To the Graduate Council:

I am submitting herewith a thesis written by De Wayne L. Webb entitled "Amounts of Tennessee Extension Staff Time Planned and Expended and Clientele Contacts with Selected Audiences and Teaching Methods, Fiscal Years 1972 and 1975, and Possible Implications for 1970 Statewide Extension Swine Production Practice Checklist Survey and Educational Program." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Agricultural Extension.

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AMOUNTS OF TENNESSEE EXTENSION STAFF TIME PLANNED AND EXPENDED AND CLIENTELE CONTACTS WITH SELECTED AUDIENCES AND TEACHING METHODS, FISCAL YEARS 1972 AND 1975, AND POSSIBLE IMPLICATIONS FOR 1970 STATEWIDE EXTENSION SWINE PRODUCTION PRACTICE CHECKLIST SURVEY AND EDUCATIONAL PROGRAM

A Thesis

Presented for the

Master of Science

Degree

The University of Tennessee, Knoxville

CRANE CREST

De Wayne L. Webb

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DEDICATION

This thesis is dedicated to my parents, Mr. and Mrs. Zollie P. Webb, and my brother Ruben C. Webb. Also, a special dedication to my wife, Charlotte Grant Webb. Their prayers and constant encouragement made many of my accomplishments possible.

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ABSTRACT

Information from the 1970 and 1975 Tennessee Swine Production Practice Checklist Surveys was studied together with data from the Tennessee Extension Management Information System, TEMIS, (i.e., agent days planned and expended and clientele contacts made) for Fiscal Years 1972 and 1975 to determine whether there were possible implications for the survey and Extension's educational program.

The classification of swine survey practices and TEMIS primary subjects was assumed to be acceptable for this study. Data were considered for Extension districts and teaching methods.

From the 1975 Tennessee Swine Production Survey, it was found that the producer reported state average weaning (8 weeks) weight, for 527 producers randomly interviewed regarding Tennessee swine, was 40 pounds per pig.

Recommended practices under Primary TEMIS Subject One, "Swine Records"; Subject Two, "Swine Pests"; Subject Three, "Swine Housing and Structures"; and Subject Four, "Swine Management"; were all used by less than 60 percent of the producers interviewed, based on 1970 data. This suggested the need to emphasize them more in Extension's swine educational program as priority or weaker areas.

Recommended practices under Primary TEMIS Subject Five, "Swine Feeding and Nutrition"; and Subject Six, "Swine Breeding and Production", were used by more than 60 percent of the producers interviewed based on 1970 data.

There were decreases in total agent days planned, total agent days expended and total clientele contacts made on swine subjects between FY 1972 and FY 1975.

Of Extension methods studied, increases in numbers and percents of agent days expended for swine Extension work varied from district to district but were greatest for Individual Teaching Methods; while the largest decrease occurred for Mass Media.

Trends in numbers and percents of clientele contacts made also varied from district to district, but the greatest increase occurred in Group Teaching Methods, with the greatest decrease occurring in All Other Teaching Methods.

Indications were that the findings of the 1970 TSPCS were not reflected in the planning of future swine educational programs. Further study would be necessary, however, to determine if other factors, not identified in this study, influenced the manner in which agent time was planned and expended. Recommendations were included.

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CHAPTER I

INTRODUCTION

I. STUDY BACKGROUND

One of the important project areas of the Tennessee Agricultural Extension Service has long been agricultural production and natural resources (8:1).* The primary task of the Extension Service is that of providing informal education in areas related to agriculture and home economics. Some 19 agricultural work areas (e.g., swine production, beef, dairy), 5 home economics areas, 5 youth development areas and the community resource development area are regularly given emphasis, when appropriate, in Tennessee counties (1:1).

Needs of special target audiences, in the case of the present study swine producers, are determined as a basis for developing Extension programs in counties where swine or some other class of livestock or enterprise may provide a major source of agricultural income.

Since a large number of Tennessee farmers raise swine, this work area has been given priority educational emphasis throughout the years.

Extension's charge in work with swine producers is like that in other areas: to diffuse research verified facts and encourage adoption of the same (8:1). This has involved agent time and contacts devoted

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*Number in parentheses refer to reference in the alphabetically listed Bibliography; while numbers after colons are page numbers.

to, among other swine subject areas, swine records, swine pests, swine housing and structures, swine management, swine feeding and nutrition, swine breeding and production, and other swine subjects. Individual, groups and mass methods have all been used in their appropriate place.

II. PURPOSE OF THE STUDY

The major purpose of this study was to determine possible implications of the 1972 and 1975 Tennessee Extension Management Information System (TEMIS) data for the 1970 Statewide Swine Practice Checklist Survey and Extension's educational program.

Specific objectives included the following:

1. To study Swine Practice Checklist Survey and Tennessee Extension Management Information System (TEMIS) data together in a meaningful, prioritized way.

2. To study shifts in time planned and expended in FY 1972 and FY 1975 by Tennessee Agents doing swine educational work in the State Extension Districts in order to try to measure the impact of the 1970 Statewide Swine Practice Checklist Survey based on changes reflected in the 1975 Survey.

3. To study shifts in contacts made in FY 1972 and FY 1975 by Tennessee Agents doing swine educational work in the State Extension Districts and to try to measure any shift brought about by the 1970 Swine Practice Checklist Survey based on changes reflected in the 1975 Survey.

4. To study Extension methods used in FY 1972 and FY 1975 and shifts in methods used and consider the relative effectiveness of the methods.

III. DEFINITIONS OF TERMS

Certain terms are used frequently throughout the study and will be defined below.

Swine Producers. This refers to individuals making all or part of their farming income from the production of pork.

Individual Contacts. Individual contacts refers to farm and home visits by an Agent, personal letter, telephone calls, and other on-site visits to discuss swine or other subject matter with an individual.

Group Contacts. This refers to group meetings such as meetings or farm test, method, field, and result demonstrations; conferences; field days; workshop meetings; and tours.

Mass Media. Mass media include radio, television, news stories, circular letters, exhibits, posters, publications, and visuals.

Other. This teaching method category accounts for Extension Reporting, Planning, Evaluation, and Non-applicable items.

Tennessee Swine Practice Checklist Survey (TSPCS). Refers to the *1970* and *1975* surveys used for the study.

Tennessee Extension Management Information System (TEMIS). TEMIS provides a vehicle for the flow of management information to be used in program planning, evaluation, and reporting. TEMIS is designed to provide information for purposes of improved decision making and program accountability.

Concern Level. A concern level was set for use in this study. It is generally considered that if a research-verified swine or other

practice is being used by 60 percent or less of swine producers or others, it should be considered of educational concern (e.g., concern level).

All Other Swine Subjects. This refers to swine subjects listed in FY 1972 and FY 1975. TEMIS Handbooks that were not related to the six priority (i.e. Swine Records, Swine Pests, Swine Housing and Structures, Swine Management, Swine Feeding and Nutrition and Swine Breeding and Production) swine subjects used in relation to recommended swine practices.

CHAPTER II

REVIEW OF LITERATURE

A search of relevant literature disclosed the following items relating directly to the present study.

I. STUDIES RELATING TENNESSEE EXTENSION MANAGEMENT INFORMATION SYSTEM (TEMIS) AND PRACTICE CHECKLIST SURVEY DATA

A 1977 Tennessee study conducted by Allen (1) was found to have related TEMIS data to practice checklist survey results. This study was carried out in the soybean work area. It related Agent time planned and expended and contacts made in FY 1972 and FY 1975 to information from the 1972 Statewide Tennessee Soybean Practice Checklist Survey (TSPCS). Allen found little relation between weak soybean subject areas that were identified, and time planned and expended by Agents.

The Downen study (4) was related to TEMIS data and how to do with the influence of the 1971 Statewide Tennessee Extension Foods and Nutrition Survey on amounts of staff time planned and expended, and clientele contacts with selected audiences and teaching methods, FY 1972 and FY 1974. Downen's findings indicated that increases in agent days planned and expended, and contacts made by agents from FY 1972 to FY 1974 were minimal in the subjects of Health and Food Preservation (e.g., weak subject areas needing greatest nutritional program emphasis). Therefore, it appeared that the 1971 Food and

Nutrition Survey had little influence that other factors were more influential or that systems and/or data available did not effectively measure or permit proper relation to test the influence of the survey.

II. STUDIES OF SWINE PRACTICES USED IN TENNESSEE

The 1972 Huffines study (5) was the only relevant work available that dealt with feeder pig production in Tennessee. The purposes of this study were: (1) to determine certain characteristics of commercial feeder pig producers in Scott County, Tennessee; (2) to determine which of a list of recommended management practices were being used by the feeder pig producers; (3) to determine the scope of the commercial feeder pig production program; and (4) to determine the sources of information being used by Scott County feeder pig producers. He found that 31 commercial feeder pig producers in the county kept an average of 16 sows and had a farm size of 109 acres. Those reporting marketing of more pigs per litter had smaller farms, less cropland, fewer sows, were older, had less formal education, and used more recommended swine production practices than others. Sources of useful information included magazines, newspapers, radio, the Extension Service, neighbors, feed dealers and livestock buyers.

III. STUDIES RELATING TO TEMIS RESEARCH AND/OR PRACTICE CHECKLIST SURVEYS

Carey (3) made a study in 1975 concerned with the problem of determining the situation in Tennessee regarding the practice checklist

approach to establishing educational priorities and evaluating progress. Data for this study was collected from 28 selected Tennessee County Extension Leaders across the state. The major findings of the study were found to be as follows: (1) the majority of Extension Leaders were following recommended Tennessee Agricultural Extension Service procedures for conducting practice checklist surveys; (2) the majority of Extension Leaders felt that the survey data obtained was accurate; (3) the majority of Extension Leaders recommended no change in the survey instrument content and felt that change in practice use by producers was a good criterion measure for purposes of planning and evaluating the County Extension program; (4) the majority of Extension Leaders felt that practice checklist data were useful for purposes of Extension planning and evaluation; and (5) the majority of Extension Leaders considered the overall practice checklist approach to planning and evaluation to be practical, pertinent, functional, accurate, valid, and reliable.

Henderson (5) studied the Tennessee Extension Management Information System (TEMIS) with emphasis on the weekly activity report form and reporting. No significant changes were recommended in the form, though agents surveyed agreed that numbers recorded in the audience and time expended fields were not accurate. It also was felt that subject codes and purpose codes were most difficult and least accurate.

The present study is the first of its kind to relate TSPCS and TEMIS data. Emphasis will be placed on percents of swine producers using practices, weaker practices identified, TEMIS subjects and agent time planned and devoted to swine production and contacts made using various methods.

CHAPTER III

METHODS AND PROCEDURES

The primary sources of information for this study were the 1970 and 1975 Tennessee Swine Production Surveys (see Appendix A); and TEMIS data for FY 1972 and FY 1975. The 1970 and 1975 Statewide Swine Production Surveys summarized practices of Tennessee swine producers in regard to their use of the 23 recommended swine production practices. The information received from these surveys allowed the Extension personnel to determine the subject areas most in need of improvement. The statewide surveys were conducted during FY 1970 and FY 1975. In 1970, 918 adult swine producers were randomly surveyed, basically 30 producers per county, statewide including 180 in District I; 222 in District II; 220 in District III; 180 in District IV; and 116 in District V. As for 1975, 732 adult swine producers were randomly surveyed, basically 20 producers per county, statewide including 180 in District I; 154 in District II; 154 in District III; 127 in District IV; and 117 in District V.

Each of the 23 recommended swine production practices was classified under one of six major TEMIS swine subjects, namely: Swine Records, Swine Pests, Swine Housing and Structures, Swine Management, Swine Feeding and Nutrition, and Swine Breeding and Production. These subjects were taken from the 1972 and 1975 TEMIS Handbooks (6) (7).

Since all of the recommended practices were considered to be equally important for study purposes a subtotal was calculated for

each of the six major subjects, by averaging the practices under each subject, according to the percentage of swine producers using the recommended practices, as shown in the 1970 TSPCS. The six subjects were then arranged in descending order of educational priority, that is from least used (i.e., weakest) practice to most used (i.e., strongest) practice.

It was arbitrarily decided that any practice that was used by 60 percent or less of the swine producers, in a given audience, would be considered below the concern level and therefore a "weak practice"; any practice used by more than 60 percent of the producers, in a given audience, would be above the concern level, and therefore a "strong practice."

A miscellaneous category was added, as Subject 7 and entitled "All Other Swine Subjects" to act as a "catch-all" category.

Data were then collected, from TEMIS computer printouts, of Agent Days Planned, Agent Days Expended, Contacts Made and Teaching Methods used for swine subjects. Teaching Methods were divided into one of the four categories: (1) Individual, (2) Group, (3) Mass Media, and (4) All Other Teaching Methods.

This study evaluated the data gathered, from TEMIS printouts, in terms of, numbers and percents of agent days planned, numbers and percents of agent days expended, numbers and percents of contacts made, and teaching methods used. Raw data appear in Appendix C.

Calculations of increases or decreases in actual number of Agent days planned and allocated to swine subjects were made by subtracting FY 1975 totals from FY 1972 totals. These resulting

figures represent absolute changes from 1972 and 1975.

Likewise, increases or decreases, in relative percents of time planned and spent, on the subjects studied, were made by subtracting FY 1975 percents from those for FY 1972. These figures represent relative shifts in percents of time and are not comparable with data showing actual changes in numbers of Agent days planned, numbers of Agent days expended, or numbers of contacts made.

CHAPTER IV

FINDINGS OF THE STUDY

The findings of this study will be discussed for districts and the State as they relate to the following: (1) Educational needs of Tennessee swine producers, 1970 and 1975, (2) Shifts in agent days *planned* and *expended* doing swine Extension work between Fiscal Year (FY) 1972 and 1975, (3) Shifts in *contacts made* with swine producers in FY 1972 and FY 1975, (4) Shifts in agent days *devoted* to swine Extension work using various teaching methods, and (5) Shifts in *contacts made* by agents with swine producers using the teaching methods studied.

I. EDUCATIONAL NEEDS OF TENNESSEE SWINE PRODUCERS

Twenty-three recommended practices included in the 1970 and 1975 Tennessee Swine Production Survey were grouped according to six Tennessee Extension Management Information System (TEMIS) primary subjects of Swine Records, Swine Pests, Swine Housing and Structures, Swine Management, Swine Feeding and Nutrition, and Swine Breeding and Production. A seventh catch-all category included all other swine subjects. Table 1 lists these subjects in descending order of educational priority need for Adult Tennessee Swine Producers. Priority needs were determined based on weak practices (i.e. those used by fewer than 60 percent of the producers) identified by the 1970 Tennessee Swine Practice Checklist Survey (TSPCS). Data from the

TABLE 1

RECOMMENDED SWINE PRODUCTION PRACTICES ARRANGED IN DESCENDING ORDER OF EDUCATIONAL PRIORITY BASED ON 1970* AND 1975 TENNESSEE SURVEYS IN 48 SELECTED COUNTIES ACCORDING TO PERCENTAGES OF INTERVIEWEES USING PRACTICES *IN THE STATE* AND CHANGES--SHOWING 1972 FY AND 1975 FY TEMIS PRIMARY SUBJECT RELATIONS

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken		Change
	1970 (N=918)	1975 (N=732)	1970-1975 (+ or -)
1. Swine Records (2349) (1425)**			
(a) Pigs were systematically identified soon after birth	13	9	-4
(b) Lifetime sow records were kept[a]	14	21	+7
Subtotal	14	15	+1
2. Swine Pests (2341) (1405, 1411)			
(a) Sows were vaccinated for leptospirosis[a]	26	40	+14
(b) Sows were wormed 3-14 days before due to farrow[a]	23	46	+23
(c) Appropriate methods were used to prevent pig anemia	60	69	+9
Subtotal	36	52	+16
3. Swine Housing and Structures (2323, 2357, 1431)			
(a) Farrowing facilities were adequate in terms of recommended standards[a]	46	55	+9
Subtotal	46	55	+9
4. Swine Management (2331) (1415)			
(a) All hogs, other than those farrowing were kept out of the farrowing quarters[a]	75	82	+7

TABLE 1 (Continued)

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken 1970 (N=918)	1975 (N=732)	Change 1970-1975 (+ or -)
(b) Sows were brought into the farrowing quarters at least 3 days before they were due to farrow[a]	72	79	+7
(c) Each sow was carefully washed before bringing her into the clean farrowing quarters[a]	18	21	+3
(d) As pigs were born, they were dried off, any membranes removed from the nostrils, and help was provided in nursing[a]	58	61	+3
(e) Farrowing quarters were kept well-ventilated, clean and dry[a]	59	77	+18
(f) Pigs were castrated before 4 weeks of age	66	83	+17
(g) The farrowing facilities were thoroughly cleaned and disinfected after sows were removed[a]	40	50	+10
(h) At least a two-week period was maintained between the time the farrowing house was cleaned and disinfected and the re-use of the same facilities for farrowing[a]	44	63	+19
Subtotal	54	65	+11
5. Swine Feeding and Nutrition (2319) (1417)			
(a) Recommended feeding practices were followed for pregnant females on pasture[a]	69	72	+3
(b) Recommended feeding practices were followed for pregnant females off pasture[a]	63	71	+8

TABLE 1 (Continued)

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken 1970 (N-918)	1975 (N=732)	Change 1970-1975 (+ or -)
(c) Concentrates were reduced or bulky feed supplied when sows were placed in farrowing quarters continuing to 3 days after farrowing[a]	62	71	+9
(d) After 3 post-farrowing days on a bulky ration, sows were fed a gradually increased ration to roughly 10 lbs. in 7-14 days[b]	70	76	+6
(e) Pigs were provided with an 18-20% creep feed during the period from 1-2 weeks of age through weaning[a]	80	89	+9
Subtotal	69	76	+7
6. Swine Breeding and Production (2303, 2344) (1420)			
(a) Recommended procedures were used for replacing herd sows.	63	71	+8
(b) Recommended procedures were used for herd sires[a]	67	72	+5
(c) A recommended crossbreeding program was used[a]	71	78	+7
(d) Gilts were bred after attaining approximately 8 months of age and a weight of about 250 lbs[a]	79	83	+4
Subtotal	70	76	+6
Grand Total	54	63	+9

*Practices are stated in terms of the 1970 swine survey.

TABLE 1 (Continued)

**Numbers in parenthesis after subjects are TEMIS Code Numbers for 1972 and 1975, respectively

[a]Significantly related, in 1975, to production in weight of pigs, at 8 weeks, (F test) at the .01 level of probability.

[b]Significantly related, in 1975, to production in weight of pigs, at 8 weeks, (F test) at the .05 level of probability.

SOURCE: Cecil E. Carter, Jr., Table II. Summaries of 1970 and 1975 Surveys of Swine Producers in Selected Tennessee Counties, Tennessee Agriculture Extension Education Section, Knoxville. (See Appendix B.)

1975 TSPCS also were added (see Appendix A). Practices were grouped in bundles related to TEMIS subjects for FY 1972 and 1975.

Swine production data from the 1975 TSPCS disclosed that (see Appendix A):

1. District I Agents had interviewed the largest number of producers with 180 (24.6 percent), Districts II and III had 154 each (21 percent), District IV had 127 interviewees (17.3 percent) and District V had 117 (16.1 percent) for a State total of 732 swine producers.

2. District IV producers averaged the heaviest weaning (8 weeks) pig weights with 41.6 pounds, District III was next with 41.0 pounds, followed by District V with 40.0 pounds, District I with 39.5 pounds and District II with 38.8 pounds for a State average of 40 pounds per weaning pig.

Comparison by Subjects

As seen in Table 1, inspection of the grand totals discloses that, on the average, swine producers registered a consequential improvement between 1970 and 1975 (i.e., 9 percent, from 54 percent to 63 percent, on the average, using the 23 practices). It should be noted that the percent using, 54 percent, improved from below to above the concern level, 63 percent during the period for the average for the 23 practices appearing in both 1970 and 1975 surveys, 19 practices were found by Carter (2) to be significantly related to weaning weights as may be noted in Table 1 (see footnotes). The F-test was used to test significance.

Four of six practice-related TEMIS subjects in 1970 were below the concern level. Those included Subject 1, Swine Records, 14 percent using; Subject 2, Swine Pests, 36 percent using; Subject 3, Swine Housing and Structure, 46 percent using; and Subject 4, Swine Management, 54 percent using. Two subjects, Subject 5, Swine Feeding and Nutrition, 69 percent using, and Subject 6, Swine Breeding and Production, 70 percent using, found swine producers interviewed in 1970 above the concern level.

By the time of the 1975 survey, only three subjects were below the concern level, namely, Subject 1, 15 percent using; Subject 2, 52 percent using; and Subject 3, 55 percent using.

Changes between 1970 and 1975 surveys ranged from (+) 16 percent for Subject 2 to (+) 1 percent for Subject 1. Consequential improvements, then were shown for Subject 2, (+) 16 percent improvement, Subject 3, (+) 9 percent improvement, and Subject 4, (+) 11 percent improvement.

Improvement was shown on all six practice-related subjects.

Subject 1, below the concern level, was composed of two practices, namely Practice 1A, "Pigs were systematically identified soon after birth," and Practice 1B, "Lifetime sow records were kept." Use of Practice 1B was very significantly ($P<.01$) related to weight of pigs at 8 weeks of age. Practice 1A was not.

Subject 2, below the concern level, was made up of three practices, including Practice 2A, "Sows were vaccinated for leptospirosis," Practice 2B, "Sows were wormed 3-14 days before due to

farrow," and Practice 2C, "Appropriate methods were used to prevent pig anemia." Practices 2A and 2B were very significantly related ($P<.01$) to weaning pig weight. Practice 2C was not. Also, Practice 2C was above the concern level in both 1970 and 1975.

Subject 3, below the concern level, consisted of one practice. Practice 3A, "Farrowing facilities were adequate in terms of recommended standards." It was very significantly related ($P<.01$) to weaning weights.

Subject 4, below the concern level, was made up of eight practices. Those included were Practice 4A, "All hogs, other than those farrowing, were kept out of the farrowing quarters," Practice 4B, "Sows were brought into the farrowing quarters at least 3 days before they were due to farrow," Practice 4C, "Each sow was carefully washed before bringing her into the clean farrowing quarters," Practice 4D, "As pigs were born, they were dried off, any membranes removed from the nostrils, and help was provided in nursing," Practice 4E, "Farrowing quarters were kept well-ventilated, clean and dry," Practice 4F, "Pigs were castrated before 4 weeks of age," Practice 4G, "The farrowing facilities were thoroughly cleaned and disinfected after sows were removed," and Practice 4H, "At least a two-week period was maintained between the time the farrowing house was cleaned and disinfected and the re-use of the same facilities for farrowing." All the practices were very significantly related ($P<.01$) to weaning pig weight, except Practice 4F which was not found to be significant. It should be noted that Subject 4 improved from

below to above the concern level (i.e., 54 percent using compared to 65 percent using) from 1970 to 1975.

Subject 5, above the concern level, both in 1970 and 1975, was made up of five practices. These included Practice 5A, "Recommended feeding practices were followed for pregnant females on pasture," Practice 5B, "Recommended feeding practices were followed for pregnant females off pasture," Practice 5C, "Concentrates were reduced or bulky feed supplied when sows were placed in farrowing quarters continuing to 3 days after farrowing," Practice 5D, "After 3 post-farrowing days on a bulky ration, sows were fed a gradually increased ration to roughly 10 lbs. in 7-14 days," and Practice 5E, "Pigs were provided with an 18-20 percent creep feed during the period from 1-2 weeks of age through weaning." All of the practices were found to be very significantly related ($P<.01$) to weaning weights, except Practice 5D, which was found to be significantly related to weaning weight at the .05 level of probability. All of the practices in Subject 5 were above the concern level in both 1970 and 1975.

Subject 6, above the concern level, consisted of four practices. Namely, Practices 6A, "Recommended procedures were used for replacing herd sows," Practice 6B, "Recommended procedures were used for herd sires," Practice 6C, "A recommended crossbreeding program was used," and Practice 6D, "Gilts were bred after attaining approximately 8 months of age and a weight of about 250 pounds. Practices 6B, 6C, and 6D were found to be very significantly related ($P<.01$) to weaning weights; while Practice 6A was not. All practices, in Subject 6, were above the concern level in both 1970 and 1975.

District Comparison on Subject Rankings

Information in Tables 2-6 permits a comparison of the use of the six practice-related subjects by district for the years 1970 and 1975 and the changes occurring during the five-year period.

Grand total average percent increases ranged from 7 percent in District I (i.e., a rise from 57 percent to 64 percent) to 17 percent in District V (i.e., a rise from 42 percent to 59 percent). Also, only District V swine producers still were below the concern level by 1975.

While District V had producers below the concern level on all six subjects in 1970, Districts I, III and IV producers registered below that level on Subjects 1 thorugh 4, and District II producers were below in Subject 1 through 3.

Average percent change on subjects ranged from a decrease (-) of 7 percent on Subject 1 in District III to an increase (+) of 26 percent on Subject 5 in District V.

By 1975, producers in Districts I, II, III, and V were still low in use of Subjects 1, 2 and 3; while District IV was low in only Subjects 1 and 2.

Average percent of practice change among districts ranged from a decrease (-) of 16 percent on Practice 19 in District III (i.e., from 24 percent in 1970 to 8 percent in 1975) to an increase (+) of 37 percent on Practice 10, also in District III (i.e., from 19 percent in 1970 to 56 percent in 1975).

Practices of concern on which consequential average percents of change were registered included, for District I, Practice 10, an

TABLE 2

RECOMMENDED SWINE PRODUCTION PRACTICES ARRANGED IN DESCENDING ORDER OF EDUCATIONAL PRIORITY BASED ON 1970* and 1975 TENNESSEE SURVEYS IN 48 SELECTED COUNTIES ACCORDING TO PERCENTAGES OF INTERVIEWEES USING PRACTICES IN *DISTRICT I* AND CHANGES SHOWING 1972 FY AND 1975 FY TEMIS PRIMARY SUBJECT RELATIONS

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken 1970 (N=918)	1975 (N=732)	Change 1970-1975 (+ or -)
1. Swine Records (2349) (1425)**			
(a) Pigs were systematically identified soon after birth	8	11	+3
(b) Lifetime sow records were kept	16	24	+8
Subtotal	12	18	+6
2. Swine Pests (2341) (1405, 1411)			
(a) Sows were vaccinated for leptospirosis	28	31	+3
(b) Sows were wormed 3-14 days before due to farrow	33	43	+10
(c) Appropriate methods were used to prevent pig anemia	70	66	-4
Subtotal	44	47	+3
3. Swine Housing and Structures (2323, 2357) (1431)			
(a) Farrowing facilities were adequate in terms of recommended standards	55	59	+4
Subtotal	55	59	+4
4. Swine Management (2331) (1415)			
(a) All hogs, other than those farrowing were kept out of the farrowing quarters	76	90	+14

TABLE 2 (Continued)

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken 1970 (N=918)	1975 (N=732)	Change 1970-1975 (+ or -)
(b) Sows were brought into the farrowing quarters at least 3 days before they were due to farrow	75	84	+9
(c) Each sow was carefully washed before bringing her into the clean farrowing quarters	19	18	-1
(d) As pigs were born, they were dried off, any membranes removed from the nostrils, and help was provided in nursing	56	69	+13
(e) Farrowing quarters were kept well-ventilated, clean and dry	66	84	+18
(f) Pigs were castrated before 4 weeks of age	59	76	+17
(g) The farrowing facilities were thoroughly cleaned and disinfected after sows were removed	46	56	+10
(h) At least a two-week period was maintained between the time the farrowing house was cleaned and disinfected and the re-use of the same facilities for farrowing	53	66	+13
Subtotal	56	68	+12
5. Swine Feeding and Nutrition (2319) (1417)			
(a) Recommended feeding practices were followed for pregnant females on pasture	71	70	-1
(b) Recommended feeding practices were followed for pregnant females off pasture	61	64	+3
(c) Concentrates were reduced or bulky feed supplied when sows were placed in farrowing quarters continuing 3 days after farrowing	67	74	+7

TABLE 2 (Continued)

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken 1970 (N=918)	1975 (N=732)	Change 1970-1975 (+ or -)
(d) After 3 post-farrowing days on a bulky ration, sows were fed a gradually increased ration to roughly 10 lbs. in 7-14 days	73	75	+2
(e) Pigs were provided with an 18-20% creep feed during the period from 1-2 weeks of age through weaning	82	90	+8
Subtotal	71	75	+4
6. Swine Breeding and Production (2303, 2344) (1420)			
(a) Recommended procedures were used for replacing herd sows	73	85	+12
(b) Recommended procedures were used for herd sires	71	79	+8
(c) A recommended crossbreeding program was used	75	72	-3
(d) Gilts were bred after attaining approximately 8 months of age and a weight of about 25o lbs.	82	88	+6
Subtotal	75	81	+6
Grand Total	57	64	+7

*Practices are stated in terms of the 1970 swine survey.

**Numbers in parentheses after subjects are TEMIS Code Numbers for 1972 and 1975, respectively.

TABLE 3

RECOMMENDED SWINE PRODUCTION PRACTICES ARRANGED IN DESCENDING ORDER OF EDUCATIONAL PRIORITY BASED ON 1970* AND 1975 TENNESSEE SURVEYS IN 48 SELECTED COUNTIES ACCORDING TO PERCENTAGES OF INTERVIEWEES USING PRACTICES IN *DISTRICT II* AND CHANGES SHOWING 1972 FY AND 1975 FY TEMIS PRIMARY SUBJECT RELATIONS

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken		Change 1970-1975 (+ or -)
	1970 (N-918)	1975 (N=732)	
1. Swine Records (2349) (1425)**			
(a) Pigs were systematically identified soon after birth	8	11	+3
(b) Lifetime sow records were kept	15	29	+14
Subtotal	12	20	+8
2. Swine Pests (2341) (1405, 1411)			
(a) Sows were vaccinated for leptospirosis	21	33	+12
(b) Sows were wormed 3-14 days before due to farrow	24	45	+21
(c) Appropriate methods were used to prevent pig anemia	49	73	+24
Subtotal	31	50	+19
3. Swine Housing and Structures (2323, 2357) (1431)			
(a) Farrowing facilities were adequate in terms of recommended standards.	48	53	+5
Subtotal	48	53	+5
4. Swine Management (2331) (1415)			
(a) All hogs, other than those farrowing were kept out of the farrowing quarters	86	80	-6

TABLE 3 (Continued)

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken 1970 (N=918)	1970 (N=732)	Change 1970-1975 (+ or -)
(b) Sows were brought into the farrowing quarters at least 3 days before they were due to farrow	78	69	-9
(c) Each sow was carefully washed before bringing her into the clean farrowing quarters	15	19	+4
(d) As pigs were born, they were dried off, any membranes removed from the nostrils, and help was provided in nursing	54	44	-10
(e) Farrowing quarters were kept well-ventilated, clean and dry	65	70	+5
(f) Pigs were castrated before 4 weeks of age	71	77	+6
(g) The farrowing facilities were thoroughly cleaned and disinfected after sows were removed	53	50	-3
(h) At least a two-week period was maintained between the time the farrowing house was cleaned and disinfected and the re-use of the same facilities for farrowing	64	68	+4
Subtotal	61	60	-1
5. Swine Feeding and Nutrition (2319) (1417)			
(a) Recommended feeding practices were followed for pregnant females on pasture	75	64	-11
(b) Recommended feeding practices were followed for pregnant females off pasture	73	79	+6
(c) Concentrates were reduced or bulky feed supplied when sows were placed in farrowing quarters continuing to 3 days after farrowing	73	80	+7

TABLE 3 (Continued)

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken 1970 (N=918)	1975 (N=732)	Change 1970-1975 (+ or -)
(d) After 3 post-farrowing days on a bulky ration, sows were fed a gradually increated ration to roughly 10 lbs. in 7-14 days	80	82	+2
(e) Pigs were provided with an 18-20% creep feed during the period from 1-2 weeks of age through weaning	89	91	+2
Subtotal	78	79	+1
6. Swine Breeding and Production (2303, 2344) (1420)			
(a) Recommended procedures were used for replacing herd sows	65	75	+10
(b) Recommended procedures were used for herd sires	71	66	-5
(c) A recommended crossbreeding program was used	72	75	+3
(d) Gilts were bred after attaining approximately 8 months of age and a weight of about 250 lbs.	71	83	+12
Subtotal	70	75	+5
Grand Total	57	62	+5

*Practices are stated in terms of the 1970 swine survey.

**Numbers in parenthesis after subjects are TEMIS Code Numbers for 1972 and 1975, respectively.

TABLE 4

RECOMMENDED SWINE PRODUCTION PRACTICES ARRANGED IN DESCENDING ORDER OF EDUCATIONAL PRIORITY BASED ON 1970* AND 1975 TENNESSEE SURVEYS IN 48 SELECTED COUNTIES ACCORDING TO PERCENTAGES OF INTERVIEWEES USING PRACTICES IN *DISTRICT III* AND CHANGES SHOWING 1972 FY AND 1975 FY TEMIS PRIMARY SUBJECT RELATIONS

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken		Change 1970-1975 (+ or -)
	1970 (N=918)	1975 (N=732)	
1. Swine Records (2349) (1425)**			
(a) Pigs were systematically identified soon after birth	24	8	-16
(b) Lifetime sow records were kept	13	15	+2
Subtotal	19	12	-7
2. Swine Pests (2341) (1405, 1411)			
(a) Sows were vaccinated for leptospirosis	33	51	+18
(b) Sows were wormed 3-14 days before due to farrow	19	56	+37
(c) Appropriate methods were used to prevent pig anemia	55	66	+11
Subtotal	36	58	+22
4. Swine Housing and Structures (2323, 2357) (1431)			
(a) Farrowing facilities were adequate in terms of recommended standards	40	47	+7
Subtotal	40	47	+7
4. Swine Management (2331) (1415)			
(a) All hogs, other than those farrowing were kept out of the farrowing quarters	61	82	+21

TABLE 4 (Continued)

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken 1970 (N=918)	1975 (N=732)	Change 1970-1975 (+ or -)
(b) Sows were brought into the farrowing quarters at least 3 days before they were due to farrow	63	84	+21
(c) Each sow was carefully washed before bringing her into the clean farrowing quarters	19	32	+13
(d) As pigs were born, they were dried off, any membranes removed from the nostrils, and help was provided in nursing	57	67	+10
(e) Farrowing quarters were kept well-ventilated, clean and dry	50	78	+28
(f) Pigs were castrated before 4 weeks of age	62	81	+19
(g) The farrowing facilities were thoroughly cleaned and disinfected after sows were removed	35	55	+20
(h) At least a two-week period was maintained between the time the farrowing house was cleaned and disinfected and the re-use of the same facilities for farrowing	31	51	+20
Subtotal	47	66	+19
5. Swine Feeding and Nutrition (2319) (1417)			
(a) Recommended feeding practices were followed for pregnant females on pasture	68	78	+10
(b) Recommended feeding practices were followed for pregnant females off pasture	62	65	+3

TABLE 4 (Continued)

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken 1970 (N=918)	1975 (N=732)	Change 1970-1975 (+ or -)
(c) Concentrates were reduced or bulky feed supplied when sows were placed in farrowing quarters continuing to 3 days after farrowing	51	65	+14
(d) After 3 post-farrowing days on a bulky ration, sows were fed a gradually increased ration to roughly 10 lbs in 7-14 days	63	68	+5
(e) Pigs were provided with an 18-20% creep feed during the period from 1-2 weeks of age through weaning	74	79	+5
Subtotal	64	71	+7
6. Swine Breeding and Production (2303, 2344) (1420)			
(a) Recommended procedures were used for replacing herd sows	62	61	-1
(b) Recommended procedures were used for herd sires	64	75	+11
(c) A recommended crossbreeding program was used	68	75	+7
(d) Gilts were bred after attaining approximately 8 months of age and a weight of about 250 lbs.	84	87	+3
Subtotal	70	75	+5
Grand Total	50	62	+12

*Practices are stated in terms of the 1970 swine survey.

**Numbers in parentheses after subjects are TEMIS Code Numbers for 1972 and 1975, respectively.

TABLE 5

RECOMMENDED SWINE PRODUCTION PRACTICES ARRANGED IN DESCENDING ORDER OF EDUCATIONAL PRIORITY BASED ON 1970* AND 1975 TENNESSEE SURVEYS IN 48 SELECTED COUNTIES ACCORDING TO PERCENTAGES OF INTERVIEWEES USING PRACTICES IN *DISTRICT IV* AND CHANGES SHOWING 1972 FY AND 1975 FY TEMIS PRIMARY SUBJECT RELATIONS

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken		Change
	1970 (N=918)	1975 (N=732)	1970-1975 (+ or -)
1. Swine Records (2349) (1425)**			
(a) Pigs were systematically identified soon after birth	13	7	-6
(b) Lifetime sow records were kept	14	20	+6
Subtotal	14	14	0
2. Swine Pests (2341) (1405, 1411)			
(a) Sows were vaccinated for leptospirosis	28	54	+26
(b) Sows were wormed 3-14 days before due to farrow	23	38	+15
(c) Appropriate methods were used to prevent pig anemia	71	84	+13
Subtotal	41	59	+18
3. Swine Housing and Structures (2323, 2357) (1431)			
(a) Farrowing facilities were adequate in terms of recommended standards.	47	68	+21
Subtotal	47	68	+21
4. Swine Management (2331) (1415)			
(a) All hogs, other than those farrowing were kept out of the farrowing quarters	80	74	-6

TABLE 5 (Continued)

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken 1970 (N=918)	1975 (N=732)	Change 1970-1975 (+ or -)
(b) Sows were brought into the farrowing quarters at least 3 days before they were due to farrow	73	75	+2
(c) Each sow was carefully washed before bringing her into the clean farrowing quarters	22	24	+2
(d) As pigs were born, they were dried off, any membranes removed from the nostrils, and help was provided in nursing	78	76	-2
(e) Farrowing quarters were kept well-ventilated, clean and dry	56	72	+16
(f) Pigs were castrated before 4 weeks of age	82	96	+14
(g) The farrowing facilities were thoroughly cleaned and disinfected after sows were removed	32	54	+22
(h) At least a two-week period was maintained between the time the farrowing house was cleaned and disinfected and the re-use of the same facilities for farrowing	35	70	+35
Subtotal	57	68	+11
5. Swine Feeding and Nutrition (2319) (1417)			
(a) Recommended feeding practices were followed for pregnant females on pasture	79	83	+4
(b) Recommended feeding practices were followed for pregnant females off pasture	71	82	+11
(c) Concentrates were reduced or bulky feed supplied when sows were placed in farrowing quarters continuing to 3 days after farrowing	69	69	0

TABLE 5 (Continued)

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken 1970 (N=918)	1975 (N=732)	Change 1970-1975 (+ or -)
(d) After 3 post-farrowing days on a bulky ration, sows were fed a gradually increased ration to roughly 10 lbs in 7-14 days	78	82	+4
(e) Pigs were provided with an 18-20% creep feed during the period from 1-2 weeks of age through weaning	83	98	+15
Subtotal	76	83	+7
6. Swine Breeding and Production (2303, 2344) (1420)			
(a) Recommended procedures were used for replacing herd sows	61	58	-3
(b) Recommended procedures were used for herd sires	72	69	-3
(c) A recommended crossbreeding program was used	84	90	+6
(d) Gilts were bred after attaining approximately 8 months of age and a weight of about 250 lbs.	73	72	-1
Subtotal	73	72	-1
Grand Total	58	66	+8

*Practices are stated in terms of the 1970 swine survey.

**Numbers in parentheses after subjects are TEMIS Code Numbers for 1972 and 1975, respectively.

TABLE 6

RECOMMENDED SWINE PRODUCTION PRACTICES ARRANGED IN DESCENDING ORDER OF EDUCATIONAL PRIORITY BASED ON 1970* AND 1975 TENNESSEE SURVEYS IN 48 SELECTED COUNTIES ACCORDING TO PERCENTAGES OF INTERVIEWEES USING PRACTICES IN *DISTRICT V* AND CHANGES SHOWING 1972 FY AND 1975 FY TEMIS PRIMARY SUBJECT RELATIONS

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken		Change
	1970 (N=918)	1975 (N=732)	1970-1975 (+ or -)
1. Swine Records (2349) (1425)**			
(a) Pigs were systematically identified soon after birth	9	6	-3
(b) Lifetime sow records were kept	12	12	0
Subtotal	11	9	-2
2. Swine Pests (2341) (1405, 1411)			
(a) Sows were vaccinated for leptospirosis	18	31	+13
(b) Sows were wormed 3-14 days before due to farrow	16	49	+33
(c) Appropriate methods were used to prevent pig anemia	57	58	+1
Subtotal	30	46	+16
3. Swine Housing and Structures (2323, 2357) (1431)			
(a) Farrowing facilities were adequate in terms of recommended standards	37	45	+8
Subtotal	37	45	+8
4. Swine Management (2331) (1415)			
(a) All hogs, other than those farrowing were kept out of the farrowing quarters	75	82	+7

TABLE 6 (Continued)

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken 1970 (N=918)	1975 (N=732)	Change 1970-1975 (+ or -)
(b) Sows were brought into the farrowing quarters at least 3 days before they were due to farrow	71	83	+12
(c) Each sow was carefully washed before bringing her into the clean farrowing quarters	12	13	+1
(d) As pigs were born, they were dried off, any membranes removed from the nostrils, and help was provided in nursing	41	44	+3
(e) Farrowing quarters were kept well-ventilated, clean and dry	56	80	+24
(f) Pigs were castrated before 4 weeks of age	53	89	+36
(g) The farrowing facilities were thoroughly cleaned and disinfected after sows were removed	28	32	+4
(h) At least a two-week period was maintained between the time the farrowing house was cleaned and disinfected and the re-use of the same facilities for farrowing	28	63	+35
Subtotal	46	61	+15
5. Swine Feeding and Nutrition (2319) (1417)			
(a) Recommended feeding practices were followed for pregnant females on pasture	39	67	+28
(b) Recommended feeding practices were followed for pregnant females off pasture	35	68	+33
(c) Concentrates were reduced or bulky feed supplied when sows were placed in farrowing quarters continuing to 3 days after farrowing	45	65	+20

TABLE 6 (Continued)

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken 1970 (N=918)	1975 (N=732)	Change 1970-1975 (+ or -)
(d) After 3 post-farrowing days on a bulky ration, sows were fed a gradually increased ration to roughly 10 lbs. in 7-14 days	44	72	+28
(e) Pigs were provided with an 18-20% creep feed during the period from 1-2 weeks of age through weaning	66	72	+26
Subtotal	46	72	+26
6. Swine Breeding and Production (2303, 2344) (1420)			
(a) Recommended procedures were used for replacing herd sows	51	73	+22
(b) Recommended procedures were used for herd sires	48	68	+20
(c) A recommended crossbreeding program was used	47	80	+33
(d) Gilts were bred after attaining approximately 8 months of age and a weight of about 250 lbs.	87	84	-3
Subtotal	58	76	+18
Grand Total	42	59	+17

*Practices are stated in terms of the 1970 swine survey.

**Numbers in parentheses after subjects are TEMIS Code Numbers for 1972 and 1975, respectively.

increase from 33 percent to 43 percent, Practice 14, an increase from 56 percent to 69 percent, Practice 20, an increase from 59 percent to 76 percent, Practice 22, an increase from 46 percent to 56 percent, and Practice 23, an increase from 53 percent to 66 percent.

Those for District II included Practice 21, an increase from 15 percent to 29 percent, Practice 4, an increase from 21 percent to 33 percent, Practice 10, an increase from 24 percent to 45 percent, Practice 16, an increase from 49 percent to 73 percent, Practice 1, an increase from 65 percent to 75 percent, and Practice 5, an increase from 71 percent to 83 percent. Practices in District II which showed a consequential decrease included: Practice 11, a decrease from 78 percent to 69 percent, Practice 14, a decrease from 54 percent to 44 percent, and Practice 6, a decrease from 75 percent to 64 percent.

Those for District III included: Practice 4, an increase from 33 percent to 51 percent, Practice 10, an increase from 19 percent to 56 percent, Practice 16, an increase from 55 percent to 66 percent, Practice 9, an increase from 61 percent to 82 percent, Practice 11, an increase from 63 percent to 84 percent, Practice 12, an increase from 19 percent to 32 percent, Practice 14, an increase from 57 percent to 67 percent, Practice 18, an increase from 50 percent to 78 percent, Practice 20, an increase from 62 percent to 81 percent, Practice 22, an increase from 35 percent to 55 percent, Practice 23, an increase from 31 percent to 51 percent, Practice 6, an increase from 68 percent to 78 percent, Practice 13, an increase from 51 percent to 65 percent, and Practice 2, an increase from 64 percent to 75 percent. Only one practice showed a consequential

decrease in District III, Practice 19, which changed from 24 percent, in 1970, to 8 percent, in 1975.

Practices in District IV that increased consequentially included: Practice 4, an increase from 28 percent to 54 percent, Practice 10, an increase from 23 percent to 38 percent, Practice 16, an increase from 71 percent to 84 percent, Practice 8, an increase from 47 percent to 68 percent, Practice 18, an increase from 56 percent to 72 percent, Practice 20, an increase from 82 percent to 96 percent, Practice 22, an increase from 32 percent to 54 percent, Practice 23, an increase from 35 percent to 70 percent, Practice 7, an increase from 71 percent to 82 percent, Practice 17, an increase from 83 percent to 98 percent. None of the practices in District IV showed a consequential decrease from 1970 to 1975.

The practices in District V, which showed a consequential increase included: Practice 4, an increase from 18 percent to 31 percent, Practice 10, an increase from 16 percent to 49 percent, Practice 11, an increase from 71 percent to 83 percent, Practice 18, an increase from 56 percent to 80 percent, Practice 20, an increase from 53 percent to 89 percent, Practice 23, an increase from 28 percent to 63 percent, Practice 6, an increase from 39 percent to 67 percent, Practice 7, an increase from 35 percent to 68 percent, Practice 13, an increase from 45 percent to 65 percent, Practice 15, an increase from 44 percent to 72 percent, Practice 17, an increase from 66 percent to 86 percent, Practice 1, an increase from 51 percent to 73 percent, Practice 2, an increase from 48 percent to

68 percent, Practice 3, an increase from 47 percent to 80 percent. None of the practices in District V showed a consequential decrease from 1970 to 1975.

II. SHIFTS IN TIME PLANNED ACCORDING TO TEMIS SWINE SUBJECTS BY DISTRICTS AND THE STATE

Comparison by Numbers of Agent Days

Table 7 includes information regarding shifts in agent days *planned* for the various swine subjects between FY 1972 and FY 1975. For the overall state total, the number of agent days decreased (-) 11 days, from 1,862 days in 1972 to 1,851 in 1975 (see Table 7).

District III had the largest agent day decrease (-) with 40 days difference, while District IV had the largest increase (+) with 30 days.

Surprisingly, time *planned* for Subjects 1-4, the weak practice subject areas, decreased, ranging from (-) 24 days decrease on Subject 3 to (-) 81 on Subject 4. The only increase among the six practice-related subjects was on Subject 6, (+) 163 agent days.

It should be noted that agent days *planned* in District I in both 1972, 905 days, and 1975, 930 days amounted to about one-half of all days *planned* for the State.

Comparisons of district data for time *planned* for the weak subjects, Subjects 1-4, generally decreased ranging from (-) 45 days to (+) 8 days--a few (i.e., District III on Subject 4 and District IV on Subjects 1 and 2) showing no change.

TABLE 7

AGENT DAY INCREASES OR DECREASES (ACTUAL SHIFTS) COMPARING *TIME PLANNED* IN ALL DISTRICTS AND THE STATE FROM 1972 TO 1975 BY NUMBER OF AGENT DAYS ACCORDING TO TEMIS SWINE SUBJECTS

TEMIS Swine Subject	State	Extension District I	II	III	IV	V
	--------Number of Agent Days--------					
1. Swine Records	-34	-8	-1	-11	0.0	-14
2. Swine Pests	-55	-45	8	-12	0.0	-6
3. Swine Housing and Structures	-24	-4	-21	2	1	-2
4. Swine Management	-81	-39	-25	0.0	-11	-6
5. Swine Feeding and Nutrition	-17	-20	32	-1	-17	-11
6. Swine Breeding and Production	163	133	-28	28	16	14
7. All other Swine Subjects	37	8	44	-46	41	-10
Total	-11	25	9	-40	30	-35
Total Agent Days (1972)	1,862	905	386	275	154	142
Total Agent Days (1975)	1,851	930	395	235	184	107

Comparison by Percents

Reference to Table 8 disclosed that most consequential changes between 1972 and 1975 occurred on strong subjects. Included were Subject 5 in District IV, (-) 13.3 percent, and Subject 6 in District I, (+) 16.4 percent, District II, (+) 10.5 percent, District III, (+) 13.1 percent, and District V, (+) 15.2 percent.

Downward trends, though not consequential are noted for Subjects 1-4, the weak areas, excepting a consequential decrease on Subject 1 for District V, (-) 9.9 percent.

While District III showed a consequential decrease in all other non-practice-related swine subjects, (-) 13.4 percent; District IV showed a consequential increase of (+) 15.9 percent.

III. SHIFTS IN TIME EXPENDED ACCORDING TO TEMIS SWINE SUBJECTS BY DISTRICTS AND THE STATE

Comparison by Numbers of Agent Days

Table 9 includes information regarding shifts in agent days *expended* for the various swine subjects between FY 1972 and FY 1975. For the overall State total, the number of agent days decreased (-) a slight 61 days from 1,957 days in 1972 to 1,896 in 1975 (see Table 9).

District II had the largest agent day decrease with (-) 88 days difference, while District I had the largest increase with (+) 69 days.

The *time expended* for Subjects 1-4, two of the weaker subject areas, decreased by (-) 9.5 days and (-) 68.6 days, respectively,

TABLE 8

PERCENT INCREASES OR DECREASES (RELATIVE SHIFTS) COMPARING *TIME PLANNED* IN ALL DISTRICTS AND THE STATE FROM 1972 TO 1975 BY PERCENT OF AGENT DAYS ACCORDING TO TEMIS SWINE SUBJECTS

TEMIS Swine Subject	State	Extension District I	II	III	IV	V
	--------Percent of Agent Days--------					
1. Swine Records	-1.9	-0.8	-0.3	-4.0	0.0	-9.9
2. Swine Pests	-2.9	-5.3	1.9	-2.4	-1.7	1.1
3. Swine Housing and Structures	-1.2	-0.6	-5.5	2.5	-1.0	3.0
4. Swine Management	-4.3	-4.4	-6.7	1.4	-7.7	-2.9
5. Swine Feeding and Nutrition	-0.9	-2.6	7.8	2.8	-13.3	-3.6
6. Swine Breeding and Production	8.9	16.4	10.5	13.1	7.8	15.2
7. All Other Swine Subjects	2.3	-2.7	-7.7	-13.4	15.9	-2.9
Total	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 9

AGENT DAY INCREASES OR DECREASES (ACTUAL SHIFTS) COMPARING *TIME EXPENDED* FOR ALL DISTRICTS AND THE STATE FROM 1972 TO 1975 BY NUMBER OF AGENT DAYS ACCORDING TO TEMIS SWINE SUBJECTS

TEMIS Swine Subject	State	Extension District I	II	III	IV	V
	----------Number of Agent Days----------					
1. Swine Records	-9.5	-3.2	-0.5	-0.8	0.0	-5.0
2. Swine Pests	27.3	19.2	9.1	1.4	-0.1	-2.3
3. Swine Housing and Structures	32.6	32.7	-1.5	-2.0	-8.2	11.6
4. Swine Management	-68.6	-41.6	-15.6	-14.0	-7.1	9.7
5. Swine Feeding and Nutrition	-6.7	-11.5	-7.2	2.2	2.0	7.6
6. Swine Breeding and Production	70.2	119.9	-36.0	11.3	-29.3	4.3
7. All Other Swine Subjects	-106.3	-46.5	-36.3	-31.1	15.7	-8.1
Total	-61.0	69.0	-88.0	-33.0	-27.0	18.0
Total Agent Days (1972)	1,957	1,117	308	195	207	130
Total Agent Days (1975)	1,896	1,186	220	162	180	148

while the *time expended* for Subjects 2 and 3, also two weaker subject areas, increased by (+) 27.3 days and (+) 32.6 days respectively.

For Subject 5, a stronger subject area, a decrease (-) of 6.7 days was noted, while the other strong subject area, Subject 6, showed an increase of (+) 70.2 days.

It should be noted that agent days *expended* in District I in both 1972, 1,117 days, and 1975, 1,186 days amounted to about 60 percent of all days *expended* for the State.

Comparison of district data for time expended for weak Subjects 1 and 4, generally decreased, ranging from (-) 41.6 days to a (+) 9.7 days; while District IV, Subject 1, showed no change. The remaining two weaker subject areas, Subjects 2 and 3 showed a general increase, when comparing district data, ranging from (-) 8.2 days to (+) 32.7 days.

Comparison by Percents

Reference to Table 10 shows that the only consequential changes between 1972 and 1975, on practice-related subjects, occurred on Subject 6, a strong subject area. A decrease of (-) 13.5 percent occurred in District IV of Subject 6, while an increase of (+) 9.7 percent occurred in District I of Subject 6.

Downward trends, though not consequential are noted for weak area Subjects 1 and 4, while upward trends, also non-consequential, are shown for weak area Subjects 2 and 3.

In the stronger area subjects, a slight decrease (-) 0.1 percent, is shown for Subject 5, while an increase of (+) 4.1 percent is shown for Subject 6.

TABLE 10

PERCENT INCREASES OR DECREASES (RELATIVE SHIFTS) COMPARING *TIME EXPENDED* IN ALL DISTRICTS AND THE STATE FROM 1972 TO 1975 BY PERCENTS OF AGENT DAYS ACCORDING TO TEMIS SWINE SUBJECTS

TEMIS Swine Subject	State	Extension District				
		I	II	III	IV	V
	----------Percent of Agent Days----------					
1. Swine Records	-0.4	-0.3	-0.2	-0.4	0.0	-3.9
2. Swine Pests	1.6	1.4	5.7	2.0	1.1	-2.6
3. Swine Housing and Structures	1.9	2.5	0.7	0.2	-3.6	7.0
4. Swine Management	-3.2	-4.4	-1.9	-4.1	-2.8	5.7
5. Swine Feeding and Nutrition	-0.1	-1.5	-0.3	2.3	2.7	4.5
6. Swine Breeding and Production	4.1	9.7	-6.4	8.3	-13.5	0.1
7. All Other Swine Subjects	-3.9	-7.4	2.4	-8.3	16.1	-10.8
Total	0.0	0.0	0.0	0.0	0.0	0.0

While District IV showed a consequential increase of (+) 16.1 percent in all other non-practice-related swine subjects; District V showed a consequential decrease of (-) 10.8 percent.

IV. SHIFTS IN NUMBER OF CONTACTS MADE ACCORDING TO TEMIS SWINE SUBJECTS BY DISTRICTS AND THE STATE

Comparison by Numbers of Contacts Made

Table 11 includes information regarding shifts in numbers of *contacts made* for the various swine subjects between FY 1972 and FY 1975. For the overall State total, the numbers of contacts made decreased (-) 16,934 contacts, from 92,800 contacts in 1972 to 75,866 in 1975 (see Table 11).

District IV had the largest decrease with (-) 17,757 fewer contacts, while District I had the largest increase with (+) 4,242 more contacts.

State totals, for *contacts made* for Subject 1, a weak subject, shows a slight downward trend, with a decrease of (-) 77 contacts made. Subject 4, another weaker subject area, registered a strong downward trend, with all five districts decreasing in contacts made; the State total for Subject 4 decreasing by (-) 5,638 contacts. The remaining two weaker subjects, Subjects 2 and 3, both showed increases in contacts made; Subject 2 increased (+) 746 contacts, while Subject 3 increased slightly by (+) 123 contacts.

Both of the stronger practice subject areas increased in numbers of contacts made, between 1972 and 1975; Subject 5 increased (+)

TABLE 11

CONTACT INCREASES OR DECREASES (ACTUAL SHIFTS) COMPARING *CONTACTS MADE* IN ALL DISTRICTS AND THE STATE FROM 1972 TO 1975 BY NUMBERS OF CONTACTS MADE ACCORDING TO TEMIS SWINE SUBJECTS

TEMIS Swine Subject	State	Extension District				
		I	II	III	IV	V
	Number of Contacts Made					
1. Swine Records	-77	-21	-1	-3	0.0	-52
2. Swine Pests	746	844	612	-585	11	-136
3. Swine Housing and Structures	123	353	-92	-128	-50	40
4. Swine Management	-5,638	-1,457	-146	-3,743	-148	-144
5. Swine Feeding and Nutrition	1,059	-150	959	-121	91	280
6. Swine Breeding and Production	6,170	6,260	822	1,261	-2,445	272
7. All Other Swine Subjects	-19,317	-1,587	939	-3,190	-15,216	-263
Total	-16,934	4,242	3,093	-6,509	-17,757	-3
Total Number of Contacts (1972)	92,800	31,659	5,905	19,012	34,397	1,827
Total Number of Contacts (1975)	75,866	35,901	8,998	12,503	16,640	1,824

1,059 contacts, while Subject 6 increased (+) 6,170 contacts.

It should be noted that the State total for all other non-practice-related swine subjects, Subject 7, decreased by (-) 19,317 contacts by far the largest decrease in number of contacts made, for any of the seven subjects. In fact, it is primarily this non-practice-related category that caused the negative State total of (-) 16,934 contacts. A State total including only practice-related subjects, Subject 1-6, would show an increase of (+) 2,383 contacts from 1972 to 1975.

District I continued to record a large share of the total contacts for the State in 1975, by making almost half, (+) 35,901 contacts out of (+) 75,866, of the contacts reported.

Comparison of district data shows a downward trend on Subjects 1 and 4, with all districts showing a decrease in *contacts made*, except District IV for Subject 1, which shows no change. The decreases for the districts ranged from a decrease of (-) 1 contact in District II for Subject 1, to a decrease of (-) 3,743 contacts in District III for Subject 4.

District data for the stronger subject areas: Subjects 5 and 6 showed a general upward trend. The only decreases reported for Subject 5 were in District I, (-) 150 contacts and District III, (-) 121 contacts. The only decrease reported for Subject 6 was in District IV, (-) 2,445 contacts, the only large decrease shown for the stronger area subjects. The increases in *contacts made* ranged from (+) 91 contacts in District IV for Subject 5 to (+) 6,260 contacts in District I on Subject 6.

Comparison by Percents

Reference to Table 12 discloses that no consequential shifts occurred, between 1972 and 1975 on Subjects 1, 2 or 3. A consequential change did occur, on Subject 4, in District II, of (-) 9.0 percent, and in District III, of (-) 17.0 percent; on Subject 5, in District V, of (+) 15.4 percent; and Subject 6 in District I, (+) 16.5 percent, District III of (+) 12.9 percent and District V (+) 14.9 percent.

A comparison of State totals, reveals that the only consequential change occurred on Subject 6, an increase of (+) 9.9 percent. Downward trends, though not consequential, are noted for weaker area Subjects 1 and 4; while non-consequential upward trends are noted for Subjects 2, 3, and 5.

It should be noted that the largest decrease in State totals, (-) 8.4 percent, occurred on Subject 7, a non-practice related category. Subject 7 recorded consequential decreases of (-) 12.7 percent in District I and (-) 14.2 percent in District V.

V. SHIFTS IN *AGENT DAYS EXPENDED* ACCORDING TO TEMIS SWINE SUBJECTS BY DISTRICTS AND THE STATE USING *INDIVIDUAL TEACHING METHODS*

Comparison by Number of Agent Days

Table 13 includes information regarding shifts in agent days expended for various swine subjects between FY 1972 and FY 1975, using *Individual Teaching Methods*. For the overall State total, the number of agent days increased (+) 29.4 days from 983.0 days in 1972 1,012.4 days in 1975 (see Table 13).

TABLE 12

PERCENT INCREASES OR DECREASES (RELATIVE SHIFTS) COMPARING *CONTACTS MADE* IN ALL DISTRICTS AND THE STATE FROM 1972 TO 1975 BY PERCENT OF CONTACTS MADE ACCORDING TO TEMIS SWINE SUBJECTS

TEMIS Swine Subject	State	Extension District				
		I	II	III	IV	V
	----------Percent of Contacts Made----------					
1. Swine Records	-0.9	-0.1	0.0	0.0	0.0	-2.9
2. Swine Pests	1.5	2.1	5.5	-1.7	0.5	-7.5
3. Swine Housing and Structures	0.4	0.9	-1.8	-0.5	0.0	2.2
4. Swine Management	-4.9	-5.5	-9.0	-17.0	-0.1	-7.9
5. Swine Feeding and Nutrition	2.4	-1.2	7.0	1.8	1.4	15.4
6. Swine Breeding and Production	9.9	16.5	3.2	12.9	-7.0	14.9
7. All Other Swine Subjects	-8.4	-12.7	-4.9	4.5	5.2	-14.2
Total	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 13

AGENT DAY INCREASES OR DECREASES (ACTUAL SHIFTS) COMPARING *TIME EXPENDED* IN ALL DISTRICTS AND IN THE STATE USING *INDIVIDUAL TEACHING METHODS* FROM 1972 TO 1975 BY NUMBERS OF AGENT DAYS ACCORDING TO TEMIS SWINE SUBJECTS

TEMIS Swine Subject	State	Extension District I	II	III	IV	V
	----------Number of Agent Days----------					
1. Swine Records	-6.4	-2.2	0	-0.6	0	-3.6
2. Swine Pests	24.1	19.5	7.5	2.4	-3.8	-1.5
3. Swine Housing and Structures	38.2	39.3	2.2	-3.3	-4.8	4.8
4. Swine Management	-40.0	-21.8	-9.2	-3.2	-7.7	1.9
5. Swine Feeding and Nutrition	5.5	7.9	-7.7	1.7	-0.2	3.8
6. Swine Breeding and Production	47.2	78.5	1.0	2.8	-20.4	-14.7
7. All Other Swine Subject	-39.2	4.9	-23.6	2.9	-19.3	-4.1
Total	29.4	126.1	-29.8	2.7	-56.2	-13.4
1972 Total Agent Days	983.0	514.7	159.7	85.7	136.7	86.2
1975 Total Agent Days	1,012.4	640.8	129.9	88.4	80.5	72.8

District IV had the largest decrease in use of *Individual Methods* with (-) 56.2 days difference, while District I had the largest increase with (+) 126.1 days difference.

Agent days *expended* for weaker practice Subjects 1 and 4 via Individual Methods decreased by (-) 6.4 days for Subject 1 and (-) 40.0 days for Subject 4. Time expended for Subjects 2 and 3, the remaining weak areas, increased (+) 24.1 days for the former and (+) 38.2 days for the latter.

The *Agent Days expended* for Subjects 5 and 6, the strong practice areas, increased by (+) 5.5 days for the former and (+) 47.2 days for the latter.

It should be noted that the agent days *expended* for District I, in both 1972, 514.7 days, and 1975, 640.8 days, respectively, amounted to over one-half of all days *expended* for the State.

Comparison of district data for time *expended* for Subjects 1 and 4, generally decreased, ranging from (-) 21.8 days to (+) 1.9 days. The increase of (+) 1.9 days was the only increase shown for Subjects 1 and 4; Subject 1 showed no change in Districts II and IV and only slight change in District III.

Subjects 2, 3, 5 and 6 showed general increases in agent days *expended* on Individual Methods ranging from (-) 20.4 days to (+) 78.5 days difference.

Comparison by Percents

Reference to Table 14 discloses that consequential changes occurred in all six practice related subjects. On Subject 1, District I

TABLE 14

PERCENT INCREASES OR DECREASES (RELATIVE SHIFTS) COMPARING *TIME EXPENDED* IN ALL DISTRICTS AND IN THE STATE USING *INDIVIDUAL TEACHING METHODS* FROM 1972 TO 1975 BY PERCENTS OF AGENT DAYS ACCORDING TO TEMIS SWINE SUBJECTS

TEMIS Swine Subject	State	Extension District I	II	III	IV	V
	----------Percent of Agent Days----------					
1. Swine Records	-21.0	-18.6	0	-75.0	0	-72.0
2. Swine Pests	4.9	14.8	4.4	14.1	-22.0	3.9
3. Swine Housing and Structures	14.1	28.6	31.6	-13.8	23.9	-21.5
4. Swine Management	0.1	3.0	-4.5	10.6	-28.9	-16.7
5. Swine Feeding and Nutrition	6.4	16.6	-13.1	4.4	-7.9	-14.0
6. Swine Breeding and Production	2.3	-2.8	33.7	-8.6	-16.1	-53.4
7. All Other Swine Subjects	0.4	3.3	-3.0	19.8	-24.3	1.0

time decreased (-) 18.6 percent. District III time decreased (-) 75.0 percent, and District V time decreased (-) 72.0 percent. In Subject 2, District I time increased (+) 14.8 percent, District III time increased (+) 14.1 percent and District IV time decreased (-) 22.0 percent. In Subject 3, District I time increased (+) 28.6 percent, District II increased (+) 31.6 percent, District III decreased (-) 13.8 percent, District IV increased (+) 23.9 percent and District V decreased (-) 21.5 percent. In Subject 4, District III time increased (+) 10.6 percent, District IV decreased (-) 28.9 percent and District V decreased (-) 16.7 percent. In Subject 5, District I time increased (+) 16.6 percent, District II decreased (-) 13.1 percent and District V time decreased (-) 14.0 percent. In Subject 6, District II time increased (+) 33.7 percent, District IV decreased (-) 16.1 percent, and District IV decreased (-) 16.1 percent, and District V decreased (-) 53.4 percent.

A consequential downward trend is noticed for time spent on *Individual Methods* on Subject 1, which decreased (-) 21.0 percent statewide; this is the only statewide downward trend reported for any of the practice-related subjects. Subjects 2 through 6 showed upward trends ranging from only (+) 0.1 percent for Subject 4, to (+) 14.1 percent for Subject 3. The increase in time spent through *Individual Methods* on Subject 3 is the only consequential increase for Subjects 2 through 6.

Subject 7, the non-practice-related subject showed a very slight increase of (+) 0.4 percent statewide for *Individual Methods;* while showing a consequential increase of (+) 19.8 percent for District III and a consequential decrease (-) 24.3 percent for District IV.

VI. SHIFTS IN AGENT DAYS *EXPENDED* ACCORDING TO TEMIS SWINE SUBJECTS BY DISTRICTS AND THE STATE, USING *GROUP TEACHING METHODS*

Comparison by Number of Agent Days

Table 15 includes information regarding shifts in agent days *expended* for the various swine subjects between FY 1972 and FY 1975, using *Group Teaching Methods*. For the overall State total, the number of agent days on these methods decreased (-) 29.9 days from (+) 543.6 days in 1972 to (+) 513.7 days in 1975 (see Table 15). The district totals reflected the downward trend with Districts I, II and III showing decreases in number of Agent Days *expended* ranging from (-) 11.4 days for District III to (-) 34.5 days in District I and (-) 32.4 for District II. An increase of (+) 41.6 days was noted for District IV and one of (+) 6.8 days was seen for District V.

A downward trend was noted in all subjects, with the exception of Subject 6, which showed no change, ranging from (-) 14.7 days for Subject 5 to (-) 0.1 days on Subject 5.

It should be noted that District I recorded about two-thirds of the agent days *expended*, in the state, in both 1972 with 369.0 days and 1975 with 334.5 days.

In comparing district data, the weaker area Subjects 1-4 showed a downward trend in use of *Group Methods* ranging from a (+) 5.1 days to (-) 9.1 days; Subject 1 showed no change in Districts II, III and IV and Subject 2 showed no change in District V.

The stronger area Subject 5 showed a downward trend ranging from a (-) 17.0 days used in *Group Methods* in District I to (+) 2.6

TABLE 15

AGENT DAY INCREASES OR DECREASES (ACTUAL SHIFTS) COMPARING *TIME EXPENDED* IN ALL DISTRICTS AND IN THE STATE USING *GROUP TEACHING METHODS* FROM 1972 TO 1975 BY NUMBERS OF AGENT DAYS ACCORDING TO TEMIS SWINE SUBJECTS

TEMIS Swine Subject	State	Extension District I	II	III	IV	V
	----------Number of Agent Days----------					
1. Swine Records	-1.8	-1.1	0	0	0	-0.7
2. Swine Pests	-0.2	-1.0	-0.5	0.5	0.8	0
3. Swine Housing and Structures	-7.0	-6.9	-3.4	1.7	-2.9	4.5
4. Swine Management	-6.1	-2.8	-9.1	-0.9	1.6	5.1
5. Swine Feeding and Nutrition	-14.7	-17.0	-1.2	0.7	2.6	0.2
6. Swine Breeding and Production	0	20.0	-21.4	5.1	-2.7	-1.0
7. All Other Swine Subjects	-0.1	-25.7	3.2	-18.5	42.2	-1.3
Total	-29.9	-34.5	-32.4	-11.4	41.6	6.8
1972 Total Agent Days	543.6	369.0	71.9	49.4	30.5	22.8
1975 Total Agent Days	513.7	334.5	39.5	38.0	72.1	29.6

days for District IV. Subject 6, the other strong area practice, showed no change statewide, but did have a range of from (+) 20.0 days in District I to (-) 21.4 days in District II using *Group Methods*.

The non-practice-related Subject 7 decreased slightly in report of Group Methods, ranging from (-) 25.7 days in District I to (+) 42.2 days for District IV.

Comparison by Percents

Reference to Table 16 discloses that many consequential changes in use of *Group Methods* occurred between 1972 and 1975.

Subject 1 recorded consequential negative changes of (-) 27.0 percent for District I and (-) 14.0 percent for District V; Districts II, III and IV showing no change. On Subject 2, consequential changes occurred in District I, (-) 14.2 percent, and District II, (-) 10.7 percent. All districts reported consequential changes in use of *Group Methods* on Subject 3; District I (-) 26.2 percent, District II (-) 31.5 percent, District III (+) 14.7 percent, District IV (-) 20.4 percent and District V (+) 12.8 percent. Subject 4 had consequential changes in use of *Group Methods* of (-) 12.4 percent in District II and (+) 32.6 percent in District IV. On Subject 5, consequential changes in use of *Group Methods* occurred in District I (-) 15.1 percent and District IV (-) 10.7 percent. Consequential changes of (-) 21.8 percent for District II and (+) 24.8 percent for District IV occurred for Subject 6. On Subject 7, the non-practice-related subject, District III reported (-) 12.5 percent and District IV had a shift of (+) 34.6 percent in use of *Group Methods*.

TABLE 16

PERCENT INCREASES OR DECREASES (RELATIVE SHIFTS) COMPARING *TIME EXPENDED* IN ALL DISTRICTS AND IN THE STATE USING *GROUP TEACHING METHODS* FROM 1972 TO 1975 BY *PERCENTS* OF AGENT DAYS ACCORDING TO TEMIS SWINE SUBJECTS

TEMIS Swine Subject	State	Extension District I	II	III	IV	V
	----------Percent of Agents Days----------					
1. Swine Records	-17.3	-27.0	0	0	0	-14.0
2. Swine Pests	-6.1	-14.2	-10.7	0.7	4.8	2.1
3. Swine Housing and Structures	-13.0	-26.2	-31.5	14.7	-20.4	12.8
4. Swine Management	3.8	3.3	-12.4	5.3	32.6	9.5
5. Swine Feeding and Nutrition	-8.3	-15.1	1.7	2.3	9.9	-10.7
6. Swine Breeding and Production	-5.9	-4.5	-21.8	3.1	24.8	-4.6
7. All Other Swine Subjects	3.4	-1.1	7.3	-12.5	34.6	0.4

Weaker area Subjects 1, 2 and 3 showed downward trends in use of *Group Methods* that ranged from (-) 6.1 percent to (-) 17.3 percent. The only weaker subject that increased, between 1972 and 1975, was Subject 4, which showed a slight increase of (+) 3.8 percent.

Subjects 5 and 6, the strong area subjects, decreased in *percents of time expended* via *Group Methods* by (-) 8.3 percent and (-) 5.9 percent, respectively.

The non-practice-related area, Subject 7, showed a small (+) 3.4 percent increase between 1972 and 1975.

VII. SHIFTS IN AGENT DAYS *EXPENDED* ACCORDING TO TEMIS SWINE SUBJECTS BY DISTRICTS AND THE STATE, USING *MASS MEDIA*

Comparison by Number of Agent Days

Table 17 includes information regarding shifts in agent days expended for the various swine subjects between FY 1972 and FY 1975 using *Mass Media*. The overall State total decreased by (-) 43.7 days from 115.0 days in 1972 to 71.3 days in 1975 (see Table 17).

The district totals for Districts I through IV decreased in *Mass Media* time, ranging from (-) 14.4 days in District III to (-) 3.4 days in District IV. District V was the only district to register an increase in use of *Mass Media* with (+) 3.2 days.

All weaker area subjects, 1 through 4, showed decreases in agent days *expended* statewide via *Mass Media*, ranging from (-) .4 days for Subject 1 to (-) 9.7 days in Subject 4.

TABLE 17

AGENT DAY INCREASES OR DECREASES (ACTUAL SHIFTS) COMPARING *TIME EXPENDED* IN ALL DISTRICTS AND IN THE STATE USING *MASS MEDIA* FROM 1972 TO 1975 BY NUMBERS OF AGENT DAYS ACCORDING TO TEMIS SWINE SUBJECTS

TEMIS Swine Subject	State	Extension District I	II	III	IV	V
	----------Number of Agent Days----------					
1. Swine Records	-0.4	0	0	0	0	-0.4
2. Swine Pests	-1.4	-0.5	1.3	-0.9	-0.3	-1.0
3. Swine Housing and Structures	-1.5	-0.3	-0.6	-0.5	0	-0.1
4. Swine Management	-9.7	-4.1	0.7	-4.5	-1.1	-0.6
5. Swine Feeding and Nutrition	-0.7	-2.5	1.1	-0.1	-0.3	1.1
6. Swine Breeding and Production	4.6	5.1	1.3	0.5	-2.3	0
7. All Other Swine Subjects	-34.6	-10.9	-13.2	-8.9	0.6	-2.2
Total	-43.7	-13.2	-9.5	-14.4	-3.4	3.2
1972 Total Agent Days	115.0	40.3	24.4	28.9	12.9	8.5
1975 Total Agent Days	71.3	27.1	14.9	14.5	9.5	5.3

For the stronger area subjects, Subject 5 decreased in use of *Mass Media* only slightly (-) 0.7 days, while Subject 6 increased in reported use of *Mass Media* by (+) 4.6 days.

The largest change in statewide totals, came on Subject 7, the non-practice-related subject, which decreased in use of *Mass Media* by (-) 34.6 days.

It should be noted that District I did not dominate the days *expended* in Table 17 as much as in Tables 9 (page 42), 13 (page 50), and 15 (page 55). District I used *Mass Media* more, in 1972 and 1975, than any other district, but the figures did not approach 50 percent of the state total, as was the case in the previous tables cited.

Comparison of district data for Subjects 1 through 4 reveals a downward trend in use of *Mass Media* from (-) 4.5 days in District III for Subject 4 to (+) 1.3 days in District II, Subject 2. Districts I through IV reported no change for use of *Mass Media* on Subject 1, while District IV reported no change on Subject 3 use.

Changes in district data for Subjects 5 and 6, the stronger areas, ranged from (-) 2.5 days spent via *Mass Media* in District I for Subject 5 to (+) 5.1 days also in District I for Subject 6. District V reported no change for use of *Mass Media* on Subject 6.

Comparison by Percents

Reference to Table 18 reveals few consequential shifts taking place between 1972 and 1975. Two shifts of (-) 9.0 percent each occurred in use of *Mass Media* in District III: one for Subject 2 and the other for Subject 4, both are weaker subjects.

TABLE 18

PERCENT INCREASES OR DECREASES (RELATIVE SHIFTS) COMPARING *TIME EXPENDED* IN ALL DISTRICTS AND IN THE STATE USING *MASS MEDIA* FROM 1972 TO 1975 BY PERCENTS OF AGENT DAYS ACCORDING TO TEMIS SWINE SUBJECTS

TEMIS Swine Subject	State	Extension District				
		I	II	III	IV	V
	----------Percent of Agent Days----------					
1. Swine Records	-3.8	0	0	0	0	-8.0
2. Swine Pests	-2.1	-1.3	5.3	-9.0	-1.8	-8.9
3. Swine Housing and Structures	-2.0	-1.2	5.6	-3.5	0	-3.3
4. Swine Management	-2.6	1.8	4.6	-9.0	-7.1	-7.9
5. Swine Feeding and Nutrition	-0.3	-2.2	8.3	-3.8	1.4	7.1
6. Swine Breeding and Production	0.7	1.4	3.6	-4.7	-6.0	-0.7
7. All Other Swine Subjects	-2.7	-1.5	-7.2	-4.7	-0.7	-3.2

Districts I through IV reported no change in use of *Mass Media* for Subject 1, while District IV also showed no change for Subject 3.

All practice related subjects, with the exception of Subject 6, showed a downward trend in use of Mass Media ranging from (-) 0.3 percent in Subject 5 to (-) 3.8 percent for Subject 1. Subject 6 showed a very slight increase in use of (+) 0.7 percent between 1972 and 1975.

VIII. SHIFTS IN AGENT DAYS *EXPENDED* ACCORDING TO TEMIS SWINE SUBJECTS BY DISTRICTS AND THE STATE, USING *ALL OTHER TEACHING METHODS*

Comparison by Number of Agent Days

Table 19 includes information regarding shifts in agent days *expended* for the various swine subjects between FY 1972 and FY 1975, using *Other Teaching Methods*. *Other Methods*, in this case, included those teaching methods that could be classified as either Individual, Group or Mass Media. Preparation, planning, evaluation, reporting, etc. are included.

The statewide total of agent days *expended* through *Other Methods* decreased by (-) 16.5 days, from 315.1 days in 1972 to 298.6 days in 1975.

District II had the largest decrease in use of *Other Methods* with (-) 16.3 days difference; while District V had the largest increase with (+) 27.8 days difference.

Time *expended* via Other Methods on Subjects 1 and 4, two of the weaker practice subject areas, decreased by (-) 0.6 days for the

TABLE 19

AGENT DAY INCREASES OR DECREASES (ACTUAL SHIFTS) COMPARING *TIME EXPENDED* IN ALL DISTRICTS AND IN THE STATE USING *ALL OTHER* TEACHING METHODS FROM 1972 TO 1975 BY NUMBERS OF AGENT DAYS ACCORDING TO TEMIS SWINE SUBJECTS

TEMIS Swine Subject	State	Extension District I	II	III	IV	V
	----------Number of Agent Days----------					
1. Swine Records	-0.6	0.4	-0.5	-0.2	0	-0.3
2. Swine Pests	4.8	1.2	0.8	-0.6	3.2	0.2
3. Swine Housing and Structures	2.9	0.6	0.3	0.1	-0.5	2.4
4. Swine Management	-12.8	-12.9	2.1	-5.4	0.1	3.3
5. Swine Feeding and Nutrition	3.2	0.1	0.6	-0.1	-0.1	2.7
6. Swine Breeding and Production	18.4	16.3	-16.9	2.9	-3.9	20.0
7. All Other Swine Subjects	-32.4	-14.8	-2.7	-6.6	-7.8	-0.5
Total	-16.5	-9.1	-16.3	-9.9	-9.0	27.8
1972 Total Agent Days	315.1	192.7	52.0	31.0	26.9	12.5
1975 Total Agent Days	298.6	183.6	35.7	21.1	17.9	40.3

former and (-) 12.8 days for the latter. The remaining weak practice areas, Subject 2 and 3, increased in days *expended* through *Other Methods* by (+) 4.8 days and (+) 2.9 days, respectively.

Subject 5, a stronger practice subject area, showed an increase in time *expended* by means of *Other Methods* of (+) 3.2 days, while the other strong area, Subject 6 had an increase of (+) 18.4 days.

In comparison of district data, the decrease in use of *Other Methods* noted for Subjects 1 and 4, ranged from (-) 12.9 days to (+) 3.3 days difference between 1972 and 1975 totals. The increase noted on Subjects 2 and 3 ranged from (-) 0.6 days to (+) 3.2 days. In Subjects 5 and 6, the stronger practice areas, the change ranged from (-) 16.9 days to (+) 20.0 days difference in use of *Other Methods*.

Comparison by Percents

Reference to Table 20 shows that some unusually large shifts occurred between 1972 and 1975, in time *expended* using *Other Methods*. One reason for these seemingly large shifts is that Table 20 reflects percentage changes, for relatively small totals. The 100 percent decrease in Subject 1 for District II, for example, consisted of a decrease of only 5 agent days spent using *Other Methods*.

Consequential shifts are present in all six practice-related subjects. Subject 1 showed consequential shifts in use of Other Methods in District I of (+) 45.6 percent, District II, (-) 100.0 percent and District III, (-) 25.0 percent. On Subject 2, a consequential increase of (+) 19.0 percent occurred in District IV. A

TABLE 20

PERCENT INCREASES OR DECREASES (RELATIVE SHIFTS) COMPARING *TIME EXPENDED* IN ALL DISTRICTS AND IN THE STATE USING *ALL OTHER* TEACHING METHODS FROM 1972 TO 1975 BY PERCNETS OF AGENT DAYS ACCORDING TO TEMIS SWINE SUBJECTS

TEMIS Swine Subject	State	Extension District I	II	III	IV	V
	----------Percent of Agent Days----------					
1. Swine Records	42.1	45.6	-100.0	-25.0	0	-6.0
2. Swine Pests	3.3	0.7	1.0	-5.8	19.0	2.9
3. Swine Housing and Structures	0.9	-1.2	5.5	2.6	-3.5	12.0
4. Swine Management	-1.3	-4.5	12.3	-6.9	3.4	15.1
5. Swine Feeding and Nutrition	2.2	0.7	5.1	-2.9	-0.6	17.6
6. Swine Breeding and Production	2.9	5.9	-15.5	10.2	-2.7	58.7
7. All Other Swine Subjects	-1.1	-0.7	2.9	-2.6	-9.6	1.8

consequential increase of (+) 12.0 percent was recorded for Subject 3, in District V, Subject 4 shows consequential shifts of (+) 12.3 percent, in District III and (+) 15.1 percent in District V, use of Other Methods, Subject 5 had a consequential increase of (+) 17.6 percent, in District V use. Consequential changes occurred, for Subject 6, of (-) 15.5 percent, for District II, (+) 10.2 percent for District III and (+) 58.7 percent for District V in use of *Other Methods* to teach swine subjects.

All of the practice-related subjects, with the exception of Subject 4, showed upward trends in use of *Other Methods* ranging from (+) 0.9 percent on Subject 3 to (+) 42.1 percent on Subject 1. Again the small number of agent days given both in years for these methods tends to minimize the findings.

IX. SHIFTS IN *NUMBER OF CONTACTS* MADE ACCORDING TO TEMIS SWINE SUBJECTS BY DISTRICTS AND THE STATE, USING *INDIVIDUAL TEACHING METHODS*

Comparison by Number of Contacts Made

Table 21 includes information regarding shifts in contacts made for the various swine subjects FY's 1972 and 1975, using *Individual Methods*.

The statewide total for contacts made via *Individual Methods* decreased (-) 56 contacts between 1972 and 1975 (see Table 21). The district totals, for contacts made, ranged from (-) 280 contacts, in District IV to (+) 229 contacts, in District III.

The only decreases noted in State totals for contacts made through *Individual Methods* on the six practice-related subjects, occurred on Subjects 1 and 4, namely (-) 51 contacts for the

TABLE 21

CONTACT INCREASES OR DECREASES (ACTUAL SHIFTS) COMPARING *CONTACTS MADE* IN ALL DISTRICTS AND THE STATE USING *INDIVIDUAL TEACHING METHODS* FROM 1972 TO 1975 BY NUMBERS OF CONTACTS MADE ACCORDING TO TEMIS SWINE SUBJECTS

TEMIS Swine Subject	State	Extension District				
		I	II	III	IV	V
	Number of Contacts					
1. Swine Records	-51	-13	0	-3	0	-35
2. Swine Pests	81	65	59	25	-44	-24
3. Swine Housing and Structures	290	253	-19	8	-28	76
4. Swine Management	-299	105	-344	83	-62	-11
5. Swine Feeding and Nutrition	100	125	-67	37	-30	35
6. Swine Breeding and Production	917	594	446	-25	-143	45
7. All Other Swine Subjects	-1,164	-1,134	-126	104	27	-35
Total	-56	-5	-51	229	-280	51
1972 Total Contacts	11,030	6,460	2,149	648	880	857
1975 Total Contacts	10,974	6,455	2,098	913	600	908

former, and (-) 229 contacts for the latter.

The remaining subjects (i.e., 2, 3, 5 and 6) showed increases in contacts made via *Individual Methods* ranging from (+) 81 contacts for Subject 2, a weaker area, to (+) 917 for Subject 6, a stronger area.

It should be noted that Subject 7, the non-practice-related subject, registered a decrease of (-) 1,164 contacts, which largely accounted for the negative statewide total. Without Subject 7, the six practice-related subjects would show an increase in *contacts made* by means of *Individual Methods* of (+) 1,108 contacts, between 1972 and 1975.

Comparison of district data for Subjects 1 and 4, the practice-related subjects that decreased, shows a range of from (-) 344 contacts via *Individual Methods* to (+) 105 contacts. Subjects 2, 3, 5 and 6 showed shifts ranging from (-) 143 contacts to (+) 594 contacts through *Individual Methods*.

Comparison by Percents

Reference to Table 22 reveals a large number of consequential changes occurred for contacts made via *Individual Methods* on all subjects between 1972 and 1975.

Subject 1 had consequential decreases in *Individual Methods* contacts in District I (-) 10.0 percent, District III (-) 100.0 percent, District V (-) 67.3 percent; while Districts II and IV reported no change. Subject 2 showed consequential shifts for percents of *Individual Method* contacts in all five districts. In order, District I through V, the shifts were: (-) 24.2 percent, (-) 25.1

TABLE 22

PERCENT INCREASES OR DECREASES (RELATIVE SHIFTS) COMPARING *CONTACTS MADE* IN ALL DISTRICTS AND THE STATE USING *INDIVIDUAL TEACHING METHODS* FROM 1972 TO 1975 BY PERCENTS OF CONTACTS MADE ACCORDING TO TEMIS SWINE SUBJECTS

TEMIS Swine Subject	State	Extension District I	II	III	IV	V
		--------Percent of Contacts----------				
70		-10.0	0	-100.0	0	-67.3
71		-24.2	-25.1	10.0	-43.5	55.5
72	+	0.6	43.8	64.8	23.7	56.8
73	+	15.7	-25.5	16.0	-7.4	44.4
74	+	8.7	-21.5	4.5	-27.8	-44.3
75	+	-3.8	14.7	-6.0	46.0	-36.8
76	+	-4.0	-14.5	2.8	1.0	9.1
77						
78						

percent, (+) 10.0 percent, (-) 43.5 percent and (+) 55.5 percent. Subject 3 showed consequential shifts in *Individual Method* contacts in Districts II through V; the shifts were (+) 43.8 percent, (+) 64.8 percent, (+) 23.7 percent and (+) 56.8 percent, respectively. Subject 4 showed consequential shifts in such contacts in District I, (+) 15.7 percent, District II, (-) 25.5 percent, District III, (+) 16.0 percent, and District V, (+) 44.4 percent. Subject 5 showed consequential decreases in *Individual Method* contacts in District II, (-) 21.5 percent, District IV, (-) 27.8 percent and District V, (-) 44.3 percent. Subject 6 had consequential shifts in such contacts in District II, (+) 14.7 percent, District IV, (+) 46.0 percent, and District V, (-) 36.8 percent.

Statewide, Subject 1 and 2 showed downward trends in such contacts of (-) 15.4 percent and (-) 4.4 percent, respectively. The remaining weaker areas, Subjects 3 and 4 showed consequential increases of (+) 21.5 percent for Subject 3 and (+) 13.2 percent for Subject 4.

In the stronger practice areas, Subject 5 decreased slightly in such contacts by (-) 3.1 percent; while Subject 6 increased slightly (+) 0.1 percent.

X. SHIFTS IN THE *NUMBER OF CONTACTS* MADE ACCORDING TO TEMIS SWINE SUBJECTS BY DISTRICTS AND THE STATE, USING *GROUP TEACHING METHODS*

Comparison by Number of Contacts Made

Table 23 includes information regarding shifts in *contacts made* for the various swine subjects FY 1972 and FY 1975, using *Group Teaching Methods*:

TABLE 23

CONTACTS INCREASES OR DECREASES (ACTUAL SHIFTS) COMPARING *CONTACTS MADE* IN ALL DISTRICTS AND THE STATE USING *GROUP TEACHING METHODS* FROM 1972 TO 1975 BY NUMBERS OF CONTACTS MADE ACCORDING TO TEMIS SWINE SUBJECTS

TEMIS Swine Subject	State	Extension District				
		I	II	III	IV	V
	Number of Contacts					
1. Swine Records	-23	-6	0	0	0	-17
2. Swine Pests	711	716	-40	-12	56	-9
3. Swine Housing and Structures	23	119	-69	1	-22	-6
4. Swine Management	-623	-133	-429	-52	17	-26
5. Swine Feeding and Nutrition	160	48	-42	46	127	-19
6. Swine Breeding and Production	203	513	-305	103	-125	17
7. All Other Swine Subjects	10,923	3,662	81	-519	7,617	82
Total	11,374	4,919	-804	-433	7,670	22
1972 Total Contacts	17,633	12,984	2,097	1,460	827	265
1975 Total Contacts	29,007	17,903	1,293	1,027	8,497	287

The statewide total for *contacts made* through *Group Methods* increased (+) 11,374 contacts, between 1972 and 1975 (see Table 23).

The District totals for such contacts ranged from (-) 804 for District II to (+) 7,670 for District IV.

Only Subjects 1 and 4 showed downward trends, with Subject 1 decreasing (-) 23 contacts and Subject 4 by (-) 623 contacts. The remaining weaker subjects, 2 and 3, increased by (+) 711 and (+) 23 such contacts, respectively; while both stronger practice subjects, 5 and 6, increased (+) 160 contacts and (+) 203 contacts also.

It should be noted that more than 60 percent of the total *contacts made* in 1972 and 1975 via *Group Methods* were made in District I.

Comparison of district data, for weaker areas, Subjects 1 and 4, showed ranges from (-) 429 to (+) 17 in such contacts. The increase of (+) 17 contacts reported for Subject 4, District IV, was the only increase shown for Subjects 1 and 4. The remaining weaker areas, Subjects 2 and 3 showed a range in *Group Method* contacts in district data from (-) 69 contacts to (+) 716 contacts.

It should be noted that Subject 7, the non-practice-related subject; increased in State Total by (+) 10,923 contacts, mainly from Districts I and IV.

Comparison by Percents

Reference to Table 24 reveals consequential shifts percents of *Group Method* contacts in all six practice-related subjects. Subject 1 had consequential decreases in such contacts in District I,

TABLE 24

PERCENT INCREASES OR DECREASES (RELATIVE SHIFTS) COMPARING *CONTACTS MADE* IN ALL DISTRICTS AND THE STATE USING *GROUP TEACHING METHODS* FROM 1972 TO 1975 BY PERCENTS OF CONTACTS MADE ACCORDING TO TEMIS SWINE SUBJECTS

TEMIS Swine Subject	State	Extension District I	II	III	IV	V
	----------Percent of Contacts----------					
1. Swine Records	-28.4	-24.0	0	0	0	-32.7
2. Swine Pests	21.3	41.1	-43.8	1.4	44.4	-4.5
3. Swine Housing and Structures	0.2	10.8	-48.9	7.6	-23.7	-11.5
4. Swine Management	6.8	8.7	-32.3	5.2	48.1	-4.4
5. Swine Feeding and Nutrition	-2.4	4.8	-43.4	5.5	30.2	-21.1
6. Swine Breeding and Production	-11.6	-32.0	-38.3	0.1	41.2	0.5
7. All Other Swine Subjects	29.8	21.4	-1.6	-2.2	49.3	19.7

(-) 24.0 percent and District V, (-) 32.7 percent; Districts II, III and IV reported no change. Subject 2 showed consequential shifts in such contacts of (+) 41.1 percent for District I; (-) 43.8 percent for District II and (+) 44.4 percent for District IV. Subject 3 had consequential shifts of (+) 10.8 percent, for District I; (-) 48.9 percent for District II; (-) 23.7 percent for District IV and (-) 11.5 percent for District V. Subject 4 reported consequential shifts in percents of *Group Method* contacts of (-) 32.3 percent for District II and (+) 48.1 percent, for District IV. Subject 5 showed consequential shifts of (-) 43.4 percent for District II; (+) 30.2 percent for District IV and (-) 21.1 percent for District V. Subject 6 had consequential shifts of (-) 32.0 percent for District I; (-) 38.3 percent for District II and (+) 41.2 percent for District IV.

Subject 1 was the only weaker area subject that showed a statewide downward trend in such contacts of (-) 28.4 percent. The remaining weaker areas, Subjects 2, 3 and 4 had increasing State totals, of (+) 21.3 percent, (+) 0.2 percent and (+) 6.8 percent, respectively of contacts via *Group Method*.

The stronger area subjects showed a statewide downward trend in such contacts of (-) 2.4 percent for Subject 5 and (-) 11.6 percent for Subject 6.

Subject 7, the non-practice-related subject, reported a consequential statewide increase in *Group Method* contacts of (+) 29.8 percent; while Districts I, IV and V showed consequential increases of (+) 21.4 percent, (+) 49.3 percent and (+) 19.7 percent respectively.

XI. SHIFTS IN THE *NUMBER OF CONTACTS MADE* ACCORDING TO TEMIS SWINE SUBJECTS BY DISTRICTS AND THE STATE, USING *MASS MEDIA*

Comparison by Number of Contacts Made

Table 25 includes information regarding shifts in *contacts made* for the various swine subjects FY 1972 and FY 1975, using *Mass Media* as the teaching methods.

The state total for *contacts made* via *Mass Media* decreased (-) 7,402 contacts, between 1972 and 1975 (see Table 25).

The district totals for contacts made using *Mass Media* ranged from (-) 6,719 contacts for District III to (+) 3,961 contacts for District II.

Comparison of subject data shows all of the weaker area subjects, Subjects 1 through 4, had downward trends in *Mass Media* with the exception of Subject 1, which showed no change. No contacts using *Mass Media* were reported for Subject 1, in either 1972 or 1975. The downward trends for the weak area subjects ranged from (-) 175 contacts to (-) 4771 contacts using Mass Media.

The stronger practice area subjects showed an upward trend in *contacts made* via *Mass Media* of (+) 617 contacts on Subject 5 and (+) 6,105 contacts on Subject 6.

Comparison of the district data, for the weaker area subjects, shows contact shifts ranging from (-) 3,759 contacts to (+) 641 contacts for *Mass Media*.

Comparison of district data, for the stronger area subjects, shows contact shifts ranging from (-) 1,314 contacts to (+) 5,122 contacts made via *Mass Media*.

TABLE 25

CONTACT INCREASES OR DECREASES (ACTUAL SHIFTS) COMPARING *CONTACTS MADE* IN ALL DISTRICTS AND THE STATE USING *MASS MEDIA* FROM 1972 TO 1975 BY NUMBERS OF CONTACTS MADE ACCORDING TO TEMIS SWINE SUBJECTS

TEMIS Swine Subject	State	Extension District				
		I	II	III	IV	V
	Number of Contacts					
1. Swine Records	0	0	0	0	0	0
2. Swine Pests	-267	-180	599	-599	-1	-95
3. Swine Housing and Structures	-175	3	-7	-135	0	-36
4. Swine Management	-4,771	-1,542	641	-3,759	-95	-16
5. Swine Feeding and Nutrition	617	-352	1,072	-201	0	98
6. Swine Breeding and Production	6,105	5,122	955	1,181	-1,314	161
7. All Other Swine Subjects	-8,902	-944	701	-3,206	-5,249	-204
Total	-7,402	2,107	3,961	-6,719	-6,659	-92
1972 Total Contacts	38,440	6,720	909	16,825	13,532	454
1975 Total Contacts	31,038	8,827	4,870	10,106	6,873	362

It should be noted that the negative State total, for contacts made, (-) 7,402 contacts was primarily the result of the decrease of (-) 8,902 contacts reported on Subject 7. The State total for the six practice-related subjects was an increase of (+) 1,500 contacts via *Mass Media*.

Comparison by Percents

Reference to Table 26 reveals a large number of consequential shifts in percents of contacts through *Mass Media*. Subject 1 reported no change, but, here again there were no contacts reported in the State using *Mass Media* in either 1972 or 1975. Subject 2 showed consequential shifts in District I, (-) 34.5 percent; District II, (+) 70.1 percent; District III, (-) 11.8 percent; and District V, (-) 47.0 percent. Subject 3 reported consequential decreases in District III, (-) 72.6 percent and District V, (-) 50.7 percent. Subject 4 reported consequential differences in District I, (-) 29.1 percent; District II, (+) 58.0 percent; District III, (-) 21.5 percent; and District IV, (-) 38.6 percent. Subject 5 reported consequential shifts in contacts through *Mass Media* in all districts except District IV, which reported no change; the shifts were (-) 15.2 percent (+) 65.5 percent, (-) 9.7 percent and (-) 26.5 percent respectively. Subject 6 had consequential differences in District I, (+) 35.6 percent; District II, (+) 52.0 percent; and District V, (+) 26.9 percent.

Comparison of State totals, for Subjects 1 through 4, the weaker subjects, shows downward trends in all weaker subjects, except

TABLE 26

PERCENT INCREASES OR DECREASES (RELATIVE SHIFTS) COMPARING *CONTACTS MADE* IN ALL DISTRICTS AND THE STATE USING *MASS MEDIA* FROM 1972 TO 1975 BY PERCENTS OF CONTACTS MADE ACCORDING TO SWINE SUBJECTS

TEMIS Swine Subject	State	Extension District I	II	III	IV	V
	----------Percent of Contacts----------					
1. Swine Records	0	0	0	0	0	0
2. Swine Pests	-24.9	-34.5	70.1	-11.8	-0.9	-47.0
3. Swine Housing and Structures	-19.1	0.1	-5.0	-72.6	0	-50.7
4. Swine Management	-22.5	-29.1	58.0	-21.5	-38.6	-6.4
5. Swine Feeding and Nutrition	2.2	-15.2	65.5	-9.7	0	-26.5
6. Swine Breeding and Production	26.5	35.6	52.0	5.8	-52.6	26.9
7. All Other Swine Subjects	-3.6	-3.7	11.4	-6.1	4.1	-18.6

Subject 1 with no change, ranging from (-) 24.9 percent to (-) 19.1 percent.

Comparison of State totals, for the strong area subjects shows upward trends in contacts through *Mass Media* of (+) 2.2 percent for Subject 5 and (+) 26.5 percent for Subject 6.

XII. *SHIFTS IN THE NUMBERS OF CONTACTS MADE* ACCORDING TO TEMIS SWINE SUBJECTS BY DISTRICTS AND THE STATE, USING *ALL OTHER TEACHING METHODS*

Comparison by Number of Contacts Made

Table 27 includes information regarding shifts in *contacts made* for the various swine subjects FY 1972 and FY 1975, using *Other Methods*. *Other Methods*, in this case, included teaching methods not classified as Individual, Group or Mass Media.

The state total of *contacts made* via *Other Methods* decreased (-) 20,846 contacts, between 1972 and 1975 (see Table 27).

District totals, for such *contacts made*, ranged from (-) 18,488 contacts, for District IV, to (+) 414 contacts for District III.

Comparison of State totals, for the weaker subject areas, reveals that Subjects 1, 3 and 4 recorded small negative shifts ranging from (-) 3 contacts, in District I, to (-) 15 contacts in Districts 3 and 4. The remaining weaker practice area, Subject 2, had a positive shift of (+) 234 contacts.

Comparison of State totals, for the stronger area subjects, showed a (+) 182 contacts increase for Subject 5, while Subject 6

TABLE 27

CONTACT INCREASES OR DECREASES (ACTUAL SHIFTS) COMPARING *CONTACTS MADE* IN ALL DISTRICTS AND THE STATE USING *ALL OTHER TEACHING METHODS* FROM 1972 TO 1975 BY NUMBERS OF CONTACTS MADE ACCORDING TO TEMIS SWINE SUBJECTS

TEMIS Swine Subject	State	Extension District				
		I	II	III	IV	V
	Number of Contacts					
1. Swine Records	-3	-2	-1	0	0	0
2. Swine Pests	234	243	-2	1	0	-8
3. Swine Housing and Structures	-15	-22	3	-2	0	6
4. Swine Management	-15	113	-14	-15	-8	-91
5. Swine Feeding and Nutrition	182	29	-4	-3	-6	166
6. Swine Breeding and Production	-1,055	31	-274	2	-863	49
7. All Other Swine Subjects	-20,174	-3,171	283	431	-17,611	-106
Total	-20,846	-2,779	-9	414	-18,488	16
1972 Total Contacts	25,697	5,495	750	43	19,158	251
1975 Total Contacts	4,851	2,716	741	457	670	267

decreased by (-) 1,055 contacts through *Other Methods*.

The district data comparisons for the weaker area Subjects 1 through 4 ranged from (-) 22 contacts to (+) 243 contacts, with Subject 1 having shown no change in Districts III, IV and V; District IV also recorded no change for Subjects 2 and 3.

District data comparisons, for the stronger area subjects, ranged from (-) 863 contacts to (+) 166 contacts between 1972 and 1975 via *Other Methods*.

Comparison by Percent

As seen in Table 28, the weaker areas, Subjects 1 through 4 recorded consequential shifts in *Other Method* contacts for Subjects 1, District I, (+) 34.0 percent; District II, (-) 100.0 percent; for Districts III through V no change was recorded; Subject 2, District I, (+) 17.6 percent; Subject 3, District I, (-) 11.5 and District II, (+) 10.1 percent; and Subject 4, District V, (-) 33.2 percent.

The stronger area subjects reported consequential shifts in contacts through *Other Methods* of (+) 38.9 percent in District V for Subject 5 and (-) 28.4 percent in District II, (-) 34.6 in District IV and (+) 9.4 percent in District V, for Subject 6.

State totals for the weaker area subjects, ranged from (-) 2.6 percent, the only weak area downward trend in Other Method contacts, for Subject 3 to (+) 43.8 percent for Subject 1.

Trends were mixed, for the stronger area subjects, with a (+) 3.3 percent increase statewide for Subject 5 and a (-) 15.0 percent decrease statewide for Subject 6 in contacts via *Other Methods*.

TABLE 28

PERCENT INCREASES OR DECREASES (RELATIVE SHIFTS) COMPARING *CONTACTS MADE* IN ALL DISTRICTS AND THE STATE USING *ALL OTHER TEACHING METHODS* FROM 1972 TO 1975 BY PERCENTS OF CONTACTS MADE ACCORDING TO TEMIS SWINE SUBJECTS

TEMIS Swine Subject	State	Extension District I	II	III	IV	V
	----------Percent of Contacts----------					
1. Swine Records	43.8	34.0	-100.0	0	0	0
2. Swine Pests	8.0	17.6	-1.2	0.4	0	-4.0
3. Swine Housing and Structures	-2.6	-11.5	10.1	1.3	0	5.4
4. Swine Management	2.5	4.7	-0.2	0.3	-2.1	-33.2
5. Swine Feeding and Nutrition	3.3	1.7	-0.6	-0.3	-2.4	38.9
6. Swine Breeding and Production	-15.0	0.2	-28.4	0.1	-34.6	9.4
7. All Other Swine Subjects	-27.4	-13.7	4.6	5.5	-54.4	-10.4

Subject 7, the non-practice-related subject, showed a consequential decrease of (-) 27.4 percent from FY 1972 to FY 1975 in contacts through *Other Methods*.

CHAPTER V

SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

Program determination and program evaluation are usually accepted as being important and necessary processes as Extension persons help county residents in identifying and satisfying their needs and personal, group and community goals. By relating Tennessee Extension Management Information System (TEMIS) data concerning agent time planned, expended, and contacts made by districts and according to selected teaching methods to practice checklist survey data, it was felt that Extension Swine educational programs might be evaluated and better planned in terms of the priority needs of the State's swine producers. The major purpose of this study was to determine possible implications of the 1972 and 1975 TEMIS data for the 1970 Tennessee Swine Practice Checklist Survey (TSPCS) had on Extension's educational program.

Specific objectives included the following: (1) to study SPCS and TEMIS data together in a meaningful, prioritized way; (2) to study shifts in time planned and expended in FY 1972 and FY 1975 by Tennessee Agents doing swine educational work in the five Tennessee Extension Supervisory Districts in order to try to measure the impact of the 1970 TSPCS based on changes reflected in the 1975 Survey; (3) to study shifts in contacts made in FY 1972 and FY 1975 by Tennessee Agents doing swine educational work in the Extension Districts and to try to measure any shifts brought about by the 1970 TSPCS based on changes reflected in the 1975 Survey; (4) to study

Extension methods used in FY 1972 and FY 1975 and note shifts in methods used and consider the relative effectiveness of the methods in teaching swine producers.

Information from the TSPCS conducted in 1970 comparing swine producers in the five districts of Tennessee regarding their use of recommended swine practices was used as the basis for identifying priority educational needs of the producers. In 1970, a total of 918 adult swine producers was randomly surveyed, basically 30 producers per county, including 180 in District I; 222 in District II; 220 in District III; 180 in District IV; and 116 in District V. In 1975 a total of 732 adult swine producers was randomly surveyed, basically 20 producers per county, including 180 in District I; 154 in District II; 154 in District III; 127 in District IV; and 117 in District V. Information collected from TEMIS computer printouts included agent days planned, expended, contacts made, and teaching methods used in terms of days expended and contacts made according to districts.

A "concern level" of 60 percent was set for subjects prioritized for this study. Swine subjects and related practices having only 60 percent or less in an average statewide producer use were considered to be "of program concern."

I. SUMMARY OF FINDINGS

It was noted in the study, that, in 1975, the average weaning weight (pig at 8 weeks) in Tennessee, was 40 pounds per pig. District IV producers averaged the heaviest weaning weights with 41.6 pounds, District III was next with 41.0 pounds, followed by

District V with 40.0 pounds, District I with 39.5 pounds and District II with 38.8 pounds (2).

Relation of SPCS and TEMIS Data

The 23 recommended practices were classified under six TEMIS subject headings to permit relating SPCS and TEMIS information. They were ordered from least used (i.e., weakest) to most used (i.e., strongest). It was assumed that data from the two sources could be related.

Four TEMIS swine subjects were found to be less than, or below, the 60 percent concern level for the 1970 SPCS in the State. The TEMIS subjects below the concern level included Subject 1, Swine Records--14 percent; Subject 2, Swine Pests--36 percent; Subject 3, Swine Housing and Structures--46 percent; and Subject 4, Swine Management--54 percent. Two 1970 subjects were above the 60 percent concern level, including Subject 5, Swine Feeding and Nutrition--69 percent and Subject 6, Swine Breeding and Production--70 percent. By 1975, Subject 4 had improved, from below, to above the 60 percent concern level (i.e., from 54 percent in 1970 to 65 percent in 1975). This improvement left three swine subjects below the concern level, in 1975, including Subject 1, Swine Records--15 percent; Subject 2, Swine Pests--52 percent; and Subject 3, Swine Housing and Structures--55 percent. The three swine subjects that were above the concern level, in 1975, included Subject 4, Mwine Management--65 percent, Subject 5, Swine Feeding and Nutrition--76 percent and Subject 6, Swine Breeding and Production--76 percent.

The grand total average practice use for all subjects in 1970 was 54 percent; and in 1975 was 63 percent for the State. Average percents of swine producers, in District I, were below the concern level, for Subject 1, Swine Records, in 1970--12 percent, and 1975--18 percent; Subject 2, Swine Pests, in 1970--44 percent, and 1975--47 percent; Subject 3, Swine Housing and Structures, in 1970--55 percent, and 1975--59 percent; and Subject 4, Swine Management, in 1970-56 percent. Average percents of swine producers, in District II, were below the concern level, for Subject 1, Swine Records, in 1970--12 percent, and 1975--20 percent; Subject 2, Swine Pests, in 1970--31 percent, and 1975--50 percent; Subject 3, Swine Housing and Structures, in 1970--48 percent, and 1975--53 percent; and Subject 4, Swine Management in 1975--60 percent. Average percents of swine producers in District III, were below the concern level, for Subject 1, Swine Records, in 1970--19 percent, and 1975--12 percent; Subject 2, Swine Pests, in 1970--36 percent, and 1975--58 percent; Subject 3, Swine Housing and Structures, in 1970--40 percent and 1975--47 percent; and Subject 4, Swine Management, in 1970--47 percent. Average percents of swine producers, in District IV, were below the concern level, for Subject 1, Swine Records, in 1970--14 percent, and 1975--14 percent; Subject 2, Swine Pests, in 1970--41 percent, and 1975--59 percent; Subject 3, Swine Housing and Structures, in 1970--47 percent; and Subject 4, Swine Management, in 1970--57 percent. Average percents of swine producers, in District V, were below the concern level, for Subject 1, Swine Records, in 1970--11 percent, and 1975--9 percent; Subject 2,

Swine Pests, in 1970--30 percent, and 1975--46 percent; Subject 3, Swine Housing and Structures, in 1970--37 percent, and 1975--45 percent; Subject 4, Swine Management, in 1970--46 percent and Subject 5, Swine Feeding and Nutrition, in 1970--46 percent. The remaining average percents of swine producers for Districts I through V were above the concern level.

Comparisons of Shifts in Agent Time Planned by Districts

There was a net decrease of (-) 11 agent days planned from FY 1972 to FY 1975. Subjects ranged from a decrease of (-) 81 days on Subject 4 to an increase of (+) 163 days for Subject 6.

The overall shift in numbers of agent days planned by districts from FY 1972 and FY 1975 ranged from a decrease of (-) 40 days in District III to an increase of (+) 30 days in District IV.

Subjects 1 through 5 showed decreases in relative percents of agent days planned ranging from (-) 4.3 percent for Subject 4 to (-) 0.9 percent for Subject 5. Districts ranged from a decrease of (-) 13.4 percent on Subject 7, District III, to an increase of (+) 16.4 percent on Subject 6, District I.

Comparisons of Shifts in Agent Time Expended by Districts

There was a net decrease of (-) 61.0 agent days expended from FY 1972 to FY 1975. Three subjects, Subjects 2, 3 and 6 showed increases in agent days expended of (+) 27.3, (+) 32.6 and (+) 70.2, respectively. All other subjects (i.e., 1, 4, 5 and 7) showed decreases in agent days expended ranging from (-) 106.3 days in

Subject 7, to (-) 6.7 days in Subject 5. All districts showed overall decreases in agent days expended, except Districts I and V. Decreases ranged from (-) 88.0 days in District II to (-) 27.0 days in District IV. Increases of (+) 69.0 and (+) 18.0 were shown in Districts I and V, respectively. Increases in agent days expended according to subjects occurred in District I, on Subjects 2, 3 and 6; District II, on Subject 2; District III, on Subjects 2, 5 and 6; District IV, on Subjects 5 and 7; and District V, on Subjects 3, 4, 5 and 6. Decreases in agent days expended according to subjects occurred in District I, on Subjects 1, 4, 5 and 7; District II, on Subjects 1, 3, 4, 5, 6 and 7; District III, on Subjects 1, 3, 4 and 7; District IV, on Subjects 2, 3, 4 and 6; and District V, on Subjects 1, 2 and 7.

Relative percents of agent days expended ranged from a decrease of (-) 3.9 percent on Subject 7 to an increase of (+) 4.1 percent in agent days expended on Subject 6. District I showed decreases on Subjects 1, 4, 5 and 6; District III; decreased on Subjects 1, 4 and 7; District IV decreased on Subjects 3, 4 and 6; and District V decreased on Subjects 1, 2 and 7 in terms of shifts in agent days expended.

Comparisons of Shifts in Contacts by Districts

Total contacts showed a net decrease of (-) 16,934 contacts from FY 1972 to FY 1975. Three subjects, Subjects 1, 4 and 7, showed decreases in contacts of (-) 77, (-) 5,638 and (-) 19,317 contacts, respectively. All other subjects (i.e., 2, 3, 5 and 6) showed increases in contacts of (+) 746 for Subject 2, (+) 123 for

Subject 3, (+) 1,059 for Subject 5 and (+) 6,170 contacts for Subject 6. Districts I and II showed overall increases of (+) 4,242 and (+) 3,093 contacts, respectively, while the remaining districts reported decreases of (-) 6,509 contacts for District III; (-) 17,757 for District IV; and (-) 3 contacts for District V. Decreases in contacts made according to subjects occurred in District I, on Subjects 1, 4, 5 and 7; District II, on Subjects 1, 3 and 4; District III, on all seven subjects, except Subject 6; District IV, on Subjects 3, 4, 6 and 7; and District V, on Subjects 1, 2, 3 and 7.

Percents of contacts by subject ranged from a decrease of (-) 8.4 percent on Subject 7, to an increase of (+) 9.9 percent on Subject 6. Decreases in percents of contacts made according to subjects occurred in District I, on Subjects 1, 4, 5 and 7; District II, on Subjects 3, 4 and 7; District III, on Subjects 2, 3 and 4; District IV, on Subjects 4 and 6; and in District V, on Subjects 1, 2, 4 and 7.

Comparisons of Shifts in Agent Days Expended by Methods

Changes in agent days expended using different teaching methods on swine subjects statewide between FY 1972 and FY 1975, ranged from a high increase of (+) 47.2 agent days using Individual Methods recorded on Subject 6 to a low decrease of (-) 40.0 agent days, also using Individual Methods recorded for Subject 4.

When districts were compared, it was noted that shifts in days expended ranged from an increase of (+) 78.5 days for Individual Methods on Subject 6, District 1, to a decrease of (-) 25.7 days in Group Methods on Subject 7, also in District I.

The only large changes in days expended, between FY 1972 and FY 1975, that took place on weaker area subjects (Subjects 1 through 4) occurred in Individual Methods, District I; an increase of (+) 19.5 days was shown for Subject 2, an increase of (+) 39.3 days was shown for Subject 3 and a decrease of (-) 21.8 days was shown for Subject 4.

Large changes occurring on stronger area subjects (Subjects 5 and 6) took place in all methods, except Mass Media. For Individual Methods, Subject 6 recorded an increase of (+) 78.5 days, in District I and a decrease of (-) 20.4 days, in District IV. For Group Methods, Subject 5 recorded a decrease of (-) 17.0 days, in District I; while Subject 6 recorded an increase of (+) 20.0 days also in District I and a decrease of (-) 21.4 days in District II. For Other Methods (i.e., planning, preparation, evaluation, and non-applicable), Subject 6 had a decrease of (-) 16.9 days in District II and increases of (+) 16.3 days and (+) 20.0 days for Districts I and V, respectively.

Large changes occurred for Subject 7, the non-practice-related subject, in Individual Methods and Group Methods. For Individual Methods, Districts II and IV showed decreases of (-) 23.6 days and (-) 19.3 days, respectively. For Group Methods, District I showed a decrease of (-) 25.7 days and District III a decrease of (-) 18.5 days; while District IV recorded an increase of (+) 42.2 days.

Changes in percents of days expended between FY 1972 and FY 1975 Statewide ranged from a relative increase of (+) 42.1 percent using Other Methods on Subject 1 to a relative decrease of (-) 21.0 percent using Individual Methods also on Subject 1.

When districts were compared, it was found that shifts in percents of days expended, ranged from an increase of (+) 58.7 percent in Other Methods on Subject 6 in District V to a decrease of (-) 100.0 percent also in All Other Methods on Subject 1 in District II.

The relatively large changes, in percents of agent days expended, between FY 1972 and FY 1975, that took place on weaker area subjects (Subjects 1 through 4) occurred in all methods, except Mass Media. For Individual Methods, Subject 1 recorded decreases of (-) 75.0 percent, in District III and (-) 72.0 percent in District V; Subject 3 recorded increases of (+) 28.6 percent in District I and (+) 31.6 percent in District II; and Subject 4 recorded a decrease of (-) 28.9 percent in District IV. For Group Methods, Subject 1 recorded a decrease of (-) 27.0 percent in District I; Subject 3 recorded decreases of (-) 26.2 percent and (-) 31.5 percent in Districts I and II, respectively; and Subject 4 recorded an increase of (+) 32.6 percent, in District IV. For Other Methods (i.e., planning, preparation, evaluation and non-applicable) Subject 1 reported an increase of (+) 45.6 percent in District I and relative decreases of (-) 100.0 percent in District II and (-) 25.0 percent, in District III.

Large relative shifts occurred for Subject 6, a stronger area subject, using Individual Methods, in District II (+) 33.7 percent and District V (-) 53.4 percent; and using Other Methods, in District V (+) 58.7 percent. There were no large shifts reported for Subject 5, the remaining strong area subjects, using any teaching method.

One large shift occurred, for Subject 7, the non-practice-related subject, using Group Methods; District IV reported an increase of (+) 34.6 percent.

Trends, in percent of agent days, were toward increased use of Individual Methods in all subjects, except Subject 1, which showed an increase in use of Other Methods. Subjects 4 and 7, also increased in the use of Group Methods. Mass Media showed the greatest decrease, between 1972 and 1975, with negative trends on nearly all subjects.

Comparisons in Shifts in Contacts by Methods

Changes in numbers of contacts made on swine subjects statewide between FY 1972 and FY 1975 ranged from a high increase of (+) 10,923 contacts through Group Methods on Subject 7 to a low decrease of (-) 20,174 contacts, via Other Methods on Subject 7.

When districts were compared, it was noted that shifts in contacts ranged from an increase of (+) 7,617 contacts using Group Methods on Subject 7, District IV, to a decrease of (-) 17,611 contacts through Other Methods also on Subject 7, District IV.

Large shifts, in number of contacts made, through all methods were noted for weaker area subjects (Subjects 1 through 4) using Group Methods and Mass Media. For Group Methods, Subject 2 showed an increase of (+) 716 contacts, in District I. For Mass Media, Subject 2 showed an increase of (+) 716 contacts, in District I. For Mass Media, Subject 2 showed an increase of (+) 599 contacts, in District II, and a decrease of (-) 599 contacts in District III;

and Subject 4 showed an increase of (+) 641 contacts, in District II and decreases of (-) 1,542 contacts and (-) 3,759 contacts, in Districts I and III, respectively.

Large shifts in numbers of contacts were reported for Subjects 5 and 6, the strong area subjects, using all types of teaching methods. For Individual Methods, Subject 6 had an increase of (+) 594 contacts, in District I. For Group Methods, Subject 6 showed an increase of (+) 513 contacts, also in District I. For Mass Media, Subject 5 showed an increase of (+) 1,072 contacts, in District II; while Subject 6 reported increases of (+) 5,122, (+) 955 and (+) 1,181 contacts, in Districts I, II and III, respectively, and a decrease of (-) 1,314 contacts in District IV. For Other Methods, Subject 6 had a change of (-) 863 contacts, in District IV.

Large shifts, in numbers of contacts, also occurred on Subject 7, the non-practice-related subject, in all four major types of teaching methods. These shifts ranged from (-) 17,611 contacts using Other Methods, in District IV, to (+) 7,617 contacts, using Group Methods, also in District IV.

Changes in percents of contacts statewide between FY 1972 and FY 1975 ranged from an increase of (+) 43.8 percent using Other Methods Subject 1 to a decrease of (-) 28.4 percent using Group Methods also on Subject 1.

When districts were compared it was found that shifts in percents of contacts ranged from an increase of (+) 70.1 percent in Mass Media on Subject 2 in District II to a decrease of (-) 100.0

percent using Individual Methods on Subject 1 in District III and using Other Methods on Subject 1, District II.

The large shifts, in percent of contacts made, for the weaker area subjects (i.e., Subjects 1 through 4) occurred in all areas, except Group Methods. For Individual Methods, Subject 1 reported decreases of (-) 100.0 and (-) 67.3 percent, in Districts III and V, respectively; Subject 2 reported a (+) 55.5 percent shift in District V; and Subject 3 reported increases of (+) 64.8 and (+) 56.8 percents, in Districts III and V, respectively. For Mass Media, Subject 2 reported a (+) 70.1 percent shift in District II; Subject 3 had decreases of (-) 72.6 and (-) 50.7 percents, in Districts III and V, respectively; and Subject 4 reported a (+) 58.0 percent shift in District II. For Other Methods, Subject 1 reported a decrease of (-) 100.0 percent, in District II.

The large shifts reported for the stronger area subjects, occurred using Mass Media; Subject 6 reported a (+) 52.0 percent increase and a (-) 52.6 percent decrease in Districts II and IV, respectively.

The only large shift reported for Subject 7, the non-practice-related subject, occurred using Other Methods; a decrease of (-) 54.4 percent, in District IV. Major trends, in contacts made, were toward increased use of Group Methods and decreased use of Other Methods; however, trends on specific subjects varied.

II. IMPLICATIONS

The classification approach tested, in this study, simultaneously examining percents of producers using recommended swine production practices, from the TSPCS, and numbers and percents of agent days expended and clientele contacts made from TEMIS, according to districts and by Extension teaching methods, appeared to permit these comparisons.

Since both numbers and percents of agent days planned, for the four weaker area swine subjects, decreased, following the FY 1970 TSPCS; and time planned for Subject 6 (the strongest practice related subject) increased, and since total days planned for swine educational emphasis actually decreased from 1972 to 1975; it appears that 1970 swine survey findings were not reflected in educational program plans of agents.

Data on agent days expended and contacts made, revealed some improvement, in educational emphasis, with two of the weaker subjects (i.e., Subject 2--Swine Pests and Subject 3--Swine Housing and Structures) having been given a larger portion of the total time expended. However, Subject 1, the weakest subject, was given an even smaller percentage of total time and contacts expended, with fewer agent days spent and fewer contacts made, in this area in 1975 than in 1972. Also, Subject 4--Swine Management, a weak area subject, reported the largest decrease in numbers and percents of agent day expended and contacts made on all subjects.

An encouraging trend, showed a decrease in agent days planned and contacts made for the swine subjects not related to the practice on the TSPCS.

Increases, in time expended, were greatest for Individual Methods used, while a decrease was noted for agent days spent using Mass Media. Increases in contacts made, were greatest in Group Methods. This indicates that agents, responsible for swine programs, felt a need to reach swine producers through personal contact (i.e., Individual or Group), rather than through Mass Media. Further study would be needed to determine whether the problems that faced the swine industry, between FY 1972 and FY 1975 were responsible for this apparent shift in agent time toward more personal types of teaching methods.

Further study, of the problems faced by the producers, between 1972 and 1975 also would be needed to determine whether or not these problems dictated that agent time be used in the already strong areas of Swine Feeding and Nutrition and Swine Breeding and Production, rather than in the weak areas of Swine Records, Swine Pests, Swine Housing and Structures and Swine Management.

III. RECOMMENDATIONS

1. Encourage agents through appropriate training to plan their educational programs according to TSPCS findings.

2. Conduct similar studies in other subject areas.

3. More closely relate TSPCS practice and TEMIS subjects.

4. Conduct other similar studies to prove the true nature of the relationships here implied between Extension inputs in agent days devoted to swine production using various methods to outputs measured in increased pork production and higher percents of producers using research-verified swine practices.

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APPENDICES

APPENDIX A

PRACTICE CHECKLIST SURVEY

CRANES CREST

THE AGRICULTURAL EXTENSION SERVICE, UNIVERSITY OF TENNESSEE
Knoxville, Tennessee

TENNESSEE SWINE SURVEY

PART I. PIG PRODUCTION

Name of Respondent_____ Address_____

County_____ Date_____ Number of Interview in Survey____

1. How many females were bred to farrow once last year?_____
   Twice_____
2. How many females actually farrowed once last year?_____
   Twice_____
3. How many pigs were raised to weaning age in your herd last year?
   _____
4. What was the average weight of your pigs at 8 weeks of age?_____
5. How many pigs were marketed as feeders?_____ Fed and marketed for slaughter?_____
6. If pigs were marketed as feeders, how were they disposed of? Feeder pig sale?_____ Contract?_____ Trades?_____ Feed them out?_____
7. Are you a farm owner-operator?_____ Tenant?_____ Sharecropper? _____ Part-owner?_____ Other?__farm manager; who leases farm
8. Do you receive 50 percnet or more of your total gross family income from farm sales? Yes_____ No_____
9. Are you a full-time farmer? Yes_____ No_____
   1 farm manager--full-time employee

RECOMMENDED PRACTICE (See attached explanatory guide sheet)	YES Percent	NO Percent
1. Were recommended procedures used for replacing herd sows?		
2. Were recommended procedures used for selecting herd sires?		
3. Was a recommended crossbreeding program used (may not apply to some purebred breeders)?		
4. Were sows vaccinated for leptospirosis?		
5. Were gilts bred after attaining approximately 8 months of age and a weight of about 250 pounds?		
6. Were recommended feeding practices followed for pregnant females on pasture?		
7. Were recommended feeding practices followed for pregnant females off pasture?		
8. Were farrowing facilities adequate in terms of recommended standards?		

RECOMMENDED PRACTICE	YES	NO
9. Were all hogs, other than those farrowing, kept out of the farrowing quarters?		
10. Were sows wormed 3-14 days before due to farrow?		
11. Were sows brought into the farrowing quarters at least 3 days before they were due to farrow?		
12. Was each sow carefully washed before bringing her into the clean farrowing quarters?		
13. Were concentrates reduced or bulky feed supplied when sows were placed in farrowing quarters, continuing to 3 days after farrowing?		
14. As pigs were born, were they dried off, any membranes removed from nostrils and was help provided in nursing?		
15. After 3 post-farrowing days on a bulky ration, were sows fed a gradually increased ration to roughly 10 pounds in 7-14 days?		
16. Were appropriate methods used to prevent pig anemia?		
17. Were pigs provided with an 18-20% creep feed during the period from 1-2 weeks of age through weaning?		
18. Were farrowing quarters kept well-ventilated, clean and dry?		
19. Were pigs systematically identified soon after birth?		
20. Were pigs castrated before 4 weeks of age?		
21. Were lifetime sow records kept?		
22. Was (were) the farrowing house(s) thoroughly cleaned and disinfected after sows were removed?		
23. Was at least a two-week period maintained between the time the farrowing house was cleaned and disinfected and the re-use of the same facilities for farrowing?		
24. Was the advice of a professional agricultural worker sought with regard to management of the herd (e.g. pig vaccination)?		

THE UNIVERSITY OF TENNESSEE AGRICULTURAL EXTENSION SERVICE

1975 SWINE SURVEY

PART I. PIG PRODUCTION

Name of Respondent_____ Address_____

1 (1) Card Number

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

___ (5) Tenure Status (1 = owner; 2 = other_____)

A. General

1. How many females (sows and gilts) were bred to farrow

___ ___ ___ (6) (7) (8) a. Once last year? (Actual number) A 999 = 1,000 or more

___ ___ ___ (9) (10) (11) b. Twice last year? (Actual number)

2. How many females actually farrowed

___ ___ ___ (12) (13) (14) a. Once last year? (Actual number)

___ ___ ___ (15) (16) (17) b. Twice last year? (Actual number)

___ ___ ___ ___ (18) (19) (20) (21) 3. How many pigs were raised to weaning age in your herd last year?

___ ___ (22) (23) 4. What was the average weight of your pigs at 8 weeks of age?

5. How many pigs were marketed as

___ ___ ___ ___ (24) (25) (26) (27) a. Feeders? (Actual Number)

___ ___ ___ ___ (28) (29) (30) (31) b. For slaughter? (Actual Number)

6. If pigs were marketed as feeders, what percent were disposed of?

___ ___ ___ (32) (33) (34) a. Through feeder pig sales?

___ ___ ___ (35) (36) (37) b. Through contracts?

___ ___ ___ (38) (39) (40) c. Through trades?

___ ___ ___ (41) (42) (43) d. Other?

___ (44) 7. Do you receive 50 percent or more of your total gross family income from farm sales? (1 = yes; 2 = no)

___ (45) 8. Are you a full-time farmer? (1 = yes; 2 = no)

B. Recommended Practices

	RECOMMENDED PRACTICES (See attached explanatory guide sheet 1 = yes; 2 = no)
___ (46)	(1) Were recommended procedures used for replacing herd sows?
___ (47)	(2) Were recommended procedures used for selecting herd sires?
___ (48)	(3) Was a recommended crossbreeding program used (May not apply to some purebred breeders)?
___ (49)	(4) Were sows vaccinated for leptospirosis?
___ (50)	(5) Were gilts bred after attaining approximately 8 months of age and a weight of about 250 lbs.?
___ (51)	(6) Were recommended feeding practices followed for pregnant females on pasture?
___ (52)	(7) Were recommended feeding practices followed for pregnant females off pasture?

(53) (8) Were farrowing facilities adequate in terms of recommended standards?

(54) (9) Were all hogs, other than those farrowing, kept out of the farrowing quarters?

(55) (10) Were sows wormed 3-14 days before due to farrow?

(56) (11) Were sows brought into the farrowing quarters at least 3 days before they were due to farrow?

(57) (12) Was each sow carefully washed before bringing her into the clean farrowing quarters?

(58) (13) Were concentrates reduced or bulky feed supplied when sows were placed in farrowing quarters--continuing to 3 days after farrowing?

(59) (14) As pigs were born, were they dried off, any membranes removed from nostrils and was help provided in nursing?

(60) (15) Were needle teeth clipped the first 24-28 hours?

(61) (16) Were tails docked the first 24-48 hours (if selling feeder pigs or finishing in confinement)?

(62) (17) After 3 post-farrowing days on a bulky ration, were sows fed a gradually increased ration to roughly 10 lbs. in 7-14 days?

(63) (18) Were appropriate methods used to prevent pig anemia?

(64) (19) Were pigs provided with an 18-20% creep feed during the period from about 2 weeks of age through weaning?

(65) (20) Were farrowing quarters kept well-ventilated, clean and dry?

(66) (21) Were pigs systematically identified soon after birth?

(67) (22) Were pigs castrated before 4 weeks of age?

(68) (23) Were lifetime sow records kept?

(69) (24) Was (were) the farrowing house(s) thoroughly cleaned and disinfected after sows were removed?

(70) (25) Was a disease break provided between the time the farrowing house was cleaned and disinfected and the re-use of the same facilities for farrowing?

(71) (26) Was the advice of a professional agricultural worker sought with regard to management of the herd (e.g. pig vaccination)?

C. Future Assistance

(72) 1. Would you be interested in attending meetings dealing with any of the following (1 = yes; 2 = no):

a. Selection of foundation stock?

b. Feeding of a sow-pig operation?

c. Management of the herd?

d. Housing and equipment?

e. Parasite and disease control?

D. Number of Contacts with Extension Agents:

(73) (74) a. Actual number of Extension meetings attended in past 12 months.

(75) (76) b. Actual number of Extension meetings attended on swine in past 12 months.

(77) c. Actual number of visits made to County Extension office (12 months).

(78) d. Actual number of telephone calls made to the County Extension office (12 months).

(79) (80) e. Actual number of farm visits received by pig producers from County Extension Agents.

APPENDIX B

FINDINGS OF 1975 CARTER STUDY

TABLE 29

TENNESSEE SWINE PRODUCERS WHO WERE USING RECOMMENDED PRODUCTION PRACTICES IN 1975 COMPARED WITH PRODUCERS NOT USING THE PRACTICES AS TO SIZE OF SWINE OPERATION AND NUMBER OF EXTENSION CONTACTS

	All Producers		Producers Who Used Practice		Producers Who Didn't Use Practice		F Value	Probability Level
	No.	Mean	No.	Mean	No.	Mean		
Practice: Herd Sow Replacement								
Number pigs raised to weaning	889	192.1	676	218.0	213	109.0	28.6	.01
Weight at 8 Weeks	869	40.0	665	41.0	204	39.0		
Number pigs sold as feeders	746	141.0	564	160.0	182	81.0	29.2	.01
Number pigs sold for slaughter	477	128.0	380	141.9	97	73.9	5.2	.05
Number Extension meetings attended	891	1.4	678	1.6	213	0.9	17.4	.01
Number Extension Swine meetings attended	884	0.6	826	0.6	58	0.5	0.7	NS
Number visits to Extension office	891	3.1	678	4.5	213	3.8	7.0	.01
Number phone calls to Extension office	891	4.1	678	4.5	213	2.9	15.0	.01
Number farm visits from agent	891	3.6	678	3.7	213	2.8	15.0	.01
Practice: Herd Sire Selection								
Number pigs raised to weaning	888	192.3	617	229.8	271	106.7	42.9	.01

TABLE 29 (Continued)

	All Producers		Producers Who Used Practice		Producers Who Didn't Use Practice			
	No.	Mean	No.	Mean	No.	Mean	F Value	Probability Level
Weight at 8 weeks	868	40.2	605	40.8	263	38.9	25.8	.01
Number pigs sold as feeders	745	140.7	510	166.6	235	84.5	36.7	.01
Number pigs sold for slaughter	476	128.3	351	150.1	125	67.2	9.4	.01
Number Extension meetings attended	890	1.4	619	1.6	271	0.9	24.4	.01
Number Extension swine meetings attended	890	0.6	619	0.7	271	0.3	23.1	.01
Number visits to Extension office	890	3.0	619	3.4	271	2.2	13.6	.01
Number phone calls to Extension office	890	4.0	619	4.6	271	2.7	22.4	.01
Number farm visits from agent	890	2.8	619	3.2	271	1.9	28.8	.01
	Practice: Crossbreeding Program							
Number pigs raised to weaning	877	193.1	671	217.1	206	115.0	23.9	.01
Weight at 8 weeks	857	40.2	658	40.5	199	39.3	8.2	.01
Number pigs sold as feeders	736	140.9	599	159.3	177	83.0	25.9	.01
Number pigs sold for slaughter	466	130.5	359	147.6	107	73.1	6.6	.01
Number Extension meetings attended	879	1.4	673	1.5	206	1.0	9.5	.01

TABLE 29 (Continued)

	All Producers		Producers Who Used Practice		Producers Who Didn't Use Practice			
	No.	Mean	No.	Mean	No.	Mean	F Value	Probability Level
Number Extension swine meetings attended	879	0.6	673	0.6	206	0.4	5.0	.05
Number visits to Extension office	879	3.0	673	3.1	206	2.6	2.4	NS
Number phone calls to Extension office	879	4.0	673	4.3	206	3.1	7.6	.01
Number farm visits from agent	879	2.8	673	2.9	206	2.6	1.1	NS
	Practice: Sows Vaccinated for Leptospirosis							
Number pigs raised to weaning	890	190.3	331	287.8	559	132.6	81.1	.01
Weight at 8 weeks	870	40.2	323	41.4	547	39.5	27.4	.01
Number pigs sold as feeders	748	140.4	284	198.5	464	104.9	53.6	.01
Number pigs sold for slaughter	479	125.0	178	205.3	301	77.5	29.5	.01
Number Extension meetings attended	892	1.4	332	1.7	560	1.2	16.8	.01
Number Extension swine meetings attended	892	0.6	332	0.8	560	0.4	26.5	.01
Number visits to Extension office	892	3.0	332	3.3	560	2.9	1.8	NS
Number phone calls to Extension office	892	4.0	332	5.1	560	3.3	20.7	.01
Number farm visits from agent	892	2.8	332	3.1	560	2.6	3.3	NS

TABLE 29 (Continued)

	All Producers		Producers Who Used Practice		Producers Who Didn't Use Practice			Probability
	No.	Mean	No.	Mean	No.	Mean	F Value	Level
Practice: Gilts Bred at 8 Mos., Wt. 250 lbs.								
Number pigs raised to weaning	889	192.2	744	200.5	145	149.8	4.4	.05
Weight at 8 weeks	869	40.2	734	40.5	135	38.9	10.5	.01
Number pigs sold as feeders	746	140.7	619	147.5	127	107.6	5.4	.05
Number pigs sold for slaughter	476	128.3	397	136.2	79	88.7	2.1	NS
Number Extension meetings attended	891	1.4	746	1.4	145	1.3	0.5	NS
Number Extension swine meetings attended	891	0.6	746	0.6	145	0.5	0.5	NS
Number visits to Extension office	891	3.0	746	3.1	145	2.8	0.5	NS
Number phone calls to Extension office	891	4.0	746	4.3	145	2.8	8.5	.01
Number farm visits from agent	891	2.8	746	2.9	145	2.5	1.3	NS
Practice: Feeding for Pregnant Females on Pasture								
Number pigs raised to weaning	885	187.3	654	205.7	231	135.3	13.1	.01
Weight at 8 weeks	865	40.2	648	40.7	217	38.8	22.4	.01
Number pigs sold as feeders	745	135.9	541	146.2	204	108.8	8.2	.01
Number pigs sold for slaughter	477	125.0	356	144.2	121	68.6	7.8	.01

TABLE 29 (Continued)

	All Producers		Producers Who Used Practice		Producers Who Didn't Use Practice		F Value	Probability Level
	No.	Mean	No.	Mean	No.	Mean		
Number Extension meetings attended	887	1.4	656	1.6	231	0.9	15.6	.01
Number Extension swine meetings attended	887	0.6	656	0.6	231	0.4	11.7	.01
Number visits to Extension office	887	3.0	656	3.2	231	2.5	5.3	.05
Number phone calls to Extension office	887	4.0	656	4.4	231	3.0	10.1	.01
Number farm visits from agent	887	2.8	656	3.0	231	2.3	7.1	.01
Practice: Feeding for Pregnant Females Off Pasture								
Number pigs raised to weaning	869	192.5	612	219.5	257	128.3	21.8	.01
Weight at 8 weeks	849	40.2	604	40.9	245	38.6	34.3	.01
Number pigs sold as feeders	734	140.6	512	157.1	222	102.6	15.0	.01
Number pigs sold for slaughter	463	127.5	321	154.6	142	66.0	11.4	.01
Number Extension meetings attended	871	1.4	614	1.5	257	1.0	9.8	.01
Number Extension Swine meetings attended	871	0.6	614	0.6	257	0.4	12.7	.01
Number visits to Extension office	871	3.0	614	3.2	257	2.6	3.9	.05
Number phone calls to Extension office	871	4.0	614	4.4	257	3.2	7.2	.01

TABLE 29 (Continued)

	All Producers		Producers Who Used Practice		Producers Who Didn't Use Practice		F Value	Probability Level
	No.	Mean	No.	Mean	No.	Mean		
Number farm visits from agent	871	2.8	614	3.0	257	2.6	1.7	NS
Practice: Adequate Farrowing Facilities								
Number pigs raised to weaning	892	191.8	461	252.5	431	126.9	53.6	.01
Weight at 8 weeks	872	40.2	450	41.5	422	38.9	57.2	.01
Number pigs sold as feeders	749	140.4	386	179.3	363	99.0	41.5	.01
Number pigs sold for slaughter	481	127.0	244	179.6	237	72.9	21.0	.01
Number Extension meetings attended	894	1.4	462	1.5	432	1.2	4.3	.05
Number Extension swine meetings attended	894	0.6	462	0.6	432	0.5	2.8	NS
Number visits to Extension office	894	3.0	462	3.3	432	2.7	4.0	.05
Number phone calls to Extension office	894	4.0	462	4.6	432	3.4	10.8	.01
Number farm visits from agent	894	2.8	462	3.0	432	2.6	2.9	NS
Practice: Hogs Not Farrowing Kept Out of Farrowing Quarters								
Number pigs raised to weaning	893	191.6	704	207.1	189	134.2	11.5	.01
Weight at 8 weeks	873	40.2	692	40.6	181	38.6	22.7	.01

TABLE 29 (Continued)

	All Producers		Producers Who Used Practice		Producers Who Didn't Use Practice			
	No.	Mean	No.	Mean	No.	Mean	F Value	Probability Level
Number pigs sold as feeders	750	140.3	592	151.2	158	99.2	11.2	.01
Number pigs sold for slaughter	481	127.0	364	143.2	117	76.7	5.8	.05
Number Extension meetings attended	895	1.4	706	1.4	189	1.2	1.5	NS
Number Extension swine meetings attended	894	0.6	462	0.6	432	0.5	2.8	NS
Number visits to Extension office	895	3.0	706	3.2	189	2.5	4.0	.05
Number phone calls to Extension office	895	4.0	706	4.2	189	3.3	4.1	.05
Number farm visits from agent	895	2.1	706	3.0	189	2.1	10.3	.01
Practice: Sows Wormed 3-14 Days Before Due to Farrow								
Number pigs raised to weaning	894	191.6	386	257.4	508	141.6	44.5	.01
Weight at 8 weeks	874	40.2	378	40.9	496	39.7	13.0	.01
Number pigs sold as feeders	751	140.3	313	180.0	438	111.9	28.7	.01
Number pigs sold for slaughter	481	127.0	221	178.8	260	83.0	16.7	.01
Number Extension meetings attended	896	1.4	388	1.7	508	1.2	13.5	.01
Number Extension swine meetings attended	896	0.6	388	0.7	508	0.5	17.9	.01

TABLE 29 (Continued)

	All Producers		Producers Who Used Practice		Producers Who Didn't Use Practice			
	No.	Mean	No.	Mean	No.	Mean	F Value	Probability Level
Number visits to Extension office	896	3.0	388	3.6	508	2.6	10.9	.01
Number phone calls to Extension office	896	4.0	388	4.6	508	3.6	7.7	.01
Number farm visits from agent	896	2.8	388	3.3	508	2.4	13.8	.01
Practice:	Sows Brought to Farrowing Quarters 3 Days Before Due to Farrow							
Number pigs raised to weaning	894	191.6	699	208.5	195	131.0	13.4	.01
Weight at 8 weeks	874	40.2	683	40.8	191	38.3	33.9	.01
Number pigs sold as feeders	751	140.3	587	154.0	164	91.1	16.9	.01
Number pigs sold for slaughter	481	127.0	379	134.3	102	99.9	1.4	NS
Number Extension meetings attended	896	1.4	701	1.5	195	1.0	7.9	.01
Number Extension swine meetings attended	896	0.7	701	0.6	195	0.4	5.7	.05
Number visits to Extension office	896	3.0	701	3.3	195	2.0	15.0	.01
Number phone calls to Extension office	896	4.0	701	4.3	195	3.1	6.6	.01
Number farm visits from agent	896	2.8	701	3.1	195	1.8	18.7	.01

TABLE 29 (Continued)

	All Producers		Producers Who Used Practice		Producers Who Didn't Use Practice			Probability
	No.	Mean	No.	Mean	No.	Mean	F Value	Level
Practice: Sow Washed Before Bringing to Farrowing Quarters								
Number pigs raised to weaning	894	191.5	172	300.2	722	165.6	37.95	.01
Weight at 8 weeks	874	40.2	169	41.8	705	39.8	20.2	.01
Number pigs sold as feeders	751	140.1	149	197.6	602	125.9	20.7	.01
Number pigs sold for slaughter	481	127.0	98	200.8	383	108.1	10.0	.01
Number Extension meetings attended	896	1.4	172	1.8	724	1.3	11.1	.01
Number Extension swine meetings attended	896	0.6	172	0.8	724	0.5	12.7	.01
Number visits to Extension office	896	3.0	172	4.0	724	2.8	10.2	.01
Number phone calls to Extension office	896	4.0	172	5.5	724	3.7	13.59	.01
Number farm visits from agent	896	2.8	172	3.4	724	2.7	5.99	.05
Practice: Concentrates Reduced or Bulky Food Supplied in Farrowing Quarters								
Number pigs raised to weaning	894	191.5	630	221.8	264	119.0	29.3	.01
Weight at 8 weeks	874	40.2	622	40.6	252	39.3	11.9	.01
Number pigs sold as feeders	751	140.1	515	162.6	236	91.0	28.2	.01
Number pigs sold for slaughter	481	127.0	346	150.2	135	67.5	9.9	.01

TABLE 29 (Continued)

	All Producers		Producers Who Used Practice		Producers Who Didn't Use Practice			
	No.	Mean	No.	Mean	No.	Mean	F Value	Probability Level
Number Extension meetings attended	896	1.4	632	1.5	264	1.1	7.4	.01
Number Extension swine meetings attended	896	0.6	632	0.6	264	0.4	10.7	.01
Number visits to Extension office	896	3.0	632	3.2	264	2.5	5.4	.05
Number phone calls to Extension office	896	4.0	632	4.3	264	3.4	5.2	.05
Number farm visits from agent	896	2.8	632	3.0	264	2.2	10.2	.01
Practice: Pigs Dried Off, Membrane Removed from Nostrils								
Number pigs raised to weaning	895	192.1	554	208.6	341	165.3	5.7	.05
Weight at 8 weeks	875	40.2	549	40.8	326	39.3	16.9	.01
Number pigs sold as feeders	752	140.9	479	157.6	273	111.6	12.1	.01
Number pigs sold for slaughter	481	127.0	290	124.4	191	130.9	0.1	NS
Number Extension meetings attended	897	1.4	555	1.4	342	1.3	1.1	NS
Number Extension swine meetings attended	897	0.6	555	0.6	342	0.4	9.6	.01
Number visits to Extension office	896	3.0	632	3.2	264	2.5	5.4	.05

TABLE 29 (Continued)

	All Producers		Producers Who Used Practice		Producers Who Didn't Use Practice		F Value	Probability Level
	No.	Mean	No.	Mean	No.	Mean		
Number phone calls to Extension office	897	4.0	555	4.5	342	3.3	8.5	.01
Number farm visits from agent	897	2.8	555	2.9	342	2.6	1.3	NS
Practice: Needle Teeth Clipped First 24-28 Hours								
Number pigs raised to weaning	895	192.1	492	230.3	403	145.4	23.6	.01
Weight at 8 weeks	875	40.2	480	40.5	395	39.8	3.9	.05
Number pigs sold as feeders	752	140.9	422	158.3	330	118.7	9.5	.01
Number pigs sold for slaughter	481	127.0	264	160.3	217	86.5	9.7	.01
Number Extension meetings attended	897	1.4	493	1.5	404	1.3	1.9	NS
Number Extension swine meetings attended	897	0.6	493	0.7	404	0.5	8.4	.01
Number visits to Extension office	897	3.0	493	3.4	404	2.6	7.2	.01
Number phone calls to Extension office	897	4.0	493	4.6	404	3.4	9.9	.01
Number farm visits from agent	897	2.8	493	3.1	404	2.4	8.9	.01

TABLE 29 (Continued)

	All Producers		Producers Who Used Practice		Producers Who Didn't Use Practice			
	No.	Mean	No.	Mean	No.	Mean	F Value	Probability Level
Practice: Tails Docked First 24-48 Hours								
Number pigs raised to weaning	885	190.8	583	198.3	302	176.4	1.4	NS
Weight at 8 weeks	865	40.2	571	40.8	294	39.2	19.5	.01
Number pigs sold as feeders	752	140.9	544	152.4	208	110.8	8.5	.01
Number pigs sold for slaughter	481	127.0	254	160.3	217	86.5	9.7	.01
Number Extension meetings attended	887	1.4	584	1.4	302	1.3	0.7	NS
Number Extension swine meetings attended	887	0.6	585	0.6	302	0.5	4.8	.05
Number visits to Extension office	887	3.0	585	3.3	302	2.5	8.5	.01
Number phone calls to Extension office	887	4.0	585	4.4	302	3.5	4.9	.05
Number farm visits from agent	887	2.8	585	2.9	302	2.8	0.1	NS
Practice: Sows Gradually Fed indreased Ration After 3 Post Farrowing Days (to 10 lbs. 7-14 Days)								
Number pigs raised to weaning	895	192.1	670	213.4	225	128.7	17.7	.01
Weight at 8 weeks	875	40.2	662	40.5	213	39.4	6.5	.05
Number pigs sold as feeders	752	140.9	550	156.2	202	99.2	15.9	.01

TABLE 29 (Continued)

	All Producers		Producers Who Used Practice		Producers Who Didn't Use Practice			
	No.	Mean	No.	Mean	No.	Mean	F Value	Probability Level
Number pigs sold for slaughter	481	127.0	360	146.8	121	68.0	8.4	.01
Number Extension meetings attended	897	1.4	672	1.5	225	1.0	8.3	.01
Number Extension swine meetings attended	897	0.6	672	0.7	225	0.4	8.1	.01
Number visits to Extension office	897	3.0	672	3.3	225	2.3	7.4	.01
Number phone calls to Extension office	897	4.0	672	4.1	225	3.7	0.9	NS
Number farm visits from agent	897	2.8	672	3.1	225	2.1	13.2	.01
Practice: Methods Used to Prevent Pig Anemia								
Number pigs raised to weaning	895	192.1	626	220.1	669	126.8	24.2	.01
Weight at 8 weeks	875	40.2	616	40.4	259	39.8	2.1	NS
Number pigs sold as feeders	752	140.9	529	158.3	223	99.7	17.7	.01
Number pigs sold for slaughter	481	127.0	340	147.3	141	78.1	7.1	.01
Number Extension meetings attended	897	1.4	628	1.4	269	1.4	0.1	NS
Number Extension swine meetings attended	897	0.6	628	0.6	269	0.6	0.1	NS

TABLE 29 (Continued)

	All Producers		Producers Who Used Practice		Producers Who Didn't Use Practice			
	No.	Mean	No.	Mean	No.	Mean	F Value	Probability Level
Number visits to Extension office	897	3.0	628	3.1	269	3.0	0.1	NS
Number phone calls to Extension office	887	4.0	585	4.4	302	3.5	4.9	.05
Number farm visits from agent	897	2.8	628	2.9	269	2.6	0.7	NS
Practice:	Pigs Provided 18-20% Creep Feed from 2 Wks through Weaning							
Number pigs raised to weaning	895	192.1	787	200.5	108	131.0	6.7	.01
Weight at 8 weeks	875	40.2	772	40.6	103	37.3	36.9	.01
Number pigs sold as feeders	752	140.9	658	149.2	94	82.9	11.0	.01
Number pigs sold for slaughter	481	127.0	421	130.3	60	104.2	0.5	NS
Number Extension meetings attended	897	1.4	789	1.5	108	0.8	9.7	.01
Number Extension swine meetings attended	897	0.6	789	0.6	108	0.3	8.8	.01
Number visits to Extension office	897	3.0	789	3.2	108	1.7	11.5	.01
Number phone calls to Extension office	897	4.0	789	4.2	108	3.1	3.2	NS
Number farm visits from agent	897	2.8	789	2.9	108	2.0	6.6	.01

TABLE 29 (Continued)

	All Producers		Producers Who Used Practice		Producers Who Didn't Use Practice		F Value	Probability Level
	No.	Mean	No.	Mean	No.	Mean		
Practice: Farrowing Quarters Kept Ventilated, Clean and Dry								
Number pigs raised to weaning	893	192.0	677	201.3	214	161.3	2.1	NS
Weight at 8 weeks	873	40.2	667	41.0	204	37.7	22.9	.01
Number pigs sold as feeders	750	140.7	573	147.8	175	115.2	3.8	.05
Number pigs sold for slaughter	480	127.3	354	134.8	125	106.9	0.6	NS
Number Extension meetings attended	895	1.4	679	1.4	214	1.3	0.4	NS
Number Extension swine meetings attended	895	0.6	679	0.6	214	0.6	0.3	NS
Number visits to Extension office	895	3.0	679	3.0	214	3.0	0.1	NS
Number phone calls to Extension office	895	4.0	679	4.1	214	3.7	0.4	NS
Number farm visits from agent	895	2.8	679	2.8	214	2.8	0.1	NS
Practice: Pigs Systematically Identified After Birth								
Number pigs raised to weaning	895	192.1	78	367.5	817	175.4	39.4	.01
Weight at 8 weeks	875	40.2	76	41.1	799	40.1	2.3	NS
Number pigs sold as feeders	752	140.9	64	216.5	688	133.9	13.1	.01

TABLE 29 (Continued)

	All Producers		Producers Who Used Practice		Producers Who Didn't Use Practice			
	No.	Mean	No.	Mean	No.	Mean	F Value	Probability Level
Number pigs sold for slaughter	481	127.0	54	227.9	427	114.2	9.3	.01
Number Extension meetings attended	897	1.4	78	2.0	819	1.3	7.8	.01
Number Extension swine meetings attended	897	0.6	78	0.9	819	0.5	9.3	.01
Number visits to Extension office	897	3.0	78	4.2	819	2.9	5.9	.05
Number phone calls to Extension office	897	4.0	78	6.1	819	3.8	11.9	.01
Number farm visits from agent	897	2.8	78	3.5	819	2.7	3.1	NS
Practice: Pigs Castrated Before 4 Weeks of Age								
Number pigs raised to weaning	895	192.1	732	195.3	163	177.6	0.6	NS
Weight at 8 weeks	875	40.2	716	40.4	159	39.6	2.9	NS
Number pigs sold as feeders	752	140.9	635	145.4	117	116.4	2.7	NS
Number pigs sold for slaughter	481	127.0	384	123.2	97	141.8	0.3	NS
Number Extension meetings attended	897	1.4	733	1.4	164	1.2	1.1	NS
Number Extension swine meetings attended	897	0.6	733	0.6	164	0.4	8.1	.01
Number visits to Extension office	897	3.0	733	3.2	164	2.2	7.0	.01

TABLE 29 (Continued)

	All Producers		Procuders Who Used Practice		Producers Who Didn't Use Practice			
	No.	Mean	No.	Mean	No.	Mean	F Value	Probability Level
Number phone calls to Extension office	897	4.0	733	4.3	164	3.0	6.8	.01
Number farm visits from agent	897	2.8	733	2.8	164	2.9	0.2	NS
	Practice: Lifetime Sow Records Kept							
Number pigs raised to weaning	895	192.1	157	321.1	738	164.6	48.1	.01
Weight at 8 weeks	875	40.2	154	41.2	721	40.0	7.2	.01
Number pigs sold as feeders	752	140.9	131	227.1	621	122.7	40.1	.01
Number pigs sold for slaughter	481	127.0	93	196.0	388	110.5	8.2	.01
Number Extension meetings attended	897	1.4	158	2.1	739	1.2	24.3	.01
Number Extension swine meetings attended	897	0.6	158	1.1	739	0.5	58.2	.01
Number visits to Extension office	897	3.0	158	3.9	739	2.8	8.7	.01
Number phone calls to Extension office	897	4.0	158	5.9	739	3.6	22.1	.01
Number farm visits from agent	897	2.8	158	3.8	739	2.6	15.1	.01

TABLE 29 (Continued)

	All Producers		Producers Who Used Practice		Producers Who Didn't Use Practice			
	No.	Mean	No.	Mean	No.	Mean	F Value	Probability Level
Practice: Farrowing House Cleaned and Disinfected After Sows Removed								
Number pigs raised to weaning	894	192.2	429	248.4	465	140.4	39.1	.01
Weight at 8 weeks	874	40.2	421	41.3	453	39.3	33.6	.01
Number pigs sold as feeders	752	140.9	361	183.4	391	101.7	42.7	.01
Number pigs sold for slaughter	480	127.1	228	161.6	252	95.9	7.7	.01
Number Extension meetings attended	896	1.4	431	1.5	465	1.2	5.5	.05
Number Extension swine meetings attended	896	0.6	431	0.7	465	0.5	7.4	.01
Number visits to Extension office	896	3.0	431	3.3	465	2.8	3.6	NS
Number phone calls to Extension office	896	4.0	431	4.6	465	3.4	10.1	.01
Number farm visits from agent	896	2.8	431	3.1	465	2.5	5.4	.05
Practice: Disease Break Between Disinfecting Farrowing House and Reuse of Facility								
Number pigs raised to weaning	894	192.3	566	215.6	328	152.1	12.1	.01
Weight at 8 weeks	874	40.2	577	40.8	317	39.2	19.9	.01
Number pigs sold as feeders	751	141.1	497	162.3	272	103.6	19.8	.01

TABLE 29 (Continued)

	All Producers		Producers Who Used Practice		Producers Who Didn't Use Practice			
	No.	Mean	No.	Mean	No.	Mean	F Value	Probability Level
Number pigs sold for slaughter	481	127.0	290	140.4	191	106.7	1.9	NS
Number Extension meetings attended	896	1.4	586	1.5	328	1.2	2.3	NS
Number Extension swine meetings attended	896	0.6	568	0.6	328	0.5	1.8	NS
Number visits to Extension office	896	3.0	568	3.2	328	2.7	2.6	NS
Number phone calls to Extension office	896	4.0	568	4.5	328	3.2	10.7	.01
Number farm visits from agent	896	2.8	568	3.0	328	2.4	5.5	.05
Practice: Advice of Professional Agricultural Worker Sought Regarding Management								
Number pigs raised to weaning	895	192.1	590	219.4	305	139.2	19.0	.01
Weight at 8 weeks	875	40.2	580	40.7	295	39.2	16.8	.01
Number pigs sold as feeders	752	140.9	499	157.3	253	108.7	13.0	.01
Number pigs sold for slaughter	481	127.0	324	143.1	157	93.8	3.8	.05
Number Extension meetings attended	897	1.4	592	1.7	305	0.7	57.8	.01
Number Extension swine meetings attended	897	0.6	592	0.7	305	0.3	51.4	.01

TABLE 29 (Continued)

	All Producers		Producers Who Used Practice		Producers Who Didn't Use Practice			Probability
	No.	Mean	No.	Mean	No.	Mean	F Value	Level
Number visits to Extension office	897	3.0	592	3.6	305	1.9	34.9	.01
Number phone calls to Extension office	897	4.0	592	4.6	305	2.9	19.9	.01
Number farm visits from agent	897	2.8	592	3.6	305	1.2	98.1	.01

NAME OF COUNTIES AND NUMBER OF PRODUCERS INCLUDED IN 1975 SWINE SURVEY*

*Benton	10	*Tipton	10	*Franklin	20	*Claiborne	20
*Carroll	10	*Weakley	10	*Grundy	20	*Cocke	20
*Chester	10	Bedford	20	Marion	19	*Grainger	10
*Crockett	10	*Humphreys	20	*McMinn	20	Hamblen	22
*Decatur	10	*Lewis	20	*Monroe	14	*Jefferson	20
*Fayette	10	Maury	20	*Polk	20	Johnson	10
*Gibson	10	*Montgomery	20	*Rhea	10	*Loudon	20
*Hardin	10	*Perry	20	*Van Buren	10	Roane	19
*Haywood	10	*Rutherford	20	Cumberland	15	*Washington	7
*Henderson	10	Steward	20	*Morgan	17		
*Henry	10	*Sumner	20	*Overton	30		
*Lauderdale	10	*Wayne	20	*Pickett	20		
*Madison	10	*Williamson	20	*Putnam	20		
*McNairy	10	Wilson	20	*Scott	20		
*Obion	10	*Bledsoe	20	*Trousdale	20		
*Shelby	10	*Bradley	20	*Blount	20		

*48 selected counties included in the study. These counties reported in both 1970 and 1975.

APPENDIX C

RAW DATA TABLES

CRANESHOT CREST

TABLE 30

RECOMMENDED SWINE PRODUCTION PRACTICES ARRANGED IN DESCENDING ORDER OF EDUATIONAL PRIORITY BASED ON 1970* AND 1975 TENNESSEE SURVEYS IN 48 SELECTED COUNTIES ACCORDING TO PERCENTAGE OF INTERVIEWEES USING PRACTICES IN THE STATE AND CHANGES SHOWING *1972* TEMIS PRIMARY SUBJECT RELATIONS

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken		Change
	1970 (N=918)	1975 (N=732)	1970-1975 (+ or -)
1. Swine Records (2349)**			
(a) Pigs were systematically identified soon after birth	13	9	-4
(b) Lifetime sow records were kept	14	21	+7
Subtotal	14	15	+1
2. Swine Pests (2341)			
(a) Sows were vaccinated for leptospirosis	26	40	+14
(b) Sows were wormed 3-14 days before due to farrow	23	46	+23
(c) Appropriate methods used to prevent pig anemia	60	69	+9
Subtotal	36	52	+16
3. Swine Housing and Structures (2323, 2357)			
(a) Farrowing facilities were adequate in terms of recommended standards	46	55	+9
Subtotal	46	55	+9
4. Swine Management (2331)			
(a) All hogs, other than those farrowing were kept out of the farrowing quarters	75	82	+7
(b) Sows were brought into the farrowing quarters at least 3 days before they were due to farrow	72	79	+7

TABLE 30 (Continued)

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken 1970 (N=918)	1975 (N=732)	Change 1970-1975 (+ or -)
(c) Each sow was carefully washed before bringing her into the clean farrowing quarters	18	21	+3
(d) As pigs were born, they were dried off, any membranes removed from the nostrils, and help was provided in nursing	58	61	+3
(e) Farrowing quarters were kept well-ventilated, clean and dry	59	77	+18
(f) Pigs were castrated before 4 weeks of age	66	83	+17
(g) The farrowing facilities were thoroughly cleaned and disinfected after sows were removed	40	50	+10
(h) At least a two-week period was maintained between the time the farrowing house was cleaned and disinfected and the re-use of the same facilities for farrowing	44	63	+19
Subtotal	54	65	+11
5. Swine Feeding and Nutrition (2319)			
(a) Recommended feeding practices were followed for pregnant females on pasture	69	72	+3
(b) Recommended feeding practices were followed for pregnant females off pasture	63	71	+8
(c) Concentrates were reduced or bulky feed supplied when sows were placed in farrowing quarters continuing to 3 days after farrowing	62	71	+9
(d) After 3 post-farrowing days on a bulky ration, sows were fed a gradually increased ration to roughly 10 lbs. in 7-14 days	70	76	+6

TABLE 30 (Continued)

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken 1970 (N=918)	1975 (N=732)	Change 1970-1975 (+ or -)
(e) Pigs were provided with an 18-20% creep feed during the period from 1-2 weeks of age through weaning	80	89	+9
Subtotal	69	76	+7
6. Swine Breeding and Production (2303, 2344)			
(a) Recommended procedures were used for replacing herd sows	63	71	+8
(b) Recommended procedures were used for herd sires	67	72	+5
(c) A recommended crossbreeding program was used	71	78	+7
(d) Gilts were bred after attaining approximately 8 months of age and a weight of about 250 lbs.	79	83	+4
Subtotal	70	76	+6
Grand Total	54	63	+9

*Practices are stated in terms of the 1970 swine survey.

**Numbers in parentheses after subjects are TEMIS Code Numbers for 1972.

TABLE 31

RECOMMENDED SWINE PRACTICES ARRANGED IN DESCENDING ORDER OF EDUCATIONAL PRIORITY BASED ON 1970* AND 1975 TENNESSEE SURVEYS IN 48 SELECTED COUNTIES ACCORDING TO PERCENTAGE OF INTERVIEWEES USING PRACTICES IN THE STATE AND CHANGES SHOWING 1975 TEMIS PRIMARY SUBJECT RELATIONS

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken		Change
	1970 (N=918)	1975 (N=732)	1970-1975 (+ or -)
1. Swine Records (1425)**			
(a) Pigs were systematically identified soon after birth	13	9	-4
(b) Lifetime sow records were kept[a]	14	21	+7
Subtotal	14	15	+1
2. Swine Pests (1405, 1411)			
(a) Sows were vaccinated for leptospirosis[a]	26	40	+14
(b) Sows were wormed 3-14 days before due to farrow[a]	23	46	+23
(c) Appropriate methods were used to prevent pig anemia	60	69	+9
Subtotal	36	52	+16
3. Swine Housing and Structures (1431)			
(a) Farrowing facilities were adequate in terms of recommended standards	46	55	+9
Subtotal	46	55	+9
4. Swine Management (1415)			
(a) All hogs, other than those farrowing were kept out of the farrowing quarters	75	82	+7

TABLE 31 (Continued)

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken 1970 (N=918)	1975 (N=732)	Change 1970-1975 (+ or -)
(b) Sows were brought into the farrowing quarters at least 3 days before they were due to farrow	72	79	+7
(c) Each sow was carefully washed before bringing her into the clean farrowing quarters[a]	18	21	+3
(d) As pigs were born, they were dried off, any membranes removed from the nostrils, and help was provided in nursing[a]	58	61	+3
(e) Farrowing quarters were kept well-ventilated, clean and dry	59	77	+18
(f) Pigs were castrated before 4 weeks of age	66	83	+17
(g) The farrowing facilities were thoroughly cleaned and disinfected after sows were removed[a]	40	50	+10
(h) At least a two-week period was maintained between the time the farrowing house was cleaned and disinfected and the re-use of the same facilities for farrowing[a]	44	63	+19
Subtotal	54	65	+11
5. Swine Feeding and Nutrition (1417)			
(a) Recommended feeding practices were followed for pregnant females on pasture[a]	69	72	+3
(b) Recommended feeding practices were followed for pregnant females off pasture[a]	63	71	+8
(c) Concentrates were reduced or bulky feed supplied when sows were placed in farrowing quarters continuing to 3 days after farrowing	62	71	+9

TABLE 31 (Continued)

TEMIS Primary Swine Subject and Related Recommended Practice	Fiscal Year in Which Surveys Were Taken 1970 (N=918)	1975 (N=732)	Change 1970-1975 (+ or -)
(d) After 3 post-farrowing days on a bulky ration, sows were fed a gradually increased ration to roughly 10 lbs. in 7-14 days[b]	70	76	+6
(e) Pigs were provided with an 18-20% creep feed during the period from 1-2 weeks of age through weaning[a]	80	89	+9
Subtotal	69	76	+7
6. Swine Breeding and Production (1420)			
(a) Recommended procedures were used for replacing herd sows	63	71	+8
(b) Recommended procedures were used for herd sires[a]	67	72	+5
(c) A recommended crossbreeding program was used	71	78	+7
(d) Gilts were bred after attaining approximately 8 months of age and a weight of about 250 lbs.[a]	79	83	+4
Subtotal	70	76	+6
Grand Total	54	63	+9

*Practices are stated in terms of the 1970 swine survey.

**Number in parentheses after subjects are TEMIS Code Numbers for 1975.

[a]Significantly related, in 1975, to production in weight of pigs, at 8 weeks, (F test) at the .01 level of probability.

[b]Significantly related, in 1975, to production in weight of pigs, at 8 weeks, (F test) at the .05 level of probability.

TABLE 32

PERCENTS OF INTERVIEWEES IN THE EXTENSION DISTRICTS AND STATE ACCORDING TO WEANING WEIGHTS, 1975

Average Weaning Weight	State Total (N=732)	Extension District I (N=180)	II (N=154)	III (N=154)	IV (N=127)	V (N=117)
No Response	3.0	0.6	1.9	0.6	0.0	14.6
40 Pounds/hd. Weaning Weight of Less	42.9	55.0	59.1	48.1	15.7	42.7
More Than 40 Pounds/hd. Weaning Weight	54.1	44.4	39.0	51.3	84.3	42.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Average Weaning Weight/ Those Responding	40.0	39.5	38.8	41.0	41.6	40.0

TABLE 33

PERCENTS OF INTERVIEWEES IN AVERAGE WEANING WEIGHT GROUPS AND TOTAL ACCORDING TO EXTENSION DISTRICTS AND STATE TOTALS, 1975

Extension Districts	Total (N=732)	Average Weaning Weight Groups		
		No Response (N=22)	40 Pounds or Less (N=314)	40 Pounds or Less (N=396)
I	24.6	4.6	41.7	33.3
II	21.0	13.6	20.8	12.5
III	21.0	4.6	20.8	16.7
IV	17.3	0.0	4.2	20.8
V	16.1	77.2	12.5	16.7
State	100.0	100.0	100.0	100.0

TABLE 34

TIME PLANNED FOR ALL DISTRICTS IN 1972 BY NUMBER OF AGENT DAYS ACCORDING TO TEMIS SUBJECTS

TEMIS Swine Subjects	State	Extension District				
		I	II	III	IV	V
Swine Records (2349)	42	16	1	11	0	14
Swine Pests (2341)	257	130	38	44	16	29
Swine Housing and Structures (2323, 2357)	186	80	43	27	15	21
Swine Management (2331)	203	88	64	22	17	12
Swine Feeding and Nutrition (2319)	288	129	56	36	38	29
Swine Breeding and Production (2303, 2344)	185	70	78	19	9	9
Other 2300's	701	392	106	116	59	28
Total	1,862	905	386	275	154	142

TABLE 35

TIME PLANNED FOR ALL DISTRICTS IN 1975 BY NUMBER OF AGENT DAYS ACCORDING TO TEMIS SUBJECTS

TEMIS Swine Subject	State	Extension District				
		I	II	III	IV	V
Swine Records (1425)	8	8	0	0	0	0
Swine Pests (1405 and 1411)	202	85	46	32	16	23
Swine Housing and Structures (1431)	162	76	22	29	16	19
Swine Management (1415)	122	49	39	22	6	6
Swine Feeding and Nutrition (1417)	271	109	88	35	21	18
Swine Breeding and Production (1420)	348	203	50	47	25	23
Other 1400's	738	400	150	70	100	18
Total	1,851	930	395	235	184	107

TABLE 36

TIME EXPENDED FOR ALL DISTRICTS ACCORDING TO TEMIS SUBJECTS IN 1972 BY NUMBER OF AGENT DAYS

TEMIS Swine Subjects	State	Extension District				
		I	II	III	IV	V
Swine Records (2349)	10.4	4.1	.5	.8	0.0	5.0
Swine Pests (2341)	90.3	39.2	12.5	10.7	16.9	11.0
Swine Housing and Structures (2323,2357)	86.2	38.6	10.8	14.2	14.2	8.4
Swine Management (2331)	287.1	178.0	40.2	44.0	15.4	9.5
Swine Feeding and Nutrition (2319)	167.7	106.3	22.6	9.1	22.1	7.6
Swine Breeding and Production (2303, 2344)	237.0	79.4	76.5	13.0	38.6	29.5
Other 2300's	1,078.3	671.4	144.9	103.2	99.8	59.0
Total	1,957	1,117	308	195	207	130

TABLE 37

TIME EXPENDED FOR ALL DISTRICTS ACCORDING TO TEMIS SUBJECTS IN 1975 BY NUMBER OF AGENT DAYS

TEMIS Swine Subject	State	Extension District				
		I	II	III	IV	V
Swine Records (1425)	.9	.9	0.0	0.0	0.0	0.0
Swine Pests (1405, 1411)	117.6	.4	21.6	12.1	16.8	8.7
Swine Housing and Structures (1431)	118.8	71.3	9.3	12.2	6.0	20.0
Swine Management (1415)	218.5	136.4	24.6	30.0	8.3	19.2
Swine Feeding and Nutrition (1417)	161.0	94.8	15.4	11.3	24.1	15.4
Swine Breeding and Production (1420)	307.2	199.3	40.5	24.3	9.3	33.8
Other 1400's	972.0	624.9	108.6	72.1	115.5	50.9
Total	1,896	1,186	220	162	180	148

TABLE 38

CONTACTS MADE FOR ALL DISTRICTS IN 1972 BY NUMBER OF CONTACTS MADE ACCORDING TO TEMIS SUBJECTS

TEMIS Swine Subjects	State	Extension District				
		I	II	III	IV	V
Swine Records (2349)	81	25	1	3	0	52
Swine Pests (2341)	2,131	521	239	1,055	114	202
Swine Housing and Structures (2323, 2357)	917	426	141	186	93	71
Swine Management (2331)	10,512	4,026	1,265	4,725	246	250
Swine Feeding and Nutrition (2319)	3,997	2,019	640	993	255	90
Swine Breeding and Production (2303, 2344)	7,361	2,573	1,016	1,022	2,498	252
Total 2300's	67,801	22,069	2,603	11,028	31,191	910
Total	92,800	31,659	5,905	19,012	34,397	1,827

TABLE 39

CONTACTS MADE FOR ALL DISTRICTS IN 1975 BY NUMBER OF CONTACTS MADE ACCORDING TO TEMIS SUBJECTS

TEMIS Swine Subject	State	Extension District				
		I	II	III	IV	V
Swine Records (1425)	4	4	0.0	0.0	0.0	0.0
Swine Pests (1405, 1411)	2,877	1,365	851	470	125	66
Swine Housing and Structures (1431)	1,040	779	49	58	43	111
Swine Management (1415)	4,874	2,569	1,119	982	98	106
Swine Feeding and Nutrition (1417)	5,056	1,869	1,599	872	346	370
Swine Breeding and Production (1420)	13,531	8,833	1,838	2,283	53	524
Other 1400's	48,484	20,482	3,542	7,838	15,975	647
Total	75,866	35,901	8,998	12,503	16,640	1,824

VITA

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