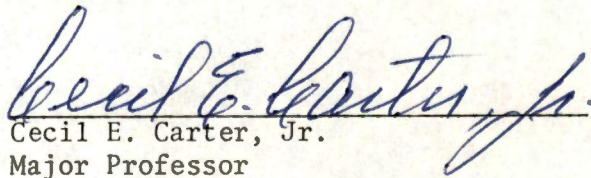
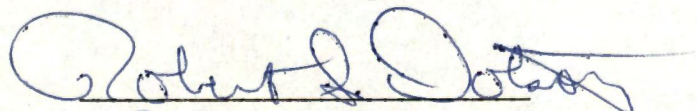
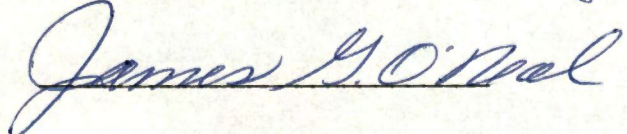


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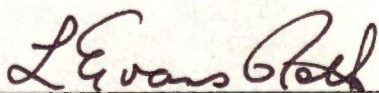
I am submitting herewith a thesis written by Michael E. Gordon entitled "Relationship Between Number of Contacts Haywood County, Tennessee Feeder Pig Producers Had with the Agricultural Extension Service and the Management of Their Feeder Pig Operations." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Agricultural Extension.


Cecil E. Carter, Jr.
Major Professor

We have read this thesis and
recommend its acceptance:

Accepted for the Council:


Vice Chancellor
Graduate Studies and Research

Thesis

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RELATIONSHIP BETWEEN NUMBER OF CONTACTS HAYWOOD COUNTY, TENNESSEE
FEEDER PIG PRODUCERS HAD WITH THE AGRICULTURAL EXTENSION SERVICE
AND THE MANAGEMENT OF THEIR FEEDER PIG OPERATIONS

A Thesis

Presented for the

Master of Science

Degree

The University of Tennessee, Knoxville

Michael E. Gordon

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ABSTRACT

The purpose of this study was to determine the influence of the Agricultural Extension Service upon the improvement of the quality of feeder pigs marketed by feeder pig producers in Haywood County, Tennessee. There was a need to determine the degree of acceptance and use of recommended swine management practices by feeder pig producers also, to determine the relationship between the number of contacts producers had with Extension and their general farm situation, management of farrowing facilities, use of recommended practices, and the number and grade of pigs sold. Data were obtained from twenty (20) feeder pig producers who had a minimum of five sows in production in 1975 and had sold pigs at the Brownsville Feeder Pig Sale for the previous five years (i.e., 1970 through 1974). The analysis of variance F test was used to determine the strength of relationships between the dependent (i.e., number of contacts producers had with Extension) and independent variables.

It was concluded that the change in the grade of feeder pigs sold during the five year period by the 20 producers was in the direction of improvement. While the number of Grade 4 feeder pigs decreased from 515 (30 percent of all pigs sold by the 20 producers) in 1970 to 54 (3 percent) in 1974, the number of Grade 1 and 2 feeder pigs increased from 80 (5 percent) in 1970 to 1,045 (27 percent) during the same time period.

The feeder pig producers' general farm situation did not significantly influence the number of contacts producers had with Extension except in the case of these producers who planned to increase the size of their

feeder pig operation. Producers who were expanding their operation made significantly more contacts with Extension agents than did those producers who were not planning to expand their operation.

The number of contacts feeder pig producers had with Extension agents did significantly influence the use of recommended practices regarding the management of their swine farrowing facilities. Producers who were using railings and crates to protect baby pigs from mashing and those who used fans to aid in air circulation in the farrowing house attended significantly more Extension meetings and more swine meetings than did those producers who were not using these practices.

The number of contacts that producers had with Extension were significantly associated with their use of five of the 21 recommended swine management practices. In all cases those producers that were using the recommended practices had a larger number of Extension contacts than did those producers not using the practices, however the differences did not achieve the .05 level of significance in all cases.

The number of contacts producers had with Extension tended to be significantly related to the number of pigs sold by the producers in each grade. Producers who sold a larger number of pigs tended to have a larger number of contacts with Extension than did the producers who had a smaller operation. The number of office visits and the number of farm visits were more highly related to size of operation than were other types of contacts producers had with Extension.

Conclusions and recommendations were also made.

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CHAPTER I

THE PROBLEM AND ITS SETTING

I. INTRODUCTION

Haywood County is located in the western area of the state approximately 50 miles northeast of Memphis. Much of the county's land acreage is devoted to row crops such as cotton, soybeans, and corn with beef cattle and feeder pigs making up the remaining farm enterprises.

Two Extension staff members devote their time to adult agriculture with one staff member working primarily with small farm families. These small farm families depend on the production of feeder pigs as a major source of their income. Extension swine meetings on swine management and feeder pig production are held during the winter months. An additional swine meeting with producers from each county that make up the Brownsville Feeder Sales Association was held in the early spring of 1975. Extension specialists were on hand to discuss problems connected with feeder pig production.

A feeding trial using lightweight Grade 4 pigs was conducted during the winter of 1975-76 at the Brownsville Feeder Pig Sales Barn. The trial was used to show the increased income that could be obtained through the use of Extension recommended swine management practices.

Extension agents use news stories, circular letters, and farm visits to keep swine producers in the county abreast of new developments in the swine work area. Also, personal contacts by Extension agents

with producers during the monthly cooperative marketing program in the county serve to stimulate and encourage swine producers to use the latest management techniques. In 1959, a cooperative feeder pig sale was started in Brownsville to open a new era in the marketing of feeder pigs. Only two feeder pig sales were held in 1959 with a total of 1,602 feeder pigs being sold. By 1975, the feeder pig sale in Haywood County had grown to twelve sales per year with producers from seven neighboring counties joining the area association. In 1975, total estimated receipts from feeder pigs produced by Haywood County's 95 producers was \$500,000.

Swine production contributes an average of 105,473,000 dollars to the annual gross income of Tennessee each year (5)*. In recent years (1965 to 1970) the feeding of hogs has been on the decrease with the production of feeder pigs on the increase, but 1975 was just the reverse. Feeder pigs produced by Tennessee farmers are marketed through organized feeder pig sales at weights of between 30 and 100 pounds.

Receipts from Tennessee feeder pig sales in 1960 was \$277,576 with 21,822 pigs being sold. This represented 1.1 percent of the total pig crop in Tennessee (7). In 1975, total receipts were \$23,930,497 with 554,121 feeder pigs being sold or 37.18 percent of the total Tennessee pig crop (7).

II. NEED FOR THE STUDY

County Extension agents in Haywood County have for some time realized the importance of feeder pig production and the economic stability that

*Numbers in parentheses refer to numbered references in the bibliography; those after the colon are page numbers.

it offers to farm people. Many times when other farm income fails, the production of feeder pigs allows these farm people to have an acceptable standard of living.

The Haywood County Extension staff felt that if the Extension swine program was to remain effective, certain informational facts about the feeder pig producer had to be studied.

Was the influence of Extension agents on the feeder pig producers leading to the adoption and use of recommended swine management practices?

What use were the feeder pig producers making of the county Extension office?

III. STATEMENT OF THE PROBLEM

Because of the emphasis placed on feeder pig production in previous recent years, it was felt necessary to determine if Haywood County feeder pig producers were marketing a higher quality of feeder pigs and what factors influenced the feeder pig producer to produce higher quality feeder pigs. There was also a need to determine the acceptance and use of recommended swine management practices by feeder pig producers and to determine the relationship between their contacts with Extension and their general farm situation, farrowing facilities, use of recommended practices, and the number of pigs sold in each grade. This study should help to evaluate the present Extension Swine Program and also help to determine the needs of the feeder pig producers in Haywood County.

IV. RELATED RESEARCH

A vast amount of literature related to swine production was available; however, most of this information was concerned with specific technical subject matter. Very little information was available in the area of the influence of the number of contacts swine producers had with Extension and their use of recommended feeder pig production practices. This chapter will consider available literature relevant to feeder pig management, and the adoption of recommended management practices by feeder pig producers.

Adoption of Agricultural Practices

Literature dealing with practice adoption by feeder pig producers was found to be unavailable; however, numerous studies on practice adoption rates for producers of various other farm enterprises have been made.

A North Central Regional Extension Publication (1:3) referred to the adoption process as a mental process through which an individual passes from first hearing about a new idea to its final adoption.

Rogers (4:3) classified the people who first try an idea as innovators or early adopters. People who are slow to try new ideas were classified as non-innovators or late adopters. In his study, Rogers found that early adopters (innovators) differed from late adopters (non-innovators) in that they had more formal education, were younger, had participated more in formal ways, held higher social status, and read more.

A North Central Regional Extension Publication (1:7) states there are differences in the nature of the farm businesses among the adopter categories. The enterprises of farm innovators, in comparison to those who adopt later, are characterized by: (1) larger farms; (2) higher gross farm incomes; (3) greater farm efficiency; (4) more specialized enterprises; and (5) greater farm ownership.

Frutchey and Williams (2:11) found that young people tend to adopt more new practices and adopt them more quickly than do older people. They (2:7) noted the following reasons why practices were not adopted: (1) time required; (2) money required; (3) time span involved in production; and (4) lack of technical knowledge. They also noted that higher expected returns resulted in a faster adoption rate.

Change Agents

This study will attempt to establish the relationship between practices used by feeder pig producers and the number of contacts producers had with County Extension Agents (change agents).

According to Rogers (3:283) a change agent is a professional person who attempts to influence adoption decisions in a direction that he feels is desirable. The change agent serves as a communication link between a professional system and his client system. Rogers found that "The extent of professional efforts by change agents is directly related to the rate of adoption of an innovation" (3:283).

In a North Central Regional Extension Publication (1:8) research indicates that early adopters have more contact with County Extension Agents, Vocational Agriculture teachers, and other agricultural agency

workers (change agents) than do farmers in other adopter categories including the innovators. The early adopters not only have the most total Extension contacts, but also are ranked especially high in the number of personal Extension contacts that they have through meetings, office calls, and farm visits.

V. PURPOSE OF THE STUDY

Extension agents in Haywood County realized the importance of feeder pig production in order to increase the income of feeder pig producers. In order to achieve this goal it was felt that the quality of feeder pigs produced must be further improved through getting more producers to make maximum use of recommended swine management practices. Thus, the main purpose of this study was to determine the relationship between the number of contacts feeder pig producers had had with Extension agents and their use of recommended swine production practices. Specific objectives for the study were:

1. To determine the relationship between the number of contacts producers had with Extension and their general farm situation.
2. To determine the relationship between the number of contacts feeder pig producers had with Extension and their use of management practices regarding swine farrowing facilities.
3. To determine the relationship between the number of contacts feeder pig producers had with Extension and their use of other recommended swine management practices.
4. To determine the relationship between the number of contacts feeder pig producers had with Extension and the number and grade of pigs they marketed.

VI. LIMITATIONS OF THE STUDY

There were two limiting factors placed on this Haywood County, Tennessee study. The first of these was that the swine producers had to have at least five sows in production in 1975. The second was that each producer must have marketed feeder pigs at the Haywood County feeder pig marketing center each of the previous years (1970-74). Twenty (20) of the 95 feeder pig producers in Haywood County met the limitations set forth for the study.

VII. METHOD OF INVESTIGATION

Source of Data

The data for this study were obtained through a personal interview with each of 20 feeder pig producers in Haywood County, Tennessee during the summer of 1975. Information about the producer and his feeder pig operation was recorded on an interview schedule developed by the researcher with the assistance of staff members in the departments of Animal Science—Swine and Agricultural Extension Education.

Also, useful data concerning the numbers and grades of pigs sold by each producer were obtained from Brownsville Feeder Pig Sale Records in the Haywood County Extension Office.

A feeder pig data form for recording the numbers and grades of pigs sold by years (i.e., 1970-74) by the 20 producers was developed (see Appendix).

The Sample

The population studied was all swine producers in Haywood County having at least five sows in production in 1975. The feeder pig producers must also have sold pigs during each of the previous five years (1970-1974) at the Haywood County Feeder Pig Market. Data were obtained from each producer who met the limitations set forth in this study (i.e., 20 producers).

Analysis of Data

Upon completion of interviews, data were recorded on Computer Data Sheets. Computer data cards were punched for statistical analysis.

Data concerning the numbers and grades of pigs marketed also were recorded and data cards were processed.

Variables for the study were classified into two groups. The first group of variables identified was the number of contacts feeder pig producers had with Extension (e.g., Extension meeting, Extension swine meetings, office visits, telephone calls, and farm visits). The second group of variables was classified into the following four classes of variables: general farm situation, management of farrowing facilities, general swine management practices, and the numbers and grades of pigs marketed.

The study was organized into four sections based upon the above classification of the variables. The first section deals with the relationship between the number of contacts feeder pig producers had with Extension agents in Haywood County and their general farm situation

(i.e., source of income, farming situation, source of farm income, and plans to increase size of operation).

The second section gives an analysis of the relationship between the number of contacts feeder pig producers had with Extension agents in Haywood County and their management of his farrowing facility which included type flooring, bedding used, method used to prevent mashing pigs, type of heat, and air circulation.

The third section deals with the relationship between the number of contacts feeder pig producers had with Extension agents in Haywood County and their use of other recommended swine management practices. The practices included selection of breeding sows, selection of herd sires, use of crossbreeding program, vaccination for leptospirosis, bred gilts at 8 months and 250 pounds, feeding pregnant sows off pasture, feeding pregnant sows on pasture, adequate farrowing facilities, other hogs kept out of farrowing house, worm sows 3-14 days before farrowing, sows in farrowing house 3 days before farrowing, clean sows before farrowing, bulky feed supplied before farrowing, care of pigs at birth, increase sow feed during nursing, prevent pig anemia, pigs on 18-20 percent creep ration, farrowing house kept clean, dry, etc., pigs castrated before 4 weeks, farrowing house cleaned after sows moved, and wait 1 to 2 weeks before using house again.

The final section of the study concerns the relationship between the number of Extension contacts that feeder pig producers had with Extension agents in Haywood County and the number of feeder pigs marketed per year by the feeder pig producers (i.e., number of grade 1-2 pigs,

grade 3, grade 4, grade utility, total pigs sold, and average grade for pigs sold).

The analysis of variance F test was used to determine the strength of relationship between the number of contacts producers had with Extension and each of the independent variables. The problem was to determine whether the observed number of Extension contacts differed as to the classification made on each variable. F values which achieved the .05 probability level were accepted as indicating a significant difference in the number of contacts producers had with Extension. The Pearson "r" correlation coefficient was used to relate the quantitative dependent variables with quantitative independent variables.

VIII. DEFINITION OF TERMS

In order that the writer and reader have a common understanding of terms used in this study, certain terms were defined as follows:

Feeder Pig. A pig that is marketed when relatively young and before reaching a weight of 125 pounds.

Grade 1. The U. S. No. 1 grade feeder pigs are long and have thick muscling throughout. These pigs have a large frame which will allow them to reach 220 pounds with a low degree of fatness (8).

Grade 2. The U. S. No. 2 grade feeder pig has moderately thick muscling and a moderately large frame. He should reach 220 pounds with only a moderate degree of fatness. He does not look as trim as the U. S. No. 1 grade feeder pig (8).

Grade 3. The U. S. No. 3 grade feeder pig has slightly thin muscling and a slightly small frame. When he reaches 220 pounds he

will have a high degree of fatness. He shows sign of fat already being deposited in the jowl and flank (8).

Grade 4. The U. S. No. 4 grade feeder pig has thin muscling and a small frame. Upon reaching 220 pounds he will have a very high degree of fatness. He will look wasty throughout (8).

Grade Utility. The U. S. utility grade feeder pig is unthrifty due to disease or poor care. His condition is not too serious that he could not recover with proper care and treatment. He will have wrinkled skin, rough unkempt appearance, and the head will appear larger than normal (8).

Extension Contact. The number of Extension meetings attended, number of Extension swine meetings attended, number of telephone calls and office visits made to the County Extension Office, and the number of farm visits received by the feeder pig producer during the past 12 months.

CHAPTER II

STUDY FINDINGS

This chapter on study findings was organized into five major sections according to the specific objectives of the study. Data pertaining to each objective of the study were presented in a table.

Section I presents findings regarding changes in the number and grade of feeder pigs sold by twenty (20) Haywood County producers between 1970 and 1974. The purpose of this section was to establish the amount of change in the quality of pigs sold during the five year period.

Section II presents data regarding the relationship between the number of contacts (e.g., meetings, office visits, telephone calls, and farm visits) feeder pig producers had with Extension and the producers' general farm situation (i.e., source of farm income). The purpose of this analysis was to determine the influence of general farm situation upon the number of contacts producers made with Extension agents over a 12 month period.

Section III presents data regarding the relationship between the number of contacts feeder pig producers had with Extension and the producers' management of their farrowing facilities (e.g., type of heat). The purpose of this analysis was to determine the influence of Extension contacts upon the producers' management of their farrowing facilities.

Section IV presents data regarding the relationship between the number of contacts feeder pig producers had with Extension and the

producers' use of general swine management practices (e.g., selection of herd sires). The purpose of this analysis was to determine the influence of Extension contacts upon the use of general swine management practices by the feeder pig producers.

Section V presents data regarding the relationship between the number of contacts feeder pig producers had with Extension and the grade of feeder pigs sold each of the five years. The purpose of this section was to determine the influence of Extension contacts upon the grade of feeder pigs sold during each of the five years.

I. CHANGES IN THE NUMBERS AND GRADES OF FEEDER
PIGS SOLD BY TWENTY HAYWOOD COUNTY PRODUCERS
BETWEEN 1970 AND 1974

The purpose of this section is to present findings regarding the numbers and grades of feeder pigs sold by twenty (20) Haywood County producers and to establish the amount of change between the years 1970 and 1974.

Changes in Numbers and Grades of Feeder Pigs

Table I presents findings regarding the change in the numbers and grades of feeder pigs sold by twenty (20) Haywood County producers between 1970 and 1974. The twenty (20) producers sold a total of 10,773 feeder pigs over the five year period. There was an increase in the number of pigs sold from 1970 to 1972 when the peak was reached. After this peak a slight decrease was noted. Almost, 3,000 of the 10,773 pigs sold during the five year period were grades 1 and 2. The number of grade 1 and 2 pigs sold ran from 80 in 1970 to 1,045 in 1974.

TABLE I
CHANGES IN THE NUMBERS AND GRADES OF FEEDER PIGS
SOLD BY TWENTY HAYWOOD COUNTY PRODUCERS
BETWEEN 1970 AND 1974

Years	Number and Grade of Pigs Sold		Av/Pro.
	No. Pigs Sold	Percent	
<u>Grades No. 1-2</u>			
1970	80	5	4.0
1971	298	15	14.9
1972	565	22	28.2
1973	960	39	43.0
1974	1,045	53	52.2
Total (5 years)	2,948	27	147.4
<u>Grade No. 3</u>			
1970	1,093	63	53.6
1971	1,286	64	64.3
1972	1,721	67	86.0
1973	1,239	51	61.9
1974	875	44	43.7
Total (5 years)	6,214	58	310.7
<u>Grade No. 4</u>			
1970	515	30	25.7
1971	436	22	21.8
1972	279	11	13.9
1973	239	10	11.9
1974	54	3	2.7
Total (5 years)	1,523	14	76.2
<u>Grade Utility</u>			
1970	48	.3	2.4
1971	4	.2	.2
1972	22	.8	1.1
1973	14	.6	.7
1974	0	0	0.0
Total (5 years)	88	.8	4.4
<u>All Grades</u>			
1970	1,736		86.5
1971	2,024		100.2
1972	2,587		129.0
1973	2,452		122.5
1974	1,974		98.7
Total (5 years)	10,773		538.6

The data showed an increase in percent of grade 1 and 2 feeder pigs sold each of the five years. In 1970, 5 percent of the pigs sold were grade 1 and 2 compared to 53 percent in 1974. The average number of grade 1 and 2 pigs sold per producer also increased from four in 1970 to 52 in 1974. Over the five year period each producer sold an average of 147.4 grade 1 and 2 pigs. Twenty seven percent of all pigs sold during the five years were 1 and 2.

Fifteen hundred and twenty three of the 10,773 pigs sold during the five year period were grade 4. The number of grade 4 pigs sold by the 20 producers decreased from 515 in 1970 to 54 in 1974. The data showed a decrease in percent of grade 4 feeder pigs sold in each of the four years following 1970. In 1970, 30 percent of the pigs sold were grade 4 compared to 3 percent in 1974. The average number of grade 4 pigs sold per producer also decreased from 25.7 in 1970 to 2.7 in 1974. Over the five year period each producer sold an average of 76.2 grade 4 pigs. Fourteen percent of all pigs sold during the five years were grade 4.

Therefore, the number and percent of grade 1 and 2 feeder pigs increased over the five year period while the number and percent of grade 4 feeder pigs decreased over the same time period.

II. RELATION BETWEEN EXTENSION CONTACTS AND GENERAL FARM SITUATION

The independent variables discussed in this section are: source of income, farming situation, source of farm income, and plans to increase size of operation. Discussion of the independent variables is done in

the above order. The purpose of this analysis was to determine the influence of general farm situation upon the number of contacts producers made with Extension over a 12 month period.

Source of Income and Number Extension Meetings Attended

Table II shows the relation between the number of contacts producers had with Extension and their sources of income. Seventeen of the twenty (20) feeder pig producers (85 percent) gave farming as their major source of income. The producers who gave farming as their major source of income attended an average 1.65 Extension meetings during the twelve month period prior to the interview. In comparison, those producers whose major source of income was other than farming attended an average 1.0 Extension meetings. When tested by the F test these differences were not significant at the .05 level. Therefore, the producers' major source of income did not significantly influence the number of Extension meetings attended.

Source of Income and Number Extension Meetings Where Swine Production Was Discussed

The producers who gave farming as their major source of income attended an average 1.0 Extension meeting where swine production was discussed during the twelve month period prior to the interview. In comparison, those producers where major source of income was other than farming attended an average .3 Extension meeting where swine production was discussed. When tested by the F test these differences were not significant at the .05 level. Therefore, the producers' major source

TABLE II

RELATIONSHIP BETWEEN THE NUMBER OF EXTENSION
CONTACTS AND FEEDER PIG PRODUCERS'
GENERAL FARM SITUATION

General Farm Situation Variable	Mean Number of Extension Contacts in 1974				
	Extension Meetings	Swine Meetings	Office Visits	Telephone Calls	Farm Visits
<u>Source of Income</u>					
Farm (N = 17)	1.65	1.0	5.4	2.2	6.0
Other (N = 3)	1.00	.33	4.0	1.3	4.0
Total (N = 20)	1.55	.90	5.2	2.1	5.7
AMT. Variance	F = .603	F = 2.35	F = 1.26	F = .231	F = 1.24
	p > .05	p > .05	p > .05	p > .05	p > .05
<u>Farming Situation</u>					
Full Time (N = 8)	2.13	1.1	5.0	2.3	7.5
Part Time (N = 7)	1.14	.57	4.6	.86	4.1
Retired (N = 5)	1.20	1.0	6.0	3.4	5.0
Total (N = 20)	1.55	.90	5.2	2.1	5.7
AMT. Variance	F = 1.32	F = 1.20	F = .506	F = 1.33	F = 3.41
	p > .05	p > .05	p > .05	p > .05	p > .05
<u>Major Source of Farm Income</u>					
Feeder Pig (N = 18)	1.0	.75	5.8	2.1	4.9
Field Crops (N = 1)	2.1	1.0	4.8	2.2	6.5
Other (N = 1)	0.0	1.0	5.0	0.0	4.0
Total (N = 20)	1.55	.90	5.2	2.1	5.7
AMT. Variance	F = 2.74	F = .268	F = .472	F = .272	F = .864
	p > .05	p > .05	p > .05	p > .05	p > .05
<u>Plan to Increase Size of Operation</u>					
Yes (N = 3)	3.3	1.6	6.0	3.3	9.7
No (N = 17)	1.2	.76	5.0	1.8	5.0
Total (N = 20)	1.6	.90	5.2	2.1	5.7
AMT. Variance	F = 9.29	F = 4.83	F = .542	F = 0.76	F = 9.73
	p < .01	p < .05	p > .05	p > .05	p < .01

of income did not significantly influence the number of Extension meetings they attended where swine production was discussed.

Source of Income and Number of Visits
to Extension Office

The producers who gave farming as their major source of income made an average 5.4 visits to the Extension office during the twelve month period prior to the interview. In comparison, those producers whose major source of income was other than farming made an average 4.0 visits to the Extension office. When tested by the F test, these differences were not significant at the .05 level. Therefore, the producers' major source of income did not significantly influence the number of visits they made to the Extension office.

Source of Income and Number Telephone Calls
to Extension Office

The producers who gave farming as their major source of income made an average 2.2 telephone calls to the Extension office during the twelve month period prior to the interview. In comparison, those producers whose major source of income was other than farming made an average 1.3 telephone calls to the Extension office. When tested by the F test, these differences were not significant at the .05 level. Therefore, the producers' major source of income did not significantly influence the number of telephone calls they made to the Extension office.

Source of Income and Number
of Farm Visits Received

The producers who gave farming as their major source of income received an average 6.0 farm visits by Extension agents during the twelve

month period prior to the interview. In comparison, those producers whose major source of income was other than farming received an average 4.0 farm visits by Extension agents. When tested by the F test, these differences were not significant at the .05 level. Therefore, the producers' major source of income did not significantly influence the number of farm visits made by Extension agents to the producers' farm.

Farming Status and Number of Extension Meetings Attended

Table II also shows the relation between the number of Extension contacts and farming status. Eight of the twenty feeder pig producers (40 percent) gave full-time as their farming status. The producers who gave full-time as their farming status attended an average 2.1 Extension meetings during the twelve month period prior to the interview. In comparison, those producers who gave their farming status as part-time attended an average 1.1 Extension meetings. In further comparison, those producers who gave their farming status as retired attended an average 1.5 Extension meetings. When tested by the F test, these differences were not significant at the .05 level. Therefore, the producers' farming status did not significantly influence the number of Extension meetings they attended.

Farming Status and Number of Extension Meetings Where Swine Production Was Discussed

The producers who gave full-time as their farming status attended an average 1.1 Extension meetings where swine production was discussed

during the twelve month period prior to the interview. In comparison, those producers whose farming status was part-time attended an average .6 Extension meetings where swine production was discussed. In further comparison, the producers who gave their farming status as part-time attended an average 1.0 Extension meeting where swine production was discussed. When tested by the F test, these differences were not significant at the .05 level. Therefore, the producers' farming status did not significantly influence the number of Extension meetings they attended where swine production was discussed.

Farming Status and Number Visits to Extension Office

The producers who gave full-time as their farming status made an average 5.0 visits to the Extension office during the twelve month period prior to the interview. In comparison, those producers whose farming status was part-time made an average 4.6 visits to the Extension office. In further comparison, those producers who gave retired as their farming status made an average 6.0 visits to the Extension office. When tested by the F test, these differences were not significant at the .05 level. Although the producers who were in the retired status made more visits to the Extension office, the farming status of the producers did not significantly influence the number of visits they made to the Extension office.

Farming Status and Number Telephone Calls to the Extension Office

The producers who gave full-time as their farming status made an average 2.3 telephone calls to the Extension office during the twelve

month period prior to the interview. In comparison, those producers whose farming status was part-time made an average .8 telephone calls to the Extension office. In further comparison, those producers who gave retired as their farming status made an average 3.4 telephone calls to the Extension office. When tested using the F test, these differences were not significant at the .05 level. Therefore, the farming status of the producers did not significantly influence the number of telephone calls they made to the Extension office.

Farming Status and Number Farm Visits Received

The producers who gave their farming status as full-time received an average 7.5 farm visits from Extension agents during the twelve month period prior to the interview. In comparison, the producers who gave part-time as their farming status received an average 4.1 farm visits from Extension agents. In further comparison, those producers who gave their farming status as retired received an average 5.0 farm visits from Extension agents. When tested by the F test, these differences were not significant at the .05 level. Therefore, the farming status of the producers did not significantly influence the number of farm visits Extension agents made to the producers' farm.

Source of Major Farm Income and Number Extension Meetings Attended

Table II also shows the relation between the number of Extension contacts and the source of farm income. Eight of the 20 feeder pig producers (40 percent) gave feeder pigs as the major source of farm income. The producers who gave feeder pigs as the major source of farm

income attended an average 1.0 Extension meetings during the twelve month period prior to the interview. In comparison, those producers who gave their major source of farm income as field crops attended an average 2.1 Extension meetings. In further comparison, those producers whose major source of farm income was other than feeder pigs or field crops attended no Extension meetings. When tested by the F test, these differences were not significant at the .05 level. Therefore, the producers' major source of farm income did not significantly influence the number of Extension meetings they attended.

Source of Major Farm Income and Number of
Extension Meetings Where Swine
Production Was Discussed

The producers who gave feeder pigs as their major source of farm income attended an average .75 Extension meetings where swine production was discussed during the twelve month period prior to the interview. In comparison, those producers whose major source of farm income was field crops attended an average 1.0 Extension meetings where swine production was discussed. In further comparison, those producers whose major source of farm income was other than feeder pigs or field crops attended an average 1.0 Extension meeting where swine production was discussed. When tested by the F test, these differences were not significant at the .05 level. Although those producers whose major source of farm income was feeder pigs attended fewer Extension meetings where swine production was discussed than either of the other income sources, major sources of farm income were not significantly influenced

by the number of Extension meetings producers attended where swine production was discussed.

Source of Major Farm Income and Number of Office Visits

The producers who gave their major source of farm income as feeder pigs made an average 5.8 visits to the Extension office during the twelve month period prior to the interview. In comparison, those producers whose major source of farm income was field crops made an average 4.8 visits to the Extension office. In further comparison, those producers that receive the major source of their farm income from other than feeder pigs or field crops made an average of 5.0 visits to the Extension office. When tested by the F test, these differences were not significant at the .05 level. Therefore, the producers' major sources of farm income did not significantly influence the number of visits producers made to the Extension office.

Source of Major Farm Income and Number of Telephone Calls to the Extension Office

The producers who gave their major source of farm income as feeder pigs made an average 2.1 telephone calls to the Extension office during the twelve month period prior to the interview. In comparison, those producers whose major source of farm income was field crops made an average 2.2 telephone calls to the Extension office. In further comparison, those producers whose major farm income was other than feeder pigs or field crops made no telephone calls to the Extension office. When tested using the F test, these differences were not significant at

.05 level. Therefore, the producers' major source of farm income did not significantly influence the number of telephone calls they made to the Extension office.

Source of Major Farm Income and Number
of Farm Visits Received

The producers who gave their major source of farm income as feeder pigs received an average 4.9 farm visits by Extension agents during the twelve month period prior to the interview. In comparison, those producers whose major source of farm income was field crops received an average 6.5 farm visits by Extension agents. In further comparison, those producers whose major source of farm income was neither feeder pigs nor field crops received an average 4.0 farm visits by Extension agents. When tested by the F test, these differences were not significant at the .05 level. Therefore, the producers' source of major farm income did not significantly influence the number of farm visits they received from Extension agents.

Future Plans for Feeder Pig Production and
Number Extension Meetings Attended

Table II, page 17, also shows the relation between future plans for feeder pig production and the number of Extension contacts. Three of the twenty feeder pig producers (15 percent) indicated they planned to increase the size of their feeder pig operation. Producers who planned to increase the size of their feeder pig operation attended an average 3.3 Extension meetings during the twelve month period prior to the interview. In comparison, those producers who did not plan to increase

their feeder pig operation attended an average 1.2 Extension meetings. When tested by the F test, these differences were significant at the .01 level. Therefore, the number of Extension meetings attended was significantly influenced by whether or not the producers had plans to increase the size of his swine program. Producers who had plans to expand their operation attended more Extension meetings than those who were not expanding.

Future Plans for Feeder Pig Production and
Number Extension Meetings Attended Where
Swine Production Was Discussed

Producers who indicated plans to increase their feeder pig operation attended an average 1.6 Extension meetings where swine production was discussed during the twelve month period prior to the interview. In comparison, those producers who are not planning to increase their feeder pig operation attended an average .7 Extension meetings where swine production was discussed. When tested by the F test, these differences were significant at the .05 level. Therefore, producers' plans to increase feeder pig operation significantly influenced the number of Extension meetings they attended where swine production was discussed. Producers who planned to expand their feeder pig operation attended a significantly larger number of Extension meetings than did those who did not plan to increase the size of their feeder pig operation.

Future Plans for Feeder Pig Production
and Number of Office Visits Made

Producers who indicated plans to increase their feeder pig operation made an average 6.0 visits to the Extension office during the twelve

month period prior to the interview. In comparison, those producers who did not plan to increase their feeder pig operation made an average 5.0 visits to the Extension office. When tested by the F test, these differences were not significant at the .05 level. Therefore, producers' plans to increase feeder pig operation did not significantly influence the number of visits they made to the Extension office.

Future Plans for Feeder Pig Production
and Number Telephone Calls to
Extension Office

Producers who indicated plans to increase their feeder pig operation made an average 3.3 telephone calls to the Extension office during the twelve month period prior to the interview. In comparison, those producers who did not plan to increase their feeder pig operation made an average 1.8 telephone calls to the Extension office. When tested by the F test, these differences were not significant at the .05 level. Therefore, producers' plans to increase feeder pig operation did not significantly influence the number of telephone calls they made to the Extension office.

Future Plans for Feeder Pig Production
and Number Farm Visits Received

The producers who indicated they had plans to increase their feeder pig operation received an average 9.7 farm visits by Extension agents during the twelve month period prior to the interview. In comparison, those producers who did not plan to increase their feeder pigs received an average 5.0 visits by Extension agents. When tested by the F test, these differences were significant at the .01 level. Therefore,

producers' plans to increase feeder pig operation did significantly influence the number of farm visits they received from Extension agents. Those producers who were expanding their swine operation received a significantly larger number of visits than did those who did not have plans to expand.

III. RELATION BETWEEN EXTENSION CONTACTS AND FARROWING FACILITIES

This section presents data regarding the relationship between the number of contacts feeder pig producers had with Extension and their use of practices regarding the management of their farrowing facilities. The purpose of this analysis was to determine the influence of Extension contacts upon the producers' management of their farrowing facilities.

Type Flooring in Farrowing Houses and Number Extension Meetings Attended

Table III shows the relationship between the number of contacts producers had with Extension and their use of recommended practices regarding the management of their farrowing facilities. Twelve of the 20 feeder pig producers (60 percent) had dirt floors in their farrowing houses. The producers who had dirt floors in their farrowing houses attended an average 1.4 Extension meetings during the twelve month period prior to the interview. In comparison, those producers who had concrete floors in their farrowing houses attended an average 2.2 Extension meetings. In further comparison, those producers who had wood floors in their farrowing houses attended an average 1.0 Extension meetings. When tested by the F test, these differences were not significant at

TABLE III

RELATIONSHIP BETWEEN THE NUMBER OF EXTENSION
CONTACTS AND FEEDER PIG PRODUCERS'
FARROWING FACILITIES

Farrowing Facilities	Mean Number of Extension Contacts in 1974				
	Extension Meetings	Swine Meetings	Office Visits	Telephone Calls	Farm Visits
<u>Type Flooring in Farrowing House</u>					
Dirt (N = 12)	1.4	0.8	4.7	1.3	5.3
Concrete (N = 5)	2.2	1.2	5.6	2.2	7.6
Wood (N = 3)	1.0	1.0	6.7	4.7	4.3
Total (N = 20)	1.6	0.9	5.2	2.0	5.7
AMT. Variance	F = .924	F = 0.70	F = 1.36	F = 1.96	F = 1.67
	p > .05	p > .05	p > .05	p > .05	p > .05
<u>What Keeps Floor Dry</u>					
Straw (N = 15)	1.7	0.9	5.5	2.3	6.2
Sawdust (N = 3)	1.3	1.0	3.7	1.3	4.7
Nothing (N = 2)	.5	0.5	5.0	1.0	3.5
Total (N = 20)	1.6	0.9	5.2	2.9	5.7
AMT. Variance	F = .80	F = 0.33	F = 1.09	F = 0.30	F = 0.99
	p > .05	p > .05	p > .05	p > .05	p > .05
<u>Method Keep Sows From Mashing Pigs</u>					
Railings (N = 8)	2.8	1.4	5.1	2.9	6.1
Crate (N = 7)	1.0	0.7	5.4	1.9	6.6
Nothing (N = 5)	.4	0.4	5.0	1.0	3.8
Total (N = 20)	1.6	0.9	5.2	2.0	5.7
AMT. Variance	F = 13.5	F = 4.30	F = 0.06	F = 0.72	F = 1.58
	p < .01	p < .05	p > .05	p > .05	p > .05
<u>Type of Heat</u>					
Heat Bulbs (N = 18)	1.6	0.9	5.2	2.2	5.9
Nothing (N = 2)	.5	0.5	5.0	1.0	3.5
Total (N = 20)	1.6	0.9	5.2	2.0	5.7
AMT. Variance	F = 1.44	F = 0.67	F = 0.02	F = 0.31	F = 1.31
	p > .05	p > .05	p > .05	p > .05	p > .05
<u>Method Air Circulation</u>					
Fan (N = 3)	1.3	0.7	7.3	3.0	8.7
Nothing (N = 17)	1.6	0.9	4.8	1.9	5.2
Total (N = 20)	1.6	0.9	5.2	2.0	5.7
AMT. Variance	F = .091	F = 0.36	F = 4.72	F = 0.41	F = 4.39
	p > .05	p > .05	p < .05	p > .05	p < .05

the .05 level. Therefore, the type of floors producers had in their farrowing house did not significantly influence the number of Extension meetings attended.

Type of Flooring in Farrowing House and Number
of Extension Meetings Attended Where
Swine Production Was Discussed

The producers who had dirt floors in their farrowing house attended an average .8 Extension meetings where swine production was discussed. In comparison, those producers who had concrete floors in their farrowing house attended an average 1.2 Extension meetings where swine production was discussed. In further comparison, those producers who had wood floors in their farrowing house attended an average 1.0 Extension meetings where swine production was discussed. When tested by the F test, these differences were not significant at .05 level. Therefore, the type of floor producers had in their farrowing houses did not significantly influence the number of Extension meetings they attended where swine production was discussed.

Type Flooring in Farrowing House and Number
Office Visits to Extension Office

The producers who had dirt floors in their farrowing house made an average 4.7 visits to the Extension office during the twelve month period prior to the interview. In comparison, those producers who had concrete floors in their farrowing house made an average 5.6 visits to the Extension office. In further comparison, those producers who had wood floors in their farrowing house made an average 6.7 visits to the Extension office. When tested by the F test, these differences were not

significant at the .05 level. Therefore, the type of floor producers had in their farrowing houses did not significantly influence the number of visits to the Extension office.

Type Flooring in Farrowing House and Number Telephone Calls to Extension Office

The producers who had dirt floors in their farrowing houses made an average 1.3 telephone calls to the Extension office during the twelve month period prior to the interview. In comparison, those producers who had concrete floors in their farrowing houses made an average 2.2 telephone calls to the Extension office. In further comparison, those producers who had wood floors in their farrowing houses made an average 4.7 telephone calls to the Extension office. When tested by the F test, these differences were not significant at the .05 level. Therefore, the type of floor producers had in their farrowing houses did not significantly influence the number of telephone calls they made to the Extension office.

Type Flooring in Farrowing Houses and Number Farm Visits Received

The producers who had dirt floors in their farrowing houses received an average 5.3 farm visits from Extension agents during the twelve month period prior to the interview. In comparison, those producers who had concrete floors in their farrowing houses received an average 7.6 farm visits from Extension agents. In further comparison, those producers who had wood floors in their farrowing houses received an average 4.3 visits from Extension agents. When tested by the F test, these differences

were not significant at the .05 level. Therefore, the type of flooring producers had in their farrowing houses did not significantly influence the number of farm visits they received from Extension agents.

Type Material Used to Keep Farrowing House Floor
Dry and Number Extension Meetings Attended

Table III also shows the relation between the number of contacts producers had with Extension and the type of materials they used to keep the farrowing house floor dry. Fifteen of the 20 feeder pig producers (75 percent) used straw to keep the floor in their farrowing house dry. The producers who used straw to keep their farrowing house floor dry attended an average 1.7 Extension meetings during the twelve month period prior to the interview. In comparison, those producers who used sawdust to keep their farrowing house floor dry attended an average 1.3 Extension meetings. In further comparison, those producers who used nothing to keep their farrowing house floor dry attended an average .5 Extension meeting. When tested by the F test, these differences were not significant at the .05 level. Therefore, the materials producers used to keep their farrowing house floors dry did not significantly influence the number of Extension meetings they attended.

Type Material Used to Keep Farrowing House Floor
Dry Number Extension Meetings Attended
Where Swine Production Was Discussed

The producers who used straw to keep their farrowing house floor dry attended an average .9 Extension meetings where swine production was

discussed during the twelve month period prior to the interview. In comparison, those producers who used sawdust to keep their farrowing house floor dry attended an average 1.0 Extension meetings where swine production was discussed. In further comparison, those producers who used nothing to keep their farrowing house floor dry attended an average .5 Extension meetings where swine production was discussed. When tested by the F test, these differences were not significant at the .05 level. Therefore, the materials producers used to keep farrowing house floors dry did not significantly influence the number of Extension meetings they attended where swine production was discussed.

Type Material Used to Keep Farrowing House
Floors Dry and Number Visits
to the Extension Office

The producers who used straw to keep their farrowing house floor dry made an average 5.5 visits to the Extension office during the twelve month period prior to the interview. In comparison, those producers who used sawdust to keep their farrowing house floor dry made an average 3.7 visits to the Extension office. In further comparison, those producers who used nothing to keep their farrowing house floor dry made an average 5.0 visits to the Extension office. When tested by the F test, these differences were not significant at the .05 level. Therefore, the materials producers used to keep their farrowing house floors dry did not significantly influence the number visits they made to the Extension office.

Type Material Used to Keep Farrowing House Floor
Dry and Number Telephone Calls
to the Extension Office

The producers who used straw to keep their farrowing house floor dry made an average 2.3 telephone calls to the Extension office during the twelve month period prior to the interview. In comparison, those producers who used sawdust to keep their farrowing house floor dry made an average 1.3 telephone calls to the Extension office. In further comparison, those producers who used nothing to keep their farrowing house floor dry made an average 1.0 telephone calls to the Extension office. When tested by the F test, these differences were not significant at the .05 level. Therefore, the material producers used to keep farrowing house floors dry did not significantly influence the number of telephone calls they made to the Extension office.

Type Material Used to Keep Farrowing House Floor
Dry and Number Farm Visits Received

The producers who used straw to keep their farrowing house floor dry received an average 6.2 farm visits from Extension agents during the twelve month period prior to the interview. In comparison, those producers who used sawdust to keep their farrowing house floor dry received an average 4.7 farm visits from Extension agents. In further comparison, those producers who used nothing to keep their farrowing house floor dry received an average 3.5 farm visits from Extension agents. When tested by the F test, these differences were not significant at the .05 level. Therefore, the material producers used to keep farrowing house floors dry did not significantly influence the number of farm visits they received from Extension agents.

Equipment Used to Keep Sow From Mashing Pigs
and Number Extension Meetings Attended

Table III also shows the relation between the number of contacts producers had with Extension and equipment they used to keep sows from mashing pigs. Eight of the 20 feeder pig producers (40 percent) used side railings to protect pigs from mashing by the sow. The producers who used side railings attended an average 2.8 Extension meetings during the twelve month period prior to the interview. In comparison, those producers who used crates to protect pigs from mashing attended an average 1.0 Extension meetings. In further comparison, those producers who used nothing to protect pigs from mashing attended an average .4 Extension meetings. When tested by the F test, these differences were significant at the .01 level. Therefore, equipment producers used to protect pigs from mashing by sows was significantly influenced by the number of Extension meetings they attended. Producers who used railings to protect baby pigs from mashing attended significantly more Extension meetings than those who used crates or those who did not use anything.

Equipment Used to Keep Sows From Mashing Pigs
and Number Visits to the Extension Office

The producers who used side railings to protect pigs from mashing by the sow made an average 5.1 visits to the Extension office during the twelve month period prior to the interview. In comparison, those producers who used crates to protect pigs from mashing made an average 5.4 visits to the Extension office. In further comparison, those producers who used nothing to protect pigs from mashing made an average 5.0 visits to the Extension office. When tested by the F test, these

differences were not significant at the .05 level. Therefore, equipment producers used to protect pigs from mashing by sows was not significantly influenced by the number of visits they made to the Extension office.

Equipment Used to Keep Sows From Mashing and
Number Telephone Calls to Extension Office

The producers who used side railings to protect pigs from mashing by the sow made an average 2.9 telephone calls to the Extension office during the twelve month period prior to the interview. In comparison, those producers who used crates to protect pigs from mashing made an average 1.9 telephone calls to the Extension office. In further comparison, those producers who used nothing to protect pigs from mashing made an average 1.0 telephone calls to the Extension office. When tested by the F test, these differences were not significant at the .05 level. Therefore, equipment producers used to protect pigs from mashing by sows was not significantly influenced by the number of telephone calls they made to the Extension office.

Equipment Used to Keep Sows From Mashing Pigs
and Number Farm Visits Received

The producers who used side railings to protect pigs from mashing by the sow received an average 6.1 farm visits from Extension agents during the twelve month period prior to the interview. In comparison, those producers who used crates to protect pigs from mashing received an average 6.6 farm visits from Extension agents. In further comparison, those producers who used nothing to protect pigs from mashing received an average 3.8 farm visits from Extension agents. When tested by the

F test, these differences were not significant at the .05 level.

Therefore, the equipment producers used to protect pigs from mashing by sows was not significantly influenced by the number of farm visits they received from Extension agents.

Type Heat Used in Farrowing House and Number
of Extension Meetings Attended

Table III, page 28, also shows the relation between the number of contacts producers had with Extension and the type of heat they used in the farrowing house. Eighteen of the 20 feeder pig producers (90 percent) used heat bulbs in their farrowing house. The producers who used heat bulbs in their farrowing house attended an average 1.6 Extension meeting during the twelve month period prior to the interview. In comparison, those producers who used no heat in their farrowing house attended an average .5 Extension meetings. When tested by the F test, these differences were not significant at the .05 level. Therefore, the type of heat producers had in their farrowing houses was not significantly influenced by the number of Extension meetings they attended.

Type Heat Used in Farrowing House and Number
Extension Meetings Attended Where
Swine Production Was Discussed

The producers who used heat bulbs in their farrowing house attended an average .9 Extension meetings where swine production was discussed during the twelve month period prior to the interview. In comparison, those producers who used no heat in their farrowing house attended an average .5 Extension meetings where swine production was discussed. When tested by the F test, these differences were not significant at the .05

level. Therefore, the type of heat producers had in their farrowing houses was not significantly influenced by the number of Extension meetings they attended where swine production was discussed.

Type Heat in Farrowing House and Number
Office Visits to Extension Office

The producers who used heat bulbs in their farrowing house made an average 5.2 visits to the Extension office during the twelve month period prior to the interview. In comparison, those producers who used no heat in their farrowing house made an average 5.0 visits to the Extension office. When tested by the F test, these differences were not significant at the .05 level. Therefore, the type of heat producers used in their farrowing houses was not significantly influenced by the number of visits they made to the Extension office.

Type Heat Used in Farrowing House and Number
Telephone Calls to Extension Office

The producers who used heat bulbs in their farrowing house made an average 2.2 telephone calls to the Extension office during the twelve month period prior to the interview. In comparison, those producers who used no heat in their farrowing house made an average 1.0 telephone calls to the Extension office. When tested by the F test, these differences were not significant at the .05 level. Therefore, the type of heat producers used in their farrowing houses was not significantly influenced by the number of telephone calls they made to the Extension office.

Type Heat Used in Farrowing House and
Number Farm Visits Received

The producers who used heat bulbs in the farrowing house received an average 5.9 farm visits from Extension agents during the twelve month period prior to the interview. In comparison, those producers who used no heat in their farrowing house received an average 3.5 farm visits from Extension agents. When tested by the F test, these differences were not significant at the .05 level. Therefore, the type of heat producers used in their farrowing house was not significantly influenced by the number of farm visits they received from Extension agents.

Air Circulation in Farrowing Houses and
Number Extension Meetings Attended

Table III, page 28, also shows the relation between the number of contacts producers had with Extension and the type of equipment used to aid air circulation in their farrowing house. Three of the 20 feeder pig producers (15 percent) who used fans to aid air circulation in their farrowing house attended an average 1.3 Extension meetings during the twelve month period prior to the interview. In comparison, those producers who used nothing to circulate air in their farrowing house attended an average 1.6 Extension meetings. When tested by the F test, these differences were not significant at the .05 level. Therefore, methods producers used to aid air circulation in farrowing houses was not significantly influenced by the number of Extension meetings they attended.

Air Circulation in Farrowing Houses and Number
Extension Meetings Attended Where
Swine Production Was Discussed

The producers who used fans for air circulation in their farrowing house attended an average .7 Extension meetings where swine production was discussed during the twelve month period prior to the interview. In comparison, those producers who used nothing to circulate air in their farrowing house attended an average .9 Extension meetings where swine production was discussed. When tested by the F test, these differences were not significant at the .05 level. Therefore, methods of air circulation producers used in their farrowing houses was not significantly influenced by the number of Extension meetings they attended where swine production was discussed.

Air Circulation in Farrowing Houses and Number
Office Visits to Extension Office

The producers who used fans for air circulation in their farrowing houses made an average 7.3 visits to the Extension office during the twelve month period prior to the interview. In comparison, those producers who used nothing to circulate air in their farrowing house made an average 4.8 visits to the Extension office. When tested by the F test, these differences were significant at the .05 level. Therefore, methods of air circulation producers used was significantly influenced by the number of visits they made to the Extension office. Producers who used a fan to help circulate air in their farrowing houses made more visits to the Extension office than those who did not use fans.

Air Circulation in Farrowing Houses and Number
of Telephone Calls to Extension Office

The producers who used fans for air circulation in their farrowing house made an average 3.0 telephone calls to the Extension office during the twelve month period prior to the interview. In comparison, those producers who used nothing to circulate air in their farrowing house made an average 1.9 telephone calls to the Extension office. When tested by the F test, these differences were not significant at the .05 level. Therefore, the method of air circulation producers used was not significantly influenced by the number of telephone calls they made to the Extension office.

Air Circulation in Farrowing Houses and Number
of Farm Visits Received

The producers who used fans for air circulation in their farrowing houses received an average 8.7 farm visits from Extension agents during the twelve months period prior to the interview. In comparison, those producers who used nothing to circulate air in their farrowing house received an average 5.2 farm visits from Extension agents. When tested by the F test, these differences were significant at the .05 level. Therefore, the method of air circulation producers used was significantly influenced by the number of farm visits they received from Extension agents. Producers who used fans to aid air circulation received significantly more farm visits from Extension agents than did those who did not use any means to aid air circulation.

IV. RELATIONSHIP BETWEEN EXTENSION CONTACTS AND USE OF GENERAL SWINE MANAGEMENT PRACTICES BY FEEDER PIG PRODUCERS

This section presents data regarding the relationship between the number of contacts feeder pig producers had with Extension and the producers' use of general swine management practices. The purpose of this analysis was to determine the influence of Extension contacts upon the use of these practices by the producers.

Selection of Breeding Sows and Number of Extension Contacts

Table IV shows 16 of the 20 feeder pig producers (80 percent) used the recommended practice of herd sow selection either in part or in all their swine enterprises during the twelve month period prior to the interview. The feeder pig producers who used the recommended practice of selecting herd sows attended more Extension meetings and swine meetings, and received a larger number of farm visits from Extension agents than did those producers who were not using this practice. Producers who were not using this practice made more visits and telephone calls to the Extension office than those who were using the practice. However, when tested by the F test these differences were not significant at the .05 level. Therefore, contacts producers had with Extension agents did not significantly influence their use of the recommended practice regarding selection of herd sows.

TABLE IV

RELATIONSHIPS BETWEEN THE NUMBERS OF EXTENSION
CONTACTS AND USE OF GENERAL SWINE MANAGEMENT
PRACTICES BY FEEDER PIG PRODUCERS

Swine Management Practices	Mean Number of Extension Contacts in 1974				
	Extension Meetings	Swine Meetings	Office Visits	Telephone Calls	Farm Visits
<u>Selection of Breeding Sows</u>					
Never Used (N = 2)	1.0	1.0	7.5	6.0	4.0
Used in Past (N = 2)	1.5	0.5	4.0	2.0	5.5
Used on Part (N = 7)	1.7	1.0	4.3	2.1	6.0
Used on All (N = 9)	1.6	0.9	4.9	1.1	5.9
Total (N = 20)	1.6	0.9	5.2	2.0	5.7
AMT. Variance	F = .132 p > .05	F = 0.23 p > .05	F = 1.22 p > .05	F = 2.01 p > .05	F = 0.23 p > .05
<u>Selection of Herd Sires</u>					
Never Used (N = 2)	1.0	1.0	7.5	6.0	4.0
Used in Past (N = 2)	1.5	0.5	4.0	2.0	5.5
Used on Part (N = 5)	2.0	1.0	5.0	2.1	7.2
Used on All (N = 11)	1.5	0.9	5.0	1.1	5.4
Total (N = 20)	1.6	0.9	5.2	2.0	5.7
AMT. Variance	F = .294 p > .05	F = 0.22 p > .05	F = 1.16 p > .05	F = 2.28 p > .05	F = 0.70 p > .05
<u>Use of Crossbreeding Program</u>					
Never Used (N = 3)	1.0	1.0	6.0	5.0	4.0
Used in Past (N = 6)	1.7	0.8	4.5	1.5	5.5
Used on Part (N = 3)	1.7	1.0	7.3	2.0	8.3
Used on All (N = 8)	1.6	0.9	4.6	1.3	5.5
Total (N = 20)	1.6	0.9	5.2	2.0	5.7
AMT. Variance	F = .179 p > .05	F = 0.05 p > .05	F = 2.01 p > .05	F = 1.51 p > .05	F = 1.24 p > .05
<u>Vaccination for Leptospirosis</u>					
Never Used (N = 14)	1.4	0.9	5.2	2.0	5.0
Used in Past (N = 3)	2.6	1.3	4.0	1.0	6.0
Used on Part (N = 3)	1.0	0.3	6.3	3.3	8.7
Total (N = 20)	1.6	0.9	5.2	2.0	5.7
AMT. Variance	F = 1.46 p > .05	F = 1.58 p > .05	F = 1.00 p > .05	F = 0.52 p > .05	F = 2.28 p > .05

TABLE IV (continued)

Swine Management Practices	Mean Number of Extension Contacts in 1974				
	Extension Meetings	Swine Meetings	Office Visits	Telephone Calls	Farm Visits
<u>Bred Gilts at 8 Mos., and 250 lbs.</u>					
Used on Part (N = 13)	1.9	1.0	5.7	2.5	6.1
Used on All (N = 7)	.8	0.7	4.3	1.1	5.0
Total (N = 20)	1.6	0.9	5.2	2.0	5.7
AMT. Variance	F = 3.34	F = 0.70	F = 2.37	F = 1.18	F = 0.62
	p > .05	p > .05	p > .05	p > .05	p > .95
<u>Feeding Pregnant Sows off Pasture</u>					
Never Used (N = 4)	1.3	1.0	6.8	3.5	4.3
Used in Past (N = 6)	.5	0.3	4.2	1.3	4.8
Used on Part (N = 8)	2.4	1.2	5.4	2.1	7.3
Used on All (N = 2)	2.0	1.0	4.5	1.0	5.0
Total (N = 20)	1.6	0.9	5.2	2.0	5.7
AMT. Variance	F = 3.40	F = 2.31	F = 1.53	F = 0.56	F = 1.41
	p < .05	p > .05	p > .05	p > .05	p > .05
<u>Feeding Pregnant Sows on Pasture</u>					
Never Used (N = 4)	1.3	1.0	6.8	3.5	4.3
Used in Past (N = 7)	.85	0.4	4.0	1.4	5.1
Used on Part (N = 9)	2.0	1.1	5.5	2.0	6.8
Total (N = 20)	1.6	0.9	5.2	2.0	5.7
AMT. Variance	F = 2.80	F = 2.59	F = 1.92	F = 0.49	F = 0.82
	p > .05	p > .05	p > .05	p > .05	p > .05
<u>Adequate Farrowing Facilities</u>					
Never Used (N = 8)	1.3	0.9	5.4	2.8	4.3
Used in Past (N = 5)	2.2	1.0	4.8	1.2	6.6
Used on Part (N = 5)	1.6	1.0	5.8	2.0	7.6
Used on All (N = 2)	1.0	0.5	4.0	1.5	4.5
AMT. Variance	F = .623	F = 0.24	F = 0.42	F = 0.32	F = 1.91
	p > .05	p > .05	p > .05	p > .05	p > .05
<u>Other Hogs Kept Out of Farrowing House</u>					
Never Used (N = 2)	.5	0.5	5.0	1.0	.35
Used in Past (N = 1)	1.0	1.0	7.0	0.0	.30
Used on Part (N = 15)	1.9	1.0	5.2	2.3	6.2
Used on All (N = 2)	0.0	0.0	4.5	2.0	5.5
Total (N = 20)	1.6	0.9	5.2	2.0	5.7
AMT. Variance	F = 2.16	F = 1.69	F = 0.31	F = 0.30	F = 0.80
	p > .05	p > .05	p > .05	p > .05	p > .05

TABLE IV (continued)

Swine Management Practices	Mean Number of Extension Contacts in 1974				
	Extension Meetings	Swine Meetings	Office Visits	Telephone Calls	Farm Visits
<u>Worm Sows 3-14 Days Before Farrowing</u>					
Never Used (N = 10)	1.5	0.9	5.3	2.4	4.7
Used in Past (N = 4)	1.5	1.3	4.5	0.8	6.0
Used on Part (N = 4)	2.5	1.0	6.0	2.5	8.0
Used on All (N = 2)	0.0	0.0	4.5	2.0	5.5
Total (N = 20)	1.6	0.9	5.2	2.1	5.7
AMT. Variance	F = 1.83	F = 1.49	F = 0.41	F = 0.34	F = 1.33
	p > .05	p > .05	p > .05	p > .05	p > .05
<u>Sows in Farrowing House 3 Days Before Farrowing</u>					
Never Used (N = 2)	.5	0.5	5.0	1.0	3.5
Used in Past (N = 1)	1.0	1.0	7.0	0.0	3.0
Used on Part (N = 12)	1.8	1.0	5.1	2.5	5.8
Used on All (N = 5)	1.6	0.8	5.2	1.8	6.8
Total (N = 20)	1.6	0.9	5.2	2.1	5.7
AMT. Variance	F = .534	F = 0.28	F = 0.25	F = 0.31	F = 0.91
	p > .05	p > .05	p > .05	p > .05	p > .05
<u>Sows Cleaned Before Farrowing</u>					
Never Used (N = 19)	1.6	0.9	5.3	2.1	5.8
Used on Part (N = 1)	0.0	0.0	4.0	1.0	3.0
Total (N = 20)	1.6	0.9	5.2	2.1	5.2
AMT. Variance	F = 1.49	F = 1.71	F = 0.36	F = 0.14	F = 0.91
	p > .05	p > .05	p > .05	p > .05	p > .05
<u>Bulky Feed Supplied Before Farrowing</u>					
Never Used (N = 7)	1.0	0.7	5.4	2.4	4.3
Used in Past (N = 7)	1.9	1.0	4.6	1.4	5.9
Used on Part (N = 6)	1.8	1.0	5.6	2.3	7.2
Total (N = 20)	1.6	0.9	5.2	2.1	5.7
AMT. Variance	F = .933	F = 0.33	F = 0.51	F = 0.25	F = 1.75
	p > .05	p > .05	p > .05	p > .05	p > .05
<u>Care of Pigs at Birth</u>					
Never Used (N = 2)	2.0	1.0	8.5	3.0	9.0
Used in Past (N = 1)	0.0	0.0	5.0	2.0	4.0
Used on Part (N = 16)	1.6	0.9	4.7	2.0	5.4
Used on All (N = 1)	2.0	1.0	7.0	0.0	6.0
Total (N = 20)	1.6	0.9	5.2	2.1	5.7
AMT. Variance	F = .536	F = 0.51	F = 3.25	F = 0.23	F = 1.07
	p > .05	p > .05	p < .05	p > .05	p > .05

TABLE IV (continued)

Swine Management Practices	Mean Number of Extension Contacts in 1974				
	Extension Meetings	Swine Meetings	Office Visits	Telephone Calls	Farm Visits
<u>Increase Sow Feed During Nursing</u>					
Never Used (N = 7)	.86	0.7	4.7	1.1	4.7
Used in Past (N = 5)	2.6	1.0	4.0	1.8	6.2
Used on Part (N = 8)	1.5	1.0	6.4	3.0	6.2
Total (N = 20)	1.6	0.9	5.2	2.1	5.7
AMT. Variance	F = 3.14 p > .05	F = 0.33 p > .05	F = 2.95 p > .05	F = 0.87 p > .05	F = 0.60 p > .05
<u>Prevent Pig Anemia</u>					
Never Used (N = 7)	1.0	1.0	5.9	2.6	4.6
Used in Past (N = 4)	2.3	1.0	4.5	1.8	5.2
Used on Part (N = 8)	1.5	0.7	4.4	1.3	5.8
Used on All (N = 1)	3.0	1.0	10.0	6.0	15.0
Total (N = 20)	1.6	0.9	5.2	2.1	5.7
AMT. Variance	F = 1.23 p > .05	F = 0.16 p > .05	F = 4.08 p < .05	F = 1.02 p > .05	F = 8.38 p < .01
<u>Pigs on 18-20 Percent Creep Ration</u>					
Never Used (N = 1)	0.0	0.0	5.0	0.0	4.0
Used in Past (N = 1)	1.0	1.0	7.0	0.0	3.0
Used on Part (N = 13)	1.8	0.9	5.0	1.8	6.5
Used on All (N = 5)	1.4	1.0	5.4	3.4	4.4
Total (N = 20)	1.6	0.9	5.2	2.1	5.7
AMT. Variance	F = .622 p > .05	F = 0.52 p > .05	F = 0.29 p > .05	F = 0.77 p > .05	F = 1.13 p > .05
<u>Farrowing House Kept Clean, Dry, etc.</u>					
Never Used (N = 8)	1.8	1.1	5.5	2.5	5.4
Used in Past (N = 4)	2.3	0.8	5.5	2.8	8.0
Used on Part (N = 8)	1.0	0.8	4.8	1.3	4.9
Total (N = 20)	1.6	0.9	5.2	2.1	5.7
AMT. Variance	F = 1.41 p > .05	F = 0.62 p > .05	F = 0.30 p > .05	F = 0.30 p > .05	F = 1.78 p > .05
<u>Pigs Castrated Before Four (4) Weeks</u>					
Used on Part (N = 9)	1.6	1.1	5.6	2.6	5.9
Used on All (N = 11)	1.5	0.7	4.9	1.6	5.5
Total (N = 20)	1.6	0.9	5.2	2.1	5.7
AMT. Variance	F = .0003 p > .05	F = 1.44 p > .05	F = 0.49 p > .05	F = 0.54 p > .05	F = 0.06 p > .05

TABLE IV (continued)

Swine Management Practices	Mean Number of Extension Contacts in 1974				
	Extension Meetings	Swine Meetings	Office Visits	Telephone Calls	Farm Visits
<u>Farrowing House Cleaned After Sows Moved</u>					
Never Used (N = 17)	1.5	0.9	5.1	1.9	5.2
Used in Past (N = 2)	3.0	1.0	1.5	4.0	11.0
Used on All (N = 1)	0.0	0.0	4.0	1.0	3.0
Total (N = 20)	1.6	0.9	5.2	2.1	5.7
AMT. Variance	F = 2.17	F = 0.81	F = 0.58	F = 0.58	F = 6.26
	p > .05	p > .05	p > .05	p > .05	p < .01
<u>Wait 1 to 2 Weeks Before Using House Again</u>					
Never Used (N = 16)	1.6	0.9	5.1	2.0	5.4
Used in Past (N = 3)	2.0	1.0	6.0	2.7	8.3
Used on Part (N = 1)	0.0	0.0	4.0	1.0	3.0
Total (N = 20)	1.6	0.9	5.2	2.1	5.7
AMT. Variance	F = .855	F = 0.82	F = 0.39	F = 0.13	F = 1.97
	p > .05	p > .05	p > .05	p > .05	p > .05

Selection of Herd Sires and Number of Extension Contacts

Sixteen of the 20 feeder pig producers (80 percent) used the recommended practice of herd sire selection either in part or in all their swine enterprise during the twelve month period prior to the interview. The feeder pig producers who used the recommended practice of selecting herd sires attended more Extension meetings and swine meetings, and received a larger number of farm visits from Extension agents than did those producers who were not using this practice. Producers who were not using this practice made more visits and telephone calls to the Extension office than those who were using the practice. However, when tested by the F test these differences were not significant at the .05 level. Therefore, the number of contacts producers had with Extension did not significantly influence their use of the recommended practice of selecting herd sires.

Use of Crossbreeding Program and Number of Extension Contacts

Eleven of the 20 feeder pig producers (55 percent) used the recommended practice of crossbreeding either in part or in all their swine enterprise during the twelve month period prior to the interview. The feeder pig producers who used the recommended practice of crossbreeding attended more Extension meetings, swine meetings, made more visits to the Extension office, and received a larger number of farm visits from Extension agents than did those producers who were not using this practice. Producers who were not using this practice made more telephone calls to the Extension office than those who were using the practice.

However, when tested by the F test these differences were not significant at the .05 level. Therefore, the number of contacts producers had with Extension did not significantly influence their use of the recommended practice of crossbreeding.

Vaccination for Leptospirosis and Number of Extension Contacts

Three of the 20 feeder pig producers (15 percent) used the recommended practice of vaccinating for leptospirosis on part of their swine enterprises during the twelve month period prior to the interview. The feeder pig producers who used the recommended practice of vaccinating for leptospirosis made a larger number of telephone calls to the Extension office than did those producers who were not using this practice. Producers who were not using this practice attended more Extension meetings, swine meetings, made more visits to the Extension office, and received more farm visits from Extension agents than did those producers who were using the practice. However, when tested by the F test these differences were not significant at the .05 level. Therefore, Extension contacts did not significantly influence the use of the recommended practice of vaccinating for leptospirosis.

Breeding Gilts at Eight Months and 250 Pounds and Number of Extension Contacts

Twenty of the 20 feeder pig producers (100 percent) used the recommended practice of breeding gilts at eight months and 250 pounds either in part or in all their swine enterprises during the twelve month period prior to the interview. The 20 feeder pig producers attended

an average 1.6 Extension meetings, 0.9 Extension swine meetings, made an average 5.2 Extension office visits, 2.0 telephone calls and were visited an average 5.7 times by Extension agents. The test of significance of difference in the number of contacts producers made with Extension could not be tested since all producers were using this practice.

Feeding Pregnant Sows off Pasture and
Number of Extension Contacts

Ten of the 20 feeder pig producers (50 percent) used the recommended practice of feeding pregnant sows off pasture either in part or in all their swine enterprises during the twelve month period prior to the interview. The feeder pig producers who used the recommended practice of feeding pregnant sows off pasture attended more Extension meetings and swine meetings, and received a larger number of visits from Extension agents than did those producers who were not using this practice. Producers who were not using this practice made more visits and telephone calls to the Extension office than those who were using the practice. When tested by the F test, producers who used the practice of feeding pregnant sows off pasture attended significantly more Extension meetings than those who did not use this practice. Other types of Extension contacts did not significantly influence use of this practice.

Feeding Pregnant Sows on Pasture and
Number of Extension Contacts

Nine of the 20 feeder pig producers (45 percent) used the recommended practice of feeding pregnant sows on pasture during the twelve month

period prior to the interview. The feeder pig producers who used the recommended practice of feeding pregnant sows on pasture attended more Extension meetings and swine meetings and received a larger number of farm visits by Extension agents than did those producers who were not using this practice. Producers who were not using this practice made more visits and telephone calls to the Extension office than those who were using the practice. However, when tested by the F test these differences in the number of contacts producers had with Extension were not significant at the .05 level. Therefore, Extension contacts did not significantly influence producers to use the recommended practice of feeding pregnant sows on pasture.

Adequate Farrowing Facilities and Number of Extension Contacts

Seven of the 20 feeder pig producers (35 percent) used the recommended practice of having adequate farrowing facilities either in part or in all their swine enterprises during the twelve month period prior to the interview. The feeder pig producers who used the recommended practice of having adequate farrowing facilities received a larger number of farm visits by Extension agents than did those producers who were not using this practice. Producers who were not using this practice attended more Extension meetings, swine meetings and made more office visits and telephone calls to the Extension office than those who were using the practice. However, when tested by the F test these differences were not significant at the .05 level. Therefore, the number of contacts producers had with Extension did not significantly influence their use of the recommended practice of providing adequate farrowing facilities.

Keeping Other Hogs Out of Farrowing House
and Number of Extension Contacts

Seventeen of the 20 feeder pig producers (85 percent) used the recommended practice of keeping other hogs out of the farrowing house either in part or in all their swine enterprises during the twelve month period prior to the interview. The feeder pig producers who used the recommended practice of keeping other hogs out of the farrowing house attended more Extension meetings, made more telephone calls to the Extension office, and received a larger number of farm visits from Extension agents than did those producers who were not using this practice. Producers who were not using this practice made more visits to the Extension office than those who were using this practice. However, when tested by the F test these differences were not significant at the .05 level. Therefore, the number of contacts producers had with Extension did not significantly influence their use of the recommended practice of keeping other hogs out of the farrowing house.

Worm Sows 3-14 Days Before Farrowing and
Number of Extension Contacts

Six of the feeder pig producers (30 percent) used the recommended practice of worming sows 3-14 days before farrowing either in part or in all their swine enterprises during the twelve month period prior to the interview. The feeder pig producers who used the recommended practice of worming sows 3-14 days before farrowing made more visits and telephone calls to the Extension office and received a larger number of farm visits from Extension agents than did those producers who were not using this practice. Producers who were not using this practice

attended more Extension and swine meetings than those who were using this practice. However, when tested by the F test these differences were not significant at the .05 level. Therefore, the number of contacts producers had with Extension did not significantly influence their use of the recommended practice of worming sows 3-14 days before farrowing.

Sows in Farrowing House 3 Days Before Farrowing
and Number of Extension Contacts

Seventeen of the feeder pig producers (85 percent) used the recommended practice of putting sows in farrowing house 3 days before farrowing either in parts or in all their swine enterprises during the twelve month period prior to the interview. The feeder pig producers who used the recommended practice of putting sows in farrowing house 3 days before farrowing attended more Extension and swine meetings, made more telephone calls to the Extension office, and received a larger number of farm visits from Extension agents than did those producers who were not using this practice. Producers who were not using this practice made more visits to the Extension office than those who were using this practice. However, when tested by the F test these differences were not significant at the .05 level. Therefore, the number of contacts producers had with Extension did not significantly influence their use of the recommended practice of putting sows in farrowing house 3 days before farrowing.

Sows Cleaned Before Farrowing and
Number of Extension Contacts

One of the feeder pig producers (5 percent) used the recommended practice of cleaning sows before farrowing in part of his swine enterprise

during the twelve month period prior to the interview. The feeder pig producers who were not using the recommended practice of cleaning sows before farrowing attended more Extension and swine meetings, made more visits and telephone calls to the Extension office, and received a larger number of farm visits from Extension agents than the one producer who was using the practice. When tested by the F test, these differences were not significant at the .05 level. Therefore, the number of contacts producers had with Extension did not significantly influence their use of the recommended practice of cleaning sows before farrowing.

Bulky Feed Supplied Before Farrowing and
Number of Extension Contacts

Six of the feeder pig producers (30 percent) used the recommended practice of feeding sows bulky feed before farrowing in part of their swine enterprise during the twelve month period prior to the interview. The feeder pig producers who used the recommended practice of feeding sows bulky feed before farrowing attended a larger number of Extension meetings, swine meetings, visits and telephone calls to the Extension office, and received more farm visits from Extension agents than did those producers who were not using this practice. However, when tested by the F test these differences were not significant at the .05 level. ✓ - Therefore, the number of contacts producers had with Extension did not significantly influence their use of the recommended practice of feeding sows bulky feed before farrowing.

Care of Pigs at Birth and Number
of Extension Contacts

Seventeen of the feeder pig producers (85 percent) used the recommended practice of caring for pigs at birth in part of their swine

enterprise during the twelve month period prior to the interview. Producers who were not using this practice made more visits and more telephone calls to the Extension office than those who were using this practice. When tested by the F test, the number of office visits in relation to caring for pigs at birth was significant at the .05 level, but the other Extension contacts were not significant at the .05 level. Therefore, producers who made more visits to the Extension office were those who were not using the recommended practice of caring for pigs at birth.

Increase Sow Feed During Nursing and Number of Extension Contacts

Eight of the feeder pig producers (40 percent) used the recommended practice of increasing the sow's feed during nursing in part of their swine enterprise during the twelve month period prior to the interview. The feeder pig producers who used the recommended practice of increasing sow feed during nursing on part of their swine herd made more telephone calls and visits to the Extension office and received more farm visits from Extension agents than those producers who were not using this practice. However, when tested by the F test these differences were not significant at the .05 level. Therefore, the number of contacts producers had with Extension did not significantly influence their use of the recommended practice of increasing sow feed during nursing.

Prevent Pig Anemia and Number of Extension Contacts

Nine of the feeder pig producers (45 percent) used the recommended practice of preventing pig anemia either in part or in all their swine

enterprises during the twelve month period prior to the interview. The feeder pig producers who used the recommended practice of preventing pig anemia attended more Extension meetings, made more visits and telephone calls to the Extension office, and received a larger number of farm visits from Extension agents than did those producers who were not using this practice. When tested by the F test, the number of office visits made by the producers was significantly larger for those using the practice than those not using the practice of preventing pig anemia. Other types of Extension contacts were not significant at the .05 level.

Pigs on 18-20 Percent Creep Ration and
Number of Extension Contacts

Eighteen of the 20 feeder pig producers (90 percent) used the recommended practice of placing pigs on 18-20 percent creep ration either in part or in all their swine enterprises during the twelve month period prior to the interview. The feeder pig producers who used the recommended practice of placing pigs on 18-20 percent creep ration attended more Extension and swine meetings, made more telephone calls to the Extension office and received a larger number of farm visits by Extension agents than did those producers who were not using this practice. Producers who were not using this practice made more visits to the Extension office than did those producers who were using the practice. However, when tested by the F test these differences were not significant at the .05 level. Therefore, the number of contacts producers made with Extension did not significantly influence their use of the recommended practice of placing pigs on 18-20 percent creep ration.

Farrowing House Kept Clean, Dry, and
Number of Extension Contacts

Eight of the feeder pig producers (40 percent) used the recommended practice of keeping the farrowing house clean and dry on part of their swine enterprise during the twelve month period prior to the interview. The feeder pig producers who used the recommended practice of keeping farrowing house clean and dry attended an average 1.0 Extension meeting, 0.8 swine meetings, made an average 4.8 visits and 1.3 telephone calls to the Extension office, and received an average 4.9 farm visits by Extension agents. Producers who were not using this practice attended more Extension and swine meetings, made more visits and telephone calls to the Extension office, and received more farm visits from Extension agents than did those producers who were using the practice. However, when tested by the F test these differences were not significant at the .05 level. Therefore, the number of contacts producers had with Extension did not significantly influence their use of the recommended practice of keeping the farrowing house clean and dry.

Pigs Castrated Before 4 Weeks and
Number of Extension Contacts

All of the 20 feeder pig producers (100 percent) used the recommended practice of castrating pigs before 4 weeks of age either in part or in all their swine enterprise during the twelve month period prior to the interview. The 20 feeder pig producers attended an average 1.6 Extension meetings, 0.9 swine meetings, made an average 5.2 Extension office visits, 2.0 telephone calls and were visited an average 5.7 times by Extension agents. The test of significance of difference in the number

of Extension contacts would not be computed since all producers were using this practice.

Farrowing House Cleaned After Sows Moved
and Number of Extension Contacts

One of the feeder pig producers (5 percent) used the recommended practice of cleaning farrowing house after sows moved in all of his swine enterprise during the twelve month period prior to the interview. The feeder pig producers who were not presently using the recommended practice of cleaning farrowing house after sows moved attended more Extension and swine meetings, made more visits and telephone calls to the Extension office, and received a larger number of farm visits from Extension agents than the one producer who was using the practice. When tested by the F test, the producers who were not presently using the practice of cleaning the farrowing house after the sows were removed were receiving significantly more farm visits from agents than the producer who was using the practice.

Wait 1-2 Weeks Before Using Farrowing House
Again and Number of Extension Contacts

One of the feeder pig producers (5 percent) used the recommended practice of waiting 1-2 weeks before using farrowing house again in part of his swine enterprise during the twelve month period prior to the interview. The feeder pig producers who were not using the recommended practice of waiting 1-2 weeks before using the farrowing house again attended more Extension and swine meetings, made more visits and telephone calls to the Extension office, and received a larger

number of farm visits by Extension agents than the one producer who was using the practice. However, when tested by the F test these differences were not significant at the .05 level. Therefore, the number of contacts producers had with Extension did not significantly influence their use of the recommended practice of waiting 1-2 weeks before using the farrowing house again.

V. RELATIONSHIP BETWEEN THE NUMBER OF EXTENSION
CONTACTS AND NUMBER PIGS SOLD
PER GRADE EACH YEAR

The purpose of this section was to present data regarding the relationship between the number of contacts feeder pig producers had with Extension and the grade of pigs sold during each of the five years.

Average Number of Grade 1-2 Pigs Sold

Table V shows the relations between the number of grade 1-2 pigs sold during each of the five years and the number of contacts producers had with Extension (i.e., number meetings attended, number swine meetings attended, number of office visits made, number of telephone calls made, and number of farm visits received from an Extension agent). The number of grade 1-2 pigs sold was not significantly related to either total number of Extension meetings attended or number of swine meetings attended.

The number of office visits was significantly related to the number of grade 1-2 pigs sold in 1971. Producers who made more office visits in 1971 also sold a larger number of 1-2 pigs. Although not significant at the .05 level, the correlation coefficients were moderately high for the types of Extension contacts.

TABLE V
RELATIONSHIP BETWEEN THE NUMBER OF EXTENSION
CONTACTS AND NUMBER PIGS SOLD
PER GRADE PER YEAR

Number Pigs Sold Per Grade Per Year	Number and Type of Extension Contacts in 1974									
	Extension Meetings		Swine Meetings		Office Visits		Telephone Calls		Farm Visits	
	r*	P**	r	P	r	P	r	P	r	P
<u>Grade 1 & 2</u>										
1970	-.07	.38	.12	.31	.26	.13	.12	.31	.08	.37
1971	-.04	.43	-.02	.46	.60	.001 ^a	.45	.02 ^a	.34	.07
1972	-.17	.23	-.19	.21	.20	.20	.42	.03 ^a	.22	.18
1973	.13	.30	.01	.48	.10	.34	.03	.45	.34	.07
1974	.25	.14	.17	.24	.36	.06	.13	.30	.51	.01 ^a
<u>Grade 3</u>										
1970	.16	.25	.16	.25	.36	.06	.25	.15	.46	.02 ^a
1971	.19	.21	.14	.28	.44	.03 ^a	.31	.09	.26	.13
1972	.40	.04 ^a	.34	.07	.50	.01 ^a	.47	.01 ^a	.67	.001 ^a
1973	.28	.11	.12	.31	.58	.00 ^a	.42	.03 ^a	.75	.001 ^a
1974	.29	.11	.14	.27	.42	.03 ^a	.13	.30	.74	.001 ^a
<u>Grade 4</u>										
1970	.25	.14	.22	.17	.51	.01 ^a	.24	.15	.76	.001 ^a
1971	.15	.26	.30	.10	-.15	.26	-.17	.24	.24	.16
1972	.55	.001 ^a	.23	.16	.16	.25	.10	.33	.66	.001 ^a
1973	.56	.001 ^a	.33	.08	.42	.03 ^a	.18	.22	.85	.001 ^a
1974	.45	.03 ^a	.13	.29	-.03	.44	-.11	.32	.28	.12

TABLE V (continued)

Number Pigs Sold Per Grade Per Year	Extension Meetings		Swine Meetings		Office Visits		Telephone Calls		Farm Visits	
	r*	P**	r	P	r	P	r	P	r	P
<u>Grade Utility</u>										
1970	-.02	.47	.06	.40	.63	.001 ^a	.62	.001 ^a	.32	.09
1971	.06	.40	.06	.40	-.04	.43	-.08	.37	.08	.37
1972	.07	.38	.08	.36	-.13	.30	-.06	.41	.15	.26
1973	.26	.14	.03	.45	.56	.001 ^a	.34	.07	.76	.001 ^a
1974	—	—	—	—	—	—	—	—	—	—
<u>Total Pigs Sold</u>										
1970	.20	.20	.22	.18	.52	.01 ^a	.32	.08	.65	.001 ^a
1971	.20	.20	.24	.16	.44	.03 ^a	.30	.10	.40	.04 ^a
1972	.35	.06	.25	.14	.45	.02 ^a	.49	.01 ^a	.67	.001 ^a
1973	.33	.08	.14	.28	.48	.02 ^a	.31	.09	.76	.001 ^a
1974	.32	.98	.18	.22	.43	.03 ^a	.14	.28	.69	.001 ^a
<u>Average Grade ***</u>										
1970	.04	.43	-.16	.24	-.08	.36	-.004	.50	.10	.34
1971	.28	.11	.22	.18	-.35	.07	-.04	.43	.24	.16
1972	.47	.02 ^a	.20	.20	-.08	.38	-.22	.17	.26	.13
1973	.34	.07	.24	.15	.10	.34	.14	.28	.31	.09
1974	-.02	.46	-.22	.18	-.07	.39	-.12	.31	.00	.49

*r = the Pearson correlation coefficient

**P = probability level

a = significant relationship

***grade computed by multiplying a factor of 1.75 times the number of pigs in grade 1 and 2; 3.00 times the number of pigs in grade 3; 4 times the number of pigs in grade 4; and 5 times the number of pigs in grade utility; and summing over all grades and dividing by the total number of pigs graded.

For two of the five years (i.e., 1971 and 1972), the number of telephone calls made to the Extension office was significantly related ($r = .45$ and $.42$ respectively) to the number of grade 1-2 pigs sold. Producers who sold a larger number of grade 1-2 pigs in 1971 and 1972 also made more telephone calls to the Extension office.

Correlation between the number of farm visits received and the number of 1-2 pigs sold were generally high and achieved the .05 significance level for the year 1974. Producers who sold more 1-2 pigs also received more farm visits from an Extension agent.

The data indicated a definite trend toward increasing contacts with Extension as number of higher quality pigs sold also increased. Also, the more personal type of contacts with Extension were more highly related to the number of grade 1-2 pigs sold than were group type contacts.

Average Number of Grade 3 Pigs Sold

The number of grade 3 pigs sold was not significantly related to the total number of swine meetings attended. However, the number of Extension meetings attended was significantly related to the number of grade 3 pigs sold in 1972. Producers who attended more Extension meetings in 1972 also sold a larger number of grade 3 pigs. Other correlation coefficients between the number of Extension meetings attended and the number of grade 3 pigs sold were generally high but did not achieve the .05 significance level.

The number of office visits was significantly related to the number of grade 3 pigs sold in four of the five years. Producers who made more office visits also sold a larger number of grade 3 pigs.

For two of the five years (i.e., 1972 and 1973) the number of telephone calls made to the Extension office was significantly related ($r = .47$ and $.42$ respectively) to the number of grade 3 pigs sold. Producers who sold a larger number of grade 3 pigs in 1972 and 1973 also made more telephone calls to the Extension office.

Correlation between the number of farm visits received and number of grade 3 pigs sold was generally high and achieved .05 significance level for all years except 1971. Producers who sold more grade 3 pigs also received more farm visits from Extension agents.

The data indicated a trend toward increasing contacts with Extension as the number of grade 3 pigs sold increased. Also the more personal type of contact with Extension were more highly related to the number of grade 3 pigs sold than were group type contacts.

Average Number of Grade 4 Pigs Sold

The number of grade 4 pigs sold was not significantly related to the total number of swine meetings attended or the number of telephone calls to the Extension office. However, the number of Extension meetings attended was significantly related to the number of grade 4 pigs sold in 1972, 1973, and 1974. Producers who attended more Extension meetings in these years also sold a larger number of grade 4 pigs.

The number of visits to the Extension office was significantly related to the number of grade 4 pigs sold in 1970 and in 1973. Producers who made more office visits also sold a larger number of grade 4 pigs during these years. Other correlation coefficients between the number of office visits and the number of grade 4 pigs sold were moderately high but did not achieve the .05 significance level.

Correlation between the number of farm visits received and the number of grade 4 pigs sold was generally high and achieved .05 significance level in three of the five years. Producers who sold more grade 4 pigs also received more farm visits from Extension agents.

The data indicated a trend toward increasing contacts with Extension as the number of grade 4 pigs sold increased.

Average Number of Grade Utility Pigs Sold

The number of utility pigs sold was not significantly related to the total number of Extension meetings attended or the number of swine meetings attended. However, the number of visits to the Extension office was significantly related to the number of utility pigs sold in 1970 and 1973. Producers who made more visits to the Extension office in these years also sold a larger number of utility pigs.

The number of telephone calls to the Extension office was significantly related to the number of utility pigs sold only in 1970. Producers who made more telephone calls to the Extension office also sold a larger number of utility pigs. Other correlation coefficients between the number of telephone calls and the number of utility pigs sold did not achieve the .05 significance level.

Correlation between the number of farm visits received and the number of utility pigs sold was generally high but achieved the .05 significance level only in 1973. Producers who sold more utility pigs also received more farm visits from Extension agents. There were no utility pigs sold in 1974 by the producers.

The data indicated a weak trend toward increasing contacts with Extension as the number of utility pigs sold increased. Also the more

personal type of contact with Extension were more highly related to the number of utility pigs sold than were group type contacts.

Total Number Pigs Sold

The total number pigs sold was not significantly related to the total number of Extension meetings and swine meetings attended. However, the number of visits made by the producers to the Extension office was significantly related to the total number pigs sold in each of the five years. Producers who made more visits to the Extension office in these years also sold more pigs.

The number of telephone calls to the Extension office was significantly related to the total number of pigs sold only in 1972. Producers who made more telephone calls to the Extension office also sold more pigs. Other correlation coefficients between the number of telephone calls and the total number of pigs sold were moderately high but did not achieve the .05 significance level.

Correlation between the number of farm visits received from an Extension agent and the total number of pigs sold was generally high and achieved the .05 significance level in each of the five years. Producers who sold more total pigs also received more farm visits from Extension agents.

The data indicated a significant increase in the number of contacts with Extension as the total number of pigs sold increased. Also the more personal type of contact with Extension were more highly related to the total number pigs sold than were group type contacts.

Average Grade of Pigs Sold

The average grade of pigs sold was not significantly related to the total number of swine meetings attended, number of visits to the Extension office, number of telephone calls to the Extension office, or the number of farm visits received. The number of Extension meetings attended was significantly related ($r = .47$) to the average grade of pigs sold in one of the five years (i.e., 1972). Producers who attended more Extension meetings also sold a higher grade of pigs in 1972.

Overall, there was a moderately low relationship between the number of contacts producers had with Extension and the computed average grade of pigs sold from 1970 to 1974.

CHAPTER III

SUMMARY OF MAJOR FINDINGS

I. PURPOSES AND SPECIFIC OBJECTIVES

The purpose of this study was to determine the relationship between the number of contacts feeder pig producers had with Extension agents and their use of recommended swine management practices. Another related purpose was to determine the influence producers' contacts with Extension had upon the number and grade of feeder pigs they marketed.

Specific Objectives

The specific objectives of the study were as follows:

1. To determine the relationship between the number of contacts producers had with Extension and their general farm situation.
2. To determine the relationship between the number of contacts feeder pig producers had with Extension and the management of their swine farrowing facilities.
3. To determine the relationship between the number of contacts feeder pig producers had with Extension and their use of recommended swine management practices.
4. To determine the relationship between the number of contacts feeder pig producers had with Extension and the number and grade of feeder pigs they marketed.

This study was undertaken because of the importance of feeder pig production to increasing the income of feeder pig producers in

Haywood County. In order to achieve this goal it was felt that the quality of feeder pigs produced must be further improved through increased use of recommended swine management practices by the producers.

II. METHOD OF INVESTIGATION

Data for this study were obtained through a personal interview with each of the twenty (20) feeder pig producers in Haywood County, Tennessee. An interview schedule was developed to record information about each producer and his feeder pig operation. A data form was also developed and used to record the number and grade of pigs sold each year (i.e., 1970 through 1974) by each of the twenty (20) feeder pig producers. Each of the twenty (20) producers interviewed had at least five sows in production in 1975 and had sold pigs at the Brownsville feeder pig sale during each of the five years studied (1970-1974). They were selected from the county's 95 feeder pig producers. The remaining 75 feeder pig producers in Haywood County did not meet one or both of the above limitations.

III. METHOD OF ANALYSIS

The completed interview schedules and data forms were coded and responses were recorded on data sheets. Data were punched on data processing cards. Computations were made by the University of Tennessee Computing Center. Variables for the study were classified into two groups (dependent and independent). The analysis of variance F test was used to determine the strength of relationship between the dependent

and independent variables. F values which achieved the .05 probability level were accepted as indicating a significant relationship between dependent and independent variables. The Pearson "r" correlation coefficient was used to determine the strength of relationships between the quantitative dependent and independent variables.

IV. MAJOR FINDINGS

Changes in the Number and Grade of Feeder Pigs Sold by Twenty Haywood County Producers between 1970 and 1974

1. The total number and the average number of feeder pigs sold per year by the 20 producers increased slightly over the five year period. (Total number of pigs sold increased from 1,736 in 1970 to 1,974 in 1974 - average number increased from 86.5 to 98.7 pigs per producer over the five year period).

2. The quality of feeder pigs sold by the 20 producers increased between 1970 and 1974 from 5 percent of the pigs sold grading 1 and 2 in 1970 to 53 percent in 1974.

Relationship between Extension Contacts and General Farm Situation

1. The feeder pig producers whose major source of income came from the farm (i.e., 85 percent of the producers) had more contacts, but did not differ significantly from those whose major income was other than farming - regarding either the number of Extension meetings they attended (i.e., 1.65 vs. 1.0), number of swine meetings they attended (i.e., 1.0 vs. .33), number of visits they made to the

Extension office (i.e., 5.4 vs. 4.0), number of telephone calls they made to the Extension office (i.e., 2.2 vs. 1.3), or the number of farm visits producers received from Extension agents (6.0 vs. 4.0).

2. The feeder pig producers who were full time farmers, part time farmers, or retired farmers did not differ significantly as to the number of Extension meetings attended, swine meetings attended, visits to the Extension office, telephone calls to the Extension office, or number of farm visits received from Extension agents.

3. The feeder pig producers whose major source of farm income was feeder pig production, field crops, or other did not differ significantly regarding the number of Extension meetings attended, swine meetings attended, visits to the Extension office, telephone calls to the Extension office, or farm visits received from Extension agents.

4. The feeder pig producers who planned to increase the size of their feeder pig operation did not differ significantly from those who were not planning to increase their operation regarding the number of visits to the Extension office or the number of telephone calls to the Extension office.

5. The feeder pig producers who planned to increase the size of their feeder pig operation and those producers who did not plan to increase the size of their feeder pig operation were significantly different as to the number of Extension meetings and the number of swine meetings they attended. The producers who planned to increase the size of their feeder pig operation attended significantly more meetings than those producers who were not planning to increase the size of their feeder pig operation.

Relationship between Extension Contacts
and Farrowing Facilities

1. The feeder pig producers who had dirt floors, concrete floors, or wood floors in their farrowing houses did not differ significantly as to the number of Extension meetings attended, swine meetings attended, visits to the Extension office, telephone calls to the Extension office, or the number of farm visits received from Extension agents.

2. The feeder pig producers who used straw, sawdust, or nothing as bedding in their farrowing houses did not differ significantly as to the number of Extension meetings attended, swine meetings attended, visits to the Extension office, telephone calls to the Extension office, or the number of farm visits received from Extension agents.

3. The feeder pig producers who used railings, crates, or nothing to keep sows from mashing pigs were significantly different as to the number of Extension meetings they attended and the number of swine meetings they attended. The producers who used railings attended significantly more meetings than did those producers who used crates or those that did not use anything. However, they did not differ significantly in the number of visits to the Extension office, telephone calls to the Extension office, or the number of farm visits received from Extension agents.

4. The feeder pig producers who used heat bulbs did not differ significantly from those who did not use anything to heat their farrowing houses regarding the number of Extension meetings attended, swine meetings attended, visits to the Extension office, telephone calls to the Extension office, or the number of farm visits received from Extension agents.

5. The feeder pig producers who used fans did not differ significantly from those who did not use anything to circulate air in their farrowing houses as far as the number of Extension meetings attended, swine meetings attended, or the number of telephone calls they made to the Extension office. However, they did differ significantly regarding the number of visits they made to the Extension office and the number of farm visits they received from Extension agents. Those producers that used fans to circulate air in the farrowing house made 7.3 visits to the Extension office and received 8.7 farm visits from Extension agents while those producers that used nothing made 4.8 visits to the Extension office and received 5.2 farm visits from Extension agents.

Relationship between Extension Contacts and Use
Of General Swine Management Practices
by Feeder Pig Producers

1. The feeder pig producers who were using the recommended practice regarding the selection of breeding sows did not differ significantly from those who were not using this practice regarding the number of Extension meetings attended, swine meetings attended, visits to the Extension office, telephone calls to the Extension office, or the number of farm visits received from Extension agents.

2. The feeder pig producers who were using the recommended practice of herd sire selection did not differ significantly from those who were not using this as to the number of Extension meetings attended, swine meetings attended, visits to the Extension office, telephone calls to the Extension office, or the number of farm visits received from Extension agents.

3. The feeder pig producers who were using the recommended practice of crossbreeding and those who were not using this practice did not differ significantly regarding the number of Extension meetings attended, swine meetings attended, visits to the Extension office, telephone calls to the Extension office, or the number of farm visits received from Extension agents.

4. The feeder pig producers who were using the recommended practice of vaccinating for leptospirosis and those who were not using this practice did not differ significantly regarding the number of Extension meetings attended, swine meetings attended, visits to the Extension office, telephone calls to the Extension office, or the number of farm visits received from Extension agents.

5. All twenty of the feeder pig producers (100 percent) were using the recommended practice of breeding gilts at eight months of age and 250 pounds.

6. The feeder pig producers who were using the recommended practice of feeding pregnant sows off pasture and those who were not using this practice did not differ significantly as to the number of swine meetings attended, visits to the Extension office, telephone calls to the Extension office, or the number of farm visits received from Extension agents. However, they did differ significantly as to the number of Extension meetings attended. The producers using this practice attended a significantly larger number of Extension meetings than those producers not using this practice.

7. The feeder pig producers who were using the recommended practice of feeding pregnant sows on pasture and those who were not using this

practice did not differ significantly as to the number of Extension meetings attended, swine meetings attended, visits to the Extension office, telephone calls to the Extension office, or the number of farm visits they received from Extension agents.

8. The feeder pig producers who were using the recommended practice of adequate farrowing facilities and those who were not using this practice did not differ significantly as to the number of Extension meetings attended, swine meetings attended, visits to the Extension office, telephone calls to the Extension office, or the number of farm visits received from Extension agents.

9. The feeder pig producers who were using the recommended practice of keeping other hogs out of the farrowing house and those who were not using this practice did not differ significantly as to the number of Extension meetings attended, swine meetings attended, visits to the Extension office, telephone calls to the Extension office, or the number of farm visits they received from Extension agents.

10. The feeder pig producers who were using the recommended practice of worming sows 3-14 days before farrowing and those who were not using this practice did not differ significantly as to the number of Extension meetings attended, swine meetings attended, visits to the Extension office, telephone calls to the Extension office, or the number of visits they received from Extension agents.

11. The feeder pig producers who were using the recommended practice of putting sows in farrowing house three (3) days before farrowing and those who were not using the practice did not differ

significantly as to the number of Extension meetings attended, swine meetings attended, visits to the Extension office, telephone calls to the Extension office, or the number of farm visits received from Extension agents.

12. The one feeder pig producer who was using the recommended practice of cleaning sows before moving them to the farrowing house and those producers who were not using this practice did not differ significantly as to the number of Extension meetings attended, swine meetings attended, visits to the Extension office, telephone calls to the Extension office, or the number of farm visits received from Extension agents.

13. The feeder pig producers who were using the recommended practice of supplying sows with bulky feed before farrowing and those producers who were not using this practice did not differ significantly as to the number of Extension meetings attended, swine meetings attended, visits to the Extension office, telephone calls to the Extension office, or the number of farm visits received from Extension agents.

14. The feeder pig producers who were using the recommended practice of caring for pigs at birth and those producers who were not using this practice did not differ significantly as to the number of Extension meetings attended, swine meetings attended, telephone calls to the Extension office, or the number of farm visits received from Extension agents. However, they were significantly different as to the number of visits they made to the Extension office. The producers that were using this practice made significantly fewer visits to the Extension office than did those producers who were not using this practice.

15. The feeder pig producers who were using the recommended practice of increasing sow's feed during nursing and those producers who were not using this practice did not differ significantly as to the number of Extension meetings attended, swine meetings attended, visits to the Extension office, telephone calls to the Extension office, or the number of farm visits received from Extension agents.

16. The feeder pig producers who were using the recommended practice of preventing pig anemia and those producers who were not using this practice did not differ significantly as to the number of Extension meetings attended, swine meetings attended, or the number of telephone calls they made to the Extension office. However, they were significantly different as to the number of visits they made to the Extension office and also the number of farm visits received from Extension agents. The producers who were using this practice made a significantly larger number of visits to the Extension office and received a significantly larger number of farm visits from Extension agents than those producers who were not using this practice.

17. The feeder pig producers who were using the recommended practice of putting pigs on an 18 percent creep ration and those producers who were not using this practice did not differ significantly as to the number of Extension meetings attended, swine meetings attended, visits to the Extension office, telephone calls to the Extension office, or the number of farm visits they received from Extension agents.

18. The feeder pig producers who were using the recommended practice of keeping the farrowing house clean and dry and those producers

who were not using this practice did not differ significantly as to the number of Extension meetings attended, swine meetings attended, visits to the Extension office, telephone calls to the Extension office, or the number of farm visits they received from Extension agents.

19. All twenty feeder pig producers (100 percent) were using the recommended practice of castrating male pigs before four (4) weeks of age.

20. The one feeder pig producer who was using the recommended practice of cleaning the farrowing house after sows were moved and the 19 producers who were not using this practice did not differ significantly as to the number of Extension meetings attended, swine meetings attended, visits to the Extension office, or the number of telephone calls made to the Extension office. However, they did differ significantly as to the number of farm visits they received from Extension agents. The producer who was using this practice received a significantly larger number of farm visits from Extension agents than did those producers who were not using this practice.

21. The one feeder pig producer who was using the recommended practice of waiting 1-2 weeks before using farrowing house again and those producers who were not using this practice did not differ significantly as to the number of Extension meetings attended, visits to the Extension office, telephone calls to the Extension office, or the number of farm visits they received from Extension agents.

Relationship between the Number of Extension
Contacts in 1974 and the Number Pigs
Sold Per Grade Each Year

1. The number of grade 1 and 2 pigs sold during the five years (1970-1974) by the feeder pig producers was not significantly related to the number of Extension meetings attended, or to the number of swine meetings attended by the feeder pig producers. However, there was a significant positive relationship between the number of grade 1 and 2 pigs sold and the number of visits to the Extension office in 1971, the number of telephone calls to the Extension office in 1971 and 1972, and the number of farm visits received from Extension agents in 1974.

2. The number of grade 3 pigs sold during the five years (1970-1974) by the feeder pig producers was not significantly related to the number of swine meetings attended by the feeder pig producers. However, there was a significant positive relationship between the number of grade 3 pigs sold and meetings attended in 1972, the number of visits to the Extension office in all years except 1970, the number of telephone calls to the Extension office in 1972 and 1973, and the number of farm visits received from Extension agents in all years except 1971.

3. The number of grade 4 pigs sold during the five years (1970-1974) by the feeder pig producers was not significantly related to the number of swine meetings attended or to the number of telephone calls to the Extension office by the feeder pig producers. However, there was a significant positive relationship between the number of grade 4 pigs sold and the number of Extension meetings attended in three of the five

years (i.e., 1972 through 1974), the number of visits to the Extension office in 1970 and 1973, and the number of farm visits received from Extension agents in 1970, 1972, and 1973.

4. The number of grade utility pigs sold during the five years (1970-1974) by the feeder pig producers was not significantly related to the number of Extension meetings attended or to the number swine meetings attended by the feeder pig producers. However, there was a significant positive relationship between the number of grade utility pigs sold and the number of visits to the Extension office in 1970 and 1973, the number of telephone calls to the Extension office in 1970, and the number of farm visits received from Extension agents in 1973.

5. The total number of pigs sold during the five years (1970-1974) by the feeder pig producers was not significantly related to the number of Extension meetings attended or to the number of swine meetings attended by the feeder pig producers. However, there was a significant positive relationship between the total number of pigs sold and the number of visits to the Extension office in each of the five years, the number of telephone calls to the Extension office in 1972, and the number of farm visits received from Extension agents in all five years (1970-1974).

6. The average grade of pigs sold during the five years (1970-1974) by the feeder pig producers was not significantly related to the number of swine meetings attended, the number of visits to the Extension office, the number of telephone calls to the Extension office, or to the number of farm visits received from Extension agents by the feeder pig producers.

However, there was a significant positive relationship between the average grade of pigs sold and the number of Extension meetings attended by the feeder pig producers.

V. CONCLUSIONS

It can be concluded from the study that the change in the number and grade of feeder pigs sold by the producers was in the direction of improvement. The number of grade 1 and 2 pigs increased from 80 (5 percent of the pigs sold by the 20 producers) in 1970 to 1,045 (27 percent of the pigs sold) in 1974, while the number of grade 4 pigs decreased from 515 (30 percent of the pigs sold) to 54 (3 percent of the pigs sold) in 1974. The number of pigs sold per producer also increased from 1,736 (86.5 per producer) in 1970 to 1,974 (98.7 per producer) in 1974.

The feeder pig producers' general farm situation did not significantly influence the number of contacts producers had with Extension except the variable of "planning to increase size of operation." Producers who planned to expand the size of their feeder pig operation attended a significantly larger number of Extension meetings and received significantly more visits from Extension agents than did the other producers.

The number of contacts feeder pig producers had with Extension did significantly influence their use of two of the five recommended practices regarding management of their farrowing facilities. Producers who were using railings to protect baby pigs attended a significantly larger

number of Extension meetings and more Extension swine meetings than did producers who were not using railings to protect baby pigs. Producers who were using fans to aid air circulation in their farrowing house were visited a significantly larger number of times by Extension agents and they also made significantly more visits to the Extension office than did producers who were not using this recommended practice.

The number of contacts producers had with Extension was significantly related to their use of five of the 21 recommended swine production practices studied. Producers who were using the recommended practices had made a significantly larger number of contacts with Extension than did producers who were not using the practices. In almost all of the remaining variables those producers that were using the practices had made a larger number of contacts with Extension than those producers not using the practice. However, due perhaps to the small number of producers included in the study, these differences did not achieve the .05 level of significance.

The number of contacts producers had with Extension tended to be significantly related to the number of pigs sold by the producers in each grade. Producers who sold a larger number of pigs also tended to have a larger number of contacts with Extension than did the producers who had a smaller operation. The number of office visits and the number of farm visits were more highly related to size of operations than were other types of contacts producers had with Extension.

VI. RECOMMENDATIONS

It is recommended that information in this study be used as a basis for planning a long range and short range feeder pig production program for Haywood County, paying particular attention to the kind of educational efforts aimed at influencing practice use by feeder pig producers.

It is further recommended that additional studies be conducted in other Tennessee counties to analyze the relationship between the number of Extension contacts swine producers make with Extension and their use of recommended swine production practices.

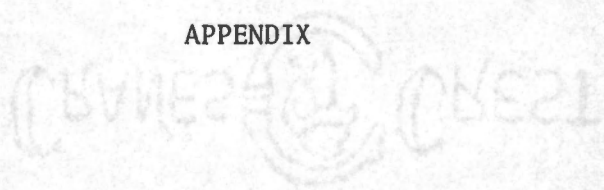


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APPENDIX



AGRICULTURAL EXTENSION SERVICE

UNIVERSITY OF TENNESSEE

HAYWOOD COUNTY SWINE SURVEY

Name of producer _____ Address _____

Date of interview _____ Place of interview _____

Name of interviewer _____

INTRODUCTION: I am helping with a survey of Haywood County swine producers. The purpose of the survey is to obtain information to use in planning programs helpful to swine producers. The answers you give will be added to those given by other swine producers who are being interviewed to get a more complete picture of the swine situation. Could I have a little of your time to go over these questions?

I. FEEDER PIG MARKETING

1. How long have you raised feeder pigs for market? Av. 11.2 years
2. Where do you market your feeder pigs? Brownsville
3. Did you raise feeder pigs for market before the Brownsville Feeder Pig Sale started? 8 yes 12 no.
4. How many years have you sold pigs at the Brownsville Feeder Pig Barn? (circle one) 1 2 3 4 5 6 7 8 9 10+ (Av. 9.1)
5. Do you sell all your feeder pigs through the Brownsville Feeder Pig Sale? 15 yes 5 no. 5a. If no, where? _____
5b. How many? _____.
6. How satisfied have you been with sales made at the Brownsville Feeder Pig Barn?
6 very satisfied _____ not very satisfied
14 satisfied _____ not satisfied at all
7. What, if anything, do you like most about the Brownsville Feeder Pig Market? _____.
8. What, if anything, do you like least about the Brownsville Pig Market? _____.

9. How satisfied are you in each of the following areas regarding the Brownsville Feeder Pig Market?

	very satisfied	satisfied	not very satisfied	not satisfied at all
a. <u>Weight of pigs</u>	5	15		
b. <u>Grading of pigs</u>	7	12	1	
c. <u>Sale procedures</u>	5	15		
d. <u>Price received</u>	9	11		
e. <u>Location of barn</u>	8	12		
f. <u>Unloading dock</u>	3	17		
g. <u>Grading area</u>	3	17		
h. <u>Penning arrangement</u>	3	17		
i. <u>Sale ring</u>	4	16		
j. <u>Other</u>				

II. BREEDING HERD

10. What breed(s) of sows do you have? _____
- 10a. Do you have any registered sows? 3 yes 17 no.
11. How many sows do you normally keep? Av. 11.2
- 11a. How many sows do you have now? Av. 8.5
- 11b. How many sows did you have at last farrowing? Av. 7.0
12. What breed(s) of boars do you have? _____
- 12a. Do you have any registered boars? 9 yes 11 no.
- 12b. How many breeding age boars do you normally keep? Av. 1.2
- 12c. How many breeding age boars do you have now? Av. 1.1

III. FARROWING AND LITTER SIZE

13. How many sows were bred to farrow once last year? Av. .8
- 13a. How many sows were bred to farrow twice last year? Av. 8.5
- 13b. How many litters (i.e., all sows and all farrowing) were farrowed last year? Av. 15.6
- 13c. What was the total number of live pigs born (all sows and all farrowing) last year? Av. 140
- 13d. How many pigs were raised to weaning last year? Av. 118

- 13e. How many feeder pigs were sold last year? Av. 98.8
- 13f. What is your average litter size at market time? Av. 9.1
14. What is the average age of your pigs when weaned? Av. 8.5
- 14a. What is the average weight of your pigs at 8 weeks of age? Av. 44.5
- 14b. What is the average weight of your pigs when sold? Av. 53 ✓
- 14c. What percent of your pigs are graded Number #1 & 2 when sold? Av. 66.3
- 14d. Do you feel the quality of your feeder pigs sold is improving or decreasing? yes (70 percent).

IV. FARROWING FACILITIES

15. What type of housing do you have for farrowing?

- 15a. What type of floor does your farrowing house have? _____
- 15b. What, if anything, do you do to keep the floors in your farrowing house dry? _____
- 15c. How do you control air circulation in your farrowing house? _____
- 15d. What, if anything do you do to keep sows from mashing young pigs? _____
- 15e. What type of heat, if any, is used in the farrowing house? _____

V. SWINE PRODUCTION PRACTICES

TO THE INTERVIEWER: The purpose of this section is to determine for each practice below whether the respondent:

- Used the practice on all of his swine herd in 1975
- Used the practice only on part of the swine herd in 1975
- Has used the practice in the past but not used in 1975
- Has never used the practice.

When interviewing do not ask practices as they are written below but, rather, ask questions related to the practice so as to assure yourself the extent to which each practice was or was not followed. Also select one time period (e.g. during 1975 or during last farrowing period) as the reference period for determining practice use - be consistent from one producer to the next.

Swine Production Practices	YES		NO	
	Used on All	Used on Part	Not Used Now	Never Have Used
1. Recommended procedures followed in placing herd sows.	9	7	2	2
2. Recommended procedures followed in placing herd sires.	11	5	2	2
3. Recommended crossbreeding program followed.	8	3	6	3
4. Sows vaccinated for leptospirosis twice each year.	0	3	3	14
5. Gilts bred after attaining approximately 8 months of age and a weight of about 250 lbs.	7	13	0	0
6. Recommended feeding practices followed for pregnant females off pasture.	2	8	6	4
7. Recommended feeding practices followed for pregnant females on pasture.	1	8	7	4
8. Farrowing facilities adequate in terms of recommended standards.	2	5	5	8
9. All hogs, other than those farrowing, kept out of the farrowing quarters.	2	15	1	2
10. Sows wormed 3-14 days before due to farrow.	2	4	4	10
11. Sows brought into the farrowing quarters at least 3 days before they were due to farrow.	5	12	1	2
12. Each sow carefully washed before bringing her into the clean farrowing quarters.	0	1	0	19
13. Concentrates reduced, or bulky feed supplied, when sows were placed in farrowing quarters continuing to 3 days after farrowing.	0	6	7	7
14. As pigs were born, were dried off, any membranes removed from nostrils and help provided in nursing.	0	17	1	2
15. After 3 post farrowing days on a bulky ration sows ration gradually increased to roughly 10 lbs. in 7-14 days.	0	8	5	7
16. Appropriate methods used to prevent pig anemia.	1	8	4	7

Swine Production Practices	YES		NO	
	Used on All	Used on Part	Not Used Now	Never Have Used
17. Tails on pigs docked and needle teeth clipped.	20	0	0	0
18. Pigs continued on an 18-20 percent creep feed during the period from 1-2 weeks of age through weaning.	5	13	1	1
19. Farrowing quarters kept well ventilated, clean and dry.	0	8	3	8
20. Pigs castrated before 4 weeks of age.	12	8	0	0
21. Farrowing house thoroughly cleaned and disinfected after sows were removed.	1	0	1	18
22. At least a 1-2 week period maintained between the time farrowing house was cleaned and disinfected and the re-use of the same facilities for farrowing.	1	0	3	16
23. Advice of a professional agriculture worker sought with regard to management of the herd.	4	14	2	0

VI. INFORMATION ABOUT PRODUCER AND HIS FARMING OPERATION

17. What is your major source of income? 16 farming 4 other.
18. Which of the following best describes your farm situation?
 a) 8 full time farmer, b) 7 part time farmer,
 c) 5 retired farmer.
19. What is your major source of farm income? a) 5 hogs (feeder pigs), b) _____ hogs (finishing), c) 12 field crops, d) _____ beef cattle, or e) 3 other.
20. How many acres of land do you own? Av. 129
- 20a. How many acres of land do you rent? Av. 61
- 20b. How many total acres (owned and rented) do you operate?
Av. 190
21. How many school grades did you complete? (circle one) 1 2 3
 4 5 6 7 8 9 10 11 12 13 14 15 16+ Av. 11
22. How old are you? Av. 52

VII. TYPES AND NUMBER OF EXTENSION CONTACTS

TO THE INTERVIEWER: The next few questions deal with the types and numbers of contacts the swine producer had with county Extension agents during the past 12 months. Actual numbers (i.e. zero through highest) should be recorded for each type of contact the producer made with Extension.

23. Number of contacts producer had with county Extension agents:
 - a. Number of Extension meetings attended: Av. 1.5 Extension meetings on all subjects.
 - b. Number of Extension meetings attended where swine production was discussed: Av. .9 Extension meetings on swine production.
 - c. Number of visits made to the county Extension office: 5.2 visits.
 - d. Number of telephone calls made to the county Extension office: Av. 2.0 telephone calls.
 - e. Number of farm visits received by the swine producer from all county Extension agents: Av. 5.6 visits from Extension agents.

VIII. FUTURE PLANS REGARDING FEEDER PIG PRODUCTION

24. Do you plan to continue to raise feeder pigs? yes no
 - 24a. If yes, do you plan to: a) increase the size of your feeder pig operation? b) decrease the size of your feeder pig operation? or c) maintain present size of your feeder pig operation?
25. What change, if any, made within the past five (5) years has been the most help to the improvement of your feeder pig program? _____
 - 25a. What future change, if any, do you feel is most needed in order to improve your feeder pig production program? _____

Note to interviewer: Make notes below regarding observations made during this visit.

VITA

Michael E. Gordon, son of Mr. and Mrs. Endol H. Gordon, was born in Camden, Tennessee, on March 29, 1949. He attended Benton County Schools and was graduated from Camden Central High School in 1967. He graduated from the University of Tennessee Martin, College of Agriculture in 1971 with a major in the area of Agricultural Education.

He was employed as assistant Extension Agent with the Agricultural Extension Service in Haywood County, Tennessee, in July, 1971. He married the former Bonnie Faye Walker in September, 1970.