To the Graduate Council:

I am submitting herewith a thesis written by George Osikorobia entitled "A Comparative Analysis of Recommended Production Practices Used by Tennessee Swine Producers Surveyed in 1979, Extension Contacts Reported and Review of Selected Characteristics." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Agricultural Extension.

Robert S. Dotson, Major Professor

We have read this thesis
and recommend its acceptance:

Accepted for the Council:

Vice Chancellor
Graduate Studies and Research

A

# A COMPARATIVE ANALYSIS OF RECOMMENDED PRODUCTION PRACTICE USED BY TENNESSEE SWINE PRODUCERS SURVEYED IN 1979, EXTENSION CONTACTS REPORTED AND REVIEW OF OF SELECTED CHARACTERISTICS

A Thesis

Presented for the

Master of Science

Degree

The University of Tennessee, Knoxville

George Osikorobia

June 1982

3060928

DEDICATION

Dedicated to Ivwromonena, Dorothy Osikorobia and my children, Augustin, Eric and Udemebraya and my family.

## ACKNOWLEDGMENTS

The author gratefully acknowledges the patient assistance and guidance given him by Dr. Robert S. Dotson, his graduate committee chairman. He also wishes to express his appreciation to the other members of his graduate committee, Dr. Cecil E. Carter, Jr., and Mr. James O'Neil for their assistance and helpful suggestions in reviewing this thesis.

Extreme gratitude is expressed to Dr. Cecil E. Carter, Jr., Associate Professor, Institute of Agriculture, The University of Tennessee, for help with print-outs; Mrs. Virginia Payne, office secretary, for typing this thesis, and the computing center of The University of Tennessee, Knoxville, for statistical analyses.

Appreciation is expressed by the author to The University of Tennessee, The Agricultural Extension Education Department, and Dr. Robert S. Dotson for granting assistance that helped make this thesis possible.

Very special appreciation is expressed to Nena, Dorothy and the children, Augustin, Eric and Udemebraye for their love and understanding during this study.

A final tribute is due his mother, Mrs. Uwevwirayovo Osikorobia, his father, Mr. Osikorobia Uguh, his junior brothers, Itoto, Wilson, Samuel and sister, Iboyi, and also to his uncle, Dr. Peter Ighofose for encouragement and financial support during studies in the United States.

CRANES CREST

ABSTRACT

The purpose of this study was to compare Extension survey data from 1,879 randomly selected swine producers in Tennessee counties where more Extension contacts were reported in 1979 with those where fewer contacts had occurred. It was proposed to see whether or not significant differences existed between the two groups regarding practice use. Also, characteristics of swine producers were reviewed.

Major findings regarding producer characteristics included the following: (1) Most (47%) producers farrowed an average of 17.9 sows twice in the previous 12-month period; (2) the mean number of pigs raised to weaning was 275; (3) about one-half each of the producers were full-time and part-time farmers; (4) most farmers (62%) had attended one or more Extension meetings for an average of 1.7; (5) most farmers (78%) made one or more visits to county Extension offices for a mean of 2.9; (6) most producers (75%) made one or more telephone calls to the Extension office for a mean of 3.7; (7) most producers (76%) received one or more visits from the county agent for a mean of 2.8; (8) most (94%) had one or more total contacts with Extension for a mean of 11.1 contacts; and (9) 9 of 14 research-verified swine practices studied were used by more than 50%.

Major findings from analyses comparing swine producers who had used one or more of 14 recommended practices from Higher Extension contact and Lower contact counties disclosed that more or significantly more of the former for all methods and totals had on the average: (1) Attended more Extension meetings; (2) made more Extension office

visits; (3) made more Extension telephone calls; (4) received more farm visits; and (5) had more total Extension contacts. Also, the higher the number of practices used, the greater the number of Extension contacts swine producers had reported.

Implications and recommendations also were included.

TABLE OF CONTENTS


| CHAPTER | | PAGE |
|---|---|---|
| I. | INTRODUCTION | 1 |
| | The Problem and Its Setting | 1 |
| | Need for the Study | 2 |
| | Purposes of Study | 2 |
| | Definition of Terms | 3 |
| II. | LITERATURE REVIEW | 4 |
| | Characteristics of Pig Producers | 4 |
| | Use of Recommended Practices by Swine Producers | 5 |
| | Factors That Influence Producers to Adopt Practices | 6 |
| III. | METHODS OF INVESTIGATION | 9 |
| | Methods of Analysis | 10 |
| | Limitations of the Study | 10 |
| IV. | FINDINGS OF THE STUDY | 11 |
| | Characteristics of Swine Producers and Their Farms | 12 |
| | Extension Contacts by Swine Producers | 12 |
| | Relations Between Swine Production Practices Used and Different Extension Contacts | 16 |
| | Relations Between Average Numbers of Extension Meetings Reported by Producers in Extension Contact Groupings and Use of Recommended Swine Practices | 28 |
| | Relations Between Average Number of Office Visits Reported by Producers in Extension Contact Groupings and Use of Recommended Swine Practices | 34 |
| | Relations Between Average Numbers of Telephone Calls to the Extension Office Reported by Producers in Extension Contact Groupings and Use of Recommended Swine Practices | 40 |
| | Relations Between Average Numbers of Extension Farm Visits Reported by Producers in Extension Contact Groupings and Use of Recommended Swine Practices | 46 |
| | Relations Between Average Numbers of Total Extension Contacts Reported by Producers in Extension Contact Groupings and Use of Recommended Swine Practices | 52 |
| | Relations Between Average Numbers of Total Extension Contacts Reported by Producers in Extension Contact Groupings and Use of Recommended Swine Practices | 58 |
| | Relations Between Average Numbers of Total Extension Contacts Reported by Producers in Extension Contact Groupings and Use of Recommended Swine Production Practices | 59 |

CHAPTER PAGE

V. SUMMARY AND IMPLICATIONS . . . . . 65
Summary 65
Major Findings 66
Implications 72
Recommendations 73

BIBLIOGRAPHY . . . . . 74

APPENDICES . . . . . 76
Appendix A 77
Appendix B 80

VITA . . . . . 88

GRANES CREST

LIST OF TABLES


| TABLE | | PAGE |
|---|---|---|
| I. | Characteristics of Tennessee Swine Producers and Their Farm Operations, 1979 . . . . . | 13 |
| II. | Extension Contacts by Tennessee Swine Producers, 1979 . . . . . | 15 |
| III. | Numbers and Percents of Swine Producers Using Recommended Practices in High and Low Extension Meeting County Categories and Totals . . . . . | 17 |
| IV. | Numbers and Percents of Swine Producers Using Recommended Practices in High and Low Office Visit County Categories and Totals . . . . . | 20 |
| V. | Numbers and Percents of Swine Producers Reporting Using Recommended Practices in High and Low Telephone Call County Categories and Totals . . . . . | 22 |
| VI. | Numbers and Percents of Swine Producers Using Recommended Practices in High and Low Farm Visit County Categories and Total . . . . . | 24 |
| VII. | Numbers and Percents of Swine Producers Using Recommended Practices in High and Low Total Extension Contact County Categories and Totals . . . . | 27 |
| VIII. | Average Numbers of Meetings Attended in the Last 12 Months by Swine Producers in High and Low Meeting Attendance Counties Comparing Those Using and Not Using Selected Swine Production Practices . . . . . | 29 |
| IX. | Average Numbers of Meetings Attended in the Last 12 Months by Swine Producers in High and Low Office Visit Counties Comparing Those Using and Not Using Selected Swine Production Practices . . . . . | 30 |
| X. | Average Numbers of Meetings Attended in the Last 12 Months by Swine Producers in High and Low Telephone Call Counties Comparing Those Using and Not Using Selected Swine Production Practices . . | 31 |
| XI. | Average Numbers of Meetings Attended in the Last 12 Months by Swine Producers in High and Low Farm Visit Counties Comparing Those Using and Not Using Selected Swine Production Practices . . . . . | 32 |

TABLE PAGE

XII. Average Numbers of Meetings Attended in the Last 12 Months by Swine Producers in High and Low Total Extension Contact Counties Comparing Those Using and Not Using Selected Swine Production Practices . . . . . 33

XIII. Average Numbers of Office Visits in the Last 12 Months by Swine Producers in High and Low Meeting Attendance Counties Comparing Those Using and Not Using Selected Swine Production Practices . . . . . 35

XIV. Average Numbers of Office Visits in the Last 12 Months by Swine Producers in High and Low Office Visits Counties Comparing Those Using and Not Using Selected Swine Production Practices . . . . . 36

XV. Average Numbers of Office Visits in the Last 12 Months by Swine Producers in High and Low Telephone Call Counties Comparing Those Using and Not Using Selected Swine Production Practices . . . . . 37

XVI. Average Numbers of Office Visits in the Last 12 Months by Swine Producers in High and Low Farm Visit Counties Comparing Those Using and Not Using Selected Swine Production Practices . . . . 38

XVII. Average Numbers of Office Visits in the Last 12 Months by Swine Producers in High and Low Total Extension Contact Counties Comparing Those Using and Not Using Selected Swine Production Practices . . . . . 39

XVIII. Average Number of Telephone Calls Made in the Last 12 Months by Swine Producers in High and Low Meetings Attended Counties Comparing Those Using and Not Using Selected Swine Production Practices . . . . . 41

XIX. Average Number of Telephone Calls Made in the Last 12 Months by Swine Producers in High and Low Office Visit Counties Comparing Those Using and Not Using Selected Swine Production Practices . . 42

TABLE PAGE

XX. Average Number of Telephone Calls Made in the Last 12 Months by Swine Producers in High and Low Telephone Call Counties Comparing Those Using and Not Using Selected Swine Production Practices . . . . . 43

XXI. Average Number of Telephone Calls Made in the Last 12 Months by Swine Producers in High and Low Farm Visit Counties Comparing Those Using and Not Using Selected Swine Production Practices . . . . . 44

XXII. Average Numbers of Telephone Calls Made in the Last 12 Months by Swine Producers in High and Low Total Extension Contact Counties Comparing Those Using and Not Using Selected Swine Production Practices . . . . . 45

XXIII. Average Number of Farm Visits Received in the Last 12 Months by Swine Producers in High and Low Meetings Attended Counties Comparing Those Using and Not Using Swine Production Practices . . . . . 47

XXIV. Average Number of Farm Visits Received in the Last 12 Months by Swine Producers in High and Low Office Visit Counties Comparing Those Using and Not Using Selected Swine Production Practices . . 48

XXV. Average Number of Farm Visits Received in the Last 12 Months by Swine Producers in High and Low Telephone Counties Comparing Those Using and Not Using Selected Swine Production Practices . . . . 49

XXVI. Average Number of Farm Visits Received in the Last 12 Months by Swine Producers in High and Low Farm Visit Counties Comparing Those Using and Not Using Selected Swine Production Practices . . . . 50

XXVII. Average Number of Farm Visits Received in the Last 12 Months by Swine Producers in High and Low Total Extension Contact Counties Comparing Those Using and Not Using Selected Swine Production Practices . . . . . 51

XXVIII. Average Number of Total Extension Contacts Made in the Last 12 Months by Swine Producers in High and Low Meeting Counties Comparing Those Using and Not Using Selected Swine Production Practices . . . . . 53

| TABLE | | PAGE |
|---|---|---|
| XXIX. | Average Number of Total Extension Contacts Made in the Last 12 Months by Swine Producers in High and Low Office Visit Counties Comparing Those Using and Not Using Selected Swine Production Practices . . . . . | 54 |
| XXX. | Average Number of Total Extension Contacts Made in the Last 12 Months by Swine Producers in High and Low Telephone Counties Comparing Those Using and Not Using Selected Swine Production Practices . . | 55 |
| XXXI. | Average Number of Total Extension Contacts Made in the Last 12 Months by Swine Producers in High and Low Farm Visit Counties Comparing Those Using and Not Using Selected Swine Production Practices . . | 56 |
| XXXII. | Average Number of Total Extension Contacts Made in the Last 12 Months by Swine Producers in High and Low Total Extension Contact Counties Comparing Those Using and Not Using Selected Swine Production Practices . . . . . | 57 |
| XXXIII. | Average Numbers of Total Extension Contacts of All Types Reported by Tennessee Swine Producers in High, Low and Total Meeting County Categories Using Different Numbers of Recommended Practices . . . | 60 |
| XXXIV. | Average Numbers of Total Extension Contacts of All Types Reported by Tennessee Swine Producers in High, Low and Total Office Visit County Categories Using Different Numbers of Recommended Practices . . . | 61 |
| XXXV. | Average Numbers of Total Extension Contacts of All Types Reported by Tennessee Swine Producers in High, Low and Total Telephone Call County Categories Using Different Numbers of Recommended Practices . . . . . | 62 |
| XXXVI. | Average Numbers of Total Extension Contacts of All Types Reported by Tennessee Swine Producers in High, Low and Total Farm Visit County Categories Using Different Numbers of Recommended Practices . . . | 63 |
| XXXVII. | Average Numbers of Total Extension Contacts of All Types Reported by Tennessee Swine Producers in High, Low and Total Extension Contact County Categories Using Different Numbers of Recommended Practices . . . . . | 64 |

# CHAPTER I

## INTRODUCTION

### I. THE PROBLEM AND ITS SETTING

Swine production has been a major source of income to Tennessee farmers throughout the state's long agricultural history. In 1840, in the first U.S. census, Tennessee was listed as one of the top swine producing states (1:651).* Although several states in the midwest have surpassed Tennessee in pork production, swine is an important part of Tennessee's agricultural industry, ranking fifth among agricultural enterprises with a cash receipt of $188,728,000 in 1979 and $167,329,000 in 1980.

In Tennessee, the Agricultural Extension Service has played an important role in the progress made by the swine industry (as evidenced by the hundreds of swine facilities across the state built according to The University of Tennessee Extension recommendations).

In recent years, many Tennessee producers have shifted their program emphasis from the production of market hogs to that of producing feeder pigs or to a farrow-to-finish type of operation. This offers the producer the profits of both the feeder pig producer and the farmer who feeds purchased pigs. Also, the farrow-to-finish producer benefits from increased efficiency found in pigs that do not have to cope with the stresses of shipping, different environments and "peck order"

---

*Numbers in parentheses refer to alphabetically listed items in the Bibliography; those after the colon refer to page numbers.

fighting that occurs when strange hogs are mixed. This increased efficiency is often worth 8 to 10 dollars per head (F).

This study was concerned with characteristics and practices of selected Tennessee pig producers having higher or lower average numbers of Extension contacts in 1979.

## II. NEED FOR THE STUDY

The Extension agents in the state are concerned with effectively serving their clientele. Like most government agencies, the Extension Service is striving for increased income and better living for farmers and homemakers.

Extension specialists felt that if the Extension swine program was to remain effective, certain questions should be answered.

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

What impact did Extension contacts have on pig producers?

## III. PURPOSES OF STUDY

Purposes of the study were to review characteristics of swine producers in Tennessee and to compare swine producers from Higher and Lower Extension contact counties as to their use of recommended practices and numbers and types of Extension contacts. Specific objectives included:

1. To review swine producer characteristics,
2. To identify and compare practices used and not used,

3. To comparatively study numbers of meetings,
4. To comparatively study numbers of office visits,
5. To comparatively study numbers of telephone calls,
6. To comparatively study numbers of farm visits,
7. To comparatively study numbers of total Extension contacts.

## IV. DEFINITION OF TERMS

Extension Contact: The number of Extension meetings attended, number of telephone calls, number of office visits made to the county Extension office, or the number of farm visits received by the swine producer during the past 12 months.

Practice: A research verified and commonly accepted procedure or task which, if performed correctly and on a regular basis, will increase or help ensure a desired outcome or return.

Swine Producers: These are individuals having at least five sows and making all or part of their farming income from the production of swine for sale. They constitute the target audience considered in this study. A stratified random sample was drawn in each county according to total numbers of pigs and slaughter hog producers.

## CHAPTER II

## LITERATURE REVIEW

A review of items available in the national agricultural data system disclosed no current or recent listing of research similar to the present study (i.e., studies of characteristics of swine producers, management practices used, and Extension contacts and methods comparing producers in Higher and Lower Extension contact county groupings).

Relevant studies completed in Tennessee were known to include those reviewed below.

### I. CHARACTERISTICS OF PIG PRODUCERS

A 1980 study conducted by James DeWayne Perry (6:3) was found to characterize 1,878 pig producers in Tennessee in terms of contacts they had had with Extension.

#### Number of Extension Meetings Attended

In his findings, 727 (38.7%) of the swine producers surveyed did not attend any Extension meetings. Thirty-nine percent of the producers attended one or two meetings, while 23.3% attended three or more meetings (6:16).

#### Number of Visits to Extension Office

In the Perry study, 416 (22.2%) of the swine producers did not make any visits to the Extension office, but over 51% made from

1 to 4 visits, while 22.5% made 5 to 12 visits and 3.7% made 13 or more visits to their county Extension agents (6:16).

Number of Telephone Calls to Extension Office

Over 25% of the pig producers did not make any telephone calls to the Extension office, while 48% or more of the producers made 1 to 4 phone calls. Another 22.4% made 5 to 12 phone calls, and 4.3% made 13 or more phone calls to their county Extension agents (6:16).

Number of Farm Visits Received from Extension Agents

Among the producers surveyed, 24% did not receive any farm visits from Extension agents, but 51% or more of the producers received 1 to 3 visits, 22% received 4 to 12 visits and 2.7% received 13 or more visits from their county Extension agents (6:19).

Total Number of Extension Contacts

Only 6.2% of the producers surveyed did not have any Extension contacts during the 12 month period and over 32% had 1 to 5 contacts, 46.5% had 6 to 20 contacts and 15.1% had over 20 contacts (6:19).

## II. USE OF RECOMMENDED PRACTICES BY SWINE PRODUCERS

Perry (6), in his findings, also identified the practices used by swine producers; among 1,839 producers reporting, 919 (49.9%) did not vaccinate for Leptospirosis, while 920 (50.1%) did vaccinate for Leptospirosis.

Six hundred eighty-three (37.2%) of producers vaccinated their sows for Erysipelas, while the other 62.8% did not use the practice. Other practices and percents using were as follows: (1) vaccination

for Atropic Rhinitis, 19.8%; (2) feed dry sows as recommended, 77.8%; (3) worm sows before farrowing, 78.6%; (4) treat sows for lice, 80.9%; (5) wash sows prior to farrowing, 27.3%; (6) increase feed to pregnant sows, 71.6%; (7) clip pig's needle teeth, 69.6%, (8) vaccinate pigs for Atropic Rhinitis, 16.4%; (9) feed nursing sows, 85%; (10) give pigs iron shots, 66.7%; (11) creep feed pigs, 90%; (12) clean farrowing quarters, 63.8%; and (13) treat weaned pigs for lice, 88%.

Thirty-eight (2.1%) of the producers did not use any of 14 recommended practices, while 2.9% of the producers used all 14. Over 60% of the producers used 8 to 14 of the practices, while only 29.7% used fewer than 7 (6:19, 23).

## III. FACTORS THAT INFLUENCE PRODUCERS TO ADOPT PRACTICES

Solomon Yabaya (11), in his study of Tennessee corn producers, found that producers who had more contacts with Extension had more acreage and yield for both grain and silage than those who had fewer contacts.

Perry (6), in his study of 1980 relationships between characteristics of Tennessee swine producers practices used and contacts, found that 49% of those who used the recommended practices and had more Extension contacts with their county Extension agents were full-time farmers and the other 51% were part-time.

Arnett (1), former Extension agent in Wilson County, Tennessee, found in his study of personal contacts in 1973 that the number of office visits was significantly related to the educational levels of 203 farmers who visited the county Extension office.

Wilson and Gallup (10) reported in their classic review of studies that the age of farmers was not significantly related to their use of recommended production practices.

Freeman (3), in his 1978 study of grade A dairy producers in Tennessee, found that the educational level of farm operators was significantly related to the number of office visits made to the Extension office over a 12-month period. The better-educated farmers had made significantly more office visits to the Extension office than those less well educated.

Jenkins (5) found in his 1977 study of soybean producers in Fayette County, Tennessee, that the producer's major occupation was not significantly related to the number of soybean meetings attended, office visits and telephone calls made to the Extension office, and farm visits received from Extension agents. However, the producer's major occupation was significantly related to the total number of Extension meetings attended. He also found that the major source of income was not significantly related to the number of Extension and soybean meetings attended, office visits and telephone calls made to the Extension office, or farm visits received from Extension agents.

In Haywood County, Tennessee, Gordon (3) found in his study of feeder pig producers that source of income, farming situation, and major source of farm income were not significantly related to the number of Extension contacts. However, the fact that producers planned to increase the size of their operation was significantly related to the number of Extension and swine meetings attended and telephone calls they made to the Extension office. Thus, the producers

who had plans to increase the size of their operations attended more Extension meetings and telephoned the Extension office more than those producers who were not expanding.

Gordon (4) indicated the number of contacts producers had with Extension in Haywood County was significantly related to their use of 5 of the 21 recommended swine production practices. The producers using the recommended practices made a significantly larger number of contacts with Extension than those producers not using these practices.

Carter's (2:31) prodigious studies of the Tennessee Information System (i.e., reported in 1981) disclosed that at least one group of recommended production practices used by selected Tennessee grade A dairymen (i.e., Factor One) was associated with numbers of Extension agent farm visits, Extension group meetings attended, visits to the Extension office and total Extension contacts reported by producers up to optimum levels found in his study. Additional contacts beyond optimum levels resulted in decreasing results ending in a plateauing effect for each method and the total.

# CHAPTER III

## METHODS OF INVESTIGATION

The population for this study was all the swine producers in Tennessee with five or more sows in counties where swine was a major enterprise. County Extension agents collected the data from swine producers randomly selected from the five districts across the state of Tennessee and returned the completed surveys to the Agricultural Extension Education office.

The Extension agents in 83 counties randomly selected on a stratified basis and interviewed 1,878 swine producers in Tennessee. At least some useable data, then, were available from 1,853 interviews. In District I, 529 swine producers in 18 counties were interviewed; in District II, 414 in 19 counties were interviewed; in District III, 208 in 13 counties were interviewed; in District IV, 341 in 15 counties were interviewed, and in District V, 350 in 18 counties were interviewed. (See Appendix A for list of counties by districts and numbers of producers.)

The survey instrument was developed by The University of Tennessee Agricultural Extension Specialist Staff in the Swine and Agricultural Extension Education sections (see Appendix B). The survey was conducted by agents in the participating counties through personal interview. The completed surveys were then returned to the Agricultural Extension Education office for analysis.

## I. METHODS OF ANALYSIS

The data were coded and punched on computer cards. Computations were made by The University of Tennessee Computing Center. The one-way analysis of variance F-test and the Chi Square test were used to determine the strength of the relationship between producers in counties in Higher and Lower Extension contact groups. The .05 probability level was accepted as significant.

## II. LIMITATIONS OF THE STUDY

This study was limited to data available in the 1979 University of Tennessee Agricultural Extension Service Swine Survey, conducted in the fall of 1979. The data were obtained by Extension agents who conducted personal interviews with the swine producers selected. The number of producers varied from county to county, depending on the number of swine producers in the county. Also, computer time available somewhat limited comparative output possibilities in the area of county characteristics.

## CHAPTER IV

## FINDINGS OF THE STUDY

Again, data for the study were responses from selected swine producers in Tennessee responding to a statewide survey in 1979. Tables and interpretations that follow are organized under nine major headings:

I. Characteristics of Swine Producers and Their Operations;

II. Extension Contacts by Swine Producers;

III. Relations Between Swine Production Practices Used and Different Extension Contacts;

IV. Relations Between Average Numbers of Extension Meetings Reported by Producers in Extension Contact Groupings and Use of Recommended Swine Practices;

V. Relations Between Average Numbers of Office Visits Reported by Producers in Extension Contact Groupings and Use of Recommended Swine Practices;

VI. Relations Between Average Numbers of Telephone Calls to the Extension Office Reported by Producers in Extension Contact Groupings and Use of Recommended Swine Practices;

VII. Relations Between Average Numbers of Extension Farm Visits Reported by Producers in Extension Contact Groupings and Use of Recommended Swine Practices;

VIII. Relations Between Average Numbers of Total Extension Contacts Reported by Producers in Contact Groupings and Use of Recommended Swine Practices;

IX. Relations Between Average Numbers of Total Extension Contacts Reported by Producers in Extension Contact Groupings and Use of Recommended Swine Production Practices.

## I. CHARACTERISTICS OF SWINE PRODUCERS AND THEIR FARMS

In his 1979 study of Tennessee swine producers, Perry (6:12-13) tabled information about the producers and their operations. Data from his study in Table I show that:

1. A total of 1,841 producers averaged 9.2 sows farrowing once, with a range from 0 to 350 farrowing once.

2. A total of 1,868 averaged 17.9 sows farrowing twice, with a range from 0 to 450 sows.

3. A total of 1,868 averaged 274.9 pigs raised to weaning with range from 0 to 8,500 pigs.

4. A total of 1,850 swine producers averaged 162.9 pigs marketed as feeders with a range of 0 to 7,150 pigs.

5. A total of 761 producers averaged 122.1 swine marketed for slaughter with a range from 0 to 7,400.

## II. EXTENSION CONTACTS BY SWINE PRODUCERS

As seen in Table II, Perry (6:16) characterized swine producers and their farms. Data in Table II show that:

1. A total of 1,877 producers averaged attending 1.7 Extension meetings, with a range from 0 to 650 attending meetings.

2. A total of 1,878 producers averaged making 2.9 Extension office visits, with a range from 0 to 98 office visits made.

TABLE I

CHARACTERISTICS OF TENNESSEE SWINE PRODUCERS AND THEIR FARM OPERATIONS, 1979*

| Name of Variable | Number of Producers | Percent of Producers |
|---|---|---|
| Number of sows farrowed once | | |
| Not any | 646 | 35.1 |
| 1-10 | 788 | 42.8 |
| 11-20 | 208 | 11.3 |
| 21-over | 199 | 10.8 |
| Total | 1841 | 100.0 |
| Mean = 9.2 Low = 0.0 High = 350.0 | | |
| Number of sows farrowed twice | | |
| Not any | 153 | 8.2 |
| 1-10 | 885 | 47.2 |
| 11-20 | 424 | 22.9 |
| 21-over | 406 | 21.7 |
| Total | 1868 | 100.0 |
| Mean = 17.9 Low = 0.0 High = 450.0 | | |
| Number of pigs raised to weaning | | |
| Not any | 52 | 2.8 |
| 1-60 | 202 | 10.8 |
| 61-120 | 484 | 25.9 |
| 121-180 | 430 | 23.0 |
| 181-500 | 465 | 24.9 |
| 501-1000 | 155 | 8.3 |
| 1001-over | 80 | 4.3 |
| Total | 1868 | 100.0 |
| Mean = 274.9 Low = 0.0 High = 8,500 | | |
| Number of pigs marketed as feeders | | |
| Not any | 294 | 15.9 |
| 1-60 | 300 | 16.3 |
| 61-120 | 483 | 26.1 |
| 121-200 | 378 | 20.3 |
| 201-500 | 291 | 15.7 |
| 501-1000 | 78 | 4.3 |
| 1001-over | 26 | 1.4 |
| Total | 1850 | 100.0 |
| Mean = 162.9 Low = 0.0 High = 7,150.0 | | |

TABLE I (continued)

| Name of Variable | Number of Producers | Percent of Producers |
|---|---|---|
| Number of pigs marketed for slaughter | | |
| 1-10 | 144 | 18.8 |
| 11-70 | 183 | 24.1 |
| 71-200 | 165 | 21.7 |
| 201-500 | 154 | 20.1 |
| 501-over | 115 | 15.3 |
| Total | 761 | 100.0 |
| Mean = 122.1 Low = 1.0 High = 7400.0 | | |
| Farming status | | |
| Full Time | 890 | 49.3 |
| Part Time | 916 | 50.7 |
| Total | 1806 | 100.0 |
| Feed slaughter hogs in buildings or on ground | | |
| Building | 274 | 42.7 |
| Ground | 367 | 57.3 |
| Total | 641 | 100.0 |
| Method of marketing hogs | | |
| Packer | 256 | 41.5 |
| Buying Station | 175 | 28.4 |
| Stockyard | 186 | 30.1 |
| Total | 617 | 100.0 |
| Sell by grade and yield | | |
| Did not sell to packers | 234 | 43.3 |
| Direct buying | 233 | 43.1 |
| Grade and Yield | 74 | 13.6 |
| Total | 541 | 100.0 |

*Source: James DeWayne Perry. "Relationships Between Characteristics of Tennessee Swine Producers, Numbers of Contacts They Had With County Agricultural Extension Agents and Numbers of Recommended Swine Production Practices Adopted." Unpublished M.S. degree thesis, Dept. of Agri. Ext. Ed., Univ. of TN., Knoxville, 1980, pp 12-13. By permission of the author.

# TABLE II

## EXTENSION CONTACTS BY TENNESSEE SWINE PRODUCERS, 1979*

| Name of Variable | Number of Producers | Percent of Producers |
|---|---|---|
| **Number of Extension Meetings attended** | | |
| Not any | 727 | 38.7 |
| 1-2 | 732 | 39.0 |
| 3-over | 418 | 22.3 |
| Total | 1877 | 100.0 |
| Mean = 1.7 Low = 0.0 High = 65.0 | | |
| **Number of visits to Extension Office** | | |
| Not any | 416 | 22.2 |
| 1-4 | 968 | 51.6 |
| 5-12 | 422 | 22.5 |
| 13-over | 72 | 3.7 |
| Total | 1878 | 100.0 |
| Mean = 2.9 Low = 0.0 High = 98.0 | | |
| **Number of telephone calls to Extension office** | | |
| Not any | 471 | 25.1 |
| 1-4 | 904 | 48.2 |
| 5-12 | 420 | 22.4 |
| 13-over | 80 | 4.3 |
| Total | 1875 | 100.0 |
| Mean = 3.7 Low = 0.0 High = 60.0 | | |
| **Number of farm visits received from Extension agents** | | |
| Not any | 450 | 24.0 |
| 1-3 | 961 | 51.3 |
| 4-12 | 413 | 22.0 |
| 13-over | 51 | 2.7 |
| Total | 1875 | 100.0 |
| Mean = 2.8 Low = 0.0 High = 31.0 | | |
| **Total number of Extension contacts** | | |
| Not any | 116 | 6.2 |
| 1-5 | 605 | 32.2 |
| 6-20 | 873 | 46.5 |
| 20-over | 285 | 15.1 |
| Total | 1879 | 100.0 |
| Mean = 11.1 Low = 0.0 High = 396.0 | | |

*Source: James Dewayne Perry. "Relationships Between Characteristics of Tennessee Swine Producers, Numbers of Contacts They Had With County Agricultural Extension Agents and Numbers of Recommended Swine Production Practices Adopted." Unpublished M.S. degree thesis, Dept. of Agri. Ext. Ed., Univ. of TN., Knoxville, 1980, pp. 17-18. By permission of the author.

3. A total of 1,875 producers averaged making 3.7 telephone calls to the Extension office, with a range from 3.0 to 60.0 telephone calls.

4. A total of 1,875 producers averaged receiving 2.8 farm visits from Extension agents, with a range from 0 to 31.0 farm visits.

5. A total of 1,879 producers averaged 11.1 total Extension contacts, with a range from 0 to 396 total Extension contacts.

## III. RELATIONS BETWEEN SWINE PRODUCTION PRACTICES USED AND DIFFERENT EXTENSION CONTACTS

### Low Versus High Extension Meeting County Producers

As shown in Table III, varying percentages of the 1,800 swine producers interviewed in 1979 had used one or more of the 14 recommended practices studied. For example, only 16.7% had used Practice #10, Vaccinated Pigs for Rhinitis, while 90.3% had followed Practice #13, Creep Fed Pigs. The average percentage using the 14 practices was 60.4--very close to the 60% "concern level" below which Extension agents seek to emphasize practices as "weak" ones needing educational attention.

Further reference to Table III allows comparison of relations between numbers and percents of swine producers using practices in two Extension meeting categories, namely: (1) High meeting county producers; those from counties reportedly having more than 1.659 total Extension meetings in agriculture in 1979; and (2) Low meeting county producers; those from counties where fewer than 1.659 total Extension meetings in agriculture in 1979 were reported. Higher percentages

## TABLE III

## NUMBERS AND PERCENTS OF SWINE PRODUCERS USING RECOMMENDED PRACTICES IN HIGH AND LOW EXTENSION MEETING COUNTY CATEGORIES AND TOTALS

| Practice | Total All County Producers | High Meeting Use County Producers | Low Meeting Use County Producers |
|---|---|---|---|
| | Percent Using | | |
| 1. Vaccinate for Leptospirosis | 49.8 (1816)* | 52.7 (586)a | 48.2 (1230) |
| 2. Vaccinate for Erysipelas | 37.8 (1813) | 42.6 (585)a | 35.5 (1228) |
| 3. Vaccinate for Atrophic Rhinitis | 20.2 (1814) | 25.6 (586)a | 17.7 (1228) |
| 4. Feed Dry Sows | 77.9 (1804) | 78.4 (582) | 77.7 (1222) |
| 5. Worm Sows Before Farrowing | 78.3 (1819) | 76.1 (586) | 79.4 (1233) |
| 6. Treat Sows for Lice | 80.8 (1816) | 75.2 (585)a | 83.4 (1231) |
| 7. Wash Sows Prior to Farrowing | 27.8 (1809) | 29.5 (584) | 26.9 (1225) |
| 8. Increase Feed to Pregnant Sows | 81.3 (1813) | 80.4 (583) | 81.7 (1230) |
| 9. Clip Pigs Needle Teeth | 69.5 (1812) | 78.1 (581)a | 65.5 (1231) |
| 10. Vaccinate Pigs for Rhinitis | 16.7 (1815) | 23.4 (585)a | 13.5 (1230) |
| 11. Feeding Nursing Sows | 85.0 (1801) | 86.9 (581) | 84.0 (1220) |
| 12. Give Pigs Iron Shots | 66.8 (1667) | 73.1 (554)a | 63.7 (1113) |
| 13. Creep Feed Pigs | 90.3 (1816) | 92.5 (584) | 89.3 (1232) |
| 14. Clean Farrow Quarters | 63.9 (1783) | 60.6 (576) | 65.5 (1207) |
| Total Average for 14 Practices | 60.4 (1800) | 62.5 (581)a | 59.1 (1219) |

*Numbers in parentheses are numbers of producers responding.
a Chi Square significant at the .01 level
b " " " " " .05 "

of the High meeting group than the Low were using 10 of the 14 practices studied, namely:

Practice #1, Vaccinate Sow Herd for Leptospirosis;

Practice #2, Vaccinate for Erysipelas;

Practice #3, Vaccinate for Atrophic Rhinitis;

Practice #4, Feed Dry Sows;

Practice #7, Wash Sows Prior to Farrowing;

Practice #9, Clip Pigs' Needle Teeth;

Practice #10, Vaccinate for Atrophic Rhinitis;

Practice #11, Feeding Nursing Sows;

Practice #12, Give Pigs Iron Shots;

Practice #13, Creep Feed Pigs.

Differences on 6 of the above-named practices (i.e., Practices #1, #2, #3, #9, #10, and #12) were significant and positive. This says that it was not by chance that the High tended to use these practices more than the Low.

At the same time, Higher percentages of Low meeting county producers than High used three practices, namely:

Practice #1, Vaccinate for Leptospirosis;

Practice #4, Feed Dry Sows;

Practice #6, Treat Sows for Lice.

Significantly more Low producers than High had treated sows for lice.

Also, a somewhat higher average percentage of the High than the Low office visit county producers had used all 14 practices. The difference, however, was not significant.

Low Versus High Extension Office Visit County Producers

As shown in Table IV, the average percentage using the 14 practices, according to office visit groupings, was 60.5--very close to the 60% Extension "concern level." Further reference to Table IV allows comparison of relations between numbers and percents of swine producers using practices in two Extension office visit categories, namely: (1) High office visit county producers, those from counties reportedly having more than 3,865 total Extension office visits in agriculture in 1979; and (2) Low office visit county producers, those from counties where fewer than 3,865 were reported. Higher percentages of the High office visit group than the Low were using 11 of the 14 practices studied, namely:

Practice #2, Vaccinate for Erysipelas;

Practice #3, Vaccinate for Atrophic Rhinitis;

Practice #5, Worm Sows Before Farrowing;

Practice #7, Wash Sows Prior to Farrowing;

Practice #8, Feed Pregnant Sows;

Practice #9, Clip Pigs' Needle Teeth;

Practice #10, Vaccinate Pigs for Rhinitis;

Practice #11, Feed Nursing Sows;

Practice #12, Give Pigs Iron Shots;

Practice #13, Creep Feed Pigs;

Practice #14, Clean Farrowing Quarters.

Differences on 6 of the above named practices (i.e., Practices #3, #9, #10, #11, #12, and #13) were significant and positive. This says that it was not by chance that the High tended to use these practices more than the Low.

TABLE IV

NUMBERS AND PERCENTS OF SWINE PRODUCERS USING RECOMMENDED PRACTICES IN HIGH AND LOW OFFICE VISIT COUNTY CATEGORIES AND TOTALS

| Practice | Total All County Producers | High Office Visit County Producers | Low Office Visit County Producers |
|---|---|---|---|
| | Percent Using | | |
| 1. Vaccinate for Leptospirosis | 49.8 (1814) | 48.5 (712) | 50.6 (1102) |
| 2. Vaccinated for Erysipelas | 37.8 (1811) | 37.9 (710) | 37.1 (1101) |
| 3. Vaccinate for Atrophic Rhinitis | 20.3 (1812) | 24.5 (711)a | 17.1 (1101) |
| 4. Feed Dry Sows | 77.9 (1802) | 76.9 (707) | 78.5 (1015) |
| 5. Worm Sows Before Farrowing | 78.4 (1817) | 79.2 (712) | 77.8 (1105) |
| 6. Treat Sows for Lice | 80.8 (1814) | 79.3 (711) | 81.8 (1103) |
| 7. Wash Sows Prior to Farrowing | 27.8 (1807) | 29.9 (709) | 26.4 (1098) |
| 8. Feed Pregnant Sows | 81.3 (1811) | 81.8 (707) | 81.1 (1104) |
| 9. Clip Pigs Needle Teeth | 69.5 (1810) | 73.4 (708)a | 67.1 (1102) |
| 10. Vaccinate Pigs for Rhinitis | 16.7 (1813) | 21.7 (711)a | 13.5 (1102) |
| 11. Feeding Nursing Sows | 85.0 (1799) | 87.5 (705)a | 83.4 (1094) |
| 12. Give Pigs Iron Shots | 66.8 (1665) | 69.4 (663)b | 65.2 (1002) |
| 13. Creep Feed Pigs | 90.3 (1814) | 93.1 (711)a | 88.5 (1103) |
| 14. Clean Farrowing Quarters | 64.0 (1781) | 65.9 (703) | 62.8 (1078) |
| Total Average for 14 Practices | 60.5 (1797.8) | 62.1 (705.7) | 59.35 (1092.1) |

*Numbers in parentheses are numbers of producers responding.
a Chi Square significant at the .01 level
b " " " " " .05 "

At the same time, higher percentage Low office visit county producers than High used four practices, namely:

Practice #5, Worm Sows Before Farrowing;

Practice #6, Treat Sows for Lice;

Practice #8, Increase Feed to Pregnant Sows;

Practice #14, Clean Farrowing Quarters.

Significantly more Low producers than high had treated sows for lice.

Also, a significantly higher average percentage of the High than the Low meeting county producers had used all 14 practices. Thus, producers from High meeting counties tended to use most and all of the practices studied.

Low Versus High Extension Telephone Call County Producers

As shown in Table V, the average percentage using the 14 practices, according to the telephone call groupings, was very close to the 60% Extension "concern level." Further reference to Table V allows comparison of relations between numbers and percents of swine producers using practices in two Extension telephone call categories, namely: (1) High telephone call county producers, those from counties where producers reportedly averaged more than 3,741 total Extension telephone calls in agriculture; and (2) Low county telephone call producers, those from counties where producers reported fewer than 3,741. Higher percentages of the High telephone call group than the Low were using 9 of the 14 practices studied, namely:

Practice #2, Vaccinate for Erysipelas;

Practice #3, Vaccinate for Atrophic Rhinitis;

Practice #7, Wash Sows Prior to Farrowing;

TABLE V

NUMBERS AND PERCENTS OF SWINE PRODUCERS REPORTING USING RECOMMENDED PRACTICES IN HIGH AND LOW TELEPHONE CALL COUNTY CATEGORIES AND TOTALS

| Practice | Total All County Producers | | High Telephone Call County Producers | | Low Telephone Call County Producers | |
|---|---|---|---|---|---|---|
| | Percent Using | | | | | |
| 1. Vaccinate for Leptospirosis | 49.8 | (1815) | 48.4 | (731) | 50.7 | (1084) |
| 2. Vaccinate for Erysipelas | 37.8 | (1812) | 40.5 | (731)b | 36.0 | (1081) |
| 3. Vaccinate for Atrophic Rhinitis | 20.2 | (1813) | 26.2 | (729)a | 16.2 | (1084) |
| 4. Feed Dry Sows | 77.9 | (1803) | 73.9 | (725)a | 80.5 | (1078) |
| 5. Worm Sows Before Farrowing | 78.3 | (1818) | 77.2 | (732) | 79.1 | (1086) |
| 6. Treat Sows for Lice | 80.8 | (1815) | 78.8 | (731) | 82.1 | (1084) |
| 7. Wash Sows Prior to Farrowing | 27.7 | (1808) | 31.0 | (729)a | 25.5 | (1079) |
| 8. Increase Feed to Pregnant Sows | 81.3 | (1812) | 77.2 | (728)a | 84.0 | (1084) |
| 9. Clip Pigs Needle Teeth | 69.6 | (1811) | 71.3 | (729) | 68.4 | (1082) |
| 10. Vaccinate Pigs for Rhinitis | 16.7 | (1814) | 20.7 | (731)a | 14.0 | (1083) |
| 11. Feeding Nursing Sows | 84.9 | (1800) | 86.5 | (725) | 83.9 | (1075) |
| 12. Give Pigs Iron Shots | 66.9 | (1666) | 68.1 | (697) | 65.9 | (969) |
| 13. Creep Feed Pigs | 90.3 | (1815) | 91.5 | (731) | 89.5 | (1084) |
| 14. Clean Farrowing Quarters | 63.9 | (1782) | 64.4 | (727) | 63.6 | (1055) |
| Total Average for 14 Practices | 58.0 | (1798.8) | 61.1 | (727) | 59.9 | (1072) |

*Numbers in parentheses are numbers of producers responding.

a Chi Square significant at the .01 level
b " " " " " .05 "

Practice #9, Clip Pigs' Needle Teeth;

Practice #10, Vaccinate Pigs for Rhinitis;

Practice #11, Feed Nursing Sows;

Practice #12, Give Pigs Iron Shots;

Practice #13, Creep Feed Pigs;

Practice #14, Clean Farrowing Quarters.

Differences on four the above-named practices (i.e., Practices #2, #3, #7, and #10) were significant and positive. This says that it was not by chance that the High tended to use these practices more than the Low.

At the same time, higher percentages of Low telephone call county producers than High used five practices, namely:

Practice #1, Vaccinate for Leptospirosis;

Practice #4, Feed Dry Sows;

Practice #5, Worm Sows Before Farrowing;

Practice #6, Treat Sows for Lice.

Significantly more Low producers than High had fed dry sows.

Also, a somewhat higher average percentage of the High than the Low telephone call county producers had used all 14 practices.

Low Versus High Extension Farm Visit County Producers

As shown in Table VI, the average percentage using the 14 practices, according to farm visit groupings, was 60.4, again very close to the 60% Extension "concern level." Further reference to Table VI allows comparison of relations between numbers and percents of swine producers using practices in two Extension farm visit categories, namely: (1) High farm visit county producers, those from counties

TABLE VI

NUMBERS AND PERCENTS OF SWINE PRODUCERS USING RECOMMENDED PRACTICES IN HIGH AND LOW FARM VISIT COUNTY CATEGORIES AND TOTALS

| Practice | Total All County Producers | High Farm Visit County Producers | Low Farm Visit County Producers |
|---|---|---|---|
| | Percent Using | | |
| 1. Vaccinate for Leptospirosis | 49.8 (1815) | 45.9 (700)a | 52.3 (1115) |
| 2. Vaccinate for Erysipelas | 37.8 (1812) | 36.5 (699) | 38.6 (1113) |
| 3. Vaccinate for Atrophic Rhinitis | 20.2 (1813) | 22.7 (699)a | 18.7 (1114) |
| 4. Feed Dry Sows | 77.9 (1803) | 72.0 (692)a | 81.5 (1111) |
| 5. Worm Sows Before Farrowing | 78.3 (1818) | 75.0 (700)a | 80.4 (1118) |
| 6. Treat Sows for Lice | 80.8 (1815) | 80.1 (700) | 81.2 (1115) |
| 7. Wash Sows Prior to Farrowing | 27.8 (1808) | 26.5 (697) | 28.5 (1111) |
| 8. Increase Feed to Pregnant Sows | 81.3 (1812) | 78.5 (697) | 83.0 (1115) |
| 9. Clip Pigs Needle Teeth | 69.5 (1811) | 70.4 (695) | 69.0 (1116) |
| 10. Vaccinate Pigs for Rhinitis | 16.7 (1814) | 18.9 (698)b | 15.3 (1116) |
| 11. Feeding Nursing Sows | 84.9 (1800) | 82.9 (691)b | 86.2 (1109) |
| 12. Give Pigs Iron Shots | 66.8 (1666) | 65.6 (648) | 67.6 (1018) |
| 13. Creep Feed Pigs | 90.3 (1815) | 91.1 (698) | 89.8 (1117) |
| 14. Clean Farrowing Quarters | 64.0 (1782) | 59.0 (693)a | 67.1 (1089) |
| Total Average for 14 Practices | 54.7 (1798.8) | 58.9 (690) | 61.4 (1026.4) |

*Numbers in parentheses are numbers of producers responding.
a Chi Square significant at the .01 level
b " " " " " .05 "

reportedly having more than 2,845 total Extension farm visits in agriculture in 1979; and (2) Low farm visit county producers, those from counties where fewer than 2,845 were reported. Higher percentages of the High farm visit group than the Low were using 4 of the 14 practices studied, namely:

Practice #3, Vaccinate for Atrophic Rhinitis;

Practice #9, Clip Pigs' Needle Teeth;

Practice #10, Vaccinate Pigs for Rhinitis;

Practice #13, Creep Feed Pigs.

Differences on two of the above-named practices (i.e., Practices #3 and #10) were significant and positive. This says that it was not by chance that the High tended to use these practices more than the Low.

At the same time, higher percentage of Low meeting county producers than High used 10 practices, namely:

Practice #1, Vaccinate for Leptospirosis;

Practice #2, Vaccinate for Erysipelas;

Practice #4, Feed Dry Sows;

Practice #5, Worm Sows Before Farrowing;

Practice #6, Treat Sows for Lice;

Practice #7, Wash Sows Prior to Farrowing;

Practice #8, Increase Feed to Pregnant Sows;

Practice #11, Feed Nursing Sows;

Practice #12, Give Pigs Iron Shots.

Significantly more Low producers than High had fed dry sows, wormed sows before farrowing, fed nursing sows and cleaned farrowing quarters.

Also, a slightly higher average number of the Low than the High farm visit county producers, on the average, had used all 14 practices.

Low Versus High Total Extension Contact County Producers

As shown in Table VII, the average percentage using the 14 practices was 60.5--very close to the 60% Extension "concern level." Further reference to Table VII allows comparison of relations between numbers and percents of swine producers using practices in two total Extension contact categories, namely: (1) High total Extension contact county producers, those from counties reportedly having more than 11,758 total Extension contacts in agriculture in 1979; and (2) Low total Extension contact county producers, those from counties where fewer than 11,758 were reported. Higher percentages of the High total Extension contact group than the Low were using 7 of the 14 practices studied, namely:

Practice #2, Vaccinate for Erysipelas;

Practice #3, Vaccinate for Atrophic Rhinitis;

Practice #9, Clip Pigs' Needle Teeth;

Practice #10, Vaccinate Pigs for Rhinitis;

Practice #11, Feed Nursing Sows;

Practice #13, Give Pigs Iron Shots;

Practice #13, Creep Feed Pigs.

Differences on two of the above-named practices (i.e., Practices #3 and #10) were significant and positive. This says that it was not by chance that the High tended to use these practices more than the Low.

## TABLE VII

## NUMBERS AND PERCENTS OF SWINE PRODUCERS USING RECOMMENDED PRACTICES IN HIGH AND LOW TOTAL EXTENSION CONTACT COUNTY CATEGORIES AND TOTALS

| Practices | Total All County Producers | High Meeting Use County Producers | Low Meeting Use County Producers |
|---|---|---|---|
| | Percent Using | | |
| 1. Vaccinate for Leptospirosis | 49.8 (1816) | 47.1 (595) | 51.7 (1221) |
| 2. Vaccinate for Erysipelas | 37.8 (1813) | 39.4 (594) | 37.0 (1219) |
| 3. Vaccinate for Atrophic Rhinitis | 20.2 (1814) | 24.9 (594)a | 18.0 (1220) |
| 4. Feed Dry Sows | 77.9 (1804) | 74.4 (590)a | 79.6 (1214) |
| 5. Worm Sows Before Farrowing | 78.3 (1819) | 75.8 (595) | 79.6 (1224) |
| 6. Treat Sows for Lice | 80.8 (1816) | 76.3 (594) | 83.0 (1222) |
| 7. Wash Sows Prior to Farrowing | 27.8 (1809) | 27.2 (592) | 28.0 (1217) |
| 8. Increase Feed to Pregnant Sows | 81.3 (1813) | 79.7 (590) | 82.1 (1223) |
| 9. Clip Pigs Needle Teeth | 69.5 (1812) | 71.7 (590) | 68.6 (1222) |
| 10. Vaccinate Pigs for Rhinitis | 16.7 (1815) | 20.9 (593)a | 14.6 (1222) |
| 11. Feeding Nursing Sows | 85.0 (1801) | 86.4 (588) | 84.3 (1213) |
| 12. Give Pigs Iron Shots | 66.8 (1667) | 67.2 (551) | 66.7 (1116) |
| 13. Creep Feed Pigs | 90.3 (1816) | 94.6 (593) | 88.2 (1223) |
| 14. Clean Farrowing Quarters | 63.9 (1783) | 59.8 (587)a | 66.0 (1196) |
| Total Average for 14 Practices | 92.4 (1799.8) | 60.5 (589) | 60.5 (1210.8) |

*Numbers in parentheses are numbers of producers responding.
a Chi Square significant at the .01 level
b " " " " " .05 "

At the same time, higher percentages of Low total Extension contacts county producers than High used the other seven practices, namely:

Practice #1, Vaccinate for Leptospirosis;

Practice #2, Vaccinate for Atrophic Rhinitis;

Practice #4, Feed Dry Sows;

Practice #5, Worm Sows Before Farrowing;

Practice #6, Treat Sows for Lice;

Practice #7, Wash Sows Prior to Farrowing;

Practice #8, Increase Feed to Pregnant Sows;

Practice #14, Clean Farrowing Quarters.

Significantly more Low producers than High had fed dry sows and cleaned farrowing quarters.

Also, almost the same average percentage of the High and the Low, on the average, had used all 14 practices.

## IV. RELATIONS BETWEEN AVERAGE NUMBERS OF EXTENSION MEETINGS REPORTED BY PRODUCERS IN EXTENSION CONTACT GROUPINGS AND USE OF RECOMMENDED SWINE PRACTICES

Analyses of variance were used to test the significance of differences in numbers of meetings attended by those using and not using practices in selected Extension contact groupings (see Tables VIII-XII). Those producers using each of 11 of the 14 practices (i.e., all practices except #6, #8 and #14) reported attending significantly more Extension meetings the previous year than did those not using the individual practices. The two Atrophic Rhinitis vaccination

## TABLE VIII

## AVERAGE NUMBERS OF MEETINGS ATTENDED IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW MEETING ATTENDANCE COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| | Total | | High Meetings | | Low Meetings | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Meetings | | | | | |
| I. Vaccinate for Leptospirosis | 2.1[a] ( 902)* | 1.3 ( 912) | 3.6 (207) | 2.1 (277) | 1.4 ( 595) | 0.9 ( 635) |
| 2. Vaccinate for Erysipelas | 2.2[a] ( 683) | 1.4 (1128) | 3.5 (247) | 2.3 (336) | 1.4 ( 436) | 1.0 ( 792) |
| 3. Vaccinate for Atrophic Rhinitis | 2.4[a] ( 365) | 1.5 (1447) | 3.7 (148) | 2.6 (436) | 1.5 ( 217) | 1.5 (1011) |
| 4. Feed Dry Sows | 1.7[a] (1403) | 1.4 ( 399) | 2.6 (454) | 2.9 (126) | 1.2 ( 949) | 0.9 ( 273) |
| 5. Worm Sows Before Farrowing | 1.8[a] ( 423) | 1.4 ( 394) | 3.0 (444) | 2.5 (140) | 1.2 ( 979) | 0.8 ( 254) |
| 6. Treat Sows for Lice | 1.7 (1465) | 1.5 ( 349) | 2.9 (438) | 2.7 (145) | 1.2 (1027) | 0.7 ( 204) |
| 7. Wash Sows Prior to Farrowing | 2.1[a] (1465) | 1.5 ( 344) | 3.4 (450) | 2.6 (141) | 1.5 (1015) | 1.0 ( 208) |
| 8. Increase Feed to Pregnant Sows | 1.7 (1472) | 1.5 ( 339) | 2.9 (407) | 2.9 (114) | 1.2 (1005) | 0.9 ( 225) |
| 9. Clip Pigs Needle Teeth | 1.9[a] (1257) | 1.2 ( 545) | 3.0 (451) | 2.3 (127) | 1.3 ( 805) | 0.9 ( 418) |
| 10. Vaccinate Pigs for Rhinitis | 2.6[a] ( 302) | 1.5 (1503) | 3.2 (136) | 2.5 (446) | 1.8 ( 166) | 1.1 (1056) |
| 11. Feeding Nursing Sows | 1.8[a] (1520) | 1.2 ( 271) | 2.9 (502) | 2.4 ( 76) | 1.2 (1017) | 0.8 ( 195) |
| 12. Give Pigs Iron Shots | 2.0[a] (1111) | 1.2 ( 546) | 3.2 (403) | 2.2 (148) | 1.4 ( 708) | 0.8 ( 397) |
| 13. Creep Feed Pigs | 1.8[a] (1635) | 1.0 ( 171) | 2.9 (538) | 2.3 ( 43) | 1.2 (1097) | 0.6 ( 127) |
| 14. Clean Farrow Quarters | 1.8 (1136) | 1.6 ( 636) | 3.0 (410) | 2.7 (226) | 1.2 ( 789) | 0.9 ( 410) |

*Numbers in parentheses are numbers of producers.

[a]F test was significant at the .01 level of confidence.

[b]F test was significant at the .05 level of confidence.

TABLE IX

AVERAGE NUMBERS OF MEETINGS ATTENDED IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW OFFICE VISIT COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| Practice | Total | | High Office Visit | | Low Office Visit | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | - - - - - - - - - - - - - - - - Mean No. Meetings - - - - - - - - - - - - - - - - | | | | | |
| 1. Vaccinate for Leptospirosis | 2.1[a] ( 902)* | 1.3 ( 911) | 3.0 (344) | 1.7 (367) | 1.6 (558) | 1.0 (367) |
| 2. Vaccinate for Erysipelas | 2.2[a] ( 683) | 1.4 (1127) | 3.0 (268) | 1.9 (268) | 1.7 (415) | 1.0 (686) |
| 3. Vaccinate for Atrophic Rhinitis | 2.4[a] ( 365) | 1.5 (1446) | 3.0 (173) | 2.1 (537) | 1.8 (172) | 1.2 (904) |
| 4. Feed Dry Sows | 1.7[a] (1403) | 1.4 ( 398) | 2.4 (543) | 2.0 (163) | 1.3 (860) | 1.0 (235) |
| 5. Worm Sows Before Farrowing | 1.8[a] (1423) | 1.4 ( 393) | 2.4 (563) | 2.0 (148) | 1.3 (860) | 1.1 (245) |
| 6. Treat Sows for Lice | 1.7 (1465) | 1.5 ( 348) | 2.3 (563) | 2.2 (147) | 1.3 (902) | 1.1 (201) |
| 7. Wash Sows Prior to Farrowing | 2.1[a] ( 501 | 1.5 (1306) | 2.7 ( 71) | 2.1 (411) | 1.7 (330) | 1.1 (805) |
| 8. Increase Feed to Pregnant Sows | 1.7 (1472) | 1.5 ( 338) | 2.2 (577) | 2.5 (129) | 1.3 (895) | 0.9 (204) |
| 9. Clip Pigs Needle Teeth | 1.9[a] (1255) | 1.2 ( 545) | 2.5 (517) | 1.8 (181) | 1.5 (738) | 0.9 (364) |
| 10. Vaccinate Pigs For Rhinitis | 2.6[a] ( 302) | 1.5 (1501) | 3.3 (153) | 2.0 (548) | 2.0 (149 | 1.2 (953) |
| 11. Feed Nursing Sows | 1.8[a] (1519) | 1.2 ( 270) | 2.4 (607) | 1.9 ( 88) | 1.4 (912) | 0.9 (182) |
| 12. Give Pigs Iron Shots | 2.0[a] (1110) | 1.2 ( 545) | 2.7 (458) | 1.7 (195) | 1.6 (652) | 0.9 (350) |
| 13. Creep Feed Pigs | 1.8[a] (1634) | 1.0 ( 170) | 2.4 (658) | 1.6 ( 43) | 1.3 (976) | 0.8 (127) |
| 14. Clean Farrow Quarters | 1.8 (1136) | 1.6 (635) | 2.3 (459) | 2.3 (234) | 1.4 (677) | 1.1 (401) |

*Numbers in parentheses are numbers of producers.

[a]F test was significant at the .01 level of confidence.

[b]F test was significant at the .05 level of confidence.

TABLE X

AVERAGE NUMBERS OF MEETINGS ATTENDED IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW TELEPHONE CALL COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| Practice | Total | | High Telephone Calls | | Low Telephone Calls | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Meetings | | | | | |
| 1. Vaccinate for Leptospirosis | 2.1[a] ( 902)* | 1.3 ( 911) | 2.7 (353) | 1.5 (377) | 1.7 (549) | 1.1 (534) |
| 2. Vaccinate for Erysipelas | 2.2[a] ( 683) | 1.4 (1127) | 2.6 (295) | 1.7 (435) | 1.7 (388) | 1.4 (692) |
| 3. Vaccinate for Atrophic Rhinitis | 2.4[a] ( 365) | 1.5 (1446) | 2.8 (190) | 1.9 (538) | 2.0 (175) | 1.3 (908) |
| 4. Feed Dry Sows | 1.7[a] (1402) | 1.4 ( 399) | 2.2 (535) | 1.7 (189) | 1.4 (867) | 1.2 (210) |
| 5. Worm Sows Before Farrowing | 1.8[a] (1422) | 1.4 ( 394) | 2.2 (864) | 1.8 (167) | 1.5 (858) | 1.2 (227) |
| 6. Treat Sows for Lice | 1.7 (1465) | 1.5 ( 348) | 2.2 (563) | 1.9 (147) | 1.4 (902) | 1.2 (201) |
| 7. Wash Sows Prior to Farrowing | 2.1[a] ( 500) | 1.5 (1306) | 2.3 (225) | 2.0 (593) | 1.9 (275) | 1.2 (803) |
| 8. Increase Feed to Pregnant Sows | 1.7 (1471) | 1.5 ( 334) | 2.1 (561) | 2.1 (166) | 1.4 (910) | 1.0 (173) |
| 9. Clip Pigs Needle Teeth | 1.9[a] (1256) | 1.2 ( 545) | 2.3 (517) | 1.5 (202) | 1.6 (739) | 1.0 (343) |
| 10. Vaccinate Pigs for Rhinitis | 2.6[a] ( 302) | 1.5 (1502) | 3.2 (150) | 1.8 (571) | 2.1 (152) | 1.3 (931) |
| 11. Feed Nursing Sows | 1.8[a] (1519) | 1.2 ( 271) | 2.2 (617) | 1.8 ( 95) | 1.5 (902) | 0.9 (173) |
| 12. Give Pigs Iron Shots | 2.0[a] (1111) | 1.2 (565) | 2.5 (473) | 1.5 (214) | 1.7 (638) | 1.0 (331) |
| 13. Creep Feed Pigs | 1.8[a] (1635) | 1.0 ( 170) | 2.2 (665) | 1.5 ( 56) | 1.5 (970) | 0.8 (114) |
| 14. Clean Farrow Quarters | 1.8 (1136) | 1.6 ( 636) | 2.1 (464) | 2.1 (253) | 1.5 (672) | 1.3 (383) |

*Numbers in parentheses are numbers of producers.

[a]F test was significant at the .01 level of confidence.

[b]F test was significant at the .05 level of confidence.

TABLE XI

AVERAGE NUMBERS OF MEETINGS ATTENDED IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW FARM VISIT COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| Practice | Total | | High Farm Visits | | Low Farm Visits | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Meetings | | | | | |
| 1. Vaccinate for Leptospirosis | 2.1[a] ( 902)* | 1.3 ( 911) | 3.1 (320) | 1.6 (378) | 1.6 ( 582) | 1.1 (533) |
| 2. Vaccinate for Erysipelas | 2.2[a] ( 683) | 1.4 (1127) | 3.1 (254) | 1.8 (443) | 1.6 ( 429) | 1.1 (684) |
| 3. Vaccinate for Atrophic Rhinitis | 2.4[a] ( 365) | 1.5 (1446) | 3.2 (158) | 2.0 (539) | 1.7 ( 207) | 1.2 (909) |
| 4. Feed Dry Sows | 1.8[a] (1402) | 1.4 ( 399) | 2.4 (496) | 1.8 (195) | 1.4 ( 906) | 1.0 (205) |
| 5. Worm Sows Before Farrowing | 1.8[a] (1422) | 1.4 ( 394) | 2.4 (623) | 1.8 (175) | 1.4 ( 899) | 1.1 (219) |
| 6. Treat Sows for Lice | 1.7 (1464) | 1.5 ( 349) | 2.3 (575) | 2.1 (155) | 1.3 ( 889) | 1.2 (194) |
| 7. Wash Sows Prior to Farrowing | 2.1[a] ( 501) | 1.5 (1305) | 2.9 (184) | 2.0 (511) | 1.6 ( 217) | 1.2 (794) |
| 8. Increase Feed to Pregnant Sows | 1.7 (1471) | 1.5 ( 339) | 2.3 (545) | 2.1 (150) | 1.4 ( 926) | 1.1 (189) |
| 9. Clip Pigs Needle Teeth | 1.9[a] (1255 | 1.2 ( 545) | 2.5 (487) | 1.6 (205) | 1.5 ( 768) | 1.0 (340) |
| 10. Vaccinate Pigs for Rhinitis | 2.6[a] ( 302) | 1.5 (1501) | 3.4 (131) | 2.0 (564) | 2.1 ( 171) | 1.2 (937) |
| 11. Feed Nursing Sows | 1.8[a] (1518) | 1.2 ( 271) | 2.4 (570) | 1.7 (118) | 1.4 ( 948) | 0.9 (153) |
| 12. Give Pigs Iron Shots | 2.0[a] (1110) | 1.2 ( 545) | 2.8 (423) | 1.5 (222) | 1.6 ( 687) | 1.0 (323) |
| 13. Creep Feed Pigs | 1.8[a] (1634) | 1.0 ( 170) | 2.3 (634) | 1.5 ( 61) | 1.4 (1000) | 0.8 (109) |
| 14. Clean Farrow Quarters | 1.8 (1136) | 1.6 ( 635) | 2.5 (406) | 1.9 (284) | 1.4 ( 730) | 1.3 (351) |

*Numbers in parentheses are numbers of producers.

[a]F test was significant at the .01 level of confidence.

[b]F test was significant at the .05 level of confidence.

TABLE XII

AVERAGE NUMBERS OF MEETINGS ATTENDED IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW TOTAL EXTENSION CONTACT COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| Practice | Total | | High Total Contacts | | Low Total Contacts | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Meetings | | | | | |
| 1. Vaccinate for Leptospirosis | 2.1[a] ( 902)* | 1.3 ( 912) | 3.4 (278) | 1.8 (314) | 1.5 ( 624) | 1.0 ( 598) |
| 2. Vaccinate for Erysipelas | 2.2[a] ( 688) | 1.4 (1128) | 3.2 (232) | 2.1 (359) | 1.7 ( 451) | 1.0 ( 769) |
| 3. Vaccinate for Atrophic Rhinitis | 2.4[a] ( 365) | 1.5 (1447) | 3.4 (146) | 2.3 (445) | 1.7 ( 219) | 1.2 (1002) |
| 4. Feed Dry Sows | 1.8[a] (1403) | 1.4 ( 399) | 2.7 (436) | 2.1 (151) | 1.3 ( 967) | 1.0 ( 248) |
| 5. Worm Sows Before Farrowing | 1.7[a] (1423) | 1.4 ( 394) | 2.7 (448) | 2.0 (144) | 1.3 ( 975) | 1.1 ( 250) |
| 6. Treat Sows for Lice | 1.7 (1464) | 1.4 ( 349) | 2.6 (559) | 2.4 (139) | 1.3 ( 905) | 1.0 ( 210) |
| 7. Wash Sows Prior to Farrowing | 2.1[a] ( 501) | 1.5 (1306) | 3.1 (180) | 2.3 (429) | 1.6 ( 341) | 1.1 ( 877) |
| 8. Increase Feed to Pregnant Sows | 1.7 ( 472) | 1.5 ( 339) | 2.5 (467) | 2.6 (120) | 1.3 (1005) | 0.9 ( 219) |
| 9. Clip Pigs Needle Teeth | 1.9[a] (1256) | 1.2 ( 545) | 2.8 (420) | 1.9 (166) | 1.5 ( 836) | 0.9 ( 379) |
| 10. Vaccinate Pigs for Rhinitis | 2.6[a] ( 302) | 1.5 (1502) | 3.3 (123) | 2.2 (466) | 2.0 ( 179) | 1.2 (1036) |
| 11. Feed Nursing Sows | 1.8[a] (1519) | 1.2 ( 271) | 2.6 (504) | 2.0 ( 80) | 1.3 (1015) | 0.9 ( 191) |
| 12. Give Pigs Iron Shots | 2.0[a] (1111) | 1.2 ( 545) | 3.1 (367) | 1.7 (180) | 1.5 ( 744) | 0.9 ( 365) |
| 13. Creep Feed Pigs | 1.8[a] (1635) | 1.0 ( 170) | 2.6 (558) | 1.7 ( 31) | 1.3 (1077) | 0.9 ( 139) |
| 14. Clean Farrowing Quarters | 1.8 (1136) | 1.6 ( 636) | 2.7 (348) | 2.3 (235) | 1.4 ( 788) | 1.2 ( 401) |

*Numbers in parentheses are numbers of producers.

[a] F test was significant at the .01 level of confidence.

[b] F test was significant at the .05 level of confidence.

practices, Practices #3 and #10, found users reporting the highest numbers of meetings attended (i.e., 2.4 and 2.6 meetings, respectively) for all groupings.

Three practices associated with lowest numbers of meetings attended by users (i.e., 1.7) were Practices #4, #6 and #8 for Extension meetings, office visits and telephone calls; Practices #6 and #8 for farm visits; and Practices #5, #6 and #8 for total contacts.

When High and Low Extension contact county producers are studied and compared, it may be seen that in most cases those using practices in both groups had attended more meetings than those not using practices. Also, in all cases (i.e., by definition), the High contact groups had attended more meetings than the Low. Though the differences between High and Low were not tested, they appeared, in the main, to be consequential.

Thus, in the main, those who used practices had attended significantly more meetings the previous year than non-users, and High Extension contact county producers in all cases, by definition, attended more meetings than Low.

## V. RELATIONS BETWEEN AVERAGE NUMBER OF OFFICE VISITS REPORTED BY PRODUCERS IN EXTENSION CONTACT GROUPINGS AND USE OF RECOMMENDED SWINE PRACTICES

The analysis of variance test was used to check the significance of differences in numbers of office visits made by those using and not using practices (see Tables XIII-XVII) the previous year in all Extension contact groupings studied. Those producers using 12 of

TABLE XIII

AVERAGE NUMBERS OF OFFICE VISITS IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW MEETING ATTENDANCE COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| Practice | Total | | High Total Meetings | | Low Total Meetings | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Office Visits | | | | | |
| 1. Vaccinate for Leptospirosis | 3.2[a] ( 902)* | 2.6 ( 913) | 4.3 (307) | 3.5 (277) | 2.7 ( 595) | 2.2 ( 636) |
| 2. Vaccinate for Erysipelas | 3.3[a] ( 683) | 2.6 (1129) | 4.2 (247) | 3.6 (336) | 2.8 ( 436) | 2.2 ( 247) |
| 3. Vaccinate for Atrophic Rhinitis | 3.7[a] ( 683) | 2.7 (1120) | 4.5 (232) | 3.7 (360) | 3.1 ( 451) | 2.2 ( 769) |
| 4. Feed Dry Sows | 2.9 (1404) | 2.9 ( 399) | 3.8 (454) | 4.3 (126) | 2.5 ( 950) | 2.2 ( 273) |
| 5. Worm Sows Before Farrowing | 3.0[a] (1424) | 2.4 ( 394) | 3.9 (444) | 3.8 (140) | 2.6 ( 980) | 1.7 ( 254) |
| 6. Treat Sows for Lice | 3.0[b] (1467) | 2.6 ( 348) | 3.9 (439) | 3.9 (144) | 2.6 (1028) | 1.6 ( 204) |
| 7. Wash Sows Prior to Farrowing | 3.5[a] ( 502) | 2.7 (1306) | 4.4 (172) | 3.7 (410) | 3.0 ( 330) | 2.2 ( 898) |
| 8. Increase Feed to Pregnant Sows | 2.9 (1473) | 2.7 ( 339) | 4.0 (467) | 3.6 (114) | 2.5 (1006) | 2.2 ( 225) |
| 9. Clip Pigs Needle Teeth | 3.1[a] (1251) | 2.4 ( 546) | 3.9 (451) | 3.8 (127) | 2.6 ( 805) | 2.0 ( 419) |
| 10. Vaccinate Pigs for Rhinitis | 3.8[a] ( 303) | 2.7 (1503) | 4.6 (137) | 3.7 (440) | 3.1 ( 166) | 2.3 (1057) |
| 11. Feed Nursing Sows | 3.1[a] (1521) | 2.1 ( 271) | 4.1 (502) | 3.0 ( 76) | 2.6 (1018) | 1.8 ( 195) |
| 12. Give Pigs Iron Shots | 3.3[a] (1112) | 2.5 ( 546) | 4.1 (403) | 3.7 (148) | 2.8 ( 709) | 2.1 ( 397) |
| 13. Creep Feed Pigs | 3.0[a] (1636 | 1.9 ( 171) | 4.0 (538) | 2.6 ( 43) | 2.5 (1098) | 1.7 ( 127) |
| 14. Clean Farrow Quarters | 3.1[b] (1137) | 2.7 ( 636) | 4.0 (347) | 3.8 (226) | 2.7 ( 790) | 2.0 ( 410) |

*Numbers in parentheses are numbers of producers.

[a]F test was significant at the .01 level of confidence.

[b]F test was significant at the .05 level of confidence.

TABLE XIV

AVERAGE NUMBERS OF OFFICE VISITS IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW OFFICE VISIT COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| Practice | Total | | High Total Office Visits | | Low Total Office Visits | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Office Visits | | | | | |
| 1. Vaccinate for Leptospirosis | 3.2[a] ( 902)* | 2.6 ( 912) | 5.4 (344) | 1.9 (368) | 1.9 ( 558) | 1.5 ( 544) |
| 2. Vaccinate for Erysipelas | 3.3[a] ( 683) | 2.6 (1129) | 5.3 (247) | 4.3 (336) | 2.0 ( 436) | 1.5 ( 793) |
| 3. Vaccinate for Atrophic Rhinitis | 3.7[a] ( 366) | 2.7 (1447) | 5.2 (149) | 4.5 (635) | 2.3 ( 217) | 1.6 (1012) |
| 4. Feed Dry Sows | 2.9 (1404) | 2.9 ( 398) | 4.8 (544) | 4.5 (165) | 1.7 ( 860) | 1.8 ( 235) |
| 5. Worm Sows Before Farrowing | 3.2[a] (1426) | 2.5 ( 393) | 4.9 (564) | 3.9 (148) | 1.8 ( 860) | 1.6 ( 243) |
| 6. Treat Sows for Lice | 3.0[b] (1467) | 2.6 ( 347) | 4.9 (565) | 4.1 (146) | 1.8 ( 902) | 1.5 ( 201) |
| 7. Wash Sows Prior to Farrowing | 3.4[a] ( 502) | 2.7 (1305) | 5.4 (212) | 4.4 (497) | 2.1 ( 290) | 1.6 ( 808) |
| 8. Increase Feed to Pregnant Sows | 2.9 (1472) | 2.7 ( 338) | 4.8 (578) | 4.5 (129) | 1.8 ( 895) | 1.6 ( 209) |
| 9. Clip Pigs Needle Teeth | 3.1[a] (1255) | 2.4 ( 545) | 4.9 (517) | 4.3 (182) | 1.8 ( 738) | 1.5 ( 364) |
| 10. Vaccinate Pigs for Rhinitis | 3.8[a] ( 303) | 2.7 (1501) | 5.2 (154) | 4.6 (548) | 2.2 ( 149) | 1.6 ( 953) |
| 11. Feed Nursing Sows | 3.1[a] (1520) | 2.1 ( 270) | 5.0 (608) | 3.3 ( 88) | 1.8 ( 912) | 1.6 ( 182) |
| 12. Give Pigs Iron Shots | 3.3[a] (1111) | 2.5 ( 545) | 5.3 (459) | 4.0 (195) | 1.9 ( 652) | 1.7 ( 350) |
| 13. Creep Feed Pigs | 3.0[a] (1635) | 1.9 ( 170) | 4.0 (659) | 2.5 ( 43) | 2.5 ( 970) | 1.7 ( 127) |
| 14. Clean Farrow Quarters | 3.1[b] (1137) | 2.6 ( 635) | 5.0 (460) | 4.2 (234) | 1.8 ( 677) | 1.7 ( 401) |

*Numbers in parentheses are numbers of producers

[a] F test was significant at the .01 level of confidence.

[b] F test was significant at the .05 level of confidence.

TABLE XV

AVERAGE NUMBERS OF OFFICE VISITS IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW TELEPHONE CALL COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| Practice | Total | | High Total Telephone Calls | | Low Total Telephone Calls | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Office Visits | | | | | |
| 1. Vaccinate for Leptospirosis | 3.2[a] ( 902)* | 2.6 ( 912) | 5.0 (353) | 2.1 (378) | 2.1 (549) | 1.8 (534) |
| 2. Vaccinate for Erysipelas | 3.3[a] ( 683) | 2.6 (1128) | 4.8 (268) | 3.9 (442) | 2.2 (415) | 1.8 (686) |
| 3. Vaccinate for Atrophic Rhinitis | 3.7[a] ( 366) | 2.7 (1446) | 4.8 (174) | 4.1 (537) | 2.5 (192) | 1.9 (909) |
| 4. Feed Dry Sows | 2.9 (1404) | 2.9 ( 398) | 4.4 (544) | 4.1 (163) | 2.0 (860) | 1.8 (235) |
| 5. Worm Sows Before Farrowing | 3.0[a] (1404) | 2.5 ( 399) | 4.5 (437) | 3.6 (151) | 2.1 (967) | 1.6 (248) |
| 6. Treat Sows for Lice | 3.0[b] (1424) | 2.6 ( 394) | 4.4 (449) | 3.7 (144) | 2.0 (975) | 1.7 (250) |
| 7. Wash Sows Prior to Farrowing | 3.5[a] (1467) | 2.7 ( 348) | 4.7 (452) | 4.1 (140) | 2.5 (1015) | 1.8 (208) |
| 8. Increase Feed to Pregnant Sows | 2.9 (1472) | 2.7 ( 339) | 4.4 (502) | 3.7 (166) | 2.0 (910) | 1.6 (173) |
| 9. Clip Pigs Needle Teeth | 3.1[a] (1256) | 2.4 ( 546) | 4.5 (517) | 3.9 (203) | 2.1 (739) | 1.6 (343) |
| 10. Vaccinate Pigs for Rhinitis | 3.8[a] ( 303) | 2.7 (1502) | 5.0 (151) | 4.1 (571) | 2.5 (152) | 1.9 (931) |
| 11. Feed Nursing Sows | 3.1[a] (1520) | 2.1 ( 271) | 4.5 (618) | 3.2 ( 98) | 2.1 (902) | 1.5 (173) |
| 12. Give Pigs Iron Shots | 3.3[a] (1112) | 2.5 ( 545) | 4.7 (474) | 3.7 (214) | 2.2 (638) | 1.8 (331) |
| 13. Creep Feed Pigs | 3.0[a] (1636) | 1.9 ( 170) | 4.8 (666) | 3.7 (656) | 1.8 (970) | 1.3 (114) |
| 14. Clean Farrow Quarters | 3.1[b] (1137) | 2.7 ( 636) | 4.0 (465) | 3.8 (253) | 2.1 (672) | 1.9 (383) |

*Numbers in parentheses are numbers of producers.

[a] F test was significant at the .01 level of confidence.

[b] F test was significant at the .05 level of confidence.

TABLE XVI

AVERAGE NUMBERS OF OFFICE VISITS IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW FARM VISIT COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| Practice | Total | | High Total Farm Visits | | Low Total Farm Visits | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Office Visits | | | | | |
| 1. Vaccinate for Leptospirosis | 3.2[a] ( 902) * | 2.6 ( 912) | 5.0 (320) | 3.4 (379) | 2.2 (582) | 2.0 (533) |
| 2. Vaccinate for Erysipelas | 3.3[a] ( 683) | 2.6 (1128) | 4.9 (295) | 3.7 (436) | 2.3 (388) | 2.0 (692) |
| 3. Vaccinate for Rhinitis | 3.7[a] ( 366) | 2.7 (1446) | 5.0 (191) | 3.9 (538) | 2.7 (175) | 2.0 (908) |
| 4. Feed Dry Sows | 2.9 (1403) | 2.9 ( 399) | 4.3 (536) | 3.7 (189) | 2.1 (867) | 2.1 (210) |
| 5. Worm Sows Before Farrowing | 3.0[a](1403) | 2.5 ( 399) | 4.5 (497) | 3.1 (194) | 2.1 (906) | 2.0 (205) |
| 6. Treat Sows for Lice | 3.0[b](1423) | 2.6 ( 394) | 4.4 (524) | 2.9 (175) | 2.1 (899) | 2.4 (219) |
| 7. Wash Sows Prior to Farrowing | 3.5[a](1466) | 2.7 ( 348) | 5.2 (561) | 3.8 (138) | 2.5 (905) | 2.0 (210) |
| 8. Increase Feed to Pregnant Sows | 2.9 (1472) | 2.7 ( 339) | 4.3 (546) | 3.5 (150) | 2.1 (926) | 2.1 (189) |
| 9. Clip Pigs Needle Teeth | 3.1[a](1255) | 2.4 ( 546) | 4.3 (487) | 3.7 (206) | 2.3 (768) | 1.7 (340) |
| 10. Vaccinate Pigs for Rhinitis | 3.8[a]( 303) | 2.7 (1501) | 4.6 (132) | 4.0 (564) | 3.1 (171) | 2.0 (937) |
| 11. Feed Nursing Sows | 3.1[a](1519) | 2.1 ( 271) | 4.5 (571) | 2.7 (115) | 2.2 (948) | 1.7 (153) |
| 12. Give Pigs Iron Shots | 3.3[a](1111) | 2.5 ( 545) | 4.7 (424) | 3.3 (222) | 2.4 (687) | 2.0 (303) |
| 13. Creep Feed Pigs | 3.0[a](1635) | 1.9 ( 170) | 4.3 (635) | 2.7 ( 61) | 2.2 (1000) | 1.4 (109) |
| 14. Clean Farrow Quarters | 3.1[b](1137) | 2.7 ( 635) | 4.8 (407) | 3.3 (284) | 2.2 (730) | 2.2 (351) |

*Numbers in parentheses are numbers of producers

[a]F test was significant at the .01 level of confidence.

[b]F test was significant at the .05 level of confidence.

TABLE XVII

AVERAGE NUMBERS OF OFFICE VISITS IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW TOTAL EXTENSION CONTACT COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| Practice | Total | | High Total Contacts | | Low Total Contacts | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Office Visits | | | | | |
| 1. Vaccinate for Leptospirosis | 3.2[a] ( 902)* | 2.6 ( 913) | 5.7 (278) | 4.1 (315) | 2.2 (624) | 1.8 (598) |
| 2. Vaccinate for Erysipelas | 3.3[a] ( 683) | 2.6 (1128) | 5.3 (254) | 4.5 (444) | 2.3 (429) | 1.8 (684) |
| 3. Vaccinate for Atrophic Rhinitis | 3.7[a] ( 366) | 2.7 (1446) | 5.4 (159) | 4.6 (539) | 2.6 (207) | 1.8 (907) |
| 4. Feed Dry Sows | 2.9 (1403) | 2.9 ( 399) | 5.0 (536) | 4.4 (189) | 2.0 (867) | 2.0 (210) |
| 5. Worm Sows Before Farrowing | 3.0[a](1423) | 2.5 ( 394) | 5.1 (565) | 3.9 (167) | 2.1 (858) | 1.6 (227) |
| 6. Treat Sows for Lice | 3.0[b](1466) | 2.6 ( 348) | 5.0 (577) | 4.0 (154) | 2.1 (889) | 1.6 (194) |
| 7. Wash Sows Prior to Farrowing | 3.5[a]( 502) | 2.7 (1306) | 5.7 (101) | 4.5 (429) | 2.4 (341) | 1.8 (877) |
| 8. Increase Feed to Pregnant Sows | 2.9 (1473) | 2.7 ( 339) | 4.9 (468) | 4.4 (120) | 2.0 (1005) | 1.8 (219) |
| 9. Clip Pigs Needle Teeth | 3.1[a](1256) | 2.4 ( 546) | 5.0 (420) | 4.3 (167) | 2.1 (836) | 1.6 (379) |
| 10. Vaccinate Pigs for Rhinitis | 3.8[a]( 303) | 2.7 (1502) | 5.3 (124) | 4.7 (466) | 2.6 (179) | 1.9 (1036 |
| 11. Feed Nursing Sows | 3.1[a](1520) | 2.1 ( 271) | 5.1 (505) | 3.4 ( 80) | 2.1 (1015) | 1.6 (191) |
| 12. Give Pigs Iron Shots | 3.3[a](1112) | 2.5 ( 545) | 5.5 (368) | 3.9 (180) | 2.2 (744) | 1.8 (365) |
| 13. Creep Feed Pigs | 3.0[a](1636) | 1.9 ( 170) | 4.9 (559) | 3.5 ( 31) | 2.0 (1077) | 1.6 (139) |
| 14. Clean Farrow Quarters | 3.1[b](1137) | 2.7 ( 636) | 5.3 (349) | 4.0 (235) | 2.1 (788) | 1.9 (401) |

*Numbers in parentheses are numbers of producers.

[a]F test was significant at the .01 level of confidence.

[b]F test was significant at the .05 level of confidence.

the 14 practices (i.e., all except Practices #4 and #8) reported making significantly more visits to the Extension office the previous year for all groupings than did those not using the individual practices. The two Atrophic Rhinitis vaccination practices, Practices #3 and #10, found users reporting the highest average numbers of office visits made (i.e., 3.7 and 3.8 visits respectively).

Two practices associated with lowest average numbers of office visits reported by users (i.e., 2.9) were practices #4 and #8 for producers in all Extension contact groupings.

When high and Low Extension contact county producers in all groupings are studied and compared, it may be seen that in most cases those using practices in both groups had made more office visits. Also, in all cases, the High contact groups had made more office visits than the Low. This was by definition. Though the differences between High and Low were not tested, they appeared, in the main, to be consequential.

Thus, in the main, those who used practices had made significantly more office visits the previous year than non-users and High county Extension contact grouping producers had in all cases made more visits than the Low.

## VI. RELATIONS BETWEEN AVERAGE NUMBERS OF TELEPHONE CALLS TO THE EXTENSION OFFICE REPORTED BY PRODUCERS IN EXTENSION CONTACT GROUPINGS AND USE OF RECOMMENDED SWINE PRACTICES

As seen in Tables XVIII-XXII, those using 13 of the 14 practices for all groups (i.e., all practices except #4) reported making significantly

TABLE XVIII

AVERAGE NUMBER OF TELEPHONE CALLS MADE IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW MEETINGS ATTENDED COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| Practice | Total | | High Total Meetings | | Low Total Meetings | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Telephone Calls | | | | | |
| 1. Vaccinate for Leptospirosis | 4.5[a] ( 900)* | 3.1 ( 913) | 5.9 (305) | 3.5 (277) | 3.7 (595) | 2.9 (630) |
| 2. Vaccinate for Erysipelas | 4.8[a] ( 683) | 3.2 (1127) | 5.9 (247) | 3.9 (334) | 4.2 (436) | 2.9 (793) |
| 3. Vaccinate for Atrophic Rhinitis | 5.5[a] ( 365) | 3.4 (1446) | 6.8 (148) | 4.1 (434) | 4.6 (217) | 3.1 (1062) |
| 4. Feed Dry Sows | 3.9 (1402) | 3.6 ( 309) | 4.8 (452) | 4.8 (123) | 3.4 (950) | 3.0 (273) |
| 5. Worm Sows Before Farrowing | 4.0[a] (1423) | 3.0 ( 393) | 5.0 (443) | 3.9 (139) | 3.5 (980) | 2.5 (254) |
| 6. Treat Sows for Lice | 3.9[a] (1467) | 3.2 ( 346) | 5.0 (439) | 4.0 (142) | 3.5 (1028) | 2.6 (204) |
| 7. Wash Sows Prior to Farrowing | 5.0[a] ( 501) | 3.3 (1305) | 6.5 (171) | 4.1 (409) | 4.3 (330) | 3.0 (896) |
| 8. Increase Feed to Pregnant Sows | 3.9[a] (1473) | 3.1 ( 337) | 4.9 (467) | 4.2 (112) | 3.5 (1006) | 2.6 (225) |
| 9. Clip Pigs Needle Teeth | 4.1[a] (1256) | 3.1 ( 545) | 5.1 (450) | 3.7 (126) | 3.6 (805) | 2.9 (419) |
| 10. Vaccinate Pigs for Rhinitis | 5.6[a] ( 302) | 3.4 (1502) | 6.5 (136) | 4.2 (444) | 4.9 (166) | 3.1 (1057) |
| 11. Feed Nursing Sows | 4.0[a] (1519) | 2.4 ( 271) | 5.0 (500) | 3.2 ( 76) | 3.6 (1018) | 2.2 (195) |
| 12. Give Pigs Iron Shots | 4.5[a] (1112) | 2.9 ( 544) | 5.3 (403) | 3.9 (146) | 4.0 (709) | 2.6 (397) |
| 13. Creep Feed Pigs | 3.9[a] (1634) | 2.6 ( 171) | 4.8 (536) | 3.4 ( 43) | 3.4 (1034) | 2.3 (127) |
| 14. Clean Farrow Quarters | 4.3[a] (1133) | 2.9 ( 636) | 5.5 (345) | 3.8 (226) | 3.9 (790) | 2.4 (410) |

*Numbers in parentheses are numbers of producers.

[a]F test was significant at the .01 level of confidence.

[b]F test was significant at the .05 level of confidence.

TABLE XIX

AVERAGE NUMBER OF TELEPHONE CALLS MADE IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW OFFICE VISIT COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| Practice | Total | | High Total Office Visits | | Low Total Office Visits | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Telephone Calls | | | | | |
| 1. Vaccinate for Leptospirosis | 4.5[a] ( 900)* | 3.1 ( 912) | 7.1 (342) | 4.6 (368) | 2.8 (558) | 2.1 (544) |
| 2. Vaccinate for Erysipelas | 4.8[a] ( 683) | 3.2 (1126) | 7.5 (268) | 4.8 (440) | 3.1 (415) | 2.1 (585) |
| 3. Vaccinate for Atrophic Rhinitis | 5.5[a] ( 365) | 3.4 (1449) | 7.7 (173) | 5.3 (536) | 3.5 (192) | 2.3 (909) |
| 4. Feed Dry Sows | 3.9 (1402) | 3.5 ( 398) | 6.0 (542) | 5.3 (163) | 2.5 (860) | 2.3 (235) |
| 5. Worm Sows Before Farrowing | 4.0[a] (1423) | 3.0 ( 392) | 6.1 (563) | 4.7 (147) | 2.6 (860) | 2.0 (245) |
| 6. Treat Sows for Lice | 3.9[a] (1467) | 3.1 ( 345) | 6.1 (565) | 4.8 (144) | 2.6 (902) | 1.9 (201) |
| 7. Wash Sows Prior to Farrowing | 5.0[a] ( 501) | 3.3 (1304) | 7.4 (211) | 5.1 (496) | 3.3 (290) | 2.2 (808) |
| 8. Increase Feed to Pregnant Sows | 3.9[a] (1473) | 3.1 ( 336) | 6.1 (578) | 4.7 (127) | 2.5 (895) | 2.2 (209) |
| 9. Clip Pigs Needle Teeth | 4.1[a] (1254) | 3.1 ( 745) | 6.2 (516) | 5.0 (181) | 2.7 (738) | 2.1 (364) |
| 10. Vaccinate Pigs for Rhinitis | 5.6[a] ( 302) | 3.4 (1500) | 7.8 (153) | 5.3 (547) | 3.3 (149) | 2.3 (953) |
| 11. Feed Nursing Sows | 4.0[a] (1518) | 2.5 ( 270) | 6.1 (506) | 3.8 ( 88) | 2.6 (912) | 1.8 (182) |
| 12. Give Pigs Iron Shots | 4.5[a] (1111) | 3.0 ( 543) | 6.6 (454) | 4.8 (197) | 2.9 (652) | 1.9 (350) |
| 13. Creep Feed Pigs | 3.9[a] (1633) | 2.6 ( 170) | 5.9 (657) | 5.1 ( 43) | 2.5 (976) | 1.7 (127) |
| 14. Clean Farrow Quarters | 4.3[a] (1135) | 2.9 ( 635) | 6.7 (458) | 4.2 (234) | 2.7 (677) | 2.1 (401) |

*Numbers in parentheses are numbers of producers.

[a]F test was significant at the .01 level of confidence.

[b]F test was significant at the .05 level of confidence.

TABLE XX

AVERAGE NUMBER OF TELEPHONE CALLS MADE IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW TELEPHONE CALL COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| Practice | Total | | High Total Telephone Calls | | Low Total Telephone Calls | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Telephone Calls | | | | | |
| 1. Vaccinate for Leptospirosis | 4.5[a] ( 900)* | 3.1 ( 912) | 7.3 (351) | 4.9 (378) | 2.6 (549) | 1.9 (534) |
| 2. Vaccinate for Erysipelas | 4.8[a] ( 683) | 3.2 (1126) | 7.3 (295) | 5.3 (434) | 2.9 (388) | 1.9 (692) |
| 3. Vaccinate for Atrophic Rhinitis | 5.5[a] ( 365) | 3.4 (1445) | 7.4 (190) | 5.6 (537) | 3.4 (175) | 2.0 (908) |
| 4. Feed Dry Sows | 3.9 (1401) | 3.6 ( 399) | 6.3 (534) | 4.9 (189) | 2.3 (867) | 1.9 (210) |
| 5. Worm Sows Before Farrowing | 4.0[a] (1422) | 3.0 ( 393) | 6.4 (564) | 4.9 (166) | 2.4 (858) | 1.7 (227) |
| 6. Treat Sows for Lice | 3.9[a] (1466) | 3.2 ( 346) | 6.4 (577) | 4.8 (152) | 2.3 (889) | 1.9 (194) |
| 7. Wash Sows Prior to Farrowing | 5.0[a] ( 500) | 3.3 (1305) | 7.5 (225) | 5.5 (502) | 3.0 (275) | 2.0 (803) |
| 8. Increase Feed to Pregnant Sows | 3.9[a] (1472) | 3.1 ( 337) | 6.5 (562) | 4.6 (164) | 2.3 (910) | 1.7 (173) |
| 9. Clip Pigs Needle Teeth | 4.1[a] (1255) | 3.1 ( 545) | 6.4 (516) | 5.3 (202) | 2.5 (739) | 1.7 (343) |
| 10. Vaccinate Pigs for Rhinitis | 5.6[a] ( 302) | 3.4 (1501) | 8.0 (150) | 5.6 (570) | 3.3 (152) | 2.1 (931) |
| 11. Feed Nursing Sows | 4.0[a] (1518) | 2.4 ( 271) | 6.4 (616) | 4.1 ( 93) | 2.4 (902) | 1.5 (173) |
| 12. Give Pigs Iron Shots | 4.5[a] (1112) | 3.0 ( 543) | 6.9 (474) | 4.7 (212) | 2.6 (638) | 1.8 (331) |
| 13. Creep Feed Pigs | 3.9[a] (1634) | 2.6 ( 170) | 6.2 (664) | 5.2 ( 56) | 2.4 (970) | 1.3 (114) |
| 14. Clean Farrow Quarters | 4.3[a] (1135) | 2.9 ( 636) | 7.0 (463) | 4.5 (253) | 2.5 (672) | 1.9 (383) |

*Numbers in parentheses are numbers of producers.

[a]F test was significant at the .01 level of confidence.

[b]F test was significant at the .05 level of confidence.

TABLE XXI

AVERAGE NUMBER OF TELEPHONE CALLS MADE IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW FARM VISIT COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| Practice | Total | | High Total Farm Visits | | Low Total Farm Visits | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Telephone Calls | | | | | |
| 1. Vaccinate for Leptospirosis | 4.5[a] ( 900)* | 3.1 ( 912) | 6.9 (321) | 4.3 (379) | 3.1 (579) | 2.3 (533) |
| 2. Vaccinate for Erysipelas | 4.8[a] ( 683) | 3.2 (1126) | 7.2 (255) | 4.5 ( 44) | 3.4 (428) | 2.4 (682) |
| 3. Vaccinate for Atrophic Rhinitis | 5.5[a] ( 365) | 3.4 (1445) | 7.0 (159) | 4.9 (540) | 4.0 (206) | 2.5 (905) |
| 4. Feed Dry Sows | 3.9 (1401) | 3.6 ( 399) | 5.7 (498) | 4.8 (194) | 2.8 (903) | 2.4 (205) |
| 5. Worm Sows Before Farrowing | 4.0[a] (1423) | 3.0 ( 343) | 6.0 (563) | 3.9 (147) | 2.8 (860) | 2.3 (245) |
| 6. Treat Sows for Lice | 3.9[a] (1466) | 3.1 ( 346) | 5.9 (561) | 3.8 (139) | 2.8 (905) | 2.7 (207) |
| 7. Wash Sows Prior to Farrowing | 5.0[a] ( 501) | 3.3 (1304) | 7.6 (185) | 4.7 (512) | 3.5 (316) | 2.5 (702) |
| 8. Increase Feed to Pregnant Sows | 3.9[a] (1472) | 3.1 ( 337) | 5.9 (547) | 4.0 (150) | 2.8 (925) | 2.5 (187) |
| 9. Clip Pigs Needle Teeth | 4.1[a] (1254) | 3.1 ( 545) | 5.8 (488) | 4.7 (206) | 3.0 (766) | 2.1 (339) |
| 10. Vaccinate Pigs for Rhinitis | 5.6[a] ( 302) | 3.4 (1500) | 7.7 (132) | 4.9 (565) | 4.1 (170) | 2.5 (935) |
| 11. Feed Nursing Sows | 4.0[a] (1517) | 2.5 ( 271) | 5.9 (572) | 3.2 (118) | 2.9 (945) | 1.9 (153) |
| 12. Give Pigs Iron Shots | 4.5[a] (1111) | 3.0 ( 543) | 6.5 (425) | 4.1 (222) | 3.2 (686) | 2.2 (321) |
| 13. Creep Feed Pigs | 3.9[a] (1633) | 2.5 ( 170) | 5.6 (636) | 3.6 ( 61) | 2.8 (997) | 2.0 (109) |
| 14. Clean Farrow Quarters | 4.3[a] (1135) | 2.9 ( 635) | 6.7 (408) | 3.7 (284) | 3.0 (727) | 2.3 (351) |

*Numbers in parentheses are numbers of producers.

[a]F test was significant at the .01 level of confidence.

[b]F test was significant at the .05 level of confidence.

TABLE XXII

AVERAGE NUMBER OF TELEPHONE CALLS MADE IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW TOTAL EXTENSION CONTACT COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| Practice | Total | | High Total Contacts | | Low Total Contacts | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Telephone Calls | | | | | |
| 1. Vaccinate for Leptospirosis | 4.5[a] ( 900)* | 3.1 ( 913) | 7.7 (276) | 5.0 (315) | 3.0 (624) | 2.1 (598) |
| 2. Vaccinate for Erysipelas | 4.8[a] ( 683) | 3.2 (1127) | 7.7 (232) | 5.3 (358) | 3.3 (351) | 2.2 (769) |
| 3. Vaccinate for Atrophic Rhinitis | 5.5[a] ( 365) | 3.4 (1446) | 8.0 (146) | 5.7 (444) | 3.8 (219) | 2.3 (100 |
| 4. Feed Dry Sows | 3.9 (1402) | 3.6 ( 399) | 6.5 (435) | 5.4 (151) | 2.7 (967) | 2.4 (248) |
| 5. Worm Sows Before Farrowing | 4.0[a] (1423) | 3.0 ( 395) | 6.8 (443) | 5.6 (139) | 2.7 (980) | 2.1 (254) |
| 6. Treat Sows for Lice | 3.9[a] (1467) | 3.2 ( 346) | 6.7 (452) | 4.8 (138) | 2.7 (1015) | 2.1 (208) |
| 7. Wash Sows Prior to Farrowing | 5.0[a] ( 501) | 3.3 (1305) | 8.5 (160) | 5.4 (428) | 3.4 (341) | 2.3 (877) |
| 8. Increase Feed to Pregnant Sows | 3.9[a] (1473) | 3.1 ( 337) | 6.7 (468) | 4.6 (118) | 2.7 (1005) | 2.3 (219) |
| 9. Clip Pigs Needle Teeth | 4.1[a] (1255) | 3.1 ( 545) | 6.6 (419) | 5.5 (166) | 2.9 (836) | 2.0 (379) |
| 10. Vaccinate Pigs For Rhinitis | 5.6[a] ( 302) | 4.7 (1501) | 8.4 (123) | 5.7 (465) | 3.7 (179) | 3.0 (103 |
| 11. Feed Nursing Sows | 4.0[a] (1518) | 2.5 ( 271) | 6.6 (503) | 4.2 ( 80) | 2.8 (1015) | 1.7 (191) |
| 12. Give Pigs Iron Shots | 4.5[a] (1112) | 3.0 ( 543) | 7.4 (368) | 4.6 (178) | 3.0 (744) | 2.1 (365) |
| 13. Creep Feed Pigs | 3.9[a] (1634) | 2.6 ( 170) | 6.4 (557) | 4.2 ( 31) | 2.6 (1077) | 2.2 (139) |
| 14. Clean Farrow Quarters | 4.3[a] (1135) | 2.9 ( 636) | 7.7 (347) | 4.2 (235) | 2.9 (788) | 2.2 (401) |

*Numbers in parentheses are numbers of producers.

[a]F test was significant at the .01 level of confidence.

[b]F test was significant at the .05 level of confidence.

more telephone calls to the Extension office the previous year than did those not using practices. The two Atrophic Rhinitis vaccination practices, Practices #3 and #10, found users reporting the highest numbers of telephone calls made (i.e., 5.5 and 5.6 calls, respectively).

Four practices associated with lowest average numbers of telephone calls made by users (i.e., 3.9 calls) were Practices #4, #6, and #8 and #13 for producers in all Extension contact groupings.

When High and Low Extension contact county producers in all groupings are studied and compared, it may be seen that in nearly all cases those using practices in both groups had made more calls. Also, in all cases, the High contact groups had made more telephone calls than the Low. Though the differences were not tested, they appeared to be consequential.

Thus, in the main, those who used practices reported making significantly more telephone calls to the office the previous year than non-users and High county producers, of course, had in all cases made more calls than Low.

## VII. RELATIONS BETWEEN AVERAGE NUMBERS OF EXTENSION FARM VISITS REPORTED BY PRODUCERS IN EXTENSION CONTACT GROUPINGS AND USE OF RECOMMENDED SWINE PRACTICES

Tables XXIII-XXVII show those using each of 8 of the 14 practices for all groupings reported receiving significantly more Extension farm visits the previous year than did those not using practices. The two Atrophic Rhinitis vaccination practices, Practices #3 and #10, found users reporting the highest average numbers of farm visits received (i.e., 3.6 and 4.0 farm visits, respectively).

TABLE XXIII

AVERAGE NUMBER OF FARM VISITS RECEIVED IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW MEETINGS ATTENDED COUNTIES COMPARING THOSE USING AND NOT USING SWINE PRODUCTION PRACTICES

| Practice | Total | | High Total Meetings | | Low Total Meetings | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Farm Visits | | | | | |
| 1. Vaccinate for Leptospirosis | 3.2[a] ( 901)* | 2.5 ( 912)* | 4.5 (306) | 3.5 (276) | 2.5 (595) | 2.1 (636) |
| 2. Vaccinate for Erysipelas | 3.5[a] ( 684) | 2.5 (1126) | 4.6 (248) | 3.6 (333) | 2.8 (436) | 2.0 (797) |
| 3. Vaccinate for Atrophic Rhinitis | 3.6[a] ( 366) | 2.7 (1445) | 4.4 (149) | 3.9 (433) | 3.1 (217) | 2.1 (1012 |
| 4. Feed Dry Sows | 2.8 (1402) | 2.9 ( 399) | 3.8 (452) | 5.0 (126) | 2.4 (950) | 2.0 (273) |
| 5. Worm Sows Before Farrowing | 2.9 (1424) | 2.6 ( 392) | 4.0 (444) | 4.0 (138) | 2.4 (980) | 1.9 (254) |
| 6. Treat Sows for Lice | 2.9 (1467) | 2.6 ( 346) | 4.1 (439) | 3.9 (142) | 2.4 (1028) | 1.6 (204) |
| 7. Wash Sows Prior to Farrowing | 3.3[a] ( 502) | 2.7 (1304) | 4.6 (172) | 3.8 (408) | 2.7 (330) | 2.2 (896) |
| 8. Increase Feed to Pregnant Sows | 2.9 (1474) | 2.8 ( 336) | 4.0 (468) | 4.3 (111) | 2.3 (1006) | 2.0 (225) |
| 9. Clip Pigs Needle Teeth | 3.1[a] (1256) | 2.3 ( 545) | 4.2 (450) | 3.5 (126) | 2.6 (805) | 2.0 (419) |
| 10. Vaccinate Pigs for Rhinitis | 4.2[a] ( 303) | 2.6 (1501) | 4.8 (137) | 3.8 (443) | 3.4 (166) | 2.1 (1057 |
| 11. Feed Nursing Sows | 3.0[a] (1519) | 2.1 ( 271) | 4.1 (500) | 3.7 ( 76) | 2.5 (1018) | 1.4 (195) |
| 12. Give Pigs Iron Shots | 3.2[a] (1112) | 2.4 ( 544) | 4.2 (403) | 3.7 (146) | 2.7 (709) | 2.0 (397) |
| 13. Creep Feed Pigs | 2.9 (1634) | 2.3 ( 171) | 4.1 (536) | 2.8 ( 43) | 2.3 (1098) | 2.2 (127) |
| 14. Clean Farrow Quarters | 2.9 (1135) | 2.9 ( 636) | 3.9 (345) | 4.3 (226) | 2.5 (790) | 2.1 (410) |

*Numbers in parentheses are numbers of producers.

[a]F test was significant at the .01 level of confidence.

[b]F test was significant at the .05 level of confidence.

TABLE XXIV

AVERAGE NUMBER OF FARM VISITS RECEIVED IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW OFFICE VISIT COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| Practice | Total | | High Total Office Visits | | Low Total Office Visits | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Farm Visits | | | | | |
| 1. Vaccinate for Leptospirosis | 3.2[a] ( 901)* | 2.5 ( 911) | 5.1 (343) | 3.5 (367) | 2.1 (558) | 1.9 (544) |
| 2. Vaccinate for Erysiperlas | 3.5[a] ( 684) | 2.5 (1125) | 5.2 (289) | 3.8 (439) | 2.3 (415) | 1.7 (686) |
| 3. Vaccinate for Atrophic Rhinitis | 3.6[a] ( 366) | 2.7 (1444) | 4.8 (174) | 4.0 (535) | 2.6 (192) | 1.8 (909) |
| 4. Feed Dry Sows | 2.8 (1402) | 2.9 ( 398) | 4.1 (542) | 4.8 (163) | 2.0 (860) | 1.6 (235) |
| 5. Worm Sows Before Farrowing | 2.9 (1424) | 2.6 ( 391) | 4.3 (564) | 3.8 (146) | 2.0 (880) | 1.9 (245) |
| 6. Treat Sows for Lice | 2.9 (1467) | 2.5 ( 345) | 4.4 (565) | 3.5 (144) | 2.0 (902) | 1.8 (201) |
| 7. Wash Sows Prior to Farrowing | 3.3[a] ( 502) | 2.7 (1303) | 4.5 (212) | 4.1 (495) | 2.4 (290) | 1.8 (808) |
| 8. Increase Feed to Pregnant Sows | 2.8 (1474) | 2.8 ( 335) | 4.2 (579) | 4.5 (125) | 2.0 (895) | 1.7 (209) |
| 9. Clip Pigs Needle Teeth | 3.1[a] (1254) | 2.3 ( 545) | 4.5 (516) | 3.7 (181) | 2.1 (738) | 1.7 (364) |
| 10. Vaccinate Pigs for Rhinitis | 4.0[a] ( 303) | 2.6 (1499) | 5.4 (154) | 4.0 (546) | 2.6 (144) | 1.9 (953) |
| 11. Feed Nursing Sows | 4.0[a] (1118) | 3.2 ( 70) | 4.7 (606) | 4.5 ( 88) | 3.2 (912) | 2.0 (182) |
| 12. Give Pits Iron Shots | 3.2[a] (1111) | 2.4 ( 543) | 4.7 (459) | 3.6 (193) | 2.2 (652) | 1.7 (350) |
| 13. Creep Feed Pigs | 2.9 (1633) | 2.3 ( 170) | 4.3 (657) | 3.9 ( 43) | 2.0 (976) | 1.8 (127) |
| 14. Clean Farrow Quarters | 2.9 (1135) | 2.8 ( 635) | 4.3 (458) | 4.3 (234) | 2.0 (677) | 2.0 (401) |

*Numbers in parentheses are numbers of producers.

[a]F test was significant at the .01 level of confidence.

[b]F test was significant at the .05 level of confidence.

TABLE XXV

AVERAGE NUMBER OF FARM VISITS RECEIVED IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW TELEPHONE COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| Practice | Total | | High Total Telephone Calls | | Low Total Telephone Calls | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Farm Visits | | | | | |
| 1. Vaccinate for Leptospirosis | 3.2[a] ( 901)* | 2.5 ( 911) | 4.7 (352) | 3.1 (377) | 2.2 (549) | 2.1 (534) |
| 2. Vaccinate for Erysipelas | 3.5[a] ( 684) | 2.5 (1125) | 4.6 (296) | 3.4 (433) | 2.6 (388) | 1.9 (692) |
| 3. Vaccinate for Atrophic Rhinitis | 3.6[a] ( 366) | 2.7 (1444) | 4.3 (141) | 3.8 (536) | 3.0 (175) | 2.0 (908) |
| 4. Feed Dry Sows | 2.8 (1401) | 2.9 ( 399) | 3.8 (534) | 4.1 (189) | 2.2 (867) | 1.8 (210) |
| 5. Worm Sows Before Farrowing | 2.9 (1423) | 2.6 ( 392) | 4.0 (565) | 3.6 (165) | 2.2 (858) | 2.0 (227) |
| 6. Treat Sows for Lice | 2.9 (1466) | 2.6 ( 346) | 4.1 (577) | 2.9 (152) | 2.1 (889) | 2.2 (194) |
| 7. Wash Sows Prior to Farrowing | 3.3[a] ( 501) | 2.7 (1304) | 4.0 (226) | 3.8 (501) | 2.8 (275) | 1.9 (803) |
| 8. Increase Feed to Pregnant Sows | 2.9 (1475) | 2.8 ( 336) | 3.9 (563) | 3.7 (163) | 2.2 (910) | 1.9 (173) |
| 9. Clip Pigs Needle Teeth | 3.1[a] (1255) | 2.3 ( 545) | 4.3 (516) | 3.0 (202) | 2.2 (739) | 1.9 (343) |
| 10. Vaccinate Pigs for Rhinitis | 4.0[a] ( 303) | 2.6 (1500) | 5.2 (151) | 3.6 (569) | 2.8 (152) | 2.0 (431) |
| 11. Feed Nursing Sows | 3.0[a] (1515) | 2.1 ( 271) | 4.1 (616) | 3.1 ( 98) | 2.3 (902) | 1.5 (173) |
| 12. Give Pigs Iron Shots | 3.2[a] (1112) | 2.4 ( 543) | 4.4 (424) | 3.2 (212) | 2.4 (638) | 1.9 (331) |
| 13. Creep Feed Pigs | 2.9 (1634) | 2.3 ( 170) | 4.0 (664) | 3.7 ( 56) | 2.2 (970) | 1.7 (114) |
| 14. Clean Farrow Quarters | 2.9 (1135) | 2.9 ( 636) | 4.0 (463) | 3.8 (253) | 2.2 (672) | 2.2 (383) |

*Numbers in parentheses are numbers of producers.

[a]F test was significant at the .01 level of confidence.

[b]F test was significant at the .05 level of confidence.

TABLE XXVI

AVERAGE NUMBER OF FARM VISITS RECEIVED IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW FARM VISIT COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| Practice | Total | | High Total Farm Visits | | Low Total Farm Visits | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Farm Visits | | | | | |
| 1. Vaccinate for Leptospirosis | 3.2[a] ( 901)* | 2.5 ( 911) | 5.6 (321) | 4.0 (570) | 1.9 (580) | 1.4 (532) |
| 2. Vaccinate for Erysipelas | 3.5[a] ( 684) | 2.5 (1125) | 6.0 (255) | 4.1 (444) | 2.0 (420) | 1.4 (681) |
| 3. Vaccinate for Atrophic Rhinitis | 3.6[a] ( 366) | 2.7 (1444) | 5.3 (159) | 4.6 (540) | 2.3 (207) | 1.5 (904) |
| 4. Feed Dry Sows | 2.8 (1401) | 2.9 ( 349) | 4.9 (498) | 4.5 (194) | 1.7 (903) | 1.4 (205) |
| 5. Worm Sows Before Farrowing | 2.9 (1423) | 2.6 ( 392) | 5.0 (525) | 4.1 (175) | 1.4 (898) | 1.5 (217) |
| 6. Treat Sows for Lice | 2.9 (1466) | 2.6 ( 346) | 4.9 (561) | 4.1 (139) | 1.6 (905) | 1.5 (207) |
| 7. Wash Sows Prior to Farrowing | 3.3[a] ( 502) | 2.7 (1303) | 5.8 (185) | 4.4 (512) | 1.9 (317) | 1.5 (791) |
| 8. Increase Feed to Pregnant Sows | 2.9 (1473) | 2.8 ( 336) | 4.8 (547) | 4.7 (150) | 1.7 (926) | 1.2 (186) |
| 9. Clip Pigs Needle Teeth | 3.1[a] (1254) | 2.3 ( 545) | 5.1 (488) | 4.1 (206) | 1.8 (766) | 1.2 (339) |
| 10. Vaccinate Pigs for Rhinitis | 4.0[a] ( 303) | 2.6 (1499) | 5.9 (132) | 4.5 (565) | 2.5 (171) | 1.5 (934) |
| 11. Feed Nursing Sows | 3.0[a] (1517) | 2.1 ( 271) | 5.1 (572) | 3.4 (118) | 1.8 (945) | 1.1 (153) |
| 12. Give Pigs Iron Shots | 3.2[a] (1111) | 2.4 ( 543) | 5.4 (125) | 4.0 ( 22) | 1.9 (686) | 1.3 (321) |
| 13. Creep Feed Pigs | 2.9 (1633) | 2.3 ( 170) | 4.9 (636) | 3.9 ( 61) | 1.7 (999) | 1.5 (109) |
| 14. Clean Farrow Quarters | 2.9 (1135) | 2.8 ( 635) | 5.1 (408) | 4.4 (284) | 1.7 (727) | 1.6 (351) |

*Numbers in parentheses are numbers of producers.

[a]F test was significant at the .01 level of confidence.

[b]F test was significant at the .05 level of confidence.

TABLE XXVII

AVERAGE NUMBER OF FARM VISITS RECEIVED IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW TOTAL EXTENSION CONTACT COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| Practice | Total | | High Total Contacts | | Low Total Contacts | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Farm Visits | | | | | |
| 1. Vaccinate for Leptospirosis | 3.2[a] ( 901)* | 2.5 ( 912) | 5.8 (277) | 4.1 (314) | 2.0 (624) | 1.7 (598) |
| 2. Vaccinate for Erysipelas | 3.5[a] ( 684) | 2.5 (1126) | 5.7 (233) | 4.3 (357) | 2.3 (451) | 1.6 (769) |
| 3. Vaccinate for Atrophic Rhinitis | 3.6[a] ( 366) | 2.7 (1445) | 5.0 (147) | 4.8 (443) | 2.7 (214) | 1.7 (100 |
| 4. Feed Dry Sows | 2.8 (1402) | 2.9 ( 399) | 4.8 (435) | 5.1 (151) | 2.0 (967) | 1.6 (248) |
| 5. Worm Sows Before Farrowing | 2.9 (1424) | 2.6 ( 392) | 5.1 (975) | 4.1 (142) | 1.9 (1424) | 1.8 (250 |
| 6. Treat Sows for Lice | 2.9 (1467) | 2.6 ( 346) | 5.1 (452) | 4.0 (130) | 1.9 (1015) | 1.6 (208) |
| 7. Wash Sows Prior to Farrowing | 3.3[a] ( 502) | 2.7 (1304) | 5.5 (161) | 4.6 (427) | 2.3 (341) | 1.7 (877) |
| 8. Increase Feed to Pregnant Sows | 2.8 (1474) | 2.8 ( 336) | 4.9 (469) | 4.8 (117) | 1.9 (1005) | 1.7 (219) |
| 9. Clip Pigs Needle Teeth | 3.1[a] (1255) | 2.3 ( 545) | 5.1 (419) | 4.4 (166) | 2.1 (836) | 1.4 (369) |
| 10. Vaccinate Pigs for Rhinitis | 4.0[a] ( 303) | 2.6 (1500) | 5.8 (124) | 4.0 (464) | 2.8 (179) | 1.7 (103 |
| 11. Feed Nursing Sows | 3.0[a] (1518) | 2.0 ( 271) | 5.1 (503) | 3.7 ( 80) | 2.0 (1015) | 1.4 (141) |
| 12. Give Pigs Iron Shots | 3.2[a] (1112) | 2.4 ( 543) | 5.5 (368) | 4.0 (178) | 2.1 (744) | 1.6 (365) |
| 13. Creep Feed Pigs | 2.9 (1634) | 2.3 ( 170) | 4.9 (557) | 4.1 ( 31) | 1.9 (1077) | 1.9 (139) |
| 14. Clean Farrow Quarters | 2.9 (1135) | 2.9 ( 636) | 5.1 (347) | 4.6 (235) | 1.9 (788) | 1.8 (401) |

*Numbers in parentheses are numbers of producers.

[a]F test was significant at the .01 level of confidence.

[b]F test was significant at the .05 level of confidence.

The practice associated with lowest numbers of farm visits by reported users (i.e., 2.8) was Practice #4 for producers in all Extension contact groupings.

When High and Low Extension contact county producers in all groupings studied are compared, it may be seen that in most cases those using practices in both groups had received more Extension farm visits. Also, in all cases, the High contact groups had received more farm visits than the Low. Though the differences were not tested, they appear in the main to be consequential.

Thus, on the average, those who used most practices had received more farm visits the previous year than non-users and High county Extension contact grouping producers had in all cases received more farm visits than the Low.

## VIII. RELATIONS BETWEEN AVERAGE NUMBERS OF TOTAL EXTENSION CONTACTS REPORTED BY PRODUCERS IN EXTENSION CONTACT GROUPINGS AND USE OF RECOMMENDED SWINE PRACTICES

The analysis of variance was used to test the significance of differences in numbers of total Extension contacts made by those using and not using practices (see Tables XXVIII-XXXII). Those using 13 of the 14 practices (i.e., all except Practices #4, #6 and #8) for all groups reported had significantly more total Extension contacts the previous year than did those not using the practices. The two Atrophic Rhinitis vaccination practices, Practices #3 and #10, found users reporting the highest numbers of total Extension contacts (i.e., 16.7 and 16.6, respectively) for all groupings.

TABLE XXVIII

AVERAGE NUMBER OF TOTAL EXTENSION CONTACTS MADE IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW MEETING COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| Practice | Total | | High Total Meetings | | Low Total Meetings | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Total Ext. Contacts | | | | | |
| 1. Vaccinate for Leptospirosis | 14.1[a] ( 904)* | 9.7 ( 912) | 21.5 (345) | 13.0 (368) | 10.4 (559) | 8.2 (544) |
| 2. Vaccinate for Erysipelas | 14.7[a] ( 685) | 10.2 (1129) | 20.8 (249) | 15.0 (336) | 11.2 (436) | 8.2 (793) |
| 3. Vaccinate for Atrophic Rhinitis | 16.7[a] ( 367) | 10.7 (1448) | 23.0 (150) | 15.6 (436) | 12.3 (217) | 8.6 (101 |
| 4. Feed Dry Sows | 12.3 (1406) | 10.8 ( 399) | 17.7 (456) | 16.8 (126) | 9.6 (950) | 8.1 (273) |
| 5. Worm Sows Before Farrowing | 12.4[b] (1426) | 10.3 ( 304) | 17.8 (446) | 16.3 (140) | 9.9 (980) | 7.0 (254) |
| 6. Treat Sows for Lice | 12.0 (1467) | 11.8 ( 349) | 17.0 (577) | 19.0 (155) | 9.8 (890) | 6.6 (144) |
| 7. Wash Sows Prior to Farrowing | 14.3[a] ( 502) | 11.0 (1308) | 19.7 (172) | 16.5 (412) | 11.4 (330) | 8.5 (896) |
| 8. Increase Feed to Pregnant Sows | 12.0 (1475) | 11.6 ( 339) | 17.1 (409) | 19.1 (114) | 9.6 (1006) | 7.8 (225) |
| 9. Clip Pigs Needle Teeth | 13.0[a] (1259) | 9.6 ( 546) | 18.2 (453) | 14.8 (127) | 10.0 (805) | 8.0 (419) |
| 10. Vaccinate Pigs for Rhinitis | 16.6[a] ( 303) | 11.0 (1505) | 20.8 (137) | 16.4 (447) | 13.2 (166) | 8.7 (105 |
| 11. Feed Nursing Sows | 12.7[a] (1523) | 7.9 ( 271) | 18.3 (504) | 12.2 ( 76) | 9.9 (1018) | 6.2 (195) |
| 12. Give Pigs Iron Shots | 13.8[a] (1114) | 9.8 ( 546) | 18.6 (405) | 16.0 (148) | 11.0 (709) | 7.5 (397) |
| 13. Creep Feed Pigs | 12.4[a] (1638) | 7.9 ( 171) | 18.0 (540) | 11.0 ( 43) | 9.6 (1098) | 6.8 (127) |
| 14. Clean Farrow Quarters | 12.9[a] (1138) | 10.6 ( 637) | 18.4 (348) | 16.3 (227) | 10.4 (790) | 7.5 (410) |

*Numbers in parentheses are numbers of producers.

[a]F test was significant at the .01 level of confidence.

[b]F test was significant at the .05 level of confidence.

TABLE XXIX

AVERAGE NUMBER OF TOTAL EXTENSION CONTACTS MADE IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW OFFICE VISIT COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| Practice | Total | | High Total Office Visits | | Low Total Office Visits | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Total Ext. Contacts | | | | | |
| 1. Vaccinate for Leptospirosis | 14.2[a] ( 904)* | 9.7 ( 912) | 22.4 (354) | 14.3 (378) | 9.1 (550) | 6.5 (534) |
| 2. Vaccinate for Erysipelas | 14.7[a] ( 685) | 10.2 (1128) | 21.9 (269) | 16.1 (442) | 10.1 (416) | 6.4 (686) |
| 3. Vaccinate for Atrophic Rhinitis | 16.7[a] ( 367) | 10.7 (1447) | 21.7 (174) | 17.2 (538) | 12.2 (193) | 6.9 (909) |
| 4. Feed Dry Sows | 12.3 (1406) | 10.8 ( 398) | 18.9 (545) | 16.6 (163) | 8.1 (861) | 6.8 (235) |
| 5. Worm Sows Before Farrowing | 12.4[b](1476) | 10.3 ( 393) | 18.8 (565) | 16.3 (148) | 8.2 (861) | 6.6 (245) |
| 6. Treat Sows for Lice | 12.0 (1468) | 11.8 ( 348) | 18.1 (565) | 19.2 (147) | 8.1 (903) | 6.3 (201) |
| 7. Wash Sows Prior to Farrowing | 14.3[a] ( 502) | 11.0 (1307) | 18.2 (212) | 17.2 (498) | 8.2 (290) | 7.2 (809) |
| 8. Increase Feed to Pregnant Sows | 12.0 (1475) | 11.6 ( 338) | 17.9 (579) | 20.0 (129) | 8.2 (896) | 6.3 (209) |
| 9. Clip Pigs Needle Teeth | 13.0[a](1257) | 9.6 ( 546) | 19.2 (518) | 16.4 (182) | 8.6 (739) | 6.3 (364) |
| 10. Vaccinate Pigs for Rhinitis | 16.6[a] ( 303) | 11.0 (1503) | 22.8 (154) | 17.2 (544) | 10.2 (149) | 7.4 (954) |
| 11. Feed Nursing Sows | 12.7[a](1522) | 7.9 ( 270) | 19.4 (609) | 12.4 ( 88) | 8.3 (913) | 5.7 (182) |
| 12. Give Pigs Iron Shots | 13.8[a](1113) | 9.8 ( 545) | 20.3 (460) | 16.1 (195) | 9.2 (653) | 6.3 (350) |
| 13. Creep Feed Pigs | 12.4[a](1637) | 7.9 ( 170) | 18.7 (660) | 14.3 ( 43) | 8.1 (977) | 5.7 (127) |
| 14. Clean Farrow Quarters | 12.9[a](1138) | 10.6 ( 636) | 20.2 (461) | 15.0 (234) | 7.9 (677) | 8.0 (402) |

*Numbers in parentheses are numbers of producers.

[a]F test was significant at the .01 level of confidence.

[b]F test was significant at the .05 level of confidence.

TABLE XXX

AVERAGE NUMBER OF TOTAL EXTENSION CONTACTS MADE IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW TELEPHONE COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| Practice | Total | | High Total Telephone Calls | | Low Total Telephone Calls | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Total Ext. Contacts | | | | | |
| 1. Vaccinate for Leptospirosis | 14.2[a] ( 904)* | 9.7 ( 912) | 21.5 (321) | 13.7 (379) | 9.4 (583) | 6.8 (533) |
| 2. Vaccinate for Erysipelas | 14.7[a] ( 685) | 10.2 (1128) | 20.2 (296) | 15.7 (436) | 10.6 (389) | 6.8 (692) |
| 3. Vaccinate for Atrophic Rhinitis | 16.7[a] ( 367) | 10.7 (1447) | 20.1 (191) | 16.6 (539) | 13.0 (176) | 7.2 (408) |
| 4. Feed Dry Sows | 12.3 (1405) | 10.8 ( 399) | 18.3 (537) | 15.4 (189) | 8.5 (868) | 6.7 (210) |
| 5. Worm Sows Before Farrowing | 12.4[b](1425) | 10.3 ( 394) | 18.1 (566) | 15.6 (167) | 8.6 (859) | 6.4 (227) |
| 6. Treat Sows for Lice | 12.0 (1467) | 11.8 ( 349) | 17.5 (561) | 17.7 (139) | 8.4 (906) | 7.1 (210) |
| 7. Wash Sows Prior to Farrowing | 14.3[a] ( 501) | 11.0 (1308) | 19.2 (226) | 16.7 (504) | 10.3 (275) | 7.5 (804) |
| 8. Increase Feed to Pregnant Sows | 12.0 (1474) | 11.6 ( 339) | 17.6 (563) | 17.2 (166) | 8.5 (911) | 6.2 (173) |
| 9. Clip Pigs Needle Teeth | 13.0[a](1256) | 9.6 ( 546) | 18.6 (518) | 15.3 (203) | 9.0 (740) | 6.3 (343) |
| 10. Vaccinate Pigs for Rhinitis | 16.0[a] ( 303) | 11.0 (1504) | 22.5 (151) | 16.4 (572) | 10.7 (152) | 7.3 (932) |
| 11. Feed Nursing Sows | 12.7[a](1522) | 7.9 ( 271) | 18.6 (619) | 12.2 ( 98) | 8.7 (903) | 5.5 (173) |
| 12. Give Pigs Iron Shots | 13.8[a](1114) | 9.8 (545) | 19.4 (475) | 14.9 (214) | 9.6 (639) | 6.5 (331) |
| 13. Creep Feed Pigs | 12.4[a](1638) | 7.9 ( 170) | 18.0 (667) | 14.1 ( 56) | 8.6 (971) | 4.8 (114) |
| 14. Clean Farrow Quarters | 12.9[a](1138) | 10.6 ( 637) | 19.5 (466) | 14.3 (253) | 8.3 (672) | 8.3 (384) |

*Numbers in parentheses are numbers of producers.

[a]F test was significant at the .01 level of confidence.

[b]F test was significant at the .05 level of confidence.

TABLE XXXI

AVERAGE NUMBER OF TOTAL EXTENSION CONTACTS MADE IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW FARM VISIT COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| Practice | Total | | High Total Farm Visits | | Low Total Farm Visits | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Total Ext. Contacts | | | | | |
| 1. Vaccinate for Leptospirosis | 14.2[a] ( 904)* | 9.7 ( 912) | 21.2 (321) | 13.4 (379) | 10.3 (583) | 7.0 (533) |
| 2. Vaccinate for Erysipelas | 14.7[a] ( 685) | 10.2 (1128) | 21.8 (255) | 14.2 (444) | 10.5 (430) | 7.6 (684) |
| 3. Vaccinate for Atrophic Rhinitis | 16.7[a] ( 367) | 10.7 (1447) | 21.3 (159) | 15.7 (540) | 13.1 (208) | 7.7 (907) |
| 4. Feed Dry Sows | 12.3 (1405) | 10.8 ( 399) | 17.9 (498) | 14.9 (194) | 9.1 (907) | 7.0 (205) |
| 5. Worm Sows Before Farrowing | 12.3[b](1425) | 10.3 ( 394) | 18.4 (525) | 12.8 (175) | 8.9 (400) | 8.3 (214) |
| 6. Treat Sows for Lice | 12.0 (1467) | 11.8 ( 344) | 17.8 (561) | 13.6 (139) | 8.3 (906) | 10.6 (210) |
| 7. Wash Sows Prior to Farrowing | 14.3[a] ( 502) | 11.0 (1307) | 21.8 (185) | 15.3 (512) | 9.9 (317) | 8.3 (795) |
| 8. Increase Feed to Pregnant Sows | 12.0 (1474) | 11.6 ( 339) | 17.7 (547) | 14.3 (150) | 8.6 (927) | 9.4 (189) |
| 9. Clip Pigs Needle Teeth | 13.0[a](1257) | 9.6 ( 546) | 18.1 (488) | 14.6 (206) | 9.7 (769) | 6.6 (340) |
| 10. Vaccinate Pigs for Rhinitis | 16.6[a] ( 303) | 11.0 (1503) | 22.0 (132) | 15.8 (565) | 12.4 (171) | 8.1 (938) |
| 11. Feed Nursing Sows | 12.7[a](1521) | 7.9 ( 271) | 18.4 (572) | 11.0 (118) | 9.3 (949) | 5.6 (153) |
| 12. Give Pigs Iron Shots | 13.8[a](1113) | 9.8 ( 545) | 20.0 (425) | 12.9 (222) | 9.9 (688) | 7.7 (323) |
| 13. Creep Feed Pigs | 12.4[a](1637) | 7.9 ( 170) | 17.6 (636) | 11.7 ( 61) | 9.1 (1001) | 5.7 (109) |
| 14. Clean Farrow Quarters | 12.9[a](1138) | 10.6 ( 636) | 19.7 (408) | 13.2 (284) | 9.0 (730) | 8.5 (352) |

*Numbers in parentheses are numbers of producers.

[a]F test was significant at the .01 level of confidence.

[b]F test was significant at the .05 level of confidence.

TABLE XXXII

AVERAGE NUMBER OF TOTAL EXTENSION CONTACTS MADE IN THE LAST 12 MONTHS BY SWINE PRODUCERS IN HIGH AND LOW TOTAL EXTENSION CONTACT COUNTIES COMPARING THOSE USING AND NOT USING SELECTED SWINE PRODUCTION PRACTICES

| Practice | Total | | High Total Contacts | | Low Total Contacts | |
|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No |
| | Mean No. Total Ext. Contacts | | | | | |
| 1. Vaccinate for Leptospirosis | 14.2[a] ( 904)* | 9.7 ( 913) | 26.1 (280) | 15.5 (315) | 8.8 (624) | 6.7 (598) |
| 2. Vaccinate for Erysipelas | 14.7[a] ( 685) | 10.2 (1129) | 24.6 (234) | 17.8 (360) | 9.6 (451) | 6.7 (769) |
| 3. Vaccinate for Atrophic Rhinitis | 16.7[a] ( 367) | 10.7 (1448) | 25.3 (148) | 18.9 (446) | 10.9 (219) | 7.1 (1002) |
| 4. Feed Dry Sows | 12.3 (1406) | 10.8 ( 399) | 21.7 (434) | 17.1 (151) | 8.0 (967) | 7.0 (248) |
| 5. Worm Sows Before Farrowing | 12.4[b](1426) | 10.3 ( 394) | 21.7 (451) | 16.6 (144) | 8.0 (975) | 6.6 (250) |
| 6. Treat Sows for Lice | 12.0 (1468) | 11.8 ( 349) | 20.7 (453) | 20.0 (141) | 8.1 (1015) | 6.2 (208) |
| 7. Wash Sows Prior to Farrowing | 14.3[a] ( 502) | 11.0 (1308) | 23.8 (161) | 19.3 (431) | 9.8 (341) | 7.0 (877) |
| 8. Increase Feed to Pregnant Sows | 12.0 (1475) | 11.6 ( 339) | 20.6 (470) | 20.3 (120) | 6.8 (1005) | 6.8 (219) |
| 9. Clip Pigs Needle Teeth | 13.0[a](1258) | 9.6 ( 546) | 21.6 (422) | 17.8 (167) | 8.6 (836) | 6.0 (379) |
| 10. Vaccinate Pigs for Rhinitis | 16.6[a] ( 303) | 17.5 (1504) | 24.5 (124) | 19.5 (468) | 11.1 (179) | 7.2 (1036) |
| 11. Feed Nursing Sows | 12.7[a](1522) | 7.9 ( 271) | 21.7 (507) | 13.4 ( 80) | 8.2 (1015) | 5.6 (191) |
| 12. Give Pigs Iron Shots | 13.8[a](1114) | 9.8 ( 545) | 23.6 (370) | 16.4 (180) | 8.9 (744) | 6.6 (365) |
| 13. Creep Feed Pigs | 12.4[a](1638) | 7.9 ( 170) | 21.0 (561) | 13.5 ( 31) | 7.9 (1077) | 6.6 (139) |
| 14. Clean Farrow Quarters | 12.9[a](1138) | 10.6 ( 637) | 23.1 (350) | 16.9 (236) | 8.3 (788) | 7.0 (401) |

*Numbers in parentheses are numbers of producers.

[a]F test was significant at the .01 level of confidence.

[b]F test was significant at the .05 level of confidence.

CRANES CREST

# IX. RELATIONS BETWEEN AVERAGE NUMBERS OF TOTAL EXTENSION CONTACTS REPORTED BY PRODUCERS IN EXTENSION CONTACT GROUPINGS AND USE OF RECOMMENDED SWINE PRACTICES

The analysis of variance was used to test the significance of differences in numbers of total Extension contacts made by those using and not using practices (see Tables XXVIII-XXXII). Those using 13 of the 14 practices (i.e., all except Practices #4, #6 and #8) for all groups reported had significantly more total Extension contacts the previous year than did those not using the practices. The two Atrophic Rhinitis vaccination practices, Practices #3 and #10, found users reporting the highest numbers of total Extension contacts (i.e., 16.7 and 16.6, respectively), for all groupings.

Two practices associated with lowest average numbers of total Extension contacts by users (i.e., 12.0) were Practices #6 and #8) for producers in all Extension contact groupings.

When High and Low Extension contact county producers are studied and compared, it may be seen that in most cases those using practices in both groups had used more total Extension contacts. Also, in most cases, the High Extension contact groups had had more total Extension contacts than the Low. Though the differences were not tested, they appeared to be consequential.

Thus, in most cases, those who used practices reported making significantly more total Extension contacts the previous year than non-users and High Extension contact county producers had in all cases had more total contacts than Low.

## X. RELATIONS BETWEEN AVERAGE NUMBERS OF TOTAL EXTENSION CONTACTS REPORTED BY PRODUCERS IN EXTENSION CONTACT GROUPINGS AND USE OF RECOMMENDED SWINE PRODUCTION PRACTICES

As seen in Tables XXXIII-XXXVII, the total number of total Extension contacts tended to increase as number of practices used increased. For example, while those using only one recommended practice averaged 3.7 total contacts the previous year, those averaging use of all 14 practices had a mean of 19.6 contacts. The analysis of variance showed the association to be a significant one at the .01 level of probability.

When High and Low groups are studied and compared, the almost straight-line increase of total contacts as practices used increased is most clearly evident for the Low, though increase also may be seen for the High. Also, average total number of Extension contacts for the high groupings in all but one case exceeded those of the Low.

Thus, the more total Extension contacts producers reported, the higher the average number of practices used tended to be.

TABLE XXXIII

AVERAGE NUMBERS OF TOTAL EXTENSION CONTACTS OF ALL TYPES REPORTED BY TENNESSEE SWINE PRODUCERS IN HIGH, LOW AND TOTAL MEETING COUNTY CATEGORIES USING DIFFERENT NUMBERS OF RECOMMENDED PRACTICES*

| Number of Practices Used | Total | High Meeting County Producers | Low Meeting County Producers |
|---|---|---|---|
| | Mean No. Total Contacts | | |
| None | 11.1 ( 38)* | 32.5 ( 2) | 9.9 ( 36) |
| 1 | 3.7 ( 15) | 0.0 ( 1) | 3.9 ( 14) |
| 2 | 5.8 ( 26) | 9.2 ( 5) | 5.0 ( 21) |
| 3 | 6.8 ( 52) | 13.5 (18) | 3.3 ( 34) |
| 4 | 10.2 (108) | 17.3 (34) | 6.9 ( 74) |
| 5 | 7.6 (124) | 9.7 (40) | 6.6 ( 83) |
| 6 | 12.3 (178) | 22.4 (50) | 8.4 (128) |
| 7 | 9.6 (180) | 13.3 (60) | 7.7 (120) |
| 8 | 9.8 (226) | 12.0 (66) | 8.9 (160) |
| 9 | 11.1 (215) | 14.6 (65) | 9.6 (150) |
| 10 | 13.9 (207) | 20.2 (76) | 10.2 (131) |
| 11 | 14.4 (108) | 21.1 (52) | 11.4 (116) |
| 12 | 13.7 (157) | 16.1 (52) | 12.5 (105) |
| 13 | 20.5 ( 96) | 29.3 (39) | 14.5 ( 57) |
| 14 | 19.6 ( 56) | 25.1 (27) | 14.5 ( 29) |

*Numbers in parentheses are numbers of producers.
aSignificant at the .01 level for F test.

TABLE XXXIV

AVERAGE NUMBERS OF TOTAL EXTENSION CONTACTS OF ALL TYPES REPORTED BY TENNESSEE SWINE PRODUCERS IN HIGH, LOW AND TOTAL OFFICE VISIT COUNTY CATEGORIES USING DIFFERENT NUMBERS OF RECOMMENDED PRACTICES*

| Number of Practices Used | Total | High Office Visit County Producers | Low Office Visit County Producers |
|---|---|---|---|
| | Mean No. Total Contacts | | |
| None | 11.1 ( 38)* | 20.3 (10) | 7.8 ( 28) |
| 1 | 3.7 ( 15) | 5.5 ( 2) | 3.4 ( 13) |
| 2 | 5.8 ( 26) | 8.0 ( 7) | 4.9 ( 19) |
| 3 | 6.5 ( 51) | 14.4 (10) | 2.8 ( 35) |
| 4 | 10.2 (108) | 15.1 (43) | 6.9 ( 65) |
| 5 | 7.6 (123) | 10.9 (47) | 5.6 ( 76) |
| 6 | 12.3 (178) | 22.6 (64) | 6.5 (114) |
| 7 | 9.6 (180) | 14.3 (68) | 6.7 (112) |
| 8 | 9.8 (226) | 14.6 (85) | 6.9 (141) |
| 9 | 11.1 (215) | 17.3 (89) | 6.8 (126) |
| 10 | 13.9 (207) | 22.1 (80) | 8.8 (127) |
| 11 | 14.4 (108) | 16.6 (68) | 12.9 (100) |
| 12 | 13.7 (157) | 21.6 (56) | 9.3 (101) |
| 13 | 20.5 ( 96) | 29.3 (53) | 9.7 ( 43) |
| 14 | 19.6 ( 56) | 25.6 (26) | 14.4 ( 30) |

*Numbers in parentheses are numbers of producers.
aSignificant at the .01 level for F test.

TABLE XXXV

AVERAGE NUMBERS OF TOTAL EXTENSION CONTACTS OF ALL TYPES REPORTED BY TENNESSEE SWINE PRODUCERS IN HIGH, LOW AND TOTAL TELEPHONE CALL COUNTY CATEGORIES USING DIFFERENT NUMBERS OF RECOMMENDED PRACTICES[a]

| Number of Practices Used | Total | High Telephone Call County Producers | Low Telephone Call County Producers |
|---|---|---|---|
| | Mean No. Total Contacts | | |
| None | 11.1 ( 38)* | 21.2 (10) | 7.5 ( 28) |
| 1 | 3.7 ( 15) | 4.7 ( 4) | 3.3 ( 11) |
| 2 | 5.8 ( 26) | 8.6 ( 8) | 4.5 ( 18) |
| 3 | 6.8 ( 52) | 12.9 (20) | 3.0 ( 32) |
| 4 | 10.2 (108) | 13.2 (52) | 7.4 ( 56) |
| 5 | 7.6 (123) | 11.3 (46) | 5.4 ( 77) |
| 6 | 12.3 (178) | 20.2 (76) | 6.4 (102) |
| 7 | 9.6 (180) | 14.4 (70) | 6.5 (110) |
| 8 | 9.8 (226) | 14.7 (78) | 7.2 (148) |
| 9 | 11.1 (215) | 17.0 (78) | 7.8 (137) |
| 10 | 13.9 (207) | 21.1 (79) | 9.5 (128) |
| 11 | 14.4 (168) | 17.1 (68) | 12.6 (100) |
| 12 | 13.7 (157) | 19.9 (66) | 9.2 ( 91) |
| 13 | 20.5 ( 96) | 27.8 (51) | 12.0 ( 45) |
| 14 | 19.6 ( 56) | 23.5 (28) | 15.7 ( 28) |

*Numbers in parentheses are numbers of producers.
[a]Significant at the .01 level for F test.

TABLE XXXVI

AVERAGE NUMBERS OF TOTAL EXTENSION CONTACTS OF ALL TYPES REPORTED BY TENNESSEE SWINE PRODUCERS IN HIGH, LOW AND TOTAL FARM VISIT COUNTY CATEGORIES USING DIFFERENT NUMBERS OF RECOMMENDED PRACTICES[a]

| Number of Practices Used | Total | High Farm Visit County Producers | Low Farm Visit County Producers |
|---|---|---|---|
| | Mean No. Total Contacts | | |
| None | 11.1 ( 38)* | 11.7 (28) | 9.5 ( 10) |
| 1 | 3.6 ( 15) | 4.5 (10) | 2.0 ( 5) |
| 2 | 5.8 ( 26) | 6.6 (12) | 5.1 ( 14) |
| 3 | 6.8 ( 52) | 9.6 (25) | 4.2 ( 27) |
| 4 | 10.2 (108) | 15.8 (46) | 6.0 ( 62) |
| 5 | 7.6 (123) | 11.6 (50) | 4.9 ( 73) |
| 6 | 12.3 (178) | 12.5 (76) | 12.2 (102) |
| 7 | 9.6 (180) | 12.1 (72) | 7.9 (108) |
| 8 | 9.8 (225) | 14.8 ( 8) | 7.1 (147) |
| 9 | 11.1 (215) | 18.5 (69) | 7.7 (146) |
| 10 | 13.9 (207) | 22.6 (86) | 7.7 (121) |
| 11 | 14.4 (108) | 18.2 (63) | 12.2 (105) |
| 12 | 13.7 (157) | 21.7 (44) | 10.5 (113) |
| 13 | 20.5 ( 96) | 29.9 (44) | 12.6 ( 52) |
| 14 | 19.6 ( 56) | 26.1 (22) | 15.4 ( 34) |

*Numbers in parentheses are numbers of producers.

[a]Significant at the .01 level for F test.

TABLE XXXVII

AVERAGE NUMBERS OF TOTAL EXTENSION CONTACTS OF ALL TYPES REPORTED BY TENNESSEE SWINE PRODUCERS IN HIGH, LOW AND TOTAL EXTENSION CONTACT COUNTY CATEGORIES USING DIFFERENT NUMBERS OF RECOMMENDED PRACTICES[a]

| Number of Practices Used | Total | High Total Contact County Producers | Low Total Contact County Producers |
|---|---|---|---|
| | Mean No. Total Contacts | | |
| None | 11.1 ( 38)* | 25.4 ( 8) | 7.3 ( 30) |
| 1 | 3.7 ( 15) | 6.3 ( 3) | 3.0 ( 12) |
| 2 | 5.8 ( 26) | 6.7 ( 7) | 5.4 ( 19) |
| 3 | 6.8 ( 52) | 13.0 (20) | 2.9 ( 32) |
| 4 | 10.2 (108) | 16.6 (39) | 6.5 ( 69) |
| 5 | 7.6 (123) | 11.9 (44) | 5.2 ( 79) |
| 6 | 12.3 (178) | 22.8 (63) | 6.6 (115) |
| 7 | 9.6 (180) | 15.5 (58) | 6.7 (122) |
| 8 | 9.8 (225) | 15.5 (67) | 7.3 (159) |
| 9 | 11.1 (215) | 20.3 (63) | 7.3 (157) |
| 10 | 13.9 (207) | 22.7 (76) | 8.8 (131) |
| 11 | 14.4 (168) | 26.2 (54) | 8.8 (114) |
| 12 | 13.7 (157) | 22.6 (44) | 10.2 (113) |
| 13 | 20.5 ( 96) | 34.0 (39) | 11.3 ( 57) |
| 14 | 19.6 ( 56) | 33.2 (17) | 13.7 ( 39) |

*Numbers in parentheses are numbers of producers.

[a]Significant at the .01 level for F test.

# CHAPTER V

# SUMMARY AND IMPLICATIONS

## I. SUMMARY

### Purposes

The purposes of this study were to review characteristics of swine producers in Tennessee and to compare swine producers from Higher and Lower Extension contact counties as to their use of recommended practices and numbers and types of contacts with Extension. Specific objectives included:

1. To review swine producer characteristics,
2. To identify and compare practices used and not used,
3. To comparatively study numbers of meetings,
4. To comparatively study numbers of office visits,
5. To comparatively study numbers of telephone calls,
6. To comparatively study farm visits,
7. To comparatively study numbers of total Extension contacts.

The population of this study included all the feeder pig and market hog producers in Tennessee with five or more sows in counties where swine was a major enterprise. County Extension agents in 83 counties collected the data through personal interviews with 1,878 producers and returned the completed surveys to the Agricultural Extension Education Office.

The Extension agents were instructed to interview both feeder pig and farrow-to-finish producers. The recommended sample size for each county was as follows:

1. Interview 15 feeder pigs producers for the first 50 producers and 5 additional interviews for each additional 50 producers to a maximum of 25 interviews with feeder pig producers.

2. Interview 10 farrow-to-finish producers or all farrow-to-finish producers in counties with less than 10 producers.

The "nth" number technique was used to identify producers to be surveyed. Alternates were selected to replace those producers who, for some reason, could not be interviewed. Producers with fewer than five sows were not included in the survey.

The survey instrument was developed by The University of Tennessee Agricultural Extension Specialist staff in the Swine and Extension Education sections.

The survey was conducted by agents in the participating counties through personal interviews. The completed surveys were then returned to the Extension Education Office for analysis.

The data were coded and punched on computer cards. Computations were made by The University of Tennessee Computing Center. The one-way analysis of variance F-test and the chi square test were used to determine the strength of the relationship between dependent and independent variables. The .05 probability level was accepted as significant.

## II. MAJOR FINDINGS

Major findings were classified and presented under headings related to the objectives of the study.

Characteristics of Swine Operations in 1979

1. Almost 43% of the producers farrowed 1 to 10 sows one time within a 12-month period. The number of sows farrowed once ranged from a low of 0 to a high of 350. The mean number of females farrowed once was 9.2 sows.

2. Forty-seven percent of the producers farrowed 1 to 10 sows twice within a 12-month period. The number of sows farrowed twice ranged from a low of 0 to a high of 450 sows. The mean number of females farrowed twice was 17.9 sows.

3. Almost 26% of the producers raised 61 to 120 pigs to weaning. The number of pigs raised to weaning ranged from 0 for the low to a high of 8,500 pigs. The mean number of pigs raised to weaning was 275 pigs.

4. Over 26% of the producers marketed 61 to 120 pigs as feeders. The number of pigs raised to weaning ranged from a low of 0 to a high of 7,150 pigs sold. The mean number of pigs sold as feeders was 163 pigs.

5. Over 24% of the farrow-to-finish producers sold 11 to 70 hogs for slaughter. Over 15% sold more than 500 slaughter hogs. The mean number of slaughter hogs sold was 122 while the low was 1.0 and the high was 7,400 hogs sold.

6. Over 49% of the producers were full-time farmers. The other 50.7% were part-time farmers.

7. About 43% of the farrow-to-finish producers fed their hogs in a building, while 57.3% fed their hogs on the ground.

8. More than 41% of the farrow-to-finish producers sold their hogs to a packer, while 28.4% sold to buying stations and 30.1% sold to stockyards.

9. Only 13.6 of the farrow-to-finish producers sold their hogs on a grade and yield program, while 43.1% sold by direct buying and 43.3% did not sell to a packer.

Extension Contacts Made by Producers in 1979

1. Over 38% of the swine producers did not attend any Extension meetings, 39% attended one or two meetings, and 22.3% attended three or more meetings. The mean number of meetings attended by swine producers was 1.7 while the low was 0 and the high was 65 Extension meetings attended.

2. Over 22% of the producers did not make any visits to the Extension office. About 52% of the producers made 1 to 4 visits, 22.5% made 5 to 12 visits, and 3.7% made 13 or more visits to the county Extension office. The mean number of office visits per producer was 2.9, the low was 0, and the high was 98.

3. Over 25% of the swine producers did not make any telephone calls to the Extension office, but 48% made 1 to 4 calls and 22.4% made 5 to 12 telephone calls. The mean number of telephone calls was 3.7 while the low was 0 and the high was 60 telephone calls.

4. Twenty-four percent of the swine producers did not receive any farm visits from Extension agents, but 51% received 1 to 3 visits. The mean number of farm visits received was 2.8 per producer while the low was 0 and the high was 31 farm visits.

5. Only 6.2% of the swine producers did not have any Extension contacts at all. Over 32% had 1 to 5 contacts and 46.5% had 6 to 20 contacts. The mean number of contacts was 11.1 while the low was 0 and the high was 396 total contacts.

Use of Recommended Swine Production Practices in 1979

1. Only five of the recommended swine production practices were not used by at least 50% of the producers. Those used by less than 50% included vaccination for Leptospirosis and Erysipelas, vaccination for Atrophic Rhinitis, washing sows prior to farrowing, and vaccination of pigs for Atrophic Rhinitis.

Relationships Between Swine Production Practices Used and Different Extension Contacts

1. Significantly higher percentages of High Extension meeting county producers (i.e., those attending more than 1,659 Extension meetings the previous year) than Low (i.e., those attending less than 1,659) on the average had used the 14 recommended swine production practices studied and had used 7 of the practices individually (i.e., Practices #1, #2, #3, #9, #10, #11, #12). The opposite was true on two practices (i.e., Practice #5 and #6).

2. There was no significant difference between the percentages of High Extension office visit county producers (i.e., those making more than 3,865 visits to the Extension office the previous year) and the Low (i.e., those attending less than 3,865) on the average with regard to the 14 recommended swine production practices studied. However, significantly higher percentages of the High had used seven

of the practices individually (i.e., Practices #3, #7, #9, #10, #11, #12, #13). The opposite was not true on any of the practices.

3. There was no significant difference between the percentages of High Extension telephone calls county producers (i.e., those making more than 3,741 Extension telephone calls the previous year) and Low (i.e., those attending less than 3,741) on the average with regard to the 14 recommended swine production practices studied. However, significantly higher percentages of the High had used four of the practices (i.e., Practices #2, #3, #7, #10) individually. The opposite was true on three practices (i.e., Practices #4, #6 and #8).

4. There was no significant difference between the percentages of the High Extension farm visit county producers (i.e., those making more than 2.845 Extension farm visits the previous year) and Low (i.e., those attending less than 2.845) on the average with regard to the 14 recommended swine production practices studied. However, significantly higher percentages of the High had used two of the practices individually (i.e., Practices #3 and #4). The opposite was true on four practices (i.e., Practices #4, #5, #11 and #14).

5. There was no significant difference between the percentages of the High total Extension contact county producers (i.e., those making more than 11.758 total Extension contacts the previous year) and Low (i.e., those attending less than 11.758) on the average with regards to the 14 recommended swine production practices studied. However, significantly higher percentages of the High had used two of the practices individually (i.e., Practices #3 and #13). The opposite was true on three practices (i.e., Practices #4, #5 and #14).

Relationships Between Average Numbers of Extension Contacts Reported by Producers in Extension Contact Groupings and Use of Recommended Swine Production Practices

1. In the main (i.e., excepting Practices #6, #8 and #14), those who used practices had attended significantly more Extension meetings the previous year than non-users and, of course, in all cases High Extension contact county producers had attended more meetings than Low.

2. On all but two practices (i.e., #12 and #14), those producers using practices had made significantly more visits to Extension offices the previous year than had non-users and, of course, High Extension contact county producers had made more office visits than Low.

3. On all but one case (i.e., for Practice #4), those producers using individual practices reported making significantly more telephone calls to Extension offices the previous year than non-users, while High contact county producers had made more calls than the Low.

4. On all but six practices (i.e., #4, #5, #6, #8, #13 and #14), those producers using individual practices reported receiving significantly more farm visits from agents the previous year than non-users, while High contact county producers had received more farm visits than the Low.

5. In all but three practices (i.e., #4, #6, #8), those producers using individual practices reported making significantly more total contact with Extension the previous year than non-users, while High contact county producers had more total Extension contacts than the Low.

6. The more total Extension contacts producers reported having had the previous year, the higher the average number of recommended swine production practices they tended to have been using (i.e., this was significant at the .01 level of confidence).

## III. IMPLICATIONS

Since number of Extension contacts swine producers had the previous year was positively associated with their use of more recommended practices, it is implied that Extension contacts indeed did appreciably influence producers to use practices.

Since some practices were not always significantly associated with Extension contacts of producers (e.g., the practice "Feed Dry Sows" was not significantly associated with any kind of Extension contact except number of meetings), some possible explanations might include but not be limited to the following:

1. Some practices were better adapted to teaching via the methods studied and, thus, were "easier" to teach.

2. Some practices were viewed by agents and/or swine producers as being more important to adopt and use and, thus, were easier to reach.

3. Results from use of some practices were more visible and satisfying (e.g., profitable) to agents and/or producers and, thus, were more readily adopted.

4. The adequacy of survey communications (e.g., consistency with which different agents asked different producers in different counties the same questions in the same ways) may have been a problem or factor compounding normal survey error.

# IV. RECOMMENDATIONS

## For Use of Findings

It is recommended that the swine specialist consider study findings as he makes inservice training and other plans for his educational programs. Also, agents in High Extension and Low Extension contact counties should be apprised of appropriate findings as the specialist sees fit.

## For Further Study

Studies should be conducted to determine the comparative values of swine production practices and to focus on those weightier ones seen to be more feasible and profitable on Tennessee farms. Also, studies to compare the relative effectiveness of different Extension methods and combinations of methods might prove beneficial. In addition, studies should be done to characterize High Extension and Low Extension contact counties so as to identify differences in Extension approaches, situations, etc., perhaps accounting for some of the differences noted here.

CRANESS CREST

# BIBLIOGRAPHY

BIBLIOGRAPHY


1. Arnett, Melvin H. "Influence of Selected Factors on Numbers of Office Visits and Telephone Calls Made to Wilson County Extension Office, Lebanon, Tennessee." Unpublished Master's Thesis, The University of Tennessee, Knoxville, 1975.

2. Carter, Cecil E. Summary Report Phase Two, Program Impact Evaluation: Developing Procedures for Evaluating the Impact of Extension Programs. Agricultural Extension Service, University of Tennessee, Knoxville.

3. Freeman, Pat Perkins. "Relationship Between Characteristics of Grade A Dairy Producers, Their Farming Operation and Their Use of Management Practices and The Numbers of Contacts They Had With Extension." Unpublished Master's Thesis, The University of Tennessee, Knoxville, 1978.

4. Gordon, Michael E. "Relationship Between Numbers of Contacts Haywood County, Tennessee, Feeder Pig Producers Had With the Agricultural Extension Service and the Management of Their Feeder Pig Operation." Unpublished Master's Thesis, the University of Tennessee, Knoxville 1977.

5. Jenkins, Jamieson H. "Relationship Between Selected Characteristics of Soybean Producers and Their Management Practices and Participation in the Extension Program in Fayette County, Tennessee." Unpublished Master's Thesis, the University of Tennessee, Knoxville, 1977.

6. Perry, James DeWayne. "Relationships Between Characteristics of Tennessee Swine Producers, Numbers of Contacts They Had With County Agricultural Extension Agent and Numbers of Recommended Swine Production Practices Adopted." Unpublished Master's Thesis, The University of Tennessee, Knoxville, 1980.

7. Tennessee Agricultural Statistics, 1979. Percents of the Swine Producers by Counties Using Each of 14 Pig Production Practices, 1979.

8. The University of Tennessee Extension Service. Trends in Tennessee Hog Production. College of Agriculture, Knoxville, 1978.

9. The University of Tennessee Extension Service. "Summary Tennessee Feeder Pig Sales, 1978." Mimeograph, College of Agriculture, Knoxville, 1978.

10. Wilson, Merdith C. and Alley, Gladys A. "Extension Teaching Methods" Extension Service Circular 495, Washington D.C. Federal Extension Service, U.S. Department of Agriculture, 1955.

11. Yabaya, Solomon Ahyuwa. "Relationship Between the Frequency of Contacts Corn Producers in Tennessee Had With County Extension Agents and Their Adoption of Eight Corn Production Practices." Unpublished Master's Thesis, The University of Tennessee, Knoxville, 1978.

APPENDICES

CRANES CREST

APPENDIX A

List of Counties by District and Numbers of Producers

| District I (18 Co.; 529 Prod.) | | District II (19 Co.; 414 Prod.) | |
|---|---|---|---|
| Carroll | (35) | Bedford | (25) |
| Chester | (24) | Davidson | (15) |
| Crockett | (25) | Giles | (25) |
| Decatur | (34) | Hickman | (20) |
| Fayette | (30) | Houston | (19) |
| Gibson | (35) | Lawrence | (27) |
| Hardeman | (34) | Lewis | (20) |
| Hardin | (35) | Lincoln | (25) |
| Haywood | (30) | Marshall | (23) |
| Henderson | (35) | Maury | (20) |
| Henry | (28) | Montgomery | (25) |
| Lauderdale | (30) | Perry | (17) |
| Madison | (27) | Robertson | (23) |
| McNairy | (30) | Rutherford | (22) |
| Obion | (25) | Stewart | (20) |
| Shelby | (16) | Sumner | (21) |
| Tipton | (30) | Wayne | (24) |
| Weakley | (26) | Williamson | (23) |
| | | Wilson | (20) |

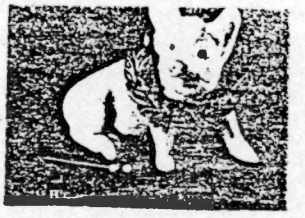
| District III (13 Co. 208 Prod.) | |
|---|---|
| Bledsoe | (25) |
| Bradley | (15) |
| Coffee | (25) |
| Franklin | (34) |
| Grundy | (18) |
| Hamilton | (18) |
| McMinn | ( 8) |
| Meigs | ( 3) |
| Monroe | (12) |
| Moore | (14) |
| Polk | ( 9) |
| Rhea | (12) |
| Van Buren | (15) |

| District IV (15 Co. 341 Prod.) | |
|---|---|
| Cannon | (25) |
| Clay | (20) |
| Cumberland | (20) |
| DeKalb | (25) |
| Fentress | (25) |
| Jackson | (26) |
| Macon | (25) |
| Morgan | (15) |
| Overton | (25) |
| Pickett | (20) |
| Putnam | (25) |
| Scott | (14) |
| Smith | (25) |
| Trousdale | (20) |
| White | (31) |

District V (18 Co.; 350 Prod.)

| | |
|---|---|
| Anderson | (14) |
| Blount | (20) |
| Campbell | (10) |
| Claiborne | (15) |
| Cocke | (36) |
| Grainger | (15) |
| Greene | (25) |
| Hamblen | (34) |
| Hancock | (15) |
| Hawkins | (15) |
| Jefferson | (27) |
| Johnson | (13) |
| Knox | (20) |
| Loudon | (14) |
| Roane | (14) |
| Sevier | (28) |
| Sullivan | (15) |
| Washington | (20) |

# APPENDIX B



The University of Tennessee
Agricultural Extension Service

1979 SWINE SURVEY

Feeder Pig and Slaughter Hog Production

Name of Producer_____ Address_____

1 (1) Card Number

___ ___ ___ (2) (3) (4) County_____ Date_____

0 0 (5) (6) Respondent Number

Part I: Pig Production (See Instructions on Last Page)
Note: Part I is to be completed for both the feeder pig producers and the farrow-to-finish producers.

A. General

1. Over the past 12-months how many females actually farrowed:

___ ___ ___ (7) (8) (9) a. Once? (Actual number)

___ ___ ___ (10) (11) (12) b. Twice? (Actual number)

___ ___ ___ ___ (13) (14) (15) (16) 2. Over the past 12-months, how many pigs were raised to weaning? (Actual number)

3. How many pigs were marketed:

___ ___ ___ ___ (17) (18) (19) (20) a. As feeders? (Actual number)

___ ___ ___ ___ (21) (22) (23) (24) b. For slaughter? (Actual number)

___ ___ ___ (25) (26) (27) 4. At what weight do you normally sell your pigs? (Actual weight)

___ (28) 5. Are you a full-time or a part-time farmer? (1 = Full time, 2 = Part time)

*Coding Instructions
a) Fill each column (e.g. 0 (7) 1 (8) 2 (9)) with a numeral and right justify
b) A zero (0) in all columns (e.g. 0 (7) 0 (8) 0 (9)) = none
c) A nine (9) in all columns (e.g. 9 (7) 9 (8) 9 (9)) = does not apply or don't know

TAEE 416I
Revised 9-79

77

B. Lead Questions and Recommended Pig Production Practices
Note: Agent should record producer's response to the Lead question in the blank provided, then decide whether or not the recommended practice was followed.

1. Lead questions for Practice #1: a) Do you crossbreed your swine herd? ___ no, ___ yes b) How many breeds do you use? _____ breeds

_____ (29) Practice #1: Follow a crossbreeding program (1 = no, 2 = yes)

2. Lead questions for Practice #2: a) Do you vaccinate sows for Leptospirosis? ___ no, ___ yes b) How often do you vaccinate sows for Leptospirosis? _____ times/ year

_____ (30) Practice #2: Vaccinate sows twice per year for Leptospirosis (1 = no, 2 = yes)

3. Lead questions for Practice #3: a) Do you vaccinate sows for Erysipelas? ___ no, ___ yes b) How often do you vaccinate sows for Erysipelas? _____ times per year

_____ (31) Practice #3: Sows vaccinated twice per year for Erysipelas (1 = no, 2 = yes)

4. Lead questions for Practice #4: a) Do you vaccinate sows for Atrophic Rhinitis? ___ no, ___ yes b) How often do you vaccinate sows for Atrophic Rhinitis? _____ times per year

_____ (32) Practice #4: Vaccinate sows twice per year for Atrophic Rhinitis (1 = no, 2 = yes)

5. Lead questions for Practice #5: a) How many pounds of feed per day are fed to dry sows during summer months? _____ pounds per day b) How many pounds of feed per day are fed to dry sows during winter months? _____ pounds per day

_____ (33) Practice #5: Feed dry sows 4 to 5 pounds per day in the summer and 6 to 7 pounds per day in winter (1 = no, 2 = yes)

6. Lead questions for Practice #6: a) Do you worm sows before breeding? ___ no, ___ yes b) Do you worm sows before farrowing? ___ no, ___ yes

_____ (34) Practice #6: Worm sows before breeding and again before farrowing (1 = no, 2 = yes)

7. Lead questions for Practice #7: a) Do you treat sows for Lice prior to farrowing? ___ no, ___ yes b) How many times do you treat sows for Lice before farrowing? _____ Treatments before farrowing

_____ (35) Practice #7: Treat sows twice for Lice before each farrowing (1 = no, 2 = yes)

8. Lead question for Practice #8: a) Do you wash your sows before each farrowing? ___ no, ___ yes

_____ (36) Practice #8: Wash sows prior to each farrowing (1 = no, 2 = yes)

9. Lead questions for Practice #9: a) Do you increase the amount of feed fed to pregnant sows 2 to 3 weeks before farrowing? ___ no, ___ yes b) How many pounds of feed are given sows each day 2 to 3 weeks prior to farrowing? _____ pounds feed per day

_____ (37) Practice #9: Increase the amount of feed fed pregnant sows 2 to 3 weeks before farrowing (1 = no, 2 = yes)

10. Lead questions for Practice #10: a) Do you clip each pig's needle teeth? ___ no, ___ yes b) When do you clip needle teeth? _____ Days old

_____ (38) Practice #10: Clip pig's needle teeth (1 = no, 2 = yes)

11. Lead questions for Practice #11: a) Do you vaccinate pigs for Atrophic Rhinitis? ___ no, ___ yes b) How many times are pigs vaccinated for Atrophic Rhinitis? _____ times

_____ (39) Practice #11: Vaccinate pigs twice for Atrophic Rhinitis (1 = no, 2 = yes)

12. Lead question for Practice #12: How many pounds of feed per day are fed to nursing sows? _____ pounds/day

_____ (40) Practice #12: Nursing sows fed recommended pounds of feed per day (1 = no, 2 = yes)

13. Lead question for Practice #13: Are pigs farrowed in confinement given Iron Shots? ___ no, ___ yes

_____ (41) Practice #13: Give Iron Shots within three (3) days to pigs farrowed in confinement (1 = no, 2 = yes)

14. Lead question for Practice #14: Do you Creep Feed your pigs? ___ no, ___ yes

(42) Practice #14: Feed pigs an 18 to 20% Creep Feed (1 = no, 2 = yes)

15. Lead question for Practice #15: Do you thoroughly clean the farrowing quarters after sows are removed? ___ no, ___ yes

(43) Practice #15: Thoroughly clean farrowing quarters after sows are removed (1 = no, 2 = yes)

16. Lead question for Practice #16: Do you disinfect farrowing quarters after sows are removed? ___ no, ___ yes

(44) Practice #16: Disinfect farrowing quarters after sows are removed (1 = no, 2 = yes)

C. Feeding Sows

1. Feeding Dry Sows

(45) (46) a. What % protein do you feed dry sows (Actual %)

(47) (48) b. How many pounds of feed are fed each sow per day? (Actual pounds)

2. Feed formulations for Dry Sows: Do you normally feed:

(49) a. Commercial Sow Feed? (1 = no, 2 = yes)

(50) b. Commercial slaughter hog feed? (1 = no, 2 = yes)

(51) c. Mixture of ground corn and sow supplement? (1 = no, 2 = yes)

(52) d. Mixture of ground corn and slaughter hog supplement? (1 = no, 2 = yes)

(53) e. Whole corn and sow supplement? (1 = no, 2 = yes)

(54) f. Whole corn and slaughter hog supplement (1 = no, 2 = yes)

CRANES CREST

3. Feeding Lactating Sows:

___ ___ (55) (56) a. What % protein do you feed? (Actual %)

___ ___ (57) (58) b. How many pounds of feed are fed? (Actual pounds)

4. Feed formulations for Lactating Sows

Do you normally feed:

___ (59) a. Commercial Sow Feed (1 = no, 2 = yes)

___ (60) b. Commercial Slaughter Feed (1 = no, 2 = yes)

___ (61) c. Mixture of Ground Corn and Sow Supplement (1 = no, 2 = yes)

___ (62) d. Mixture of Ground Corn and Slaughter Hog Supplement (1 = no, 2 = yes)

___ (63) e. Whole Corn and Sow Supplement (1 = no, 2 = yes)

___ (64) f. Whole Corn and Slaughter Hog Supplement (1 = no, 2 = yes)

D. Pig Production Problems

1. During the past 12-months, have each of the following been a problem in the production of feeder pigs:

___ (65) a. Pig scours (1 = no, 2 = yes)

___ (66) b. Small litters born (1 = no, 2 = yes)

___ (67) c. Uneven weight of pigs at birth (1 = no, 2 = yes)

___ (68) d. Sows fail to milk (1 = no, 2 = yes)

___ (69) e. Downer sows (1 = no, 2 = yes)

___ (70) f. Sows fail to breed (1 = no, 2 = yes)

CRANES CREST

_____ (71) 2. Would you be interested in attending a swine production meeting this winter? (1 = no, 2 = yes)

2 (1) Card Number

___ (2) ___ (3) ___ (4) County

0 (5) 0 (6) Respondent Number

Part II: Slaughter Hog Production - from Weaning to Market

Note: Part II is to be completed for the farrow to finish producers only (e.g. this excludes producers who finish purchased pigs only and those who produce feeder pigs only)

A. General

_____ (7) 1. Do you feed hogs in a building or on the ground? (1 = Building, 2 = Ground, 3 = Don't Feed-out any hogs)

_____ (8) 2. How do you process your hog feed? (1 = purchased, not processed on farm, 2 = Tractor grinder-mixer, 3 = Stationary mill)

_____ (9) 3. If feed is processed on the farm, what feeds are used in the mixture? (1 = Purchased - not processed on the farm, 2 = Grain, Soybean Oil Meal and a premix, 3 = Grain and a commercian supplement, 4 = Whole Corn and supplement free choice)

___ (10) ___ (11) ___ (12) 4. At what weight do you sell your slaughter hogs? (Actual pounds)

_____ (13) 5. How do you market your hogs? (1 = Packer, 2 = Hog buying station, 3 = Stock yard)

_____ (14) 6. If slaughter hogs are sold to a packer, do you sell by direct buying or on the basis of grade and yield? (1 = Don't sell to packer, 2 = Direct buying, 3 = Grade and yield

B. Lead Questions and Recommended Slaughter Hog Production Practices

1. Lead question for Practice #1: Do you worm your pigs a second time? ___ no, ___ yes

_____ (15) Practice #1: Worm pigs during finishing period (1 = no, 2 = yes)

2. Lead question for Practice #2: What percent protein do you feed the pigs from weaning to 125 pounds? _____ Percent Protein

_____ (16) Practice #2: Feed pigs 16 percent protein from weaning to at least 100 - 125 pounds (1 = no, 2 = yes)

3. Lead questions for Practice #3: a) Do you treat pigs for Lice after weaning age? ___ no, ___ yes b) How often do you treat them? _____ Times

_____ (17) Practice #3: Treat weaned pigs for Lice (1 = no, 2 = yes)

4. Lead question for Practice #4: Do you feed antibiotics during the finishing period? ___ no, ___ yes

_____ (18) Practice #4: Feed Antibiotics during the finishing period (1 = no, 2 = yes)

5. Lead question for Practice #5: How many finishing hogs do you have for each feeder opening? _____ Hogs per feeder opening

_____ (19) Practice #5: Provide one feeder opening for each five (5) finishing hogs (1 = no, 2 = yes)

C. Number of Contacts Feeder Pig and Slaughter Hog Producers Had With Extension Agents

Note: This section is to be completed for each swine producer interviewed in this survey (i.e. the feeder pig producers and the slaughter hog producers)

_____ _____ (20) (21) 1. How many Extension meetings of all types did you attend during the previous 12-months? (Actual number)

_____ (22) 2. How many Extension swine meetings did you attend during the past 12-months? (Actual number)

_____ _____ (23) (24) 3. How many visits did you make to the Extension office during the past 12-months? (Actual number)

_____ _____ (25) (26) 4. How many telephone calls did you make to the Extension office during the past 12-months? (Actual number)

_____ _____ (27) (28) 5. How many farm visits did you receive from Extension agents during the past 12-months? (Actual number)

## References for Practices

Part I:

Practice #1 - See Bulletin 489, Crossbreeding Systems in Commercial Swine Production, 1972, J. B. McLaren and H. J. Smith. Also, see Tennessee Farm and Home Science, "Rotational Crossbreeding in Commercial Swine Production" by J. B. McLaren and H. J. Smith, Progress Report Number 66, 1968.

Practice #2, #3 - See Memeograph "Sow Feeding".

Practices #4, #5, #6, #8, #9, #10, #12, #13, #14, #15, #16 - See Extension Publication 669 (Reprint), 1976; Also see Memeograph "Sow Feeding" and Extension Publication 742, "Dollars or Disease - Tips on Parasite Control for Swine".

Practice #7 - See "Tennessee Pork Industry Handbook".

Part II:

Practice #1, #2, #3 - See Extension Publication 570 "4-H Swine Handbook", 1969. Also see "Tennessee Pork Industry Handbook".

Practice #4, #5 - See Publication 814 "Management of Purchased Pigs". Also see "Tennessee Pork Industry Handbook".

## Instructions for the 1979 Survey of Feeder Pig Producers and Slaughter Hog Producers

1. Date Due: December 15, 1979

2. Disposition: Mail all completed survey forms to the Associate District Supervisor of Agricultural Programs.

3. Survey Population: Feeder pig producers and market hog producers in Tennessee who have at least five (5) sows.

4. Counties to be Surveyed: All Tennessee counties.

5. Sample Size: Each county will interview both feeder pig producers and the slaughter hog producers. The sample size for each audience is as follows:
   a). Slaughter Hog Producers: Ten (10) or all slaughter hog producers in counties with less than 10.
   b). Feeder Pig Producers:
      1. Counties with less than 50 producers interview 15.
      2. Counties with 50 to 100 producers interview 20.
      3. Counties with over 100 producers interview 25.

6. Sampling Procedure:
   a). Use an up-to-date listing of all feeder pig producers in the county who have at least five (5) sows and a separate listing of all slaughter hog producers with at least five sows.
   b). Use the Nth number technique to identify 13 slaughter hog producers (the last three producers will be used as alternates). Also determine the appropriate number (e.g. see above) of feeder pig producers to be interviewed then use the Nth number technique to identify specific producers to be interviewed. Be sure to identify individual feeder pig producers to serve as alternates. Alternates should only be used to replace those producers who for good reasons can't be interviewed.

# VITA

George Osikorobia was born on August 15, 1955, to Mr. and Mrs. Osikorobia Uguh, Ufuoma, Ughelli. He began his formal education at Ofuoma Roman Catholic Elementary School and attended St. Peters Clevers College High School at Aghalokpe and graduated in 1974.

He attended Nigerian Institute of Oil Palm Research and completed the requirements for a diploma in Oil Palms Production in 1976.

He also attended the Florida A&M University, Tallahassee, in 1977 and completed the requirements for a Bachelor of Science degree in Agricultural Business in 1981. Along with this, he was a member and president of Agricultural Business Club and International Student Club.

He was employed as an Assistant Agricultural Officer in Agbarah Farms in Ibru Organization in July of 1974 to August 1977.

In the spring of 1981, he was admitted into the Graduate School of The University of Tennessee, Knoxville, Department of Agricultural Extension Education.

CRANES CREST