

R E P O R T R E S U M E S

ED 019 479

08

VT 004 783

NONFARM AGRICULTURAL EMPLOYMENT IN NORTHWEST LOUISIANA--AREA  
I--WITH IMPLICATIONS FOR DEVELOPING TRAINING PROGRAMS.

BY- MONDART, C.L., SR. AND OTHERS

LOUISIANA ST. UNIV., BATON ROUGE

REPORT NUMBER VO-AG-ED-17

PUB DATE JUN 67

REPORT NUMBER BR-5-0016

CONTRACT OEC-5-85-040

EDRS PRICE MF-\$0.50 HC-\$3.68 90P.

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

AS PART OF A STATEWIDE STUDY OF AGRICULTURAL OCCUPATIONS IN LOUISIANA, AN INTERVIEW SURVEY OF 233 AGRICULTURAL BUSINESSES AND AGENCIES IN THE 10-PARISH AREA IN THE NORTHWESTERN SECTION WAS CONDUCTED TO (1) IDENTIFY AND CLASSIFY FIRMS WITH EMPLOYEES NEEDING AGRICULTURAL COMPETENCIES, (2) IDENTIFY AGRICULTURAL COMPETENCIES NEEDED FOR ENTRY AND ADVANCEMENT, AND (3) IDENTIFY CHARACTERISTICS OF ALL JOB TITLES. THE FIRMS EMPLOYED 4,847 WORKERS OF WHICH 2,451 IN 438 JOB TITLES NEEDED AGRICULTURAL COMPETENCIES. AN ESTIMATED 170 ADDITIONAL EMPLOYEES WILL BE NEEDED WITHIN 5 YEARS. EMPLOYEES WERE FOUND IN EIGHT OCCUPATIONAL FAMILIES AND NINE EMPLOYMENT LEVELS. OVER 78 PERCENT OF THE JOB TITLES WERE FOUND IN THE OCCUPATIONAL FAMILIES--(1) FARM SUPPLIES AND EQUIPMENT, (2) LIVESTOCK AND POULTRY, (3) CROPS, FORESTRY, AND SOIL CONSERVATION, AND (4) FARM SERVICE. THE MEAN MINIMUM AGE FOR JOB ENTRY WAS 22. EMPLOYERS WANTED EMPLOYEES WITH AT LEAST A HIGH SCHOOL EDUCATION, AND MORE THAN 18 PERCENT PREFERRED SOME COLLEGE TRAINING. A FARM BACKGROUND WAS PREFERRED IN 64 PERCENT OF THE JOBS. THE PROFESSIONAL, MANAGERIAL, SUPERVISORY, AND SALES EMPLOYMENT LEVELS GENERALLY REQUIRED BROAD AGRICULTURAL TRAINING WITH CONCENTRATION IN A SPECIFIC AREA. ON-THE-JOB TRAINING AND INDUSTRY SCHOOLS WERE THE MOST COMMON MEANS OF SUPPLYING CONTINUING EDUCATION. THE SURVEY INSTRUMENT, A LIST OF TOWNS AND BUSINESSES SURVEYED, AND A LIST OF WORKERS IN EACH ARE INCLUDED. OTHER AREA SURVEYS AND RELATED STUDIES ARE AVAILABLE AS VT 004 782 - VT 004 787. (JM)

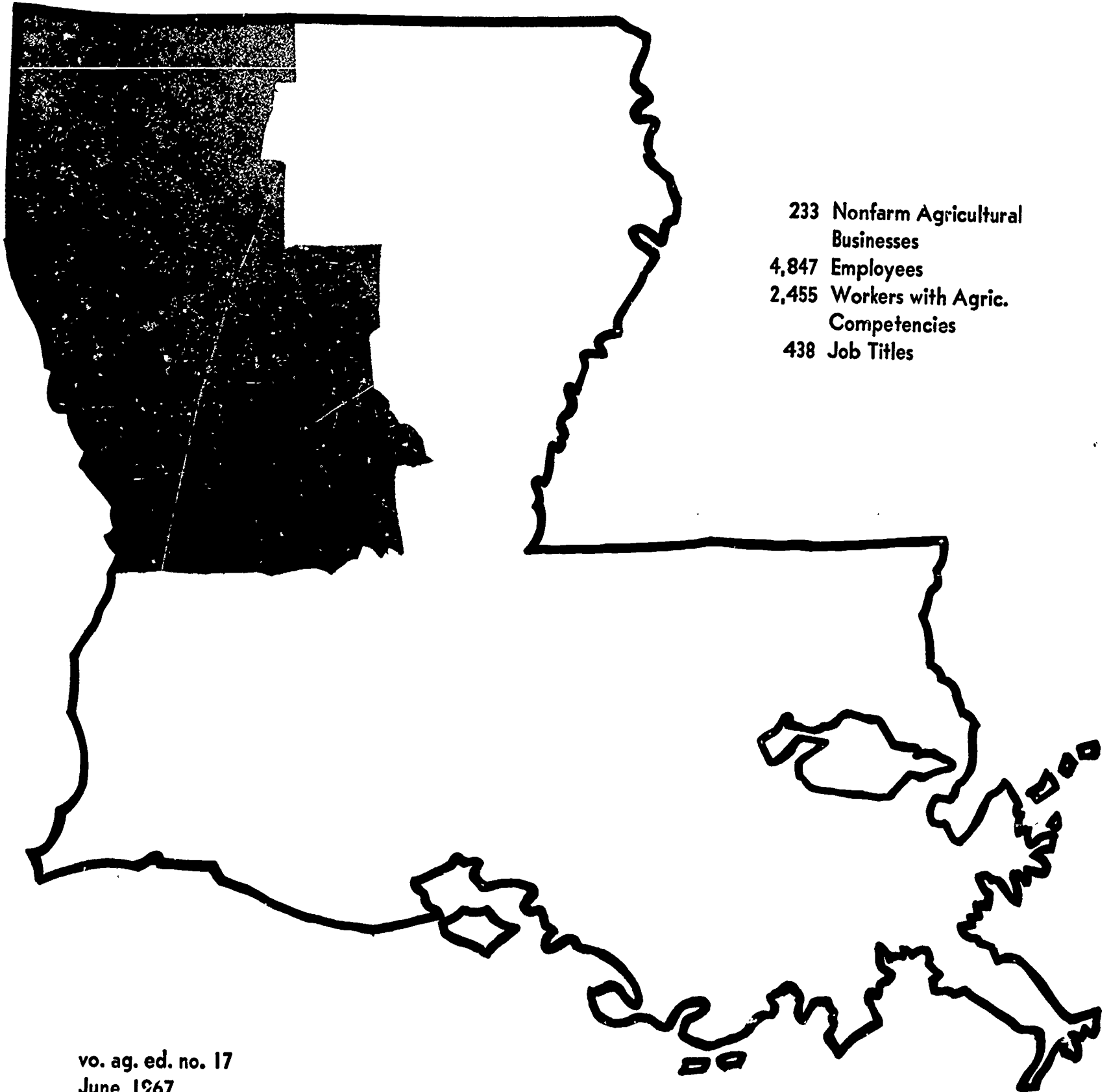
ED019479

BP-5 0016

P.A. 08

# NONFARM AGRICULTURAL EMPLOYMENT IN NORTHWEST LOUISIANA — AREA I — WITH IMPLICATIONS FOR DEVELOPING TRAINING PROGRAMS

Cooperative Research Project  
OE 5-85-040



vo. ag. ed. no. 17  
June 1967

Department of Vocational Agricultural Education  
School of Vocational Education  
College of Agriculture  
Louisiana State University  
Baton Rouge

VT004783

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE  
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE  
PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS  
STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION  
POSITION OR POLICY.

NONFARM AGRICULTURAL EMPLOYMENT IN NORTHWEST  
LOUISIANA--AREA I--WITH IMPLICATIONS  
FOR DEVELOPING TRAINING PROGRAMS

Cooperative Research Project  
OE 5-85-040

by

C. L. Mondart, Sr.  
C. M. Curtis  
Loy H. Dobbins

DEPARTMENT OF VOCATIONAL AGRICULTURAL EDUCATION

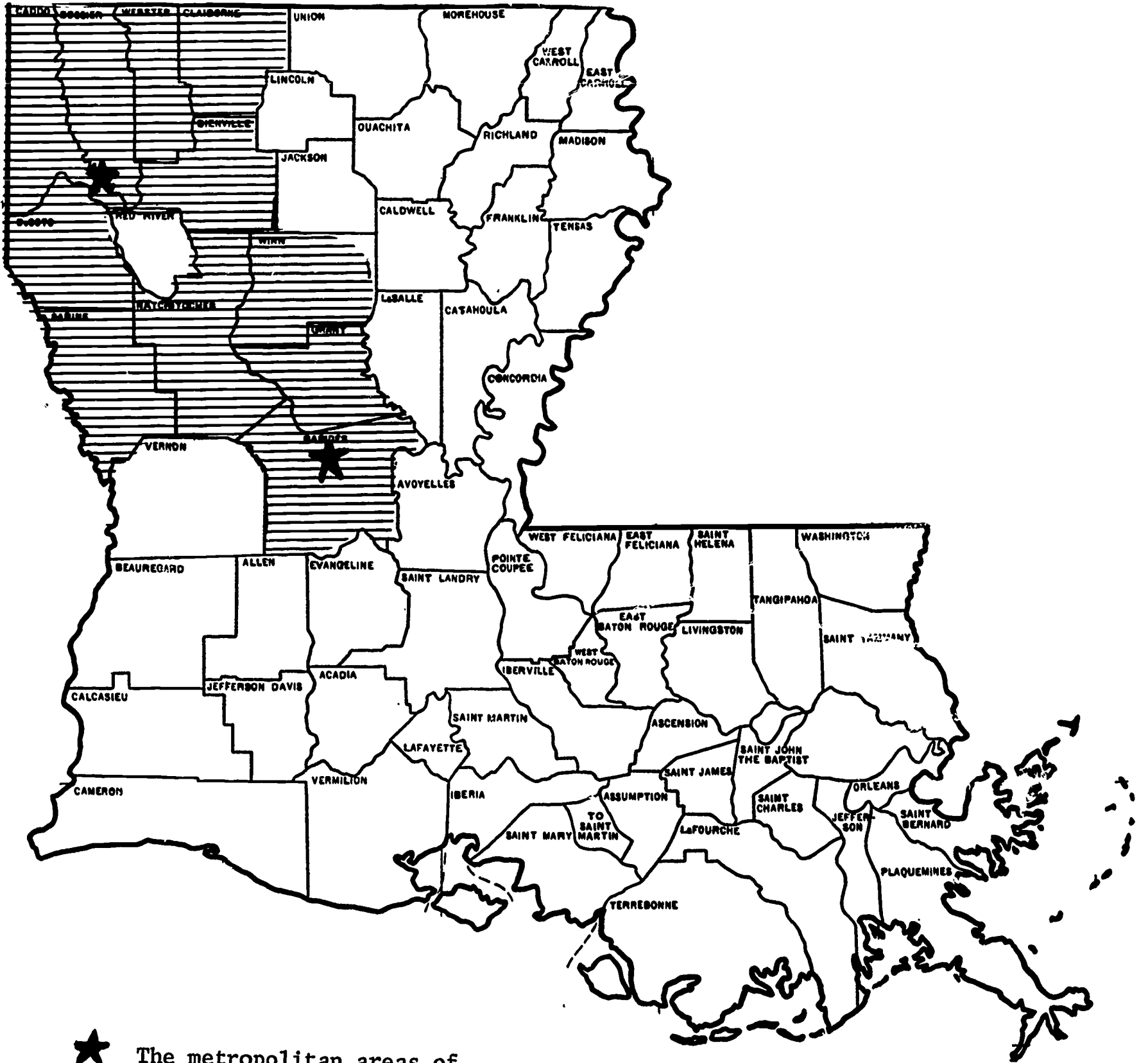
SCHOOL OF VOCATIONAL EDUCATION

COLLEGE OF AGRICULTURE

LOUISIANA STATE UNIVERSITY

June, 1967

The research reported herein was supported by the Cooperative Research  
Program of the Office of Education, U. S. Department of Health, Education  
and Welfare; funded under Section 4 (c) of the National Vocational Educa-  
tion Act of 1963.



★ The metropolitan areas of Shreveport and Alexandria are excluded in this study

TABLE OF CONTENTS

|   | Page |
|---|------|
| RESEARCH STAFF. . . . .   | iv   |
| ACKNOWLEDGMENTS . . . . .   | v    |
| INTRODUCTION. . . . .   | 1    |
| Survey Purposes. . . . .  | 5    |
| Procedure. . . . .  | 5    |
| Treatment of Survey Information. . . . .  | 6    |
| PRESENTATION AND ANALYSIS OF SURVEY INFORMATION . . . . .                                   | 8    |
| Occupational Families. . . . .  | 8    |
| Number Employed in Nonfarm Agriculture . . . . .  | 11   |
| Job Titles According to Occupational Families and<br>Levels of Employment. . . . .          | 14   |
| Levels of Employment in Nonfarm Agriculture. . . . .  | 16   |
| Job Entry Age for Nonfarm Agricultural Workers . . . . .                                    | 16   |
| Salaries of Employees Working in Nonfarm Agriculture . . . . .                              | 18   |
| Educational Level Desired of Persons Entering<br>Nonfarm Agricultural Occupations. . . . .  | 27   |
| Residential Background Preferred of New Employees. . . . .                                  | 29   |
| Farm Experience Preferred of New Employees . . . . .  | 31   |
| Agricultural Subjects in Which Prospective Workers<br>Must Have Knowledge or Skill. . . . . | 31   |
| Continuing Education Required of Employees with Educa-<br>tional Facilities Used. . . . .   | 42   |
| SUMMARY, CONCLUSIONS AND RECOMMENDATIONS. . . . .   | 45   |
| Summary. . . . .  | 45   |
| Conclusions. . . . .  | 48   |
| Recommendations. . . . .  | 50   |
| SELECTED BIBLIOGRAPHY . . . . .   | 55   |
| APPENDIX. . . . .   | 57   |
| A. Survey Schedule. . . . .   | 58   |
| B. Towns, Firms and/or Industries Surveyed. . . . .   | 65   |
| C. Job Titles and Number of Workers . . . . .   | 71   |

## RESEARCH STAFF

C. L. Mondart, Sr., Professor, Director, School of Vocational Education  
C. M. Curtis, Associate Professor, Project Director  
Loy H. Dobbins, Research Associate  
William Sanford Hyde, Research Associate  
James C. Letlow, Research Associate  
Dale Reed, Research Associate\*  
Lehman R. Sullivan, Research Associate  
Alice D. Anders, Project Secretary

## PROJECT SPONSORS

School of Vocational Education  
College of Agriculture  
Louisiana State University

Louisiana State Department of Education

and

United States Office of Education  
Contract Number OE 5-85-040, funded  
under Section 4 (c) of the National  
Vocational Education Act of 1963.

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



## ACKNOWLEDGMENTS

The authors wish to express their appreciation to the following individuals for their contributions.

### Special Consultants

- Dr. Alvin Bertrand, Professor of Rural Sociology, Department of Sociology, Louisiana State University.
- Mr. Robert E. Lee, Chief, Community Employee Programs, Division of Employment Security, State of Louisiana.
- Mr. Silas D. Garvin, Labor Market Analyst, Division of Employment Security, State of Louisiana.
- Mr. Joseph R. Gerace, Operations Analyst, Division of Employment Security, State of Louisiana.

### Advisory Committee

- Dr. J. Norman Efferson, Dean, College of Agriculture, Louisiana State University.
- Dr. R. Howard Hanchey, Associate Dean, College of Agriculture, Louisiana State University.
- Dr. Fred H. Wiegmann, Head, Department of Agricultural Economics and Agribusiness, Louisiana State University.
- Dr. Alvin Bertrand, Professor of Rural Sociology, Department of Sociology, Louisiana State University.
- Mr. William E. Johnson, Assistant Superintendent for Vocational Education, Louisiana State Department of Education.
- Mr. Thomas S. Derveloy, Director, Vocational Agricultural Education, Louisiana State Department of Education.
- Mr. T. S. Colvin, Supervisor Area I, Louisiana State Department of Education.
- Mr. Woodrow Lyles, Supervisor Area II, Louisiana State Department of Education.

Mr. Ivan Baker, Supervisor Area III, Louisiana State State Department of Education.

Mr. James C. Simmons, Supervisor Area IV, Louisiana State Department of Education.

Mr. A. A. LeBlanc, Late Head, Department of Vocational Agricultural Education, University of Southwestern Louisiana.

Dr. John Mitchell, Head, Department of Vocational Agricultural Education, University of Southwestern Louisiana.

Dr. J. Y. Terry, Head, Department of Vocational Agricultural Education, Louisiana Polytechnic Institute.

### Cooperating

The Louisiana State University Staff:

Dr. John A. Hunter, President.

Dr. Cecil G. Taylor, Chancellor.

Dr. J. Norman Efferson, Dean, College of Agriculture.

Dr. R. Howard Hanchey, Associate Dean, College of Agriculture.

Dr. J. C. Atherton, Professor, Vocational Agricultural Education.

Dr. James Hutchinson, Associate Professor, Vocational Agricultural Education.

Dr. Bill B. Townsend, Director, Computer Research Center.

Mr. Donald E. Simmons, Assistant to the Comptroller.

Mr. John D. Tiedeman, Accountant, Auditor's Office.

Miss Marion M. Comeaux, Administrative Assistant, Office of the President.

Mrs. Mary K. McMinn, Secretary, School of Vocational Education.



NONFARM AGRICULTURAL EMPLOYMENT IN NORTHWEST  
LOUISIANA--AREA I--WITH IMPLICATIONS  
FOR DEVELOPING TRAINING PROGRAMS

by

C. L. Mondart, Sr.  
C. M. Curtis  
Loy H. Dobbins

INTRODUCTION

The welfare of the American citizen becomes more closely associated with an occupation as the national economy moves from a rural to an urban society. Occupations not only grow more complex and greater in number, but they consistently require more qualifications of the prospective worker. Youth possessing appreciable education and vocational training are highly employable. Those less fortunate in formal education are more likely to obtain lesser paying jobs, or even fail to find satisfactory employment.

Today, in education the payoff to the individual is a realistic job. Moreover, the individual worker is identified with the kind of work performed which, as a fact of modern day living, tends to establish level of living and social contribution.

Educators in planning occupational training programs must first consider the aspirations and capabilities of students, and they must also be guided by the labor market, taking into account fields of employment in which there are consistent opportunities for employment.

Traditionally, the broad field of agriculture has absorbed youth in great numbers, particularly those having a rural background. Early in the life of the country the land was its prime resource, with most people living off its bounties. Farming commenced as a way of life, reaching commercial

status only after farmers could produce a surplus over family living to sell to others who were engaged in off-farm occupations.

With the growth of the country, more people gravitated to expanding populated centers, where they engaged in a business or industry, or worked at jobs connected with them. As centers of population grew into cities, two major needs developed; more workers were needed to supply a growing job market, while additional food was required to feed the workers along with a rapidly growing urban population.

Fortunately, the farms of the country were able to supply both needs, but in the process farming changed from a way of life to a commercial enterprise, with surplus farm population migrating to cities instead of seeking other lands on which to farm. Additionally, they were joined by dissatisfied farmers who quit the farm in an effort to find more desirable employment in the city.

The continually rising importance of food to the nation's economy, plus the problem of feeding a growing labor force, focused the attention of the national leadership upon the task of providing vocational education to prospective farmers, along with those already engaged in farming.

To meet the pressure for trained workers, both on and off the farm, (capable of meeting the needs of the times) Congress in 1917 passed the Smith-Hughes Act, authorizing federal funds to promote at the secondary school level vocational programs in agriculture, trades and industries, and home economics.

Courses in agriculture achieved widespread acceptance, especially in rural schools where both farmers and prospective farmers were instructed in farm technology with the aim of training them "for proficiency in farming

occupations." Unfortunately, and largely because vocational education was new and without experienced people to direct it, the 1917 legislation was rigid in its requirements, rather than flexible enough for vocational education to change as the nation's manpower needs changed.

The real impact of the legislation was its endorsement of vocational education at the national level. Actually, its provisions were rooted in conditions existing prior to 1917, even though post World War II circumstances were beginning to emerge at its passage--circumstances causing some parts of the law to be obsolete even before they could be applied at the local level, particularly the stipulation in agriculture limiting the training to "...present and prospective farmers..."

Happily, the Morse-Perkins Act passed by Congress in 1963 recognizes agriculture as a broad field of employment and "opened up" vocational agriculture to provide training for occupations involving a "knowledge and skill in agricultural subjects," thus fulfilling a long time need.

The 1963 Vocational Act obligates each state to analyze its manpower needs and employment opportunities preparatory to long-range planning. For agriculture, census reports give information showing the downward trend in farm employment, but no similar material is available to describe the upsurge in manpower needs of off-farm agriculture.

To obtain such information--to identify the concerns engaged in non-farm agricultural activity and the jobs contained in them--Louisiana State University and the State Department of Education undertook a massive research program, beginning with the metropolitan areas and extending into the lesser populated areas of the State.

For accomplishing research outside of the metropolitan areas, Louisiana was divided into four areas, following the same pattern used by the State Department of Education for effecting supervision of vocational agriculture programs. Findings in this report cover Area I, comprising the parishes located in the northwest portion of the state. Information presented was obtained firsthand by agricultural instructors of the Area.

The metropolitan centers of Shreveport and Alexandria are located in Area I, as defined by the State Department of Education. However, these cities were a part of a survey of Louisiana metropolitan centers reported in L.S.U. Bulletins No. 6 and 7, published in February 1965. Consequently, research in Area I excludes these centers. It does include rural parishes of the Area, specifically: Bienville, Bossier, Claiborne, Caddo, DeSoto, Grant, Natchitoches, Sabine, Webster, and Winn.

Farming in the Area I centers about cotton, livestock, and forestry. In 1964, the Area reported 10,495 farms. People living on them had a spendable income of some \$75 million, including earnings received from non-farm work.

The Area described is serviced by 17 trade centers, located outside the cities of Shreveport and Alexandria. These centers had 233 businesses and agencies employing workers required to have a knowledge and skill in agricultural subjects for proper job performance.

In the whole of Area I, Shreveport had 221 nonfarm agricultural concerns, Alexandria had 139, and the rural centers had 233, or a total of 593.

This report contains information pertinent only to the 233 agricultural businesses and agencies studied in the 10-parish area defined.

## Survey Purposes

The survey of Area I was made to accomplish several purposes considered timely:

1. To identify and classify according to occupational family all of the businesses and agencies having one or more job titles requiring the employee to have knowledge and skill in agricultural subjects;
2. To identify the competencies needed in agricultural subjects, or skills required, for job entry and advancement; and
3. To identify the special characteristics of all job titles found in nonfarm agricultural occupations, which include salary or wages, entry age, required formal education, farm experience, legal restrictions and union regulations, together with a description of work performed by workers holding a particular job title.

More generally, the purpose of the survey was to provide educators with a knowledge of present and emerging agricultural occupations, other than those in farming and ranching for which training programs have been developed. Hopefully, survey findings would be sufficient to stimulate and give direction to new training programs designed for youth in the Area interested in nonfarm agricultural employment.

## Procedure

The research design called for the use of agricultural teachers in effecting the survey of nonfarm agricultural firms located in rural centers. In Area I, 18 agricultural teachers obtained the job information presented in this study by personal interviews with 233 concerns. These teachers were instructed in the interview technique and use of the schedule by University personnel. Actual surveys were made under the supervision of a member of the research staff responsible for the Project conducted state-wide.

Nonfarm agricultural businesses and agencies located in the Area were identified by local chambers of commerce, local agricultural teachers and telephone directories. Newspapers and radio stations gave support



and publicity to the survey.

Each teacher involved in the study was assigned a list of firms to contact, and was paid a fee of \$100 to work his list and obtain the information desired. The 18 teachers worked 233 businesses and agencies having employees using a knowledge of agriculture in job performance. Information about these workers form the basis for this report, besides contributing to the overall state report published under separate cover.

The firms and agencies participating in the survey contained 4,847 workers; 2,451 were required to have knowledge and skill in agricultural subjects.

Used in the gathering of information pertinent to nonfarm agricultural job titles in Area I, was the same schedule\* employed in all areas of the state; also, in the metropolitan centers. This schedule was developed to identify the off-farm agricultural business or agency, the job titles involving agricultural knowledge and skill, along with a job description covering qualifications required for entry and advancement.

#### Treatment of Survey Information

In order to present and interpret survey information, the data were organized under three general categories, namely:

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.

To provide for better coordination of summary data at the state and national level, occupational families were used as developed by the Center for Research and Leadership Development in Vocational and Technical Education at

---

\*See Appendix A

The Ohio State University. These families are:

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

The number of employees was determined for each occupational family, as well as the number of workers needing competencies in agriculture now and five years hence. Job titles were determined by occupational family and projected new job titles were listed in each. Job titles were classified according to levels of employment: Professional, Technical, Managerial, Supervisory, Sales, Office, Skilled, Semiskilled, and Unskilled.

In each occupational family and level of employment, data were collected concerning job entry age, monthly salary, and number of employees needing knowledge or skill in each subject matter area, namely: Plant Science, Animal Science, Agricultural Business and Management and Farm Mechanics and Automation.

More specifically, requirements for each occupational family were determined according to each job level. Such employment essentials as: education, residential background, farm experience, and continuing education required for advancement were also determined.

Data in this study were intended to reveal occupational opportunities in nonfarm agriculture in the small towns and semi-urban areas of northwest Louisiana, and it may be noted that these data may serve as tools to be used by secondary school teachers and guidance counselors as they assist students in making vocational choices. Implementation of the facts interpreted in this study will provide a firm basis for future program development in vocational agricultural education.



## PRESENTATION AND ANALYSIS OF SURVEY INFORMATION

A principal purpose of this study was to identify clusters of nonfarm agricultural jobs found in the agriculturally oriented businesses and agencies located in the northwest Louisiana sector, excluding Shreveport and Alexandria, with special regard to educational qualifications needed by prospective workers to effect satisfactory job entrance and continued progress in the field chosen. This presentation is made in an attempt to communicate agricultural occupational opportunities to those primarily concerned with the education of rural youth who face problems in finding a place in the labor force. Educational needs for job entry as expressed by employers were also summarized.

### Occupational Families

Nonfarm agricultural businesses and agencies lend themselves to groupings called families which are appropriate for the work done or nature of service performed. Each grouping offers a wide range of occupations, according to variations in businesses making up a particular family. Specific jobs contained within a family grouping may require similar and yet different skills and abilities, depending upon level of performance and the work to be done.

Each of the 233 businesses and agencies in Area I were categorized in one of the eight major occupational families, losing the identity of the individual concern in the process of classification. The individual concern is shown only by type of service under each family, according to the following arrangement:

- I. Farm Machinery Sales and Service  
Farm Machinery and Equipment Dealer  
Automobile and Truck Dealer  
Farm Equipment Prefabricator  
Farm Implement Company
- II. Farm Supplies and Equipment  
Hardware Store  
Fence Company  
Department Store  
Feed and Seed Store  
Building Supply Store  
Fertilizer Company  
Wholesale Distributing Company  
Agricultural Chemical Dealer  
Garden Center  
Veterinarian Supply Company  
Feed Mill  
Dairy Farm Equipment Dealer  
Farmers Cooperative  
Lumber Company  
Petroleum Dealer  
Drug Store (Veterinarian Supplies)  
Forestry Equipment Dealer
- III. Livestock and Poultry  
Slaughter House  
Butcher Shop  
Meat Market  
Egg Processing Company  
Milk Distributorship  
Creamery  
Wholesale Meat Distributor  
Dairy Products Company  
Livestock Auction Barn  
Hatchery  
Grocery Store  
Poultry and Egg Processing Company  
Freezing and Storage Plant  
Packing Plant
- IV. Crops, Forestry and Soil Conservation  
Louisiana Forestry Commission  
Tree Service Company  
Logging Company  
Produce Company  
Forestry Service (U. S.)  
Wood Preserving Company  
Grain Company  
Lumber Company  
Timber Contractor  
Food Store  
Cotton Gin  
Cotton Brokerage Company

- IV. Crops, Forestry and Soil Conservation (continued)  
Cotton Division, Marketing Service  
Seed Dealer  
Cotton Warehouse  
Wood Yards  
Creosote Plant  
Fruit and Vegetable Market  
Grain Elevator  
Feed Mill  
Veneer Company
- V. Ornamental Horticulture  
Garden Center  
Nursery  
Wholesale Florist  
Landscape Company
- VI. Wildlife and Recreation  
Golf Course  
State Park  
City Park  
National Park  
Playground  
Golf Course Service Company  
Country Club  
Louisiana Wildlife and Fisheries Commission  
State Parks and Recreation Commission  
Bait Shop  
Fish Market
- VII. Farm Service  
Welding Company  
Machine Shop  
Electric Power Supplier  
Pest Exterminating Company  
Artificial Breeding Association  
Credit Association  
Farmers Home Administration  
Realty Company  
Insurance Company  
Aero Farm Service  
Water Well Company  
Auto Repair Shop  
Building Contractor  
Livestock Brand Commission  
Farm Service Laboratory  
Airplane Service  
Iron Works  
Concrete Company  
Land and Timber Company  
Blacksmith

VII. Farm Service (continued)

Farm Bureau  
Fertilizer and Lime Service  
Motor Repair Shop  
D.H.I.A. Supervisor  
Farm Dusting Service

VIII. Agricultural Service

Animal Hospital  
Veterinarian  
Agricultural Stabilization and Conservation  
Agricultural Extension Service  
Soil Conservation Service  
State Department of Agriculture  
Vocational Agriculture Teacher  
U. S. Department of Agriculture  
Animal Disease Eradication (U.S.D.A.)  
Bank  
Agricultural Experiment Station  
Federal Land Bank Association  
U. S. Department of Interior  
U. S. D. A. Plant Pest Control

Number Employed in Nonfarm Agriculture

The number of agricultural businesses, industries, and agencies categorized according to occupational family is revealed in Table I. A total of 233 businesses and agencies were surveyed. More than 76 per cent of these firms were in Farm Supplies and Equipment, Crops, Forestry and Soil Conservation, Livestock and Poultry, and Farm Service. The greatest concentration was in Farm Supplies and Equipment.

Of the 4,847 employed in the eight occupational families 2,455 workers had agricultural competencies. Five years hence the number of jobs in which the employee needs agricultural competencies is expected to be 2,621--an increase of 7 per cent.

Table II indicates that over 50 per cent of those employed in non-farm agriculture in Northwest Louisiana were required to have competencies in agriculture. More than one-half of those employed needing agricultural

TABLE I

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

| <u>Occupational Family</u>          | <u>Number</u> | <u>Per Cent</u> |
|-------------------------------------|---------------|-----------------|
| Farm Machinery Sales & Service      | 26            | 11.0            |
| Farm Supplies & Equipment           | 60            | 25.8            |
| Livestock & Poultry                 | 38            | 16.3            |
| Crops, Forestry & Soil Conservation | 48            | 20.6            |
| Ornamental Horticulture             | 6             | 2.6             |
| Wildlife & Recreation               | 2             | 1.0             |
| Farm Service                        | 31            | 13.3            |
| Agricultural Service                | 22            | 9.4             |
| Total                               | 233           | 100.0           |

TABLE II

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

| Occupational<br>Family                 | Total Number<br>of Employees | Current<br>Employment | Employees Needing Agricultural Competencies |   | Expected<br>Employment<br>Five Years Hence | Per Cent In-<br>crease Five<br>Years Hence |
|--|------------------------------|-----------------------|---|---|--|--|
|  |                              |                       | Current                                     | Employees Needing<br>Agri. Competencies |  |  |
| Farm Machinery<br>Sales & Service      | 432                          | 280                   | 64.8  | 354                                     | 26.0                                       |  |
| Farm Supplies &<br>Equipment           | 366                          | 284                   | 77.6  | 311                                     | 10.0                                       |  |
| Livestock &<br>Poultry                 | 618                          | 295                   | 47.7  | 303                                     | 2.0  |  |
| Crops, Forestry &<br>Soil Conservation | 2,973                        | 1,247                 | 42.0  | 1,283                                   | 3.0  |  |
| Ornamental<br>Horticulture             | 19                           | 17                    | 89.5  | 19                                      | 11.0                                       |  |
| Wildlife &<br>Recreation               | 25                           | 11                    | 44.0  | 19                                      | 72.0                                       |  |
| Farm Service                           | 291                          | 221                   | 76.0  | 229                                     | 4.0  |  |
| Agricultural<br>Service                | 123                          | 96                    | 78.0  | 103                                     | 7.0  |  |
| <b>Total</b>                           | <b>4,847</b>                 | <b>2,451</b>          | <b>50.6</b>                                 | <b>2,621</b>                            | <b>7.0</b>                                 |  |

competencies were in the occupational family of Crops, Forestry and Soil Conservation. Occupational families, when ranked according to number of workers are:

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

Growth in number of employees needing skill in agricultural subjects was expected in all occupational families. Employers anticipated the addition of 170 workers over the coming five years. The overall increase when all families were considered was 7 per cent.

#### Job Titles According to Occupational Families and Levels of Employment

The 2,451 workers performing jobs requiring a knowledge in agriculture in the 233 establishments surveyed held 438 different job titles as indicated by Table III. The number of job titles five years hence is expected to increase by 29.

A detailed list of the eight occupational families, together with the total number of workers in each job title is found in Appendix D.

Job titles appear in sufficient quantity in all eight families to challenge the occupational interest of youth, and it might be pointed out that an increase of approximately 7 per cent in the number of job titles five years hence indicates a healthy growth of agricultural opportunity.



TABLE III

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

| Occupational Family                 | Number of Job Titles |                  | Number of Job Titles |                  | Per Cent Job Title Increase Five Years Hence |
|-------------------------------------|----------------------|------------------|----------------------|------------------|--|
|                                     | Five Years Hence     | Five Years Hence | Five Years Hence     | Five Years Hence |  |
| Farm Machinery Sales & Service      | 46                   | 48               |                      |                  | 4.3  |
| Farm Supplies & Equipment           | 62                   | 67               |                      |                  | 8.0  |
| Livestock & Poultry                 | 70                   | 77               |                      |                  | 10.0   |
| Crops, Forestry & Soil Conservation | 142                  | 148              |                      |                  | 4.2  |
| Ornamental Horticulture             | 6                    | 6                |                      |                  | 0.0  |
| Wildlife & Recreation               | 7                    | 8                |                      |                  | 14.3   |
| Farm Service                        | 70                   | 75               |                      |                  | 7.1  |
| Agricultural Service                | 35                   | 38               |                      |                  | 8.6  |
| Total                               | 438                  | 467              |                      |                  | 6.6  |

### Levels of Employment in Nonfarm Agriculture

A listing of the number of individuals employed in the various job titles and by level of employment in Table IV reveals opportunities available to youth. A ranking of level of employment frequency in all occupational families is as follows: (1) Semiskilled, (2) Skilled, (3) Managerial, (4) Unskilled, (5) Sales, (6) Office, (7) Supervisory, (8) Professional, (9) Technical.

A concentration is shown in the semiskilled level of employment in Crops, Forestry and Soil Conservation. This occupational family represents over 50 per cent of the total agriculturally trained workers. Of this group, skilled, semiskilled and unskilled levels of employment accounted for 81 per cent of the workers. The management level of employment appeared to offer more opportunities in Livestock and Poultry, and Farm Supplies and Equipment. Employment in the sales level was concentrated in Farm Machinery Sales and Service, and Farm Supplies and Equipment. Almost 50 per cent of the professional workers were employed in Crops, Forestry and Soil Conservation.

### Job Entry Age for Nonfarm Agricultural Workers

Average age of all employees was secured for each of the 233 firms and agencies by occupational family and for each level of employment. Consideration was given to the Present age, Minimum age for entry, and the Maximum age for entry.

It was interesting to note that the average minimum age for entry in all occupational families and for practically all levels of employment was centered around 22. It was somewhat higher with jobs having more responsibilities. The average maximum age for job entry was 50 years .

TABLE IV

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

| Occupational Family                 | Levels of Employment |            |               |            |            |            |              | Total       | Per Cent    |              |              |
|-------------------------------------|----------------------|------------|---------------|------------|------------|------------|--------------|-------------|-------------|--------------|--------------|
|                                     | Prof. Tech.          | Man-gerial | Super-visoary | Sales      | Office     | Skilled    | Semi-skilled |             |             | Un-skilled   |              |
| Farm Machinery Sales & Service      | 22                   | 0          | 38            | 15         | 81         | 17         | 92           | 13          | 2           | 280          | 11.4         |
| Farm Supplies & Equipment           | 0                    | 1          | 81            | 4          | 64         | 21         | 20           | 43          | 50          | 284          | 11.5         |
| Livestock & Poultry                 | 0                    | 13         | 83            | 16         | 20         | 19         | 34           | 110         | 0           | 295          | 12.0         |
| Crops, Forestry & Soil Conservation | 53                   | 24         | 45            | 77         | 7          | 25         | 355          | 465         | 196         | 1247         | 51.0         |
| Ornamental Horticulture             | 0                    | 0          | 8             | 0          | 0          | 0          | 0            | 0           | 9           | 17           | 0.7          |
| Wildlife & Recreation               | 4                    | 1          | 2             | 3          | 0          | 0          | 0            | 0           | 1           | 11           | 0.4          |
| Farm Service                        | 3                    | 14         | 34            | 11         | 12         | 30         | 28           | 56          | 33          | 221          | 9.0          |
| Agricultural Service                | 26                   | 6          | 10            | 5          | 0          | 30         | 15           | 4           | 0           | 96           | 4.0          |
| <b>Total</b>                        | <b>108</b>           | <b>59</b>  | <b>301</b>    | <b>131</b> | <b>184</b> | <b>142</b> | <b>544</b>   | <b>691</b>  | <b>291</b>  | <b>2,451</b> | <b>100.0</b> |
| <b>Per Cent</b>                     | <b>4.4</b>           | <b>2.4</b> | <b>12.3</b>   | <b>5.3</b> | <b>7.5</b> | <b>5.8</b> | <b>22.2</b>  | <b>28.3</b> | <b>11.8</b> | <b>100.0</b> |              |

It would seem, since the average entry age is 22 years, that possibly youngsters are not adequately prepared for job entry for specific occupations upon graduation from high school and that some four or more years additional training is necessary to effect job entry. It is quite plausible that if individuals should receive sufficient training in occupational skills while still enrolled in the secondary school, the age of job entry would be reduced.

Average ages for each occupational family and for each level of employment within the occupational family are indicated in Tables V-1 through V-8.

#### Salaries of Employees Working in Nonfarm Agriculture

Median monthly salaries or wages were calculated for all occupational families and for each level of employment. The median monthly salaries, including Beginning, Present and Maximum are shown in Tables VI-1 through VI-8.

The median monthly wages for jobs at the Skilled level in Farm Machinery Sales and Service; Farm Supplies and Equipment; and Crops, Forestry and Soil Conservation exceeded the wages for the Unskilled by \$100 or more. In Farm Service the Skilled workers earned upward of \$200 monthly more than the Unskilled.

An analysis of salaries indicated that employees were paid in line with training and responsibility, starting with a low income for the unskilled and advancing through sales, supervisory, managerial and professional.

Professional, technical, managerial and supervisory employees accounted for 24 per cent of the employees. Their beginning median salaries ranged from \$201 to a high of \$409 with maximum median salaries of \$506 to \$776 per month

TABLE V-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 | Number of<br>Job Titles |
|---------------------|---------|---------|---------|-------------------------|
| Professional        | 32      | 25      | 36      | 9                       |
| Technical           | 0       | 0       | 0       | 0                       |
| Managerial          | 38      | 26      | 49      | 28                      |
| Supervisory         | 40      | 28      | 46      | 11                      |
| Sales               | 37      | 21      | 50      | 17                      |
| Office              | 32      | 22      | 45      | 12                      |
| Skilled             | 35      | 21      | 46      | 28                      |
| Semiskilled         | 28      | 21      | 41      | 8                       |
| Unskilled           | 30      | 21      | 45      | 1                       |

TABLE V-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 | Number of<br>Job Titles |
|---------------------|---------|---------|---------|-------------------------|
| Professional        | 0       | 0       | 0       | 0                       |
| Technical           | 40      | 30      | 55      | 1                       |
| Managerial          | 43      | 25      | 52      | 65                      |
| Supervisory         | 38      | 24      | 52      | 3                       |
| Sales               | 39      | 22      | 50      | 28                      |
| Office              | 35      | 21      | 51      | 17                      |
| Skilled             | 40      | 21      | 49      | 13                      |
| Semiskilled         | 35      | 20      | 48      | 18                      |
| Unskilled           | 38      | 18      | 48      | 17                      |

TABLE V-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 | Number of<br>Job Titles |
|---------------------|---------|---------|---------|-------------------------|
| Professional        | 0       | 0       | 0       | 0                       |
| Technical           | 38      | 21      | 48      | 6                       |
| Managerial          | 40      | 24      | 50      | 62                      |
| Supervisory         | 40      | 22      | 47      | 12                      |
| Sales               | 36      | 22      | 50      | 11                      |
| Office              | 36      | 20      | 51      | 14                      |
| Skilled             | 40      | 21      | 51      | 24                      |
| Semiskilled         | 36      | 19      | 53      | 34                      |
| Unskilled           | 0       | 0       | 0       | 0                       |

TABLE V-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 | Number of<br>Job Titles |
|---------------------|---------|---------|---------|-------------------------|
| Professional        | 37      | 23      | 51      | 32                      |
| Technical           | 36      | 22      | 49      | 9                       |
| Managerial          | 43      | 26      | 53      | 38                      |
| Supervisory         | 45      | 27      | 55      | 47                      |
| Sales               | 47      | 23      | 51      | 4                       |
| Office              | 39      | 23      | 53      | 18                      |
| Skilled             | 41      | 22      | 54      | 90                      |
| Semiskilled         | 39      | 19      | 54      | 70                      |
| Unskilled           | 38      | 20      | 53      | 14                      |

TABLE V-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 | Number of<br>Job Titles |
|---------------------|---------|---------|---------|-------------------------|
| Professional        | 0       | 0       | 0       | 0                       |
| Technical           | 0       | 0       | 0       | 0                       |
| Managerial          | 45      | 22      | 51      | 7                       |
| Supervisory         | 0       | 0       | 0       | 0                       |
| Sales               | 0       | 0       | 0       | 0                       |
| Office              | 0       | 0       | 0       | 0                       |
| Skilled             | 0       | 0       | 0       | 0                       |
| Semiskilled         | 0       | 0       | 0       | 0                       |
| Unskilled           | 32      | 21      | 49      | 5                       |

TABLE V-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 | Number of<br>Job Titles |
|---------------------|---------|---------|---------|-------------------------|
| Professional        | 35      | 21      | 65      | 2                       |
| Technical           | 42      | 20      | 65      | 1                       |
| Managerial          | 44      | 23      | 55      | 2                       |
| Supervisory         | 42      | 21      | 65      | 1                       |
| Sales               | 0       | 0       | 0       | 0                       |
| Office              | 0       | 0       | 0       | 0                       |
| Skilled             | 0       | 0       | 0       | 0                       |
| Semiskilled         | 0       | 0       | 0       | 0                       |
| Unskilled           | 40      | 18      | 55      | 1                       |



TABLE V-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 | Number of<br>Job Titles |
|---------------------|---------|---------|---------|-------------------------|
| Professional        | 34      | 21      | 48      | 3                       |
| Technical           | 37      | 22      | 54      | 7                       |
| Managerial          | 40      | 26      | 51      | 32                      |
| Supervisory         | 41      | 24      | 51      | 6                       |
| Sales               | 39      | 23      | 58      | 10                      |
| Office              | 37      | 22      | 53      | 24                      |
| Skilled             | 36      | 21      | 48      | 7                       |
| Semiskilled         | 34      | 19      | 53      | 12                      |
| Unskilled           | 35      | 18      | 51      | 5                       |

TABLE V-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 | Number of<br>Job Titles |
|---------------------|---------|---------|---------|-------------------------|
| Professional        | 40      | 23      | 56      | 24                      |
| Technical           | 47      | 22      | 54      | 4                       |
| Managerial          | 42      | 27      | 58      | 10                      |
| Supervisory         | 38      | 23      | 50      | 4                       |
| Sales               | 0       | 0       | 0       | 0                       |
| Office              | 43      | 20      | 60      | 21                      |
| Skilled             | 24      | 18      | 53      | 3                       |
| Semiskilled         | 39      | 18      | 55      | 3                       |
| Unskilled           | 0       | 0       | 0       | 0                       |

TABLE VI-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        | \$701.00              | \$701.00 | \$701.00 |
| Technical           | .00                   | .00      | .00      |
| Managerial          | 626.00                | 700.00   | 701.00   |
| Supervisory         | 442.00                | 538.00   | 538.00   |
| Sales               | 375.00                | 475.00   | 701.00   |
| Office              | 251.00                | 310.00   | 425.00   |
| Skilled             | 301.00                | 351.00   | 506.00   |
| Semiskilled         | 234.00                | 251.00   | 284.00   |
| Unskilled           | 175.00                | 225.00   | 275.00   |

TABLE VI-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        | \$ .00                | \$ .00  | \$ .00  |
| Technical           | 425.00                | 475.00  | 525.00  |
| Managerial          | 354.00                | 488.00  | 554.00  |
| Supervisory         | 375.00                | 525.00  | 525.00  |
| Sales               | 246.00                | 351.00  | 401.00  |
| Office              | 228.00                | 283.00  | 415.00  |
| Skilled             | 245.00                | 279.00  | 315.00  |
| Semiskilled         | 201.00                | 231.00  | 333.00  |
| Unskilled           | 187.00                | 185.00  | 229.00  |

TABLE VI-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        | \$ .00                | \$ .00  | \$ .00  |
| Technical           | 451.00                | 601.00  | 675.00  |
| Managerial          | 383.00                | 482.00  | 540.00  |
| Supervisory         | 430.00                | 601.00  | 651.00  |
| Sales               | 375.00                | 426.00  | 509.00  |
| Office              | 195.00                | 235.00  | 251.00  |
| Skilled             | 241.00                | 325.00  | 351.00  |
| Semiskilled         | 195.00                | 230.00  | 251.00  |
| Unskilled           | .00                   | .00     | .00     |

TABLE VI-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        | \$534.00              | \$700.00 | \$701.00 |
| Technical           | 393.00                | 482.00   | 559.00   |
| Managerial          | 551.00                | 667.00   | 701.00   |
| Supervisory         | 440.00                | 518.00   | 567.00   |
| Sales               | 625.00                | 700.00   | 701.00   |
| Office              | 301.00                | 351.00   | 413.00   |
| Skilled             | 315.00                | 372.00   | 410.00   |
| Semiskilled         | 258.00                | 299.00   | 361.00   |
| Unskilled           | 195.00                | 232.00   | 268.00   |

TABLE VI-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        | \$ .00                | \$ .00  | \$ .00  |
| Technical           | .00                   | .00     | .00     |
| Managerial          | 338.00                | 475.00  | 701.00  |
| Supervisory         | .00                   | .00     | .00     |
| Sales               | .00                   | .00     | .00     |
| Office              | .00                   | .00     | .00     |
| Skilled             | .00                   | .00     | .00     |
| Semiskilled         | .00                   | .00     | .00     |
| Unskilled           | 175.00                | 219.00  | 258.00  |

TABLE VI-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        | \$425.00              | \$575.00 | \$701.00 |
| Technical           | 325.00                | 425.00   | 475.00   |
| Managerial          | 201.00                | 225.00   | 375.00   |
| Supervisory         | 325.00                | 425.00   | 475.00   |
| Sales               | .00                   | .00      | .00      |
| Office              | .00                   | .00      | .00      |
| Skilled             | .00                   | .00      | .00      |
| Semiskilled         | .00                   | .00      | .00      |
| Unskilled           | 175.00                | 225.00   | 275.00   |

TABLE VI-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        | \$400.00              | \$625.00 | \$701.00 |
| Technical           | 325.00                | 525.00   | 525.00   |
| Managerial          | 511.00                | 661.00   | 701.00   |
| Supervisory         | 501.00                | 601.00   | 601.00   |
| Sales               | 325.00                | 475.00   | 584.00   |
| Office              | 301.00                | 401.00   | 451.00   |
| Skilled             | 409.00                | 459.00   | 509.00   |
| Semiskilled         | 201.00                | 251.00   | 276.00   |
| Unskilled           | 193.00                | 243.00   | 275.00   |

TABLE VI-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        | \$451.00              | \$651.00 | \$701.00 |
| Technical           | 425.00                | 550.00   | 625.00   |
| Managerial          | 525.00                | 675.00   | 701.00   |
| Supervisory         | 325.00                | 551.00   | 601.00   |
| Sales               | .00                   | .00      | .00      |
| Office              | 287.00                | 364.00   | 437.00   |
| Skilled             | 263.00                | 325.00   | 339.00   |
| Semiskilled         | 225.00                | 275.00   | 275.00   |
| Unskilled           | .00                   | .00      | .00      |

Beginning median salaries for sales workers in Farm Machinery Sales and Service and Crops, Forestry and Soil Conservation ranged from \$375 to \$675 per month. Maximum median salaries were above \$700 per month.

This study did not reveal large numbers employed at the technical level; however, this level of employment offered attractive beginning salaries with substantial increases as the worker gained tenure and experience. Livestock and Poultry, Farm Service, and Crops, Forestry and Soil Conservation families employed 86 per cent of the workers at the technical level.

#### Educational Level Desired of Persons Entering Nonfarm Agricultural Occupations

Data in Table VII reveal the educational level desired of persons entering agricultural occupations other than farming. This information was for each occupational family by number of employees desired at each educational level. As in any other business endeavor, where efficiency in operation is the determining factor, the management of nonfarm agricultural businesses did not desire individuals possessing less than a high school education. Only 5.7 per cent of those employed were found to have less than high school training.

For job entry in the families of Agricultural Service and Farm Machinery Sales and Service prospective workers need more than a high school education; 62.5 and 55.2 per cent respectively

The expression of employers for individuals with college training was of special significance. Only 108 employees were classified at the professional level, yet employers indicated that college training was necessary for 442 or 18 per cent of all employees having knowledge and skill in agriculture.

TABLE VII

EDUCATIONAL LEVEL DESIRED OF PERSONS ENTERING AGRICULTURAL OCCUPATIONS OTHER THAN FARMING

| Occupational Family                 | Number of Employees | Number of Employees            |            |                      |             |                        |            |              |            |                           |             |           |            |
|-------------------------------------|---------------------|--------------------------------|------------|----------------------|-------------|------------------------|------------|--------------|------------|---------------------------|-------------|-----------|------------|
|                                     |                     | Less Than High School Graduate |            | High School Graduate |             | Post H. S. Tech. Educ. |            | Some College |            | College Degree Preference |             |           |            |
|                                     |                     | No. Cent.                      | No. Cent.  | No. Cent.            | No. Cent.   | No. Cent.              | No. Cent.  | No. Cent.    | No. Cent.  | No. Cent.                 |             |           |            |
| Farm Machinery Sales & Service      | 280                 | 1                              | .4         | 114                  | 40.8        | 43                     | 15.3       | 31           | 11.0       | 88                        | 31.4        | 3         | 1.1        |
| Farm Supplies & Equipment           | 284                 | 8                              | 2.8        | 200                  | 70.4        | 11                     | 3.9        | 22           | 7.7        | 28                        | 9.9         | 15        | 5.3        |
| Livestock & Poultry                 | 295                 | 5                              | 1.7        | 192                  | 65.1        | 34                     | 11.5       | 20           | 6.8        | 28                        | 9.5         | 16        | 5.4        |
| Crops, Forestry & Soil Conservation | 1,247               | 105                            | 8.4        | 975                  | 78.3        | 36                     | 2.9        | 33           | 2.6        | 84                        | 6.7         | 14        | 1.1        |
| Ornamental Horticulture             | 17                  | 0                              | .0         | 12                   | 70.6        | 0                      | .0         | 3            | 17.6       | 1                         | 5.9         | 1         | 5.9        |
| Wildlife & Recreation               | 11                  | 0                              | .0         | 6                    | 54.5        | 0                      | .0         | 1            | 9.1        | 4                         | 36.4        | 0         | .0         |
| Farm Service                        | 221                 | 21                             | 9.5        | 134                  | 60.6        | 17                     | 7.7        | 22           | 10.0       | 27                        | 12.2        | 0         | .0         |
| Agricultural Service                | 96                  | 0                              | .0         | 36                   | 37.5        | 10                     | 10.4       | 11           | 11.5       | 39                        | 40.6        | 0         | .0         |
| <b>Total</b>                        | <b>2,451</b>        | <b>140</b>                     | <b>5.7</b> | <b>1,669</b>         | <b>68.1</b> | <b>151</b>             | <b>6.2</b> | <b>143</b>   | <b>5.8</b> | <b>299</b>                | <b>11.3</b> | <b>49</b> | <b>2.0</b> |



Of the total of 278 college graduates, the highest number -- 172 employees or 60 per cent -- were located in Farm Machinery Sales and Service and Crops, Forestry and Soil Conservation. Workers having a post high school technical education numbered 151, or 6 per cent of the total: three-fourths of them were in Farm Machinery Sales and Service; Livestock and Poultry; and Crops, Forestry and Soil Conservation.

The study records only three vocational agriculture teachers when actually there were 61 employed according to the Louisiana State Board of Education. This explains the reason for the college trained personnel not being as high as the three companion rural and semi-urban area studies.

#### Residential Background Preferred of New Employees

Generally, it has been assumed that employers in nonfarm agricultural businesses employ workers who were farm reared, an assumption supported by data gathered from 233 firms of the Northwest Louisiana rural area: 64 per cent of their employees would be replaced by new workers with a farm background.

Table VIII indicates by occupational family the kind of background desired of agricultural workers.

Three of four prospective employees would be required to have a farm residential background in families: Agricultural Service; Wildlife and Recreation; Ornamental Horticulture; and Crops, Forestry and Soil Conservation. In the other families, one of two prospective workers need a farm background.

TABLE VIII

## RESIDENTIAL BACKGROUND PREFERRED OF NEW EMPLOYEES

| Occupational<br>Family                 | Number of<br>Employees | Farm         |             | Rural<br>Nonfarm |             | Urban    |             | No<br>Preference |             |
|--|------------------------|--------------|-------------|------------------|-------------|----------|-------------|------------------|-------------|
|  |                        | No.          | Cent        | No.              | Per<br>Cent | No.      | Per<br>Cent | No.              | Per<br>Cent |
| Farm Machinery<br>Sales & Service      | 280                    | 144          | 51.4        | 10               | 3.6         | 0        | 0.0         | 126              | 45.0        |
| Farm Supplies<br>& Equipment           | 284                    | 172          | 60.6        | 7                | 2.4         | 0        | 0.0         | 105              | 37.0        |
| Livestock &<br>Poultry                 | 295                    | 167          | 56.6        | 32               | 10.8        | 0        | 0.0         | 96               | 32.6        |
| Crops, Forestry &<br>Soil Conservation | 1,247                  | 892          | 71.5        | 100              | 8.0         | 1        | 0.1         | 254              | 20.4        |
| Ornamental<br>Horticulture             | 17                     | 13           | 76.5        | 0                | 0.0         | 0        | 0.0         | 4                | 23.5        |
| Wildlife &<br>Recreation               | 11                     | 9            | 81.8        | 0                | 0.0         | 0        | 0.0         | 2                | 18.2        |
| Farm<br>Service                        | 221                    | 103          | 46.6        | 25               | 11.3        | 4        | 1.8         | 89               | 40.3        |
| Agricultural<br>Service                | 96                     | 79           | 82.3        | 12               | 12.5        | 2        | 2.1         | 3                | 3.1         |
| <b>Total</b>                           | <b>2,451</b>           | <b>1,579</b> | <b>64.4</b> | <b>186</b>       | <b>7.6</b>  | <b>7</b> | <b>0.3</b>  | <b>679</b>       | <b>27.7</b> |

### Farm Experience Preferred of New Employees

Findings presented in Table IX show that 1,579, or 65 per cent, of the workers in nonfarm agricultural concerns, using a knowledge and skill in agriculture, were required to have farm experience.

Commercial type farm experience was preferred for only 267 or 17 per cent of the jobs; whereas, employers required that 231 or 15 per cent of the employees should have non-commercial farm experiences. No preference as to the type of farm experience was expressed for 1,081 or 68 per cent of the employees.

It is significant to note that employers in Crops, Forestry and Soil Conservation indicated no preference as to type farm experience for 88 per cent of the jobs; whereas, 100 per cent of the workers in Wildlife and Recreation were required to have farm experience with no preference as to kind. It was also significant that 61 per cent of the new employees in Farm Machinery Sales and Service are acceptable with non-commercial farm experience; while 54 per cent of the new employees in Ornamental Horticulture must show commercial farm experience.

### Agricultural Subjects in Which Prospective Workers Must Have Knowledge or Skill

To determine job requirements in terms of knowledge and skill in agricultural subjects was a major objective of the survey. Adjustments in training programs must be made to conform with qualifications demanded of youth when applying for jobs in any one of the occupational families regardless of employment level.

For purposes of obtaining and recording knowledge and skill in agricultural subjects needed to effect job entry, agriculture was divided into

TABLE IX

## FARM EXPERIENCE PREFERRED OF NEW EMPLOYEES

| Occupational<br>Family                 | Number of<br>Employees | Commercial<br>Farm |             | Non-Commercial<br>Farm |             | No<br>Preference |             |
|--|------------------------|--------------------|-------------|------------------------|-------------|------------------|-------------|
|  |                        | No.<br>Per Cent    | Per Cent    | No.<br>Per Cent        | Per Cent    | No.<br>Per Cent  | Per Cent    |
| Farm Machinery<br>Sales & Service      | 144                    | 33                 | 23.0        | 88                     | 61.0        | 23               | 16.0        |
| Farm Supplies<br>& Equipment           | 172                    | 60                 | 35.0        | 19                     | 11.0        | 93               | 54.0        |
| Livestock &<br>Poultry                 | 167                    | 47                 | 28.0        | 44                     | 26.0        | 76               | 46.0        |
| Crops, Forestry &<br>Soil Conservation | 892                    | 64                 | 07.0        | 46                     | 05.0        | 782              | 88.0        |
| Ornamental<br>Horticulture             | 13                     | 7                  | 54.0        | 3                      | 23.0        | 3                | 23.0        |
| Wildlife &<br>Recreation               | 9                      | 0                  | 0.0         | 0                      | 0.0         | 9                | 100.0       |
| Farm<br>Service                        | 103                    | 26                 | 25.5        | 22                     | 21.0        | 55               | 53.5        |
| Agricultural<br>Service                | 79                     | 30                 | 38.0        | 9                      | 11.0        | 40               | 51.0        |
| <b>Total</b>                           | <b>1,579</b>           | <b>267</b>         | <b>17.0</b> | <b>231</b>             | <b>15.0</b> | <b>1,081</b>     | <b>68.0</b> |

four subject matter areas: 1) Animal Science, 2) Plant Science, 3) Agricultural Business Management and Marketing, and 4) Agricultural Mechanization and Automation. Each subject matter area was further divided into competency areas and were checked Necessary, Desirable or Not Necessary. In calculating the competency index, a numerical value of three was given to the competency checked Necessary, two was given when checked Desirable, and one was given when checked Not Necessary. With the information recorded as listed above, the Computer Center at Louisiana State University calculated mean competency rating by occupational family and level of employment. It was determined that the following scale would be used to rate the competencies as to high, medium and low: High (1.800 - 3.000), Medium (1.400 - 1.799), Low (1.000 - 1.399)

Tables X-1 through X-8 indicate the agricultural subject area in each occupational family with which employees must be familiar at each level of employment.

Each occupational family and the nine levels of employment structured for this study served as a basis for determining the agricultural subject areas with which the individual must be familiar to secure initial employment.

Certain discernible trends were established in all occupational families: 1) generally, a rather broad coverage of all subject matter areas was required of all workers, 2) the work performed within a particular family tended to prescribe the subject matter area or areas involved, 3) workers at the management and supervisory levels were widely knowledgeable, and 4) employees at the Professional, Technical, and Skilled levels were intensively trained in a particular area or one of the divisions of subject matter making up an area.

TABLE X-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        | 22     | 1.000                      | 1.717         | 1.500                    | 1.870                    |
| Technical           | 0      | 0                          | 0             | 0                        | 0                        |
| Managerial          | 38     | 1.594                      | 1.792         | 2.125                    | 2.060                    |
| Supervisory         | 15     | 1.125                      | 1.488         | 1.557                    | 2.076                    |
| Sales               | 81     | 1.544                      | 1.663         | 1.868                    | 1.912                    |
| Office              | 17     | 1.073                      | 1.129         | 1.885                    | 1.278                    |
| Skilled             | 92     | 1.134                      | 1.195         | 1.313                    | 2.042                    |
| Semiskilled         | 13     | 1.188                      | 1.284         | 1.500                    | 1.938                    |
| Unskilled           | 2      | 1.000                      | 1.000         | 1.000                    | 1.333                    |

Competency Rating Scale:

- High (1.800-3.000)
- Medium (1.400-1.799)
- Low (1.000-1.399)

TABLE X-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        | 0      | 0                          | 0             | 0                        | 0                        | 0 |
| Technical           | 1      | 1.000                      | 1.909         | 2.000                    | 1.333                    |   |
| Managerial          | 81     | 1.750                      | 1.797         | 1.954                    | 1.797                    |   |
| Supervisory         | 4      | 1.917                      | 1.848         | 1.958                    | 1.722                    |   |
| Sales               | 64     | 1.902                      | 1.740         | 1.763                    | 1.851                    |   |
| Office              | 21     | 1.250                      | 1.342         | 1.897                    | 1.245                    |   |
| Skilled             | 20     | 1.538                      | 1.259         | 1.644                    | 2.077                    |   |
| Semiskilled         | 43     | 1.146                      | 1.278         | 1.271                    | 1.648                    |   |
| Unskilled           | 50     | 1.287                      | 1.396         | 1.132                    | 1.598                    |   |

## Competency Rating Scale:

High (1.800-3.000)

Medium (1.400-1.799)

Low (1.000-1.399)



TABLE V-3

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

LIVESTOCK AND POULTRY

| Level of Employment | Number | Average Competency Ratings |               |                          |                          |
|---------------------|--------|----------------------------|---------------|--------------------------|--------------------------|
|                     |        | Animal Science             | Plant Science | Agri. Bus. Mangt. & Mkt. | Agri. Mech. & Automation |
| Professional        | 0      | 0                          | 0             | 0                        | 0                        |
| Technical           | 13     | 2.438                      | 1.167         | 1.979                    | 1.722                    |
| Managerial          | 83     | 2.181                      | 1.361         | 2.117                    | 1.855                    |
| Supervisory         | 16     | 2.281                      | 1.144         | 2.250                    | 2.305                    |
| Sales               | 20     | 1.977                      | 1.000         | 2.023                    | 1.424                    |
| Office              | 19     | 1.902                      | 1.032         | 2.250                    | 1.286                    |
| Skilled             | 34     | 2.151                      | 1.121         | 1.484                    | 1.500                    |
| Semiskilled         | 110    | 1.743                      | 1.072         | 1.294                    | 1.505                    |
| Unskilled           | 0      | 0                          | 0             | 0                        | 0                        |

## Competency Rating Scale

High (1.800-3.000)

Medium (1.400-1.799)

Low (1.000-1.399)

TABLE X-4

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

CROPS, FORESTRY AND SOIL CONSERVATION

| Level of Employment | Number | Average Competency Ratings |               |                          |                          |
|---------------------|--------|----------------------------|---------------|--------------------------|--------------------------|
|                     |        | Animal Science             | Plant Science | Agri. Bus. Mangt. & Mkt. | Agri. Mech. & Automation |
| Professional        | 53     | 1.242                      | 2.170         | 2.340                    | 1.885                    |
| Technical           | 24     | 1.375                      | 1.848         | 1.944                    | 1.852                    |
| Managerial          | 45     | 1.227                      | 1.715         | 2.566                    | 1.943                    |
| Supervisory         | 77     | 1.016                      | 1.518         | 1.915                    | 2.007                    |
| Sales               | 7      | 1.188                      | 1.591         | 1.750                    | 1.292                    |
| Office              | 25     | 1.000                      | 1.333         | 2.083                    | 1.278                    |
| Skilled             | 355    | 1.024                      | 1.300         | 1.293                    | 1.833                    |
| Semiskilled         | 465    | 1.020                      | 1.299         | 1.191                    | 1.702                    |
| Unskilled           | 196    | 1.080                      | 1.325         | 1.196                    | 1.702                    |

Competency Rating Scale  
 High (1.800-3.000)  
 Medium (1.400-1.799)  
 Low (1.000-1.399)

TABLE X-5

AGRICULTURAL AREAS WITH WHICH EMPLOYEES MUST BE FAMILIAR BY OCCUPATIONAL FAMILIES

ORNAMENTAL HORTICULTURE

| Level of Employment | Number | Average Competency Ratings |               |                          |                          |   |
|---------------------|--------|----------------------------|---------------|--------------------------|--------------------------|---|
|                     |        | Animal Science             | Plant Science | Agri. Bus. Mangt. & Mkt. | Agri. Mech. & Automation |   |
| Professional        | 0      | 0                          | 0             | 0                        | 0                        | 0 |
| Technical           | 0      | 0                          | 0             | 0                        | 0                        | 0 |
| Managerial          | 8      | 1.000                      | 2.234         | 2.000                    | 1.952                    |   |
| Supervisory         | 0      | 0                          | 0             | 0                        | 0                        | 0 |
| Sales               | 0      | 0                          | 0             | 0                        | 0                        | 0 |
| Office              | 0      | 0                          | 0             | 0                        | 0                        | 0 |
| Skilled             | 0      | 0                          | 0             | 0                        | 0                        | 0 |
| Semiskilled         | 0      | 0                          | 0             | 0                        | 0                        | 0 |
| Unskilled           | 9      | 1.000                      | 1.836         | 1.025                    | 1.900                    |   |

Competency Rating Scale:  
 High (1.800-3.000)  
 Medium (1.400-1.799)  
 Low (1.000-1.399)

TABLE X-6

AGRICULTURAL AREAS WITH WHICH EMPLOYEES MUST BE FAMILIAR BY OCCUPATIONAL FAMILIES

WILDLIFE AND RECREATION

| Level of Employment | Number | Average Competency Ratings |               |                          |                          |
|---------------------|--------|----------------------------|---------------|--------------------------|--------------------------|
|                     |        | Animal Science             | Plant Science | Agri. Bus. Mangt. & Mkt. | Agri. Mech. & Automation |
| Professional        | 4      | 1.500                      | 2.000         | 1.750                    | 2.167                    |
| Technical           | 1      | 2.125                      | 1.727         | 1.000                    | 1.500                    |
| Managerial          | 2      | 1.250                      | 1.000         | 2.000                    | 1.167                    |
| Supervisory         | 3      | 1.625                      | 1.909         | 1.375                    | 2.167                    |
| Sales               | 0      | 0                          | 0             | 0                        | 0                        |
| Office              | 0      | 0                          | 0             | 0                        | 0                        |
| Skilled             | 0      | 0                          | 0             | 0                        | 0                        |
| Semiskilled         | 0      | 0                          | 0             | 0                        | 0                        |
| Unskilled           | 1      | 1.750                      | 1.455         | 1.000                    | 1.500                    |

Competency Rating Scale:  
 High (1.800-3.000)  
 Medium (1.400-1.799)  
 Low (1.000-1.399)

TABLE X-7

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

FARM SERVICE

| Level of Employment | Number | Average Competency Ratings |               |                          |                          |
|---------------------|--------|----------------------------|---------------|--------------------------|--------------------------|
|                     |        | Animal Science             | Plant Science | Agri. Bus. Mangt. & Mkt. | Agri. Mech. & Automation |
| Professional        | 3      | 1.667                      | 1.606         | 2.208                    | 1.444                    |
| Technical           | 14     | 1.857                      | 1.519         | 2.143                    | 1.643                    |
| Managerial          | 34     | 1.406                      | 1.537         | 2.102                    | 1.812                    |
| Supervisory         | 11     | 1.333                      | 1.500         | 2.354                    | 2.139                    |
| Sales               | 12     | 1.550                      | 1.727         | 2.387                    | 1.883                    |
| Office              | 30     | 1.177                      | 1.167         | 2.010                    | 1.153                    |
| Skilled             | 28     | 1.000                      | 1.000         | 1.214                    | 2.167                    |
| Semiskilled         | 56     | 1.073                      | 1.212         | 1.229                    | 1.792                    |
| Unskilled           | 33     | 1.000                      | 1.145         | 1.100                    | 2.033                    |

Competency Rating Scale:

High (1.800-3.000)

Medium (1.400-1.799)

Low (1.000-1.399)

TABLE X-8

AGRICULTURAL AREAS WITH WHICH EMPLOYEES MUST BE FAMILIAR BY OCCUPATIONAL FAMILIES

AGRICULTURAL SERVICE

| Level of Employment | Number | Average Competency Ratings |               |                          |                          |
|---------------------|--------|----------------------------|---------------|--------------------------|--------------------------|
|                     |        | Animal Science             | Plant Science | Agri. Bus. Mangt. & Mkt. | Agri. Mech. & Automation |
| Professional        | 26     | 2.365                      | 2.428         | 2.672                    | 2.111                    |
| Technical           | 6      | 1.500                      | 2.045         | 1.906                    | 1.667                    |
| Managerial          | 10     | 1.412                      | 1.964         | 2.175                    | 1.583                    |
| Supervisory         | 5      | 1.438                      | 2.023         | 1.969                    | 1.875                    |
| Sales               | 0      | 0                          | 0             | 0                        | 0                        |
| Office              | 30     | 1.250                      | 1.723         | 1.970                    | 1.381                    |
| Skilled             | 15     | 1.000                      | 1.697         | 1.333                    | 1.222                    |
| Semiskilled         | 4      | 1.542                      | 2.091         | 1.875                    | 2.000                    |
| Unskilled           | 0      | 0                          | 0             | 0                        | 0                        |

Competency Rating Scale:  
 High (1.800-3.000)  
 Medium (1.400-1.799)  
 Low (1.000-1.399)

Employers were in general agreement that workers at the Management, Supervisory and Sales levels must have broad training extending over all agricultural subject areas; while those in the Professional, Technical and Skilled classifications were expected to have intensive training in the area of their speciality. The product sold or service performed influenced the emphasis placed upon training desired in the agricultural subject areas.

In a majority of the cases, businesses and agencies favored training in all agricultural areas, with emphasis upon one or more areas dealing directly with the work or service to be performed. There was general agreement that most workers in nonfarm agriculture, including office workers in many instances, need a broad agricultural background. Some specialization had to be acquired either by training or experience at all levels except the Unskilled. The employers reported that they desired unskilled workers with more skills than they had, but in reality the employers were stating they needed employees that were above the Unskilled level of training.

#### Continuing Education Required of Employees with Educational Facilities Used

Employers were asked to indicate in-service training needed by employees to advance on the job, designating educational facilities used or provided for such training.

This information is shown in Table XI by occupational family and according to educational facility used.

A majority of employees covered by this study, 94 per cent, participated in educational programs designed to upgrade them on-the-job and for job advancement. On-the-job training programs ranged from a low of 77 per cent for Farm Machinery Sales and Service to a high of 98 per cent for each Farm Supplies and Equipment and Crops, Forestry and Soil Conservation. The firm



TABLE XI

## CONTINUING EDUCATION REQUIRED BY FIRMS TO ADVANCE IN OCCUPATIONS

| Occupational Category               | Number of Family Employees | Number of Industry Employees | Number of Employees |              |                           |           |                   |            |               |            |            |          |            |  |
|-------------------------------------|----------------------------|------------------------------|---------------------|--------------|---------------------------|-----------|-------------------|------------|---------------|------------|------------|----------|------------|--|
|                                     |                            |                              | On-the-Job Training |              | Public School Adult Educ. |           | Vocational School |            | Agri. College |            | None       |          |            |  |
|                                     |                            |                              | No.                 | Per Cent     | No.                       | Per Cent  | No.               | Per Cent   | No.           | Per Cent   | No.        | Per Cent |            |  |
| Farm Machinery                      | 280                        | 179                          | 64.0                | 214          | 76.5                      | 11        | 3.9               | 31         | 11.1          | 17         | 6.1        | 3        | 1.1        |  |
| Farm Supplies & Equipment           | 284                        | 170                          | 59.9                | 279          | 98.2                      | 2         | 0.7               | 6          | 2.1           | 12         | 4.2        | 0        | 0.0        |  |
| Livestock & Poultry                 | 295                        | 169                          | 57.3                | 274          | 92.9                      | 6         | 2.0               | 18         | 6.1           | 33         | 11.2       | 0        | 0.0        |  |
| Crops, Forestry & Soil Conservation | 1,247                      | 1,110                        | 89.0                | 1,224        | 98.2                      | 21        | 1.7               | 50         | 4.0           | 65         | 5.2        | 3        | 0.2        |  |
| Ornamental Horticulture             | 17                         | 8                            | 46.3                | 15           | 88.2                      | 0         | 0.0               | 3          | 17.6          | 6          | 35.3       | 0        | 0.0        |  |
| Wildlife & Recreation               | 11                         | 4                            | 36.4                | 10           | 90.0                      | 0         | 0.0               | 0          | 0.0           | 5          | 45.5       | 0        | 0.0        |  |
| Farm Service                        | 221                        | 183                          | 82.8                | 200          | 90.5                      | 2         | 0.9               | 15         | 6.8           | 6          | 2.7        | 1        | 0.5        |  |
| Agricultural Service                | 96                         | 40                           | 41.7                | 93           | 96.9                      | 4         | 4.2               | 2          | 2.1           | 28         | 29.2       | 0        | 0.0        |  |
| <b>Total</b>                        | <b>2,451</b>               | <b>1,863</b>                 | <b>76.1</b>         | <b>2,309</b> | <b>94.2</b>               | <b>46</b> | <b>1.9</b>        | <b>125</b> | <b>5.1</b>    | <b>172</b> | <b>7.0</b> | <b>7</b> | <b>0.3</b> |  |

or industry school received the second highest rating with a low of 36 per cent for Wildlife and Recreation and a high of 89 per cent for Crops, Forestry and Soil Conservation. As expected many of the employers required on-the-job training and participation in firm or industry school programs to advance in the occupation or even to hold the job. Agricultural colleges, public school adult education programs and vocational schools were used in only a small percentage of the cases. It was of special significance that employers indicated continuing education for more than 99% of all employees having knowledge and skill in agriculture. Agricultural Service showed that 29 per cent of its workers had further training in an agricultural college which represented primarily state and federal agricultural professional employees.

Expression of a general desire by employers to have continuing education available for their employees, and the fact that in most cases the present training was on-the-job training and firm or industry schools, points up a great need for expanded vocational programs in the public school system.

## SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

It has long been felt that vocational agriculture should reflect the occupational opportunities offered to youth in the entire field of agriculture -- that adjustments in aims should be made with a changing agriculture. Change today is quite evident, eliminating the need for many workers in agricultural production. Farms are growing much larger, but require fewer workers to produce more. Jobs once done on the farm are now being performed in towns and cities where thriving agricultural concerns are busy servicing the farmer and handling his products. These concerns in combination now employ as many or more people than are needed in production agriculture.

Evolving in nonfarm agriculture is a great host of occupations, besides those found on the farm. In the Area covered by this report jobs were found at all levels of employment dealing with processing farm products, marketing and services to the farmer. All of the businesses and agencies engaged in these activities employ workers who use knowledge and skill in agricultural subjects for proper job performance. Generally, preparation in agriculture for the work performed by individual employees was obtained by experience, or on-the-job training. In the years ahead, employers are expected to look for younger employees trained in agriculture at the time of job entry.

The major task in this research dealt with identifying businesses and agencies serving agriculture in the Northwest Area of Louisiana; along with the jobs they contain requiring a knowledge of agriculture, with

the kind of knowledge or skill involved. It was assumed that such information will be useful to parents, students and educators when planning training programs for boys interested in nonfarm agricultural occupations.

### Summary

A summary of findings follows:

1. Two hundred and thirty-three agricultural firms were surveyed in the ten Northwest Louisiana parishes (excluding the Shreveport and Alexandria metropolitan areas). These organizations employed 4,847 individuals; of this number 2,451 or 51 per cent had competencies in agriculture. Some 170 additional employees who possess agricultural skills will be needed in the next five years.
2. A total of 438 job titles was indicated by all employers with an increase of 29 over the next five years.
3. More than 78 per cent of the job titles were found in four occupational families, namely; Farm Supplies and Equipment, Livestock and Poultry, Crops, Forestry and Soil Conservation, and Farm Service. Over 32 per cent of the job titles were in Crops, Forestry and Soil Conservation.
4. Employees were found in all occupational families and in nine levels of employment. Some 1,247 employees (over 50 per cent) were located in Crops, Forestry and Soil Conservation with 65 per cent of these working in the skilled and semiskilled levels of employment. The management levels of employment appear to offer more opportunities in Livestock and Poultry, and Farm Supplies and Equipment; sales offer more opportunities in Farm Machinery Sales and Service, and Farm Supplies and Equipment.
5. The professional level of employment was represented in all occupational families except Farm Supplies and Equipment, Livestock and Poultry and Ornamental Horticulture
6. Technicians were not found in Farm Machinery Sales and Service and Ornamental Horticulture.
7. The mean minimum age for job entry in all occupational families, and for practically all levels of employment, was 22 years. It was somewhat higher with jobs having more responsibilities. The average maximum age for entry was 50 years.
8. Beginning salaries were paid in keeping with training and responsibility, starting with a low income for the unskilled and advancing through sales, supervisory, managerial and professional.

9. Professional, technical, managerial and supervisory employees accounted for 24 per cent of the total with beginning median salaries ranging from a low of \$325 to over \$700 per month except at the managerial level in Wildlife and Recreation.
10. Sales, as a level of employment, commands a strong position when compared to beginning salaries in many other levels.
11. Management in nonfarm agricultural concerns did not desire to employ individuals with less than a high school education.
12. A preference for some college training was expressed for more than 18 per cent of prospective employees in all occupational families.
13. Some 64 per cent of the positions in all of the occupational families were given "farm" as the residential background preferred of new employees.
14. Employers in nonfarm agriculture who are concerned about the residential background of their workers will employ those from rural nonfarm and urban backgrounds but preferred those with a farm background in 89 per cent of the cases.
15. Commercial type farm experience was acceptable by employers for 17 per cent of the jobs; employers for more than 15 per cent of the workers accepted individuals who had experience on the non-commercial type of farm. The findings reveal that 68 per cent of the employers stated "no-preference" between commercial or non-commercial but wanted new employees to have farm experience.
16. The professional, managerial, supervisory and sales levels of employment in most occupational families generally required broad training extending over all agricultural subject fields, yet required a concentration in one specific area.
17. The semiskilled and unskilled workers were required to be familiar with agricultural subject areas.
18. On-the-job training and firm or industry schools were used most frequently as a means of supplying continuing education. This was true in 94 per cent and 76 per cent of the cases, respectively.
19. Over 50 per cent of the employees in the nonfarm businesses and agencies were classified in the skilled and semiskilled levels of employment.
20. Without exception, some knowledge and skill in agricultural subjects was required by all job titles for office personnel. These job titles required a broad general knowledge in agricultural terminology and customs, but were specific in the area of office and business management procedures.



## Conclusions

The research undertaken, covering the rural nonfarm agricultural complex of Northwest Louisiana, identified 233 concerns employing 4,847 workers of whom 2,451 (51 per cent) were required to have and use knowledge and skill in agricultural subjects. Many of these workers did not experience specific training in preparation for job titles held, yet they did receive on-the-job training involving agricultural subjects appropriate to work performed. Management in all firms surveyed expressed repeatedly the need for workers with pre-job training to fill vacancies and new positions.

It is clear that occupational opportunities in nonfarm agriculture are available to youth in the Area. Equally clear is that pre-job training at the high school level will materially aid interested youth in taking advantage of their opportunities, if a high school education is obtained along with training in agriculture appropriate to the kind of work desired.

Analysis of data contained in this study conveys to educators and youth in Northwest Louisiana an image of the importance of nonfarm agriculture as a source of occupations in agriculture, including specific job requirements and implications for pre-job training programs. Conclusions in support of this claim follow:

1. The rural and semi-rural sections of the Area contain a host of nonfarm agricultural concerns, with a number in each of the eight families of nonfarm agricultural occupations. These businesses and agencies employ workers at all levels, with more than one-half of them using a knowledge or skill in agricultural subjects. Both job titles and numbers of employees are on the increase, offering even greater opportunities of employment to youth.
2. Nonfarm agricultural concerns in the Area employ workers above the unskilled level. Prospective workers without agricultural skills have one chance in ten of obtaining satisfactory employment.



3. Occupations available in nonfarm agriculture are in businesses and agencies having a greatly diversified function. Firms in sizeable numbers are engaged in processing; wholesaling; agricultural services; and recreational, but the greatest concentration is in retail sales.
4. Prospective workers in nonfarm agriculture without required pre-job education and training must qualify by working at other occupations, involving a period of time approximating five years. Those with proper qualifications acquired in school can move directly into nonfarm agricultural jobs following high school, or college graduation.
5. Satisfactory jobs in nonfarm agricultural concerns are not available to applicants having less than a high school education. Moreover, many job titles require education and training beyond the secondary school level, a requirement that is advancing. All applicants for occupations at the professional level must have appropriate college degrees.
6. Employment in nonfarm agricultural concerns is extended first to those having a farm residential background, supported by farm experience; however, farm experience is not a rigid requirement for employment. Rather, emphasis is placed upon education and training.
7. Salaries for all levels of employment are commensurate with the training and skills possessed by the worker. Occupational progress, financially, is also parallel to individual capacity to increase level of performance. Jobs at the professional, technical and managerial levels demand more training but also pay more. Jobs at the semiskilled and unskilled levels pay less, require a limited amount of training and offer little hope for advancement.
8. Continuous training, regardless of employee rank is expected in all occupational families. Over three-fourths of the employers have their workers to acquire training on-the-job and at a firm or industry school in order to advance in rank or salary. Secondary schools and colleges may render a greater service with effective in-service training programs.

### Recommendations

The traditional function of the Louisiana high school is to provide schooling at the elementary and secondary levels. The rural, as well as the urban, high school must anticipate change if it is to be functional

in the lives of people. In general, schools must periodically adjust to at least two areas of change, namely: economic and sociological. Adjustments are mainly made by means of new programs or innovations based upon factors and forces which affect the future of students.

In order for the program in vocational agriculture to be effective today, it must offer a program of instruction and experience in keeping with the educational needs of youth with emphasis on individual vocational needs in the work world. This can be accomplished by identifying the vocational needs of youth and then providing an educational program to match their needs.

The growing employment market in agriculture is in the establishments that process, service, supply and equip agricultural production. It is a generally accepted fact that the number of farmers is on the decline, yet agriculture continues to be the number one industry in number and variety of jobs offered.

If vocational education in agriculture is to fulfill its functions effectively, the program must be continually evaluated, adjusted and extended to meet the needs and demands of current technological developments, as well as the new social and economic conditions.

Nonfarm agricultural concerns in the Area studied need a continuing supply of workers equipped with a high school education and competencies in agricultural subjects. The high schools of the Area are the best organized centers, besides being more accessible to youth, for providing the kind of training programs needed to qualify youth for employment in nonfarm agricultural occupations.

Traditionally, the high school has been concerned with the preparation of youth for proficiency in farming occupations. Changing conditions

on the farm, together with a rising nonfarm agricultural enterprise, now obligates the high school to add another dimension to its offering for accomplishing more than one level of attainment in vocational agriculture -- that of training interested and capable youth for service in occupations connected with but off the farm.

A more effective instructional base must be provided for vocational agriculture to deal with individual occupational interests and capabilities. Currently, instruction is centered around the home farm, offering few effective instructional provisions for individual differences. To improve the main organizational center -- the high school -- other and additional sub-centers must be established if rural youth are to get appropriate school experiences in preparation for nonfarm agricultural occupations.

School use of nonfarm agricultural businesses and agencies for providing pre-job training experiences will relate and focus action on individual differences.

Data gathered from the Area studied form a background for suggestions that can be used by educators in organizing the high school for learning activities basic to qualifying students in vocational agriculture for employment in nonfarm agricultural jobs:

1. In providing for individual differences among students with occupational objectives in agriculture, local school administrators and teachers must realize that for any teaching act so comprehensive, several important curriculum changes must be made:
  - a. Determine instructional objectives, according to student occupational objectives;
  - b. Adapt instructional materials in production agriculture to form a basic program for all trainees;
  - c. Provide, for advanced students, instructional materials related to individual or group occupational objectives, whether leading to specific kinds of farming or nonfarm agricultural occupations; and

- d. Use appropriate off-campus centers for providing pre-occupational experiences, such as the farm, for students planning to farm and the agricultural business or agency for those planning nonfarm agricultural occupations.
2. The capacity of the high school to provide for individual differences in occupational objectives of boys enrolled in vocational agriculture, depends on the extent to which it can organize to attain more than one level of accomplishment, namely:
    - a. Provide for students desiring to farm;
    - b. Provide for students desiring to enter nonfarm agricultural jobs; and
    - c. Provide for students desiring to enter an agricultural profession.
  3. The high school with a vocational agriculture program must evaluate teaching material in the light of new demands being made upon it by a changing agriculture. Programs can no longer serve as terminal, limiting training to the primitive concept of "less than college" grade or non-college preparatory.

Careers in agriculture, even those in production, are being up-graded, requiring more preparation, including junior and senior college levels. Occupations in nonfarm agriculture at the Technical level require post high school training, while all professional careers involve a college education and beyond.

4. In organizing vocational agriculture to make it possible to meet the individual needs of boys who participate in its offerings, the resources of other vocational agencies in the school must be accessible.

Prospective workers in nonfarm agricultural concerns must often possess competencies in addition to those involving a knowledge and skill in agricultural subjects such as; financing, management, supervision, marketing, advertising, accounts, and buying.

Team teaching will insure continuity in the training program.

## SELECTED BIBLIOGRAPHY

- Administration of Vocational Education, Vocational Education Bulletin No. 1, General Series No. 1, U. S. Department of Health, Education and Welfare, Washington, D. C.: U. S. Government Printing Office, 1963.
- Bailey, Joseph K., Non-Farm Agricultural Employment in West Virginia With Implications for Vocational Education Programs, Division of Vocational, Technical and Adult Education, Charleston, West Virginia, January, 1965.
- Barwick, Ralph P., Identification of Off Farm Agricultural Occupations, A Preliminary Report of the Delaware Study of Agricultural Occupations Other Than Farming, Agricultural Education, School of Agriculture, University of Delaware, Newark, Delaware, Agricultural Education Publication No. 3, March, 1963.
- Clark, Raymond M., Training for Off-Farm Agricultural Occupations, Office of Research and Publications, College of Education, Michigan State University, East Lansing, Michigan, 1963.
- Clark, Raymond M., Need for Training for Non-Farm Agricultural Business, Michigan State University, Department of Teacher Education, East Lansing, Michigan, December, 1959.
- Committee on Labor and Public Welfare, United States Senate, Selected Education Acts of 1963, Washington, D. C.: U. S. Government Printing Office, 1963.
- Cushman, Harold R., Virgil E. Christenson, and Garry R. Bice, Off-Farm Agricultural Occupations in New York State, The Agricultural Education Division, Rural Education Department, New York State College of Agriculture, Cornell University, Ithaca, New York, January, 1965.
- Dillion, Roy D., and Paul S. Cain, Employment Opportunities and Usable Agricultural Skills in Non-Farm Agricultural Occupations In Appalachia, School of Applied Sciences and Technology, Morehead State University, Morehead, Kentucky.
- Griffin, Warren L., The Nature of Agricultural Occupations, Other Than Farming, in Saline County, Missouri, Volume 65, Number 32, Education Series, Number 91, University of Missouri, Office of Publications, Columbia, Missouri, November 16, 1964.
- Hoover, Norman K., Handbook of Agricultural Occupations. Danville, Illinois: The Interstate Printers and Publishers, Inc., 1963.



- Hoover, N. K., D. R. McClay, and G. Z. Stevens, Technical Education Needs of Persons Engaged in Agricultural Occupations, a Preliminary Report of the Pennsylvania Study of Agricultural Occupations, Department of Agricultural Education, The Pennsylvania State University, University Park, Pennsylvania.
- Judge, Homer V., Employment Opportunities and Needed Competencies In Off-Farm Agricultural Occupations in Massachusetts, School of Education, University of Massachusetts, Amherst, June, 1965.
- Kahler, Alan Arnold, Competencies in Agriculture Needed by Males Employed In Retail Farm Machinery Distribution, Department of Education, Iowa State University of Science and Technology, Ames, Iowa.
- Mondart, C. L., and C. M. Curtis, Occupational Opportunities and Training Needs for Non-Farm Agricultural Jobs in the Metropolitan Areas of Louisiana. Department of Vocational Agricultural Education, School of Vocational Education, College of Agriculture, Louisiana State University, Baton Rouge, February, 1965.
- Phipps, Lloyd J., and Others, Technical Education in and for Rural Areas, Preliminary Report No. 1, Technicians and Other Workers Who Need Technical Knowledge, Vocational and Technical Education Department, College of Education, University of Illinois, June, 1964.
- The National Center for Advanced Study and Research in Agricultural Education, Report of Research Coordination Conference on Agricultural Occupations, The Ohio State University, Columbus, Ohio, 1963.
- The National Center for Advanced Study and Research in Agricultural Education, Report of the Second Research Coordination Conference on Agricultural Occupations, The Ohio State University, Columbus, Ohio, 1964.
- Tom, Frederick K. T., Charles W. Hill, and Kingsley L. Greene, Employment Opportunities Related to Farming in the Syracuse, New York, Economic Area, New York State College of Agriculture, Cornell University, Rural Education Department, Agricultural Education Division, Ithaca, New York, June, 1961
- Vocational and Technical Education for Off-Farm Occupations, Research Summarization of State Surveys of Persons Employed in Off-Farm Occupations Needing Competencies in Agriculture, Center for Vocational and Technical Education, The Ohio State University, May, 1965.



**APPENDIX**

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. Anticipated New Job Titles</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. \_\_\_\_\_ 700 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-<br/>essary</u> | <u>Desir-<br/>able</u> | <u>Not Nec-<br/>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 _____<br>Weeds _____ |
| _____ | _____ | _____ | 12. Management   |
| _____ | _____ | _____ | 13. Production of Ornamental Plants                        |
| _____ | _____ | _____ | 14. Landscaping  |
| _____ | _____ | _____ | 15. Ginning  |
| _____ | _____ | _____ | 16. Warehousing  |

B. Area: Plant Science (cont'd)

| <u>Nec-<br/>essary</u> | <u>Desir-<br/>able</u> | <u>Not Nec-<br/>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

Following is a list of towns in Area I which were surveyed.

Plain Dealing  
Springhill  
Haynesville  
Homer  
Arcadia  
Winnfield  
Colfax  
Many  
Logansport  
Mansfield  
Natchitoches  
Minden  
Ringgold

Following is a list of firms and/or industries in Area I which were surveyed.

Poland Truck and Tractor Co., Arcadia  
Arcadia Lumber Co., Arcadia  
Federal Land Bank of Arcadia, Arcadia  
Agricultural Stabilization and Conservation, Arcadia  
C. R. Knotts, Poles & Piling Co., Saline  
Corbett's Green House, Saline  
Bienville Agricultural Extension Service, Arcadia  
Haughton High School, Haughton  
Johnson Lumber Co., Plain Dealing  
S. H. Balinger Co. Limited, Plain Dealing  
Wardview Gin Co., Inc., Plain Dealing  
Gleason-Snyders Ford Co., Plain Dealing  
Dixie Seed Inc., Gilliam  
Al Wychie Distributor, Plain Dealing  
Plain Dealing Builders Supply, Plain Dealing  
Roberson Farm Equipment, Plain Dealing  
North La. Chemical, Inc., Gilliam  
Caldwell Motor Co., Plain Dealing  
Vivian Furniture Co., Vivian  
Galloway Grocery, Ida  
Oil City Ford Motor Co., Oil City  
Hall's Insurance Agency, Vivian  
Cowgill's Sales, Vivian  
Dominick Bros. Gin, Mira  
Wilson Bros. Country Store, Vivian  
Caddo Trust and Savings Bank, Gilliam  
North Caddo Insurance Agency, Gilliam  
Smith Motor Co., Vivian  
Williamson's Chevrolet Co., Vivian  
Vivian Bait Shop and Fish Market, Vivian  
Vivian Oil & Gas, Vivian  
Noah Tyson Water Well Drilling Service, Rodessa  
Wayne's Phillips 66 Service Station, Vivian  
Woodard-Walker Lumber Co., Taylor  
Amos Smith Farm Service, Gibsland  
McGehee Poultry Inc., Arcadia  
Kimball's & Murphy General Store, Haynesville  
Piggly Wiggly, Haynesville  
Waller Ford Co., Haynesville  
Martin Gro. & Market, Haynesville  
Lowe & Kilpatrick Esso, Haynesville  
Sales Bros. General Store, Haynesville  
Camden Monument Works, Haynesville  
Reeder Log Co., Haynesville  
Haynesville Cotton Warehouse Co., Haynesville  
North La. Post Plant, Haynesville  
Planter's Bank & Trust Co., Haynesville  
Ritchie Gro. Co., Haynesville  
Parker's Dairy, Haynesville  
Blackwell Feed & Seed Store, Haynesville  
Arcadia Production Credit, Arcadia

Haynesville Locker Plant, Haynesville  
 C. T. Almond Dist, Haynesville  
 Haynesville Chevrolet Co., Haynesville  
 Arkansas & Louisiana Lumber Co., Haynesville  
 L. D. Carter & Son Timber Co., Haynesville  
 P. D. Holt Gro. & Market, Haynesville  
 Claiborne Merc. Timber & Land Co., Haynesville  
 Brunson Wood Co., Haynesville  
 The People's Cotton Warehouse, Homer  
 Piggly Wiggly, Homer  
 Moore's Feed Store, Homer  
 Torbert Feed & Seed Store, Homer  
 H. F. Pate Freezer & Meat Processing Plant, Athens  
 Homer Drug Co, Homer  
 Claiborne Drug, Homer  
 Lee's Drugs, Homer  
 Hollis Farm Supply, Homer  
 L. M. Owens Garage & Machine Shop, Homer  
 Roy Owens Welding Service, Homer  
 Claiborne Parish Agricultural Extension, Homer  
 Pugh Lime Service, Homer  
 Claiborne Parish Farm Bureau, Homer  
 Junction City Wood Yard, Homer  
 Harmon & Crane Wood Contractors Inc., Homer  
 Claiborne Electric Cooperative, Homer  
 Claiborne Wholesale Co., Homer  
 Claiborne Parish ASCS, Homer  
 Cane Ranger District, U. S. Forest Service, Homer  
 Soil Conservation Service, Homer Work Unit, Homer  
 F.H.A. County Office, Homer  
 Boatner Gro. & Market, Arcadia  
 Lyles Auction, Mansfield  
 Rhet Grant, Auctioneer, Mansfield  
 Farm Bureau Insurance, Mansfield  
 Pineland Chain Saw, Mansfield  
 Pelican Locker Plant, Pelican  
 Thigpen Packing Co., Mansfield  
 McLaurin's Super Market, Mansfield  
 Ruffin Super Market, Mansfield  
 Francis Ruffin's Super Market, Mansfield  
 Wag-A-Bag Grocery, Mansfield  
 Piggly Wiggly, Mansfield  
 First National Bank, Mansfield  
 Mansfield Bank & Trust Co., Mansfield  
 Mathews Lumber Co., Mansfield  
 Soil Conservation District, Mansfield  
 DeSota Agricultural Extension Service, Mansfield  
 ASCS, Mansfield  
 Vocational Agricultural Instructor, Stonewall  
 Louisiana Animal Breeders Co-op. Grand Cane  
 D.H.I.A. Supervisor, Stonewall  
 Mansfield Meat Co., Mansfield

Billy Pollock-Midwest Dairy, Mansfield  
Farmers Supply Co., Mansfield  
A. Frank Jackson Co., Mansfield  
Middleton Feed Supply, Mansfield  
Cowans Merchantile, Stonewall  
Murray Smith Farm Supply, Mansfield  
Logansport Locker Plant, Logansport  
Piggly Wiggly, Logansport  
Stanley Locker Plant, Logansport  
McBride Feed and Seed Store, Logansport  
Rite-Care Poultry Co., Logansport  
Wallir Hatchery, Logansport  
N. J. Caraway Co. Department Store, Logansport  
John Henry Black, Logansport  
Cen-Tex Hatchery Co., Logansport  
James A. Pace Lumber Co., Logansport  
Pace Hardware & Furniture Co., Logansport  
McGuire's Garage, Montgomery, La.  
Lang Motor Co., Montgomery  
Harrison Grocery, Montgomery  
Montgomery Furniture & Hardware, Montgomery  
Kilpatrick's General Merchandise, Montgomery  
Bank of Montgomery, Montgomery  
Montgomery Block Co., Montgomery  
Everette Nelms Supplies and Feed & Seed, Montgomery  
W. P. Williams Insurance Agency, Colfax  
Kuhlmann Ford, Inc., Montgomery  
Fletcher's Hardware and Furniture Co., Montgomery  
Milam's Department Store, Montgomery  
Futrell Motor Co., Colfax  
Murler Motor Co., Colfax  
Colfax Lumber Co., Colfax  
Valley Electric Membership Co-op., Natchitoches  
Natchitoches Lumber Yard, Inc., Natchitoches  
Cane River Supply Co. Inc., Natchitoches  
Agricultural Stabilization and Conservation Service, Natchitoches  
U.S.D.A. Plant Pest Control, Natchitoches  
La., Department of Agriculture Division of Entomology, Natchitoches  
Chambers Nursery, Natchitoches  
Natchitoches Nursery, Natchitoches  
Fosher Dusting Co., Natchitoches  
La. Forestry Commission, Natchitoches  
Acme Cement Co., Natchitoches  
Aaron Ford Tractor, Natchitoches  
SCS, USDA, Natchitoches  
U. S. Forest Service, Natchitoches  
Hunt's Food and Industry, Inc., Natchitoches  
Natchitoches Seed Store Inc., Natchitoches  
Marthaville Milling Co., Marthaville  
Natchitoches Parish Farm Bureau, Natchitoches  
Russell & Salim Crop Duster, Natchitoches  
Thompson Hayworth Chemical Co., Natchitoches



Natchitoches Soybean Co., Natchitoches  
Valley Farmers Co-op. Inc., Natchitoches  
West La. Farmers Assn., Many  
Rogers Enterprises, DeRidder  
Florien Mercantile Co., Florien  
United Auto Parts, Many  
Sammy Wall Logging Contractor, Many  
Tabors Farm Supply, Many  
Young's Cash Store, Florien  
Greer's Grocery & Market, Zwolle  
Zwolle School Community Food Pres Center, Zwolle  
L. Lefkouits & Co., Zwolle  
Zwolle Feed Store, Zwolle  
Paul Ebarb & Co., Zwolle  
Vickers Grocery, Zwolle  
Many Motor Co., Many  
Sibley's Market, Zwolle  
Sabine Lumber Co., Zwolle  
J. Wallace Settle Concrete Products, Minden  
Sam Jones, Inc., Minden  
Webster Parish Cooperative Ext. Service, Minden  
Agricultural Stabilization & Conservation, Minden  
The Pardee Co., Minden  
Minden Chamber of Commerce, Minden  
Anti-Pest and Veitch Termite Control, Minden  
Sauacool Concrete Works, Minden  
C. E. Valentine Farm Produce, Minden  
Carraway Feed & Hardware Store, Sarepta  
La. Wildlife & Fisheries Comm., Minden  
Bayou Industrial Corporation, ;Minden  
The Blosson Shop, Minden  
Bolen Speede Ford Inc., Minden  
Sanitary Dairy Products, Minden  
Dunham Manufacturing Co., Minden  
Dealer Association Inc. , Minden  
Standard Chevrolet Co., Minden  
Williams & Hicks Co., Minden  
Webster Freezing & Storage Co., Minden  
Columbia Southern Plywood Corp., Minden  
Robinson Nursery, Minden  
Webster Parish Farm Bureau, Minden  
Cone Farm Products, Minden  
Cone & Johnson Feed Store, Minden  
Helfin Freezer Locker Plant, Helfin  
District 4, La. Forestry Commission, Minden  
Woodard-Walker Sawmill Co., Helfin  
Continental Can Co., Winnfield  
Tremont Lumber Co., Joyce  
American Cresote Works, Winnfield  
L. L. Brewton Lumber Co., Winnfield  
Watt's Gin Co., Winnfield  
Soil Conservation Service, Winnfield

Aaron Ford Tractor Co., Inc., Winnfield  
CCC Super Market & Slaughter House, Winnfield  
Riley's Gro. & Slaughter House, Winnfield  
Terminix Pest Control, Winnfield  
Winnfield Veneer Co., Winnfield  
A & P Store, Winnfield  
Hunt Lumber Co., Dodson  
U. S. Forest Service, Winnfield  
Agricultural Stabilization & Conservation Service, Winnfield  
Olin Mathieson, Winnfield  
Ruston Oil Meal & Fert. Co., Arcadia  
Olin Mathieson Chemical Corp., Arcadia  
Crump Tractor Co., Haynesville  
Santiam Southern Co., Haynesville  
Haynesville Planning Mill, Haynesville  
Allen Bros. Feed Mill of Home, Inc., Homer  
Marvel Box Co., Homer  
Homer Livestock Auction, Homer  
Goodwin Welding Service, Inc., Haynesville  
Power Tool Center, Haynesville  
Claiborne Butane, Homer  
Lowry Packing Co., Minden

## APPENDIX C

The following is a list of the job titles in each of the eight non-farm agricultural occupational families, including the number of workers found in each job title.

| OCCUPATIONAL FAMILY            | LEVEL OF EMPLOYMENT AND JOB TITLES | NUMBER OF WORKERS |
|--------------------------------|------------------------------------|-------------------|
| Farm Machinery Sales & Service | Professional                       |                   |
|                                | Research Engineer                  | 4                 |
|                                | Plant Research Engineer            | 1                 |
|                                | Field Research Engineer            | 1                 |
|                                | Asst. Plant Research Engineer      | 4                 |
|                                | Asst. Field Research Engineer      | 4                 |
|                                | Plant Production Engineer          | 1                 |
|                                | Asst. Plant Produc. Engineer       | 3                 |
|                                | Research Draftsman                 | 1                 |
|                                | Asst. Research Draftsman           | 3                 |
|                                | Total Professional. . . . .        | .22               |
|                                | Technical                          |                   |
|                                | Total Technical. . . . .           | 0                 |
|                                | Managerial                         |                   |
|                                | General Manager                    | 1                 |
| Sales Manager                  | 3                                  |                   |
| Parts Manager                  | 6                                  |                   |
| Service Manager                | 1                                  |                   |
| Manager                        | 7                                  |                   |
| Asst. Manager                  | 2                                  |                   |
| Owner-Manager                  | 4                                  |                   |
| Warehouse Manager              | 1                                  |                   |
| Manager-Salesman               | 1                                  |                   |
| President-Manager              | 1                                  |                   |
| Vice President Manager         | 1                                  |                   |
| Co-Owner Manager               | 4                                  |                   |
| Pres. Research Engineer        | 1                                  |                   |
| Vice Pres. Sales Manager       | 4                                  |                   |
| Asst. Sales Manager            | 1                                  |                   |
| Total Managerial. . . . .      | .38                                |                   |
| Supervisory                    |                                    |                   |
| Shop Foreman                   | 9                                  |                   |
| Foreman-New Equipment          | 2                                  |                   |
| Plant Production Foreman       | 2                                  |                   |
| Asst. Plant Production Fore.   | 2                                  |                   |
| Total Supervisory. . . . .     | 15                                 |                   |

| OCCUPATIONAL FAMILY                             | LEVEL OF EMPLOYMENT AND JOB TITLES | NUMBER OF WORKERS |
|---|------------------------------------|-------------------|
| Farm Machinery Sales & Service                  | Sales                              |                   |
|   | Salesman                           | 80                |
|   | Parts Salesman                     | 1                 |
|   | Total Sales. . . . .               | 81                |
|   | Office                             |                   |
|   | Bookkeeper                         | 10                |
|   | Office Secretary                   | 5                 |
|   | Bookkeeper & Asst. Manager         | 2                 |
|   | Total Office. . . . .              | 17                |
|   | Skilled                            |                   |
|   | Mechanic                           | 60                |
|   | Partsman                           | 8                 |
|   | Welder                             | 16                |
|   | Asst. Partsman                     | 1                 |
|   | Machinist                          | 4                 |
|   | Bodyman                            | 2                 |
|   | Mechanic & Truck Driver            | 1                 |
|   | Total Skilled. . . . .             | 92                |
|   | Semiskilled                        |                   |
|   | Truck Driver                       | 1                 |
|   | Mechanic Helper                    | 4                 |
|   | Assemblyman                        | 3                 |
|   | Shop Worker                        | 3                 |
|   | Setup & Deliveryman                | 2                 |
|   | Total Semiskilled. . . . .         | 13                |
|   | Unskilled                          |                   |
|   | Common Laborer                     | 2                 |
|   | Total Unskilled. . . . .           | 2                 |
| Total Farm Machinery Sales and Service. . . . . |                                    | 280               |
| Farm Supplies & Equipment                       | Professional                       |                   |
|   | Total Professional. . . . .        | 0                 |
|   | Technical                          |                   |
|   | Ammoniator                         | 1                 |
|   | Total Technical. . . . .           | 1                 |
|   | Managerial                         |                   |
|   | Manager                            | 18                |
|   | Store Manager                      | 5                 |
|   | General Manager                    | 2                 |
|   | Service Manager                    | 1                 |
| Plant Manager                                   | 4                                  |                   |
| Manager-Owner                                   | 11                                 |                   |

| OCCUPATIONAL<br>FAMILY                | LEVEL OF EMPLOYMENT<br>AND JOB TITLES | NUMBER OF<br>WORKERS |
|---------------------------------------|---------------------------------------|----------------------|
| Farm Supplies &<br>Equipment (cont'd) | Managerial (cont'd)                   |                      |
|                                       | Asst. Manager                         | 14                   |
|                                       | Department Manager                    | 1                    |
|                                       | Market Manager                        | 4                    |
|                                       | Warehouse Manager                     | 4                    |
|                                       | General Mgr.-Co-owner                 | 6                    |
|                                       | Asst. Mgr.-Bookkeeper                 | 1                    |
|                                       | Asst. Mgr.-Co-owner-Clerk             | 1                    |
|                                       | Co-manager                            | 5                    |
|                                       | Owner-Operator                        | 1                    |
|                                       | President-Manager                     | 1                    |
|                                       | L. P. Gas Sales Manager               | 1                    |
|                                       | Total Managerial. . . . .             | .81                  |
|                                       | Supervisory                           |                      |
|                                       | Plant Superintendent                  | 1                    |
|                                       | Boiler Serviceman                     | 2                    |
|                                       | Feed Room & Mixer Foreman             | 1                    |
|                                       | Total Supervisory. . . . .            | 4                    |
|                                       | Sales                                 |                      |
|                                       | Salesman                              | 17                   |
|                                       | Sales Clerk                           | 10                   |
|                                       | Sales Lady                            | 3                    |
|                                       | Outside Salesman                      | 1                    |
|                                       | Farm Store Salesman                   | 18                   |
|                                       | Inside Salesman                       | 5                    |
|                                       | Store Clerk                           | 1                    |
|                                       | Gas Salesman                          | 3                    |
|                                       | Feed Buyer                            | 6                    |
|                                       | Total Sales. . . . .                  | 64                   |
|                                       | Office                                |                      |
|                                       | Bookkeeper                            | 9                    |
|                                       | Shipping Clerk                        | 2                    |
|                                       | Office Employee                       | 3                    |
|                                       | Secretary                             | 2                    |
|                                       | Clerk                                 | 1                    |
|                                       | Secretary & Bookkeeper                | 1                    |
|                                       | Office Clerk                          | 1                    |
|                                       | Receiving & Shipping Clerk            | 1                    |
|                                       | Assistant Bookkeeper                  | 1                    |
|                                       | Total Office. . . . .                 | .21                  |
|                                       | Skilled                               |                      |
|                                       | Mechanic                              | 5                    |
|                                       | Mechanic Serviceman                   | 1                    |
|                                       | Butcher                               | 7                    |
|                                       | Parts Man                             | 1                    |

| OCCUPATIONAL FAMILY                        | LEVEL OF EMPLOYMENT AND JOB TITLES | NUMBER OF WORKERS |
|--|------------------------------------|-------------------|
| Farm Supplies & Equipment (cont'd)         | Skilled (cont'd)                   |                   |
|  | Machinist                          | 1                 |
|  | Plumber (Farm)                     | 2                 |
|  | Carburetor Mechanic                | 1                 |
|  | Pay Load Operator                  | 2                 |
|  | Total Skilled. . . . .             | 20                |
|  | Semiskilled                        |                   |
|  | Truck Driver                       | 26                |
|  | Warehouseman                       | 10                |
|  | Service & Repairman                | 1                 |
|  | Assistant Butcher                  | 2                 |
|  | Sack Hanger                        | 1                 |
|  | Sewing Machine Operator            | 1                 |
|  | Feed Mixer                         | 2                 |
|  | Total Semiskilled. . . . .         | 43                |
|  | Unskilled                          |                   |
|  | Porter                             | 1                 |
|  | Yardman                            | 3                 |
|  | Laborer                            | 29                |
|  | Deliveryman                        | 9                 |
| Plant Helper                               | 1                                  |                   |
| Stock Boy                                  | 1                                  |                   |
| Dock Workers                               | 4                                  |                   |
| Warehouse Assistant                        | 2                                  |                   |
| Total Unskilled. . . . .                   | 50                                 |                   |
| Total Farm Supplies and Equipment. . . . . |                                    | 284               |
| Livestock & Poultry                        | Professional                       |                   |
|  | Total Professional. . . . .        | 0                 |
|  | Technical                          |                   |
|  | Inspector-Grader                   | 4                 |
|  | Cattle Buyer                       | 7                 |
|  | Auctioneer                         | 1                 |
|  | Plant Engineer                     | 1                 |
|  | Total Technical. . . . .           | 13                |
|  | Managerial                         |                   |
|  | Plant Manager                      | 3                 |
|  | Manager                            | 25                |
|  | Assistant Manager                  | 5                 |
|  | Egg Department Manager             | 1                 |
|  | Owner-Manager                      | 15                |
|  | Assistant Plant Manager            | 1                 |
| Office Manager                             | 2                                  |                   |
| Marketing Manager                          | 2                                  |                   |
| Produce Manager                            | 6                                  |                   |



| OCCUPATIONAL<br>FAMILY          | LEVEL OF EMPLOYMENT<br>AND JOB TITLES | NUMBER OF<br>WORKERS |
|---------------------------------|---------------------------------------|----------------------|
| Livestock &<br>Poultry (cont'd) | Managerial (cont'd)                   |                      |
|                                 | Market Manager                        | 2                    |
|                                 | Grocery Manager                       | 1                    |
|                                 | Hatchery Manager                      | 3                    |
|                                 | President-Manager                     | 1                    |
|                                 | Owner-Livestock Buyer                 | 1                    |
|                                 | Yard Manager                          | 1                    |
|                                 | Asst. Manager & Salesman              | 1                    |
|                                 | Stock Manager                         | 1                    |
|                                 | Farm Flock Manager                    | 8                    |
| Company Owner-Manager           | 4                                     |                      |
|                                 | Total Managerial. . . . .             | .83                  |
|                                 | Supervisory                           |                      |
|                                 | General Plant Superintendent          | 1                    |
|                                 | Shipping Foreman                      | 1                    |
|                                 | Foreman                               | 5                    |
|                                 | Quality Control Supervisor            | 1                    |
|                                 | Asst. Plant Superintendent            | 1                    |
|                                 | Poultry Supervisor                    | 1                    |
|                                 | Meat Superintendent                   | 1                    |
|                                 | Hatchery Foreman                      | 1                    |
|                                 | Pullet Program Foreman                | 2                    |
|                                 | Asst. Shipping Superintendent         | 1                    |
|                                 | Mill Foreman                          | 1                    |
|                                 | Total Supervisory. . . . .            | 16                   |
|                                 | Sales                                 |                      |
|                                 | Salesman                              | 6                    |
|                                 | Route Salesman                        | 7                    |
|                                 | Purchasing Agent                      | 1                    |
|                                 | Livestock Buyer                       | 1                    |
|                                 | Market Clerk                          | 3                    |
|                                 | Baby Chick Salesman                   | 2                    |
|                                 | Total Sales. . . . .                  | 20                   |
|                                 | Office                                |                      |
|                                 | Bookkeeper                            | 4                    |
|                                 | Ticket Writer                         | 6                    |
|                                 | Secretary                             | 2                    |
|                                 | Receiving Clerk                       | 1                    |
|                                 | Clerk                                 | 2                    |
|                                 | Weightmaster                          | 1                    |
|                                 | Accountant                            | 1                    |
|                                 | Bookkeeper-Clerk                      | 1                    |
|                                 | Check Writer                          | 1                    |
|                                 | Total Office. . . . .                 | .19                  |

| OCCUPATIONAL FAMILY          | LEVEL OF EMPLOYMENT AND JOB TITLES   | NUMBER OF WORKERS       |    |
|------------------------------|--------------------------------------|-------------------------|----|
| Livestock & Poultry (cont'd) | <b>Skilled</b>                       |                         |    |
|                              | Meat Cutter                          | 1                       |    |
|                              | Butcher                              | 23                      |    |
|                              | Auctioneer                           | 1                       |    |
|                              | Slaughter Butcher                    | 3                       |    |
|                              | Butcher-Meat Cutter                  | 3                       |    |
|                              | Electrician                          | 1                       |    |
|                              | Milk Purification Operator           | 1                       |    |
|                              | Sausage Maker                        | 1                       |    |
|                              | Total Skilled. . . . .               | 34                      |    |
|                              |                                      | <b>Semiskilled</b>      |    |
|                              | Maintenance Man                      | 2                       |    |
|                              | Butcher's Helper                     | 4                       |    |
|                              | Slaughterer                          | 12                      |    |
|                              | Yardman                              | 13                      |    |
|                              | Truck Driver                         | 36                      |    |
|                              | Grader                               | 5                       |    |
|                              | Mixers Man                           | 1                       |    |
|                              | Laborer                              | 15                      |    |
|                              | Produce Helper                       | 4                       |    |
|                              | Meat Wrapper                         | 14                      |    |
|                              | Stock Man                            | 2                       |    |
|                              | Routeman's Helper                    | 1                       |    |
|                              | Handyman                             | 1                       |    |
|                              | Total Semiskilled. . . . .           | 110                     |    |
|                              | Total Livestock and Poultry. . . . . | 295                     |    |
|                              | Crops, Forestry & Soil Conservation  | <b>Professional</b>     |    |
|                              |                                      | Forester III            | 1  |
|                              |                                      | District Ranger         | 6  |
|                              |                                      | Forester II             | 2  |
|                              |                                      | Unit Forester           | 2  |
|                              |                                      | Asst. District Forester | 1  |
|                              |                                      | District Forester       | 1  |
|                              |                                      | Forester                | 34 |
| Chief Forester               |                                      | 3                       |    |
| Area Forester                |                                      | 1                       |    |
| Asst. District Ranger        |                                      | 1                       |    |
| Forest Chemist               |                                      | 1                       |    |
| Total Professional. . . . .  |                                      | 53                      |    |
|                              |                                      | <b>Technical</b>        |    |
| Investigator III             |                                      | 1                       |    |
| Forest Technician            |                                      | 4                       |    |
| Engineer                     | 1                                    |                         |    |
| Enforcement Agent            | 1                                    |                         |    |
| Engineer's Aid               | 2                                    |                         |    |



| OCCUPATIONAL FAMILY                          | LEVEL OF EMPLOYMENT AND JOB TITLES | NUMBER OF WORKERS |
|--|------------------------------------|-------------------|
| Crops, Forestry & Soil Conservation (cont'd) | Technical (cont'd)                 |                   |
|  | Practical Forester                 | 5                 |
|  | Forestry Aid                       | 10                |
|  | Total Technical. . . . .           | 24                |
|  | Managerial                         |                   |
|  | Assistant Manager                  | 1                 |
|  | President                          | 1                 |
|  | Gin Manager                        | 4                 |
|  | Land Manager                       | 1                 |
|  | Manager                            | 12                |
|  | Office Manager                     | 3                 |
|  | Vice President                     | 1                 |
|  | General Manager                    | 1                 |
|  | Plant Manager                      | 3                 |
|  | Sales Manager                      | 3                 |
|  | Owner-Manager                      | 6                 |
|  | President-Co-owner                 | 1                 |
|  | President- General Manager         | 1                 |
|  | Company Manager & Co-owner         | 3                 |
|  | Manager-Operator                   | 1                 |
| Insurance Manager                            | 1                                  |                   |
| Manager-President                            | 1                                  |                   |
| Asst. Sales Manager                          | 1                                  |                   |
| Total Managerial. . . . .                    | 45                                 |                   |
| Supervisory                                  |                                    |                   |
| Foreman                                      | 2                                  |                   |
| Asst. Superintendent                         | 2                                  |                   |
| Quality Control Supt.                        | 1                                  |                   |
| Wood Yard Foreman                            | 4                                  |                   |
| Mill Superintendent                          | 7                                  |                   |
| Maintenance                                  | 1                                  |                   |
| Yard Foreman                                 | 2                                  |                   |
| Superintendent                               | 2                                  |                   |
| Production Plant Supt.                       | 12                                 |                   |
| Gin Superintendent                           | 1                                  |                   |
| Plant Superintendent                         | 1                                  |                   |
| Repair Shop Foreman                          | 2                                  |                   |
| Logging Foreman                              | 2                                  |                   |
| Compress Labor Foreman                       | 2                                  |                   |
| Woods Foreman                                | 12                                 |                   |
| Mill Foreman                                 | 7                                  |                   |
| Planner Mill Foreman                         | 9                                  |                   |
| Asst. Woods Foreman & Truck Driver           | 1                                  |                   |
| Construction & Maint. Supt.                  | 1                                  |                   |
| Gen. Foreman of Roads and Grounds            | 1                                  |                   |
| Dry Kiln Foreman                             | 1                                  |                   |

| OCCUPATIONAL FAMILY | LEVEL OF EMPLOYMENT AND JOB TITLES | NUMBER OF WORKERS |
|---------------------|------------------------------------|-------------------|
|---------------------|------------------------------------|-------------------|

Crops, Forestry & Soil Conservation (cont'd)

Supervisory (cont'd)  
 Shipping Foreman 1  
 Pulpwood Superintendent 1  
 Green End Foreman 1  
 Logging Superintendent 1  
 Total Supervisory. . . . . 77

Sales  
 Salesman 1  
 Timber Buyer 4  
 Pole Buyer 2  
 Total Sales. . . . . 7

Office  
 Clerks 3  
 Shipping Clerk 6  
 Typist-Clerk 9  
 Secretary 1  
 Bookkeeper 3  
 Admin. Officer 1  
 Accountant 1  
 Invoice Clerk 1  
 Total Office. . . . . 25

Skilled  
 Forest Ranger I 1  
 Forest Ranger II 3  
 Forest Ranger III 1  
 Heavy Equipment Operator 36  
 Partsman 1  
 Ginner 2  
 Press Operator 2  
 Trimmer 68  
 Mechanic 15  
 Gin Operator 4  
 Standman 2  
 Radio Operator 1  
 Welder 1  
 Lookout Man 2  
 Electrician 1  
 Edgeman 11  
 Millwright 6  
 Sawyer 17  
 Cutup man 1  
 Loader Operator & Wood Scaler 1  
 Loader Operator 1  
 Saw Filer 13  
 Lumber Grader 23  
 Lumber Checker 3



| OCCUPATIONAL FAMILY                          | LEVEL OF EMPLOYMENT AND JOB TITLES    | NUMBER OF WORKERS      |      |
|--|---------------------------------------|------------------------|------|
| Crops, Forestry & Soil Conservation (cont'd) | Skilled (cont'd)                      |                        |      |
|  | Planner Machine Operator and Mechanic | 3                      |      |
|  | Timber Marker Estimator               | 11                     |      |
|  | Grain Inspector                       | 1                      |      |
|  | Dry Kiln Operator                     | 2                      |      |
|  | Power Saw Operator                    | 102                    |      |
|  | Log Skidder                           | 2                      |      |
|  | Towmotor Operator                     | 2                      |      |
|  | Millwright & Sawyer                   | 1                      |      |
|  | Lumber Setter                         | 3                      |      |
|  | Plywood Grader                        | 6                      |      |
|  | Crane Operator                        | 1                      |      |
|  | Machinist                             | 2                      |      |
|  | Welder Mechanic                       | 3                      |      |
|  |                                       | Total Skilled. . . . . | .355 |
|  |                                       | Semiskilled            |      |
|  |                                       | Forest Foreman I       | 11   |
|  |                                       | Forest Foreman II      | 12   |
|  |                                       | Forest Foreman III     | 14   |
|  |                                       | Tractor Operator       | 88   |
|  |                                       | Forest Fireman         | 37   |
|  |                                       | Maintenance Helper     | 3    |
|  |                                       | Log Scaler             | 14   |
|  |                                       | Gin Stand Worker       | 2    |
|  |                                       | Truck Driver           | 115  |
|  |                                       | Forest Towerman I      | 9    |
|  |                                       | Forest Towerman II     | 5    |
|  |                                       | Forest Towerman III    | 17   |
|  |                                       | Tree Trimmer           | 38   |
|  |                                       | Crawler Driver         | 16   |
|  |                                       | Pole & Pile Peeler     | 5    |
|  |                                       | Scaler Helper          | 1    |
|  |                                       | Mechanic Helper        | 2    |
|  |                                       | Saw Filer Helper       | 1    |
|  |                                       | Log Lifter             | 7    |
|  |                                       | Debarker Operator      | 4    |
|  |                                       | Chipper Operator       | 2    |
|  |                                       | Lumber Handler         | 1    |
|  | Forester Aid                          | 34                     |      |
|  | Tractor Driver & Loader               | 2                      |      |
|  | T.S.I. Crewman                        | 20                     |      |
|  | Road Maintenance Crew                 |                        |      |
|  | Laborer                               | 4                      |      |
|  | Fork Lift Operator                    | 1                      |      |
|  | Total Semiskilled. . . . .            | .465                   |      |



| OCCUPATIONAL FAMILY                                  | LEVEL OF EMPLOYMENT AND JOB TITLES | NUMBER OF WORKERS |
|--|------------------------------------|-------------------|
| Crops, Forestry & Soil Conservation (cont'd)         | Unskilled                          |                   |
|  | Yardman                            | 2                 |
|  | Laborer                            | 178               |
|  | Suction Feeder                     | 2                 |
|  | Yard Laborer                       | 4                 |
|  | Feed Mill & Grain Elevator Worker  | 2                 |
|  | Cotton Loader                      | 8                 |
|  | Total Unskilled. . . . .           | 196               |
| Total Crops, Forestry and Soil Conservation. . . . . |                                    | 1,247             |
| Ornamental Horticulture                              | Professional                       |                   |
|  | Total Professional. . . . .        | 0                 |
|  | Technical                          |                   |
|  | Total Technical. . . . .           | 0                 |
|  | Managerial                         |                   |
|  | Nursery Manager                    | 1                 |
|  | Assistant Manager                  | 1                 |
|  | Owner-Manager                      | 4                 |
|  | Co-Manager & Owner                 | 2                 |
|  | Total Managerial. . . . .          | 8                 |
|  | Supervisory                        |                   |
|  | Total Supervisory. . . . .         | 0                 |
|  | Sales                              |                   |
|  | Total Sales. . . . .               | 0                 |
|  | Office                             |                   |
|  | Total Office. . . . .              | 0                 |
|  | Skilled                            |                   |
|  | Total Skilled. . . . .             | 0                 |
|  | Semiskilled                        |                   |
|  | Total Semiskilled. . . . .         | 0                 |
| Unskilled  |                                    |                   |
| Laborer  | 6                                  |                   |
| Nursery Helper                                       | 3                                  |                   |
| Total Unskilled. . . . .                             | 9                                  |                   |
| Total Ornamental Horticulture. . . . .               |                                    | 17                |



| OCCUPATIONAL FAMILY                    | LEVEL OF EMPLOYMENT AND JOB TITLES | NUMBER OF WORKERS |
|--|------------------------------------|-------------------|
| Wildlife & Recreation                  | Professional                       |                   |
|  | Wildlife Biologist                 | 3                 |
|  | Fish Biologist                     | 1                 |
|  | Total Professional. . . . .        | 4                 |
|  | Technical                          |                   |
|  | Waste Disposal Inspector           | 1                 |
|  | Total Technical. . . . .           | 1                 |
|  | Managerial                         |                   |
|  | Owner-Manager                      | 1                 |
|  | Asst. Manager & Salesman           | 1                 |
|  | Total Managerial. . . . .          | 2                 |
|  | Supervisory                        |                   |
|  | Refuge Supervisor                  | 3                 |
|  | Total Supervisory. . . . .         | 3                 |
|  | Sales                              |                   |
| Total Sales. . . . .                   | 0                                  |                   |
| Office                                 |                                    |                   |
| Total Office. . . . .                  | 0                                  |                   |
| Skilled                                |                                    |                   |
| Total Skilled. . . . .                 | 0                                  |                   |
| Semiskilled                            |                                    |                   |
| Total Semiskilled. . . . .             | 0                                  |                   |
| Unskilled                              |                                    |                   |
| Laborer                                | 1                                  |                   |
| Total Unskilled. . . . .               | 1                                  |                   |
| Total Wildlife and Recreation. . . . . | 11                                 |                   |

|              |                             |   |
|--------------|-----------------------------|---|
| Farm Service | Professional                |   |
|              | Home Economist              | 1 |
|              | Appraiser                   | 1 |
|              | Entomologist                | 1 |
|              | Total Professional. . . . . | 3 |
|              | Technical                   |   |
|              | Pest Control Technician     | 4 |
|              | Milk Technician             | 1 |
|              | Livestock Board Inspector   | 3 |
|              | Artificial Inseminator      | 1 |
| Pilot        | 3                           |   |

| OCCUPATIONAL FAMILY | LEVEL OF EMPLOYMENT AND JOB TITLES | NUMBER OF WORKERS |
|---------------------|------------------------------------|-------------------|
|---------------------|------------------------------------|-------------------|

Farm Service (cont'd)

Technical (cont'd)  
 Radio Breaker & Utility Maint. Man 1  
 Meter & Utility Maint. Man 1  
 Total Technical. . . . . 14

Managerial  
 Manager 5  
 Asst. Manager 4  
 Sales Manager 1  
 Branch Manager 1  
 Vice President 4  
 President 1  
 General Manager 1  
 Office Manager 1  
 Owner-Manager 6  
 Credit Manager 2  
 Manager-Welder 1  
 Treas. Office Manager 1  
 Co-Manager 2  
 Asst. Manager Accountant 1  
 Manager & Insurance Agent 1  
 Engineer Manager 1  
 Agency Manager 1  
 Total Managerial. . . . . 34

Supervisory  
 Line Superintendent 4  
 Service Supervisor 1  
 Fieldman 3  
 Right-of-way Foreman 2  
 Supervisor of Meter Readers 1  
 Total Supervisory. . . . . 11

Sales  
 Salesman 4  
 Insurance Salesman 1  
 Service Agent 4  
 Power Use Manager & Public Relations Man 3  
 Total Sales. . . . . 12

Office  
 Secretary 4  
 Bookkeeper 2  
 Clerk 1  
 Clerical Asst. 4  
 Office Secretary 1  
 Stock Clerk 1

| OCCUPATIONAL FAMILY | LEVEL OF EMPLOYMENT AND JOB TITLES | NUMBER OF WORKERS |
|---------------------|------------------------------------|-------------------|
|---------------------|------------------------------------|-------------------|

Farm Service (cont'd)

| Office (cont'd)               |    |
|-------------------------------|----|
| Treasurer                     | 1  |
| Asst. Cashier                 | 2  |
| Cashier                       | 4  |
| Steno-Clerk                   | 1  |
| Accountant III, Transp. Clerk | 1  |
| Work Order Clerk              | 1  |
| Warehouse Clerk               | 1  |
| Accountant I                  | 1  |
| Accountant III-Billing Clerk  | 1  |
| Asst. Bookkeeper              | 1  |
| Secretary Bookkeeper          | 1  |
| Dispatcher                    | 1  |
| Claims Adjuster               | 1  |
| Total Office. . . . .         | 30 |

Skilled

|                          |    |
|--------------------------|----|
| Mechanic                 | 5  |
| Lineman                  | 18 |
| Welder                   | 3  |
| Cement Batch Operator    | 1  |
| Heavy Equipment Operator | 1  |
| Total Skilled. . . . .   | 28 |

Semiskilled

|                            |    |
|----------------------------|----|
| Warehouseman               | 1  |
| Ground Crew                | 21 |
| Asst. Exterminator         | 3  |
| Caretaker                  | 2  |
| Welder's Helper            | 11 |
| Tree Pruner                | 8  |
| Meter Reader               | 10 |
| Total Semiskilled. . . . . | 56 |

Unskilled

|                          |    |
|--------------------------|----|
| Laborer                  | 8  |
| General Helper           | 17 |
| Service Assistant        | 8  |
| Total Unskilled. . . . . | 33 |

Total Farm Service. . . . . 221

Agricultural Service

Professional

|                          |   |
|--------------------------|---|
| Voc. Agriculture Teacher | 2 |
| Asst. County Agent       | 2 |
| Forester                 | 1 |
| Home Demonstration Agent | 2 |
| County Agent             | 4 |
| State Entomologist       | 1 |
| Assoc. County Agent      | 4 |

| OCCUPATIONAL<br>FAMILY           | LEVEL OF EMPLOYMENT<br>AND JOB TITLES | NUMBER OF<br>WORKERS |
|----------------------------------|---------------------------------------|----------------------|
| Agricultural<br>Service (cont'd) | Professional (cont'd)                 |                      |
|                                  | Asst. Home Demonstration Agent        | 2                    |
|                                  | Soil Conservationist                  | 2                    |
|                                  | Work Unit Conservationist             | 3                    |
|                                  | Assoc. Home Demon. Agent              | 3                    |
|                                  | Total Professional. . . . .           | 26                   |
|                                  | Technical                             |                      |
|                                  | Soil Conservation Technician          | 1                    |
|                                  | Conservation Technician               | 2                    |
|                                  | Engineering Aid                       | 3                    |
|                                  | Total Technical. . . . .              | 6                    |
|                                  | Managerial                            |                      |
|                                  | President                             | 2                    |
|                                  | Manager                               | 1                    |
|                                  | Office Manager                        | 4                    |
|                                  | County Office Manager                 | 2                    |
|                                  | Exec. Vice President                  | 1                    |
|                                  | Total Managerial. . . . .             | 10                   |
|                                  | Supervisory                           |                      |
|                                  | Performance Supervisor                | 2                    |
|                                  | County Supervisor                     | 1                    |
|                                  | Plant & Insect Inspector              | 2                    |
|                                  | Total Supervisory. . . . .            | 5                    |
|                                  | Sales                                 |                      |
|                                  | Total Sales. . . . .                  | 0                    |
|                                  | Office                                |                      |
| Secretary                        | 7                                     |                      |
| Program Clerk                    | 4                                     |                      |
| Counter Clerk                    | 2                                     |                      |
| Administrative Clerk             | 2                                     |                      |
| Clerk                            | 4                                     |                      |
| Chief Clerk                      | 1                                     |                      |
| County Office Clerk              | 1                                     |                      |
| Agri. Conser. Program Clerk      | 3                                     |                      |
| General Clerk                    | 4                                     |                      |
| Performance Clerk                | 2                                     |                      |
| Total Office. . . . .            | 30                                    |                      |
| Skilled                          |                                       |                      |
| Field Reporter                   | 15                                    |                      |
| Total Skilled. . . . .           | 15                                    |                      |

| OCCUPATIONAL FAMILY                 | LEVEL OF EMPLOYMENT AND JOB TITLES | NUMBER OF WORKERS |
|-------------------------------------|------------------------------------|-------------------|
| Agricultural Service (cont'd)       | Semiskilled                        |                   |
|                                     | District Aid                       | 3                 |
|                                     | Pest Control Assistant             | 1                 |
|                                     | Total Semiskilled. . . . .         | 4                 |
|                                     | Unskilled                          |                   |
|                                     | Total Unskilled. . . . .           | 0                 |
| Total Agricultural Service. . . . . |                                    | .96               |