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NONFARM AGRICULTURAL EMPLOYMENT IN LOUISIANA WITH  
IMPLICATIONS FOR DEVELOPING TRAINING PROGRAMS.

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LOUISIANA ST. UNIV., BATON ROUGE

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DESCRIPTORS- \*OFF FARM AGRICULTURAL OCCUPATIONS, \*EDUCATIONAL  
NEEDS, \*EMPLOYMENT OPPORTUNITIES, \*OCCUPATIONAL SURVEYS,  
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CLUSTERS, LOUISIANA,

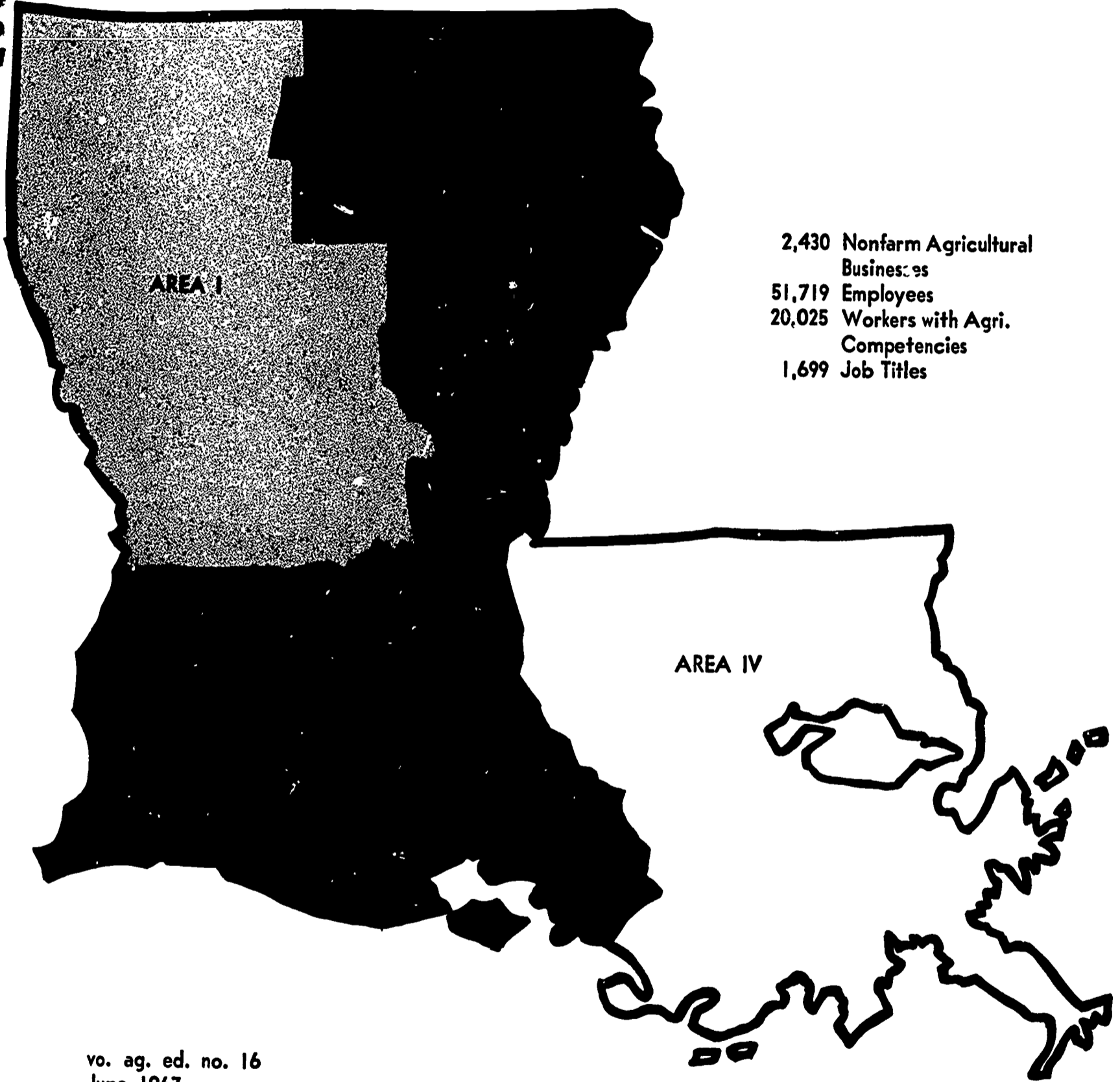
THE COMBINED RESULTS OF THE STUDIES OF SEVEN  
METROPOLITAN CENTERS AND 90 SEMI-URBAN AND RURAL TOWNS IN  
LOUISIANA SHOWED (1) THE NUMBER OF PEOPLE EMPLOYED, NUMBER  
NEEDING AGRICULTURAL COMPETENCIES, EXPECTED NUMBER TO BE  
HIRED, AND NUMBER OF JOB TITLES, (2) CHARACTERISTICS OF  
EMPLOYEES SUCH AS AGE, EDUCATION, BACKGROUND, AND SALARY, AND  
(3) AGRICULTURAL COMPETENCIES NEEDED TO ENTER, CONTINUE, AND  
ADVANCE IN THE FIRMS. IN 2,430 BUSINESSES AND AGENCIES  
SURVEYED, 51,719 WORKERS WERE EMPLOYED OF WHICH 20,025 IN  
1,699 JOB TITLES NEEDED AGRICULTURAL COMPETENCIES. JOB TITLES  
WERE EXPECTED TO INCREASE BY 9.5 PERCENT WITHIN 5 YEARS. THE  
GREATEST NUMBER OF WORKERS WERE IN THE OCCUPATIONAL FAMILIES  
(1) CROPS, FORESTRY, AND SOIL CONSERVATION, (2) FARM SUPPLIES  
AND EQUIPMENT, (3) LIVESTOCK AND POULTRY, AND (4)  
AGRICULTURAL SERVICES, AND IN THE SEMISKILLED MANAGERIAL,  
SKILLED, AND SALES EMPLOYMENT LEVELS. TECHNICIAN LEVEL  
EMPLOYEES RANKED SEVENTH IN TOTAL NUMBER OF WORKERS AND WERE  
MOST NUMEROUS IN AGRICULTURAL SERVICE. MOST EMPLOYERS  
REQUIRED A MINIMUM JOB-ENTRY AGE OF 23 AND A HIGH SCHOOL  
EDUCATION FOR ENTRY INTO THE OCCUPATIONS, AND MOST PREFERRED  
A FARM BACKGROUND FOR A MAJORITY OF THE POSITIONS. OTHER  
FINDINGS CONCERNED PROMOTION, PREREQUISITE EDUCATION,  
AGRICULTURAL COMPETENCIES, INSERVICE TRAINING, LICENSING,  
GROWTH, AND SUPPLY. TEN RECOMMENDATIONS CONCERNED CURRICULUM  
CHANGES, WORK EXPERIENCE, CONTINUING EDUCATION, SCHOOL  
RESPONSIBILITY FOR JOB PLACEMENT AND FOLLOWUP, AND RESEARCH  
AND DEVELOPMENT. AREA AND OTHER RELATED STUDIES ARE REPORTED  
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**C. L. Mondart, Sr.  
C. M. Curtis**

**DEPARTMENT OF VOCATIONAL AGRICULTURAL EDUCATION**

**SCHOOL OF VOCATIONAL EDUCATION**

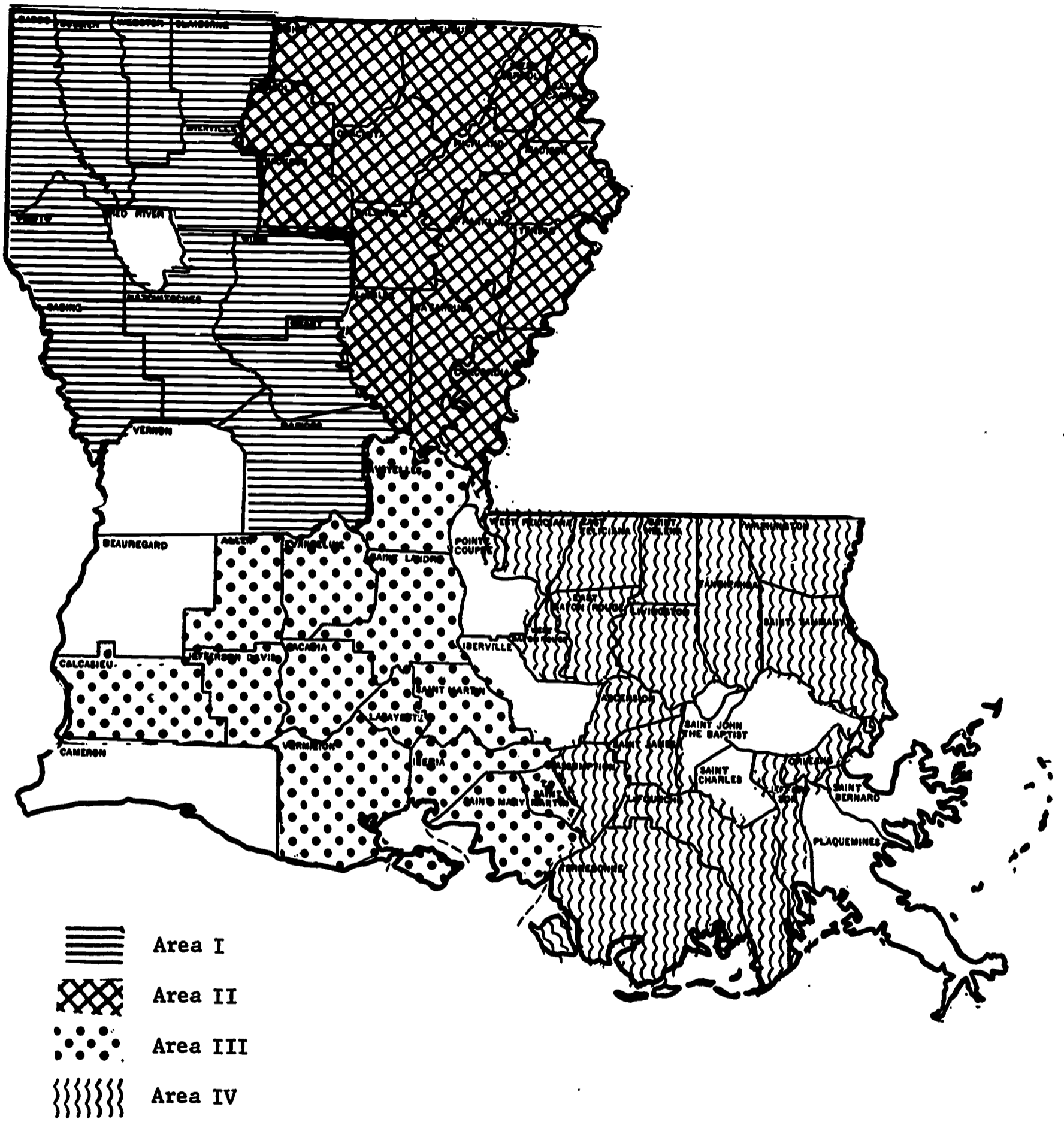
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SCOPE OF STUDY



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\*Mr. Reed resigned at end of first year and was replaced by Mr. Sullivan.

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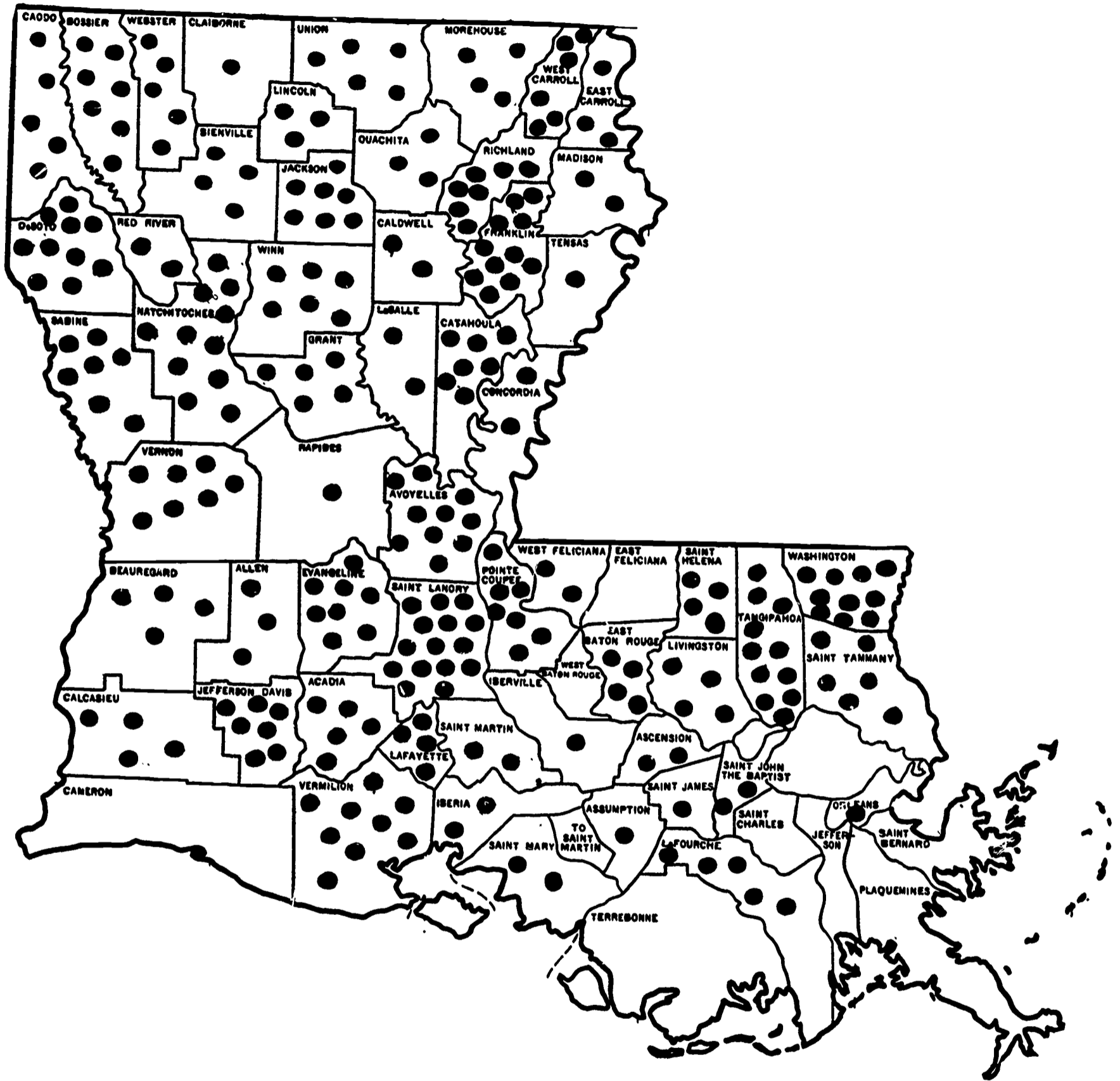
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VOCATIONAL AGRICULTURE DEPARTMENTS  
IN LOUISIANA



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INTRODUCTION OF THE STUDY

Rural boys are constantly under pressure to improve their chances for finding and pursuing a satisfactory career. For them proper choice of an occupation is a very special problem, demanding unusual treatment. They face career barriers not common to other youth, for more than one-half of them must migrate to populated centers to seek occupational opportunities. There -- on the home grounds of better prepared youth -- they must compete for suitable careers.

Fortunately, most rural boys have a "built-in" vocational advantage, providing they choose among the great host of occupations available to them in agriculture. Their apprenticeship on the farm is the key to the edge they hold over others having similar career aspirations.

Actually, growing up on the farm gives a boy a head start towards an occupation. It provides him with an occupational background the city boy can't acquire -- an understanding of farm and rural life. For, farm experience is definitely preferred to hold thousands of different jobs that have connections with farming. Moreover, knowledge and skill in agricultural subjects acquired above the apprenticeship level have real market value in the work world.

Clearly, it is to the interest of the national economy not to let farm know-how and experience go to waste.

Unquestionably, there is no more satisfying life than being a farmer -- 40 acres, a horse, a milk cow and a gun constituted the first great American dream. If a boy wants and can farm -- has the necessary land and capital or can get it -- then he certainly ought to farm, for his production can be vastly important to the general welfare.

But, the simple truth is that relatively few rural boys can become owners and operators of successful farms. Logically, the rest of them -- those who must plan a lifetime away from the farm -- should be encouraged to use their occupational assets most effectively -- in agricultural careers that are farm connected.

Agriculture in the state and nation has experienced startling developments at amazing speeds. Advancing farm technology and mechanization, in addition to the use of petro-chemicals in plant and animal protection, have combined to make possible greater production with fewer farm workers. Moreover, specialized production has followed the constant pressure for the substitution of capital for labor. As a consequence, farmers have grown more dependent upon others besides farm laborers, as their operations grow larger and more complex.

Agricultural communities now tend towards urban-country communities having greatly diversified but common interests--the production, processing and marketing of farm products. Farmers now look to a battery of businesses and agencies in town to service their production requirements, while still another group of town concerns look to the farmers for raw products to process and market.

This is but a portion of the long and consistent pattern of change in farming, including the substitution of increasing amounts of capital for labor, larger and fewer farms with more specialization, the movement towards more mechanization, and the use of petro-chemical products in farm production.

Emerging in towns and cities, along with changes on the farm, is a large and growing segment of the economy known as nonfarm agricultural business, a vital part of the agricultural industry. It offers proof that advancing technology does not necessarily result in a new loss of jobs, but actually creates new jobs and occupations which require workers with new skills. Undoubtedly, many people of both sexes who have left the farm can be found employed in urban areas by businesses engaged in servicing the farmer or handling his products.

Unfortunately, little information has been available showing actual numbers employed, the jobs held, worker qualifications and compensation, along with the kind and number of employing concerns involved.

Yet, generally, it is known that occupations connected with farming are increasing, as farm workers decrease. The business of handling farm machinery and equipment serves to illustrate this development: tractors and tractor equipment save countless man hours on the farm, but many knowledgeable workers are required off the farm to design, manufacture, distribute and service these machines.

It is towards these kinds of jobs that great numbers of youth leaving the farm may wisely direct themselves, assuming that they will obtain the considerable amount of education and training required for job entry and progress, for jobs in nonfarm agricultural businesses are distinctive and require workers to function predictably.

Adjusting human resources on the farm to the needs of agriculture is a major problem of the middle 1960's and the decade ahead, principally because the farm has more youth than can be profitably employed as adults. Estimates indicate that in the decade ahead, only one commercial farm will be available for each 10 farm reared boys reaching maturity.

A logical solution to the problem lies in efforts to step up occupational training to include retraining and guidance programs at the high school level so excess farm-reared youth may move into occupations offering them the best opportunity to "cash-in" on their farm experience. Logically adjusting the educational system for rural youth to provide them with the necessary occupational training to meet the requirements of modern agriculture is a process that must take into account the occupations making up the nonfarm sectors of the economy.

This need to identify jobs in nonfarm agriculture has long existed, together with training programs at the high school level to prepare farm youth for them. Appreciable acknowledgment of the need was made in December of 1963, when the State Board of Liquidation of the State Debt agreed to underwrite a survey of nonfarm agricultural occupations in the major metropolitan areas of the state.

These areas were found to contain 1,067 businesses and agencies considered a part of the agricultural economy. Together they employed 30,300 workers, and of this number 9,087 were required to have agricultural competencies relating to 1,582 different job titles

Agricultural jobs of even more importance to farm youth are those located nearest to them -- those in agricultural businesses and agencies located outside the metropolitan areas in the host of the more rural

centers of population. Moreover, occupational opportunities in nonfarm agriculture offered by agricultural concerns located in the towns and villages of the state may equal or even exceed those in the metropolitan areas. The chief concern of this study was to identify and describe all non-farm agricultural jobs in both city and village.

### Design of the Study

This research grew out of provisions of the Morse-Perkins Act (P.L. 88-210) which relate specifically to vocational agriculture and job training.

...any amounts (money) allotted for vocational agriculture may be used for vocational education in any occupation involving knowledge and skill in agricultural subjects...; and

...(provide) vocational education which is realistic in the light of actual or anticipated opportunities for gainful employment...suited to the ... needs, interests and ability to benefit from such training...

Clearly, these provisions encourage the development of new programs in vocational agriculture, leading to careers in agriculture other than farm production -- that the traditional program, to train for proficiency in farming occupations, must give way to more comprehensive training made up of several courses of study; all in preparation for agricultural careers but involving different agricultural knowledge and skills.

Equally clear in the Act is the provision defining the quality of training to be provided -- that it be realistically geared to actual job opportunities and offered to those who have the interest, need and ability to profit from such training.

Presumably, there is a place in agriculture for farm youth who wish to remain within the general framework of the industry, but are

unable to or do not aspire to farming as a career. Where this place is and what it will take in the way of education and training to get there is a major concern of this research.

### The Problem

This research was designed to discover nonfarm agricultural jobs in Louisiana, to identify the agricultural competencies they require, and to classify them by occupations or clusters for use as bases for developing programs in vocational agriculture. More specifically the objectives were:

1. To identify and describe present and emerging agricultural occupations, other than farming and ranching, for which knowledge and skill in agriculture is a requirement for job entry;
2. To develop job title descriptions for titles found in all nonfarm agricultural occupational families;
3. To cluster or categorize job titles according to major sectors of nonfarm agricultural occupational families;
4. To develop suggested training programs for use in vocational agriculture classes having students with occupational objectives in nonfarm agriculture;
5. To demonstrate and evaluate training programs in pilot centers at the high school level;
6. To develop leadership in vocational education, especially in the service of vocational agriculture.

The research takes into account the great diversity of Louisiana agriculture which offers a wide variety of occupational opportunities involving equally diverse agricultural knowledge and skill and makes necessary a number of different training programs in vocational agriculture. Hence, to gain the key factors required for developing new and more timely training the research was conducted statewide, approximating 100 per cent of the nonfarm agricultural businesses and agencies having workers with agricultural competencies.

The scope of the research attempted required a two-phase approach; first, a survey of nonfarm agricultural businesses and agencies located in the seven metropolitan areas of the state, and second, repeating the survey in the smaller towns and cities of the state.

A grant of \$25,000 from the State Board of Liquidation of the State Debt funded Phase One, while a grant of \$94,000 from the U. S. Office of Education, 4 (c) funds, funded Phase Two under contract number OE 5-85-040.

Research conducted under Phase One was reported under Agricultural Education Series Numbers 4, 6, 7, 8, 9, 10, 11, and 12, Louisiana State University, Baton Rouge, Louisiana. This report combines Phases One and Two, giving statewide coverage of nonfarm agricultural occupations in Louisiana.

#### Procedure

Both Phases One and Two of the study were descriptive, using the survey method and the interview technique for obtaining needed information. The selection of metropolitan areas to include in Phase One was effected by general acknowledgment of areas in Louisiana considered to be metropolitan: Alexandria, Baton Rouge, Lafayette, Lake Charles, Monroe, New Orleans, and Shreveport.

Some 90 smaller towns and villages -- those within or adjacent to educational centers having vocational agriculture programs -- were covered by Phase Two.

Firms to be surveyed in each area included in the study were determined by state and local Employment Security Divisions, Chambers of Commerce, the Yellow Pages of the telephone directories, and the local agricultural instructor. No concern was overlooked where one or more workers were required to have agricultural competencies in job performance.



For Phase Two the sample of 90 towns and villages included a total of 1,363 businesses and agencies having workers with agricultural knowledge and skill. Total employment amounted to 21,419 workers, with 10,938 using agricultural knowledge and skill in job performance.

The total sample, both Phase One and Two, contained 2,430 nonfarm agricultural concerns having 51,719 workers, with 20,025 required to have knowledge and skill in agricultural subjects. These workers were distributed over a total of 1,699 different job titles, each involving specific knowledge and skills in agricultural subjects.

The survey of agricultural firms located in the metropolitan areas was effected by interviewers employed and trained by University personnel, using facilities and resources supplied by the Division of Employment Security. Two interview schedules were prepared, A and B, for purposes of identifying job titles and needed competencies for job entry. Both schedules\* were pretested under actual field conditions -- they are placed in the Appendix. In design, they follow general patterns developed at the National Center in Columbus, Ohio.

Job titles in a particular concern were identified and defined by management, along with the agricultural knowledge and skill required for entry and advancement.

Firms involved were classified according to eight categories, or occupational families:

- Farm Machinery Sales & Service
- Farm Supplies & Equipment
- Livestock & Poultry
- Crops, Forestry & Soil Conservation
- Ornamental Horticulture
- Wildlife & Recreation
- Farm Service
- Agricultural Service

---

\*See Appendix A.

Job titles were classified according to levels of employment:

Professional  
Technical  
Managerial  
Supervisory  
Sales  
Office  
Skilled  
Semiskilled  
Unskilled

Phase Two, the survey of nonfarm agricultural firms in the 90 smaller towns and villages of the state, was accomplished with the aid of 186 local teachers of vocational agriculture, plus the four research associates assigned to the project. Actual surveys were made by these teachers under the supervision of the research associates, who, along with the faculty in Agricultural Education, trained them in the use of the interview technique and the schedules employed.

Training sessions for the teachers were made a major part of an extension course, Agricultural Education 219, a problems course organized for that purpose, which extended over a period of 30 weeks when the surveys were made. Expenses incurred by the participating teachers were paid by the University, using both federal and state funds amounting to a total of \$14,588.

State funds were supplied by the Vocational Division of the State Department of Education to augment federal funds provided for the Project Number OE 5-85-040.

Information gathered in Phase Two was treated in the same manner as in Phase One.

## Treatment of Survey Information

Information obtained from 1,067 concerns surveyed in the metropolitan centers was combined with that obtained from 1,363 firms in the semi-urban and rural areas for a total of 2,430. Data were organized and presented under three general categories: (1) occupational families, (2) classification of job titles into levels of employment and training required in agricultural subjects, and (3) special requirements for job entry.

Descriptive statistical techniques were used in analyzing data. Simple frequency tabulations were employed to show job titles, levels of employment, educational levels associated with job entry, preferred residential background, farm experience and continuing education required for job advancement. Employee ages were presented by occupational family and level of employment in terms of average age of all workers, average minimum age for job entry, and average maximum age for entry. Salaries were reported according to medians by levels of employment in the various families.

Agricultural subject matter in which employees must be trained was indicated for each occupational family by employment level. Subject matter areas selected to show basic agricultural training required were: (1) Animal Science, (2) Plant Science, (3) Agricultural Business Management and Marketing, and (4) Agricultural Mechanics and Automation. At the time, each employer interviewed furnished the information about numbers of present and future employees in each job title in the business. A checklist of competencies (knowledge, skills and abilities) was completed separately for all job titles. For every item on the checklist

the employer marked the degree of competency required of employees. Average competency ratings for employees were then computed according to levels of employment. Components of each subject matter area designed to determine specialized training needs was not treated in this report but will appear in a subsequent release.

Data obtained from the 2,430 businesses and agencies surveyed were grouped according to selected occupational families: (1) Farm Machinery Sales and Service, (2) Farm Supplies and Equipment, (3) Livestock and Poultry, (4) Crops, Forestry and Soil Conservation, (5) Ornamental Horticulture, (6) Wildlife and Recreation, (7) Farm Service, and (8) Agricultural Service.

Job titles identified were classified into occupational levels, taking into consideration duties and responsibilities as well as field of activity: (1) Professional, (2) Technical, (3) Managerial, (4) Supervisory, (5) Sales, (6) Office, (7) Skilled, (8) Semiskilled, and (9) Unskilled.

Data were analyzed in the Computer Center of Louisiana State University and Agricultural and Mechanical College, Baton Rouge, Louisiana.\*

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\*See Appendix B

## PRESENTATION AND ANALYSIS OF SURVEY INFORMATION

The principal purpose of the study was to identify clusters of agricultural jobs found in agriculturally oriented businesses and agencies located in metropolitan, semi-urban, and rural areas of Louisiana, with particular emphasis on educational qualifications needed by prospective employees to effect satisfactory job entry. This analysis was made in an attempt to provide those engaged in education with a knowledge of present and emerging agricultural opportunities other than farming or ranching, which may be used for purposes of building curriculums in the public schools.

### Occupational Families

Groupings, appropriate to the nature of product processed or service performed, were developed as a means of classifying agricultural businesses, industries and agencies. These clusters were called occupational families. Each one offered a wide range of occupations, according to variations in concerns making up the several families. Specific jobs contained within a family grouping may require similar yet different skills and abilities, depending upon the level of performance and the work to be done.

The 2,430 agricultural businesses and agencies were categorized in eight major occupational families. Identity of the individual concern was lost in classification. Types of firms, industries or agencies were shown under each family according to the following arrangement:

#### Farm Machinery Sales & Service

Automation Equipment Co.  
Farm Machinery & Equipment Dealer  
Automobile Dealer  
Contractors Equipment Co.

#### Farm Machinery Sales & Service (cont.)

Farm Implement Co.  
Cotton Picker Rebuilding Co.  
Farm Implement Manufacturer  
Farm Equipment Prefabricator

Types of Firms, Industries and Agencies (continued)

Farm Supplies & Equipment

Hardware Store  
Fence Co.  
Department Store  
Feed & Seed Store  
Louisiana Agricultural Cooperatives  
Building Supply Store  
Dime Store  
Fertilizer Co.  
Wholesale Distributing Co.  
Agricultural Chemical Dealer  
Pet Market  
Garden Center  
Veterinarian Supply Co.  
Dairy Farm Equipment Dealer  
Farmers Co-op.  
Lumber Co.  
Marketing Co-op.  
Rice & Feed Mill  
Auto Supply Co.  
Motor Supply  
Blowpipe Co.  
Gin and Mill Supply Co.  
Butane Co.  
Spray & Equipment Co.  
Farm Store  
General Merchandise Co.  
Seed Co.  
Farm Supply  
Tire Service Co.  
Drug Store (Veterinarian Supplies)  
Forestry Equipment Dealer

Livestock & Poultry

Slaughter House  
Butcher Shop  
Meat Market  
Egg Processing Co.  
Milk Distributorship  
Creamery  
Wholesale Meat Distributor  
Dairy Products Co.  
Boarding Stables  
Livestock Auction Barn  
Rendering Plant  
Poultry Market  
Packing Plant  
Soap Co.  
Hatchery  
Grocery Store  
Poultry & Egg Processing Co.

Livestock & Poultry (cont.)

Poultry By-Products Co.  
Stockyard  
Frozen Food Locker  
Sausage Co.  
Louisiana State Milk Testing Div.  
Cattle Dealer Company  
Hide Company.

Crops, Forestry & Soil Conservation

Louisiana Forestry Commission  
Fruit Exchange Co.  
Tree Service Co  
Logging Co.  
Produce Co.  
Rice By-Products Co.  
Coffee Co.  
Fruit Co.  
U.S. Forest Service  
Rice Mill  
Wood Preserving Co.  
Grain Co.  
Canned Food Co.  
Lumber Co. (sawmill)  
Tomato Co.  
Rice Dryer  
Timber Contractor  
Seed Dealer  
Cotton Warehouse  
Wood Yards  
Sugar Refinery  
Compress & Warehouse Co.  
Seed Cleaning Plant  
Syrup Mill  
Sweet Potato Co.  
Tree Nursery  
Vaneer Company  
Stake Mill  
Craft Shop  
Fruit & Vegetable Market  
Feed Mill  
Oil Mill  
Pulpwood Co.  
Food Store  
Cotton Gin  
Cotton Brokerage Co.  
Paper Co.  
Planting Co.  
Sugar Co-op.  
Cotton Products Co  
Creosoting Co.

Types of Firms, Industries and Agencies (continued)

Crops, Forestry & Soil Conservation (cont.)

Fruit Stand

Cotton Division, Marketing Service

Forestry Consultant Co.

Irrigation Company

Plywood Mill

Ornamental Horticulture

Garden Center

Nursery

Florist

Landscape Co.

Wholesale Florist

Horticulture Products Co.

Florist Gift Shop

Greenhouse

Wildlife & Recreation

Golf Course

State Park

Riding Stable

Taxidermist

S.P.C.A.

City Park

National Park

Playground

Golf Course Service Co.

La. Wildlife & Fisheries Com.

State Park & Recreation Com.

Farm Service

Welding Co.

Machine Shop

Electric Power Supplier

Pest Exterminating Co.

Artificial Breeding Assoc.

Credit Associations

Farmers Home Administration

Radio Station

Realty Co.

Aero Farm Service

Water Well Co.

Auto Repair Shop

Research Consulting Firm

Building Contractor

Livestock Brand Commission

Television Station

Farm Service (continued)

Insurance Co.

Farm Service Laboratory

Airplane Service

Hay Harvesting Co.

School Canning Center

Small Motor Shop

Sheet Metal

Creosoting Co.

Seeding and Sodding Co.

Saw Repairing Co.

Dragline & Bulldozer Service

Cabinet Shop

Concrete Co.

Plumbing & Heating

Canal Company

Farm Service Laboratory

Land & Timber Company

Fertilizer & Lime Service

Motor Repair Shop

D.H.I.A. Supervisor

Farm Dusting Co.

Iron Works

Land & Oil Co.

Blacksmith

Farm Bureau

Farm Tractor Service

Agricultural Service

Animal Hospital

Veterinarian

Agricultural Stabilization &  
Conservation

State College

Agricultural Extension Service

State Dept. of Agriculture

Vocational Agriculture Teacher

State Market Commission

State Dept. of Education

Animal Disease Eradication (USDA)

Bank

State Land Office

Levee Board

Forestry Experiment Station

Plant Pest Control (USDA)

Federal Land Bank Association

U.S. Air Force Base

State Fair Association

Experiment Station

U.S. Dept. of Interior.

## Number of Nonfarm Agricultural Concerns

This report combined data from 2,430 concerns. The study of seven metropolitan centers covered 1,067 establishments engaged in some type of agricultural business, while the 90 semi-urban and rural areas contained 1,363 agricultural concerns.

TABLE I

### NUMBER OF AGRICULTURAL BUSINESSES, INDUSTRIES, AND AGENCIES GROUPED BY OCCUPATIONAL FAMILY, 1965 AND 1966

Occupational Family	State				Total State	Per Cent	
	Metropolitan Summary	Area I	Area II	Area III			Area IV
Farm Machinery							
Sales & Service	38	26	35	53	24	176	7.3
Farm Supplies & Equipment	251	60	94	88	58	551	22.7
Livestock & Poultry	162	38	49	62	40	351	14.4
Crops, Forestry & Soil Conservation	152	48	98	78	18	394	16.2
Ornamental Horticulture	111	6	11	21	11	160	6.6
Wildlife & Recreation	29	2	12	3	0	46	1.9
Farm Service	178	31	87	52	25	373	15.3
Agricultural Service	146	22	94	86	31	379	15.6
<b>Total</b>	<b>1,067</b>	<b>233</b>	<b>480</b>	<b>443</b>	<b>207</b>	<b>2,430</b>	<b>100.0</b>

A trend evident throughout the nation was apparent in Louisiana in that a concentration of businesses were engaged in servicing production agriculture. The importance of service concerns in Louisiana becomes apparent when Table I is analyzed. Farm Supplies and Equipment, Agricultural Service, Farm Service, and Farm Machinery Sales and Service made up 60.9 per cent of the total number of businesses.



Actual processing of farm products into consumable commodities was limited largely to two families: Livestock and Poultry; Crops, Forestry and Soil Conservation. However, these fields also contain a large variety of occupations and specific jobs relating to the servicing of farmer needs.

Agricultural establishments were well distributed over the state with the exception of those under Agricultural Services. In this area a concentration in the metropolitan centers, largely in the form of state and federal agencies, was noted. An interesting observation centered around a heavy population of Farm Machinery Sales and Services in the southwest region of the state. The dimensions of agriculture in this section, led by the vast operations of the rice and sugar cane industries, accounted for this concentration.

The rank of occupational families according to number of establishments was as follows:

- Farm Supplies & Equipment
- Crops, Forestry & Soil Conservation
- Agricultural Service
- Farm Service
- Livestock & Poultry
- Farm Machinery Sales & Service
- Ornamental Horticulture
- Wildlife & Recreation

Special interest centered around the number of firms engaged in Ornamental Horticulture. The development of this phase of nonfarm agriculture was indicative of urbanization and increasing occupational opportunities provided in this area of service. Ornamental Horticulture businesses were concentrated in the metropolitan centers.

The development shown by concerns and agencies engaged in Wildlife and Recreation was equally significant. This growth includes public parks, golf courses, and wildlife conservation agencies at the state and federal

levels. It is of special interest to farmers and landowners with land available for diversion into recreational tracts.

#### Number Employed in Nonfarm Agriculture

A total of 51,719 employees was found in the 2,430 agriculturally oriented businesses and agencies participating in the survey. Of this number 20,025, or 38.7 per cent, were required to have competencies in agriculture as a job requirement, with an expected increase to 21,999 in the next five years -- an overall rise of 9.8 per cent.

Data in Table II, indicating total employment in nonfarm agricultural firms, not only pointed up the economic importance of agriculture in Louisiana, but identified occupational possibilities other than farming where a general knowledge of agriculture was a requirement for job entry.

Occupational families, when ranked according to number of workers appeared as follows:

Crops, Forestry & Soil Conservation  
Farm Supplies & Equipment  
Livestock & Poultry  
Agricultural Service  
Farm Service  
Farm Machinery Sales & Service  
Wildlife & Recreation  
Ornamental Horticulture

Generalizations drawn from data presented in Table II are listed below:

1. Since this survey was statewide, including metropolitan centers as well as semi-urban and rural areas, the need for agricultural training and skill may have been minimized in certain cases. Of the total 51,719 workers it was found that 20,025, or 38.7 per cent, needed to have knowledge and skill in agriculture to contribute positively toward their occupation. On the basis studies completed in other states this percentage is low.

TABLE II

NUMBER OF PERSONS EMPLOYED IN AGRICULTURAL BUSINESSES, INDUSTRIES,  
AND AGENCIES, AND NUMBER OF EMPLOYEES NEEDING AGRICULTURAL  
COMPETENCIES, BY OCCUPATIONAL FAMILY

Occupational Family	Total Number of Employees	Current Employment	Employees Needing Agricultural Competencies		Per Cent Increase Five Years Hence
			Current Employees Needing Agri. Competencies	Expected Employment Five Years Hence	
Farm Machinery					
Sales & Service	3,038	1,828	60.1	2,248	22.9
Farm Supplies & Equipment	8,360	3,022	36.1	3,383	11.9
Livestock & Poultry	8,298	3,194	38.4	3,398	6.3
Crops, Forestry & Soil Conservation	17,040	6,061	35.5	6,390	5.4
Ornamental Horticulture	1,076	928	86.2	1,049	13.0
Wildlife & Recreation	1,641	373	22.7	437	17.1
Farm Service	5,631	1,844	32.7	2,082	12.9
Agricultural Service	6,635	2,775	41.8	3,012	8.5
Total	51,719	20,025	38.7	21,999	9.8

2. Even though Ornamental Horticulture ranked eighth among the occupational families in total number of workers, it was highest in percentage of workers (86.2) needing knowledge and skill in agricultural subjects in order to perform job requirements. This reflects the rapid development of the horticulture industry and the demand for trained workers to meet the mushrooming needs of persons in the large cities for professional advice and assistance in their landscaping problems.
3. Farm Machinery Sales and Service, while ranking sixth among the occupational families, was second in number of workers needing agricultural competencies. These data indicated the rapid growth of the agricultural machinery business and the extent of mechanization in production agriculture.
4. All eight of the occupational families were expected to grow in number of employees trained in agricultural subjects. Projected growth in employees during the coming five-year period ranged from a low of 5.4 per cent in Crops, Forestry and Soil Conservation, to a high of 22.9 per cent in Farm Machinery Sales and Service. The overall anticipated increase was 9.8 per cent.

A ranking of occupational families, according to numbers of workers needing agricultural competencies, was as follows:

Crops, Forestry & Soil Conservation  
 Livestock & Poultry  
 Farm Supplies & Supplies  
 Agricultural Service  
 Farm Service  
 Farm Machinery Sales & Service  
 Ornamental Horticulture  
 Wildlife & Recreation

#### Job Titles According To Occupational Families of Employment

The 20,025 workers serving in an agricultural capacity in the 2,340 establishments surveyed held 1,699 job titles, ranging in performance from the level of laborer to professional status.

In this study, a job title refers to a specific position held by a worker, or number of workers, who must have for satisfactory performance a knowledge and skill in agriculture of a particular nature.

TABLE III

NUMBER OF JOB TITLES IN AGRICULTURAL OCCUPATIONS  
OTHER THAN FARMING, BY OCCUPATIONAL FAMILIES

Occupational Family	Number of			Number of Job Titles Five Years Hence	Per Cent Job Title Increase Five Years Hence
	Job Titles		Total		
	Urban	Rural			
Farm Machinery Sales & Service	41	70	111	135	21.6
Farm Supplies & Equipment	129	118	247	291	17.8
Livestock & Poultry	169	78	247	264	6.8
Crops Forestry & Soil Conservation	223	231	454	475	4.7
Ornamental Horticulture	66	10	76	84	10.4
Wildlife & Recreation	40	25	65	67	2.7
Farm Service	124	94	218	238	9.0
Agricultural Service	206	75	281	308	9.6
Total	998	701	1,699	1,862	9.5

A detailed breakdown of job titles was shown for each of the occupational families, together with the number of workers in each job title.\*

Crops, Forestry and Soil Conservation contained the largest number of job titles as well as the largest number of workers using a knowledge and skill in agricultural subjects. A ranking of families according to number of job titles appears below:

- Crops, Forestry & Soil Conservation
- Agricultural Service
- Farm Supplies & Equipment
- Livestock and Poultry
- Farm Service
- Farm Machinery Sales & Service
- Ornamental Horticulture
- Wildlife & Recreation

All of the families were expected to grow, adding 163 job titles over the coming five-year period. The anticipated increase in number of job titles implies additional occupational opportunities for youth in an expanding agricultural complex.

Each of the occupational families provided job titles in sufficient numbers to challenge the occupational interests of youth who indicate a desire to enter a nonfarm agricultural occupation. The growth trend indicated will make nonfarm agriculture in the state even more appealing to young people, particularly those with a rural background.

#### Levels of Employment by Occupational Family

Available job titles at the different levels of employment within an occupational family were closely related to the occupational opportunities available to young people in nonfarm agriculture. Level of employment was indicative of salary or wages that can be expected and formal education

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\*See Appendix C.

required, while the job title indicated lines of applied training to be given consideration.

Table IV indicates these levels of employment found within the eight occupational families.

Employees at the professional level were concentrated in the Agricultural Service, and Crops, Forestry and Soil Conservation families. These families required a large proportion of college graduates trained in agriculture.

Employees at the technical level were found primarily in Agricultural Service; Crops, Forestry and Soil Conservation; Farm Service, and Livestock and Poultry. The need for technicians is relatively recent, and opens new fields of opportunity for youth.

Managerial and supervisory levels shared the spotlight of importance as illustrated by the numbers serving in these capacities in the firms surveyed. Employees at these levels were well distributed in all the concerns and emphasized the need for workers whose training must cover a broad area in agriculture as well as business practices and principles.

All firms participating in the study employed salesmen who were required to have knowledge and skill in agriculture. The importance of salesmen to the agriculturally oriented business was illustrated by the large number employed in some of the families. In these families the growth and development of many of the businesses depend upon the ability of their salesmen. Sales personnel made up 9.7 per cent of the total workers having agricultural training.

An unexpected development was the large number of office personnel designated by employers as needing certain skills in agriculture. This level of employment made up 7.2 per cent of the total.

TABLE IV

## TOTAL EMPLOYEES WITH AGRICULTURAL TRAINING, BY LEVELS OF EMPLOYMENT IN OCCUPATIONAL FAMILIES

Occupational Family	Levels of Employment								Per Cent		
	Prof.	Tech.	Mana-gerial	Super-viso-ry	Sales	Office	Skilled	Semi-skilled		Un-skilled	Total
Farm Machinery Sales & Service	31	0	362	82	354	88	730	173	8	1,828	9.1
Farm Supplies & Equipment	25	16	805	96	677	306	138	597	362	3,022	15.1
Livestock & Poultry	3	113	555	218	476	182	504	1,046	97	3,194	16.0
Crops, Forestry & Soil Conservation	363	169	621	282	233	246	919	1,941	1,287	6,061	30.3
Ornamental Horticulture	20	2	199	22	83	13	102	61	426	928	4.6
Wildlife & Recreation	17	2	34	51	0	1	10	42	216	373	1.9
Farm Service	64	164	381	87	111	155	395	373	114	1,844	9.2
Agricultural Service	793	820	217	92	16	453	153	128	103	2,775	13.8
Total	1,316	1,286	3,174	930	1,950	1,444	2,951	4,361	2,613	20,025	100.0
Per Cent	6.6	6.4	15.8	4.7	9.7	7.2	14.8	21.8	13.0	100.0	



A total of 7,312 workers, or 36.6 per cent, was classified as skilled and semiskilled. Employers interviewed indicated that these workers were very important to the operation of the business and were usually required to have knowledge and skill in agricultural subjects in specialized areas. Unskilled level employees (13 per cent) were reported as needing agricultural skills, but usually on a limited scale.

Eliminating the unskilled, a ranking of occupational levels by number of workers gives a very clear picture of occupational opportunities offered at each level:

- Semiskilled
- Managerial
- Skilled
- Sales
- Office
- Professional
- Technical
- Supervisory

Professional personnel employed in the state universities and colleges were not included in this study. Inclusion of these employees would have moved the professional level to a higher rank inasmuch as Louisiana State University alone has a staff of over 800 professional agriculturalists. The number of technicians would also have increased.

#### Job Entry Age Into Nonfarm Agricultural Occupations

The mean age for all employees was computed by occupational family and for each level of employment. Consideration was given to the present age, minimum age for job entry, and the maximum age for entry.

Table V shows averages of ages for all levels of employment. Subsequently Tables VI-1 through VI-8 present the same information by occupational families and level of employment.

TABLE V

AVERAGE PRESENT, AVERAGE MINIMUM AND AVERAGE MAXIMUM AGE OF ENTRY  
INTO OFF-THE-FARM AGRICULTURAL OCCUPATIONS,  
BY LEVEL OF EMPLOYMENT

Level of Employment	Present	Minimum	Maximum
Professional	34	24	47
Technical	37	24	50
Managerial	39	26	50
Supervisory	38	25	50
Sales	36	23	49
Office	34	23	48
Skilled	34	22	48
Semiskilled	33	21	48
Unskilled	34	21	48

The average age of all employees required to have agricultural competencies varied little among the families and the different levels of employment. Ages of employees ranged from 33-39, with 34 years representing the average age.

Minimum employment entry age ranged from 21 to 26, giving an average for all levels of employment of approximately 23 years. The lack of younger people in some of the categories was attributed to a qualifications deficit, with compulsory military service also contributing to the shortage.

TABLE VI-1

AVERAGE PRESENT, MINIMUM AND MAXIMUM AGE OF ENTRY INTO OFF-THE-FARM  
 AGRICULTURAL OCCUPATIONS, BY OCCUPATIONAL FAMILY  
 AND LEVEL OF EMPLOYMENT

FARM MACHINERY SALES AND SERVICE

Level of Employment	Present	Minimum	Maximum
Professional	31	25	41
Technical	38	25	50
Managerial	37	27	48
Supervisory	38	28	47
Sales	36	23	49
Office	33	22	47
Skilled	35	22	47
Semiskilled	31	21	44
Unskilled	38	20	50

TABLE VI-2

AVERAGE PRESENT, MINIMUM AND MAXIMUM AGE OF ENTRY INTO OFF-THE-FARM  
 AGRICULTURAL OCCUPATIONS, BY OCCUPATIONAL FAMILY  
 AND LEVEL OF EMPLOYMENT

FARM SUPPLIES AND EQUIPMENT

Level of Employment	Present	Minimum	Maximum
Professional	36	25	46
Technical	39	27	53
Managerial	39	26	50
Supervisory	36	26	48
Sales	35	23	48
Office	34	22	47
Skilled	35	22	46
Semiskilled	32	21	47
Unskilled	37	20	47

TABLE VI-3

AVERAGE PRESENT, MINIMUM AND MAXIMUM AGE OF ENTRY INTO OFF-THE-FARM  
 AGRICULTURAL OCCUPATIONS, BY OCCUPATIONAL FAMILY  
 AND LEVEL OF EMPLOYMENT

LIVESTOCK AND POULTRY

Level of Employment	Present	Minimum	Maximum
Professional	30	25	50
Technical	36	23	51
Managerial	37	26	48
Supervisory	35	24	49
Sales	34	22	51
Office	35	22	48
Skilled	34	21	48
Semiskilled	32	22	48
Unskilled	31	25	46

TABLE VI-4

AVERAGE PRESENT, MINIMUM AND MAXIMUM AGE OF ENTRY INTO OFF-THE-FARM  
 AGRICULTURAL OCCUPATIONS, BY OCCUPATIONAL FAMILY  
 AND LEVEL OF EMPLOYMENT

CROPS, FORESTRY AND SOIL CONSERVATION

Level of Employment	Present	Minimum	Maximum
Professional	35	23	46
Technical	36	25	49
Managerial	39	27	50
Supervisory	40	28	51
Sales	39	25	48
Office	35	23	48
Skilled	38	25	51
Semiskilled	37	21	47
Unskilled	37	22	50

TABLE VI-5

AVERAGE PRESENT, MINIMUM AND MAXIMUM AGE OF ENTRY INTO OFF-THE-FARM  
AGRICULTURAL OCCUPATIONS, BY OCCUPATIONAL FAMILY  
AND LEVEL OF EMPLOYMENT

ORNAMENTAL HORTICULTURE

Level of Employment	Present	Minimum	Maximum
Professional	31	23	42
Technical	30	22	45
Managerial	42	26	50
Supervisory	36	25	50
Sales	35	22	48
Office	32	25	43
Skilled	30	22	46
Semiskilled	32	20	49
Unskilled	32	21	48

TABLE VI-6

AVERAGE PRESENT, MINIMUM AND MAXIMUM AGE OF ENTRY INTO OFF-THE-FARM  
AGRICULTURAL OCCUPATIONS, BY OCCUPATIONAL FAMILY  
AND LEVEL OF EMPLOYMENT

WILDLIFE AND RECREATION

Level of Employment	Present	Minimum	Maximum
Professional	41	24	55
Technical	42	22	53
Managerial	40	24	53
Supervisory	41	24	58
Sales	-	-	-
Office	30	25	50
Skilled	35	25	50
Semiskilled	33	24	51
Unskilled	38	22	53

TABLE VI-7

AVERAGE PRESENT, MINIMUM AND MAXIMUM AGE OF ENTRY INTO OFF-THE-FARM  
AGRICULTURAL OCCUPATIONS, BY OCCUPATIONAL FAMILY  
AND LEVEL OF EMPLOYMENT

FARM SERVICE

Level of Employment	Present	Minimum	Maximum
Professional	33	22	44
Technical	34	23	47
Managerial	39	26	50
Supervisory	39	20	47
Sales	38	22	50
Office	36	22	50
Skilled	34	23	47
Semiskilled	31	20	46
Unskilled	32	20	46

TABLE VI-8

AVERAGE PRESENT, MINIMUM AND MAXIMUM AGE OF ENTRY INTO OFF-THE-FARM  
AGRICULTURAL OCCUPATIONS, BY OCCUPATIONAL FAMILY  
AND LEVEL OF EMPLOYMENT

AGRICULTURAL SERVICE

Level of Employment	Present	Minimum	Maximum
Professional	37	24	51
Technical	38	22	49
Managerial	41	28	52
Supervisory	39	25	50
Sales	36	24	50
Office	36	22	50
Skilled	32	20	48
Semiskilled	36	21	49
Unskilled	30	21	42

Most employers indicated that younger people with the necessary education and training would be acceptable. An analysis of the maximum job entry age showed employers were of the opinion that the firm should be able to realize 15 to 20 years service from an employee prior to retirement. The average maximum entry age for all levels was approximately 40 years.

A review of the mean ages for all families revealed that the differences in ages were not significant. All families and all levels of employment contained an agricultural working force averaging about 34 years. The average minimum entry age was 23, with 48 being maximum.

#### Monthly Salaries or Wages In Occupations Other Than Farming

Data gathered by the study indicated that as a matter of general procedure, employees were paid in accordance with their background of training and responsibilities, as well as their tenure with a particular organization.

A factor influencing average salaries in at least four families -- Crops, Forestry and Soil Conservation; Ornamental Horticulture; Wildlife and Recreation, and Livestock and Poultry -- was the large number of semi-skilled and unskilled workers. This group of employees can never hope to achieve a salary, even after years of tenure, to match the beginning salaries of the other levels of employment.

The occupational families varied in salary scales for the several levels, yet generally professional and managerial levels were at the top of the scale with unskilled at the bottom.

As noted in Table IV, 35 per cent of the total agricultural workers were found in the semiskilled and unskilled levels of employment. These

levels require lesser amounts of education and training, did not offer satisfactory beginning pay, and had definite limitations for pay increases following tenure. At the same time four levels of employment -- professional, technical, managerial, and supervisory -- accounted for 33.5 per cent of the agricultural workers. It seems significant that these four categories headed the list in terms of starting and maximum salaries. These data have definite implications for designing programs in terms of future job demands.

TABLE VII

AVERAGE MEDIAN MONTHLY SALARY OF OCCUPATIONS OTHER THAN FARMING, BY LEVEL OF EMPLOYMENT

Level of Employment	Beginning	Present	Maximum
Professional	\$441.95	\$582.44	\$682.01
Technical	369.34	446.57	532.40
Managerial	385.85	494.65	605.31
Supervisory	369.60	460.78	512.85
Sales	295.69	394.04	489.07
Office	271.10	333.74	385.34
Skilled	283.65	345.21	406.10
Semiskilled	217.60	266.10	307.79
Unskilled	190.65	218.30	244.87

These data indicate that 24.5 per cent of the employees in firms surveyed performed jobs classified in the sales and skilled employment levels. Salaries in these levels were below those reported for the technical and supervisory workers. However, starting salaries for this group were good and there were indications of possibilities for salary advancement as the individual gained experience and tenure. This seemed to offer incentive for young workers who meet the qualifications outlined by employers.



TABLE VIII-1

MEDIAN MONTHLY SALARY OF OCCUPATIONS OTHER THAN FARMING,  
BY OCCUPATIONAL FAMILIES AND LEVEL OF EMPLOYMENT

FARM MACHINERY SALES AND SERVICE

Level of Employment	Median Monthly Salary		
	Beginning	Present	Maximum
Professional	\$601.00	\$676.00	\$723.72
Technical	276.00	426.00	576.00
Managerial	424.07	542.66	651.00
Supervisory	381.55	438.50	506.00
Sales	333.50	463.50	613.50
Office	239.46	312.90	383.14
Skilled	282.87	371.75	450.33
Semiskilled	223.32	265.70	296.00
Unskilled	183.33	200.00	200.00

TABLE VIII-2

MEDIAN MONTHLY SALARY OF OCCUPATIONS OTHER THAN FARMING,  
BY OCCUPATIONAL FAMILIES AND LEVEL OF EMPLOYMENT

FARM SUPPLIES AND EQUIPMENT

Level of Employment	Median Monthly Salary		
	Beginning	Present	Maximum
Professional	\$426.00	\$501.00	\$626.00
Technical	526.00	576.00	626.00
Managerial	362.00	479.00	570.00
Supervisory	348.00	430.00	496.00
Sales	250.00	333.00	397.00
Office	230.00	294.00	355.00
Skilled	275.00	336.00	390.00
Semiskilled	236.00	286.00	326.00
Unskilled	193.00	220.00	248.00

TABLE VIII-3

MEDIAN MONTHLY SALARY OF OCCUPATIONS OTHER THAN FARMING,  
BY OCCUPATIONAL FAMILIES AND LEVEL OF EMPLOYMENT

LIVESTOCK AND POULTRY

Level of Employment	Median Monthly Salary		
	Beginning	Present	Maximum
Professional	-	-	-
Technical	\$386.00	\$463.50	\$532.25
Managerial	355.41	455.54	601.00
Supervisory	379.12	446.83	519.75
Sales	262.54	344.75	396.00
Office	212.76	266.39	321.83
Skilled	252.56	309.62	353.73
Semiskilled	204.22	244.93	285.88
Unskilled	187.50	187.50	226.00

TABLE VIII-4

MEDIAN MONTHLY SALARY OF OCCUPATIONS OTHER THAN FARMING,  
BY OCCUPATIONAL FAMILIES AND LEVEL OF EMPLOYMENT

CROPS, FORESTRY AND SOIL CONSERVATION

Level of Employment	Median Monthly Salary		
	Beginning	Present	Maximum
Professional	\$358.50	\$661.00	\$717.66
Technical	422.87	485.37	560.37
Managerial	423.58	461.00	594.10
Supervisory	415.29	480.41	534.33
Sales	371.83	461.71	538.50
Office	276.96	333.95	380.76
Skilled	305.74	362.98	410.23
Semiskilled	242.32	291.79	351.31
Unskilled	194.08	234.57	263.50

TABLE VIII-5

MEDIAN MONTHLY SALARY OF OCCUPATIONS OTHER THAN FARMING,  
BY OCCUPATIONAL FAMILIES AND LEVEL OF EMPLOYMENT

ORNAMENTAL HORTICULTURE

Level of Employment	Median Monthly Salary		
	Beginning	Present	Maximum
Professional	\$326.00	\$476.00	\$576.00
Technical	175.00	175.00	175.00
Managerial	366.00	471.00	601.00
Supervisory	301.00	375.00	375.00
Sales	180.00	245.00	339.00
Office	276.00	326.00	376.00
Skilled	180.00	235.00	285.00
Semiskilled	178.00	220.00	270.00
Unskilled	184.00	234.00	257.00

TABLE VIII-6

MEDIAN MONTHLY SALARY OF OCCUPATIONS OTHER THAN FARMING,  
BY OCCUPATIONAL FAMILIES AND LEVEL OF EMPLOYMENT

WILDLIFE AND RECREATION

Level of Employment	Median Monthly Salary		
	Beginning	Present	Maximum
Professional	\$438.50	\$567.66	\$701.00
Technical	351.00	426.00	526.00
Managerial	238.50	351.00	451.00
Supervisory	288.50	451.00	501.00
Sales	-	-	-
Office	376.00	426.00	426.00
Skilled	401.00	451.00	501.00
Semiskilled	226.00	301.00	326.00
Unskilled	200.00	234.33	263.50

TABLE VIII-7

MEDIAN MONTHLY SALARY OF OCCUPATIONS OTHER THAN FARMING,  
BY OCCUPATIONAL FAMILIES AND LEVEL OF EMPLOYMENT

FARM SERVICE

Level of Employment	Median Monthly Salary		
	Beginning	Present	Maximum
Professional	\$463.50	\$525.50	\$710.09
Technical	476.00	626.00	712.60
Managerial	432.94	556.76	663.50
Supervisory	414.88	538.50	588.50
Sales	296.00	459.33	588.50
Office	276.66	328.27	400.00
Skilled	280.16	338.81	445.04
Semiskilled	231.00	271.58	311.71
Unskilled	200.00	236.00	250.00

TABLE VIII-8

MEDIAN MONTHLY SALARY OF OCCUPATIONS OTHER THAN FARMING,  
BY OCCUPATIONAL FAMILIES AND LEVEL OF EMPLOYMENT

AGRICULTURAL SERVICE

Level of Employment	Median Monthly Salary		
	Beginning	Present	Maximum
Professional	\$480.20	\$669.94	\$719.65
Technical	341.91	394.75	551.00
Managerial	484.33	640.28	710.90
Supervisory	428.50	526.00	582.25
Sales	376.00	451.00	551.00
Office	290.02	382.48	440.06
Skilled	291.91	356.55	413.50
Semiskilled	200.00	246.83	295.44
Unskilled	183.33	200.00	251.00

## Educational Level Desired of Workers in Nonfarm Agriculture

Data indicate that education and occupational training held a priority rating in all aspects of nonfarm agriculture. Table IX gives educational level desired of workers entering nonfarm agricultural jobs, and clearly shows the emphasis placed on formal education.

An analysis of these data confirm the general belief that students planning careers in nonfarm agriculture are expected to complete high school. Only 10.6 per cent of the jobs were available to individuals not holding high school diplomas.

Emphasis placed upon college training was of special significance; 3,069, or 15.3 per cent, of the employees were listed by the employers as needing a college degree to make job entry. An additional 2,180 or 10.9 per cent, had to show some college work before they met employment qualifications. This trend was especially evident in the Agricultural Service family where 1,232 of the 2,775 employees must have college diplomas. If all university and college agricultural personnel were added, the percentage of nonfarm agricultural workers in this family would have increased sharply, making the need for college trained personnel take on added significance. It is estimated that more than 800 agricultural workers are employed in the state institutions having agricultural programs.

Employer concern over the lack of qualified youth applying for jobs in their organizations was indicated by insistence upon formal education for practically all of their future employees. Of special significance was the often expressed idea of the need for prevocational training leading to job entry.

TABLE IX

## EDUCATIONAL LEVEL DESIRED OF PERSONS ENTERING AGRICULTURAL OCCUPATIONS OTHER THAN FARMING

Occupational Family	Number of Employees	Number of Employees											
		Less Than High School		High School Graduate		Post H. S. Tech. Educ.		Some College		College Degree		No Preference	
		No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Farm Machinery Sales & Service	1,828	73	4.0	925	50.6	314	17.2	268	14.7	186	10.2	62	3.3
Farm Supplies & Equipment	3,022	261	8.6	1,749	57.9	183	6.1	372	12.3	352	11.6	105	3.5
Livestock & Poultry	3,194	509	15.9	1,692	53.0	164	5.1	300	9.4	311	9.8	218	6.8
Crops, Forestry & Soil Conservation	6,061	789	13.0	3,559	58.7	296	4.9	380	6.3	634	10.5	403	6.6
Ornamental Horticulture	928	141	15.2	438	47.2	27	2.9	111	12.0	67	7.2	144	15.5
Wildlife & Recreation	373	114	30.6	176	47.2	3	.8	25	6.7	26	6.9	29	7.8
Farm Service	1,844	163	8.8	924	50.1	202	10.9	256	13.9	261	14.2	38	2.1
Agriculture Service	2,775	65	2.3	841	30.3	149	5.4	468	16.8	1,232	44.5	20	.7
Total	20,025	2,115	10.6	10,304	51.5	1,338	6.7	2,180	10.9	3,069	15.3	1,019	5.0

### Residential Background Preferred of New Employees

A farm-reared background was considered desirable in 49.8 per cent of the job cases, indicating that this factor was not an absolute requirement for entering nonfarm agricultural occupations.

Table X shows the kind of background preferred by the nonfarm agricultural firms for new employees.

A fact outstanding in Table X is that 44.1 per cent of the nonfarm agricultural employees will be replaced without regard to their residential background -- emphasis was placed upon ability to perform work required rather than the place the competencies were acquired. In the case of two families -- Wildlife and Recreation, and Ornamental Horticulture -- 70.5 and 69.1 per cent respectively of the vacancies will be filled with no preference as to residential background.

A rather surprising revelation was that rural nonfarm and urban residential backgrounds were not considered as factors in employment. Combined, the two backgrounds received a preference rating in only 6.1 per cent of the cases. This, when viewed with the 49.8 per cent preference for the farm reared, indicated that rural youth have a "head start" over those with urban backgrounds.

### Farm Experience Preferred of New Employees

Almost one-half of the employees having agricultural competencies, 9,973, would be replaced, as vacancies occur, with applicants having a farm residential background. Data referring to the kind of farm residential background preferred -- commercial farm, non-commercial farm, or no preference as to the kind -- appear in Table XI.

TABLE X

RESIDENTIAL BACKGROUND PREFERRED OF NEW EMPLOYEES

Occupational Family	Number of Employees	Farm		Rural Non-Farm		Urban		No Preference	
		No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Farm Machinery Sales & Service	1,328	1,059	57.9	159	8.7	7	.4	603	33.0
Farm Supplies & Equipment	3,022	1,331	44.1	155	5.1	60	2.0	1,476	48.8
Livestock & Poultry	3,194	1,498	46.9	80	2.5	18	.6	1,598	50.0
Crops, Forestry & Soil Conservation	6,061	3,253	53.7	392	6.5	10	.1	2,406	39.7
Ornamental Horticulture	928	263	28.3	20	2.2	4	.4	641	69.1
Wildlife & Recreation	373	89	23.9	19	5.1	2	.5	263	70.5
Farm Service	1,844	871	47.3	93	5.0	26	1.4	854	46.3
Agricultural Service	2,775	1,609	58.0	171	6.2	11	.4	984	35.4
<b>Total</b>	<b>20,025</b>	<b>9,973</b>	<b>49.8</b>	<b>1,089</b>	<b>5.4</b>	<b>138</b>	<b>.7</b>	<b>8,825</b>	<b>44.1</b>



TABLE XI

## FARM EXPERIENCE PREFERRED OF NEW EMPLOYEES

Occupational Family	Number of Employees	Commercial Farm		Non-Commercial Farm		No Preference	
		No. Per Cent	Per Cent	No. Per Cent	Per Cent	No. Per Cent	Per Cent
Farm Machinery Sales & Service	1,059	381	36.0	348	32.8	330	31.2
Farm Supplies & Equipment	1,331	635	47.8	292	21.9	404	30.3
Livestock & Poultry	1,498	582	38.9	212	14.2	704	46.9
Crops, Forestry & Soil Conservation	3,253	500	15.5	917	28.1	1,836	56.4
Ornamental Horticulture	263	135	51.8	75	28.5	53	19.7
Wildlife & Recreation	89	13	14.7	29	32.5	47	52.8
Farm Service	871	330	37.9	274	31.5	267	30.6
Agricultural Service	1,609	669	41.6	463	28.8	477	29.6
Total	9,973	3,245	32.5	2,610	26.2	4,118	41.3

Commercial farm experience took precedence over that obtained on a non-commercial farm. However, for 41.3 per cent of the workers where farm residential background was a factor, no preference was listed as to kind or type of farm experience. Statewide, where farm background was favored, it was indicated that employers felt that 58.7 per cent of the jobs would best be filled with persons having a specific kind of farm experience. Significantly, firms specializing in farm or agriculture service or the processing of an agricultural commodity were unwilling to restrict employment to those with a farm background or to a particular kind of farm. Emphasis was placed on formal education and specific training leading to job entry qualifications.

#### Agricultural Areas in Which Nonfarm Agricultural Workers Must Have Competencies

One of the major objectives of the research was to determine job requirements, in terms of knowledge and skill in agricultural subjects, needed by prospective employees in order to enter and advance in nonfarm agricultural occupations. These requirements, along with educational level, make up the heart of the study.

To record information and guide interviewees in summarizing job requirements in terms of agricultural competencies necessary in the different job titles, agricultural subject matter was divided into four broad areas: (1) Animal Science, (2) Plant Science, (3) Agricultural Business Management and Marketing, and (4) Agricultural Mechanization and Automation. Each area was divided into categories which described specialized agricultural knowledge to aid employers in identifying particular skills associated with the performance of each job title.

Tables XII-1 through XII-8 show agricultural subject areas in which employees must have training, according to occupational families and levels of employment. Specific knowledge and skill associated with particular job titles are not identified in this report.

Data in the Tables XII-1 through XII-8 indicate the rank that employers gave to the various competency groups in terms of the need for these competencies to be developed in future employees. In order to report effectively the results of this section of the survey a competency rating scale was developed as follows: high (1.8-3.0), medium (1.4-1.7), low (1.0-1.3). This ranking enables educators to place emphasis on agricultural subject matter training in terms of job entry requirements as indicated by the firms employing nonfarm agricultural workers. Definite trends were in evidence in all occupational families:

1. Generally speaking, a rather broad coverage of all subject matter areas in agriculture was required of all nonfarm agricultural workers.
2. The particular product processed or sold and the service for sale within an agricultural family determined the subject matter areas involved.
3. Data indicate that as a usual rule employees at the managerial and supervisory levels were required to have broad knowledge in subject matter areas as well as specialized knowledge in relation to a particular business.
4. Employees at the professional level were expected to have training in all of the agricultural areas, but at the same time they must have intensive training in their area of specialization.
5. Depending on the family, the coverage of agricultural subject matter for technical workers varied. In all cases intensive training was required in the particular phase making up the subject matter content pertinent to job performance activities of the employee.
6. In the skilled and semiskilled levels workers were intensively trained in a particular area or one of the divisions making up an area.

TABLE XII-1

AGRICULTURAL AREAS WITH WHICH EMPLOYEES MUST BE FAMILIAR, BY OCCUPATIONAL FAMILIES

FARM MACHINERY SALES AND SERVICE

Level of Employment	Number	Average Competency Ratings			
		Animal Science	Plant Science	Agri. Bus. Mangt. & Mkt.	Agri. Mech. & Automation
Professional	31	1.041	1.737	1.771	2.240
Technical	-	-	-	-	-
Managerial	362	1.459	1.739	2.276	2.242
Supervisory	82	1.095	1.398	1.529	2.262
Sales	354	1.510	1.733	2.010	2.131
Office	88	1.062	1.122	2.011	1.304
Skilled	730	1.118	1.270	1.360	2.198
Semi-Skilled	173	1.085	1.217	1.261	2.011
Unskilled	8	1.000	1.000	1.000	1.611

Competency Rating Scale:

High (1.8 - 3.0)

Medium (1.4 - 1.7)

Low (1.0 - 1.3)

TABLE XII-2

AGRICULTURAL AREAS WITH WHICH EMPLOYEES MUST BE FAMILIAR, BY OCCUPATIONAL FAMILIES

FARM SUPPLIES AND EQUIPMENT

Level of Employment	Number	Average Competency Ratings			
		Animal Science	Plant Science	Agri. Bus. Mangt. & Mkt.	Agri. Mech. & Automation
Professional	25	1.833	1.909	2.208	1.611
Technical	16	1.234	1.807	1.829	1.979
Managerial	805	1.815	1.764	2.177	1.836
Supervisory	96	1.592	1.646	1.755	1.929
Sales	677	1.758	1.754	1.850	1.817
Office	206	1.315	1.304	1.833	1.353
Skilled	138	1.368	1.296	1.420	2.057
Semi-Skilled	597	1.236	1.272	1.326	1.695
Unskilled	362	1.267	1.316	1.224	1.609

Competency Rating Scale  
 High (1.8 - 3.0)  
 Medium (1.4 - 1.7)  
 Low (1.0 - 1.3)

TABLE XII-3

AGRICULTURAL AREAS WITH WHICH EMPLOYEES MUST BE FAMILIAR, BY OCCUPATIONAL FAMILIES

LIVESTOCK AND POULTRY

Level of Employment	Number	Average Competency Rating			
		Animal Science	Plant Science	Agri. Bus. Mangt. & Mkt.	Agri. Mech. & Automation
Professional	3	-	-	-	-
Technical	113	2.344	1.183	1.932	1.565
Managerial	555	2.136	1.310	2.176	1.638
Supervisory	218	2.060	1.163	1.924	1.820
Sales	476	1.806	1.097	1.819	1.249
Office	182	1.565	1.037	2.044	1.135
Skilled	504	1.921	1.120	1.455	1.380
Semi-Skilled	1,046	1.665	1.085	1.257	1.441
Unskilled	97	1.250	1.000	1.000	1.500

Competency Rating Scale

- High (1.8 - 3.0)
- Medium (1.4 - 1.7)
- Low (1.0 - 1.3)



TABLE XII-4

AGRICULTURAL AREAS WITH WHICH EMPLOYEES MUST BE FAMILIAR, BY OCCUPATIONAL FAMILIES  
CROPS, FORESTRY AND SOIL CONSERVATION

Level of Employment	Number	Average Competency Rating			
		Animal Science	Plant Science	Agri. Bus. Mangt. & Mkt.	Agri. Mech. & Automation
Professional	363	1.347	2.031	2.162	1.807
Technical	169	1.200	1.695	1.807	1.824
Managerial	621	1.331	1.750	2.382	1.871
Supervisory	282	1.086	1.560	1.846	1.854
Sales	233	1.197	1.720	1.946	1.517
Office	246	1.090	1.394	1.965	1.250
Skilled	919	1.067	1.342	1.322	1.859
Semi-Skilled	1,941	1.120	1.319	1.259	1.619
Unskilled	1,287	1.040	1.313	1.108	1.474

Competency Rating Scale  
 High (1.8 - 3.0)  
 Medium (1.4 - 1.7)  
 Low (1.0 - 1.3)

TABLE XII-5

AGRICULTURAL AREAS WITH WHICH EMPLOYEES MUST BE FAMILIAR, BY OCCUPATIONAL FAMILIES

ORNAMENTAL HORTICULTURE

Level of Employment	Number	Average Competency Rating			
		Animal Science	Plant Science	Agri. Bus. Mangt. & Mkt.	Agri. Mech. & Automation
Professional	20	2.125	2.909	2.750	2.167
Technical	2	1.000	1.727	1.000	1.667
Managerial	199	1.003	2.336	2.227	2.113
Supervisory	22	1.000	2.545	2.500	2.541
Sales	83	1.000	2.030	1.972	1.611
Office	13	1.000	1.591	1.937	1.750
Skilled	102	1.047	2.017	1.289	1.166
Semi-Skilled	61	1.000	1.958	1.407	1.664
<u>Unskilled</u>	426	1.057	1.743	1.245	1.794

Competency Rating Scale

High (1.8 - 3.0)  
 Medium (1.4 - 1.7)  
 Low (1.0 - 1.3)



TABLE XII-6

AGRICULTURAL AREAS WITH WHICH EMPLOYEES MUST BE FAMILIAR, BY OCCUPATIONAL FAMILIES

WILDLIFE AND RECREATION

Level of Employment	Number	Average Competency Rating			
		Animal Science	Plant Science	Agri. Bus. Mangt. & Mkt.	Agri. Mech. & Automation
Professional	17	2.000	2.197	1.791	2.222
Technical	2	2.000	1.727	1.000	1.250
Managerial	34	1.427	1.310	1.771	1.569
Supervisory	51	1.449	1.698	1.481	1.775
Sales	-	-	-	-	-
Office	1	2.000	2.091	2.000	2.500
Skilled	10	1.313	1.636	1.625	2.417
Semi-Skilled	42	1.162	1.672	1.325	1.583
Unskilled	216	1.340	1.424	1.104	1.602

Competency Rating Scale

High (1.8 - 3.0)

Medium (1.4 - 1.7)

Low (1.0 - 1.3)

TABLE XII-7

## AGRICULTURAL AREAS WITH WHICH EMPLOYEES MUST BE FAMILIAR, BY OCCUPATIONAL FAMILIES

FARM SERVICE

Level of Employment	Number	Average Competency Rating			
		Animal Science	Plant Science	Agri. Bus. Mangt. & Mkt.	Agri. Mech. & Automation
Professional	64	2.083	2.058	2.480	2.223
Technical	164	1.617	1.586	1.826	1.505
Managerial	381	1.407	1.596	2.056	2.008
Supervisory	87	1.956	1.976	2.537	2.371
Sales	111	1.450	1.437	2.003	2.220
Office	155	1.151	1.229	1.811	1.247
Skilled	395	1.119	1.213	1.281	2.239
Semi-Skilled	373	1.105	1.231	1.248	1.795
Unskilled	114	1.046	1.120	1.139	1.886

Competency Rating Scale

High (1.8 - 3.0)

Medium (1.4 - 1.7)

Low (1.0 - 1.3)

TABLE XII-8

AGRICULTURAL AREAS WITH WHICH EMPLOYEES MUST BE FAMILIAR, BY OCCUPATIONAL FAMILIES

AGRICULTURAL SERVICE

Level of Employment	Number	Average Competency Rating			
		Animal Science	Plant Science	Agri. Bus. Mangt. & Mkt.	Agri. Mech. & Automation
Professional	793	2.248	2.288	2.393	2.121
Technical	820	1.520	1.842	1.765	1.809
Managerial	217	1.740	1.908	2.334	1.932
Supervisory	92	1.678	1.996	2.137	2.030
Sales	16	1.250	1.864	1.563	2.083
Office	453	1.316	1.557	2.042	1.419
Skilled	153	1.078	1.418	1.514	1.578
Semi-Skilled	128	1.595	1.502	1.457	1.592
Unskilled	103	1.604	1.178	1.087	1.516

Competency Rating Scale  
 High (1.8 - 3.0)  
 Medium (1.4 - 1.7)  
 Low (1.0 - 1.3)

2

Evidence implying the need for agricultural training at sales and office levels was significant. This indicates the necessity for providing a much broader program of training for persons serving at these levels. These data are in agreement with that of other states indicating that vocational agriculture may support, or be supported by, other vocational subjects taught in the comprehensive high school. More of this type of supporting education must be included in curriculum planning if vocational education is to be effective in preparing youth for the complex world of work.

A further analysis of data presented here shows rather clearly that it is no longer sufficient just to have prospective employees available and willing to work. A premium was placed on education and occupational training, indicating the need for more adequately trained persons to enter the expanding area of nonfarm agriculture.

Data clearly show that each occupational family reflects a "cluster" of jobs at the various employment levels which may be utilized as a basis for developing instructional programs. This is especially true where job titles combine a number of skills or have a common core of subject matter.

#### Continuing Education Required of Nonfarm Agricultural Employees

A portion of the study was devoted to a determination of the kind of continuing education required of employees if they aspired to advance in the firm, to the type of educational facility used for training, and the degree of participation by employees. Table XIII contains the tabulated results of employer responses.

An interesting pattern developed as the data were analyzed. On-the-job training and firm or industry schools were usually used for upgrading

TABLE XIII

CONTINUING EDUCATION REQUIRED BY FIRMS TO ADVANCE IN OCCUPATIONS

Occupational Category	Number of Employees	Number of Employees											
		Firm or Industry School		On-the-Job Training		Public School Adult Educ.		Vocational School		Agri. College		None	
		No.	Cent	No.	Cent	No.	Cent	No.	Cent	No.	Cent	No.	Cent
Farm Machinery Sales & Service	1,828	1,139	62.3	1,476	80.7	71	3.9	267	14.6	74	4.0	33	1.8
Farm Supplies & Equipment	3,022	1,298	43.0	2,376	78.6	118	3.9	316	10.4	223	7.4	254	8.4
Livestock & Poultry	3,194	1,315	41.2	2,502	78.3	84	2.6	176	5.5	221	6.9	236	7.4
Crops, Forestry & Soil Conservation	6,061	2,272	37.5	4,705	77.6	131	2.2	395	6.5	392	6.4	1,071	17.7
Ornamental Horticulture	928	308	33.1	628	67.6	21	2.3	145	15.6	154	16.6	110	11.8
Wildlife & Recreation	373	36	9.7	296	79.4	2	0.5	20	5.4	63	16.9	43	11.5
Farm Service	1,844	743	40.2	1,488	80.6	51	2.8	150	8.1	193	10.5	198	10.7
Agricultural Service	2,775	732	26.4	1,865	67.1	67	2.4	96	3.5	615	22.1	505	18.2
<b>Total</b>	<b>20,025</b>	<b>7,834</b>	<b>39.1</b>	<b>15,336</b>	<b>76.7</b>	<b>545</b>	<b>2.7</b>	<b>1,565</b>	<b>7.8</b>	<b>1,935</b>	<b>9.7</b>	<b>2,450</b>	<b>12.3</b>

employees -- 76.7 per cent and 39.1 per cent, respectively. The use made of public school programs was almost negligible -- only 545 workers, or 2.7 per cent. Vocational schools and agricultural colleges were indicated as the means for upgrading employees in 7.8 per cent and 9.7 per cent of the cases. Employers did not provide for or require continuing education for 2,450, or 12.3 per cent, of the workers.

Efforts were made in all concerns to have training available for employees on a continuing basis. Expressions by employers indicated that reliance on on-the-job training as the primary resource for employee upgrading was due to a lack of availability of the types of programs needed at the high school or post-high school levels. This points up the need for consideration of an extension of the secondary school program to include training and retraining to meet the needs of industry. This would be consistent with the emerging pattern in vocational education -- that of providing appropriate training and retraining in terms of the needs of the work force.

## SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

### Summary

The march of technology and science in a modern and progressive society emphasizes more than ever, and for an ever-increasing proportion of the population, the need for development of more salable vocational skills. Workers without competence in keeping with the demands of progress are at a growing disadvantage and will eventually find that they have been written out of the labor market.

This research emphasizes that tremendous shifts have taken place in the agricultural industry in recent years. A broad complex of nonfarm agricultural businesses and services has evolved to facilitate the work of the production farmer. It is a complex involving hundreds of professional, technical, and vocational occupations requiring extensive knowledge and highly developed skills for successful performance. Trends indicate that agriculture will continue to respond to the demands of technology and, with the increase in population, will become even more intricate and specialized in the future. Therefore, individuals aspiring to enter agricultural occupations should become knowledgeable concerning the types of jobs available and their characteristics.

The President's Panel of Consultants on Vocational Education in its summary report recommended that the vocational agriculture program, under federal reimbursement, should be broadened to include training in agricultural occupations other than farming or ranching. This suggestion was implemented in the Morse-Perkins Act of 1963.

In recognition of this need and in anticipation of the broadened responsibility for vocational agriculture, Louisiana began to participate in activities that led to the awarding of a state grant in November 1963 by the State Board of Liquidation of the State Debt. This allotment financed a survey of the nonfarm businesses and agencies in the seven metropolitan areas of the state -- Alexandria, Baton Rouge, Lafayette, Lake Charles, New Orleans, Monroe and Shreveport. As this project neared completion, application was made to the U. S. Office of Education for a grant under terms of Section 4 (c) of the Morse-Perkins Act for funds to carry the study into the smaller cities and towns. The project was funded under contract number OE 5-85-040 and began June 15, 1965.

This report combines the results of the studies of the seven metropolitan centers and the 90 semi-urban and rural towns in Louisiana, thus providing a comprehensive state summary of nonfarm agricultural jobs.

This report is arranged to reveal the following information:

- (1) Numbers of people employed, numbers needing agricultural competencies, expected numbers of persons to be hired in the next five years, and numbers of job titles.
- (2) Characteristics such as age, education, background, and salary.
- (3) Agricultural competencies needed to effect job entry and additional education required for continuation and advancement in the firm:

In short, the task of this research has been to accumulate facts concerning nonfarm agricultural occupations within Louisiana, and to inform educators, employers, parents, and high school youth of the abundance of agricultural opportunities existing in this state -- for those who prepare themselves.



Findings are summarized as follows:

1. There were 2,430 businesses and agencies surveyed, representing the vast agricultural complex of Louisiana. These organizations employed 51,719 workers -- of which 20,025 were required to have competencies in agriculture. Within a five-year period the number of workers with skills and knowledge in agricultural subjects is expected to rise to 21,999.
2. The 20,025 workers were found under 1,699 job titles. Five years hence it is expected that the number of job titles will increase to 1,862, an increase of 9.5 per cent.
3. Occupational families recording the greatest number of workers were those dealing with Crops, Forestry and Soil Conservation; Farm Supplies and Equipment; Livestock and Poultry, and Agricultural Service. These areas also supplied the largest number of job titles.
4. Insofar as the levels of employment were concerned, semiskilled, managerial, skilled, and sales, in the order listed contained the largest number of agricultural workers when all families were considered. Professional workers were found in two families primarily -- Agricultural Service, and Crops, Forestry and Soil Conservation. In proportion to the total number of workers, Wildlife and Recreation listed the largest number of unskilled employees -- 59 per cent.
5. Technician level employees ranked seventh in total number of workers, with the Agricultural Service family utilizing the largest number. These workers would advance in numbers if state colleges and universities had been included in the survey.
6. Employers interviewed indicated that the minimum age would not be less than 23 years for replacing employees leaving the business. This implies that employers would, in most cases, discriminate against hiring youngsters directly out of high school if more mature applicants were available. Generally speaking, 48 years is considered to be the maximum age for hiring new workers. All families and all levels of employment presented an agricultural working force averaging about 34 years.
7. A definite pattern was apparent in all firms relative to salary schedules. Employees were paid in relation to their background of education, training, experience and responsibility, beginning with low pay for the unskilled followed by substantial increases for the skilled and continuing upward through the management and professional levels. As a rule, employers felt that a well trained worker was the best investment their business could make, and they were ready to pay higher salaries for well trained individuals. Significant salary advances were given with tenure, with the exception of the semiskilled and unskilled categories where pay remained at low levels.

8. Generally, a high school education was a prerequisite for entry into nonfarm agricultural occupations. Only 10.6 per cent of the jobs would be filled with applicants who were not high school graduates. Taking into account all families and all levels of employment, one in four prospective employees was expected to have a college degree or some college training.
9. Residential background was a factor considered by employers when replacing employees in only 55.2 per cent of the job titles. Approximately one-half of the positions could best be filled with workers with farm backgrounds. Experience gained by the prospective employees on a commercial farm was preferred to that obtained on a non-commercial farm. Employers indicated that applicants with urban backgrounds would not be discriminated against. However, only a small number of cases were recorded where an urban background was preferable to the farm.
10. The degree of competency in agricultural subjects required of employees varied according to the work performed in each job title and each occupational family. However, certain similarities existed: (1) generally, a rather broad coverage of subject matter was required of all workers above the semiskilled and unskilled levels; (2) employees at the management and supervisory levels, in addition to having specialized knowledge in relation to a particular business, were expected to be widely knowledgeable in agricultural subjects; (3) employees at the professional level were expected to have some training in all agricultural areas, but at the same time they must have intensive training in their area of specialization; (4) the coverage of agricultural subject matter for technical workers varied, depending on the family, but in all cases intensive training was required in the subject matter content pertinent to job performance; (5) skilled level workers possessed knowledge and skill in a particular area or one of the divisions making up an area.
11. Efforts were made in all concerns to have training for employees on a continuing basis. On-the-job training, and firm or industry schools, were the chief means of providing such training. Employers made limited use of training provided through public school adult education programs and vocational programs.
12. Education and training for job entry were the restrictions placed on the great majority of job titles. Some of the agencies had job titles requiring civil service ratings, while only a slight percentage were under contract with labor. Most jobs at the professional level required a college degree and in some instances a professional degree. A small number of jobs at the technical and skilled levels required licenses.
13. Considerable growth in terms of job titles and numbers of employees was reported by all businesses and agencies, particularly those supplying farmers with items and services necessary for production, followed by those processing and marketing farm produced commodities.

14. Employers expressed a need for a supply of trained workers, emphasizing the value of education, training and skill. Of special significance was the emphasis placed upon occupational training obtained prior to job entry.

### Conclusions

This study of the nonfarm agricultural complex of the state depicts rather vividly the creation of new fields of employment owing to the combining of science and technology. The host of jobs once available to youth have been eliminated from farm work, but at the same time the applications of research findings and automation have resulted in new occupational fields where the number of job opportunities exceed those formerly supplied on the farm.

Significantly, the jobs lost because of advancing technology in agriculture comprise those in which many untrained farm youth formerly found employment. Jobs emerging in off-farm agriculture demand an ever rising level of education, training and skill -- thus, to a large extent, eliminating the untrained.

The off-farm agricultural complex surveyed in Louisiana employed 51,719 people, of which a large portion, 20,025, were required to have certain knowledge and skill in agricultural subjects before job entry. For these workers, education in agriculture is a continuing process, as it is for the farmer. The untrained and the unskilled worker cannot hope to compete successfully in this manpower market.

Farm youth, because of work experiences gained at home, have a "head start" toward gainful employment in any segment of the nonfarm agricultural complex providing they have the interest and are willing to work, and if the necessary educational and training opportunities are made available and they utilize them.

Evidence assembled in this study "points up" the many employment opportunities for individuals trained in agriculture. How to make rural youth employable by education and training prior to job entry poses a very real problem to educators.

Evidence also describes areas where employment opportunities exist. If vocational agriculture is going to make a worthy contribution to occupational training, then efforts must be made to gear instruction to the needs of areas defined.

This research is one phase of an effort to make vocational agriculture more meaningful to youth in relation to job preparation. It is felt that the evidence presented will assist teachers and school administrators in making decisions concerning the broadening of vocational agriculture programs in keeping with the occupational interests and needs of youth:

1. Off-farm agricultural occupations are found in businesses and services with diverse functions. Although concentrated most heavily in services and retail sales, they are also found in manufacturing or processing, wholesaling, recreation, specialized agricultural production and education.
2. There is a vast array of separate and distinct job titles in which workers use agricultural competencies. The proportion of time devoted to the use of such competencies on the job varies widely with job titles. However, on the average, workers in non-farm agricultural occupations use agricultural knowledge and skill a high percentage of the time.
3. Survey results point out that the nonfarm agricultural complex is a vibrant segment of Louisiana's economy,-- employing 51,719 persons of which 39.8 per cent perform duties requiring knowledge and skill in agriculture.

Educational level required prior to job entry varied throughout the entire complex: the college graduate with a professional degree, the college graduate with an agricultural speciality, and the high school graduate with agricultural training. The great number of jobs and wide range of job requirements offer the prospective applicant considerable challenge with regard to testing his interests and ultimately making a job selection.

Roughly one-third of the total employees performed duties in the Professional, Technical, Managerial and Supervisory employment levels. These employees are the main gears of the organization and collectively offer the most promise for satisfactory employment. They direct the work of the other two-thirds.

4. Agriculture in Louisiana is growing rapidly as evidenced by a substantial increase expected in number of employees as well as job titles for the next five-year period.

More than 1,600 job titles provide a vast array of opportunities for the interested and qualified. These jobs differ in training requirements, work involved, salary scales and opportunities for advancement.

Salary schedules at all levels in all occupational families were found to be in terms of training and work performed. Jobs at the professional, technical and managerial levels demand more training, but also pay more. Jobs at the semiskilled and unskilled levels paid less, required a limited amount of training and offered little hope for advancement.

5. A high school education and some knowledge and experience in agriculture was sufficient for 51.5 per cent of the employees in nonfarm agricultural occupations. Employers reported the significant figure of 32.9 per cent of workers needing varying degrees of advanced training to meet job requirements. Employers listed post-high school training gained in vocational-technical schools and college as being preferable. Successful applicants to jobs which are considered professional must have a college degree, a qualification considered minimum in many other areas of employment. Continuous training, regardless of employee rank, was expected in all occupational families. On-the-job training, firm or industry schools, and programs offered at the secondary school or college levels are means of effecting such training.

## Recommendations

Vocational education for occupations in nonfarm agriculture has recently assumed a new importance in Louisiana, as it has in the entire nation. The alarming rise in unemployment and under-employment of youth; the shortage of sorely needed trained personnel in the technical, semi-professional and skilled levels; the rising need for retraining workers displaced by automation; and the demand for new educational opportunities at the secondary and post-secondary school levels have forced a critical re-examination of vocational agriculture and its seeming neglect of occupational information.

This investigation revealed that agriculture is a part of society in which the occupational structure is changing rapidly. Some occupations have expanded, others have completely disappeared, while an entire new catalog of jobs has come upon the scene, making necessary an entirely fresh concept of training programs.

National publicity has given agriculture a bad image from an occupational standpoint. However, there is no decline in job openings; opportunities are far in advance of training resources, if non-farm jobs are considered. A rising level of competency for prospective workers is demanded as new jobs emerge and those existing increase in importance. Vocational agricultural education, if it responds to the stimuli, is on the launching pad of a period of intensive growth and development.

Research indicates that rural youth, particularly over the past decade, have not benefitted fully from occupational opportunities available to them in agriculture. Training for employment other than that offered in traditional programs of vocational agriculture is no doubt the

"number one" need on the local scene. Broadened programs will be the key to a new horizon with hundreds of job opportunities never before listed available to individuals. With interest and desire for employment in agricultural fields at a new high, training is the missing link.

All sectors of agriculture must look to schools, particularly at the secondary level, to provide pre-employment education. This training must range from occupational information to education in the sciences and technology. As society advances to a more highly skilled age, the school must provide more training for a growing percentage of our school population who expect to not only qualify to become adult members of society but wish to prepare for a future occupation while in high school.

What shall the vocational agriculture program include to fully meet the needs of students? This complex problem faces the more than 300 high schools in Louisiana offering vocational agriculture. The main problem is the assembling of sufficient teaching resources and the development of programs broad enough to be truly functional in occupational education.

Vocational agriculture as an area of public education in Louisiana must take action on the following recommendations, which in the opinion of the researchers are supported by factual evidence:

1. This study supports the premise that agriculture is more than farm production, involving thousands of workers engaged in furnishing supplies and services to farmers and to a vast number who process and distribute farm commodities over the state and nation. Employment opportunities for the agriculturally trained extend over the entire agricultural complex of the state.

Production farming is still the basic segment of agriculture but changing demands have emphasized the urgent need for trained individuals in the total agricultural industry.

Secondary school programs in vocational agriculture in Louisiana must be vastly expanded with a definite overhaul of training purpose if the demand for workers in production farming and

nonfarm agriculture is to be filled with agriculturally trained individuals.

2. Traditionally, vocational agriculture has been restricted to schools located in the rural areas of the state. To date relatively few boys attending urban schools have had an opportunity to enroll, yet many of them can profit by the training.

Research in this state and the nation shows that many urban boys enter nonfarm agricultural occupations. Reasons cited for this occupational selection vary from family connections with the business to an interest acquired because of casual contact with some phase of agriculture. These individuals have a right to expect some formal preparation in their interest area.

Vocational agricultural training must be expanded to include more training opportunities. The Vocational Education Act of 1963 clearly states that monies allotted for agriculture may be used for vocational education in any occupation involving knowledge and skill in agricultural subjects whether or not such occupations involve the work of the farm.

3. Programs must be developed for individuals who will leave the home community to effect job entry. Generally, workers move to areas where employment opportunities are known to exist, thereby making it essential that the school keep an up-to-date catalog of occupational information. Work force mobility must be understood and those charged with the responsibility of program development and maintenance should keep abreast of manpower statistics, the requirements of the state and regional labor markets, as well as the local situation. The school today is no longer an educational institution specifically for the area in which it is located. It must serve the educational needs of its graduates who will find employment opportunities statewide, nationwide and internationally.
4. Subject matter in agriculture may be classified under four broad categories: Plant Science, Animal Science, Agricultural Business Management and Marketing, and Agricultural Mechanics and Automation. Functional programs in vocational agriculture must provide for student experiences involving these agricultural science areas, including aspects of production and processing.

Developments in industry make it increasingly evident that detailed job descriptions must be the basis for building future training programs and that vocational training must be mixed with other subjects according to the demands of the job.

5. Employers are emphasizing that industry today demands a well-educated worker, making it of paramount importance that vocational agriculture not be regarded as a separate feature completely apart from the rest of the school program. It must supplement a well-planned program of general education for those preparing for entry into agricultural jobs.



Vocational education in any area must be considered as an enriching factor to the total educational program and not as a tolerated separate entity.

6. Work experiences are an integral part of any vocational education program. If a program of education is to turn out employables, opportunities must be provided that will enable students to perform in a job situation. Therefore, it is important that schools offering programs leading to employment in nonfarm agricultural occupations enter into training contracts with nearby cooperating agricultural businesses and agencies so that on-the-job training may be obtained under the supervision of the school.

Consideration should be given to the development of self-contained school plants having laboratories for serving science programs and providing vocational agriculture with demonstration projects, besides giving students experiences in selected areas of agriculture.

7. A review of educational qualifications for the various nonfarm agricultural jobs identified in this study emphasizes the very important point that the secondary school must prepare interested students for education beyond high school. It is evident that those interested in a technical or professional job must pursue training either in a technical school, a junior college or complete a college course.

The high school is not terminal, even though the employee does not attend a post high school program or go to college. Industry today requires that workers continue training so that they may be more effective and so that they may advance in the company. It also provides the means for their additional education.

Regardless of the employment aims of the student, the school program must prepare for continuing education.

8. The schools must be responsible for placement and follow-up. In the past, schools at the secondary level have not considered this an educational function. The Vocational Act of 1963 provides for the cooperation of the Employment Security Division with all schools offering programs of vocational education in job identification and job placement.

The maintenance of up-to-date employment information relating to former students is a must for schools having programs of vocational agriculture. Ultimate high school graduation with vocational agricultural training in no way assures successful job entry. Students must have help in selecting an occupation, in preparing for a job, and in securing employment upon graduation. The maintenance of an accurate follow-up record of former students is an absolute necessity for a sound counseling program.

9. Educators must consider the development of a more comprehensive high school. The decrease in rural population and the increasing difficulty of communities involved to provide training resources has brought about a trend toward a comprehensive educational system located in or near heavily populated urban areas.

The pressures created by the rapid rate of change are so great that they certainly cannot be ignored by lay or professional leaders in education. Effective planning and development in modern educational programs require a keen awareness of the extent of the modification in science and technology. Solution of problems developing as a result of this revolution will require new developments in technology and will make new demands upon manpower.

The comprehensive high school, with its superior resources, can provide broad general education for all youth, as well as supplying more specialized training for each individual which is designed to best serve his interests and needs.

Recent research findings lend support to the trend in educational thinking that urban schools, due to the needs of agricultural businesses and agencies, should seriously consider the addition of programs in vocational agriculture. These schools can more easily assemble facilities and equipment for teaching purposes that are used in the occupations, and the close proximity of agriculturally-oriented businesses and agencies enables the development of adequate programs of work experience.

10. Research and development, successfully used as tools by business and industry, are assigned an important place in the future of vocational education. Research in nonfarm agricultural occupations must be continuous, and developmental centers applying research results at the local level must be set up if realistic training programs are to be developed. Vocational education should embody the philosophy that all citizens must have access to education and training that is of high quality and realistic in terms of opportunities for gainful employment.

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APPENDIX A

Louisiana State University  
College of Agriculture  
Department of Agricultural Education  
Baton Rouge, Louisiana

Interviewer \_\_\_\_\_

Date of Interview \_\_\_\_\_

CONFIDENTIAL

Pre-Employment and Continuing Educational Needs of Persons Engaged in  
Off-the-Farm Agricultural Occupations in Selected Areas of Louisiana

Form I

Firm Number \_\_\_\_\_ Occupational Family \_\_\_\_\_

I. Name of Business or Service \_\_\_\_\_

II. Address \_\_\_\_\_ Town \_\_\_\_\_

III. Person Interviewed \_\_\_\_\_

Position \_\_\_\_\_

IV. Estimated per cent gross income that is agriculturally oriented \_\_\_\_\_

V. Major agricultural products and/or functions of business or service

\_\_\_\_\_  
\_\_\_\_\_

VI. Employees in this business or service (Total Number) \_\_\_\_\_

A. For employees needing competencies in agriculture, complete the following:

<u>Existing Job Titles</u>	<u>Number of Employees</u>			
	<u>Presently</u>		<u>Five Years Hence</u>	
	<u>Full-Time</u>	<u>Part-Time</u>	<u>Full-Time</u>	<u>Part-Time</u>
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____

Form I (Cont'd)

<u>Existing Job Titles</u>	<u>Number of Employees</u>			
	<u>Presently</u>		<u>Five Years Hence</u>	
	<u>Full-Time</u>	<u>Part-Time</u>	<u>Full-Time</u>	<u>Part-Time</u>
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
<b>B. <u>Anticipated New Job Titles</u></b>				
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____

Fill out a separate Form II for each job title listed above.

Louisiana State University  
College of Agriculture  
Department of Agricultural Education  
Baton Rouge, Louisiana

Interviewer \_\_\_\_\_

Date of Interview \_\_\_\_\_

CONFIDENTIAL

Pre-Employment and Continuing Educational Needs of Persons Engaged in  
Off-the-Farm Agricultural Occupations in Selected Areas of Louisiana

Form II

Firm Number \_\_\_\_\_ Occupational Family \_\_\_\_\_ Level of Employment \_\_\_\_\_

I. Name and Address of Firm \_\_\_\_\_  
\_\_\_\_\_

II. Job Title \_\_\_\_\_

III. Number of workers in this Job Title

Full-Time \_\_\_\_\_ Part-Time \_\_\_\_\_

IV. Anticipated Number of workers Five Years Hence

Full-Time \_\_\_\_\_ Part-Time \_\_\_\_\_

V. Average Age \_\_\_\_\_ Minimum for Entry \_\_\_\_\_ Maximum for Entry \_\_\_\_\_

VI. Wages or Salary Per Month: (Beginning - Maximum - Present)

1. \_\_\_\_\_ 150-200 4. \_\_\_\_\_ 301-350 7. \_\_\_\_\_ 451-500 10. \_\_\_\_\_ 601-650

2. \_\_\_\_\_ 201-250 5. \_\_\_\_\_ 351-400 8. \_\_\_\_\_ 501-550 11. \_\_\_\_\_ 651-700

3. \_\_\_\_\_ 251-300 6. \_\_\_\_\_ 401-450 9. \_\_\_\_\_ 551-600 12. \_\_\_\_\_ 701 and above

VII. Activities and Duties of Persons with this Job Title (Detail)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



VIII. Agricultural competencies with which worker must be familiar to do job

A. Area: Animal Science

<u>Nec- essary</u>	<u>Desir- able</u>	<u>Not Nec- essary</u>	
_____	_____	_____	1. Breeding Farm Animals
_____	_____	_____	2. Livestock Feeding and Nutrition
_____	_____	_____	3. Sanitation, Disease and Parasite Control
_____	_____	_____	4. Housing and Equipment
_____	_____	_____	5. Management
_____	_____	_____	6. The Dairy Manufacturing Industry
_____	_____	_____	7. Processing
			_____ Packing Plants
			_____ Creameries
			_____ Poultry Processing
			_____ Butchering
_____	_____	_____	8. Marketing
			_____ Packing Plants
			_____ Creameries
			_____ Poultry Processing Plants
			_____ Livestock Auctions

B. Area: Plant Science

_____	_____	_____	9. Propagation
_____	_____	_____	10. Soils and Fertilization
_____	_____	_____	11. Control of Insects _____ Diseases _____ Weeds _____
_____	_____	_____	12. Management
_____	_____	_____	13. Production of Ornamental Plants
_____	_____	_____	14. Landscaping
_____	_____	_____	15. Ginning
_____	_____	_____	16. Warehousing



**B. Area: Plant Science (cont'd)**

<u>Nec- essary</u>	<u>Desir- able</u>	<u>Not Nec- essary</u>	
_____	_____	_____	17. Processing (food, seed, grain, etc.)
_____	_____	_____	18. Marketing
_____	_____	_____	19. Forestry
			_____ Establishing a Stand
			_____ Hardwood Control
			_____ Fire Control
			_____ Estimating and Grading
			_____ Disease Control
			_____ Insect Control
			_____ Harvesting
			_____ Marketing
			_____ Manufacturing
			_____ Pulp Wood

**C. Area: Agricultural Business Management and Marketing**

_____	_____	_____	20. Records and Accounts, Budgeting and Analysis
_____	_____	_____	21. Agricultural Financing, Credit and Insurance
_____	_____	_____	22. Farm Organization and Management
_____	_____	_____	23. Labor Management
_____	_____	_____	24. Marketing Problems and Practices
_____	_____	_____	25. Agricultural Policy
_____	_____	_____	26. Agricultural and Related Price Analysis
_____	_____	_____	27. Cooperatives and Business Organizations

**D. Area: Agricultural Mechanics and Automation**

_____	_____	_____	28. Farm Power and Machinery
_____	_____	_____	29. Farm Buildings and Conveniences
_____	_____	_____	30. Farm Electrification and Processing
_____	_____	_____	31. Soil and Water Conservation

D. Area: Agricultural Mechanics and Automation (cont'd)

Nec-    Desir-    Not Nec-  
essary    able    essary

\_\_\_\_\_ 32. Farm Shop (welding, plumbing, etc.)

\_\_\_\_\_ 33. Farm Construction and Maintenance

E. Other Agricultural competencies that are needed for this Job  
Title \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

IX. Educational Level Desired for Job Titles (Check only one)

\_\_\_\_\_ 1. Less than High School Graduate

\_\_\_\_\_ 2. High School Graduate

\_\_\_\_\_ 3. Post High School Technical Education

\_\_\_\_\_ 4. Some College

\_\_\_\_\_ 5. College Degree (Baccalaureate)

\_\_\_\_\_ 6. Master's Degree

\_\_\_\_\_ 7. Doctor's Degree

\_\_\_\_\_ 8. No Preference

X. Residential Background (Check only one)

\_\_\_\_\_ 1. Farm

\_\_\_\_\_ 2. Rural, nonfarm

\_\_\_\_\_ 3. Urban

\_\_\_\_\_ 4. No Preference

XI. Farm Experience

\_\_\_\_\_ 1. On a commercial farm

\_\_\_\_\_ 2. On a noncommercial farm

\_\_\_\_\_ 3. No Preference

**XII. Experience Desired to Enter this Job Title** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**XIII. Limitations on Entering this Job Title**

**A. Licensing or Certification**

\_\_\_\_\_ 1. Professional

\_\_\_\_\_ 2. Industrial

\_\_\_\_\_ 3. Civil Service

**B. Labor Law Restrictions** \_\_\_\_\_  
\_\_\_\_\_

**C. Labor Union Restrictions** \_\_\_\_\_  
\_\_\_\_\_

**D. Other (specify)** \_\_\_\_\_  
\_\_\_\_\_

**XIV. Education Required to Advance in this Job Title**

**A. Technical short course or training provided by:**

\_\_\_\_\_ 1. Your firm or the industry as a whole

\_\_\_\_\_ 2. On-the-job training

\_\_\_\_\_ 3. Public school (adult education)

\_\_\_\_\_ 4. A vocational school

\_\_\_\_\_ 5. An agricultural college

\_\_\_\_\_ 6. None

APPENDIX B

IBM Code Sheet

Form I

<u>IBM Column Number</u>	
1 - 4	Firm Number
5	Occupational Family
6 - 7	Town
8 - 9	Parish
10	Area
11 - 13	% Gross Income
14 - 16	Total Number of Employees
17 - 18	Number Job Titles
19 - 21	Number Needing Agricultural Competencies
22 - 23	Number Anticipated New Job Titles

Form II

<u>IBM Column Number</u>	
1 - 4	Firm Number
5	Occupational Family
6	Level of Employment
7 - 8	Job Title
9 - 10	Number Workers (Now) Full-Time
11 - 12	Number Workers (Now) Part-Time
13 - 14	Number Workers (5 years) Full-Time
15 - 16	Number Workers (5 years) Part-Time
17 - 18	Average Age
19 - 20	Minimum Age
21 - 22	Maximum Age
23 - 24	Beginning Wage
25 - 26	Present Wage
27 - 28	Maximum Wage
29 - 61	Agricultural Competencies
62	Other Agricultural Competencies
63	Educational Level
64	Residential Background
65	Farm Experience
66	Professional
67	Industrial
68	Civil Service
69	Labor Law Restrictions
70	Labor Union Restrictions
71	Other Limitations
72	Your Firm
73	On The Job
74	Adult Education
75	Vocational School
76	Agricultural College
77	None
78 - 80	Vocational Agricultural Education Form II

## APPENDIX C

### STATE SUMMARY--JOB TITLES

#### I. FARM MACHINERY SALES AND SERVICE

##### 1. Professional

Irrigation Engineer	Asst. Plant Research Engineer
Asst. Irrigation Engineer	Asst. Field Research Engineer
Designing Engineer	Plant Production Engineer
Asst. Designing Engineer	Asst. Plant Production Engineer
Research Engineer	Research Draftsman
Plant Research Engineer	Asst. Research Draftsman
Field Research Engineer	

##### 2. Technical

##### 3. Managerial

General Manager	Owner
Sales Manager	Materials Manager
Business Manager	Owner Manager
Parts Manager	Warehouse Manager
Service Manager	Asst. Warehouse Manager
Manager	Store Manager & Shop Foreman
Office Manager	Asst. Manager & Salesman
Asst. General Manager	Branch Manager
Asst. Manager	Manager-Salesman
President	President-Manager
Asst. Parts Manager	V. President-Manager
Vice President	Co-Owner-Manager
Truck Manager	President-Research Engineer
Shop Manager	V. Pres-Sales Manager
Used Car Manager	Asst. Sales Manager
Credit Manager	Secretary-Treasurer
Owner-Manager-Salesman	

##### 4. Supervisory

Shop Foreman	Shop Superintendent
Parts Foreman	Shop Supervisor
Foreman-New Equipment	Demonstrator of Cane Equipment
Foreman-Repairs	Plant Production Foreman
Foreman-Warehouse & Assembly	Asst. Plant Production Foreman

##### 5. Sales

Salesman	Farm Equipment Salesman
Sales Clerk	Outside Salesman
Truck Salesman	Sales Representative
Parts Salesman	Stock Control Clerk
Manufacturer's Agent	Shipping & Receiving Clerk

**I. FARM MACHINERY SALES AND SERVICE (continued)**

**6. Office**

Clerk	Office Clerk
Bookkeeper	Accountant
Posting Clerk	Secretary-Bookkeeper
Office Secretary	Asst. Bookkeeper
Office Helper	Asst. Secretary
Bookkeeper & Asst. Manager	

**7. Skilled**

Mechanic	Small Engine Repairman
Truck Mechanic	Mechanic & Partsman
Serviceman	Service-Repairman
Tractor & Machine Mechanic	Asst. Partsman
Parts Man	Machinist
Farm Equipment Mechanic	Bodyman
Welder	Mechanic & Truck Driver
Welder Repairman	Drill Press Operator
Painter	Fitter
Cotton Picker Mechanic	Welder-Painter
Roving Mechanic	

**8. Semiskilled**

Truck Driver	Welders Helper
Mechanic Helper	Pickup Man
Warehouseman	Deliveryman
Assemblyman	Setup & Deliveryman
Shop Worker	

**9. Unskilled**

Porter	Common laborer
--------	----------------

**II. FARM SUPPLIES AND EQUIPMENT**

**1. Professional**

Plant Breeder	Agronomist
Engineer	Nutritionist
Horticulturist	Pharmacist
Forester	Entomologist

**2. Technical**

Seed Analyser	Chief Designer Engineer
Herdsman	Mechanical Engineer
Chemist	Gin Electrician
Lumber Grader	Field Technician
Pilot	Ammoniator

**3. Managerial**

Manager	Shop Manager
Store Manager	Department Manager
General Manager	District Manager
Treasurer	Horticulture Department Manager

## II. FARM SUPPLIES AND EQUIPMENT (continued)

### 3. Managerial (cont.)

Division Manager	General Manager, Co-Owner
Plumbing & Welding Dept. Mgr.	Asst. Manager-Bookkeeper
Asst. Parts Manager	Store Manager-Yard Foreman
Personnel Manager	Manager, Co-Owner-Clerk
Branch Manager	Asst. Mgr., Co-Owner-Clerk
Manager Trim Dept.	Office & Warehouse Manager
President	Owner Mgr.-Cotton Buyer
Secretary-Treasurer	Co-Manager
Production Manager	Mill Manager
Plant Dept. Manager	Poultry Operator Mgr.
Division Manager	Yard Manager
Service Manager	Asst. Yard Manager
Plant Manager	President-Owner
Manager-Owner	Egg Plant Manager
Grocery Manager	Station Manager
Asst. Manager	Paint Dept Manager
Department Manager	Credit Manager
Sales Manager	Farm Advertising Manager
Farm Store Manager	Owner-Operator
Parts Manager	Manager Bookkeeper
Manager Farm Department	Elevator Manager
Office Manager	President-Manager
Produce Manager	L. P. Gas Sales Manager
Market Manager	Firm Manager
Vice President	Owner-General Manager
Treasurer	Warehouse Manager
Traffic Manager	

### 4. Supervisory

Fertilizer Superintendent	Shop Superintendent
Mill Foreman	Warehouse Foreman
Dept. Supervisor	Gin Repair Foreman
Foreman, Supt.	Carpentry Foreman
Warehouse Supervisor	Scale Crew Foreman
Yard Supt.	Station Supervisor
Mill Supt.	District Supervisor
Warehouse Supt.	Service Supervisor
Shop Foreman	Plant Foreman
Erection Foreman	Fertilizer & Lime Supt.
Asst. Plant Supt.	Feed, Seed & Garden Supt.
Woods Foreman	Tool Dept. Supt.
Superintendent	Plant Superintendent
Plant Supervisor	Production Foreman
Seed-Dryer Supervisor	Working Foreman
Yard Foreman	Broiler Serviceman
Foreman	Feed Room & Mixer Foreman
Wrecking Foreman	Asst. Foreman
Planner Foreman	Crew Leader
General Foreman	

## II. FARM SUPPLIES AND EQUIPMENT (continued)

### 5. Sales

Salesman	Agricultural Salesman
Sales Clerk	Counterman
Sales Lady	Store Clerk
Sales Girls	Sales Representative
Outside Salesman	Field Salesman & Service Man
Telephone Salesman	Commission Agent
Farm Store Salesman	Clerk-Deliveryman
Purchasing Agent	Contact Salesman
Sales Correspondent	Secretary Treasurer & Clerk
Inside Salesman	Gas Salesman
Buyer	Road Salesman
Livestock Sales Consultant	Clerk Buyer
Farm Pharmaceutical Buyer	Nursery Clerk
Lumber Buyer	Feed Buyer

### 6. Office

Bookkeeper	Accountant
Chief Accountant	Stock Clerk
Shipping Clerk	Cashier
Receiving Clerk	Office Clerk
Secretary-Treasurer	Clerk-Secretary
Asst. Secretary	Clerk-Bookkeeper
Office Employees	Posting Clerk
Service Clerk	Secretary & Bookkeeper
Secretary	Receiving & Shipping Clerk
Clerk	Asst. Bookkeeper
General Clerk	

### 7. Skilled

Mechanic	Tire Recapman
Serviceman	Small Engine Mechanic
Operator	Saw Mechanic
Saddlemaker	Lathe Operator
Welder	Miller
Estimator	Machinist
Home Improvement Consultant	Mix Operator
Farm Service Man	Fork Lift Operator
Plant Operator	Packer Operator
Mechanic Serviceman	Elevator Operator
Sheet Metal Mechanic	Plumber (Farm)
Butcher	Carburetor Mechanic
Engine Mechanic (Gin)	Pay Load Operator
Head Saw Cylinder Filer	Packing Line Operator
Parts Man	Feed Mixer
Mixing Man	



## II. FARM SUPPLIES AND EQUIPMENT (continued)

### 8. Semiskilled

Produce man	Gin Repair Crewman
Service Man	Butane Serviceman
Maintenance Man	Butane Transport Driver
Asst. Seed Dryer	Butane Delivery Man
Semiskilled Producers	Egg Grader
Repairman	Fertilizer Plant Worker
Poultry Service Man	Maintenance Service Man
Truck Driver	Service & Repairman
Warehouseman	Assistant Butcher
Assembly Man	Millman
Deluxer	Production Helper
Sheet Metal Mechanics Helper	General Helper
Asst. Warehouseman & Truck Driver	Elevator Helper
Electricians Helper	Sack Hanger
Engine Mechanics Helper	Sewing Machine Operator
Saw Shop Crewman	Feed Mixer
Carpenter Crewman	Utility man
Scale Repair Crewman	

### 9. Unskilled

Porter	Delivery Man
Yardman	Driver's Helper
Laborer	Plant Helper
Warehouse Assistant	Service Station Attendant
Truck Helper	Stock Boy
Fence Erector	Dock Workers
Insulation Man	

## III. LIVESTOCK AND POULTRY

### 1. Professional

Bacteriologist	Hog Specialist
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### 2. Technical

Field Man	Cattle Buyer
Inspector Grader	U.S.D.A. Inspector
Swine Expert	Auctioneer
Lab. Technician	Plant Engineer
Lab. Sample Checker	Ringman
Herdsman	D.H.I.A. Tester

### 3. Managerial

Plant Manager	Production Manager
President	Farm Manager
Manager	Marketing Manager
Asst. Manager	Produce Manager
Egg Dept. Manager	Market Manager
Killing Floor Manager	Asst. Market Manager
Owner Manager	Frozen Food Manager
Beef Manager	Route Manager

III. LIVESTOCK AND POULTRY (continued)

3. Managerial (cont.)

Asst. General Manager  
Retail Sales Manager  
Branch Manager  
Treasurer  
Procurement Manager  
Asst. Plant Manager  
Milk Production Manager  
Sales Manager  
Vice President  
Office Manager  
General Manager  
Southern Zone Manager  
Asst. Office Manager  
Egg Room Manager  
Dairy & Poultry Manager  
Personnel Manager  
Wholesale Manager  
Merchandise Manager  
Secretary-Treasurer

Grocery Manager  
Store Manager  
Owner-Operator  
Manager-Bookkeeper  
Hatchery Manager  
Feed Mill Manager  
President-Manager  
Field Manager  
Processor & Sales Manager  
Owner Livestock Buyer  
Yard Manager  
Asst. Manager & Salesman  
Stock Manager  
Farm Flock Manager  
Co. Owner-Manager  
Office Manager-Bookkeeper  
Manager & Cattle Buyer  
Assistant Yard Manager  
Owner-Butcher

4. Supervisory

General Plant Superintendent  
Plant Supervisor  
Supervisor  
Sales Supervisor  
Milk Plant Supt.  
Sausage Superintendent  
Dairy Manufacturing Supt  
Shipping Foreman  
Plant Foreman  
General Supervisor  
Foreman  
Shift Supervisor  
Processing Foreman  
Quality Control Supervisor  
Sales Supervisor  
Prod. Control Supervisor  
Dairy & Poultry Supt.  
Plant Supt.  
Wholesale Supt.  
Asst. Plant Supt  
Supervisor  
Department Supervisor  
Plant Production Supt.  
Manufacturing Supervisor  
Route Supervisor  
Ice Cream Plant Supt.

Milk Supervisor  
Ice Cream Superintendent  
Poultry Supervisor  
Curing Foreman  
Meat Curing Supervisor  
Asst. Ice Cream Supt.  
Milk Supt  
Asst. Milk Supt.  
Superintendent  
Dock Foreman  
Storeroom Supt.  
Sausage Foreman  
Meat Supt.  
Retail Supt.  
Sales Supt.  
Asst. to Sales Supt.  
Asst. Supervisor  
Yard Foreman  
Farm Supervisor  
Hatchery Foreman  
Pullet Program Foreman  
Plant Maint. Supt  
Raw Products Receiver  
Asst. Shipping Supt.  
Plant Superintendent  
Mill Foreman

### III. LIVESTOCK AND POULTRY (continued)

#### 5. Sales

Salesman	Precision Cut Salesman
Route Salesman	Full Line Salesman
Purchasing Agent	Merchandiser
Sales Lady	Cattle Buyer
Beef, Lamb & Veal Salesman	Hotel, Restaurant & Inst. Salesman
Dairy & Poultry Salesman	Produce Clerk
Sales Clerk	Market Clerk
Livestock Buyer	Wholesale Routeman
Merchandising Man	Baby Chick Salesman
Routeman	Hide & Wool Buyer
Buyer	Feed Salesman
Sales Engineer	
Outside Salesman	

#### 6. Office

Bookkeeper	Clerk
Shipping Clerk	Weightmaster
Office Worker	Stock Clerk
Ticket Writer	Accountant
Secretary	Scale Man
Auditor	Stenographer-Clerk
Receiving Clerk	Weightmaster-Ticket Writer
Clerical Help	Bookkeeper-Clerk
Cashier	Check writer
Clerical Clerk	

#### 7. Skilled

Meat Cutter	Processor
Asst. Herdsman	Smoker
Rendering Operator	Auctioneer
Meat Boner	Cheese Maker
Livestock Handler	Slaughter-Butcher
Stockman	Disease Control Man
Processor (Beef)	Creamery Worker
Carpenter	Butcher-Meat Cutter
Ice Cream Maker	Processor (Dairy)
Asst. Operator	Electrician
Milk Tester	Short Time Operator
Butcher	Raw Milk Pickup Man
Pasteurizer Operator	Milk Purification Operator
Steak Cutter	Sausage Maker
Bone Cutter	Assorted & Inspector
Grader Packer	

#### 8. Semiskilled

Maintenance Man	Egg Candler
Milker	Service Man
Cooler Man	Mixer Man
Warehouseman	Laborer
Plant Worker	Groundsman
Ring Man	Delivery Man

### III. LIVESTOCK AND POULTRY (continued)

#### 8. Semiskilled (cont.)

Sausage Maker	Produce Helper
Butcher's Helper	Meat Wrapper
Poultry Processors	Packer (Dairy)
Curer	Stock Man
Slaughterer	Egg Room Operator
Processor	Farm Operator
Yardman	Trimmer
Slaughterer, Packer & Peeler	Hatching Egg Handler
Truck Driver	Routeman's Helper
Order Packer	Cattle Herder
Grader	Egg Packer
Candler & Grader	Sorter & Checker
Weight Master	Egg Processor
Sales Driver	Weight Man
Load-Out-Man	

### IV. CROPS, FORESTRY AND SOIL CONSERVATION

#### 1. Professional

State Forester	Timber Management Researcher
Forester V	Wildlife Researcher
Forester III	Agronomist
Forester I	Public Relations
Water Management Researcher	Forester II
Biochemist	Engineer
Director of Research	Chemist
Service Forester	Work Unit Conservationist
Range Researcher	Tropical Research Director
Asst. Engineer	Area Forest Supt.
Asst. Forester	Unit Forester
Dept. Information Rep.	Agri-Commodity Supervisor
Federal Inspector	Range Conservationist
District Forest Supt.	Asst. District Forester
District Ranger	District Forester
Research Forester	Forester
Soil Scientist	Chief Forester
Entomologist	Area Forester
Plant Physiologist	Forest Specialist
Asst. State Forester	Agricultural Engineer
Forester IV	

#### 2. Technical

Electrician	Tree Surgeon
Investigator III	Enforcement Agent
Car Inspector	Lumber Inspector
Asst. Engineer	Farm Planner
Forest Technician	Quality Control Man
Forest Ranger	Engineers Aid
Candlers	Cotton Mkt. Spec. Fieldman
Inspector	Cotton Classifier

#### IV. CROPS, FORESTRY AND SOIL CONSERVATION (continued)

##### 2. Technical (cont.)

Radio Technician  
Technical Expert  
Investigator II  
Engineer  
Chemist  
Treating Technician  
Graders

Cane Inspector  
Practical Forester  
Forestry Aid  
Chief Engineer  
Surveyor  
Plant Engineer

##### 3. Managerial

Manager Agriculture Dept.  
General Sugar Mill Manager  
Assistant Manager  
Elevator Manager  
Secretary-Treasurer  
President  
Field Manager  
Business Manager  
Production Manager  
Gin Manager  
Egg Farm Manager  
Meat Manager  
Forestry Manager  
Land Manager  
Transportation Manager  
Truck Manager  
General Field Manager  
Manager  
Traffic Manager  
Executive Vice-President  
Office Manager  
Vice-President  
Store Manager  
General Manager  
Plant Manager  
Poultry Manager  
Sales Manager  
Produce Manager  
Market Manager  
Export Manager  
Banana Department Manager  
Egg Room Manager  
Sec., Treas., Gen. Mgr. &  
Cotton Buyer

General Manager-Cotton Buyer  
Owner Manager  
President-Co-Owner  
Market Coordinator  
President, General Manager  
Asst. Manager-Bookkeeper  
Secretary-Treasurer & Manager  
Assistant Market Manager  
Assistant Produce Manager  
Planner Mill Manager  
Assistant Store Manager  
Co-Manager & Co-Owner  
Manager Salesman  
Manager Operator  
Vice President Land Manager  
Insurance Manager  
Warehouse Manager  
Feed Mill Manager  
Grain Storage Manager  
Trucks Manager  
Fertilizer Manager  
Assistant Office Manager  
Manager President  
Assistant Sales Manager  
Owner  
President Manager  
Vice President-Assistant Manager  
Vice President-General Manager  
Secretary-Treasurer & Office Manager  
Canal Manager  
Drier Manager  
Comptroller  
Office Manager & Cotton Buyer  
Territorial Manager

##### 4. Supervisory

Foreman  
Foreman III  
Fabrication Superintendent  
Assistant Superintendent  
Erection Foreman  
Superintendent Oil Mill

General Shipping Supervisor  
Plant Foreman  
Farm Superintendent  
Wood Procurement Superintendent  
Warehouse Superintendent  
Foreman Lint Room

**IV. CROPS, FORESTRY AND SOIL CONSERVATION (continued)**

**4. Supervisory (cont.)**

Plant Supervisor	Herdsman Foreman
Quality Control Supt.	Field Overseer
Wood Marketing Foreman	Supervisor Transportation
Warehouse Foreman	Tree Nursery Supt. II
Tree Surgeon Foreman	Gin Superintendent
Head Forestry Dept.	Plant Superintendent
Supervisor Warehouse	Repair Shop Foreman
Tree Nursery Supt. I	Elevation Supt.
Wood Yard Foreman	Logging Foreman
Mill Superintendent	Compress Superintendent
Maintenance	Compress Asst. Supt. & Press Foreman
General Supt. of Mills	Compress Labor Foreman
Yard Foreman	Woods Foreman
Foreman II	Mill Foreman
Supervisor	Planer Mill Foreman
Superintendent	Cross Tie Superintendent
Production Plant Supt.	Shed Foreman
Asst. Shed Foreman	Pulpwood Superintendent
Factory Superintendent	Green End Foreman
Shed Supervisor	Logging Superintendent
Assistant Shed Supervisor	Department Superintendent
Cresote Plant Superintendent	Millwright Foreman
Asst. Cresote Plant Supt.	Log Contractor
Field Foreman	Shop Foreman
Asst. Woods Foreman &	Production Foreman
Truck Driver	Production Supervisor
Const. & Maint. Supt.	Line Supervisor
General Foreman of Roads &	Dry Kiln Foreman
Grounds	Shipping Foreman

**5. Sales**

Salesman	Cane Buyer
Buyer	Sweet Potatoe Buyer
Sales Representative	Rice Buyer-Grader
Food Clerk	Timber Buyer
Broker	Pole Buyer
Trader	Rice Buyer
Merchant	Seed Buyer
Dairy Clerk	Sales Clerk
Produce Buyer	Cotton Buyer
Auctioneer	Sales Manager
Asst. Sales Manager	

**6. Office**

Time Keeper	Grain Checker & Weigher
Clerk	Admin. Officer
Chief Clerk	Asst. Shipping Clerk
Seed Checker & Weigher	Shipping Clerk & Bookkeeper
Shipping Clerk	Shed Clerk
Secretary-Treasurer	Clerk Weigher
Cashier	Weigher & Bookkeeper

IV. CROPS, FORESTRY AND SOIL CONSERVATION (continued)

6. Office (cont.)

Typist-Clerk	Ticketman & Cotton Weigher
Cane Weigher	Recorder Clerk
Payroll Clerk	Bookkeeper & Sample Man
Office Worker	Asst. Bookkeeper
Secretary	Shipping Clerk
Bookkeeper	Accountant
Office & Shipping Clerk	Invoice Clerk
Weigher	Clerk & Warehouseman
Receipt Writer	General Clerk
Check Writer	Shipping & Storing Clerk

7. Skilled

Cavity Man	Treating Engineer
Derrick Operator	Loader Operator
Sugar Boiler	Gang Sawyer
Forest Ranger I	Saw Filer
Forest Ranger II	Kiln Operator
Forest Ranger III	Shop Mechanic
Cabinet Maker	Machine Man (Planer Mill)
Heavy Equipment Operator	Machine Feeder
Egg Candler	Lumber Grader
Forest Ranger	Lumber Checker
Partsman	Sawyer & Filer
Ginner	Planer Machine Operator & Mechanic
Press Operator	Maintenance Man
Meat Cutter	Okra Slicer Operator
Butcher	Timber Market Estimator
Draftsman	Rice Dryer Operator
Trimmer	Syrup Mill Operator
Refinery Mechanic	Grain Inspector
Clarifier Operator	Fireman
Mechanic	Hydrofunic House Worker
Gin Operator	Lathe Operator
Standman	Verneer Clipper Operator
Forest Foreman	Splicer Operator
Radio Operator	Dry Kiln Operator
Fill Operator	Veneer Breaker
Carpenter	Power Saw Operator
Welder	Gin Mechanic
Lookout Man	Log Skidder
Ranger	Tow Motor Operator
Electrician	Millwright & Sawyer
Horse Trainer	Lumber Setter
Presser	Plywood Grader
Edgeman	Crane Operator
Millwright	Machinist
Sawyer	Welder Mechanic
Cutup Man	Process Inspector
Sheet Metal Mechanic	Field Man (Agricultural)
Box Setter	Head Miller
Weigher	Bin Man
Maintenance Man	Receiver-Shipper (Rice Dryer)
Loader Operator and Wood Scaler	

IV. CROPS, FORESTRY AND SOIL CONSERVATION (continued)

8. Semiskilled

Climber	Feed Mill Operator
Forest Foreman I	Seed Cleaner & Delinter Operator
Forest Foreman II	Cane Grinder
Forest Foreman III	Cane Juice Carrier
Tractor Operator	Cane Juice Drainer
Forest Fireman	Skimmer
Maintenance Helper	Syrup Cooker & Fireman
Poultry Processor	Pole & Pole Peeler
Lift Truck Operator	Scaler Helper
Log Scaler	Mechanic Helper
Welder Helper	Laborer
Mill Employees	Saw Filer Helper
Gin Stand Worker	Log Lifter
Candler	Debarker Operator
Horse Training Helper	Fireman
Truck Driver	Press Crew Worker
Forest Towerman I	Carman
Forest Towerman II	Laborer Utility
Fire Guard	Chipper Operator
Packer-Shipper	Resaw Operator
Forest Towerman	Handy Man
Tree Trimmer	Grader-Packer
Feed Miller	Grader
Crawler Driver	Meat Wrapper
Asst. Ginner	Relief Man
Warehouseman	Commodity Aids
Tower Man II	Bench Saw Operator
Weigher	Plane Operator
Pumper	Lumber Handler
Crew Leader	Forester Aid
Utility Man	Cotton Sample Weigher
Seed Weigher	Edger
Elevator Operator	Log Tripper
Skidway Man	Peach Packer
Tractor Driver & Loader	Cane Sampler
Scaleman	Operators Helper
Blower	Deliveryman
T.S.I. Crewman	Road Maintenance Crew Laborer
Fork Lift Operator	Sawman
Mill Laborer	Asst. Miller
Asst. Dryer Operator	Packing Crew
Oilers	Canal Walkers
Miller Maintenance	

9. Unskilled

Groundsman	Woods Crew
Yardman	Warehouseman
Block Setter	Laborer
Trade Helper	Porter
Field Worker	Yard Laborer
Cotton Picker (hand)	Tree Planter
Suction Feeder	Feed Mill & Grain Elevator Worker
Syrup Mill Worker	Weeder-Grader
Produce Trimmer	Cotton Loader
Pulp Loader	



**V. ORNAMENTAL HORTICULTURE**

**1. Professional**

Landscape Architect  
Entomologist

Landscape Draftsman  
Landscape Specialist

**2. Technical**

Florist

**3. Managerial**

Manager  
Nursery Manager  
Asst. Manager Retail Sales  
Small House Plant Manager  
Office Manager  
Sales Manager  
President  
Asst. Manager  
Manager Retail Sales

Manager Chem. & Fert. Dept.  
Nursery Stock & Trees Manager  
Nursery Farm Manager  
Sales Lot Manager  
Owner-Manager  
Vice President  
Manager Grower  
Co-Manager & Owner

**4. Supervisory**

Foreman  
Nursery Foreman  
Landscape Foreman  
Field Foreman  
Job Foreman

Sales Supervisor  
Supervisor  
Greenhouse Foreman  
Lot & Landscape Foreman  
Plant Supervisor

**5. Sales**

Salesman  
Dispatcher  
Lot Salesman

Sales Clerk  
Landscape Salesman  
Designer Salesman

**6. Office**

Clerk  
Bookkeeper  
Secretary-Treasurer

Office Worker  
Telephone Clerk

**7. Skilled**

Floral Designer  
Propagator  
Designer  
Mechanic  
Asst. Designer

Flower Arranger  
Asst. Floral Designer  
Tree Surgeon  
Budder-Cutter

**8. Semiskilled**

Potter  
Planter  
Grower  
Tractor Driver  
Apprentice Designer  
Nurseryman  
Truck Driver

Landscape Gardener  
Serviceman  
Digger  
Pinner  
Florist Helper  
Tree Surgeons Helper

9. Unskilled

Laborer  
Yard Boy  
Apprentice  
Landscape Laborer  
Greenhouse Attendant  
Stable Workman

Delivery Boy  
Gardener  
Nursery Helper  
Yardman  
Potter

VI. WILDLIFE AND RECREATION

1. Professional

Curator  
Horticulturist  
Biologist  
Commissioner

Wildlife Biologist  
Research & Educational Personnel  
Fish Biologist

2. Technical

Biologist Aid

Waste Disposal Inspector

3. Managerial

Manager  
Asst. Superintendent  
Asst. Manager  
General Manager  
Superintendent  
Park Superintendent

Golf Course Manager  
Wildlife Manager  
Refuge Manager  
Owner-Manager  
Asst. Manager & Salesman

4. Supervisory

Park Ranger  
Superintendent  
Asst. Superintendent  
Tree Supervisor  
Supervisor  
Golf Course Superintendent  
Area Supervisor  
Foreman  
Greens Supt.  
Landscape Supervisor

Parkway Foreman  
Recreation Area Supervisor  
Fishery Foreman  
Wildlife Agent  
Area Supervisor  
District Supervisor  
Game Warden  
Supt. of Parks & Recreation  
Park Supervisor  
Refuge Supervisor

5. Sales

6. Office

Refuge Clerk

7. Skilled

Taxidermist  
Operator  
Chief Greenskeeper

Mechanic  
Bulldozer Operator  
Heavy Equipment Operator

8. Semiskilled

Maintenance Man  
Gardener  
Asst. Greenskeeper  
Equipment Operator

Greenskeeper  
Truck Driver  
Minnow Feeder  
Fish Farm Helper

VI. WILDLIFE AND RECREATION (continued)

9. Unskilled

Park Attendant  
Groundskeeper  
Fairway Keeper  
Asst. Greenskeeper  
Kennel Man

Golf Course Employee  
Laborer  
Caretaker  
Seine Man

VII. FARM SERVICE

1. Professional

Mechanical Engineer  
Chemist Bacteriologist  
Public Relations  
Farm News Director  
FHA Supervisor  
Agri. Engineer  
State Director  
Engineer  
Asst. Loan Specialist  
Home Economist  
Radio Farm Director  
Farm Management Supervisor  
Field Engineer  
Research Director  
County Supervisor

Home Service Advisor  
Executive Secretary  
Work Unit Supervisor  
Entomologist  
Administration Officer  
Loan Specialist  
Farm Management Officer  
Loan Officer  
Supervisor  
Agri. Advisor  
Appraiser  
Home Service Engineer  
Asst. County Supervisor  
Electrical Engineer  
District Sales Manager

2. Technical

Laboratory Asst  
Service Technician  
Pest Control Technician  
Management Technician  
Milk Technician  
Inspector  
Livestock Board Inspector  
Airplane Pilot  
Plant Cover Technician

Pilot  
Survey Asst.  
Advisor  
Draftsman  
Sanitarian  
Radio Breaker & Utility Maint. Man  
Meter & Utility Maint. Man  
Artificial Inseminator  
Breeding Technician

3. Managerial

Manager  
Asst. Manager  
Sales Manager  
Branch Manager  
Vice President  
Senior Vice President  
Pest Control Division Manager  
Secretary-Treasurer  
President  
Division Manager  
General Manager  
District Manager  
Office Manager  
Termite Division Manager

Credit Manager  
Manager Operator  
Owner Asst. Manager  
Asst. Branch Manager  
Office Manager & Secretary Treasurer  
Farm Loan Manager  
Manager Pilot  
Manager Welder  
Treasurer-Office Manager  
Manager Mechanic  
Co. Manager  
Asst. Manager Accountant  
President & Manager  
Manager & Insurance Agent

VII. FARM SERVICE (continued)

3. Managerial (cont.)

Regional Manager  
Owner-Manager  
Plant Manager

Engineer Manager  
Agency Manager

4. Supervisory

Supervisor  
Shop Foreman  
Pest Control Supervisor  
Machinist Foreman  
Foreman  
Termite Dept. Head  
Field Supt.  
Installation Supervisor  
Line Supt.  
Service Supervisor  
Irrigation Supervisor

Plant Supervisor  
Spray Supervisor  
Asst. County Supervisor  
Field Representative  
Enforcement Agent  
Construction Line Foreman  
Business Supervisor  
District Supervisor  
Termite Supervisor  
Performance Supervisor  
Asst. Shop Foreman

5. Sales

Salesman  
Real Estate Agent  
Advertising Salesman  
Routeman  
Insurance Salesman

Service Agent  
Counter Salesman  
Purchasing Agent  
Power Use Manager & Public Rel.

6. Office

Office Worker  
Chief Brand Clerk  
Office Clerk  
Office Asst.  
Secretary  
Bookkeeper  
Clerk  
Clerical Asst.  
Office Secretary  
Clerk-Secretary  
Stock Clerk  
Checker  
Treasurer  
Asst. Cashier

Cashier  
Shipping Clerk  
Bookkeeper-Dispatcher  
Steno-Clerk  
Accountant II, Transportation Clerk  
Work Order Clerk  
Warehouse Clerk  
Accountant I  
Accountant III-Billing Clerk  
Asst. Bookkeeper  
Secretary-Bookkeeper  
Dispatcher  
Claims Adjuster

7. Skilled

Operators  
Mechanic  
General Pest Treater  
Machinist  
Well Serviceman  
Welding Operator  
Truck Press Operator  
Blacksmith  
Serviceman  
Carpenter

Tree Surgeon  
Reporters  
Gin Repairman  
Bulldozer Operator  
Construction Lineman  
Electrician  
Plumber  
Engineer  
Dragline Operator  
Sheet Metal Mechanic

VII. FARM SERVICE (continued)

7. Skilled (cont.)

Lineman	Appliance Mechanic
Machine Operator	Machinest-Welder
Welder	Cement Batch Operator
Well Driller	Heavy Equipment Operator
Driller	

8. Semiskilled

Treater	Hay Crewman
Pest Control Service Man	Applicator
Termite Service Man	Tractor Operator
Welder Helper	Spreader Operator
Well Driller Helper	Caretaker
Machinist Helper	Canal Walker
Termite Treater	Mill Operator
Fieldman	Tree Pruner
Tool Room Man	Carpenters Helper
Treater Helper	Meter Reader
Exterminator	Form Setter
Warehouseman	Finisher
Scout II	Loader-Driver
Painter	Floor Hand
Ground Crew	Mechanics Helper
Asst. Exterminator	Apprentice Machinist
Termite Control Man	Tree Climber

9. Unskilled

Warehouse Helper	Service Asst.
Delivery Man	Electricians Helper
Laborer	Plumbers Helper
Lineman Helper	Sheet Metal Helper
General Helper	Truck Drivers Helper

VIII. AGRICULTURAL SERVICE

1. Professional

Research Agronomist	Asst. Commissioner of Agriculture
Vocational Agriculture Teacher	Asst. Director Weights & Measures
Vocational Agriculture Specialist	Director Sweet Potatoe Advertising
Executive Assistant II	Plant Entomologist
Chief Anhydrous Ammonia Div.	State Entomologist
Director Weights & Measures	Veterinary Pathologist
Exec. Asst. Dept. of Agriculture	Pest Control State Superintendent
Dir. Warehouse Commission	County Agent
Veterinarian	Assoc. County Agent
Poultry Pathologist	Agri. Marketing District Supervisor
Pest Control Dist. Super.	State Dir. Voc. Agri. Education
State Super. La. Market Comm.	Professor of Agronomy
Asst. County Agent	Assoc. Prof. Animal Science
Agri. Marketing Ser. Area Supervisor	Asst. Dir. Agri Research Ser.
Agri. Commodity Grader	Plant Pathologist

## VIII. AGRICULTURAL SERVICE (continued)

### 1. Professional (cont)

Chairman Agriculture Dept.	Soil Scientist
Assoc. Prof. Ag. Engineering	County Manager
Dir. Agri. Research Service	Agri. Economist
Chemical Engineer	Geologist
Research Forester	Senior Counselor
Forester	Instructor
Party Leader	Chemist
Hydraulic Engineer	Asst. Home Demonstration Agent
Entomologist	Animal Husbandry Man
Counselor	Conservationist
Research Plant Pathologist	Assoc. Prof. Dairy Science
Home Demonstration Agent	Assoc. Home Demonstration Agent
Agronomist	Prof. of Horticulture
Livestock Director	Forestry Consultant
Home Economics Teacher	Soil Conservationist
Asst. Prof. of Horticulture	Civil Engineer
Assoc. Prof. of Horticulture	Work Unit Conservationist
Asst. Prof. Poultry Science	Station Superintendent
State Admin. Officer	Assoc. Prof. Agronomy
Agri. Engineer	(In charge of Experiment Station)
Biologist	Assoc. Prof. of Agronomy
Asst. Agronomist	Forester Admin. (Range)
County Office Manager	Agric. Professor
Voc. Agri. Supervisor	Construction Engineer
Land Administrator II	Rice Breeder

### 2. Technical

Pest Control Technician	Grain Inspector
Veterinary Nurse	State Seed Analysis
Livestock Inspector General	Pest Controller
Sweet Potatoe Inspector	Soil Conservation Aid
Milk Sampler & Weigher	Fats & Oil Specialist
Marketing Specialist	Claim Specialist
Anhydrous Ammonia Inspector	Credit Examiner
Herbicide Inspector	Inspector
Junior Livestock Loan	Poultry Grader
Field Representative	Horticultur. Inspector
Cotton Gin Specialist	Pink Boll Worm Inspector
Exhibit Technician	Conservation Technician
Soil Conservation Technician	Agri. Research Technician
Warehouse Examiner	Cotton Market Specialist
Field Representative	Pink Boll Worm Quarantine Insp.
Jr. Credit Examiner	Customer Service Representative
Poultry Product Insp.	Agri. Engineering Aid
Fresh Fruit & Veg. Insp.	New Business Representative
Pest Control Inspector	Districts Supervisors Aid
Draftsman	Asst. Forester
Civil Engineering Technician	Soil Conservation Aid
Milk Technician	Computer

VIII. AGRICULTURAL SERVICE (continued)

2. Technical (cont.)

Employment Security Tech.  
Produce Inspector  
Animal Disease Enforcement  
Officer  
Livestock Inspector  
Warehouse Examiner  
Feed & Fertilizer Inspector

Research Aid  
Engineering Aid  
Farm Planner  
Field Inspector  
Apiary Inspector  
Weight & Measure Inspector  
Seed Technician

3. Managerial

Trust Officer  
President  
Loan Officer  
Asst. Manager Livestock  
Loan Department  
Manager  
Office Manager  
Secretary-Treasurer  
Senior Officer  
Administrator  
Senior Vice President  
Asst. Vice President  
Administration Officer  
Vice President  
Manager Livestock Loan Dept.  
Asst. Administration Officer  
Manager Agricultural Loans

County Office Manager  
Department Manager  
Storage Management Officer  
Officer in Charge  
Business Analysis  
District Manager  
Manager & Fieldman  
Executive Vice President  
Sales Manager  
Asst. Manager  
Owner Manager  
Branch Manager  
Asst. Office Manager  
Asst. V. Pres. & Agric. Rep.  
Equipment Manager  
Asst. Cashier, Manager

4. Supervisory

Work Unit Supervisor  
Fire Ant Supervisor  
Farm Superintendent II  
Area Supervisor  
Field Supt.  
Gulf Region Supervisor  
Horticulture Foreman  
Poultry Production Supervisor  
Supervisor  
Employment Security Supervisor  
Performance Supervisor  
Farm Supervisor  
Horticulture Supervisor  
Service Crew Foreman

County Supervisor  
Farm Loan Supervisor  
Dist. Fieldman  
Field Supervisor  
Field Representative  
Asst. County Supervisor  
Farm & Lab. Supervisor  
Milk Technician Supervisor  
Plant & Insect Inspector  
Party Leader  
Dist. Supervisor  
Agric. Commodity Grader Super.  
Asst. Farm Foreman  
Superintendent

5. Sales

Liason Officer  
Salesman  
Market & Produce Buyer

Merchants  
Routeman

VIII. AGRICULTURAL SERVICE (continued)

6. Office

Secretary	Stenographer
Clerk Typist	Conservation Program Clerk
Note Teller	Soil Bank Clerk
Milk Plant Auditor	Bookkeeper .
Collector	County Office Clerk
Area Clerk	Agri. Conser. Program Clerk
Investigator	Cashier
Program Clerk	Admin. Price Support Clerk
Allotment Program Clerk	Clerk IV
Counter Clerk	Agri. Statistician
Administrative Clerk	Appraisers
Receptionist	Sugar Clerk
Sugar Feed Grain Clerk	General Clerk
Acerage Allotment Clerk	Extension Secretary
Grain Market Reporter	Filing Clerk
Milk Auditor	Cotton Loan Clerk
Credit Examiner	Performance Clerk
Clerk	Allotment & Marketing Quota Clerk
Asst. Cashier	C. A. & M. 2 Clerk
Auditor	Note Teller & Bookkeeper
Chief Clerk	Asst. County Office Clerk
Interviewer	Stock Clerk & Warehouseman
Farm Commodity Market Reporter	Office Assistant

7. Skilled

Auto Mechanic	Farm Mechanic
Plainometer Operator	Equipment Operator
Surveyor	Asst. Farm Mechanic
Field Reporter	Heavy Machine Operator
Service Crewman	Industrial Service Operator
State Cooperator	Asst. to Engineering Aid

8. Semiskilled

Veterinarian Helper	Plumbers Helper
Plant Pest Control Worker	Farm Laborer
Veterinarian Asst.	Dairy Laborer
Kennel Helper	Student Farm Laborer
Fire Ant Control Worker	Research Helper
Grader	Pest Control Asst.
District Aid	Parts Man

9. Unskilled

Laborer	Gardener
Kennel Man	Veterinarian Hospital Helper
Grain Sampler	Janitor