, especially in the line of mechanics. One stated that a mechanical aptitude in dealing with farm machinery, repair and maintenance would be a favorable factor in hiring new employees.

Persons interviewed in the field of building supplies, considered a background in agriculture unnecessary although one man stated that high school training in agriculture was desirable. Many thought that business training in selling and handling of building materials was most desired. According to those interviewed, they do not sell much to farmers. They do not go out and make estimates, they only fill the orders that are brought to them. It seems that persons in this business also could benefit from having someone in their employ with an agricultural background. It seems reasonable to assume that if a person understood farm operations, he would be better able to meet farmers' needs, and, in some cases, anticipate these needs before they were apparent to the farmers themselves.

The local banks are conscious of the value of agricultural training. They have an agricultural representative who aids in the handling of their agricultural work. However, this representative is shared with other counties and comes only when the need arises.

There are three newspapers and two radio stations comprising the area of communications. Each of the newspapers has a reporter who handles the agricultural news. These reporters should be agriculturally oriented to be able to find and write up the agricultural news. The radio stations, on the other hand, do not have special persons to handle the farm news. One stated that their

agricultural program is handled by the county agents.

Persons interviewed in the group of grading and excavating felt that a background in agriculture was unnecessary. Areas of this type of work in which such knowledge would be helpful were mechanics, especially in the handling of equipment, also soil structure and water management. All of these areas are covered in our high school vocational agriculture program. It seems reasonable to assume that persons who have completed this program would be better prepared to enter this area of the construction field and be more successful when employed.

The local power company serving Clatsop County has seven employees that are agriculturally oriented. It was stated that they should have a general knowledge of agriculture in order to work and deal with farm people.

Grocery Stores

The third largest group of firms in this study is the grocery store. This comprises one wholesale grocery outlet, six supermarkets, and 39 smaller stores, some approaching the supermarket class, but most being a one family-type business. The wholesale firm is a branch of a larger operation with headquarters in Portland, employing two individuals. The main function of this firm is wholesaling to privately-owned stores. Representatives

of this firm did not feel that an agricultural background was necessary in performing the type of work they were doing.

Table IV - Grocery Stores

Kinds of stores	Number of stores	Number interviewed
Supermarkets	6	2
Smaller stores	39	3
Wholesale grocery	1	1
Total	46	6

On the other hand, the chain store representative thought it desirable that the store manager, meat cutters, and produce managers have an agricultural background. Their opinions were that an agricultural background would not be a necessity, but would be very helpful. Most of the employees receive on-the-job training for their particular position.

Representatives from the smaller stores expressed different opinions. Some believed an agricultural background was helpful in the operation of their business, while others thought it unnecessary. A reason for the difference of opinion could be the location of the store, and the people served. In the rural areas of Clatsop County, the stores carry such items as: garden seed, sprays, fertilizers, small tools, and other things needed by rural people. It is evident that an agricultural background would be helpful in selling these items and in working with the rural people.

Farm Equipment, Repair, and Supplies

Farm equipment, repair and supply firms are listed in Table V. Ten of these are general repair shops. The concensus was that a mechanical ability and a background in agriculture were good pre-requisites for entering the field of repair and maintenance of equipment.

Table V - Farm Equipment, Repair, & Supply Firms

Kind of firm	Number of firms	Number interviewed
Owen & Peeks Implement Co.	1	1
Lektro Incorporated	1	1
General Repair Shops	10	4
Feed, seed, fertilizer, and supplies	3	3
Electrical shops	7	1
Plumbing	10	2
Lime and Fertilizer	1	1
Total	30	13

Representatives from the plumbing and electrical shops expressed their beliefs that an agricultural background would be desirable but not a necessity. They felt that prospective employees could be helped through taking a course in agricultural mechanics covering these fields. The lone implement company in the county employs five persons. All are agriculturally oriented, including

the woman bookkeeper. The manager desired a background and high school training in agriculture for his employees.

A representative from a firm that manufactures equipment for milk farmers expressed his opinion that their employees should have an electrical and mechanical knowledge. He added also that a farm background with high school training in agriculture is desirable in this type of work.

When interviewed, firms selling feed, seed, chemicals and supplies to farmers were definitely in favor of a good background in agriculture for their employees. They felt that an asset to their business was being able to give advice when asked, also in knowing the products they were selling.

Forestry

Another group of firms in Clatsop County, and the one which is by far the largest, is forestry. See Table VI. The two largest owners of forest land are Crown-Zellerbach, with 210,000 acres, and the State of Oregon with 147,228 acres. The land in their

Table VI - Forest Firms

Kind of firm	Number of firms	Number interviewed
Crown-Zellerbach Corp.	1	1
State Forestry Service	1	1
Private logging co.	6	1
Small woodlot farmers	4	1
Total	12	4

holdings is on a sustained yield basis. Most of the timber cut in the county is from these lands. There are six private logging companies that employ 15 to 20 men each. One that is also engaged in road building employs 60 men. These companies buy most of their timber at state sales and do contract logging for Crown-Zellerbach. There are numerous small contract loggers composed of two or three man crews that do thinning for Crown-Zellerbach. The county also contains several farmers who have farm woodlots. At least four of them are doing work in growing and managing of their trees.

Fisheries

The fishing industry shown in Table VII is very important to the economy of Clatsop County. In this study, however, only the hatcheries and the canneries that supply feed to mink farmers were considered to be agricultural. Persons interviewed stated that a background in agriculture plus high school training in agriculture

Table VII - Fisheries

Kinds	Number of firms	Number interviewed
Hatcheries:		
State	3	2
Private	1	
Canneries	5	1
Total	9	3

is desirable for employment. The statement was made that if one wants to advance in this type of work, he needs a college background.

Five canneries sell fish scrap to the Oregon Fur Producers for mink feed. It was estimated for a cannery that the services of two men are involved in the handling of this feed. One manager commented that the money received for this feed was the margin that kept the fishing industry here competitive with industries in other areas.

Processing and Distributing

In the group of processing and distributing, (see Table VIII), are classed several kinds of firms. There are four dairy producers and distributors. The persons representing these occupations felt that a farm background was essential for this kind of work, with high school and college training in agriculture being desirable. In these firms are thirteen full time employees. In the dairy cooperative processing plant are employed 34 full time employees. It is desirable for all employees to have an agricultural background, including the women secretaries, however, this was not considered essential in securing the job. A college degree was thought essential for five persons in the firm: two in agriculture and three in business.

Table VIII - Processing and Distributing Firms

Kinds of firms	Number of firms	Number interviewed
Reed & Hertig Slaughter house	1	1
Poultry processing plant	1	1
Lower Columbia Dairy Ass'n	1	1
Dairy Producer Distributor	4	2
Bioproducts	1	1
Oregon Fur Producers	1	1
Total	9	7

The Oregon Fur Producers Association is a purchasing cooperative serving the mink farmers. Eleven full time employees are hired, with six additional helpers for the summer when there are more mink to feed. The manager of this firm stated that an agricultural background and high school training in agriculture would be helpful for employees in this firm but not essential in securing the job. The manager himself, in addition to an agricultural background, needed business and cooperative training. Some of the employees, such as truck drivers and plant operators, need a mechanical background in order to operate the machinery. The feed mixers need to understand nutrition enough to know how to mix the feed, and know the quality of the feed. This manager made the remark, as did several others that were interviewed, that an agricultural background is helpful and desirable for his secretary as she must understand the language in order that she might talk

with the people who come to the plant, also for her reading and writing reports.

The poultry processing plant employs four men and six women. The poultry are produced there, processed, and then delivered to local markets. All the men employed need training or a background in agriculture. The women need to be neat, clean, and adept with their hands.

The slaughter-house employs three full-time, and two part-time men for whom it is desirable also that they have an agricultural background. Besides this, in order to do this work well, they need special schooling to learn the work, or have on-the-job training.

Bioproducts, Incorporated, processes fish and fish scraps into usable products such as: fish meal, fish pellets, and mink feed. They have 44 full-time employees. It is not essential but desirable for the employees to have a background in agriculture. Mr. Anderson, the person interviewed in this firm, stated, "We find that the employees with an agricultural background are the best workers, so we usually hire them" (4). He went on to explain that these employees know how to work. They understand how to work with equipment, and do not require as much supervision.

Recreation

Considering still another area of work, (see Table IX), there are three golf courses in Clatsop County, employing ten persons.

Table IX - Recreation

Kinds of Firms	Number of firms	Number interviewed
Golf courses	3	1
Parks - a. Cities	2	1
b. State	2	1
c. National	1	1
Total	8	4

These employees need to know how to maintain the turf. Therefore, it is desirable that they have an agricultural background in mechanics and plant science. One superintendent attended a two-year college majoring in this field.

Persons interviewed representing county, state, and national parks felt that the only persons that would benefit from an agricultural background would be their maintenance personnel. Their duties include handwork, caring for and maintaining lawn, and some forestry work.

Professions

In the group listed as firms and professions, (Table X), most of these individuals need a college degree. There are some

employed by the firms with less than a college degree, but it is desired that these have an agricultural background.

Table X - Firms and Professions

Kind of firm or profession	Number of firms	Number interviewed
Veterinarian	1	1
Soil Conservation Service	1	1
Astor Experiment Station	1	1
County assessor	1	1
Seafoods Laboratory research	1	1
County Agricultural agent	1	
Agricultural teacher	1	
Total	7	5

Other Services

Those employed in the group listed as "Other Agricultural Services", (Table XI), need technical training either in the form of short specialized classes, or formal on-the-job training.

Table XI - Other Agricultural Services

Kind of service	Number of persons
Milk tester	1
Milk inspector	1
Meat inspector	1
Land appraiser	1
Weed inspector	1
Artificial inseminator	3
Total	8

The average number employed in each group of firms interviewed is shown in Table XII. The table by itself has very little value but can be used in conjunction with other tables that follow for comparative purposes.

Table XII - Average number employed in each group of firms interviewed

Type of firm	No. of firms interviewed	Average no. employed	Range in no. employed
Farm production	21	1 - 1.33	1 - 3
Farm services	24	10.11	1 - 52
Grocery stores	6	6.67	2 - 27
Farm equipment repair and supplies	13	4.92	1 - 17
Forestry	4	102.5	2 - 335
Fisheries	3	4.0	2 - 6
Recreation	4	4.0	1 - 7
Processing & distributing	7	15.57	3 - 44
Other firms & professions	5	3.5	1 - 6

Table XIII shows the educational level for persons employed by firms interviewed. In a few cases, the educational level of employees was not known, but this table does give an indication of the educational level required by employers in the different groups of firms. Thirty-three are listed as having less than a high school education, and 319 that have a high school diploma. These employees fill the semi-skilled jobs. Some employed in technical

Table XIII - Educational level of present full-time employees of the firms interviewed

Type of firm	Number interviewed	Less than High school	High school Diploma	Post High school Technical	Junior College	College Graduate
Farm Production	21	7	15		2	4
Farm Services	24	2	19	2	6	7
Grocery Stores	6	1	5	7		
Farm Equipment, Repair & Supplies	13	1	8	47	2	2
Forestry	4	1	183	21	3	31
Fisheries	3		6	4		
Recreation	4	4	12		1	
Processing & Distributing	7	17	70	6		12
Other Firms & Professions	5		1	3	1	4
Total	87	33	319	90	15	60

groups have less than high school education, but have gone to technical school and had on-the-job training to become skilled at their trade. Those persons employed on a managerial level are college trained, or, as in the case of chain stores, have had special training provided by the firms themselves.

Most employers are willing to provide on-the-job training as indicated in Table XIV. However, it is desired that these employees have a high school education. As stated by some employers, "We will train them, but they have to be trainable." Some firms with several employees indicated more than one category of training, depending upon the level of work being done. Some need only informal on-the-job training, while others need specialized courses. In the farm service group some indicated no need for agricultural training. These are listed under the column entitled "Others".

Table XV shows the kinds of background that employers indicated would be helpful for persons seeking employment in their firm. It should be noted that some groups have several employees, and functions performed by these groups are quite different. In most groups those interviewed are of the opinion that personnel seeking employment in supervisory or managerial capacity could profit from all three types of experiences. Some require, in addition, special training in their particular line of work, such as grocery stores, and technical training in the mechanical field.

Table XIV - Training opportunities desired for agriculturally oriented employees for those firms interviewed

Type of firm	Number interviewed	None	Formal on-the-job	Informal on-the-job	Evening classes	Part-time day classes	Specialized courses away from job	Other
Farm Production	21		1	19	1		6	
Farm Service	24	1		12			2	6
Grocery Stores	6	1	1	3	1		2	
Farm Equipment, Repair & Supplies	13		1	9	2		3	
Forestry	4		2	3			2	
Fisheries	3			3			1	
Recreation	4	2		2			1	
Processing & Distributing	7		1	6		1		
Other Firms & Professions	5		1	3			3	1
Total	87	4	7	60	4	1	20	7

* Some persons interviewed listed more than one kind of training opportunity desired for their employees.

Table XV - Kinds of background that would be helpful to persons seeking employment in agricultural occupations

Type of Firm	Interviewed	Experience			
		Farm	Voc. Agric. high school	College	Other
Farm Production	21	19	17	18	
Farm Service	24	10	8	6	10
Grocery stores	6	1	3	1	3
Farm Equipment, Repair & Supplies	13	10	11	3	4
Forestry	4	3	3	2	1
Fisheries	3	1	2	2	1
Recreation	4	2	2	1	2
Processing & Distributing	7	7	7	6	
Other Firms & Professions	5	4	5	3	
Total	87	57	58	42	21

* Some persons interviewed listed more than one kind of background helpful to persons seeking employment.

Opportunities for advancement in these firms are limited, as can be seen in Table XVI. This is due to the small numbers employed by these firms. In the case of some firms where several are employed, all four columns apply. Those in the lower positions can advance or gain experience for work elsewhere. Those employed in certain professional occupations or who are departmental heads stay the same.

During the next five years, twenty of these business firms expect to increase in number employed. Sixty-five anticipate staying the same. The bright part about this survey is that only two anticipate a decrease in number employed.

The economic outlook for Clatsop County is bound to improve with the two new industries - the Tongue Point Job Corps school for boys, and the large pulp mill at Wauna which is now under construction. With the increase in population some of the other industries will need to expand to meet the demands that will be made upon them.

Table XVI - Opportunities for advancement in firms interviewed

Type of Firm	Number interviewed	Same Position	Job in other firm	Other jobs in this firm	Background for other occupations
Farm Production	21	21	1		2
Farm Services	24	14	17	4	4
Grocery Stores	6	2	3	2	2
Farm Equipment, Repair & Supplies	13	5	4	4	5
Forestry	4	2		3	1
Fisheries	3			3	1
Recreation	4	1	1	2	3
Processing & Distributing	7	6	4	2	4
Other Firms & Professions	5	4	1	1	
Total	87	55	35	21	22

* Some persons interviewed listed more than one category.

Table XVII - Employment opportunities in Agricultural Occupations.

Type of Firm	Number interviewed	Employment next five years		
		Number of Increase	Number of Decrease	Stay the same
Farm Production	21	3	1	17
Farm Services	24	2		27
Grocery Stores	6	4		2
Farm Equipment Repair & Supplies	13	5		8
Forestry	4			4
Fisheries	3	1		2
Recreation	4			4
Processing & Distributing	7	4	1	2
Other firms & professions	5	1		4
Total	87	20	2	65

Chapter IV

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Modern agriculture no longer describes only the production of food and fiber, but also includes all of the off-farm agricultural occupations that have to do with supplying and servicing the farmer, and the handling and processing of the farmer's product.

Our government realizes the importance of agriculture in our country. This is indicated by the amount of legislation passed providing funds for education and research in this field of work.

Agriculture in Clatsop County involves many different kinds of firms. These in turn employ persons with different educational levels, and kinds of agricultural experience and background. This study was undertaken to gain a better understanding of the agricultural industries and their employment needs in Clatsop County.

The fundamental purpose of this investigation is to determine the present and emerging agricultural occupations in Clatsop County, and to supply a basis for the following:

1. Broadening and upgrading the course offerings in our high school to cover more of the local agricultural occupations.
2. Working with industry and students in providing experience programs for gaining insight into the occupations

of their choice.

3. Building our adult education program around the needs of our local population.

Clatsop County is located in the extreme northwestern corner of Oregon. It has a population of 27,380. Its land area is approximately 526,541 acres of which approximately 52,000 acres are in farms, and 470,000 acres in forest land. The remainder of the land is taken up by towns, sand dunes, or land that will not grow trees or crops.

The main sources of Clatsop County's income is from forestry, forest industries, fisheries, agriculture, shipping, and recreation. Lists of agricultural firms for this study were selected in the following ways:

1. Productive agricultural industries were secured from the county agricultural agents.
2. Industries which the author believes associated with agriculture were secured from the Astoria city directory, which includes lists of industries in the whole county.

These agricultural firms were listed in groups according to product produced or service performed, and a random sample of each group was interviewed.

A study of this kind needs to have certain limitations placed upon it. This study is limited to the agricultural occupations in

Clatsop County. It is further limited by the method used in isolating the agricultural firms for study; the random sampling technique used for selecting firms to be interviewed; the interview method used in gathering information; and the educational level and experience background of those persons interviewed.

Conclusions

1. There are a large number of firms besides productive agricultural firms that need employees with agricultural background and/or training. There are opportunities for both men and women. These opportunities appear to be sufficient in number to warrant other schools in the county to have programs of vocational agriculture.
2. It would appear from the data gathered that a high school education is essential for most occupations. Also, previous farm experience and/or training in vocational agriculture would increase one's chances of being employed in the agricultural occupations.
3. The largest number employed in the agricultural occupations have only a high school diploma. This being so, it would appear that the high schools have the responsibility to prepare students for entering these occupations.
4. It appears impractical in our vocational agricultural

program to attempt to train students completely for specific skills needed in certain agricultural occupations. Most employers are willing to provide on-the-job training if employees have the basic background knowledge for this training.

5. While some employers provide on-the-job training or special training for employees, others require that their employees be graduates of special technical schools or colleges. It would appear that high school training in agriculture could provide a background for these employees.

Recommendations

Considering the evidence in the findings of this study, and conclusions drawn, the following recommendations are made relative to vocational agricultural occupations:

1. The vocational agricultural program should be expanded to include students who are planning to enter off-farm agricultural occupations. Also, off-farm work experience should be acceptable in lieu of the supervised farming program.
2. Since there are a large number of women employed in agricultural firms who need an agricultural background,

girls interested in occupations of this nature should be encouraged to enroll in high school vocational agriculture classes.

3. Programs of vocational education in agriculture should be offered by more schools in the county. Being a rural area, Clatsop County has a large number of firms that need employees with agricultural background and/or training. Since the largest number employed have only a high school education, it seems reasonable to assume that high schools should have the responsibility for providing the background needed for entering these occupations.
4. Each instructor of vocational agriculture should obtain local data concerning the agricultural occupations which includes the off-farm agricultural occupations in order to plan an effective course of study in vocational agriculture for his own local area.
5. There should be a closer working relationship between the high schools and business and industry to acquaint students with the occupational opportunities available and prepare them for entering these occupations. Also, the school could provide some of the educational training needed for those persons already employed.

6. Since a great many of the agricultural occupations could also be classified under Distributive Education, or Trade and Industrial Education, it seems that these vocational services and Vocational Agriculture could work more closely together in providing training needed by present and future agricultural employees.
7. Further studies should be made concerning off-farm agricultural occupations to coordinate the high school's vocational agricultural program with the needs of industries.

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APPENDICES

Appendix I

Agricultural Firms in Clatsop County

Kinds of Firms	No. of firms	Number interviewed
<u>I. Productive Agricultural Firms</u>		
Livestock	41	5
Mink	40	4
Dairy	33	4
Poultry	20	2
Nurseries	8	3
Holly growers	7	2
Cranberries	<u>3</u>	<u>1</u>
	152	21
<u>II. Farm Service Firms</u>		
Insurance	27	4
Real estate agents	12	3
Rural gasoline & oil distr.	9	2
Hardware stores	8	3
Building materials	6	3
Banks	5	2
Grading & excavating	4	1
Newspapers	3	3
Radio stations	2	2
Pacific Power & Light	<u>1</u>	<u>1</u>
	78	24
<u>III. Grocery stores</u>		
Smaller stores	39	3
Supermarkets	6	2
Wholesale grocery	<u>1</u>	<u>1</u>
	46	6
<u>IV. Farm Equipment Repair & Supplies</u>		
General repair shops	10	4
Plumbing	10	2

Appendix I (cont'd)

Electrical shops	7	1
Feed, seed, fertilizer, supplies	3	3
Owen & Peeke Implement Co.	1	1
Lektro Incorporated	1	1
Lime and fertilizer	<u>1</u>	<u>1</u>
	30	13
V. <u>Forestry firms</u>		
Private logging companies	6	1
Small woodlot farmers	4	1
Crown Zellerbach Corp.	1	1
State forestry service	<u>1</u>	<u>1</u>
	12	4
VI. <u>Fisheries</u>		
Hatcheries:		
State	3	2
Private	1	
Canneries	<u>5</u>	<u>1</u>
	9	3
VII. <u>Processing & distributing firms</u>		
Reed & Hertig slaughter house	1	1
Poultry processing plant	1	1
Lower Columbia Dairy Ass'n	1	1
Dairy Producer Distributor	4	2
Bioproducts	1	1
Oregon Fur Producers	<u>1</u>	<u>1</u>
	9	7
VIII. <u>Recreation</u>		
Golf courses	3	1
Parks:		
Cities	2	1
State	2	1
National	<u>1</u>	<u>1</u>
	8	4

Appendix I (cont'd)

IX. Firms & professions

Veteranarian	1	1
Soil Conservation Service	1	1
John Jacob Astor Experiment Station	1	1
County assessor	1	1
Seafoods Laboratory Research	1	1
County agricultural agents	3	
Agricultural teacher	<u>1</u>	<u>5</u>
	9	

X. Agricultural services

Milk tester	1
Milk inspector	1
Meat inspector	1
Land appraiser	1
Weed inspector	1
Artificial inseminator	<u>3</u>
	8

Appendix II

Job Titles by Groups
As listed by those interviewedFarm Production

Holly Grower
Greenhouse Operator
Office Secretary and Sales Clerk
Florist
Poultry Farmer
Dairy Farmer
Dairy Farmhand
Cranberry Grower
Livestock Farmer
Mink Farmer
Ranch Foreman
Farm Laborer
Farm Manager

Farm Service

Insurance Agent
Real Estate Salesman
Office Manager
Truck driver, Salesman
Bookkeeper
Purchasing Stock Clerk
News Reporter
News Editor
Salesmen
Line Superintendent
Engineer

Grocery Stores

Manager
Assistant Manager
Clerk
Truck Driver, Salesman
Produce Manager
Meat Department Manager

Appendix II (cont'd)

Meat Cutter

Farm Equipment Repair and Supplies

General Machine Shop Repairman
Welding and Repair
Welding and Repair Service
Feed Plant Manager
Salesman of feed, seed and fertilizer
Mixing and processing man
Mixing and Processing Supervisor
Office Secretary
Farm and Garden store manager
Stock Clerk
Journeyman, Plumber
Apprentice Plumber
Journeyman, Electrician
Farm Equipment store manager
Farm Machinery mechanic
Sales and service man
General Mechanic
Bookkeeper
Welder
Assembly man
Electrical assemblyman
Machinist
Supervisor

Forestry

Forester
Forester Aide
Technician
Forest Dispatcher
Engineer
Assistant District Warden
Contract Logger
Faller and Bucker
Rigging Crew
Transportation
Boom Crew
Construction Crew
Maintenance

Appendix II (cont'd)

Research

Fisheries

Hatchery Superintendent
Assistant Superintendent
Hatcheryman

Recreation

Superintendent of Golf Course
Assistant Superintendent
Laborers
Maintenance Man
Groundsman

Processing and Distributing

General Manager
Assistant Manager
Bookkeeper
Chief Operator
Assistant Operator
General Labor
Administrative Personnel
Butcher
Meat Cutter
Mechanical Superintendent
Production Foreman
Mixed Feed Foreman
Assistant Mixed Feed Foreman
Refrigeration Engineer
Secretary - Bookkeeper
Truck Driver
Office Manager
Sales Manager
Laboratory Technician
Truck Driver
Procurement
Processing
Secretaries

Appendix II (cont'd)

Other Firms and Professions

Soil Conservationist
Civil Engineer
Engineer Technicians
Farm Appraiser
Veteranarian
Secretary
Experiment Station Superintendent
Agricultural Technician
Experimental Farmer
Mechanic
Secretary

Appendix III

(Form I)

AGRICULTURAL OCCUPATIONAL SURVEY
CLATSOP COUNTY, OREGON
1965

A. Name of Firm _____

Address _____

B. Name of person interviewed _____

C. Position of person interviewed or reporting

- | | |
|-----------------------------|-------------------------|
| _____ 1. Owner | _____ 6. Office Manager |
| _____ 2. Owner manager | _____ 7. Supervisor |
| _____ 3. Co-owner manager | _____ 8. Sales Manager |
| _____ 4. Manager hired | _____ 9. Foreman |
| _____ 5. Personnel director | _____ 10. Other |

D. Main function of this firm

- | | |
|------------------------|-------------------------|
| _____ 1. Production | _____ 7. Service |
| _____ 2. Retailing | _____ 8. Warehouse |
| _____ 3. Wholesaling | _____ 9. Transportation |
| _____ 4. Purchasing | _____ 10. Construction |
| _____ 5. Processing | _____ 11. Other _____ |
| _____ 6. Manufacturing | _____ |

E. Total number employed by this firm

- | | |
|--------------------|--------------------|
| 1. _____ Full time | _____ Ag. oriented |
| _____ Male | _____ Male |
| _____ Female | _____ Female |
| 2. _____ Part time | _____ Ag. oriented |
| _____ Male | _____ Male |
| _____ Female | _____ Female |

Appendix III (cont'd)

F. Source most frequently used in securing new agriculturally oriented employees

- | | |
|------------------------------------|------------------------------|
| _____ 1. State Employment Service | _____ 7. Present employees |
| _____ 2. Advertisements | _____ recommendations |
| _____ 3. Personal interview | _____ 8. Public high schools |
| _____ 4. Written application | _____ 9. Persons coming in, |
| _____ 5. College placement bureaus | _____ seeking jobs |
| _____ 6. Friends' recommendations | _____ 10. Other _____ |

G. Present job title for the agriculturally oriented employees, number employed and educational level:

Title	No. of Employees	Educational level (Use code number below)
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

- Code: 1. Less than high school
 2. High school diploma
 3. Post high school technical education
 4. Junior college degree
 5. College graduate

H. Training opportunities desired for agriculturally oriented employees

- | | |
|---------------------------------------|---|
| _____ 1. None | _____ 5. Part time day classes |
| _____ 2. Formal on the job training | _____ 6. Specialized courses away from firm |
| _____ 3. Informal on the job training | _____ 7. Correspondence courses |
| _____ 4. Evening classes | _____ 8. Other _____ |

Appendix III (cont'd)

I. During the next 5 years would you estimate that the need for new employees in your firm with agricultural background will:

- | | | | |
|-------|------------------|-------|-------------|
| _____ | 1. Increase | _____ | By how many |
| _____ | 2. Decrease | _____ | By how many |
| _____ | 3. Stay the same | | |

J. Would your firm be willing to hire a high school student to work after school, on Saturdays and/or during vacation periods, which is under the supervision of a school instructor, in order that he might learn more about this type of firm, or occupations within this firm.

Comments: _____

Appendix III (cont'd) Form II

AGRICULTURAL OCCUPATIONAL SURVEY
CLATSOP COUNTY, OREGON
1965

Firm _____

A. Job Title _____

B. _____ Total employed permanently with this job title

Male _____ Female _____

C. _____ Total employed part time with this job title

Male _____ Female _____

_____ Year around _____ Seasonal _____ No. of months

D. To what extent would the following background be helpful in securing this job?

Check with: 1. Essential 2. Desirable 3. Unnecessary

_____ Previous work experience

_____ Farm experience or background

_____ High School training in agriculture

_____ College training in agriculture

_____ Other

E. What are the average number of hours worked per week by permanent job holders?

1. Less than 30 _____ 4. 45 to 49 _____

2. 30 to 39 _____ 5. 50 or more _____

3. 40 to 44 _____

F. Monthly starting salary _____ Monthly top salary _____

G. What are the opportunities for advancement

_____ Same position _____ Other jobs in firm

_____ Job in other firm _____ Background for other occupation

H. Areas in which a worker with this job title should be familiar are:
