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**A study of ordering patterns of extension agents in Tennessee counties for selected Tennessee Agricultural Extension publications with agricultural titles during the two year period, July 1, 1965-June 30, 1967**

Jesse Eagleton Francis

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To the Graduate Council:

I am submitting herewith a thesis written by Jesse Eagleton Francis entitled "A study of ordering patterns of extension agents in Tennessee counties for selected Tennessee Agricultural Extension publications with agricultural titles during the two year period, July 1, 1965-June 30, 1967." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Agricultural Extension.

Robert S. Dotson, Major Professor

We have read this thesis and recommend its acceptance:

Cecil E. Carter, Charles L. Cleland

Accepted for the Council:

Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

May 20, 1970


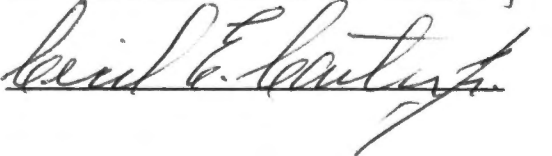
To the Graduate Council:

I am submitting herewith a thesis written by Jesse Eagleton Francis entitled "A Study of Ordering Patterns of Extension Agents in Tennessee Counties for Selected Tennessee Agricultural Extension Publications with Agricultural Titles During the Two Year Period, July 1, 1965-June 30, 1967." I recommend that it be accepted for nine quarter hours of credit in partial fulfillment of the requirements for the degree of Master of Science, with a major in Agricultural Extension.



Major Professor

We have read this thesis  
and recommend its acceptance:

Accepted for the Council:

  
Vice Chancellor for  
Graduate Studies and Research

A STUDY OF ORDERING PATTERNS OF EXTENSION AGENTS IN TENNESSEE  
COUNTIES FOR SELECTED TENNESSEE AGRICULTURAL EXTENSION  
PUBLICATIONS WITH AGRICULTURAL TITLES DURING THE TWO  
YEAR PERIOD, JULY 1, 1965-JUNE 30, 1967

---

A Thesis  
Presented to  
the Graduate Council of  
The University of Tennessee

---

In Partial Fulfillment  
of the Requirements for the Degree  
Master of Science

---

by  
Jesse Eagleton Francis

June 1970



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## ABSTRACT

This benchmark study was concerned with the problem of too rapidly increasing expenditures for publishing and distributing agricultural-titled Extension publications. Publication ordering patterns for all 95 Tennessee county Extension staffs were studied. Also, ten variables concerning county Extension programs and four variables concerning agricultural-titled Extension publication ordering patterns per county were investigated. The purpose was to obtain information concerning publication ordering patterns which would be helpful to Extension administrators in the future allocation of funds and to identify the association between certain county Extension program variables and the publication ordering patterns of the county Extension staffs. Data were drawn from publication order forms on file from all Tennessee counties for the period, 1965-1967, and from other secondary sources. Tabulated data were reported in numbers, per cents and averages where appropriate for total, high order (numerically ranking from first through thirty-second in numbers of copies of publications ordered), medium order (numerically ranking from 33-63), and low order (numerically ranking from 64-95) counties. Main comparisons were between high and low order counties. Also, a step-wise multiple regression analysis was made with the assistance of the University of Tennessee Computer Center.

Findings disclosed that the county Extension staffs for the state, high order and low order counties tended to "use order Form 559" (Ordering Procedure A) and "have the county agricultural agent initiate the order" (Ordering Procedure B) as recommended; but that the staffs

did not tend to follow recommended Ordering Procedures C and D, namely: "averaging no more than one order every two months" (excepting for low order county staffs), and "pooling orders," respectively. Three of the eleven Extension publication title classes, namely: (1) farm crops and fertilizers, (2) fruits and vegetables, and (3) insects, plant diseases and pests accounted for almost two-thirds of all copies of agricultural-titled Extension publications ordered, 1965-1967, and approximately one-half of the total copies on hand at inventory time, 1967. Slightly less than two-thirds of all copies of publications ordered by county staffs in the state 1965-1967 were accounted for in the inventory, 1967. Three-fifths of all copies of publications ordered in the state were ordered by the 32 high order counties. One-half of all copies of publications ordered in the state was ordered during the months of January, February and March. Furthermore, it was disclosed that, as the total number of full-time farm family equivalents per county, total number of county Extension staff members per county, total appropriation to county agricultural agents per county and total real and personal assessed taxable property per county increased, the numbers of copies of agricultural-titled Extension publications ordered for the state also increased. Multiple correlation analysis disclosed that when five selected county Extension program variables were correlated with the total number of copies of publications ordered, the county appropriation to county agricultural agents was the most accurate predictor of the total number of copies of publications ordered for the state. The numbers of full-time farm family equivalents constituted the best indicator for low order counties. It was implied that state staffs

responsible for funding and distributing such publications, and district supervisors responsible for training county personnel should make appropriate use of findings. Recommendations for further study were included.

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## CHAPTER I

### INTRODUCTION

Tennessee county agents use a variety of teaching methods. A traditional teaching method involves the use of the printed word in the form of agricultural subject matter publications. These publications have been developed in response to questions raised regarding income producing projects, core subjects for which information is being sought and the need to communicate to the people the results of agricultural production research.

#### I. STATEMENT OF THE PROBLEM

Prior to this study, 1965-1967, the Tennessee Agricultural Extension Service did not have a stated policy concerning the use of subject matter publications. The Extension subject matter specialist developing the publication made the initial distribution of one or more copies of the publication to the county agents. County agents requested additional copies of the publication as needed. The Extension Service administrators assumed that once a publication was approved and initially printed it would be made available in quantities to county agents upon request. Priorities were not established as to the number of each subject matter publication to print or the total number of all subject matter publications to print. The number of publications which could be printed annually depended upon the amount of money budgeted for this purpose. The current year's budget allocation for

publication cost was determined by the escalator (2)\* method. This method consists of: (1) determining the previous year's publication cost; (2) obtaining estimates from subject matter specialists and program leaders as to the number of new publications that would be needed to carry out program objectives; (3) determining the previous rate of disappearance and present program emphasis to estimate the number of reprints to be made for old publications; (4) reviewing the current cost for printing individual subject matter publication; and (5) analyzing the information obtained in items (1) through (4) above to determine the current year's budget allocation for publication cost. Relating to item (4) above, the cost in the period 1965-1967 ranged from 2 to 30 cents per publication. Regarding item (5) above, this analysis resulted in Extension administrators adding 10 to 20 per cent to the publication budget each succeeding year.

During the period 1955-1967, the estimated Tennessee Agricultural Extension Service publication cost increased from approximately \$30,000 annually to over \$90,000. Due to this approximate 15 per cent annual increase in estimated publication cost, it was necessary to evaluate this budget item in relation to the total Extension Service budget for the purpose of determining if restrictions should be placed on the numbers of publications printed. To evaluate this budget item, it was necessary to determine how many publications were being ordered by county agents and the number of publications being carried over in

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

inventory annually. Although the Extension Service administrators were concerned with budget analysis, they were more specifically interested in the relationship existing between the numbers of publications ordered by county agents and justification for the numbers ordered (2).

## II. NEED FOR THE STUDY

Prior to this investigation, no formal attempt had been made to study the Tennessee Agricultural Extension Service publication situation to see what patterns the 95 county staffs were following as they ordered publications with agricultural titles. A benchmark evaluation of publication usage in the Tennessee Agricultural Extension Service should be useful to administrators concerned with making decisions regarding agricultural publication expenditures.

## III. PURPOSES OF THE STUDY

The purposes of this study were:

1. To determine if the recommended ordering procedures were being followed; (a) whether or not the correct order form (559) was being used; (b) whether or not orders were being made by the recommended person (the county agricultural agent); (c) whether or not orders were being made at the recommended intervals (total number of orders to average no more than one order every two months); and (d) whether or not the orders were being "pooled" (orders including both agricultural-titled and non-agricultural-titled publications).

2. To determine which classes and numbers of agricultural-titled publications studied were being ordered most frequently, in largest numbers and in greatest size of order per county.

3. To determine which classes and numbers of agricultural-titled publications studied were on hand, in greatest supply, at time of inventory.

4. To determine the total numbers of agricultural-titled Extension publications ordered, 1965-1967, and in inventory, 1967; the total numbers of copies of publications ordered by quarterly intervals; and the total number of orders for agricultural-titled Extension publications, 1965-1967.

5. To determine if any relationships existed between selected county Extension program-related factors and certain agricultural-titled publication ordering patterns.

#### IV. DEFINITION OF TERMS

The following terminology used in the study is defined to prevent ambiguity:

Publication - refers to an item designated as a Tennessee Extension publication, is published and available for distribution; e.g., Publication (PB).

Title publication - refers to a definite item or number in a series; e.g., PB-459, "How To Keep Farm Records."

Agricultural-titled extension publication - refers to a publication printed by the Tennessee Agricultural Extension Service that contains subject matter relating to one or another of the 11 title classes of agricultural publications studied. Eighty different title publications were considered in the study.

Title class of agricultural publication - refers to publications with subject matter relating to the 11 classes of agricultural publications studied, namely: (a) agricultural economics; (b) animal husbandry-beef; (c) animal husbandry-hogs; (d) animal husbandry-sheep; (e) dairy; (f) farm crops and fertilizers; (g) forestry; (h) fruits and vegetables; (i) insects, plant diseases and pests; (j) landscaping and lawns; and (k) poultry.

Order - refers to a single request by one or more Extension staff members for one or more copies of one or more agricultural-titled Extension publications.

Copy - refers to one individual representative of a title publication; e.g., a single copy of PB-459, "How to Keep Farm Records."

High order counties - refers to the 32 Tennessee counties (numerical ranking 1-32) ordering the greatest number (range 4,811-13,300 total copies per county) of agricultural-titled Extension publications during the two year period, July 1, 1965 through June 30, 1967.

Medium order counties - refers to the 31 Tennessee counties (numerical ranking 33-63) ordering an intermediate number (range 2,795-4,810 total copies per county) of agricultural-titled Extension publications during the two year period, July 1, 1965 through June 30, 1967.

Low order counties - refers to the 32 Tennessee counties (numerical ranking 64-95) ordering the least number (range 225-2,794 total copies per county) of agricultural-titled Extension publications during the two year period, July 1, 1965 through June 30, 1967.

Full-time agricultural staff equivalent (FASE) - refers to an estimate of the total per cent of time devoted by any and all county



Extension staff members annually to carrying out educational programs relating to agricultural conservation, productions, management, marketing, natural resource development and utilization of farm products. If a county Extension staff consisting of three members, and each devoted 70 per cent of his time annually to agricultural; the county would have and FASE of 2.1 (three time 70 per cent).

Full-time farm family equivalent (FFFE) - refers to a measure used in the Tennessee Agriculture Extension Service to determine the county Extension staff work load and the size of the county Extension staff for each of Tennessee's 95 counties. The measure of workload is based on the assumption that Extensions' first responsibility is to full-time farm families and diminished as families become further removed from full-time farming. All families living in a county were classified into three broad classifications, namely: (a) Rural farm; (b) Urban; and (c) Rural non-farm. Each of these classes was further divided into sub-classes and a mathematical formula or factor was applied to the number of families falling into each of the sub-classes to determine the actual FFFE.

Correlation - refers to the amount of similarity in direction and degree of variation in corresponding pairs of observations in two variables; the study of the relationship between two or more variables (7:39).

Coefficient of correlation (r) - refers to a pure number, varying from a value of +1.-- through 0 to -1.00, that tells to what extent two things are related, to what extent variations in the one go with variations in the other (6:135).

Coefficient of multiple correlation (R) - refers to a pure number lying between the limits of 0.00 and 1.00 indicating the proportion of variance in the dependent variable that is dependent upon, or associated with, or accounted for by the independent variable. It indicates the strength of relationship between one variable and two or more variables taken together (6:392).

## CHAPTER II

### REVIEW OF RELATED LITERATURE

Agricultural Extension Service administrators in an effort to supply the public demand for information and also stay within the limits of their publication budgets are constantly asking questions about the procedures and practices followed in printing and distributing publications.

In 1958, the Federal Extension Service, United States Department of Agriculture (USDA), conducted a study on determining needs for departmental publications and indicated in the preface to the summary of the study report that administrators prior to issuing new publications needed answers to such publication questions as: (1) What facts do we have to determine if publication "X" is really needed? (2) How do we know what facts should go into the publication? (3) How much detail--how many pages are needed? (4) Who should receive copies of the publication--which counties? (5) How many copies should be printed? and (6) With a limited publication budget, which publications should get priority in printing (8:iii)?

Much of the subsequent publication research conducted by the Department of Agriculture and State Extension Services has been planned to obtain answers to one or more of these questions. However, very little research could be identified that dealt specifically with questions 4 and 5 above or with specific ordering and distributing procedures. In Tennessee no formal research has been conducted that relates to the ordering and distributing patterns followed by county Extension staffs.

## I. ORDERING PROCEDURES

In 1968, Agricultural Extension Service editors in fifty states were asked (in a letter to these editors from the Tennessee Extension Service editor) if they knew of studies which previously had been conducted in their state that specifically dealt with publication distributing and ordering procedures. Of the 26 editors replying, three indicated knowledge of similar studies having been conducted in their states. Several editors expressed a need for such a study to be conducted in their states.

Carpenter et al. (4:5 -8) in an analysis of Extension agents' requests for publications noted that agents did a reasonably thorough job in checking publications for possible useage before placing their orders and that most agents indicated they thoroughly read all special instructions that sometimes accompany notice copies. His study, conducted in North Carolina in 1956; included twelve counties and dealt with, among other things, agent ordering patterns. In the same study (4:17) it was found that farm agents estimated that they devoted 1 to 5 per cent of their time to ordering, handling and distributing publications.

## II. FREQUENCY WITH WHICH PUBLICATIONS ARE

### ORDERED BY CLASSES AND NUMBERS

Phifer et al. (8:4), in the previously mentioned USDA study related to the development and testing of six methods of determining the needs of the public for information that can be provided through popular publications, found that about 65 per cent of the demand for

information was on agricultural subjects and about 35 per cent on home economics subjects. Crop information accounted for about 20 per cent of the demand for agricultural subjects. Horticultural subjects ranked highest among crops comprising more than 75 per cent of the demand.

Gavitt et al. (5:2), in a 1960 study dealing with mail requests received by the Agricultural Information Office at the University of Rhode Island from the general public, found that 60 per cent of the requests were for agricultural-titled publications and that 50 per cent of the agricultural-titled publications requested were about horticulture.

Carpenter et al. (4:5) stated that the North Carolina farm agents studied placed their orders for publications fairly quickly after they were notified that a publication was available. This was true even when a publication became available at a time of year when it was least likely to be used.

Prochaska et al. (10:16), in a 1957 Oklahoma study of the distribution of reserve stocks of publications, looked at titles which went out of print quickly and those for which there was considerable demand (100 or more copies requested per month) after they were out of print. He found that, with two exceptions, all of the titles studied carried some element of educational activity in addition to their primary function of reporting results of research. Titles in least demand were defined as those still on hand and available for distribution 18 months or more after printing.

Prochaska et al. (10:23) also noted that about 40 per cent of the bulk publication requests from Oklahoma county agents were for 25 or fewer copies of one title. Less than 10 per cent were for more than 50 copies. The average number of copies requested per title request was 38.7.

### III. CLASSES AND NUMBERS OF PUBLICATIONS KEPT IN GREATEST INVENTORY

The Carpenter et al. (4:4) North Carolina study mentioned above also included a storeroom inventory of publications at the state supply level. Many factors were found to be responsible for the rate of disappearance of both Extension and Experiment Station publications from storeroom stocks or inventory and there was evidence to substantiate some effect from the following: (1) the importance of the subject in the state; (2) interest in the subject at the time of printing; (3) availability of other publications on the subject; and (4) degree of administrative emphasis given on the subject.

In the same research, it also was found that the number of different titles in display racks of farm agents ranged from 33 to 230 and that the number of copies of each title kept in the rack ranged from 1 to 29. Of the 15 publications (with agricultural titles) included in the North Carolina study, the number of copies in inventory per county for any one publication ranged from 1 to 500. The greatest total number of copies of one title publication in inventory for the twelve counties was 832 and the least was 4 (4:22).

IV. TOTAL PUBLICATIONS ORDERED AND NUMBER  
AND AVERAGE SIZE OF ORDERS

Phifer et al. (9:iii), in a 1961 Vermont publication study, noted that many people did not know that certain publications existed and felt they needed to know about them. Newspapers, radio, and magazines were seen to be effective places to announce new publications. Gavitt et al. (5:5) stated that, in the Rhode Island mail survey, it was indicated rather conclusively that mass media plays a vital role in helping the Cooperative Extension Service carry out its educational program of providing helpful, non-influenced information.

Phifer et al. (9:iii) found that people who requested a publication were more likely to have read it than if it was sent to them unrequested; but if they did receive a publication, they usually looked it over. If it interested them, they read it. Berkland (1:2) did an Iowa study in 1965 regarding the influence of "effort in acquiring a publication" on its readership and acceptance. Of those eligible to request a publication, 73 per cent either "skimmed" or "read it." When a publication was mailed to non-requesters, 50 per cent of the group did not remember having received it, while only 42 per cent "skimmed" or "read it." In contradiction to the foregoing, Sabrosky et al. (11:5), in a 1966 study, made in 25 counties in five states, dealing with the distribution and use of selected Civil Defense publications; noted that people who received publications without asking for them were just as likely to find them useful as the people who asked for the publications.

Phifer et al. (9:iii) found, in the Vermont study, that people were more apt to read short, easy-to-read publications on topics that interested them. Brehm (3:2), in a 1967, Iowa study of the influence of prior knowledge on requests and readership, concluded that "prior knowledge is a motivating predisposition in the selection of communication stimuli." Brehm's findings, based on work with a sample of 441 married couples in a medium-sized community, suggest that Extension publications might be more effective if they were geared toward specific, somewhat knowledgeable audiences rather than toward the general public. Lang (8:4), in a 1959 study of the questions asked of agents in four Michigan counties and of publications available to answer questions, found that most people; rather than asking general questions requiring involved discussion type answers, asked questions which were specific and required definite answers. Lang concluded that simple inexpensive fact sheets or folders appeared more efficient for answering questions asked county Extension agents than did the more expensive and detailed publications.

Carpenter et al. (4:14) noted that North Carolina farm agents studied distributed an average of 3,715 publications a year with a range from 815 to 11,000. It was noted that the farm agent who distributed a total of only 815 copies of all titles in one year spread these among 1,900 farm families in the county--less than one to each two farm families. On the other hand it was noted, a farm agent in a county who distributed 11,000 publications to 2,755 farm families had a ratio of four per farm family per year.



Prochaska et al. (10:7) found that more than one-half of the total requests received at the state source for all publication series were made by Oklahoma county agents.

#### V. OTHER DATA RELATING TO NUMBER OF PUBLICATIONS ORDERED

In an effort to obtain information as to the factors affecting demand for Oklahoma Experiment Station publications, Prochaska et al. (10:4-5) correlated the number of Experiment Station publication requests per unit (1,000) population with the following available data for the Oklahoma counties where the requests originated: (1) median school years completed by population 25 years of age or over; (2) median family income for the entire population; (3) total value of all farm products sold; (4) total number of farms; (5) total value of farm products sold per farm; (6) rural farm population; and (7) the per cent of the county's population which was rural farm. A significant (.05 level) positive correlation was found with items 3 and 5 above. Prochaska stated that a positive relationship between the importance of commercial agriculture and the requesting of Experiment Station publications was strongly indicated.

Of the 1,263 residents in 74 Rhode Island towns requesting agricultural-titled publications in 1960, Gavitt et al. (5:4) found that 712 (56 per cent) of them lived in six of the larger towns.

Phifer et al. (8:5), in checking mail request (approximately one mail request out of each 100) received in the U. S. Department of Agriculture in 1958, found that about 65 per cent of the mail requests studied carried city street addresses.

## CHAPTER III

### METHODS OF PROCEDURE

As mentioned previously, Extension Service administrators were confronted with ever-increasing publication cost to the extent that some kind of control on the numbers of publications being printed seemed necessary. However, it also was apparent that more information was needed to guide the administrators considering changes in publication printing procedures. Therefore, this benchmark evaluation of publication usage in the Tennessee Agricultural Extension Service should be helpful to the administrators and information personnel responsible for planning and initiating publication production programs.

#### I. SOURCES OF DATA

The Extension Service prints publications with titles relating to four major subject area, namely; agriculture, home economics, youth, and community resource development. This investigation dealt only with selected agricultural-titled Extension publications with subject matter relating to the area of agriculture.

To be included in the study, a title publication had to meet all of the following conditions: (1) it had to be an Extension publication dealing with a subject in the area of agriculture; (2) it had to be available for order by staffs in the 95 Tennessee counties during the period July 1, 1965 through June 30, 1967; (3) it had to be listed on an order form (recommended form or otherwise) which was on file in the state mailing room; and (4) it was to be used by Extension staffs in

support of educational programs relating to agricultural production, conservation, management, marketing, natural resources development and utilization of farm products.

Related to item 3 above, it was determined that order forms for eleven classes of agricultural-titled Extension publications were on file in the state mailing room and available for analysis. These title classes, with the number of different titles per class, were identified as follows: (1) agricultural economics, nine titles; (2) animal husbandry-beef, six titles; (3) animal husbandry-hogs, four titles; (4) animal husbandry-sheep, two titles; (5) dairy, eleven titles; (6) farm crops and fertilizers, eleven titles; (7) forestry, eight titles; (8) fruits and vegetables, twelve titles; (9) insects, plant diseases and pests, ten titles; (10) landscaping and lawns, three titles; and (11) poultry, four titles. Printed order forms were not on file in the state mailing room for the agricultural engineering title class of Extension publications; therefore, this class was not included in the study (see Appendix B for the 80 different titles studied).

All data included in this study, with the exception of supplemental data required for the study purpose dealing with relationships between selected county factors and some agricultural-titled Extension publication ordering patterns, were obtained from the file records of publication orders and inventory records received from all of the Tennessee Extension staffs during the two-year period, July 1, 1965 through June 30, 1967. The supplemental data used were obtained from records in the Extension Service administrator's office, Tennessee

Extension Service district supervisor's offices, and from appropriate United States and Tennessee census and other reports.

## II. TREATMENT OF DATA

Since the Extension Service publication order Form Number 559 (see Appendix A) was the recommended form to be used by county staffs in making publications orders during the study period, it was used as a guide in developing the tabulation sheet required to compile a consolidated listing of selected data from orders for agricultural-titled Extension publications in Tennessee and to establish the ordering patterns used by the 95 county staffs. Each and all publication order forms of the 1,559 total order forms on file were systematically studied and data were recorded for the selected items by counties. Elementary mathematical techniques, such as numerical counts, averages, per cents, measures of dispersion and ranking, were used with the selected items in the summation and tabulation of data recorded for each county.

The total number of copies of agricultural-titled publications ordered per county for the two-year study period was selected as the main dependent variable. Tennessee counties were arranged by name in descending rank order based on the total number of copies of agricultural-titled Extension publications ordered per county during the two-year study period, 1965-1967. Subsequently, all counties were divided into three publication order groups as follows: (1) "high order" counties (counties ranking 1 through 32); (2) "medium order" counties (counties

ranking 33 through 63); and (3) "low order" counties (counties ranking 64 through 95). Data in Figure 1 shows the geographical location of the 32 counties in the high order group, 31 counties in the medium order group, and 32 counties in the low order group in Tennessee. Table I shows the three order groups and the range in numbers of copies of publications ordered within each group.

The supplemental data were collected for each of the 95 counties of Tennessee and combined where appropriate with the regular data as listed below.

Agricultural-titled Extension publications variables (dependent):

1. Total number of copies of agricultural-titled Extension publications ordered.
2. Total number of copies of agricultural-titled Extension publications ordered per full-time agricultural staff equivalent (FASE).
3. Total number of copies of agricultural-titled Extension publications in inventory.
4. Total number of orders for agricultural-titled Extension publications.

County Extension Program Variables (independent):

5. Total number of county Extension staff members
6. Total number of full-time agricultural staff equivalent (FASE)
7. Total number of full-time farm family equivalents
8. Total number of full-time farm family equivalents per full-time agricultural staff equivalent (FASE)
9. Total value of agricultural products sold



TABLE I

NUMBERS OF TENNESSEE COUNTIES IN THE AGRICULTURAL-TITLED EXTENSION  
PUBLICATION ORDER GROUPS ACCORDING TO RANGES IN TOTAL  
COPIES ORDERED PER COUNTY, 1965-1967

Total Copies Per County Publication Order Group	Number of Counties Analyzed	Range of Publications Ordered Per County Within Groups (Copies)
Low	32	225-2794
Medium	31	2795-4810
High	32	4811-13,300
Total	95	225-13,300

10. Total value of agricultural products sold per full-time agricultural staff equivalent (FASE)
11. Total appropriation to County Agricultural Agents
12. Total appropriation to County Agricultural Agents per full-time agricultural staff equivalent (FASE)
13. Total real and personal assessed taxable property
14. Total real and personal assessed taxable property per full-time agricultural staff equivalent (FASE).

All of the data used in the study for the 95 counties for variables 1 through 14 will be found in Appendix C, Table LVIII.

### III. STATISTICAL AND OTHER ANALYSIS

With reference to study purposes 1 through 4, the data were analyzed for all selected publication items relating to ordering procedures for Tennessee, high, medium, and low order county groups in simple numbers and per cents, and averages were computed and ranges listed where appropriate. Main comparisons in the study for these purposes were made between high and low order groups since the greatest "ordering procedure differences" would be expected between these extreme groups.

Since study purpose 5 dealt with the relationships between selected county factors and agricultural-titled publication ordering patterns, it was necessary to determine the correlation and multiple correlations between variables. The stepwise regression analysis program developed at the Health Science Computing Facility, University of California at Los Angeles was used to make the analysis of the data



dealing with study purpose 5. In a stepwise manner, a sequence of multiple linear regression equations is computed. One variable is added at each step to the regression equation and is the one which accounts for the largest amount of the variation in the dependent variable. The data were transferred to data cards which were used in the 7040 digital computer at the University of Tennessee Computing Center for making the computations between the several variables. The 7040 computer was used in determining the correlations among dependent variables and independent variables. The correlation (Pearson's  $r$ ) between each of the 14 variables and every other variable was computed. The correlations among the dependent variable and the independent variables also were determined.

The significance levels for the coefficient of correlation ( $r$ ) and coefficient of multiple correlations ( $R$ ) at different degrees of freedom were determined for the .05 and .01 levels of significance. Tables found in most statistical textbooks (6:581) were used to determine these significance levels.

## CHAPTER IV

### FINDINGS OF THE STUDY

The purpose of this chapter was to present, analyze and discuss the results of the study under five general headings which correspond to the purposes of the study, namely: (1) to determine if the recommended ordering procedures were being followed, (2) to determine which classes and numbers of agricultural-titled Extension publications studied were being ordered most frequently, in largest numbers and in greatest size of order per county; (3) to determine which classes and numbers of agricultural-titled publications studied were on hand, in greatest supply at time of inventory; (4) to determine: the total numbers of agricultural-titled Extension publications ordered, 1965-1967, and in inventory, 1967; the total numbers of copies of publications ordered by quarterly intervals; and the total number of orders for Extension publications, 1965-1967; and (5) to determine if any relationships existed between selected county Extension program-related factors and certain agricultural-titled publication ordering patterns.

#### I. TO DETERMINE IF THE RECOMMENDED ORDERING PROCEDURES WERE BEING FOLLOWED

Each of the four recommended ordering procedures, namely: (1) use Order Form 559; (2) have County Agent initiate the order; (3) average not more than one order every two months; and (4) "pool" orders (with both agricultural-titled and non-agricultural-titled Extension publications) will be discussed separately below.

Tables II-XVI summarize data showing ordering procedures used by county staffs in the four different groups: total state, high order counties, medium order counties and low order counties.

#### Ordering Procedure A--Use Order Form 559

County Extension staffs were to use Order Form 559 to order all publications (including agricultural-titled publications) stocked in the University of Tennessee Agricultural Extension Service mailing room (state mailing room).

Data in Tables II-VI provide information regarding use by county staffs of the recommended Order Form 559 in ordering agricultural-titled Extension publications. While 88 per cent of all orders for agricultural-titled Extension publications were made on Form 559 by county staffs as recommended, considerable difference is noted when high order (94 per cent on 559) and low order (84 per cent on 559) counties are compared (see Table II). Specific reference to Table III shows that the average number of orders per county for the state using Form 559 was 14.45. Staffs in high order counties (17.44 average orders per county) used the recommended Order Form 559 more frequently than did those in low order (10.56 average orders using Form 559 per county) counties.

Reference to Tables IV-VI indicates that the per cent of orders by staffs in individual counties using the correct Order Form 559 ranged from 50-100 per cent for high order, from 24-100 per cent for medium order and from 0-100 per cent for low order counties. Also, the total average number of orders per county was higher for high order (18.63 orders than for either the medium (18.10 orders) or low (12.56 orders) order counties.

TABLE II

USE OF ORDERING PROCEDURES A, B, C, AND D BY TENNESSEE EXTENSION STAFFS FOR ORDERING SELECTED AGRICULTURAL-TITLED EXTENSION PUBLICATIONS BY TOTAL, HIGH, MEDIUM AND LOW ORDER COUNTIES, 1965-1967, ACCORDING TO NUMBER OF ORDERS AND PER CENT OF TOTAL ORDERS\*

Recommended Ordering Procedures	Total (N=1559)		High (N=596)		Medium (N=561)		Low (N=402)	
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
A - Use Order Form 559	1,373	88	558	94	477	85	338	84
B - Have County Agent initiate the order	1,426	91	525	88	520	93	381	95
C - Average not more than one order every two months	1,047	67	367	62	356	63	324	81
D - "Pool orders (with both agricultural-titled and non-agricultural-titled Extension publications)	951	61	392	66	339	60	220	55

\*Per cents are rounded to nearest whole number.

TABLE III

USE OF ORDERING PROCEDURES A, B, C, AND D BY TENNESSEE EXTENSION STAFFS FOR ORDERING SELECTED AGRICULTURAL-TITLED EXTENSION PUBLICATIONS BY TOTAL, HIGH, MEDIUM AND LOW ORDER COUNTIES, 1965-1967, ACCORDING TO AVERAGE NUMBER OF ORDERS PER COUNTY

Recommended Ordering Procedures	Average Number Orders Per County			
	Total N=95 staffs ordering 1559 times	High N=32 staffs ordering 596 times	Medium N=31 staffs ordering 561 times	Low N=32 staffs ordering 402 times
A - Use Order Form 559	14.45	17.44	15.39	10.56
B - Have County Agent initiate the order	15.01	16.41	16.77	11.90
C - Average not more than one order every two months	16.41	18.63	18.10	12.56
D - "Pool" orders (with both agricultural-titled and non-agricultural-titled Extension publications)	10.01	12.25	10.94	6.87

TABLE IV

USE OF ORDERING PROCEDURE A BY TENNESSEE EXTENSION STAFFS FOR  
ORDERING SELECTED AGRICULTURAL-TITLED EXTENSION  
PUBLICATIONS BY HIGH ORDER COUNTIES,  
1965-1967

Name of County	Ordering Form Used by Number of Orders					
	Recommended Form 559	Per Cent of Total	Other	Per Cent of Total	Total	Per Cent*
Anderson	31	100	0	0	31	100
Bedford	13	93	1	7	14	100
Carroll	15	79	4	21	19	100
Carter	10	100	0	0	10	100
Claiborne	15	100	0	0	15	100
Clay	12	100	0	0	12	100
Crockett	19	90	2	10	21	100
Davidson	33	97	1	3	34	100
Dickson	12	100	0	0	12	100
Gibson	21	95	1	5	22	100
Giles	14	100	0	0	14	100
Hamblen	13	100	0	0	13	100
Hamilton	39	95	2	5	41	100
Hardin	10	100	0	0	10	100
Hawkins	16	100	0	0	16	100
Johnson	16	50	16	50	32	100
Knox	9	82	2	18	11	100
Lincoln	19	100	0	0	19	100
Loudon	18	100	0	0	18	100
McNairy	13	87	2	13	15	100
Marshall	22	100	0	0	22	100
Monroe	7	100	0	0	7	100
Obion	28	97	1	3	29	100
Rhea	24	92	2	8	26	100
Sequatchie	20	95	1	5	21	100
Sevier	16	100	0	0	16	100
Shelby	24	96	1	4	25	100
Smith	16	100	0	0	16	100
Stewart	14	100	0	0	14	100
Sullivan	23	96	1	4	24	100
Washington	7	88	1	12	8	100
Wayne	9	100	0	0	9	100
Total	558	94	38	6	596	100
Average No. of Orders	17.44		1.19		18.63	

\*Per cents are rounded to the nearest whole number.

TABLE V

USE OF ORDERING PROCEDURE A BY TENNESSEE EXTENSION STAFFS FOR  
ORDERING SELECTED AGRICULTURAL-TITLED EXTENSION  
PUBLICATIONS BY MEDIUM ORDER COUNTIES,  
1965-1967

Name of County	Ordering Form Used by Number of Orders					
	Recommended Form 559	Per Cent of Total	Other	Per Cent of Total	Total	Per Cent*
Blount	38	93	3	7	41	100
Bradley	9	24	29	76	38	100
Cannon	5	100	0	0	5	100
Cheatham	22	100	0	0	22	100
Cocke	10	83	2	17	12	100
Cumberland	23	96	1	4	24	100
Dyer	16	80	4	20	20	100
Franklin	13	87	2	13	15	100
Greene	18	95	1	5	19	100
Hancock	16	100	0	0	16	100
Hardeman	10	100	0	0	10	100
Haywood	21	100	0	0	21	100
Henderson	11	79	3	21	14	100
Henry	13	93	1	7	14	100
Lawrence	25	100	0	0	25	100
Madison	20	100	0	0	20	100
Marion	9	53	8	47	17	100
Maury	9	64	5	36	14	100
Montgomery	31	100	0	0	31	100
Morgan	13	93	1	7	14	100
Overton	16	94	1	6	17	100
Polk	10	100	0	0	10	100
Putnam	11	85	2	15	13	100
Roane	16	89	2	11	18	100
Robertson	15	88	2	12	17	100
Rutherford	9	69	4	31	13	100
Scott	9	64	5	36	14	100
Sumner	29	91	3	9	32	100
Tipton	10	77	3	23	13	100
Trousdale	15	100	0	0	15	100
Warren	5	71	2	29	7	100
Total	477	85	84	15	561	100
Average No. of Orders	15.39		2.71		18.10	

\*Per cents are rounded to the nearest whole number.

TABLE VI

USE OF ORDERING PROCEDURE A BY TENNESSEE EXTENSION STAFFS FOR  
ORDERING SELECTED AGRICULTURAL-TITLED EXTENSION  
PUBLICATIONS BY LOW ORDER COUNTIES,  
1965-1967

Name of County	Ordering Form Used by Number of Orders					
	Recommended Form 559	Per Cent of Total	Other	Per Cent of Total	Total	Per Cent*
Benton	7	54	6	46	13	100
Bledsoe	20	91	2	9	22	100
Campbell	12	100	0	0	12	100
Chester	17	100	0	0	17	100
Coffee	12	86	2	14	14	100
Decatur	6	100	0	0	6	100
DeKalb	5	71	2	29	7	100
Fayette	16	100	0	0	16	100
Fentress	16	100	0	0	16	100
Grainger	10	100	0	0	10	100
Grundy	8	62	5	38	13	100
Hickman	9	90	1	10	10	100
Houston	10	100	0	0	10	100
Humphrey	8	100	0	0	8	100
Jackson	8	100	0	0	8	100
Jefferson	9	45	11	55	20	100
Lake	0	0	2	100	2	100
Lauderdale	21	78	6	22	27	100
Lewis	9	100	0	0	9	100
McMinn	11	100	0	0	11	100
Macon	8	100	0	0	8	100
Meigs	10	100	0	0	10	100
Moore	7	88	1	12	8	100
Perry	11	85	2	15	13	100
Pickett	13	93	1	7	14	100
Unicoi	3	43	4	57	7	100
Union	7	50	7	50	14	100
Van Buren	6	100	0	0	6	100
Weakley	9	45	11	55	20	100
White	20	95	1	5	21	100
Williamson	15	100	0	0	15	100
Wilson	15	100	0	0	15	100
Total	338	84	64	16	402	100
Average No. of Orders	10.56		2.00		12.56	

\*Per cents are rounded to the nearest whole number.



TABLE VII

USE OF ORDERING PROCEDURE B BY TENNESSEE EXTENSION STAFFS FOR  
ORDERING SELECTED AGRICULTURAL-TITLED EXTENSION  
PUBLICATIONS BY HIGH ORDER COUNTIES,  
1965-1967

Name of County	Agents Initiating Order by Number of Orders					
	Recommended County Agent	Per Cent of Total	Other	Per Cent of Total	Total	Per Cent*
Anderson	31	100	0	0	31	100
Bedford	13	93	1	7	14	100
Carroll	15	79	4	21	19	100
Carter	10	100	0	0	10	100
Claiborne	14	93	1	7	15	100
Clay	12	100	0	0	12	100
Crockett	21	100	0	0	21	100
Davidson	21	62	13	38	34	100
Dickson	8	67	4	33	12	100
Gibson	17	77	5	23	22	100
Giles	14	100	0	0	14	100
Hambleton	4	31	9	69	13	100
Hamilton	35	85	6	15	41	100
Hardin	8	81	2	20	10	100
Hawkins	14	88	2	12	16	100
Johnson	32	100	0	0	32	100
Knox	10	91	1	9	11	100
Lincoln	16	84	3	16	19	100
McNairy	15	100	0	0	15	100
Marshall	18	82	4	18	22	100
Monroe	4	57	3	43	7	100
Obion	28	97	1	3	29	100
Rhea	26	100	0	0	26	100
Sequatchie	21	100	0	0	21	100
Sevier	16	100	0	0	16	100
Shelby	16	64	9	36	25	100
Smith	16	100	0	0	16	100
Stewart	14	100	0	0	14	100
Sullivan	21	88	3	12	24	100
Washington	8	100	0	0	8	100
Wayne	9	100	0	0	9	100
Total	525	88	71	12	596	100
Average No. of Orders	16.41		2.22		18.63	

TABLE VIII

USE OF ORDERING PROCEDURE B BY TENNESSEE EXTENSION STAFFS FOR  
ORDERING SELECTED AGRICULTURAL-TITLED EXTENSION  
PUBLICATIONS BY MEDIUM ORDER COUNTIES,  
1965-1967

Name of County	Agents Initiating Order by Number of Orders					
	Recommended County Agent	Per Cent of Total	Other	Per Cent of Total	Total	Per Cent*
Blount	35	85	6	15	41	100
Bradley	36	95	2	5	38	100
Cannon	4	80	1	20	5	100
Cheatham	20	91	2	9	22	100
Cocke	8	67	4	33	12	100
Cumberland	24	100	0	0	24	100
Dyer	17	85	3	15	20	100
Franklin	15	100	0	0	15	100
Greene	16	84	3	16	19	100
Hancock	16	100	0	0	16	100
Hardeman	9	90	1	10	10	100
Haywood	21	100	0	0	21	100
Henderson	14	100	0	0	14	100
Henry	14	100	0	0	14	100
Lawrence	25	100	0	0	25	100
Madison	18	90	2	10	20	100
Marion	17	100	0	0	17	100
Maury	14	100	0	0	14	100
Montgomery	28	90	3	10	31	100
Morgan	13	93	1	7	14	100
Overton	17	100	0	0	17	100
Polk	8	80	2	20	10	100
Putnam	13	100	0	0	13	100
Roane	15	83	3	17	18	100
Robertson	16	94	1	6	17	100
Rutherford	12	92	1	8	14	100
Scott	14	100	0	0	14	100
Sumner	31	97	1	3	32	100
Tipton	10	77	3	23	13	100
Trousdale	14	93	1	7	15	100
Warren	6	86	1	14	7	100
Total	520	93	41	7	561	100
Average No. of Orders	16.78		1.32		18.10	

\*Per cents are rounded to the nearest whole number.

TABLE IX

USE OF ORDERING PROCEDURE B BY TENNESSE EXTENSION STAFFS FOR  
ORDERING SELECTED AGRICULTURAL-TITLED EXTENSION  
PUBLICATIONS BY LOW ORDER COUNTIES,  
1965-1967

Name of County	Agents Initiating Order by Numbers of Order					
	Recommended County Agent	Per Cent of Total	Other	Per Cent of Total	Total	Per Cent*
Benton	10	77	3	23	13	100
Bledsoe	22	100	0	0	22	100
Campbell	12	100	0	0	12	100
Chester	17	100	0	0	17	100
Coffee	14	100	0	0	14	100
Decatur	5	83	1	17	6	100
DeKalb	6	86	1	14	7	100
Fayette	16	100	0	0	16	100
Fentress	15	94	1	6	16	100
Grainger	10	100	0	0	10	100
Grundy	13	100	0	0	13	100
Hickman	10	100	0	0	10	100
Houston	10	100	0	0	10	100
Humphrey	5	62	3	38	8	100
Jackson	8	100	0	0	8	100
Jefferson	20	100	0	0	20	100
Lake	2	100	0	0	2	100
Lauderdale	26	96	1	4	27	100
Lewis	9	100	0	0	9	100
McMinn	7	64	4	36	11	100
Macon	8	100	0	0	8	100
Meigs	10	100	0	0	10	100
Moore	7	88	1	12	8	100
Perry	13	100	0	0	13	100
Pickett	14	100	0	0	14	100
Unicoi	7	100	0	0	7	100
Union	13	93	1	7	14	100
Van Buren	6	100	0	0	6	100
Weakley	18	90	2	10	20	100
White	21	100	0	0	21	100
Williamson	12	80	3	20	15	100
Wilson	15	100	0	0	15	100
Total	381	95	21	5	402	100
Average No. of Orders	11.90		0.66		12.56	

\*Per cents are rounded to the nearest whole number.

TABLE X

USE OF ORDERING PROCEDURE C BY TENNESSEE EXTENSION STAFFS FOR  
ORDERING SELECTED AGRICULTURAL-TITLED EXTENSION  
PUBLICATIONS BY HIGH ORDER COUNTIES,  
1965-1967

Name of County	Average Not More Than One Order Every Two Months--By Number of Orders	
	Actual Number of Orders Made	Difference Between Actual Numbers of Orders and Recommended Number (12)
Anderson	31	19
Bedford	14	2
Carroll	19	7
Carter	10	0
Claiborne	15	3
Clay	12	0
Crockett	21	9
Davidson	34	22
Dickson	12	0
Gibson	22	10
Giles	14	2
Hamblen	13	1
Hamilton	41	29
Hardin	10	0
Hawkins	16	4
Johnson	32	20
Knox	11	0
Lincoln	19	7
Loudon	18	6
McNairy	15	3
Marshall	22	10
Monroe	7	0
Obion	29	17
Rhea	26	14
Sequatchie	21	9
Sevier	16	4
Shelby	25	13
Smith	16	4
Stewart	14	2
Sullivan	24	12
Washington	8	0
Wayne	9	0
Total	596	229
Average Number of Orders	18.63	7.16

TABLE XI

USE OF ORDERING PROCEDURE C BY TENNESSEE EXTENSION STAFFS FOR  
ORDERING SELECTED AGRICULTURAL-TITLED EXTENSION  
PUBLICATIONS BY MEDIUM ORDER COUNTIES,  
1965-1967

Name of County	Average Not More Than One Order Every Two Months--By Number of Orders	
	Actual Number of Orders Made	Difference Between Actual Numbers of Orders and Recommended Number (12)
Blount	41	29
Bradley	38	26
Cannon	5	0
Cheatham	22	10
Cocke	12	0
Cumberland	24	12
Dyer	20	8
Franklin	15	3
Greene	19	7
Hancock	16	4
Hardeman	10	0
Haywood	21	9
Henderson	14	2
Henry	14	2
Lawrence	25	13
Madison	20	8
Marion	17	5
Maury	14	2
Montgomery	31	19
Morgan	14	2
Overton	17	5
Polk	10	0
Putnam	13	1
Roane	18	6
Robertson	17	5
Rutherford	13	1
Scott	14	2
Summer	32	20
Tipton	13	1
Trousdale	15	3
Warren	7	0
Total	561	205
Average Number of Orders	18.10	6.61

TABLE XII

USE OF ORDERING PROCEDURE C BY TENNESSEE EXTENSION STAFFS FOR  
ORDERING SELECTED AGRICULTURAL-TITLED EXTENSION  
PUBLICATIONS BY LOW ORDER COUNTIES,  
1965-1967

Name of County	Average Not More Than One Order Every Two Months--By Number of Orders	
	Actual Number of Orders Made	Difference Between Actual Number of Orders and Recommended Number (12)
Benton	13	1
Bledsoe	22	10
Campbell	12	0
Chester	17	5
Coffee	14	2
Decatur	6	0
DeKalb	7	0
Fayette	16	4
Fentress	16	4
Grainger	10	0
Grundy	13	1
Hickman	10	0
Houston	10	0
Humphrey	8	0
Jackson	8	0
Jefferson	20	8
Lake	2	0
Lauderdale	27	15
Lewis	9	0
McMinn	11	0
Macon	8	0
Meigs	10	0
Moore	8	0
Perry	13	1
Pickett	14	2
Unicoi	7	0
Union	14	2
Van Buren	6	0
Weakley	20	8
White	21	9
Williamson	15	3
Wilson	15	3
Total	402	78
Average Number of Orders	12.56	2.44

TABLE XIII

USE OF ORDERING PROCEDURE D BY TENNESSEE EXTENSION STAFFS FOR  
ORDERING SELECTED AGRICULTURAL-TITLED EXTENSION  
PUBLICATIONS BY HIGH ORDER COUNTIES,  
1965-1967

Name of County	"Pool" Orders (with both Agricultural-Titled and Non-Agricultural-Titled Publications)					
	Pooled as Recommended	Per Cent of Total	Not Pooled	Per Cent of Total	Total	Per Cent*
Anderson	24	77	7	23	31	100
Bedford	11	79	3	21	14	100
Carroll	11	58	8	42	19	100
Carter	10	100	0	0	10	100
Claiborne	14	93	1	7	15	100
Clay	6	50	6	50	12	100
Crockett	10	48	11	52	21	100
Davidson	20	59	14	41	34	100
Dickson	10	83	2	17	12	100
Gibson	15	68	7	32	22	100
Giles	13	93	1	7	14	100
Hamblen	12	92	1	8	13	100
Hamilton	33	80	8	20	41	100
Hardin	9	90	1	10	10	100
Hawkins	14	88	2	12	16	100
Johnson	11	34	21	66	32	100
Knox	7	64	4	36	11	100
Lincoln	14	74	5	26	19	100
Loudon	11	61	7	39	18	100
McNairy	11	73	4	27	15	100
Marshall	15	68	7	32	22	100
Monroe	6	86	1	14	7	100
Obion	4	14	25	86	29	100
Rhea	14	54	12	46	26	100
Sequatchie	16	76	5	24	21	100
Sevier	13	81	3	19	16	100
Shelby	14	56	11	44	25	100
Smith	5	31	11	69	16	100
Stewart	13	93	1	7	14	100
Sullivan	12	50	12	50	24	100
Washington	8	100	0	0	8	100
Wayne	6	67	3	33	9	100
Total	392	66	204	34	596	100
Average Number of Orders	12.25		6.38		18.63	

\*Per cents are rounded to the nearest whole number.

TABLE XIV

USE OF ORDERING PROCEDURE D BY TENNESSEE EXTENSION STAFFS FOR  
ORDERING SELECTED AGRICULTURAL-TITLED EXTENSION  
PUBLICATIONS BY MEDIUM ORDER COUNTIES,  
1965-1967

Name of County	"Pool" Orders (with both Agricultural-Titled and Non-Agricultural-Titled Publications)					
	Pooled as Recommended	Per Cent of Total	Not Pooled	Per Cent of Total	Total	Per Cent*
Blount	22	54	19	46	41	100
Bradley	19	50	19	50	38	100
Cannon	5	100	0	0	5	100
Cheatham	12	55	10	45	22	100
Cocke	7	58	5	42	12	100
Cumberland	11	46	13	54	24	100
Dyer	10	50	10	50	20	100
Franklin	13	87	2	13	15	100
Greene	17	89	2	11	19	100
Hancock	14	88	2	12	16	100
Hardeman	9	90	1	10	10	100
Haywood	6	29	15	71	21	100
Henderson	5	36	9	64	14	100
Henry	12	86	2	14	14	100
Lawrence	20	80	5	20	25	100
Madison	20	100	0	0	20	100
Marion	12	71	5	29	17	100
Mauzy	8	57	6	43	14	100
Montgomery	16	52	15	48	31	100
Morgan	7	50	7	50	14	100
Overton	10	59	7	41	17	100
Polk	10	100	0	0	10	100
Putnam	8	62	5	38	13	100
Roane	7	39	11	61	18	100
Robertson	11	65	6	35	17	100
Rutherford	4	31	9	69	13	100
Scott	9	64	5	36	14	100
Summer	11	34	21	66	32	100
Tipton	11	85	2	15	13	100
Trousdale	7	47	8	53	15	100
Warren	6	86	1	14	7	100
Total	339	60	222	40	561	100
Average Number of Orders	10.94		7.16		18.10	

\*Per cents are rounded to the nearest whole number.



TABLE XV

USE OF ORDERING PROCEDURE D BY TENNESSEE EXTENSION STAFFS FOR  
ORDERING SELECTED AGRICULTURAL-TITLED EXTENSION  
PUBLICATIONS BY LOW ORDER COUNTIES,  
1965-1967

Name of County	"Pool" Orders (with both Agricultural-Titled and Non-Agricultural-Titled Publications)					
	Pooled as Recommended	Per Cent of Total	Not Pooled	Per Cent of Total	Total	Per Cent*
Benton	6	46	7	54	13	100
Bledsoe	10	45	12	55	22	100
Campbell	9	75	3	25	12	100
Chester	8	47	9	53	17	100
Coffee	8	57	6	43	14	100
Decatur	5	83	1	17	6	100
DeKalb	4	57	3	43	7	100
Fayette	12	75	4	25	16	100
Fentress	9	56	7	44	16	100
Grainger	6	60	4	40	10	100
Grundy	4	31	9	69	13	100
Hickman	9	90	1	10	10	100
Houston	4	40	6	60	10	100
Humphrey	5	62	3	38	8	100
Jackson	8	100	0	0	8	100
Jefferson	4	40	16	80	20	100
Lake	1	50	1	50	2	100
Lauderdale	12	44	15	56	27	100
Lewis	7	78	2	22	9	100
McMinn	9	82	2	18	11	100
Macon	6	75	2	25	8	100
Meigs	9	90	1	10	10	100
Moore	6	75	2	25	8	100
Perry	5	38	8	62	13	100
Pickett	4	29	10	71	14	100
Unicoi	3	43	4	57	7	100
Union	8	57	6	43	14	100
Van Buren	6	100	0	0	6	100
Weakley	5	25	15	75	20	100
White	5	24	16	76	21	100
Williamson	8	53	7	47	15	100
Wilson	15	100	0	0	15	100
Total	220	55	182	45	402	100
Average Number of Orders	6.87		5.69		12.56	

\*Per cents are rounded to the nearest whole number.

TABLE XVI

USE OF ORDERING PROCEDURES A, B, C, AND D BY TENNESSEE EXTENSION STAFFS FOR ORDERING SELECTED AGRICULTURAL-TITLED EXTENSION PUBLICATIONS BY TOTAL, HIGH, MEDIUM AND LOW ORDER COUNTIES, 1965-1967, ACCORDING TO PER CENTS OF STAFFS\*

Recommended Ordering Procedures	County Staffs Using Recommended Procedures in 75 Per Cent or More of Orders			
	Total (N=95) Per Cent	High (N=32) Per Cent	Medium (N=31) Per Cent	Low (N=32) Per Cent
A - Use Order Form 559	84	97	81	75
B - Have County Agent initiate the order	92	84	97	94
C - Average not more than one order every two months	62	53	52	81
D - "Pool" orders (with both agricultural-titles and non-agricultural-titled Extension publications)	40	47	35	38

\*Per cents are rounded to nearest whole number.

### Ordering Procedure B—Have County Agent Initiate The Order

In an effort to develop a systematic flow of Extension publications from the state mailing room to the county Extension offices, the County Agricultural Agent (County Agent) had been designated, because of position, to be responsible for initiating publication orders.

Data in Tables II-III, pages 25-26, and VII-IX, pages 30-32, furnish information as to whether or not the County Agent is initiating the orders for agricultural-titled Extension publications as recommended. Table II shows that 91 per cent of all agricultural-titled Extension publication orders received from county staffs were initiated by the County Agent as recommended, yet some difference is observed when high order (88 per cent of orders initiated by agent) and low order (95 per cent of orders initiated) counties are contrasted.

While the average numbers of orders initiated by the County Agent per county staff for the state was 15.01 (see Table III, page 26), the average number of orders per county staff from high order counties (16.41 average orders initiated) was greater than those from the low order counties (11.90 average orders initiated). However, the average for the medium order (16.78) counties was higher than either the average for the high or the low group.

Reference to Tables VII-IX reveals that the per cent of orders initiated by the County Agent per county staff ranged from 31-100 per cent for high order, to 67-100 per cent for the medium order and 62-100 per cent for low order counties. Moreover, as indicated

earlier, the total average number of all orders per county staffs was higher for high order counties (18.63 orders) than for either the medium (18.10 order) or low (12.50 orders) order counties.

Ordering Procedure C--Average Not More Than One Order Every Two Months

Due to the limited number of personnel available to process Extension publication orders received in the state mailing room and in an effort to process all requests as soon as possible, county staffs had been encouraged to place as many orders for publications as needed to carry out effective Extension programs; but to place as few a number of orders as possible. Generally, staffs were encouraged to place no more than one order each two month period.

Therefore, the concept of county staffs to average not more than one order every two months during the two year study period, 1965-1967 (12 publication orders or less would be in the recommended range of orders), was the basis for establishing ordering procedure C.

Additional reference to Table II, page 25, shows that, while 67 per cent of all orders for agricultural-titled Extension publications were made by county staffs in keeping with the 0-12 orders as recommended, much difference is observed when the high order (62 per cent in range 0-12 orders) and low order (81 per cent in range 0-12) counties are compared.

Further reference to Table III, page 26, and Tables X-XII, pages 33-35, reveals that the average number of orders for Extension publications per county staff for the state was 16.41, which was 4.41 orders above the recommended 12 for the two year period. When high

(18.63) and low (12.56) order county averages are compared it is noted that the low order staffs came closer to the recommended order number. Medium order (18.10) counties were close to the high order counties on the average.

Ordering Procedure D--"Pool" Orders (With Both Agricultural and Non-Agricultural-Titled Extension Publications)

Individual request from county Extension staffs for copies of both agricultural-titled and non-agricultural-titled Extension publication were to be combined or "pooled" into single orders. Tables II-III, pages 25-26, and Tables XIII-XV, pages 36-38, present data concerning the number of agricultural-titled Extension publication orders which also included request for copies of non-agricultural-titled Extension publications.

While 61 per cent of all orders from county staffs for agricultural-titled Extension publications also contained requests for copies of non-agricultural-titled Extension publications as recommended, some difference is noted when high order (66 per cent of orders pooled), medium order (60 per cent of orders pooled) and low order (55 per cent of orders pooled) counties are compared (see Table II, page 25).

Further reference to Table III, page 26, shows that the average number of orders per county for the state being pooled by county staffs as recommended was 10.01. Staffs in high order counties (12.25 average number of orders) pooled a greater number of orders as recommended than did those in low order counties (6.87 average number of orders pooled).

Reference to Tables XIII-XV, pages 36-38, reveals that the per cent of orders being pooled by staffs in individual counties ranged from 14-100 per cent for high order, from 29-100 per cent for medium order and from 24-100 per cent for low order counties.

#### Ordering Procedures - A, B, C, and D Being Followed By County Staffs

In an effort to determine how effectively the Tennessee Extension Service county staffs were following each of the four recommended procedures for ordering selected agricultural-titled Extension publications, it was predetermined that a staff would be seen to have met the requirements of following a procedure if the staff used the procedure for 75 per cent or more of their agricultural-titled Extension publication orders.

Data in Table XVI, page 39, reveal the per cents of county staffs in the state identified to have followed the four recommended procedures in 75 per cent or more of their publication orders. While 84 per cent of the staffs in the state were identified as having met the requirement of having followed Procedure A--Use Order Form 559, considerable difference is noted when high order (97 per cent following Procedure A), medium order (81 per cent) and low order (75 per cent following Procedure A) staffs are compared.

It was interesting to note that 92 per cent of the staffs in the state met the requirement of following Procedure B--Have County Agent To Initiate the Order, yet much difference is observed when high order (84 per cent following Procedure B), medium order (97 per cent) and low order (94 per cent) counties are examined.

Further reference to Table XVI shows that 62 per cent of the staffs in the state had met the requirement of following Procedure C-- Average Not More than One Order Every Two Months. However, a great deal of difference was observed when the staffs in the high order (53 per cent) and medium order (52 per cent) counties following Procedure C were compared with the low order (81 per cent) counties.

In reference to the per cent staffs following Procedure D-- "Pool" Orders, it was noted that only 40 per cent of staffs in all counties followed recommended Procedure D. When high (47 per cent) and low (38 per cent) order counties are compared, it is seen that more of the former than the latter used Procedure D.

## II. CLASSES AND NUMBERS OF PUBLICATIONS ORDERED

Table XVII is a summary table showing the per cent of total publications accounted for by agricultural-titled Extension publications in each of the eleven title classes studied. The classes in the table are presented in descending rank order. Again, it is interesting to note that, of the 393,985 total publication copies with agricultural-titles ordered by the 95 county staffs in the state in 1965-1967, more than 58 per cent were ordered by those in high order counties, 28 per cent in medium order and less than 14 per cent in the low order category.

### Farm Crops And Fertilizer Title Class of Publications

Reference to Tables XVII and XVIII discloses that 30 per cent of all agricultural-titled publications ordered in the state were accounted for in the farm crops and fertilizer title (11 different

TABLE XVII

PER CENTS OF TOTAL PUBLICATIONS ACCOUNTED FOR BY CLASSES OF SELECTED  
 AGRICULTURAL-TITLED EXTENSION PUBLICATIONS ORDERED BY  
 EXTENSION STAFF MEMBERS IN TENNESSEE, HIGH,  
 MEDIUM AND LOW ORDER COUNTIES, 1965-1967\*

Agricultural- Titled Classes of Extension Publi- cations	Two-Year Publication Order Category			
	Total (100%) (N=393,985) Per Cent Ac- counted for	High (58%) (N=230,168) Per Cent Ac- counted for	Medium (28%) (N=110,237) Per Cent Ac- counted for	Low (14%) (N=53,580) Per Cent Ac- counted for
Farm crops and fertilizers (11)	30	31	29	27
Fruits and vegetables (12)	24	25	23	23
Insects, plant diseases and pests (10)	14	14	14	15
Animal husbandry- beef (6)	9	8	10	8
Landscaping and lawns (3)	7	7	7	7
Animal husbandry- hogs (4)	6	5	5	8
Dairy (11)	3	3	4	6
Forestry (8)	3	2	3	4
Agricultural economics (9)	2	3	3	1
Animal husbandry- sheep (2)	1	1	1	1
Poultry (4)	1	1	1	0
Total	100	100	100	100

\*Per cents are rounded to nearest whole number.



titles) class. When high and low order counties are compared, it is found that a higher per cent (31) of the former is accounted for than is true for the latter (27 per cent).

Review of information in Table XVIII indicates that all county staffs in the state ordered some publications in this class for a total of 118,965 copies ordered. High order counties accounted for 61 per cent of these; while low order counties accounted for only 12 per cent. For all counties the range in total numbers of publication copies ordered in the class ranged from 45 (in one low order county) to 6,525 (in one high order county). The total average numbers of publication copies ordered per county, then, were 1,252.26 for the state, 2,269.22 for the high order, 1,024.00 for 456.44 for low order counties.

Of the 603 total orders for publications in this class, 1965-1967, high order counties accounted for 244; while low order counties only totaled 148. The range in numbers of orders ran from 1 (in one low order county) to 14 (in one high order county); the average being 6.35 orders per county for the state, 7.62 for the high order staffs, 6.81 for medium, and only 4.62 for low order staffs.

With regard to the average number of publication copies included per order per county during the study period, the average for the state was 197.29; while the high order counties averaged 297.60 copies per order as compared with 98.69 copies for the low order counties.

The sum total of the numbers of times the eleven different titles in this class appeared on all orders, including duplication, was 1,186. This is a measure of the total number of different times one or another of the eleven titles in this class was listed in an order and had to

be handled by personnel in the state mailing room. The high order figure for this measure was 498; while low order staffs totaled 275. The range in the numbers of times the eleven different titles appeared on orders was from 3 (in a low order county) to 32 (in a high order county). Averages per county were 12.48 for the state, 15.56 for high order staffs, 13.32 for medium and 8.59 for low order staffs. When duplication was removed, it was noted that the averages per county were 6.57 of the eleven titles appearing for the state, 7.38 of the eleven for high order staffs, 6.84 for medium and 5.50 for the low order staffs.

Fruits and Vegetables Title Class of Publications

Data in Tables XVII, page 45, and XIX reveal that the second largest per cent (24) of all agricultural-titled publications ordered in the state by county staffs were accounted for in the fruits and vegetables titles (12 different titles) class. It is further noted that the 25 per cent of publications accounted for by the high order counties is greater than the 23 per cent accredited to the low order group.

Reference to Table XIX shows that the 95 staffs in the state ordered a total of 95,565 copies of publications from this class. High order counties accounted for 60 per cent of these publications, as compared with 27 per cent for the medium order; and 13 per cent for the low order staffs. The range in number of copies ordered from this title class was 15 (in a low order county) to 3,625 (in a high order county). While the average number of copies ordered per county per

TABLE XIX

NUMBERS, RANGE AND AVERAGE NUMBERS OF SELECTED ITEMS RELATING TO THE EXTENSION FRUITS AND VEGETABLES TITLE CLASS OF AGRICULTURAL PUBLICATIONS ORDERED BY EXTENSION STAFF MEMBERS IN TENNESSEE, HIGH, MEDIUM AND LOW ORDER COUNTIES, 1965-1967

	Two-Year Publication Order Category			
	Total Counties (N=95)	High Counties (N=32)	Medium Counties (N=31)	Low Counties (N=32)
Selected Items Regarding Fruits and Vegetables Title Class of Publications	(220- 13,300 copies)	(4,811- 13,300 copies)	(2,795- 4,810 copies)	(225- 2,794 copies)
Total number of counties ordering publications this class, 1965-1967	95	32	31	32
Total number of copies of publi- cations ordered from this class, 1965-1967	95,565	57,564	25,559	12,442
Range	15-3,625	250-3625*	345-1435*	15-1,020*
Average per county	1005.95	1798.88	824.48	388.81
Total number of orders made, 1965-1967, including titles this class	695	279	242	174
Range	1-21	2-21	3-20*	1-13*
Average per county	7.32	8.72	7.81	5.44
Average number of copies of pub- lications ordered this class, 1965-1967, per order per county	137.50	206.32	105.62	71.51
Sum total of the number of times twelve different titles appeared on all orders made by the staff in each of all counties in the group, 1965-1967 (including duplication)	1,476	640	506	330
Range	1-56	5.56*	7-35*	1-22*
Average per county	15.54	20.00	16.32	10.31
Sum total of the numbers of twelve different titles in this class ordered by the staff in each of all counties in the group, 1965-1967 (excluding duplication)	(Of 1,140 possible)	(Of 384 possible)	(Of 372 possible)	(Of 384 possible)
Range	1-12	4-12*	6-12*	1-11*
Average per county	8.18	9.12	9.00	6.44

\*Range for this category includes only those ordering from the class.

staff was 1,005.95 for the state, much difference is noted when the high order counties (1,798.88 average per county) are compared with the medium order (824.48) and the low order (388.81) counties.

Further, the data indicate that of the 695 total orders for publications in this title class, 1965-1967, high order counties accounted for 279; while low order counties had only 174 orders. The range in number of orders was 1 (in a low order county) to 21 (in a high order county); the averages being 7.32 for the state, 8.72 for the high order staffs, 7.81 for medium, and only 5.44 for low order staffs.

Although the average number of copies of publications ordered in this class per order per county for the state was 137.50, a striking difference is noted when the high order (206.32 average number of copies) counties are compared with the medium order (105.62) and low order (71.51 average number of copies) counties. The sum total of the numbers of times the twelve titles in this class appeared on all orders, including duplication, for the four order groups was: total state (1,476), high order counties (640), medium order (506), and low order counties (330). The range in the numbers of times for twelve different titles appearing on orders was from 1 (in a low order county) to 56 (in a high order county). Averages per county were 15.54 for the state, 20.00 for high order staffs, 16.32 for medium order, and 10.31 for the low order staffs.

When duplication was removed, it was observed that the averages for different titles per county were 8.18 (of the twelve titles) for

the state, 9.12 for the high order staffs, 9.00 for the medium order, and only 6.44 (of the twelve titles) for the low order staffs.

#### Insects, Plant Disease and Pests Title Class of Publications

While the data in Table XVII, page 45, indicate that 14 per cent of all copies of agricultural-titled publications ordered in the state were accounted for in the insects, plant diseases and pests (10 different titles) class; it is observed that similar percentages of copies of all publications ordered were accounted for in this title class by high order (14), medium order (14), and low order (15) counties.

Reference to Table XX indicates that all 95 county staffs in the state ordered some copies of publications from this class for a total of 55,071 copies ordered. Of this number, high order counties ordered slightly more than 58 per cent of the copies as compared with only 14 per cent for the low order counties. The range in total number of copies of publications ordered by all staffs in this class was 25 (in a low order county) to 3,725 (in a high order county). The averages for numbers of copies ordered per county were 579.69 for the state, 1,005.16 for high order staffs, 485.55 for medium and 245.44 for low order staffs.

Regarding the 475 total orders for publications in this class, 1965-1967, it is observed that 191 of these were attributed to the high order counties as compared with only 118 orders from low order counties. However, the range in number of orders per county ran

TABLE XX

NUMBERS, RANGE AND AVERAGE NUMBERS OF SELECTED ITEMS RELATING TO THE EXTENSION INSECTS, PLANT DISEASES AND PESTS TITLE CLASS OF AGRICULTURAL PUBLICATIONS ORDERED BY EXTENSION STAFF MEMBERS IN TENNESSEE, HIGH, MEDIUM AND LOW ORDER COUNTIES, 1965-1967

	Two-Year Publication Order Category			
	Total Counties (N=95)	High Counties (N=32)	Medium Counties (N=31)	Low Counties (N=32)
Selected Items Regarding Insects, Plant Diseases and Pests Title Class of Publications	(220- 13,300 copies)	(4,811- 13,300 copies)	(2,795- 4,810 copies)	(225- 2,794 copies)
Total number of counties ordering publications this class, 1965-1967	95	32	31	32
Total number of copies of publi- cations ordered from this class, 1965-1967	55,071	32,165	15,052	7,854
Range	25-3,725	250-3725*	150-1200*	25-1144*
Average per county	579.69	1005.16	485.55	245.44
Total number of orders made, 1965-1967, including titles this class	475	191	166	118
Range	1-12	2-12*	2-10*	1-10*
Average per county	5.00	5.97	5.35	3.69
Average number of copies of publi- cations ordered this class, 1965- 1967, per order per county	115.94	168.40	90.67	66.56
Sum total of the number of times ten different titles appeared on all orders made by the staff in each of all counties in the group, 1965-1967 (including duplication)	648	269	233	146
Range	1-15	3-15*	3-15*	1-11*
Average per county	6.82	8.41	7.52	4.56
Sum total of the numbers of ten different titles in this class ordered by the staff in each of all counties in the group, 1965- 1967 (excluding duplication)	(Of 950 possible)	(Of 320 possible)	(Of 310 possible)	(Of 320 possible)
Range (possible 0-10)	1-10	3-9*	3-9*	1-6*
Average per county	5.13	6.19	5.45	3.75

\*Range for this category includes only those ordering from the class.

from 1 (in a low order county) to 12 (in a high order county); and the averages were 5.00 orders per county for the state, 5.97 for the high order staffs, 5.35 for medium order staffs and 3.69 for the low order staffs.

Further, when the number of publication copies ordered from this class is examined relative to the number of total orders per county; it is found that while the total staffs averaged 115.94 copies per order per county, that high order counties averaged a much greater number (168.40 copies per order per county) than did the medium order (90.67 copies) and low order (66.56 copies) counties.

The sum total of the numbers of times the ten different titles in this class appeared on all orders, including duplication, was 648 for the state, 269 for the high order staffs, 233 for the medium, and 146 for the low order staffs. The averages per county were 6.82 for the state, 8.41 for high order staffs, 7.52 for medium, and 4.56 for low order staffs. When duplication (total number of different times the ten titles appeared) was removed, it is observed that while the average number of the ten different titles appearing on the order per county for the state was 5.13, the high order counties had a considerably higher average (6.19) number of titles than did the low order (3.75) counties.

#### Animal Husbandry-Beef Title Class of Publications

Additional reference to Table XVII, page 45, reveals that 9 per cent of all copies of agricultural-titled Extension publications ordered

by county staffs in the state were from the animal husbandry-beef title (6 different titles) class. When the high, medium, and low order counties are compared, it is found that the per cent (10) of publication copies accounted for by this class is higher for the medium order than for either the high order (8 per cent) or low order (8 per cent) counties.

It is noted from data in Table XXI that 91 Tennessee county staffs ordered 34,687 copies of publications in this class. All staffs in high order (32) and medium order (31) counties ordered some publications from the class, but all staffs did not order from the low order (28 staffs) counties. The range in numbers of copies of publications ordered was from 35 (in a low order county) to 2,450 (in a high order county). The average number of copies ordered was much higher for the high order (606.72) than for the low order (135.19) counties.

Of the 339 orders (including titles this class) made by staffs in the state, it is noted that a greater proportion of these were from the high order (135 orders) and medium order (131 orders) counties than were from the low order (73 orders) counties. While the range in number of orders was from 1 (in all order groups) to 12 (in the medium order counties), the averages per county were: 3.57 for the state, 4.22 for the high order, 4.23 for the medium order and 2.28 for the low order counties.

With respect to the average number of copies of publications included per order per county during the study period, the average for the state was 102.32; while the high order counties averaged 143.81 as compared with 59.28 copies for the low order counties.



TABLE XXI

NUMBERS, RANGE AND AVERAGE NUMBERS OF SELECTED ITEMS RELATING TO THE  
EXTENSION ANIMAL HUSBANDRY-BEEF TITLE CLASS OF AGRICULTURAL  
PUBLICATIONS ORDERED BY EXTENSION STAFF MEMBERS  
IN TENNESSEE, HIGH MEDIUM AND LOW  
ORDER COUNTIES, 1965-1967

	Two-Year Publication Order Category			
	Total Counties (N=95)	High Counties (N=32)	Medium Counties (N=31)	Low Counties (N=32)
Selected Items Regarding Animal Husbandry-Beef Title Class of Publications	(220- 13,300 copies)	(4,811- 13,300 copies)	(2,795- 4,810 copies)	(225- 2,794 copies)
Total number of counties ordering publications this class, 1965-1967	91	32	31	28
Total number of copies of publi- cations ordered from this class, 1965-1967	34,687	19,415	10,946	4,326
Range	0-2,450	50-2,450*	50-950*	35-575*
Average per county	365.13	606.72	353.10	135.19
Total number of orders made, 1965- 1967, including titles this class	339	135	131	73
Range	0-12	1-10*	1-12*	1-5*
Average per county	3.57	4.22	4.23	2.28
Average number of copies of publi- cations ordered this class, 1965- 1967, per order per county	102.32	143.81	83.56	59.28
Sum total of the number of times six different titles appeared on all orders made by the staff in each of all counties in the group, 1965-1967 (including duplication)	454	193	174	87
Range	0-21	1-15*	1-21*	1-6*
Average per county	4.78	6.03	5.63	2.72
Sum total of the numbers of six different titles in this class ordered by the staff in each of all counties in the group, 1965- 1967 (excluding duplication)	(Of 570 possible)	(Of 192 possible)	(Of 186 possible)	(Of 192 possible)
Range (possible 0-6)	0-6	1-6*	1-6*	1-5*
Average per county	3.29	3.88	3.64	2.38

\*Range for this category includes only those ordering from the class.

The sum total of the numbers of times the six different titles in this class appeared on all orders, including duplication, was 454. The high order counties had a sum total of 193 as compared with only 87 for the low order staffs. The range in the numbers of times the six titles appeared on orders was from 1 (in each of the county order groups) to 21 (in a medium order county). Averages per county were 4.78 for the state, 6.03 for high order staffs, 5.63 for medium and 2.72 for low order staffs. When duplication was removed, it was observed that the averages per county were 3.29 of the six titles appearing for the state, 3.88 of the six for high order staffs, 3.64 for medium and 2.38 for the low order staffs.

#### Landscaping and Lawns Title Class of Publications

Further reference to Table XVII, page 45, shows that 7 per cent of all agricultural-titled Extension publications ordered in the state were accounted for in the landscaping and lawns title (3 different titles) class. Also, 7 per cent of all copies of publications ordered by high, medium, and low order counties were from this title class.

Data in Table XXII reveal that all counties in the state (with the exception of one low order county) ordered publications in this class for a total of 27,089 copies. High order counties accounted for slightly more than 56 per cent of these, while low order counties accounted for approximately 13 per cent. While the range in number of copies ordered for all counties was from 10 (in a low order county) to 1,700 (in a high order county), the averages in numbers of copies per

TABLE XXII

NUMBERS, RANGE AND AVERAGE NUMBERS OF SELECTED ITEMS RELATING TO THE  
EXTENSION LANDSCAPING AND LAWNS TITLE CLASS OF AGRICULTURAL  
PUBLICATIONS ORDERED BY EXTENSION STAFF MEMBERS IN  
TENNESSEE, HIGH, MEDIUM AND LOW ORDER COUNTIES,  
1965-1967

	Two-Year Publication Order Category			
	Total Counties (N=95)	High Counties (N=32)	Medium Counties (N=31)	Low Counties (N=32)
Selected Items Regarding Landscaping and Lawns Title Class of Publications	(220- 13,300 copies)	(4,811- 13,300 copies)	(2,795- 4,810 copies)	(225- 2,794 copies)
Total number of counties ordering publications this class, 1965-1967	94	32	31	31
Total number of copies of publi- cations ordered from this class, 1965-1967	27,089	15,340	8,308	3,441
Range	0-1,700	50-1,700*	40-850*	10-415*
Average per county	285.15	479.38	268.00	107.53
Total number of orders made, 1965- 1967, including titles this class	334	130	128	76
Range	1-13	1-13*	1-8*	1-9*
Average per county	3.52	4.06	4.13	2.38
Average number of copies of publi- cations ordered this class, 1965- 1967, per order per county	81.10	118.00	64.91	45.28
Sum total of the number of times three different titles appeared on all orders made by the staff in each of all counties in the group, 1965-1967 (including duplication)	439	180	166	93
Range	0-20	1-20*	1-16*	1-14*
Average per county	4.62	5.62	5.35	2.91
Sum total of the numbers of three different titles in this class ordered by the staff in each of all counties in the group, 1965- 1967 (excluding duplication)	(Of 285 possible)	(Of 96 possible)	(Of 93 possible)	(Of 96 possible)
Range (possible 0-3)	0-3	1-3*	1-3*	1-3*
Average per county	2.34	2.47	2.64	1.91

\*Range for this category includes only those ordering from the class.

county for the state were 285.15; for the high order counties 479.38; for the medium order counties 268.00; and for the low order counties 107.53.

Of the 334 total orders including publications in this class, 1965-1967, high order and medium order counties accounted for 130 and 128 orders respectively; while low order counties accounted for only 76 of the orders. The range in numbers of orders ran from 1 (in all county order groups) to 13 (in a high order county); the averages being 3.52 orders per county for the state, 4.06 for the high order staffs, 4.13 for medium and 2.38 orders per county for the low order counties.

When the numbers of copies of publications ordered from this class are examined relative to the numbers of total orders per county, it is found that; while the total staffs averaged 81.10 copies per order per county, the high order counties averaged a considerably higher (118.00 copies per county) number than did the low order counties (45.28).

The sum total of the numbers of times the three different titles in this class appeared on all orders, including duplication, was 439 for the state, 180 for high order counties, 166 for medium order and 93 for low order counties. The range in numbers of times the three different titles appeared on orders from this class was from 1 (in all county order groups) to 20 (in a high order county). Averages per county were 4.62 for the state, 5.62 for high order staffs, 5.35 for medium and 2.91 for low order staffs. When duplication was removed, it was noted that; while the average numbers of the three different titles appearing on the orders per county for the state was 2.34, the high

order counties averaged 2.47 (of the three titles) compared to 1.91 (of the three titles) for the low order staffs.

#### Animal Husbandry-Hogs Title Class of Publications

Reference to Tables XVII, page 45, and XXIII reveals that only 6 per cent of all agricultural-titled Extension publications ordered in the state were accounted for in the animal husbandry-hogs title (4 different titles) class. When high and low order counties are compared, it is found that a lower per cent (5) of the former is accounted for than is true for the latter (8 per cent).

Data in Table XXIII indicate that 88 county staffs in the state ordered some publications from this class for a total of 22,337 copies ordered. Of these, high order counties accounted for 55 per cent compared to only 18 per cent for the low order counties. The range in numbers of publications copies ordered from this class ran from 10 (in a low order county) to 1,200 (in a high order county). Average numbers of copies ordered from the class per county for the state were 235.13, for the high order counties 385.62 and for low order counties only 128.03.

As indicated, of the 298 total number of publication orders made, 1965-1967, including titles this class; the high order counties accounted for 133 of these as contrasted to only 71 orders for the low order counties. The number of orders ranged from 1 (in all county order groups) to 14 (in a high order county); the averages being 3.14 orders per county for the state, 4.16 for the high order staffs, 3.03 for the medium order and 2.22 for low order staffs.

TABLE XXIII

NUMBERS, RANGE AND AVERAGE NUMBERS OF SELECTED ITEMS RELATING TO THE  
EXTENSION ANIMAL HUSBANDRY-HOGS TITLE CLASS OF AGRICULTURAL  
PUBLICATIONS ORDERED BY EXTENSION STAFF MEMBERS IN  
TENNESSEE, HIGH, MEDIUM AND LOW ORDER COUNTIES,  
1965-1967

	Two-Year Publication Order Category			
	Total Counties (N=95)	High Counties (N=32)	Medium Counties (N=31)	Low Counties (N=32)
Selected Items Regarding Animal Husbandry-Hogs Title Class of Publications	(220- 13,300 copies)	(4,811- 13,300 copies)	(2,795- 4,810 copies)	(225- 2,794 copies)
Total number of counties ordering publications this class, 1965-1967	88	30	31	27
Total number of copies of publi- cations ordered from this class, 1965-1967	22,337	12,340	5,900	4,097
Range	0-1,200	50-1,200*	50-540*	10-460*
Average per county	235.13	385.62	190.32	128.03
Total number of orders made, 1965- 1967, including titles this class	298	133	94	71
Range	0-14	1-14*	1-8*	1-6*
Average per county	3.14	4.16	3.03	2.22
Average number of copies of publi- cations ordered this class, 1965- 1967, per order per county	74.96	92.78	62.77	57.70
Sum total of the number of times four different titles appeared on all orders made by the staff in each of all counties in the group, 1965-1967 (including duplication)	378	166	128	84
Range	0-19	1-19*	1-15*	1-7*
Average per county	3.98	5.19	4.13	2.62
Sum total of the numbers of four different titles in this class ordered by the staff in each of all counties in the group, 1965- 1967 (excluding duplication)	(Of 380 possible)	(Of 128 possible)	(Of 124 possible)	(Of 128 possible)
Range (possible 0-4)	0-4	1-4*	1-4*	1-4*
Average per county	2.39	2.78	2.42	1.97

\*Range for this category includes only those ordering from the class.



With reference to the average number of copies of publications included per order per county during the study period, the average for the state was 74.96; while the high order counties averaged 92.78 copies per order as compared with 57.70 copies for the low order counties.

The sum total of the numbers of times the four different titles in this class appeared on all orders, including duplication, was 378 for the state, 166 for high order staffs, 128 for the medium order and only 84 for the low order staffs. The range in the number of times the four titles appeared on orders was from 1 (in all county order groups) to 19 (in a high order county). Averages per county were 3.98 titles for the state, 5.19 for the high order counties, 4.13 for medium order and 2.62 (titles) for low order counties. With duplication removed, the averages per county were 2.39 of the four titles appearing for the state, 2.78 of the four for high order staffs, 2.42 for the medium and 1.97 for the low order staffs.

#### Dairy, Forestry, Agricultural Economics, Animal Husbandry-Sheep, and Poultry Title Classes of Publications

Reference to Table XVII, page 45, and Tables XXIV-XXVIII indicates that five title classes of Extension publications, namely; dairy, forestry, agricultural economic, animal husbandry-sheep, and poultry accounted for only 10 per cent (40,271 copies) of all agricultural-titled Extension publications ordered in the state during the period, 1965-1967. Of the 80 different agricultural titles included in the study, 34 (or 42 per cent) of the titles were accounted for in these five title classes.

TABLE XXIV

NUMBERS, RANGE AND AVERAGE NUMBERS OF SELECTED ITEMS RELATING TO THE EXTENSION DAIRY TITLE CLASS OF AGRICULTURAL PUBLICATIONS ORDERED BY EXTENSION STAFF MEMBERS IN TENNESSEE, HIGH, MEDIUM AND LOW ORDER COUNTIES, 1965-1967

	Two-Year Publication Order Category			
	Total Counties (N=95)	High Counties (N=32)	Medium Counties (N=31)	Low Counties (N=32)
Selected Items Regarding Dairy Title Class of Publications	(220-13,300 copies)	(4,811-13,300 copies)	(2,795-4,810 copies)	(225-2,794 copies)
Total number of counties ordering publications this class, 1965-1967	65	22	27	16
Total number of copies of publications ordered from this class, 1965-1967	13,782	6,407	3,975	3,400
Range	0-2,075	25-1,520*	5-457	15-2,075*
Average per county	145.07	200.22	128.22	106.25
Total number of orders made, 1965-1967, including titles this class	134	53	53	28
Range	0-7	1-5*	1-7*	1-3*
Average per county	1.41	1.66	1.71	0.88
Average number of copies of publications ordered this class, 1965-1967, per order per county	102.85	120.89	75.00	121.43
Sum total of the number of times eleven different titles appeared on all orders made by the staff in each of all counties in the group, 1965-1967 (including duplication)	278	104	128	46
Range	0-22	1-15*	1-22*	1-7*
Average per county	2.93	3.25	4.13	1.44
Sum total of the numbers of eleven different titles in this class ordered by the staff in each of all counties in the group, 1965-1967 (excluding duplication)	(Of 1,045 possible) 212	(Of 352 possible) 77	(Of 341 possible) 94	(Of 352 possible) 41
Range (possible)	0-11	1-9*	1-10*	1-5*
Average per county	2.23	2.41	3.03	1.28

\*Range for this category includes only those ordering from the class.



TABLE XXV

NUMBERS, RANGE AND AVERAGE NUMBERS OF SELECTED ITEMS RELATING TO THE  
EXTENSION FORESTRY TITLE CLASS OF AGRICULTURAL PUBLICATIONS  
ORDERED BY EXTENSION STAFF MEMBERS IN TENNESSEE, HIGH,  
MEDIUM AND LOW ORDER COUNTIES, 1965-1967

	Two-Year Publication Order Category			
	Total Counties (N=95)	High Counties (N=32)	Medium Counties (N=31)	Low Counties (N=32)
Selected Items Regarding Forestry Title Class of Publications	(220- 13,300 copies)	(4,811- 13,300 copies)	(2,795- 4,810 copies)	(225- 2,794 copies)
Total number of counties ordering publications this class, 1965-1967	69	30	23	16
Total number of copies of publi- cations ordered from this class, 1965-1967	11,157	5,621	3,516	2,020
Range	0-1,275	50-950*	10-875*	10-1,275*
Average per county	117.44	175.65	113.42	63.12
Total number of orders made, 1965- 1967, including titles this class	133	66	46	21
Range	0-5	1-5*	1-5*	1-2*
Average per county	1.40	2.06	1.48	0.66
Average number of copies of publi- cations ordered this class, 1965- 1967, per order per county	83.88	85.17	76.43	96.19
Sum total of the number of times eight different titles appeared on all orders made by the staff in each of all counties in the group, 1965-1967 (including duplication)	205	104	73	28
Range	0-14	1-10*	1-14*	1-4*
Average per county	2.16	3.25	2.35	0.88
Sum total of the numbers of eight different titles in this class ordered by the staff in each of all counties in the group, 1965- 1967 (excluding duplication)	(Of 760 possible)	(Of 256 possible)	(Of 248 possible)	(Of 256 possible)
Range (possible 0-8)	0-7	1-7*	1-7*	1-4*
Average per county	1.82	2.69	1.90	0.88

\*Range for this category includes only those ordering from the  
class.

TABLE XXVI

NUMBERS, RANGE AND AVERAGE NUMBERS OF SELECTED ITEMS RELATING TO THE  
EXTENSION AGRICULTURAL ECONOMICS TITLE CLASS OF AGRICULTURAL  
PUBLICATIONS ORDERED BY EXTENSION STAFF MEMBERS IN  
TENNESSEE, HIGH, MEDIUM AND LOW ORDER COUNTIES,  
1965-1967

	Two-Year Publication Order Category			
	Total Counties (N=95)	High Counties (N=32)	Medium Counties (N=31)	Low Counties (N=32)
Selected Items Regarding Agricultural Economics Title Class of Publications	(220- 13,300 copies)	(4,811- 13,300 copies)	(2,795- 4,810 copies)	(225- 2,794 copies)
Total number of counties ordering publications this class, 1965-1967	70	29	26	15
Total number of copies of publi- cations ordered from this class, 1965-1967	10,045	6,040	3,360	645
Range	0-715	15-715*	10-350*	10-150*
Average per county	105.74	188.75	108.39	20.16
Total number of orders made, 1965- 1967, including titles this class	136	62	54	20
Range	0-6	1-6*	1-5*	1-2*
Average per county	1.43	1.94	1.74	0.62
Average number of copies of publi- cations ordered this class, 1965- 1967, per order per county	73.86	97.42	62.22	32.25
Sum total of the number of times nine different titles appeared on all orders made by the staff in each of all counties in the group, 1965-1967 (including duplication)	170	76	70	24
Range	0-8	1-8*	1-8*	1-4*
Average per county	1.79	2.38	2.26	0.75
Sum total of the numbers of nine different titles in this class ordered by the staff in each of all counties in the group, 1965- 1967 (excluding duplication)	(Of 855 possible)	(Of 288 possible)	(Of 279 possible)	(Of 288 possible)
Range (possible 0-9)	0-6	1-5*	1-6*	1-3*
Average per county	1.50	1.91	1.90	0.72

\*Range for this category includes only those ordering from the class.

TABLE XXVII

NUMBERS, RANGE AND AVERAGE NUMBERS OF SELECTED ITEMS RELATING TO THE EXTENSION ANIMAL HUSBANDRY-SHEEP TITLE CLASS OF AGRICULTURAL PUBLICATIONS ORDERED BY EXTENSION STAFF MEMBERS IN TENNESSEE, HIGH, MEDIUM AND LOW ORDER COUNTIES, 1965-1967

	Two-Year Publication Order Category			
	Total Counties (N=95)	High Counties (N=32)	Medium Counties (N=31)	Low Counties (N=32)
Selected Items Regarding Animal Husbandry-Sheep Title Class of Publications	(220- 13,300 copies)	(4,811- 13,300 copies)	(2,795- 4,810 copies)	(225- 2,794 copies)
Total number of counties ordering publications this class, 1965-1967	34	13	13	8
Total number of copies of publi- cations ordered from this class, 1965-1967	3,303	1,573	1,125	605
Range	0-425	0-415*	0-425*	0-325*
Average per county	34.77	49.16	36.29	18.91
Total number of orders made, 1965- 1967, including titles this class	46	18	20	8
Range	0-3	1-2*	1-3*	1*
Average per county	0.48	0.56	0.64	0.25
Average number of copies of publi- cations ordered this class, 1965- 1967, per order per county	71.80	87.39	56.25	75.62
Sum total of the number of times two different titles appeared on all orders made by the staff in each of all counties in the group, 1965-1967 (including duplication)	51	20	23	8
Range	0-3	1-3*	1-3*	1*
Average per county	0.54	0.63	0.74	0.25
Sum total of the numbers of two different titles in this class ordered by the staff in each of all counties in the group, 1965- 1967 (excluding duplication)	(Of 190 possible)	(Of 64 possible)	(Of 62 possible)	(Of 64 possible)
Range (possible 0-2)	41	15	18	8
Average per county	0-2	1-2*	1-2*	1*
	0.43	0.47	0.58	0.25

\*Range for this category includes only those ordering from the class.

TABLE XXVIII

NUMBERS, RANGE AND AVERAGE NUMBERS OF SELECTED ITEMS RELATING TO THE  
EXTENSION POULTRY TITLE CLASS OF AGRICULTURAL PUBLICATIONS  
ORDERED BY EXTENSION STAFF MEMBERS IN TENNESSEE, HIGH,  
MEDIUM AND LOW ORDER COUNTIES, 1965-1967

	Two-Year Publication Order Category			
	Total Counties (N=95) (220- 13,300 copies)	High Counties (N=32) (4,811- 13,300 copies)	Medium Counties (N=31) (2,795- 4,810 copies)	Low Counties (N=32) (225- 2,794 copies)
Selected Items Regarding Poultry Title Class of Publications				
Total number of counties ordering publications this class, 1965-1967	38	16	14	8
Total number of copies of publi- cations ordered from this class, 1965-1967	1,984	1,088	752	144
Range	0-150	5-150*	2-125*	6-25*
Average per county	20.88	34.00	24.26	4.50
Total number of orders made, 1965- 1967, including titles this class	53	26	19	8
Range	0-5	1-5*	1-3*	1*
Average per county	0.56	0.81	0.61	0.25
Average number of copies of publi- cations ordered this class, 1965- 1967, per order per county	37.43	41.85	39.58	18.00
Sum total of the number of times four different titles appeared on all orders made by the staff in each of all counties in the group, 1965-1967 (including duplication)	67	32	26	9
Range	0-7	1-7*	1-4*	1-2*
Average per county	0.70	1.00	0.84	0.28
Sum total of the numbers of four different titles in this class ordered by the staff in each of all counties in the group, 1965- 1967 (excluding duplication)	(Of 380 possible)	(Of 128 possible)	(Of 124 possible)	(Of 128 possible)
Range (possible 0-4)	0-4	1-3*	1-4*	1-2*
Average per county	0.57	0.75	0.74	0.28

\*Range for this category includes only those ordering from the  
class.

With specific reference to the dairy title (11 different titles) class, Table XXIV, page 62, it is observed that of the 13,782 total copies of publications ordered in the state, only 65 of the county staffs ordered some publications from the class. It is noted that one low order county accounted for 2,075 copies of the 3,400 total copies of publications ordered from this class by the low order counties. The total number of orders, including titles in the dairy class, was 134 for the state, 53 for the high order staffs, 53 for the medium and only 28 (orders) for the low order staffs. The average number of copies ordered per order per county was slightly higher for the low order (121.43) than for the high order (120.89) and medium order (75.00) counties. With regard to the number of different titles (11) which could be ordered in the class; it was noted that the average number of titles ordered per county was 2.23 for the state, 2.41 titles for the high order counties, 3.03 for the medium order and 1.28 titles for the low order counties.

Data in Table XXV, page 63, relating to the forestry title (8 different titles) class of publications, show that 11,157 copies of all agricultural-titled Extension publications ordered in the state were accounted for in this class, and that 69 counties ordered some forestry title publications with the number of copies ranging from 10 (in the medium and low order counties) to 1,275 (in a low order county). Of the 133 total orders for Extension publications in this class, 66 were from high order counties as compared with 21 (orders) from the low order counties. The average number of copies per order per county was higher

(96.19) for the low order counties than were the averages for either high order (85.17 copies) or medium order (76.43 copies) counties. It was noted that the low order staffs averaged ordering only 0.88 titles of the eight different titles included in the forestry class, while the high order counties averaged 2.69 titles and medium order counties averaged 1.90 titles.

Further reference to Table XXVI, page 64, shows that 70 counties in the state ordered some of the 10,045 copies of Extension publications accounted for in the agricultural economics title (9 different titles) class, 1965-1967. High order counties ordered 60 per cent of all copies of publications from this titles class as compared with only 6 per cent by low order counties. While the range in number of copies ordered from the class ran from 10 (in the medium and low order counties) to 715 (in a high order county); the average number of copies of publications ordered was 105.74 for the state, 188.75 for the high order counties, 108.39 (copies) for medium order and 20.16 for the low order counties. Although the average number of copies of publications for this class per order per county was 73.86 for the state, much difference was observed when the high order (97.42 average copies per order) counties and low order (32.25 average copies per order) counties are compared. With regard to the numbers of nine different titles in the class, it was interesting to note that the averages for the number of titles ordered, excluding duplication, were 1.50 for the state, 1.91 for high order, 1.90 for medium order and 0.72 (titles) for low order counties.

Data in Table XXVII, page 65, reveal that only 34 counties in the state ordered some of the 3,303 total copies of Extension publications accounted for in the animal husbandry-sheep title (2 different titles) class. The average number of copies ordered per county for the state was 34.77. Of the 46 total state orders for publications this class, the high, the medium and low order counties initiated 18, 20 and 8 orders respectively. The averages for number of copies of publications ordered this class per order were 71.80 for the state, 87.39 (copies) for high order, 56.25 for medium order and 75.62 (copies) for low order counties. It was noted that while state staffs averaged ordering 0.43 titles of the two different titles included in the class, the medium order counties averaged 0.58 (titles) as compared with 0.47 (titles) for high order and only 0.25 (titles) for low order counties.

Additional reference to Tables XVII, page 45, and XXVIII, page 66, shows that the poultry title class accounted for the smallest per cent (1) of all agricultural-titled Extension publications ordered in the state, 1965-1967. Of the 1,984 total copies of publications ordered from this class, it was observed that only 38 counties in the state ordered some of these publications; and that the 16 high order counties ordering publications from the class accounted for 55 per cent of the copies ordered as compared with only 7 per cent of the publications being accounted for by eight low order counties. The total number of orders made including titles this class was 53 for the state with the average number of copies per order being 37.43. Of the four different titles in this class, it was observed that the averages for the numbers

of titles ordered, excluding duplication, were 0.57 for the state, 0.75 (titles) for the high order counties, 0.74 (titles) for the medium order and only 0.28 (titles) for the low order counties.

### III. CLASSES AND NUMBERS OF PUBLICATIONS INVENTORIED

Table XXIX is a summary table showing the per cent of total publications accounted for by agricultural-titled classes in each of the eleven title classes studied at the time of inventory, 1967. The classes in the table are presented in descending rank order.

Of the 250,617 total publication copies with agricultural titles inventoried by county staffs in Tennessee in 1967, 54 per cent of these were on hand in high order counties as compared with 29 per cent for the medium order and 17 per cent for the low order counties.

#### Fruits and Vegetables Title Class of Publications

Data in Tables XXIX and XXX reveal that 18 per cent of all agricultural-titled Extension publications inventoried, 1967, in the state were accounted for in the fruits and vegetables title (12 different titles) class. It is noted that the low order counties had a larger per cent (19) of their total publication inventory in this title class than did either the high order (18 per cent) or medium order (18 per cent) counties.

Further investigation of the data in Table XXX discloses that all 95 counties in the state had some copies of publications in this class on hand at inventory time. Of the 45,502 copies of publications inventoried in the state, the high order counties accounted for 53



TABLE XXIX

PER CENTS OF TOTAL PUBLICATIONS ACCOUNTED FOR BY CLASSES OF SELECTED  
 AGRICULTURAL-TITLED EXTENSION PUBLICATIONS INVENTORIED  
 BY EXTENSION STAFF MEMBERS IN TENNESSEE, HIGH,  
 MEDIUM AND LOW ORDER COUNTIES, 1967\*

Agricultural- Titled Classes of Extension Publi- cations	1967 Publication Inventory Category			
	Total (100%) (N=250,617) Per Cent Ac- counted for	High (54%) (N=134,465) Per Cent Ac- counted for	Medium (29%) N=72,350) Per Cent Ac- counted for	Low (17%) (N=43,802) Per Cent Ac- counted for
Fruits and vegetables (12)	18	18	18	19
Farm crops and fertilizers (11)	17	17	18	17
Insects, plant diseases and pests (10)	15	16	14	15
Dairy (11)	11	11	12	8
Animal husbandry- beef (6)	9	9	9	8
Forestry (8)	9	9	8	8
Animal husbandry- hogs (4)	8	7	9	10
Landscaping and lawns (3)	6	6	5	6
Agricultural economics (9)	4	4	4	6
Poultry (4)	2	2	2	1
Animal husbandry- sheep (2)	1	1	1	2
Total	100	100	100	100

\*Per cents are rounded to nearest whole number.

TABLE XXX

NUMBERS, RANGE AND AVERAGE NUMBERS OF SELECTED ITEMS RELATING TO THE  
EXTENSION FRUITS AND VEGETABLES TITLE CLASS OF AGRICULTURAL  
PUBLICATIONS INVENTORIED BY EXTENSION STAFF MEMBERS IN  
TENNESSEE, HIGH, MEDIUM AND LOW ORDER COUNTIES, 1967

	Two-Year Publication Order Category			
	Total Counties (N=95)	High Counties (N=32)	Medium Counties (N=31)	Low Counties (N=32)
Selected Items Regarding Fruits and Vegetables Title Class of Publications	(220- 13,300 copies)	(4,811- 13,300 copies)	(2,795- 4,810 copies)	(225- 2,794 copies)
Total number of counties with publications this class on hand at time of inventory, 1967	95	32	31	32
Total number of copies of publications on hand this class at the time of inventory, 1967	45,402	24,129	12,963	8,310
Range	36-1,328	323-1,328*	68-911*	36-692*
Average per county	477.92	754.03	418.16	259.69
Sum total of the numbers of twelve different titles in this class on hand at the time of inventory, 1967	912	334	304	274
Range (possible 0-12)	3-12	6-12*	3-12*	4-12*
Average per county	9.60	10.44	9.81	8.56

\*Range for this category includes only those with inventories from the class.

per cent of the copies as compared with 18 per cent accounted for in the low order counties. Copies of publications on hand ranged from 36 (in a low order county) to 1,328 (in a high order county). While the average number of copies of publications per county on hand was 477.92 for the state, considerable difference is observed when the high order (754.03) counties are compared with the low order (259.69 average copies on hand) counties.

It was noted that, of the twelve different publication titles appearing in the fruits and vegetables title class; the range in numbers of titles on hand was from 3 (in a medium order county) to 12 (in all three county order groups). The averages per county were 9.60 of the twelve titles appearing for the state, 10.40 of the twelve for the high order staffs, 9.81 for medium and 8.56 for the low order staffs.

#### Farm Crops and Fertilizer Title Class of Publications

It was found from the data in Tables XXIX, page 71, and XXXI that 17 per cent of all agricultural-titled Extension publications inventoried in the state were accounted for in the farm crops and fertilizer title (11 different titles) class. It is noted that only a slight difference existed between the per cents of publications accounted for in the title class by high order (17), medium order (18) and low order (17) counties.

Reference to Table XXXI reveals that all county staffs in the state inventoried some of the 43,122 total copies of publications on hand in the farm crops and fertilizer title class. Of this number, high order counties accounted for 52 per cent of the copies, medium order

TABLE XXXI

NUMBERS, RANGE AND AVERAGE NUMBERS OF SELECTED ITEMS RELATING TO THE EXTENSION FARM CROPS AND FERTILIZERS TITLE CLASS OF AGRICULTURAL PUBLICATIONS INVENTORIED BY EXTENSION STAFF MEMBERS IN TENNESSEE, HIGH, MEDIUM AND LOW ORDER COUNTIES, 1967

	Two-Year Publication Order Category			
	Total Counties (N=95)	High Counties (N=32)	Medium Counties (N=31)	Low Counties (N=32)
Selected Items Regarding Farm Crops and Fertilizers Title Class of Publications	(220- 13,300 copies)	(4,811- 13,300 copies)	(2,795- 4,810 copies)	(225- 2,794 copies)
Total number of counties with publications this class on hand at time of inventory, 1967	95	32	31	32
Total number of copies of publications on hand this class at the time of inventory, 1967	43,122	22,465	13,074	7,583
Range	39-1,443	266-1,443*	39-999*	93-571*
Average per county	453.92	702.03	421.74	236.97
Sum total of the numbers of eleven different titles in this class on hand at the time of inventory, 1967	640	232	217	191
Range (possible 0-11)	3-9	4-9*	4-9*	3-8*
Average per county	6.74	7.25	7.00	5.97

\*Range for this category includes only those with inventories from the class.

counties 30 per cent and low order counties only 18 per cent. The number of copies of publications this title class on hand at inventory ranged from 39 (in a medium order county) to 1,443 (in a high order county). While the average numbers of copies of publications on hand per county for the state was 453.92, considerable difference is observed when the high order (702.03 copies) and low order (236.97 copies) counties are compared.

With regard to the numbers of the eleven different titles in this class on hand at the time of inventory, a range in number of titles from 3 (in a low order county) to 9 (in the high and medium order groups) was observed; the averages per county being 6.74 of the eleven titles for the state, 7.25 for high order, 7.00 for medium order and 5.97 for low order counties.

#### Insects, Plant Diseases and Pests Title Class of Publications

With additional reference to Table XXIX, page 71, and from the data in Table XXXII, it is noted that 15 per cent of all agricultural-titled publications in inventory for the state was accounted for in the insects, plant diseases and pests title (ten different titles) class. The per cent of the publications in inventory accounted for in this class by high, medium and low order groups were 16, 14, and 15, respectively.

Further reference to Table XXXII shows that all 95 counties in the state had some of the 37,239 copies of publications from this title class in inventory; however, a much larger number (20,911 copies) of publications were in inventory for high order counties than was in

TABLE XXXII

NUMBERS, RANGE AND AVERAGE NUMBERS OF SELECTED ITEMS RELATING TO THE EXTENSION INSECTS, PLANT DISEASES AND PESTS TITLE CLASS OF AGRICULTURAL PUBLICATIONS INVENTORIED BY EXTENSION STAFF MEMBERS IN TENNESSEE, HIGH, MEDIUM AND LOW ORDER COUNTIES, 1967

	Two-Year Publication Order Category			
	Total Counties (N=95)	High Counties (N=32)	Medium Counties (N=31)	Low Counties (N=32)
Selected Items Regarding Insects, Plant Diseases and Pests Title Class of Publications	(220- 13,300 copies)	(4,811- 13,300 copies)	(2,795- 4,810 copies)	(225- 2,794 copies)
Total number of counties with publications this class on hand at time of inventory, 1967	95	32	31	32
Total number of copies of publications on hand this class at the time of inventory, 1967	37,239	20,911	9,955	6,373
Range	15-1,569	139-1,569*	52-915*	15-724*
Average per county	391.99	653.47	321.13	199.16
Sum total of the numbers of ten different titles in this class on hand at the time of inventory, 1967	585	217	197	171
Range (possible 0-10)	1-10	3-10*	2-10*	1-9*
Average per county	6.16	6.78	6.35	5.34

\*Range for this category includes only those with inventories from the class.

inventory by the medium order (9,955 copies) and low order (6,373 copies) counties. The range in numbers of copies of publications in inventory ran from 15 (in a low order county) to 1,569 (in a high order county). While the average per county for the numbers of copies of publications inventoried in this title class was 391.99 for the state, considerable difference was noted when the averages for high order (653.47 copies) and low order (199.16 copies) counties were compared.

With reference to the sum total of the numbers of ten different titles in this class on hand at the time of inventory, 1967, the range was from 1 (in a low order county) to 10 in the medium and high order groups. Averages for the numbers of ten different titles were 6.16 for the state, 6.78 for high order counties, 6.35 for medium and 5.34 for low order counties.

#### Dairy Title Class of Publications

Reference to Table XXIX, page 71, and Table XXXIII reveal that, while 11 per cent of all agricultural-titled Extension publications inventoried, 1967, in the state were accounted for in the dairy title (eleven different titles) class; 11 per cent of the inventories of the high order counties were from this title class as compared with 12 per cent for medium order counties and only 8 per cent for the low order counties.

Additional reference to Table XXXIII indicates that 91 counties had some of the 27,527 copies of publications from this title class in inventory. Of this number, the high order counties accounted for 54 per cent of the copies, medium order counties 32 per cent and low order

TABLE XXXIII

NUMBERS, RANGE AND AVERAGE NUMBERS OF SELECTED ITEMS RELATING TO THE  
EXTENSION DAIRY TITLE CLASS OF AGRICULTURAL PUBLICATIONS  
INVENTORIED BY EXTENSION STAFF MEMBERS IN TENNESSEE,  
HIGH, MEDIUM AND LOW ORDER COUNTIES, 1967

	Two-Year Publication Order Category			
	Total Counties (N=95)	High Counties (N=32)	Medium Counties (N=31)	Low Counties (N=32)
Selected Items Regarding Dairy Title Class of Publications	(220- 13,300 copies)	(4,811- 13,300 copies)	(2,795- 4,810 copies)	(225- 2,794 copies)
Total number of counties with publications this class on hand at time of inventory, 1967	91	32	29	30
Total number of copies of publications on hand this class at the time of inventory, 1967	27,527	14,862	8,932	3,733
Range	0-2,157	34-2,033*	18-2,157*	12-326*
Average per county	289.76	464.44	288.13	116.66
Sum total of the numbers of eleven different titles in this class on hand at the time of inventory, 1967	448	179	147	123
Range (possible 0-11)	0-9	2-9*	1-9*	1-9*
Average per county	4.72	5.59	4.74	3.84

\*Range for this category includes only those with inventories from the class.



counties 14 per cent of the copies in inventory. While the number of copies of publications on hand ranged from 12 (in a low order county) to 2,157 (in a medium order county); the averages per county were 289.76 (copies) for the state, 464.44 for high order counties, 288.13 for medium and 116.66 (copies) for low order counties.

It was observed that of the eleven different publication titles appearing in the dairy title class the range in numbers of titles on hand was from 1 in the low and medium order groups to 9 in each of the three order groups. The averages per county were 4.72 of the eleven titles appearing in inventories for the state, 5.59 of the eleven titles for the high order staffs, 4.74 for medium and 3.84 for the low order staffs.

#### Animal Husbandry-Beef Title Class Of Publications

From a review of the data in Tables XXIX, page 71, and XXXIV it is noted that 9 per cent of all agricultural-titled Extension publications inventoried in the state were accounted for in the animal-husbandry-beef title (6 different titles) class, and that similar per cents of 9, 9, and 8 were accounted for by the high, medium, and low order counties respectively.

Of the 93 counties in the state with some of the 22,169 copies of Extension publications from this class in inventory, 1967; it was observed that 32 high order counties had 57 per cent of the copies in inventory as compared with 28 per cent of the copies for the medium order (30) and 15 per cent for low order (31) counties. The numbers of copies of publications on hand this class at time of inventory ranged

TABLE XXXIV

NUMBERS, RANGE AND AVERAGE NUMBERS OF SELECTED ITEMS RELATING TO THE  
EXTENSION ANIMAL HUSBANDRY-BEEF TITLE CLASS OF AGRICULTURAL  
PUBLICATIONS INVENTORIED BY EXTENSION STAFF MEMBERS IN  
TENNESSEE, HIGH, MEDIUM AND LOW ORDER COUNTIES, 1967

	Two-Year Publication Order Category			
	Total Counties (N=95)	High Counties (N=32)	Medium Counties (N=31)	Low Counties (N=32)
Selected Items Regarding Animal Husbandry-Beef Title Class of Publications	(220- 13,300 copies)	(4,811 13,300 copies)	(2,795- 4,810 copies)	(225- 2,794 copies)
Total number of counties with publications this class on hand at time of inventory, 1967	93	32	30	31
Total number of copies of publications on hand this class at the time of inventory, 1967	22,169	12,557	6,323	3,389
Range	0-1,276	69-1,276*	35-555*	2-523*
Average per county	233.36	392.41	200.74	105.91
Sum total of the numbers of six different titles in this class on hand at the time of inventory, 1967	342	132	110	98
Range (possible 0-6)	0-5	2-5*	2-5*	1-5*
Average per county	3.58	4.13	3.55	3.06

\*Range for this category includes only those with inventories from the class.

from 2 (in a low order county) to 1,276 (in a high order county). While the average number of copies of publications on hand per county for the state was 233.36, much difference is observed when the high order (392.41 copies) and low order (105.91 average copies) counties are compared.

With regard to the numbers of the six different titles in this class on hand at the time of the inventory, 1967; a range in numbers of titles from 1 (in the low order counties) to 5 (in each of the three order groups) was observed; the averages per county being 3.58 of the six titles for the state, 4.13 for high order counties, 3.55 for medium order and 3.06 for low order counties.

#### Forestry Title Class of Publications

It was found from data in Tables XXIX, page 71, and XXXV that 9 per cent of all agricultural-titled publications inventoried in the state, 1967, were in the forestry title (8 different titles) class of Extension publications. It was observed that only a small difference existed between the per cents of publications accounted for in the title class by high order (9), medium order (8) and low order (8) counties.

Further investigation of the Table XXXV reveal that 90 of the 95 counties in the state had some of the 21,874 total copies of Extension publications on hand in the forestry title class. When the per cents of the numbers of copies of publications on hand this class are compared for high order (57) and low order (16), it is noted that the former is much larger than is the latter. While the number of copies of publications inventoried for the class ranged from 10 (in a low order county) to 1,660 (in a high order county); the averages for the numbers of copies of publications on hand per county were 230.25 for the state,

TABLE XXXV

NUMBERS, RANGE AND AVERAGE NUMBERS OF SELECTED ITEMS RELATING TO THE  
EXTENSION FORESTRY TITLE CLASS OF AGRICULTURAL PUBLICATIONS  
INVENTORIED BY EXTENSION STAFF MEMBERS IN TENNESSEE,  
HIGH, MEDIUM AND LOW ORDER COUNTIES, 1967

	Two-Year Publication Order Category			
	Total Counties (N=95)	High Counties (N=32)	Medium Counties (N=31)	Low Counties (N=32)
Selected Items Regarding Forestry Title Class of Publications	(220- 13,300 copies)	(4,811- 13,300 copies)	(2,795- 4,810 copies)	(225- 2,794 copies)
Total number of counties with publications this class on hand at time of inventory, 1967	90	32	28	30
Total number of copies of publications on hand this class at the time of inventory, 1967	21,874	12,416	6,046	3,412
Range	0-1,660	10-1,660*	10-659*	10-384*
Average per county	230.25	388.00	195.03	106.62
Sum total of the numbers of eight different titles in this class on hand at the time of inventory, 1967	487	193	156	138
Range (possible 0-8)	0-8	2-8*	1-8*	1-7*
Average per county	5.13	6.03	5.03	4.31

\*Range for this category includes only those with inventories from the class.

388.00 for high order counties, 195.03 (average copies) for medium and 106.62 (average copies) for the low order counties.

The range for the numbers of eight different titles in this class on hand at the time of inventory was 1 (in low and medium order groups) to 8 (in high and medium order groups); with the average number of titles per county on hand being 5.13 for the state and 6.03, 5.03 and 4.31 for the high, medium, and low order counties respectively.

#### Animal Husbandry-Hogs Title Class Of Publications

Further reference to Table XXIX, page 71, and from a review of data in Table XXXVI; it is noted that the animal husbandry-hogs title (4 different titles) class accounted for 8 per cent of the total copies of Extension publications in inventory in the state. It was observed that the high order counties had a smaller per cent (7) of their inventories accounted for in this class than did the medium order (9 per cent) and the low order (10 per cent) counties.

Although all 95 counties in the state had some of the 20,353 copies of publications from this title class in inventory, the high order counties inventoried a much larger per cent (49) of the copies in the class than did the low order counties (21 per cent). Total number of copies of publications on hand thic class ranged from 5 (in a medium order county) to 870 (in a high order county); with the averages per county being 214.24 for the state, 311.38 for the high order counties, 197.87 for the medium order and 132.97 for the low order counties.

Additional investigation of Table XXXVI with regard to the sum total of the numbers of four different titles in this class on hand at time of inventory, 1967, reveals the range in numbers of titles to be

TABLE XXXVI

NUMBERS, RANGE AND AVERAGE NUMBERS OF SELECTED ITEMS RELATING TO THE  
EXTENSION ANIMAL HUSBANDRY-HOGS TITLE CLASS OF AGRICULTURAL  
PUBLICATIONS INVENTORIED BY EXTENSION STAFF MEMBERS IN  
TENNESSEE, HIGH, MEDIUM AND LOW ORDER COUNTIES, 1967

	Two-Year Publication Order Category			
	Total Counties (N=95)	High Counties (N=32)	Medium Counties (N=31)	Low Counties (N=32)
Selected Items Regarding Animal Husbandry-Hogs Title Class of Publications	(220- 13,300 copies)	(4,811- 13,300 copies)	(2,795- 4,810 copies)	(225- 2,794 copies)
Total number of counties with publications this class on hand at time of inventory, 1967	95	32	31	32
Total number of copies of publications on hand this class as the time of inventory, 1967	20,353	9,964	6,134	4,255
Range	5-870	7-870*	5-507*	16-479*
Average per county	214.24	311.38	197.87	132.97
Sum total of the numbers of four different titles in this class on hand at the time of inventory, 1967	312	108	106	98
Range (possible 0-4)	1-3	2-4*	1-4*	1-4*
Average per county	3.28	3.38	3.42	3.06

\*Range for this category includes only those with inventories  
from the class.

from 1 (in the medium and low order counties) to 4 (in each and all of the three order groups). The averages for the numbers of the four titles from this class on hand per county were approximately the same for the state (3.28), high order (3.38), medium order (3.42) and low order (3.06) counties.

Landscaping and Lawns, Agricultural Economics, Poultry, And Animal Husbandry-Sheep Title Classes Of Publications

Reference to Table XXIX, page 71, and to Tables XXXVII-XL shows that four of the eleven title classes, namely; landscaping and lawns, agricultural economics, poultry, and animal husbandry-sheep accounted for only 13 per cent of all agricultural-titled publications inventoried in the state in 1967. When the per cent of inventories (13) for high order counties are compared with medium order (12 per cent) and low order (15 per cent) counties, it was noted the latter accounted for a greater per cent of their inventories in the four classes than was accounted for by the former.

Additional reference to Table XXXVII reveals that all 95 counties in the state inventoried some of the 14,359 total copies of publications accounted for by the landscaping and lawns title class. High order counties accounted for 54 per cent of the copies inventoried as compared with only 20 per cent by the low order counties. The range in number of copies in inventory was from 7 (in a low order county) to 750 (in a high order county); and the averages for numbers of copies inventoried per county were 151.15 for the state, 241.31 (copies) for high order, 121.26 (copies) for medium order and 89.94 (copies) for low order

TABLE XXXVII

NUMBERS, RANGE AND AVERAGE NUMBERS OF SELECTED ITEMS RELATING TO THE EXTENSION LANDSCAPING AND LAWNS TITLE CLASS OF AGRICULTURAL PUBLICATIONS INVENTORIED BY EXTENSION STAFF MEMBERS IN TENNESSEE, HIGH, MEDIUM AND LOW ORDER COUNTIES, 1967

	Two-Year Publication Order Category			
	Total Counties (N=95)	High Counties (N=32)	Medium Counties (N=31)	Low Counties (N=32)
Selected Items Regarding Landscaping and Lawns Title Class of Publications	(220- 13,300 copies)	(4,811- 13,300 copies)	(2,795- 4,810 copies)	(225- 2,794 copies)
Total number of counties with publications this class on hand at time of inventory, 1967	95	32	31	32
Total number of copies of publications on hand this class at the time of inventory, 1967	14,359	7,722	3,759	2,787
Range	7-750	16-750*	8-502*	7-402*
Average per county	151.15	241.31	121.26	89.94
Sum total of the numbers of three different titles in this class on hand at the time of inventory, 1967	248	86	81	81
Range (possible 0-3)	1-3	1-3*	1-3*	1-3*
Average per county	2.61	2.69	2.61	2.53

\*Range for this category includes only those with inventories from the class.



TABLE XXXVIII

NUMBERS, RANGE AND AVERAGE NUMBERS OF SELECTED ITEMS RELATING TO THE EXTENSION AGRICULTURAL ECONOMICS TITLE CLASS OF AGRICULTURAL PUBLICATIONS INVENTORIED BY EXTENSION STAFF MEMBERS IN TENNESSEE, HIGH, MEDIUM AND LOW ORDER COUNTIES, 1967

	Two-Year Publication Order Category			
	Total Counties (N=95)	High Counties (N=32)	Medium Counties (N=31)	Low Counties (N=32)
Selected Items Regarding Agricultural Economics Title Class of Publications	(220- 13,300 copies)	(4,811- 13,300 copies)	(2,795- 4,810 copies)	(225- 2,794 copies)
Total number of counties with publications this class on hand at time of inventory, 1967	89	32	30	27
Total number of copies of publications on hand this class at the time of inventory, 1967	11,797	6,110	3,234	2,453
Range	0-588	12-588*	12-345*	6-391*
Average per county	124.18	190.93	104.32	76.66
Sum total of the numbers of nine different titles in this class on hand at the time of inventory, 1967	331	121	116	94
Range (possible 0-9)	0-9	1-9*	1-7*	1-9*
Average per county	3.48	3.78	3.74	2.94

\*Range for this category includes only those with inventories from the class.

TABLE XXXIX

NUMBERS, RANGE AND AVERAGE NUMBERS OF SELECTED ITEMS RELATING TO THE  
EXTENSION POULTRY TITLE CLASS OF AGRICULTURAL PUBLICATIONS  
INVENTORIED BY EXTENSION STAFF MEMBERS IN TENNESSEE,  
HIGH, MEDIUM AND LOW ORDER COUNTIES, 1967

	Two-Year Publication Order Category			
	Total Counties (N=95)	High Counties (N=32)	Medium Counties (N=31)	Low Counties (N=32)
Selected Items Regarding Poultry Title Class of Publications	(220- 13,300 copies)	(4,811- 13,300 copies)	(2,795- 4,810 copies)	(225- 2,794 copies)
Total number of counties with publications this class on hand at time of inventory, 1967	66	24	20	22
Total number of copies of publications on hand this class at the time of inventory, 1967	3,962	2,202	1,120	640
Range	0-450*	4-450	5-171*	1-151*
Average per county	41.70	68.81	36.18	20.00
Sum total of the numbers of four different titles in this class on hand at the time of inventory, 1967	135	52	46	37
Range (possible 0-4)	0-4	1-4*	1-4*	1-4*
Average per county	1.42	1.62	1.48	1.16

\*Range for this category includes only those with inventories from the class.

TABLE XL

NUMBERS, RANGE AND AVERAGE NUMBERS OF SELECTED ITEMS RELATING TO THE  
EXTENSION ANIMAL HUSBANDRY-SHEEP TITLE CLASS OF AGRICULTURAL  
PUBLICATIONS INVENTORIED BY EXTENSION STAFF MEMBERS IN  
TENNESSEE, HIGH, MEDIUM AND LOW ORDER COUNTIES, 1967

	Two-Year Publication Order Category			
	Total Counties (N=95)	High Counties (N=32)	Medium Counties (N=31)	Low Counties (N=32)
Selected Items Regarding Animal Husbandry-Sheep Title Class of Publications	(220- 13,300 copies)	(4,811- 13,300 copies)	(2,795- 4,810 copies)	(225- 2,794 copies)
Total number of counties with publications this class on hand at time of inventory, 1967	71	27	22	22
Total number of copies of publications on hand this class at the time of inventory, 1967	2,813	1,127	910	776
Range	0-225	3-192 *	1-192 *	1-225 *
Average per county	29.61	35.22	29.35	24.25
Sum total of the numbers of two different titles in this class on hand at the time of inventory, 1967	105	40	36	29
Range (possible 0-2)	0-2	1-2	1-2	1-2
Average per county	1.10	1.25	1.16	0.91

\*Range for this category includes only those with inventories  
from the class.

counties. With reference to the numbers of three different titles in this class on hand at time of inventory, it was observed that the range was from 1 to 3 for the three order groups; with averages for numbers of different titles per county being 2.61 for the state and 2.69, 2.61, and 2.53 for the high, medium, and low order counties respectively.

Further reference to Table XXXVIII indicates that only 89 counties inventoried some of the 11,797 total copies of Extension publications accounted for by the agricultural economics title class, and that the high order counties accounted for 52 per cent of the copies inventoried as compared with only 21 per cent by low order counties. The range in number of copies of publications on hand this class was from 6 (in a low order county) to 588 (in a high order county); with the averages for number of copies per county being 124.18 for the state, 190.93 (copies) for high order, 104.32 (copies) for medium order, and 76.66 (copies) for low order counties. While the range in numbers of nine different titles in this class on hand at the time of inventory, 1967, was from 1 to 9 (in both high and low order counties); the averages for number of different titles on hand was 3.48 for the state, 3.78 (titles) for high order and 2.94 (titles) for low order counties.

The data in Table XXXIX, page 88, reveal that of the 3,962 total copies of Extension publications inventoried and accounted for by the poultry title class, 1967, the 24 high order counties with inventories (2,202 copies) this class accounted for 56 per cent of the number inventoried as compared with only 16 per cent by the 22 low order counties with inventories (640 copies). All order groups inventoried one or

more of the four different titles in the class, but the average numbers of four titles in this class on hand was 1.42 for the state, 1.62 (titles) for high order, 1.48 (titles) for medium order, and 1.16 (titles) for low order counties.

Data in Table XXIX, page 71, and Table XL, page 89, reveal that the animal husbandry-sheep title class of Extension publications accounted for only 1 per cent of all publications inventoried in the state, 1967; and that only 71 counties in the state had some of the 2,813 total copies of publications from this class in inventory. While the range in number of copies of publications on hand was from 1 (in medium and low order counties) to 225 (in a low order county), the average number of copies on hand per county was only 29.61 for the state.

#### IV. COPIES OF PUBLICATIONS ORDERED AND INVENTORIED: ORDERS FOR PUBLICATIONS; AND COPIES OF PUBLICATIONS ORDERED BY QUARTERLY INTERVALS

Reference to Table XLI reveals that of the 393,985 total copies of agricultural-titled Extension publications ordered in the state, 1965-1967, 64 per cent of them were in inventory at the end of the study period, 1967. The per cent of copies ordered and in inventoried was considerably less for the high order counties (58) than was the 82 per cent of total copies ordered and in inventory for the low order counties.

Data in Table XLII indicate that 50 per cent of the total numbers of copies of Extension publications ordered in the state, 1965-1967, were ordered during the months of January, February, and March, while the per cent ordered during these months for high, medium, and low order

TABLE XLI

PER CENTS OF TOTAL NUMBERS OF COPIES OF SELECTED AGRICULTURAL-TITLED EXTENSION PUBLICATIONS ORDERS, 1965-1967, ACCOUNTED FOR BY DISAPPEARANCE AND INVENTORY IN TENNESSEE, HIGH, MEDIUM AND LOW ORDER COUNTIES\*

Agricultural-Titled Extension Publications Accounted For By	Two-Year Publication Order Category			
	Total (100%) (N=393,985) Per Cent accounted for	High (58%) (N=230,168) Per Cent accounted for	Medium (28%) (N=110,237) Per Cent accounted for	Low (14%) (N=53,580) Per Cent accounted for
Disappearance, 1965-1967	36	42	34	18
In inventory, 1967	64	58	66	82
Total	100	100	100	100

\*Per cents are rounded to nearest whole number.

TABLE XLII

TOTAL NUMBERS OF SELECTED AGRICULTURAL-TITLED EXTENSION PUBLICATIONS  
 ORDERED IN QUARTERLY INTERVALS BY COUNTY EXTENSION STAFFS IN  
 TENNESSEE, HIGH, MEDIUM AND LOW ORDER COUNTIES, 1965-  
 1967 BY NUMBERS AND PER CENTS

Three Month Intervals	Two-Year Publication Order Category							
	Total Counties (N=95) (220- 13,300 copies)		High Counties (N=32) (4,811- 13,300 copies)		Medium Counties (N=31) (2,795- 4,810 copies)		Low Counties (N=32) (225- 2,794 copies)	
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
July- September	46,101	12	25,028	11	14,257	13	6,816	13
October- December	51,152	13	29,117	13	16,966	15	5,069	10
January- March	196,762	50	118,035	51	53,821	49	24,906	46
April- June	99,970	25	57,988	25	25,193	23	16,789	31
Total	393,985	100	230,168	100	110,237	100	53,580	100

counties were 51, 49, and 46 respectively. The months of April, May and June accounted for the second largest per cent (25) of the total numbers of Extension publications ordered for the state as compared with 25 per cent for the high order, 23 per cent for medium order and 31 per cent for low order counties. The smallest per cent of total copies of publications ordered for the state (12) were during the months of July, August, and September. The high order counties accounted for 11 per cent of their total numbers of copies of publications ordered during these months as compared with 13 per cent being accounted for in both medium and low order counties.

Of the 1,559 total number of orders of agricultural-titled Extension publications in the state, 1965-1967, the data in Table XLIII reveal that 38 per cent (596 orders) of these were made by staffs in high order counties as compared with 36 per cent (561 orders) for medium and 26 per cent (402 orders) for low order counties. The averages for numbers of copies of publications per order were 252.72 for the state, 386.19 for high order, 196.50 for medium order and 133.28 for low order counties.

V. RELATIONSHIPS BETWEEN SELECTED COUNTY EXTENSION PROGRAM  
FACTORS AND CERTAIN AGRICULTURAL-TITLED EXTENSION  
PUBLICATION ORDERING PATTERNS

The findings of this study as previously reported under purposes one through four have revealed much variation in the agricultural-titled Extension publication ordering patterns of the 95 county Extension staffs in Tennessee. It was noted in Table I, page 20, that the



TABLE XLIII

TOTAL NUMBERS OF ORDERS AND AVERAGE NUMBER OF COPIES PER  
ORDER FOR SELECTED AGRICULTURAL-TITLED EXTENSION  
PUBLICATIONS IN TENNESSEE, HIGH, MEDIUM AND  
LOW ORDER COUNTIES, 1965-1967

Agricultural- Titled Extension Publications	Total (N=393,985 copies of publications)	Two-Year Publication Order Category		
		High (N=230,168 copies of publications)	Medium (N=110,237 copies of publications)	Low (N=53,580 copies of publications)
Total numbers of orders	1559	596	561	402
Average number of copies of publications per order	252.72	386.19	196.50	133.28

range in number of copies of Extension publications ordered in the state ran from 225 (in a low order county) to 13,300 copies (in a high order county). Also, in reviewing the data collected it was noted that one high order county had a considerably higher number of copies (9,485) of Extension publications in inventory than did the medium order county with the least number of copies (348) in inventory. Further reference to Tables X-XII, pages 33-35, reveals that the number of publications orders ranged from 2 (in a low order county) to 41 (in both a high and medium order county).

It was anticipated that variations in ordering patterns would occur; and it was assumed that several factors could possibly be identified as affecting the numbers of copies of publications ordered, the numbers of copies of publications in inventory, and the number of orders for publications. Although it was not within the scope of this study to attempt to identify or analyze all of the possible factors involved in influencing the publication ordering patterns; five county Extension program related factors were selected for analysis.

Thus, purpose 5 dealt with a statistical analysis using: (1) the correlation between the selected county factors (10 independent variables) and county publication ordering patterns (3 dependent variables); and (2) multiple correlation between the 10 independent variables and 2 dependent variables relating to the number of copies of publications ordered in Tennessee.

#### The Correlation Between Selected County Extension Program Factors And Agricultural-Titles Extension Publication Ordering Patterns

The 10 selected county Extension program independent variables were grouped for analysis under five groups of variables as follows:

(1) county staff; (2) full-time farm family equivalents; (3) value of agricultural products sold; (4) county appropriations--monies--to County Agricultural Agents and (5) real and personal assessed taxable property. The 3 dependent variables related to ordering patterns were: (1) the number of copies of agricultural-titles Extension publications ordered; (2) the number of agricultural-titled Extension publications in inventory and (3) the number of order for agricultural-titled Extension publications.

In this analysis, the coefficient of correlation ( $r$ ) was used to measure the closeness of the relationship between each of the 10 selected county Extension program variables and each of the 3 agricultural-titled Extension publication ordering pattern variables. It should be noted that this coefficient of correlation could not be used to tell whether the relationship was one of cause and effect.

Tables were developed to show the relation between the selected county Extension program variables and the Extension publication ordering pattern variables in Tennessee, high and low order counties. The following guide was used in determining the significance of the coefficients of correlations for the three order groups: (1) in Tennessee, with 93 degrees of freedom-- $N=95$  counties--, the coefficient of correlation had to equal or exceed .21 to be significant at the .05 level of significance and .27 to achieve the .01 level of significance; and (2) in high order and low order counties, with 30 degrees of freedom-- $N=32$  counties--, the coefficient of correlation had to equal or exceed .35 to be significant at the .05 level of significance and .45 to achieve the .01 level of significance.

The correlation matrices provide a listing of the correlation of each variable with each and all other variables included in the study for the three order groups; Tennessee, high and low order counties (see Appendix D).

Relation between county Extension staff variables and agricultural-titled Extension publications variables. Reference to Table XLIV discloses the correlation between the two county Extension staff variables and the three agricultural-titled Extension publication variables in Tennessee, high and low order counties, 1965-1967. While the total number of agricultural-titled Extension publications ordered showed a positive coefficient of .26 (significant at .05 level) with the total number of county Extension staff for the state, there was no significant relation indicated for the high order counties (.00 coefficient of correlation); but a very significant (.01 level) correlation of .51 was observed for the low order counties. Although the number of publications ordered revealed a positive coefficient of .23 (significant at the .05 level) with the total number of full-time agricultural staff equivalents (FASE) for the state, there was not any significant relation shown for high order and low order counties.

Additional reference to Table XLIV reveals that the total numbers of agricultural-titled publications inventoried did not show any significant relation to the two county Extension staff variables.

With reference to the number of publication orders and total number of county Extension staff, correlation coefficients were observed of .35 (significant at .01 level) for the state, .31 for

TABLE XLIV

CORRELATION BETWEEN TWO COUNTY EXTENSION STAFF VARIABLES AND THREE AGRICULTURAL-TITLED EXTENSION PUBLICATION VARIABLES IN TENNESSEE, HIGH AND LOW ORDER COUNTIES, 1965-1967

County Extension Staff Variable	Agricultural-Titled Extension Publication Variable									
	Numbers of Publications Ordered			Numbers of Publications Inventoried			Number of Publications			
	Total N=95 r	High N=32 r	Low N=32 r	Total N=95 r	High N=32 r	Low N=32 r	Total N=95 r	High N=32 r	Low N=32 r	Total N=95 r
Total number of county Extension staff members	.26 <sup>b</sup>	.00	.51 <sup>a</sup>	.17	-.13	.32	.35 <sup>a</sup>	.31	.35 <sup>b</sup>	.35 <sup>b</sup>
Total number of full-time agricultural staff equivalent per county (FASE)	.23 <sup>b</sup>	.18	.32	.05	-.18	.25	.10	.29	.19	.19

<sup>a</sup>Significant at .01 level.

<sup>b</sup>Significant at .05 level.

high order and .35 (significant at .05 level) for low order counties. There was no significant relation shown between number of publication orders and the number of county Extension staff per FASE.

The relations in Table XLIV, page 99, indicated that as the total number of county Extension staff members per county and FASEs per county increased there also was an increase in the number of publications ordered; and as the total number of county Extension staff members increased, the number of publication orders also increased.

Relation between full-time family equivalents variables and agricultural-titled Extension publications variables. The correlation between two full-time farm family equivalent variables and the three agricultural-titled Extension publication variables in Tennessee, high and low order counties are shown in Table XLV. Total numbers of publications ordered was related at the .01 level of significance to the total number of farm family equivalents per county for the state (correlation coefficient .31) and low order counties (correlation coefficient .50), while no significant relation was shown for the high order counties (correlation coefficient .03). When the coefficient of correlation for numbers of publications ordered and the number of full-time farm family equivalents per FASE are observed for the state (.13), high (-.13) and low (.36) order counties, it is noted that a significant (.05 level) relation exists only for low order counties.

These relations indicate that, as the number of full-time farm family equivalents increased per county, there was an increase in the total number of publications ordered in the state; and that when the

TABLE XLV

CORRELATION BETWEEN TWO COUNTY FARM FAMILY EQUIVALENT VARIABLES AND THREE AGRICULTURAL-TITLED EXTENSION PUBLICATION VARIABLES IN TENNESSEE, HIGH AND LOW ORDER COUNTIES, 1965-1967

Full-Time Farm Family Equivalent Variable	Agricultural-Titled Extension Publication Variable									
	Numbers of Publications Ordered			Numbers of Publications Inventoried			Number of Publications			
	Total N=95	High N=32	Low N=32	Total N=95	High N=32	Low N=32	Total N=95	High N=32	Low N=32	r
Total number of farm family equivalents per county	.31 <sup>a</sup>	.03	.59 <sup>a</sup>	.25 <sup>b</sup>	.02	.37 <sup>b</sup>	.32 <sup>a</sup>	.32	.48 <sup>a</sup>	
Total number of farm family equivalents per county per FASE*	.13	-.13	.36 <sup>b</sup>	.23 <sup>b</sup>	.23	.23	.34 <sup>a</sup>	.13	.25	

<sup>a</sup> Significant at .01 level.

<sup>b</sup> Significant at .05 level.

\*Full-time agricultural staff equivalent.

number of full-time farm family equivalents per county and farm family equivalents per FASE are increased, the number of orders for publications will also increase.

Additional reference to Table XLV reveals that, while the total number of full-time farm family equivalents variable was significantly (.05 level) related to the numbers of publications inventoried for the state (coefficient of correlation .25) and the low order (coefficient of correlation .37) counties; it was not significantly related for the high order (coefficient of correlation .02) counties. When the farm family equivalents per FASE variable was correlated with numbers of publications inventoried, a positive coefficient of .23 (significant at .05 level) was observed for the state. However, no significant relation was observed for high order (coefficient of .23) and low order (coefficient of .23) counties. These data showed that Tennessee counties having larger full-time farm family equivalents and larger full-time farm family equivalents per FASE also had larger total numbers of publications in inventory.

Relation between two-county value of agricultural products sold variables and agricultural-titled Extension publications variables.

Table XLVI shows the correlation between the two-county value of agricultural products sold variables and the three agricultural-titled Extension publications variables in Tennessee, high and low order counties, 1965-1967. An investigation of the table revealed no significant relation between total value of agricultural products sold per county and numbers of publications ordered in the state and high order counties. However, the low order counties had a significant (.05 level)



TABLE XLVI

CORRELATION BETWEEN TWO--VALUE OF AGRICULTURAL PRODUCTS SOLD--VARIABLES AND THREE AGRICULTURAL-TITLED EXTENSION PUBLICATION VARIABLES IN TENNESSEE, HIGH AND LOW ORDER COUNTIES, 1965-1967

Value of Agricultural Products Sold Variable	Agricultural-Titled Extension Publication Variable									
	Numbers of Publications Ordered			Numbers of Publications Inventoried			Numbers of Publications			Number of Publications
	Total N=95	High N=32	Low N=32	Total N=95	High N=32	Low N=32	Total N=95	High N=32	Low N=32	Total N=95
	r	r	r	r	r	r	r	r	r	r
Total value of agricultural products sold per county	.09	.22	.38 <sup>b</sup>	.01	.12	.29	.03	.13	.48 <sup>a</sup>	
Total value of agricultural products sold per county per FASE*	.03	.08	.24	.06	.22	.18	.20	.00	.39 <sup>b</sup>	

<sup>a</sup>Significant at .01 level.

<sup>b</sup>Significant at .05 level.

\*Full-time agricultural staff equivalent.

correlation coefficient (.38). Further investigation revealed no significant relation between value of products sold per county per FASE and numbers of publications ordered for the state, high and low order counties. These findings indicate that there was no significant relation between the total value of farm products sold per county and the numbers of agricultural-titled Extension publications ordered by the county staffs in Tennessee. These findings do not agree with the previously reported findings taken from the Oklahoma study (5:4-6) where a significant (.05 level) positive correlation was observed between the numbers of Oklahoma Experiment Station publications requested and the total value of all products sold in the state and per farm.

Further reference to Table XLVI discloses no significant relation between the two county value of agricultural products sold variables and the number of publications inventoried variable in Tennessee, high and low order counties. With reference to the correlation between the two-county value of agricultural products sold variables and the number of publication orders variable, it was observed that no significant relation existed for the state and high order counties, but significant relation existed (.01 level for value per county and .05 level for value per FASE) for the low order counties.

Relation between county appropriation variables and agricultural-titled Extension publications variables. The data in Table XLVII reveal the correlations between the two-county appropriation variables and the three agricultural-titled Extension publications variables in Tennessee, high and low order counties, 1965-1967. When the total appropriation to County Agricultural Agents variable was correlated with the numbers

TABLE XLVII

CORRELATION BETWEEN TWO COUNTY APPROPRIATION VARIABLES AND THREE AGRICULTURAL-TITLED EXTENSION PUBLICATION VARIABLES IN TENNESSEE, HIGH AND LOW ORDER COUNTIES, 1965-1967

County Appropriation Variable	Agricultural-Titled Extension Publication Variable									
	Numbers of Publi- cations Ordered			Numbers of Publi- cations Inventoried			Number of Publi- cation Orders			
	Total N=95	High N=32	Low N=32	Total N=95	High N=32	Low N=32	Total N=95	High N=32	Low N=32	r
Total appropriation to County Agricultural Agents per county	.32 <sup>a</sup>	.14	.36 <sup>b</sup>	.17	-.11	.20	.29 <sup>a</sup>	.31	.36 <sup>b</sup>	
Total appropriation to County Agricultural Agents per county per FASE*	.25 <sup>b</sup>	-.15	.56 <sup>a</sup>	.26 <sup>b</sup>	.13	.28	.42 <sup>a</sup>	.39 <sup>b</sup>	.42 <sup>b</sup>	

<sup>a</sup> Significant at .01 level.

<sup>b</sup> Significant at .05 level.

\*Full-time agricultural staff equivalent.

of publications ordered, it was noted that the coefficient (.32) for the state was significant at a higher level (.01) than was the .05 level of significance of the correlation coefficient (.32) for the low order counties. No significance was shown for the high order counties. However, the reverse was true for the correlation of the total appropriation to County Agricultural Agents per FASE and total numbers of publications ordered. The level of significance (.05) was lower for the state (coefficient .25) than was the .01 level of significance for the low order (coefficient .56) counties. Although no significant relation existed for the high order counties, a negative coefficient of correlation (-.15) was observed.

Further reference to Table XLVII reveals that, with one exception, the two total county appropriation to County Agricultural Agents variables were not significantly related to the numbers of publications inventoried variable in the state, high and low order counties; the exception being the county appropriation per FASE variable which was significantly related to the numbers of publications inventoried at the .05 level for the state (coefficient of correlation .26).

With reference to the number of publication orders variable and the two county appropriation variables, it was observed that, with one exception; a significant relation was shown for these variables in the state, high and low order counties. The correlation coefficients for the total appropriation to County Agricultural Agents were .29 (significant at .01 level) for the state, .31 for the high order and .36 (significant at .05 level) for the low order counties; while the coefficient (.42) for the appropriation to agents per FASE was

significant at the .01 level for the state, and at the .05 level for the high order (.39) and low order (correlation coefficient .42) counties.

Data in Table XLVII indicated that when the total appropriation to County Agricultural Agents per county and/or per FASE are increased there also will be an increase in the number of publications ordered and the number of orders for publications.

Relation between county real and personal assessed taxable property variables and agricultural-titled Extension publications variables. The correlation between two-county real and personal assessed taxable property variables and the three agricultural-titled Extension publications variables in Tennessee, high and low order counties are shown in Table XLVIII. While a very significant (.01 level) correlation coefficient of .28 was found for the state, and a significant (.05 level) coefficient of .35 was observed for the low order counties when the real and personal assessed taxable property variable was correlated with the number of publications ordered; there was no significant relation for the high order (correlation coefficient .14) counties. Although real and personal assessed taxable property per FASE variable showed a correlation coefficient of .27 (significant at .01 level) when related to the numbers of publications ordered for the state, was no significant relation for these variables in the high and low order counties.

Further investigation of Table XLVIII revealed no significant relation between the two real and personal assessed taxable property variables and the numbers of publications inventoried variable. It was

TABLE XLVIII

CORRELATIONS BETWEEN TWO--COUNTY REAL AND PERSONAL ASSESSED TAXABLE PROPERTY--  
VARIABLES AND THREE AGRICULTURAL--TITLED EXTENSION PUBLICATION VARIABLES  
IN TENNESSEE, HIGH AND LOW ORDER COUNTIES, 1965-1967

Real and Personal Assessed Taxable Property Variable	Agricultural-Titled Extension Publication Variable									
	Numbers of Publi- cations Ordered			Numbers of Publi- cations Inventoried			Number of Publi- cation Orders			
	Total N=95	High N=32	Low N=32	Total N=95	High N=32	Low N=32	Total N=95	High N=32	Low N=32	r
Real and personal assessed taxable property per county	.28 <sup>a</sup>	.14	.35 <sup>b</sup>	.12	-.13	.17	.29 <sup>a</sup>	.38 <sup>b</sup>	.24	
Real and personal assessed taxable property per county per FASE*	.27 <sup>a</sup>	.04	.30	.17	-.08	.12	.39 <sup>a</sup>	.47 <sup>a</sup>	.18	

<sup>a</sup>Significant at .01 level.

<sup>b</sup>Significant at .05 level.

\*Full-time agricultural staff equivalent.

observed from the data in Table XLVIII that when the real and personal assessed taxable property was correlated with the number of publication orders, positive coefficients of .29 (significant at .01 level) and .38 (significant at .05 level) were obtained for the state and high order counties respectively. However, there was no significant relation for for these two variables in the low order counties. Similar relations were observed between the real and personal assessed taxable property per FASE variable and number of publication orders. The correlation coefficients for these variables were .39 (significant at .01 level) for the state, .47 (significant at .01 level) for high order counties and .18 for the low order counties.

The data in Table XLVIII indicate that as the real and personal assessed taxable property in Tennessee counties increased there also was an increase in the number of publications ordered and an increase in the number of publication orders.

#### Multiple Correlation Between Selected County Extension Program Factors And Agricultural- Titled Extension Publication Ordering Patterns

In a further attempt to determine relationships between selected county Extension program variables and agricultural-titled Extension publications variables in Tennessee, high and low counties, 1965-1967; it was proposed that multiple-correlation problems be formulated to observe the relation between a dependent agricultural-titled Extension publications variable (the two dependent variables were publications ordered per county and per FASE) and two or more of the other county Extension program variables varying simultaneously for each problem in the three order groups.

Since the coefficient of multiple correlation ( $R$ ) is related to the intercorrelation of independent variables as well as to their correlation with the dependent variable, it was used in this analysis to indicate the strength or relationship between one variable and two or more others taken together. The coefficient of multiple determination ( $R^2$ ) indicates the proportion of variance in the dependent variable that is dependent upon, or associated with, or accounted for by the independent variables; therefore, it was used in the interpretation of the multiple  $R$ 's for each multiple-correlation problem.

Appropriate tables were developed to show the multiple correlation analysis for the problems studied. Multiple  $R$ 's and  $R^2$ 's were shown for each independent variable correlated with a dependent variable. A footnote was used in each of the tables to show the per cent of total variation in the dependent variable that was accounted for by all of the independent variables entered into the multiple correlation. As was indicated in the analysis of the coefficients of correlation ( $r$ ), the relation shown in the multiple correlation ( $R$ ) analysis can not be interpreted as being one of cause and effect.

Multiple correlation of five selected county Extension program variables with the total numbers of agricultural-titled Extension publications ordered in Tennessee, high and low order counties, 1965-1967.

Data in Tables XLIX-LI reveal that, while the five selected county Extension program variables accounted for similar per cents of variation in the numbers of publications ordered in the state (.13) and high order (.16) counties, a much higher per cent (.44) of variation was accounted for in the low order counties.



TABLE XLIX

MULTIPLE CORRELATION OF FIVE SELECTED COUNTY EXTENSION PROGRAM  
VARIABLES WITH THE TOTAL NUMBERS OF AGRICULTURAL-TITLED  
EXTENSION PUBLICATIONS ORDERED IN ALL 95 TENNESSEE  
COUNTIES, 1965-1967

County Program Variable	Total Number of Agricultural-Titled Extension Publications Ordered <sup>c</sup>			
	r	R	R <sup>2</sup>	Per Cent Increase In R <sup>2</sup>
Total county appropriation to agricultural agents per county	.32 <sup>a</sup>	.32 <sup>a</sup>	.10	9.94
Total number full-times farm family equivalent per county	.31 <sup>a</sup>	.34 <sup>a</sup>	.12	1.88
Total value of agricultural products sold per county	.09	.36 <sup>a</sup>	.13	1.07
Total real and personal assessed taxable property per county	.28 <sup>a</sup>	.36 <sup>b</sup>	.13	0.32
Total number of county Extension staff members	.26 <sup>b</sup>	.36 <sup>b</sup>	.13	0.17

<sup>a</sup>Significant at .01 level.

<sup>b</sup>Significant at .05 level.

<sup>c</sup>Thirteen per cent of the variation in total number of publications ordered was accounted for by the five selected county program variables.

TABLE L

MULTIPLE CORRELATION OF FIVE SELECTED COUNTY EXTENSION PROGRAM  
VARIABLES WITH THE TOTAL NUMBERS OF AGRICULTURAL-TITLED  
EXTENSION PUBLICATIONS ORDERED IN 32 TENNESSEE HIGH  
ORDER COUNTIES, 1965-1967

County Program Variable	Total Number of Agricultural-Titled Extension Publications Ordered			
	r	R	R <sup>2</sup>	Per Cent Increase In R <sup>2</sup>
Total value of agricultural products sold per county	.22	.22	.05	5.09
Total number of county Extension staff members	.00	.25	.06	1.37
Total real and personal assessed taxable property per county	.14	.38	.15	8.38
Total number full-time farm family equivalents per county	.03	.40	.16	0.86
Total county appropriation to agricultural agents per county	.14	.40	.16	0.05

<sup>a</sup>Significant at .01 level.

<sup>b</sup>Significant at .05 level.

<sup>c</sup>Sixteen per cent of the variation in total numbers of publications ordered was accounted for by the five selected county program variables.

TABLE LI

MULTIPLE CORRELATION OF FIVE SELECTED COUNTY EXTENSION PROGRAM  
VARIABLES WITH THE TOTAL NUMBERS OF AGRICULTURAL-TITLED  
EXTENSION PUBLICATIONS ORDERED IN 32 TENNESSEE LOW  
ORDER COUNTIES, 1965-1967

County Program Variable	Total Number of Agricultural-Titled Extension Publications Ordered <sup>c</sup>			
	r	R	R <sup>2</sup>	Per Cent Increase In R <sup>2</sup>
Total number of full-times farm family equivalent per county	.59 <sup>a</sup>	.59 <sup>a</sup>	.35	35.06
Total number of county Extension staff members	.51 <sup>a</sup>	.63 <sup>a</sup>	.40	4.50
Total county appropriations to agricultural agents per county	.36 <sup>b</sup>	.66 <sup>a</sup>	.43	3.33
Total real and personal assessed taxable property per county	.35 <sup>b</sup>	.67 <sup>a</sup>	.44	1.43
Total value of agricultural products sold per county	.38 <sup>b</sup>	.68 <sup>a</sup>	.44	0.18

<sup>a</sup>Significant at .01 level.

<sup>b</sup>Significant at .05 level.

<sup>c</sup>Forty-four per cent of the variation in total number of publications ordered was accounted for by the five selected county program variables.

Further reference to Table XLIX shows that 10 per cent of the variation in total numbers of publications ordered in the state was accounted for by the total county appropriation to agricultural agents variable, 2 per cent of the variation was accounted for by the total number of full-time farm family equivalent variable and only 1 per cent of the variation was accounted for by the remaining 3 variables. It was observed that three of the county Extension program variables (county appropriations, full-time farm family equivalents and value of agricultural products sold) reached the .01 level of significance for multiple correlation with total numbers of publications ordered in the state. The remaining two county Extension program variables were significantly associated, at the .05 level, with the number of publications ordered variable.

Based on the data in Table XLIX, page 111, the total county appropriation to county agricultural agents was the most accurate predictor of the total number of publications ordered in Tennessee

Additional reference to Table L, page 112, reveals that the five county Extension program variables were not significantly associated with the total number of agricultural-titled Extension publications ordered variable in the high order counties. However data in Table LI, page 113, reveal that all five of the county Extension program variables were significantly associated, at the .01 level, with the total numbers of publications ordered in the low order counties. Total number of full-time farm family equivalents accounted for 35 per cent of the variation in numbers of publications ordered, while the total number of county Extension staff members variable accounted for 5 per cent of the

variation. Only 4 per cent of the variation (total variation of 44 per cent) was accounted for by the remaining three county Extension program variables.

From the data presented in Table LI, page 113, it appeared that an increase in the total number of full-time farm family equivalents per county would be accompanied by an increase in the number of total publications ordered in the low order counties.

Multiple correlation of five selected county Extension program per full-time agricultural staff equivalent variables with the total numbers of agricultural-titled Extension publications ordered in Tennessee, high and low order counties, 1965-1967. All five of the selected county Extension program per full-time agricultural staff equivalent (FASE) variables were shown to be significant at the .05 level with the total number of agricultural-titled Extension publications ordered for the state, 1965-1967 (Table LII). The real and personal assessed taxable property per FASE variable accounted for 7 per cent of the variation (out of the total 10 per cent variation accounted for by the five variables) in numbers of publications ordered. From the data in Table LII it would be difficult (due to the slight amount of variation accounted for) to support the concept that an increase in the real and personal assessed taxable property per FASE would be accompanied by an increase in the numbers of publications ordered in Tennessee.

Table LIII shows a non-significant (.05 level) multiple correlation of the five county Extension program per FASE variables with the total number of agricultural-titled Extension publications ordered in the high order counties, 1965-1967.

TABLE LII

MULTIPLE CORRELATION OF FIVE SELECTED COUNTY EXTENSION PROGRAM  
PER FULL-TIME AGRICULTURAL STAFF EQUIVALENT VARIABLES WITH  
THE TOTAL NUMBERS OF AGRICULTURAL-TITLED EXTENSION  
PUBLICATIONS ORDERED IN ALL 95 TENNESSEE  
COUNTIES, 1965-1967

County Program Per Full-Time Agricultural Staff Equivalent Variable	Total Number of Agricultural-Titled Extension Publications Ordered <sup>c</sup>			Per Cent Increase In R <sup>2</sup>
	r	R	R <sup>2</sup>	
Total real and personal assessed taxable property	.27 <sup>b</sup>	.27 <sup>b</sup>	.07	7.05
Total number of Extension staff members	.23 <sup>b</sup>	.30 <sup>b</sup>	.09	1.95
Total county appropriation to agricultural agents	.25 <sup>b</sup>	.32 <sup>b</sup>	.10	.94
Total number of full-times farm family equivalents	.13	.32 <sup>b</sup>	.10	.13
Total value of agricultural products sold <sup>d</sup>				

<sup>a</sup>Significant at .01 level.

<sup>b</sup>Significant at .05 level.

<sup>c</sup>Ten per cent of the variation in total numbers of publications ordered was accounted for by the four selected county variables listed above.

<sup>d</sup>The total value of products sold variable did not enter into the computation due to insufficient F level.

TABLE LIII

MULTIPLE CORRELATION OF FIVE SELECTED COUNTY EXTENSION PROGRAM  
PER FULL-TIME AGRICULTURAL STAFF EQUIVALENT VARIABLES WITH  
THE TOTAL NUMBERS OF AGRICULTURAL-TITLED EXTENSION  
PUBLICATIONS ORDERED IN 32 TENNESSEE HIGH  
ORDER COUNTIES, 1965-1967

County Program Full-Time Agricultural Staff Equivalent Variable	Total Number of Agricultural-Titled Extension Publications Ordered <sup>c</sup>			Per Cent Increase In R <sup>2</sup>
	r	R	R <sup>2</sup>	
Total number of Extension staff members	.18	.18	.03	3.07
Total county appropriation to agricultural agents	-.15	.33	.11	7.72
Total real and personal assessed taxable property	.04	.36	.13	2.28
Total value of agricultural products sold	.08	.40	.16	3.27
Total number of full-time farm family equivalents	-.13	.42	.18	1.27

<sup>a</sup>Significant at .01 level.

<sup>b</sup>Significant at .05 level.

<sup>c</sup>Eighteen per cent of the variation in total numbers of publications ordered was accounted for by the five selected county program variables.

Reference to Table LIV shows that .37 per cent of the variation in total numbers of publications ordered was accounted for by the five selected county program per FASE variables in the low order counties, 1965-1967. County appropriations to agricultural agents per FASE accounted for the largest per cent (31) of the variation in total numbers of publications ordered, with the four remaining county program per FASE variables accounting for 6 per cent of the variation. The .01 level of significance for multiple correlation was reached for the county appropriation per FASE, real and personal assessed taxable property per FASE, and total number of full-time farm family equivalents per FASE variables; while the .05 level of significance was reached for the remaining two FASE variables.

Based on the analysis of data in Table LIV, it would appear that an increase in the county appropriation to agricultural agents per FASE should be accompanied by an increase in the total number of publications ordered by the low order counties.

Multiple correlation of five selected county Extension program variables with the total numbers of agricultural-titled Extension publications ordered per full-time agricultural staff equivalent in Tennessee, high and low order counties, 1965-1967. Data in Table LV reveal the direction of the relation in the non-significant (.05 level) multiple correlation of the five selected county Extension program variables with the total number of Extension publications ordered per full-time agricultural staff equivalent for the state.

Data in Table LVI shows that the five selected county program variables were all significant at the .01 level in the multiple



TABLE LIV

MULTIPLE CORRELATION OF FIVE SELECTED COUNTY EXTENSION PROGRAM  
PER FULL-TIME AGRICULTURAL STAFF EQUIVALENT VARIABLES WITH  
THE TOTAL NUMBERS OF AGRICULTURAL-TITLED EXTENSION  
PUBLICATIONS ORDERED IN 32 TENNESSEE LOW  
ORDER COUNTIES, 1965-1967

County Program Full-Time Agricultural Staff Equivalent Variable	Total Number of Agricultural-Titled Extension Publications Ordered <sup>c</sup>			Per Cent Increase In R <sup>2</sup>
	r	R	R <sup>2</sup>	
Total county appropriation to agricultural agents	.56 <sup>a</sup>	.56 <sup>a</sup>	.31	31.38
Total real and personal assessed taxable property	.30	.58 <sup>a</sup>	.34	2.25
Total number of full-time farm family equivalents	.36 <sup>b</sup>	.59 <sup>a</sup>	.35	1.40
Total number of Extension staff members	.32	.60 <sup>b</sup>	.36	1.45
Total value of agricultural products sold	.24	.61 <sup>b</sup>	.37	0.19

<sup>a</sup>Significant at .01 level.

<sup>b</sup>Significant at .05 level.

<sup>c</sup>Thirty-seven per cent of the variation in total numbers of publications ordered was accounted for by the five selected county program variables.

TABLE LV

MULTIPLE CORRELATION OF FIVE SELECTED COUNTY EXTENSION PROGRAM  
VARIABLES WITH THE TOTAL NUMBERS OF AGRICULTURAL-TITLED  
EXTENSION PUBLICATIONS ORDERED PER FULL-TIME  
AGRICULTURAL STAFF EQUIVALENT IN ALL 95  
TENNESSEE COUNTIES, 1965-1967

County Program Variable	Total Number of Agricultural-Titled Extension Publications Ordered Per Full- Time Agricultural Staff Equivalents			
	r	R	R <sup>2</sup>	Per Cent Increase In R <sup>2</sup>
Total number of county Extension staff members	-.19	.19	.04	3.55
Total value of agricultural products sold per county	-.11	.21	.04	0.92
Total numbers of full-time farm family equivalents	-.09	.24	.06	1.30
Total county appropriations to agricultural agents	-.15	.24	.06	0.03
Total real and personal assessed taxable property <sup>d</sup>				

<sup>a</sup>Significant at .01 level.

<sup>b</sup>Significant at .05 level.

<sup>c</sup>Six per cent of the variation in total numbers of publications ordered per full-time agricultural staff equivalent was accounted for by the four selected county program variables listed above.

<sup>d</sup>The real and personal assessed taxable property variable did not enter into the computation due to insufficient F level.

TABLE LVI

MULTIPLE CORRELATION OF FIVE SELECTED COUNTY EXTENSION PROGRAM  
VARIABLES WITH THE TOTAL NUMBERS OF AGRICULTURAL-TITLED  
EXTENSION PUBLICATIONS ORDERED PER FULL-TIME  
AGRICULTURAL STAFF EQUIVALENT IN 32  
TENNESSEE HIGH ORDER COUNTIES,  
1965-1967

County Program Variable	Total Number of Agricultural-Titled Extension Publications Ordered Per Full- Time Agricultural Staff Equivalents <sup>c</sup>			
	r	R	R <sup>2</sup>	Per Cent In R <sup>2</sup>
Total number of county Extension staff members	-.57 <sup>a</sup>	.57 <sup>a</sup>	.32	32.13
Total real and personal assessed taxable property	-.33	.63 <sup>a</sup>	.40	7.73
Total number of full-time farm family equivalents	-.47 <sup>a</sup>	.64 <sup>a</sup>	.42	1.79
Total county appropriations to agricultural agents	-.42 <sup>b</sup>	.65 <sup>a</sup>	.43	1.19
Total value of agricultural products sold	-.35 <sup>b</sup>	.66 <sup>a</sup>	.43	0.10

<sup>a</sup>Significant at .01 level.

<sup>b</sup>Significant at .05 level.

<sup>c</sup>Forty-three per cent of the variation in total numbers of publications ordered per full-time agricultural staff equivalent was accounted for by the five selected county program variables.

correlation with the total number of publications ordered per FASE in the high order counties. Of the 43 per cent variation in the numbers of publications ordered per FASE in the high order counties, 32 per cent of the variation was accounted for by the total number of county Extension staff members variable, 8 per cent was accounted for by the real and personal assessed taxable property variable, and 3 per cent of the variation being accounted for by the remaining three county program variables.

Based on the data in Table LVI it could be predicted that a decrease in the total number of county Extension staff members would be accompanied by an increase in the total number of Extension publications ordered per FASE in the high order counties.

Reference to Table LVII reveals that there is a non-significant (.05 level) multiple correlation of the five county Extension program variables with the total number of agricultural-titled Extension publications ordered per full-time agricultural staff equivalent in the low order counties.

TABLE LVII

MULTIPLE CORRELATION OF FIVE SELECTED COUNTY EXTENSION PROGRAM  
 VARIABLES WITH THE TOTAL NUMBERS OF AGRICULTURAL-TITLED  
 EXTENSION PUBLICATIONS ORDERED PER FULL-TIME  
 AGRICULTURAL STAFF EQUIVALENT IN 32  
 TENNESSEE LOW ORDER COUNTIES,  
 1965-1967

County Program Variable	Total Number of Agricultural-Titled Extension Publications Ordered Per Full- Time Agricultural Staff Equivalents <sup>c</sup>			
	r	R	R <sup>2</sup>	Per Cent Increase In R <sup>2</sup>
Total number of full-time farm family equivalents	.22	.22	.05	5.04
Total county appropriations to agricultural agents	-.05	.37	.14	8.74
Total real and personal assessed taxable property	.12	.48	.24	9.76
Total number of county Extension staff members	-.02	.49	.24	0.07
Total value of agricultural products sold	.04	.50	.25	0.89

<sup>a</sup>Significant at .01 level.

<sup>b</sup>Significant at .05 level.

<sup>c</sup>Twenty-five per cent of the variation in total numbers of publications ordered per full-time agricultural staff equivalent was accounted for by the five selected county program variables.

## CHAPTER V

### SUMMARY AND IMPLICATIONS

Because of the increasing expenditures of funds for Tennessee agricultural-titled Extension publications during the period 1955-1967, administrative concern was expressed for doing a benchmark publication study to provide a basis for making future such expenditures.

The purposes of the study were:

1. To determine if the recommended ordering procedures were being followed; (a) regarding use of the correct order form (i.e. Publication Form 559); (b) regarding completion of the order form by the correct person (i.e. by the county agricultural agent); (c) regarding ordering at correct intervals (i.e. the total number of orders to average no more than one every two months); and (d) regarding "pooling" of orders (i.e. to include both agricultural-titled and non-agricultural-titled Extension publications).

2. To determine which classes and numbers within classes of agricultural-titled Extension publications studied were being ordered most frequently, in largest numbers and in greatest size of order per county.

3. To determine which classes and numbers within classes of agricultural-titled Extension publications studied were on hand, in greatest supply, at the time of inventory.

4. To determine the total numbers of agricultural-titled Extension publications ordered, 1965-1967, and in inventory, 1967;

the total numbers of copies of publications ordered by quarterly intervals, and the total numbers of orders, 1965-1967, for such publications.

5. To determine if any relationships existed between selected county Extension program-related factors and certain agricultural-titled Extension publication ordering patterns.

A review of related literature disclosed the availability of very little research in the area of publication ordering procedures. One 1960 statewide study of factors affecting the demand for Experiment Station bulletins, or publications, reported that there was a positive relation between such demand and the importance of commercial agriculture in the county and state. Most agent requests for such bulletins were for twenty-five or fewer copies of one title.

Another statewide study, analyzing agent requests for publications, found that agents checked publications for potential use before placing orders. Agents were spending from one to five per cent of their time in ordering, handling, and distributing publications. The farm agents were noted to place orders for publications fairly quickly (i.e. within three weeks) after they were notified that they were available; and of the fifteen publications studied (published between 1948 and 1956), from one to 500 copies were found to be on inventory in the county office in 1956. The same agents distributed an average of 3,715 publications per year, with a range from 815 to 11,000 per agent.

A third study, conducted in 1958, to determine the nationwide needs of the public for information to be provided in popular Extension-type publications, found that about two-thirds of the demand for

information dealt with agricultural subjects and about one-third was concerned with home economics subjects.

Regarding research methods used for the present study, data drawn from 1,559 publication order forms on file from all Tennessee counties for the period 1965-1967 were comparatively analyzed according to total, high order counties (numerically ranking from first through thirty-second in numbers of copies of publications ordered), medium order counties (numerically ranking from 33-63), and low order counties (numerically ranking from 64-95). Tabulated data were reported in numbers, per cents and averages where appropriate.

Supplemental data were collected for all counties from records in the offices of Tennessee Extension Service administrators and district supervisors, and from appropriate United States and Tennessee Census and other reports. Multiple regression analyses were made with the assistance of a 7040 digital computer, University of Tennessee Computer Center.

## I. SUMMARY OF FINDINGS

### Regarding Recommended Ordering Procedures Being Followed

Findings presented in this section concern the use of the four recommended publication ordering procedures, namely: (1) use of Order Form 559; (2) initiation of orders by the county agricultural agent; (3) county staffs averaging not more than one order every two months; (4) "pooling" orders to include both agricultural-titled and non-agricultural-titled Extension publications needed by the county staff.

#### Ordering procedure A: use of publication order Form 559.

Analysis of data related to this recommended ordering procedure indicated the following:



1. Eighty-eight per cent of all orders (94 per cent for high order and 84 per cent for low order counties) for agricultural-titled Extension publications were made on Form 559.

2. An average of 14.45 orders on Form 559 per county (17.44 for the high and 10.56 for low order counties) for the two year period studied was recorded.

3. The per cent of all agricultural-titled Extension publication orders per county on Form 559 ranged from 0-100 per cent for the state (50-100 per cent for high order and 0-100 per cent for low order counties).

4. Eighty-four per cent of the county staffs (97 of the high and 75 of the low order county staffs) used Form 559 in making three-fourths or more of their publication orders during the period, 1965-1967.

Ordering procedure B: have county agricultural agent initiate the orders. Analysis of data relating to this recommended procedure revealed the following:

1. Ninety-one per cent of all agricultural-titled Extension publication orders (88 per cent for high order and 95 per cent for low order counties) were initiated by the county agricultural agent.

2. An average of 15.01 orders per county was initiated by the county agricultural agents in the state during the two-year period, 1965-1967 (16.41 orders for high and 11.90 orders for the low order counties).

3. The per cent of orders initiated by the county agricultural agent per county staff ranged from 31-100 per cent for the state (31-100 per cent for high order and 62-100 per cent for low order counties).

4. Ninety-two per cent of the county Extension staffs (84 of the high and 94 of the low order county staffs) had the county agricultural

agent initiate the order in three-fourths or more of their publication orders during the period.

Ordering procedure C: Average not more than one order every two months. Analysis of data concerning this recommended ordering procedure revealed the following:

1. Sixty-seven per cent of all agricultural-titled Extension publication orders (62 per cent for high order and 81 per cent for low order counties) were made to average not more than one order every two months per year.

2. The average number of orders per county for the state was 16.41 (18.63 for the high and 12.56 for the low order counties), or 4.41 average orders above the recommended 12 orders (not to average more than one order every two months for the two-year study period).

3. Sixty-two per cent of the county Extension staffs (53 of the high and 81 of the low order county staffs) averaged making not more than one order every two months in three-fourths or more of their publication orders during the period, 1965-1967.

Ordering procedure D: "pool" orders (with both agricultural-titled and non-agricultural-titled Extension publications. Analysis of data related to this recommended ordering procedure showed the following:

1. Sixty-one per cent of all orders (66 per cent for high order and 55 per cent for low order counties) for agricultural-titled Extension publications in the state were "pooled."

2. The average number of orders "pooled" per county for the state was 10.01 (12.25 for high order and 6.87 for low order counties).

3. The range in per cent of orders being "pooled" by staffs in

individual counties for the state was from 14-100 per cent (14-100 per cent for high order and 24-100 per cent for low order counties).

4. Forty per cent of the county Extension staffs in the state "pooled" orders (47 per cent for high order and 38 per cent for low order counties) in making three-fourths or more of their publication orders, 1965-1967.

Regarding Classes and Numbers Within Classes of Agricultural-titled Extension Publications Which Were Being Ordered Most Frequently in Largest Numbers, and in Greatest Size per Order

Findings presented in this section concerned which classes and numbers within classes of agricultural-titled Extension publications were being ordered most frequently, in largest numbers and in greatest size per order. The eleven title classes (in descending rank order according to total number of copies of publications ordered) of agricultural Extension publications studied were, namely: (1) farm crops and fertilizers; (2) fruits and vegetables; (3) insects, plant diseases and pests; (4) animal husbandry-beef; (5) landscaping and lawns; (6) animal husbandry-hogs; (7) dairy; (8) forestry; (9) agricultural economics; (10) animal husbandry-sheep; and (11) poultry. Title classes one through three accounted for slightly more than two-thirds (68 per cent) of the total number of copies of agricultural-titled Extension publications ordered in the state, 1965-1967.

Farm crops and fertilizer title class. Analysis of data related to this publication class revealed the following:

1. Thirty per cent of all agricultural-titled Extension publications ordered in the state (31 per cent for high order and 27 per cent

for low order counties) were accounted for by this title class.

2. Numerically, 118,965 copies of Extension publications ordered in the state from this title class (72,615 copies for the high order and 14,606 copies for the low order counties).

3. The average number of orders per county with publications in this class for the state was 6.35 (7.62 for the high order and 4.62 for the low order counties).

4. The average number of copies of publications in this title class per order per county for the state was 197.29 (297.60 copies for high order and 98.69 copies for low order counties).

5. Of the 11 different titles in this class, county staffs for the state averaged ordering 6.57 titles (7.38 for the high order and 5.50 for the low order counties).

Fruits and vegetables title class. Data concerning this publication class indicate the following:

1. Twenty-four per cent of all agricultural-titled Extension publications ordered in the state (25 per cent for high order and 23 per cent for low order counties) were accounted for by this title class.

2. Numerically, 95,565 copies of Extension publications ordered in the state were from this title class (57,564 copies for the high order and 12,442 copies for the low order counties).

3. The average number of orders per county with publications in this class for the state was 7.32 (8.72 for the high order and 5.44 for the low order counties).

4. The average number of copies of publications in this title class per order per county for the state was 137.50 (206.32 copies for high order and 71.51 copies for low order counties).

5. Of the 12 different titles in this class, county staffs for the state averaged ordering 8.18 titles (9.12 for the high order and 6.44 for the low order counties).

Insects, plant diseases and pests title class. A review of data related to this title class of Extension publications reveals the following:

1. Fourteen per cent of all agricultural-titled Extension publications ordered in the state (14 per cent for high order and 15 per cent for low order counties) were accounted for by this title class.

2. Numerically, 55,071 copies of Extension publications ordered in the state were from this title class (32,165 copies for the high order and 7,854 copies for the low order counties).

3. The average number of orders per county with publications in this class for the state was 5.00 (5.97 for the high order and 3.69 for the low order counties).

4. The average number of copies of publications in this title class per order per county for the state was 115.94 (168.40 for high order and 66.56 for low order counties).

5. Of the ten different titles in this class, county staffs for the state averaged ordering 5.13 titles (6.19 titles for high order and 3.77 titles for low order counties).

Other title classes. Analysis of data concerning the animal husbandry-beef, landscaping and lawns, animal husbandry-hogs, dairy, forestry, agricultural economics, animal husbandry-sheep, and poultry title classes reveal the following:

1. Slightly less than one-third (32 per cent) of the total copies of agricultural-titled Extension publications ordered in the state, 1965-1967, were accounted for by the eight classes (30 per cent for the high order and 35 per cent for the low order counties).

2. The three animal husbandry classes (beef, hogs and sheep) when combined accounted for 16 per cent (60,327 copies) of the total copies of publications ordered in the state (14 per cent, 33,328 copies, for high order and 17 per cent, 9,028 copies, for low order counties).

3. The smallest number (less than 1 per cent, 1,984 copies) of copies of all agricultural-titled Extension publications ordered in the state (less than 1 per cent, 1,088 copies, for high order and less than 1 per cent, 144 copies, for low order counties) were accounted for in the poultry title class.

Regarding Classes and Numbers of Agricultural-titled Extension Publications Studied Which Were on Hand, in Greatest Supply, at Time of Inventory

Findings presented in this section concern the classes and numbers of agricultural-titled Extension publications studied which were on hand, in greatest supply, at time of inventory. The eleven title classes in descending rank order according to total numbers of copies of agricultural Extension publications studied which were on hand, in greatest supply, at time of inventory. The eleven title classes in descending rank order according to total numbers of copies of agricultural Extension publications inventoried, 1967, and studied were, namely: (1) fruits and vegetables; (2) farm crops and fertilizers; (3) insects, plant diseases and pests; (4) dairy; (5) animal husbandry-beef; (6) forestry; (7) animal husbandry-hogs; (8) landscaping and lawns;

(9) agricultural economics; (10) poultry; and (11) animal husbandry-sheep. Title classes one through four above accounted for slightly less than two-thirds (61 per cent) of the total number of copies of agricultural-titled Extension publications on hand at time of inventory, 1967.

Fruits and vegetables title class. Findings related to this publication class included the following:

1. Eighteen per cent of all agricultural-titled Extension publications inventoried, 1967, in the state (18 per cent for high order and 19 per cent for low order counties) were accounted for by this title class.

2. Numerically, 45,402 copies of Extension publications inventoried in the state (24,129 copies in high order and 8,310 copies in low order counties) were from this title class.

3. The average number of copies of publications on hand in this class at time of inventory per county for the state was 477.92 (754.03 copies for high order and 259.69 copies for low order counties).

4. Of the twelve different titles in this class, county staffs for the state averaged inventorying 9.60 titles (10.44 for high order and 8.56 for low order counties).

Farm crops and fertilizer title class. Study of data concerning this publication class indicate the following:

1. Seventeen per cent of all agricultural-titled Extension publications inventoried, 1967, in the state, as well as for both high order and low order counties, were accounted for by this title class.

2. Numerically, 43,122 copies of Extension publications inventoried in the state (22,465 for high order and 7,583 for low order counties) were from this title class.

3. The average number of copies of publications on hand in this class at time of inventory per county for the state was 453.92 (702.03 copies for high order and 236.97 copies for low order counties).

4. Of the eleven different titles in this class, county staffs for the state averaged inventorying 6.75 titles (7.25 for high order and 5.97 for low order counties).

Insects, plant diseases and pests title class. Analysis of data relating to this publication class revealed the following:

1. Fifteen per cent of all agricultural-titled Extension publications inventoried, 1967, in the state (16 per cent for high order counties and 15 per cent for low order counties) were from this title class.

2. Numerically, 37,239 copies of Extension publications inventoried in the state (20,911 for high order and 6,373 for low order counties) were from this title class.

3. The average number of copies of publications on hand this class at time of inventory per county for the state was 391.99 (653.47 copies for high order and 199.16 copies for low order counties).

4. Of the ten different titles in this class, county staffs for the state averaged inventorying 6.16 titles (6.78 for high order and 5.34 for low order counties).



Dairy title class. Study of data concerning this publication class revealed the following:

1. Eleven per cent of all agricultural-titled Extension publications inventoried, 1967, in the state and high order counties (8 per cent low order counties) were accounted for by this title class.

2. Numerically, 27,527 copies of Extension publications inventoried in the state (14,862 for high order and 3,733 for low order counties) were from this title class.

3. The average number of copies of publications on hand this class at time of inventory per county for the state was 289.76 (464.44 copies for high order and 116.66 copies for low order counties).

4. Of the eleven different titles in this class, county staffs for the state averaged inventorying 4.72 titles (5.59 for high order and 3.84 for low order counties).

Other title classes. Analysis of data concerning the animal husbandry-beef, forestry, animal husbandry-hogs, landscaping and lawns, agricultural economics, poultry, and animal husbandry-sheep title classes revealed the following:

1. Slightly more than one-third (39 per cent) of the total copies of agricultural-titled Extension publications inventoried in the state, 1967, were accounted for by these seven classes (38 per cent for high order and 41 per cent for low order counties).

2. The three animal husbandry classes (beef, hogs and sheep) when combined accounted for 18 per cent (56,881 copies) of the total copies of publications inventoried in the state (17 per cent--30,243 copies --for high order and 20 per cent--10,522 copies--for low order counties).

3. The smallest number (1 per cent--2,813 copies) of copies of all agricultural-titled Extension publications inventoried in the state (1 per cent--1,127 copies for high order and 2 per cent--776copies for low order counties) were accounted for in the animal husbandry-sheep title class.

Regarding Numbers of Copies of Publications Ordered and Inventoried,  
Number of Orders for Publications, and Numbers of Copies of Publi-  
cations Ordered by Quarterly Intervals

Findings presented in this section concern the total number of copies of agricultural-titled Extension publications ordered and inventoried, the number of orders for publications, and number of copies of publications ordered by quarterly intervals during the two year period, 1965-1967.

Total number of copies of publications ordered and inventoried.

Analysis of data pertaining to the total number of copies of publications ordered and inventoried revealed the following:

1. Sixty-four per cent (250,617 copies) of the total number of copies (393,985 copies) of agricultural-titled Extension publications ordered in the state, 1965-1967, were on hand at time of inventory, 1967.

2. High order counties had 58 per cent (134,465 copies) of their total copies (230,168 copies) of Extension publications ordered on hand at time of inventory, 1967.

3. Low order counties had 82 per cent (43,802 copies) of their total copies (53,580 copies) of agricultural-titles Extension publications order on hand at time of inventory, 1967.

Total number of orders for agricultural-titled Extension publications. Analysis of data relating to the number of orders for Extension publications revealed the following:

1. The total number of orders made for agricultural-titled Extension publications in the state, 1965-1967, was 1,559 (596 for high order and 402 for low order counties).
2. The average number of copies of publications per order for the state was 252.72 (386.19 for the high order and 133.28 for low order counties).

Total number of copies of Extension publications ordered by quarterly intervals. Findings relating to the number of copies of Extension publications ordered by quarterly intervals, 1965-1967, included the following:

1. Fifty per cent (196,762 copies) of all the agricultural-titled Extension publications ordered in the state, 1965-1967, were ordered during the months of January, February, and March (51 per cent--118,035 copies for high order and 46 per cent--24,906 copies for low order counties).
2. Twenty-five per cent (99,970 copies) of all Extension publications ordered in the state were ordered during the months of April, May, and June.
3. The smallest per cent (12) of all copies (46,101 copies) of Extension publications ordered, 1965-1967, were ordered during the months of July, August, and September.

Regarding Relationships Between Selected County Extension Program  
Factors and Certain Agricultural-Titled Extension Publication  
Ordering Patterns

Findings presented in this section concern relationships between four dependent agricultural-titled Extension publications variables, namely: (1) total number of copies of agricultural-titled Extension publications ordered; (2) total number of copies of agricultural-titled Extension publications ordered per full-time agricultural staff equivalent (FASE); (3) total number of copies of agricultural-titled Extension publications in inventory, and (4) total number of orders for agricultural-titled Extension publications; and ten selected independent county Extension program variables, namely: (1) total number of county Extension staff members; (2) total number of FASEs per county; (3) total number of full-time farm family equivalents; (4) total number of full-time farm family equivalents per FASE; (5) total value of agricultural products sold; (6) total value of agricultural products sold per FASE; (7) total appropriation to county agricultural agents; (8) total appropriation to county agricultural agents per FASE, (9) total real and personal assessed taxable property, and (10) total real and personal assessed taxable property per FASE.

Correlation between county Extension staff variables and  
agricultural-titled Extension publications variables. Statistical analysis of the data relating to the correlations between the two county Extension staff variables, (i.e. total number of county Extension staff members and total number of full-time agricultural staff equivalents;

and three agricultural-titled Extension publications variables (i.e. numbers of publications ordered, numbers of publications inventoried and number of publication orders) revealed the following:

1. As the total number of county Extension staff members per county increased, there was a significant increase in the number of copies of publications ordered (.05 level) and number of publication orders (.01 level) for the state. The same was true for low order counties, though confidence levels were reversed (i.e., .01 and .05, respectively). This was not true for high order counties.

2. As the total number of FASEs increased, there was a significant increase in the number of copies of publications ordered for the state (.05 level). This relation was not significant for high and low order categories.

Correlation between full-time farm family equivalent variables and agricultural-titled Extension publication variables. Findings relating to the correlations between the two farm family equivalent variables (total number of full-time farm family equivalents and total number of full-time farm family equivalents and total number of full-time farm family equivalents per FASE) and three agricultural-titled Extension publications variables (numbers of publications ordered, numbers of publications inventoried and numbers of publication orders) include the following:

1. As the number of full-time farm family equivalents per county increased, there was a significant increase (.01 level) in the total number of publications ordered for both the state and low order groups;

and likewise there were increases in the numbers of publications inventoried (.05 level) and number of publication orders (.01 level) for these groups.

2. As the number of full-time farm family equivalents per county per FASE increased, there was a significant increase (.05 level) in the total number of copies of publications ordered only in the low order group, however, there were increases in both numbers of publications inventoried (.05 level) and number of publication orders for the total state (.01 level).

Correlation between county value of agricultural products sold variables and agricultural-titled Extension publications variables.

Analysis of the data relating to the correlations between the two county value of agricultural products sold variables (total value of agricultural products sold and total value of agricultural products sold per FASE), and three agricultural-titled Extension publications variables, (numbers of publications ordered, numbers of publications inventoried and numbers of publications orders) revealed the following:

1. As the total value of agricultural products sold per county increased, there were significant increases in the numbers of publications ordered (.05 level) and number of publication orders (.01 level) only for the low order county group.

2. As the total value of agricultural products sold per county per FASE increased there was a significant increase in the number of publication orders (.05 level) only for the low order county group.

Correlation between county appropriation variables and agricultural-titled Extension publications variables. Study of data relating to the correlations between the two county appropriation variables (total appropriation to county agricultural agents and total appropriations to county agricultural agents per FASE), and three agricultural-titled Extension publications variables (numbers of publications ordered, numbers of publications inventoried and number of publications orders) disclosed the following:

1. As the appropriation to county agricultural agents per county increased, there was a significant increase in the total number of publications ordered for both the state (.01 level) and low order county (.05 level) groups; and likewise, there was a significant increase in the number of publications orders (.01 and .05 levels, respectively) for these groups.

2. As the appropriation to county agricultural agents per county per FASE increased, there was a significant increase in the total number of publications ordered for both the state (.05 level) and low order (.01 level) groups; likewise, there was a significant increase in the number of publications inventoried for the state (.05 level) and a significant increase in the number of publication orders for the state (.01 level), high (.05 level) and low order (.05 level) groups.

Correlation between county real and personal assessed taxable property variables and agricultural-titled Extension publications variables. Analysis of the data relating to the correlations between the two county real and personal assessed taxable property variables (total real and personal assessed taxable property and total real and

personal assessed taxable property per FASE) and three agricultural-titled Extension publication variables (numbers of publications ordered, numbers of publications inventoried and numbers of publications orders) revealed the following:

1. As the total real and personal assessed taxable property per county increased, there was a significant increase in the total number of publications ordered for both the state (.01 level) and low order (.05 level) county groups; likewise, there was a significant increase in the number of publication orders for both the state (.01 level) and high order (.05 level) county groups.

2. As the real and personal assessed taxable property per county per FASE increased, there was a significant increase in the total number of publications ordered for the state (.01 level); and significant increases in the number of publication orders for both (.01 level) the state and high order county groups.

Multiple correlation of five selected county Extension program variables with the total number of agricultural-titled Extension publications ordered variable. Analysis of the data related to the multiple correlation of five selected county Extension program variables, namely: (1) total number of county Extension staff members; (2) total number of full-time farm family equivalents; (3) total value of agricultural products sold; (4) total appropriation to county agricultural agents; and (5) total real and personal assessed taxable property, with the total number of agricultural-titled Extension publications ordered variable revealed the following:



1. The five selected program variables accounted for 13 per cent of the variation in the total number of publications ordered in the state (16 per cent for high order and 44 per cent for low order counties).

2. The largest per cent (10) of this variation in total number of publications ordered was accounted for by the total county appropriation to county agricultural agents variable; whereas the largest per cent (35) of variation in the low order counties was accounted for by the total number of full-time farm family equivalent variable.

3. Although 16 per cent of the variation in total number of agricultural-titled Extension publications ordered was accounted for by the five program variables in the high order counties, none of the variables reached a significant level for either  $r$  or  $R$ .

4. The total county appropriation to county agricultural agents was the most accurate predictor of the total number of publications ordered in the state.

Multiple correlation of five selected county Extension program per full-time agricultural staff equivalent variables with the total numbers of agricultural-titled Extension publications ordered variable.

Analysis of the data related to the multiple correlation of five selected county Extension program variables, namely: (1) total number of county Extension staff members per full-time agricultural staff equivalents (FASE); (2) total number of full-time farm family equivalents per FASE; (3) total value of agricultural products sold per FASE; (4) total appropriation to county agricultural agents per FASE;

and (5) total real and personal assessed taxable property per FASE, with the total number of agricultural-titled Extension publications ordered variable revealed the following:

1. The five selected program variables accounted for 10 per cent of the variation in the total number of publications ordered in the state (18 per cent for high order and 37 per cent for low order counties).

2. The largest per cent (7) of the variation in total number of publications ordered in the state was accounted for by the total real and personal assessed taxable property variable; whereas, the largest per cent (31) of variation in the low order counties was accounted for by the total county appropriation to county agricultural agents variable.

3. Although 18 per cent of the variation in total number of agricultural-titled Extension publications ordered was accounted for by the five program variables in high order counties, none of the variables reached a significant level for either  $r$  or  $R$ .

4. The total county appropriation to county agricultural agents was the most accurate predictor of the total number of publications ordered for the low order counties.

Multiple correlation of five selected county Extension program variables with the total number of agricultural-titled Extension publications ordered per full-time agricultural staff equivalent variable. Analysis of the data related to the multiple correlation of five selected county Extension program variables, namely: (1) total number of county Extension staff members; (2) total number of full-time farm family equivalents; (3) total value of agricultural products sold; (4) total appropriation to county agricultural agents; and (5) total

real and personal assessed taxable property with the total number of agricultural-titled Extension publications ordered per full-time agricultural staff equivalent (FASE) variable revealed the following:

1. The five selected program variables accounted for 6 per cent of the variation in the total number of publications ordered per county per FASE in the state (43 per cent for high order and 25 per cent for low order counties).

2. The largest per cent (32) of the variation in the high order counties was accounted for by the total number of county Extension staff members variable.

3. Although 6 per cent (25 per cent for low order counties) of the variation in total number of publications ordered per FASE were accounted for by the five program variables in the state, they did not reach a significant level for either  $r$  or  $R$ .

4. The total number of county Extension staff members was the most accurate predictor of the total number of publications ordered per FASE for the high order counties. All relations were negative ones (i.e. increase in the independent variables resulted in decreases in the dependent variable).

## II. IMPLICATIONS AND RECOMMENDATIONS

Some of the implications drawn and recommendations made based upon the findings of this benchmark study are:

1. Since statistical analyses of the data revealed that seven of the ten selected county Extension program factors were positively associated with the total number of copies of agricultural-titled

Extension publications ordered in the state, and since there were wide ranges in the numbers of copies of these publications ordered by county staffs in high and low order counties, careful consideration of the characteristic differences between high and low order counties should be given by state and district Extension personnel in planning and conducting county agricultural agent in-service training dealing with publication ordering procedures and of agricultural-titled Extension publications.

2. Because county staffs for the state were carrying inventories of approximately two-thirds of the total numbers of copies of agricultural-titled Extension publications ordered in a two year period, it would appear that publication expenditures could be reduced if Extension administrators gave consideration to decreasing the average number of copies of such publications ordered and carried in the county inventory (also, fewer copies of a publication would be on hand should it be withdrawn from print). Also, because 50 per cent of the total numbers of copies of publications ordered were requested during the months of January, February and March, it appears that additional reductions in expenditures could result from having county staffs to order more copies of publications in months other than January, February, and March. This would permit better scheduling of time for personnel in the state mailing room.

3. Since two-thirds of all copies of agricultural-titled Extension publications ordered in the state were from three of the eleven classes, and accounted for only 33 of the 80 titles studied,

Extension specialist and departmental leaders in cooperation with program personnel should give careful consideration to a more frequent review of the remaining eight publication classes and 47 titles for the purpose of determining if the title publications in print and available for distribution to county Extension staffs contain subject matter relevant to the current agricultural Extension teaching effort and, in fact, are needed.

4. Due to the observed variations in the ordering patterns of county Extension agents for agricultural-titled Extension publications in Tennessee and in anticipation of developing the best possible procedures for ordering and utilizing these publications, district supervisors and appropriate administrative and specialist staff should be familiar with the findings of this study.

5. Extension administrators and other appropriate state staff should develop (i.e. in written form) and implement Extension publication ordering procedures which will effect the best possible use of publication funds.

#### Recommendations for Further Study

1. A follow-up study similar to the present one should be conducted in Tennessee for the years, 1969-1970.

2. Benchmark studies similar to the present one should be conducted in Tennessee to study the ordering patterns of Extension agents for Extension publications with titles dealing with each of these additional subject areas, namely: (1) home economics, (2) 4-H Club, and (3) resource development.

3. Additional study, using the base data of the present study, should be made of other possible Extension program factors having relationships to the numbers of copies of Extension publications ordered (i.e. performance review rating of county agricultural agents in the state, high and low order counties and the numbers of copies of agricultural-titled Extension publications ordered).

4. The implications of the present study with regard to the range in total number of copies of Extension publications ordered by county staffs in Tennessee indicate the need for additional study to be made relative to the distribution patterns of Extension agents for agricultural-titled Extension publications at the county level. Special emphasis should be given to the following: (1) how do county Extension agents decide which agricultural-titled Extension publications to order from the state mailing room and how many copies of each title to order? (2) what methods for distribution of publications do agents use such as handing copies to office visitors, office publication display racks, special interest meetings, regular scheduled meetings, in reply to letter and phone request, home visits and others? and (3) how are the copies of publications in inventory handled at the county with regard to obsolete publications for which revisions have not been made and those which are obsolete but revisions have been made? What system is followed in maintaining adequate stocks of publications in inventory?

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## APPENDIXES

APPENDIX A

PUBLICATIONS ORDER BLANK

Date Order Received	Date Order Filled	Date _____ 19__
		Name _____
		County _____
		P. O. Box No. _____
		Street Address _____
		Post Office _____
		Zip Code _____

**Instructions:** Use this form in conjunction with the two publications order catalogs, EC 641, Tennessee Farm and Home Publications, Form 73, Popular Publications and Form 435, 4-H Publications and Materials.

This is an ordering form for ALL publications and bulletins stocked in the U-T Agricultural Extension mailing room.

1. Please list the publication(s) or bulletin(s) needed and mail this form to:  
Extension Mailing Room  
Box 1071  
Knoxville, Tennessee 37901
2. Please order EC's (Extension Circulars) and SC's (Special Circulars) and all other specified departmental materials DIRECTLY from the subject matter departments by separate letter or request—unless such materials are specially listed in Form 73 or Form 435 as being available through the Extension Mailing Room.
3. Please use Form FES 91A for ordering all USDA publications—unless such materials are specially listed in EC 641, Form 73 or Form 435 as being available through the Extension Mailing Room or subject matter department.

Number	Publication or Bulletin	Number Copies Needed	Special Instructions
Sample: Pub. 433	How to Control the Alfalfa Weevil	500	
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			

(Use additional forms if needed)

**To be completed by Mailing Room:**

The publications below were out of stock for the following (checked) reasons:

Publication	Being Reprinted	Held for Revision	Withdrawn (Killed)	Date Supply Expected	Please Reorder
1.					
2.					
3.					
4.					
5.					

Form No. 559  
March 1965

Send White and Blue Copies to Extension Mailing Room  
Keep Yellow Copy for Your Files.

FIGURE 2

PUBLICATIONS ORDER BLANK

## APPENDIX B

### List of Eighty Agricultural-Titled Extension Publications Studied

1965-1967

#### Agricultural Economics Title Class

- PB 459 How to Keep and Use Farm Records
- PB 473 What Sets Hog Prices
- PB 483 Beef Shoppers Guide
- PB 532 Outlook--A Key to Profits on Your Farm
- PB 534 Guidelines to Forming Farmer Associations
- PB 545 The Total Management Framework of Agri-Business Firms
- PB 547 Divisions of Responsibility in Management in Agri-Business Firms
- PB 557 Live Hog Future Trading
- PB 562 Key Factors Affecting Farm Profits

#### Animal Husbandry-Beef Title Class

- PB 330 Beef Cattle in Tennessee
- PB 450 You Can Control Livestock Pests
- PB 500 Summer Feed--One Key to 500-Pound Calves
- PB 527 Let's Go Solo--Save our Little Ones
- PB 542 TBCIP (Tennessee Beef Improvement Program)
- PB 544 Tennessee Beef Cattle Calendar

#### Animal Husbandry-Hogs Title Class

- PB 391 More Money from Hogs
- PB 441 Country Style Pork
- PB 453 Tennessee Feeder Pigs
- PB 533 Why Produce the Meat-Type Hog?

#### Animal Husbandry-Sheep Title Class

- PB 531 Your Spring Lamb Production Calendar
- PB 539 Eight Steps to Spring Lamb Production

#### Dairy Title Class

- PB 401 Raise Better Dairy Calves
- Pb 416 Good Feeding Makes More Milk
- PB 425 Raise Good Dairy Herd Replacements
- PB 426 Milking the Easy Way with Parallel-Type Elevated Stalls
- PB 427 Save Time and Labor with Layout and Equipment
- PB 428 Use Rye and Oats to Grow More Fall and Early Spring Pasture

Dairy Title Class (continued)

- PB 429 Milking the Easy Way with V-Type Elevated Stalls
- PB 431 Food and Health Profits From the Home Milk Supply
- PB 436 Managed Milking Means More Milk
- PB 561 Machine Milking
- Pb 423 Feed Your Cows for Profit

Farm Crops and Fertilizers Title Class

- PB 358 Burley Tobacco Production in Tennessee
- PB 378 Field Crop Seeding Guide
- PB 381 Fertilizer Recommendations
- PB 385 Chemical Weed Control for Field Crops
- PB 395 Chemical Weed Control in Tobacco Beds
- PB 421 Soybean Production
- PB 424 Grow More Summer Pasture
- PB 432 Cotton Production in Tennessee
- PB 443 More Corn Per Acre
- PB 480 Let's Control Johnson Grass
- PB 533 How Good Is Your Feed

Forestry Title Class

- PB 445 Marketing Woodland Products
- PB 465 A Simple Method of Treating Fence Posts
- PB 471 Planting Forest Tree Seedlings
- PB 472 There's Cash in Salvage Timber
- PB 474 How to Cut for the Top Dollar
- PB 476 It Pays to Kill Scrub Trees
- PB 528 Shaping Christmas Trees for Profit
- PB 540 Write Your Own Timber Sale Agreement

Fruits and Vegetables Title Class

- PB 344 Growing Strawberries in Tennessee
- PB 363 Pepper Production in Tennessee
- PB 375 Home Fruit Spray Schedule
- PB 403 Commercial Tomato Production
- PB 418 Recommended Vegetable Varieties
- PB 419 Recommended Fruit Varieties
- PB 420 Quality Sweet Potato Production
- PB 446 Okra Production
- PB 447 Vegetable Garden Guide
- PB 452 Chemical Weed Control in Fruits and Vegetables
- PB 475 The Pecan Tree for Nuts and Shade
- PB 504 Selecting an Orchard Site

Insect and Plants Diseases Title Class

- PB 349 Household Pest Control
- PB 377 Crown Rot on Alfalfa Clover
- PB 387 Cotton Insect Control
- PB 393 Control of Poultry Pest
- PB 433 Alfalfa Weevil Control
- PB 506 Stop Field Crop Pest
- PB 538 We, the Pest Killers
- PB 554 Pesticide Dilution Table Based on Pounds Per Acre
- PB 556 Pesticide Storage Locker You Can Build
- PB 563 Pesticide Dilution Table Based on Active Ingredient  
in Finished Sprays

Landscape and Lawns Title Class

- PB 326 Tennessee Lawns
- PB 379 Planting and Care of Ornamental Trees and Shrubs
- PB 454 Landscape Planning

Poultry Title Class

- PB 415 Tennessee's 40 x 40 Poultry House
- PB 463 Calcium for Layers
- PB 501 Poultry Flock Vaccination
- PB 524 Egg Handling Guide for Retailers

APPENDIX C

TABLE LVIII

AGRICULTURAL-TITLED EXTENSION PUBLICATION ORDERING DATA IN ALL 95 COUNTIES, 1965-1967

County	Variable Number													
	y1	y2	y3	y4	x5	x6	x7	x8	x9 (1000)	x10 (1000)	x11	x12	x13 (1000)	x14 (1000)
Anderson	6,495	5,196	3,661	31	4.2	1.25	1,842	1,474	1,311	1,049	2,594	2,470	19,485	15,588
Bedford	6,675	5,256	5,348	14	4.25	1.27	1,778	1,400	6,133	4,829	2,258	2,213	14,746	11,611
Benton	2,440	1,731	629	13	3.2	1.41	894	634	1,442	1,023	1,748	1,433	2,992	2,122
Bledsoe	985	904	954	22	4.0	1.09	707	649	1,805	1,656	1,709	1,658	2,423	2,223
Blount	3,001	2,522	1,446	41	4.2	1.19	2,794	2,348	4,120	3,463	2,292	2,315	51,521	43,295
Bradley	4,631	3,172	911	38	4.45	1.46	1,737	1,190	4,859	3,328	2,649	2,171	14,108	9,663
Campbell	1,635	1,308	607	12	4.2	1.25	1,437	1,150	1,286	1,028	2,080	1,981	4,510	3,608
Cannon	3,200	2,500	5,366	5	3.0	1.28	1,068	834	2,061	1,610	1,530	1,195	3,106	2,427
Carroll	5,225	4,147	4,774	19	4.0	1.26	2,567	2,037	7,267	5,767	2,945	2,337	9,727	7,720
Carter	5,531	4,097	3,346	10	4.25	1.35	2,189	1,621	1,807	1,339	2,115	2,014	39,120	28,978
Cheatham	3,540	6,436	1,107	22	2.0	0.55	992	1,804	2,353	4,278	1,186	2,157	3,984	7,244
Chester	1,660	1,297	1,721	17	3.0	1.28	1,051	821	4,005	3,129	2,372	1,853	3,370	2,633
Claiborne	6,575	5,260	4,235	15	3.2	1.25	2,351	1,881	5,016	4,013	1,605	1,529	4,594	3,675
Clay	6,490	4,954	3,238	12	3.0	1.31	903	689	2,226	1,699	1,326	1,012	1,509	1,152
Cocke	3,250	2,664	1,036	12	3.2	1.22	1,902	1,559	5,524	4,528	2,034	1,994	7,452	6,108
Coffee	1,475	815	1,752	14	4.33	1.81	1,589	878	4,715	2,605	3,936	2,607	17,521	9,680
Crockett	13,300	6,856	4,337	21	4.0	1.94	2,128	1,097	11,660	6,010	3,019	1,556	12,848	6,623
Cumberland	3,030	2,104	2,710	24	4.2	1.44	1,298	901	2,843	1,974	2,106	1,698	5,361	3,723
Davidson	6,228	2,673	4,464	34	7.0	2.33	8,164	3,504	4,951	2,125	6,584	4,771	670,261	287,665
Decatur	1,825	857	1,958	6	5.0	2.13	919	431	1,832	860	1,849	1,541	2,120	995
DeKalb	2,715	3,352	465	7	2.0	0.81	1,358	1,677	3,439	4,245	1,160	1,432	3,135	3,870
Dickson	6,300	5,526	3,043	12	4.2	1.14	1,458	1,279	3,125	2,741	2,552	2,527	6,660	5,842
Dyer	3,412	2,730	1,169	20	4.0	1.25	2,017	1,614	16,467	13,174	3,011	2,409	15,384	12,307
Fayette	2,594	1,104	1,872	16	6.0	2.35	3,284	1,397	15,466	6,581	3,361	2,453	7,590	3,230
Fentress	1,145	1,218	2,399	16	3.0	0.94	1,028	1,094	4,770	5,074	1,304	1,387	4,372	4,651

TABLE LVIII (continued)

County	Variable Number													
	x1	x2	x3	x4	x5	x6	x7	x8	x9 (1000)	x10 (1000)	x11	x12	x13 (1000)	x14 (1000)
Franklin	2,895	1,540	2,229	15	5.0	1.88	2,163	1,151	6,720	3,575	1,913	2,056	10,734	5,710
Gibson	9,250	1,447	4,668	22	5.0	2.08	4,367	2,100	21,583	10,376	4,672	2,246	23,956	11,517
Giles	4,932	1,854	2,079	14	7.0	2.66	2,356	886	6,781	2,549	3,922	1,904	11,965	4,498
Grainger	1,125	978	1,898	10	3.0	1.15	1,670	1,452	4,048	3,520	1,460	1,270	3,760	3,270
Graene	3,525	1,855	5,091	19	5.0	1.90	4,533	2,386	16,058	8,451	5,145	2,708	23,453	12,344
Grundy	1,075	827	1,162	13	4.33	1.30	714	549	3,151	2,424	1,272	1,259	2,037	1,566
Hamblen	5,370	4,296	5,474	13	3.0	1.25	1,475	1,180	3,820	3,056	3,517	2,813	16,524	13,219
Hamilton	8,060	2,660	2,301	41	6.0	3.03	4,568	1,508	3,887	1,283	7,127	3,494	364,475	120,289
Hancock	3,450	4,600	2,144	16	1.2	0.75	1,274	1,699	2,707	3,610	720	1,200	2,071	2,762
Hardeman	2,860	1,288	348	10	6.0	2.22	1,983	893	8,257	3,719	2,567	2,021	5,689	2,563
Hardin	7,675	5,996	4,828	10	3.0	1.28	1,471	1,149	3,628	2,835	2,313	1,807	5,258	4,108
Hawkins	6,140	2,952	5,558	16	5.0	2.08	3,001	1,443	6,489	3,119	4,365	2,098	9,710	4,668
Haywood	3,381	1,509	789	21	5.0	2.24	3,104	1,386	14,381	6,420	2,995	2,396	9,507	3,351
Henderson	3,725	1,765	2,461	14	5.0	2.11	1,805	855	6,144	2,912	1,880	1,607	6,031	2,858
Henry	4,810	3,787	3,379	14	4.2	1.27	1,867	1,470	8,038	6,329	1,785	1,668	12,528	9,865
Hickman	2,750	2,331	2,528	10	4.2	1.18	1,116	946	2,653	2,248	1,570	1,570	4,587	3,887
Houston	2,285	3,047	1,389	10	2.2	0.75	436	581	709	945	935	1,700	1,657	2,209
Humphreys	1,700	1,371	1,022	8	4.2	1.24	888	716	1,988	1,603	2,150	2,048	10,413	8,398
Jackson	1,820	2,022	1,787	8	2.0	0.90	1,353	1,503	2,879	3,199	1,129	1,254	2,384	2,649
Jefferson	1,945	1,621	1,148	20	3.2	1.20	1,766	1,472	5,889	4,907	2,510	2,510	11,022	9,185
Johnson	11,490	8,511	3,560	32	3.25	1.35	1,465	1,085	3,452	2,557	1,635	1,277	5,974	4,425
Knox	5,580	2,232	4,148	11	6.2	2.50	7,336	2,934	6,505	2,602	5,725	3,948	247,848	99,139
Lake	225	281	353	2	1.0	0.80	706	883	8,189	10,236	2,400	3,000	7,300	9,125
Lauderdale	2,423	2,125	1,464	27	3.0	1.14	2,615	2,294	14,139	12,402	3,294	2,889	7,827	6,866
Lawrence	2,975	1,720	3,239	25	5.0	1.73	2,389	1,381	5,303	3,065	3,282	1,897	13,297	7,686
Lewis	1,065	1,420	566	9	2.2	0.75	491	655	763	1,017	943	1,715	2,562	3,416
Lincoln	7,165	4,215	5,297	19	5.0	1.70	2,704	1,591	8,193	4,820	2,267	2,667	17,983	10,578
Loudon	5,380	4,483	2,618	18	3.2	1.20	1,439	1,199	3,793	3,161	2,100	2,100	7,045	5,871
McMinn	1,735	1,248	1,134	11	4.45	1.39	1,975	1,421	5,767	4,149	2,800	2,435	13,819	9,942

TABLE LVIII (continued)

County	Variable Number													
	y1	y2	y3	y4	x5	x6	x7	x8	x9 (1000)	x10 (1000)	x11	x12	x13 (1000)	x14 (1000)
McNairy	5,862	5,329	1,457	15	3.0	1.10	1,996	1,815	6,253	5,685	1,308	1,189	5,648	5,135
Macon	1,205	906	1,250	8	3.0	1.33	1,829	3,375	4,849	3,646	2,843	2,138	6,955	5,229
Madison	4,265	1,350	3,641	20	7.0	3.16	3,314	1,049	11,442	3,621	6,776	2,144	38,116	12,062
Marion	3,760	2,507	2,355	17	3.53	1.50	1,107	738	1,851	1,234	1,890	1,601	7,824	5,216
Marshall	7,865	5,741	4,025	22	3.25	1.37	1,596	1,165	5,227	3,815	3,236	2,889	8,493	6,199
Mauzy	3,160	2,307	1,779	14	6.0	1.37	2,617	1,910	7,793	5,689	3,799	2,773	43,825	31,989
Meigs	1,025	907	855	10	2.2	1.13	499	441	1,406	1,244	1,351	1,453	4,687	4,148
Monroe	4,895	3,138	5,357	7	4.45	1.56	1,894	1,214	5,163	3,310	3,029	2,294	6,877	4,408
Montgomery	3,260	2,810	2,331	31	5.0	1.16	2,488	2,145	7,493	6,459	3,099	2,671	26,421	22,776
Moore	1,045	933	1,131	8	2.25	1.12	489	437	1,581	1,412	1,197	1,376	2,081	1,858
Morgan	3,660	2,752	2,530	14	3.0	1.33	873	656	1,234	928	3,297	2,479	2,318	1,743
Obion	5,391	4,212	3,688	29	4.0	1.28	2,357	1,841	14,987	11,708	3,886	3,036	17,799	13,905
Overton	2,795	2,184	1,839	17	3.0	1.28	1,503	1,174	2,171	1,696	2,422	1,892	3,751	2,930
Perry	2,107	1,915	1,314	13	3.2	1.10	2,488	2,262	1,063	966	1,500	1,667	1,500	1,364
Pickett	810	964	1,016	14	2.0	0.84	592	705	1,172	1,395	996	1,186	1,580	1,880
Polk	3,930	2,933	3,097	10	3.25	1.34	710	530	941	702	2,229	2,026	7,414	3,533
Putnam	3,680	2,647	1,932	13	4.0	1.39	2,094	1,506	3,210	2,309	2,333	1,678	20,272	14,584
Rhea	5,927	4,858	3,972	26	4.4	1.22	919	753	1,497	1,227	2,233	2,189	3,881	3,181
Roane	4,675	3,896	2,639	18	4.2	1.20	1,685	1,404	1,586	1,321	2,070	2,070	15,698	13,082
Robertson	4,776	3,411	2,781	17	6.0	1.40	2,495	1,782	13,800	9,857	3,147	2,248	19,185	13,704
Rutherford	2,875	2,544	1,758	13	5.25	1.13	2,806	2,483	7,431	6,576	2,850	3,000	36,137	31,980
Scott	3,080	3,385	2,296	14	2.0	0.91	922	1,013	2,290	2,517	1,309	1,438	2,226	2,446
Sequatchie	8,768	5,158	3,601	21	3.0	1.70	383	225	897	528	1,506	2,007	1,684	990
Sevier	5,254	3,503	2,803	16	3.2	1.50	2,269	1,513	4,661	3,107	2,580	1,985	10,760	7,173
Shelby	9,450	1,356	3,280	25	11.0	6.97	7,054	1,012	16,290	2,337	22,167	3,682	1,272,123	182,514
Smith	5,470	4,082	4,295	16	3.0	1.34	1,911	1,426	6,293	4,696	2,798	2,088	7,048	5,260
Stewart	12,325	17,607	5,746	14	2.0	0.70	843	1,204	2,099	2,999	840	1,200	1,726	2,466
Sullivan	9,575	4,788	4,299	24	5.0	2.00	4,324	2,162	5,422	2,711	5,470	2,735	117,618	58,809
Sumner	3,471	3,732	3,416	32	4.0	0.93	3,281	3,528	10,982	11,809	2,190	2,355	19,141	20,582
Tipton	2,940	916	1,102	13	6.0	3.21	2,915	908	15,312	4,770	5,670	1,800	9,479	2,953



TABLE LVIII (continued)

County	Variable Number													
	y1	y2	y3	y4	x5	x6	x7	x8	x9 (1000)	x10 (1000)	x11	x12	x13 (1000)	x14 (1000)
Trousdale	4,650	5,536	4,254	15	2.0	0.84	687	818	2,722	3,241	990	1,179	3,128	3,724
Unicoi	2,025	2,700	2,290	7	2.25	0.75	952	1,269	1,060	1,413	1,443	2,220	4,124	5,499
Union	916	1,309	1,480	14	1.2	0.70	964	1,377	1,550	2,215	450	900	1,720	2,454
Van Buren	575	719	902	6	2.0	0.80	354	443	625	781	961	1,202	1,059	1,324
Warren	3,575	2,008	1,356	7	5.0	1.78	1,798	1,010	7,255	4,076	3,269	1,836	6,958	3,909
Washington	9,235	6,369	9,485	8	4.25	1.45	3,394	2,341	9,210	6,352	3,250	3,095	34,182	23,574
Wayne	5,830	5,070	5,418	9	3.2	1.15	1,133	985	1,749	1,521	1,482	1,560	2,525	2,196
Weakley	2,575	2,028	2,720	20	4.0	1.27	2,718	2,140	11,217	8,833	2,891	2,276	13,169	10,369
White	2,220	1,597	1,147	21	4.0	1.39	1,470	1,058	4,175	3,004	1,728	1,243	5,127	3,688
Williamson	2,725	2,290	1,338	15	5.2	1.19	2,087	1,754	8,006	6,728	3,170	3,202	25,162	21,145
Wilson	2,190	1,991	1,720	15	5.0	1.10	2,327	2,115	9,029	8,209	4,065	3,695	22,945	20,859

NOTE: y1 = total number of copies of agricultural-titled Extension publications ordered.

y2 = total number of copies of agricultural-titled Extension publications ordered per full-time agricultural staff equivalent (FASE).

y3 = total number of copies of agricultural-titled Extension publications in inventory.

y4 = total number of orders for agricultural-titled Extension publications.

x5 = total number of county Extension staff members.

x6 = total number of full-time agricultural staff equivalents (FASE).

x7 = total number of full-time farm family equivalents.

x8 = total number of full-time farm family equivalent per full-time agricultural staff equivalent (FASE).

x9 = total value of agricultural products sold.

x10 = total value of agricultural products sold per full-time agricultural staff equivalent (FASE).

x11 = total appropriation to County Agricultural Agents.

x12 = total appropriation to County Agricultural Agents per full-time agricultural staff equivalent (FASE).

x13 = total real and personal assessed taxable property.

x14 = total real and personal assessed taxable property per full-time agricultural staff equivalent (FASE).

APPENDIX D

TABLE LIX

INTERCORRELATION BETWEEN PAIRS OF VARIABLES IN ALL 95 TENNESSEE COUNTIES, 1965-1967

Variable Number	y1 r	y2 r	y3 r	y4 r	x5 r	x6 r	x7 r	x8 r	x9 r	x10 r	x11 r	x12 r	x13 r	x14 r
y1	1.00	.75	.70	.35	.26	.23	.31	.13	.09	.03	.32	.25	.28	.27
y2		1.00	.56	.16	-.19	-.19	-.09	.09	-.11	-.01	-.15	-.03	-.08	-.04
y3			1.00	.09	.17	.05	.25	.23	.01	.06	.17	.26	.12	.17
y4				1.00	.35	.10	.32	.34	.03	.20	.29	.42	.29	.39
x5					1.00	.45	.54	.26	.07	.12	.73	.62	.59	.54
x6						1.00	.72	-.13	.74	-.03	.71	.30	.57	.40
x7							1.00	.51	.63	.26	.67	.66	.62	.71
x8								1.00	.06	.51	.18	.55	.18	.41
x9									1.00	.45	.29	.19	.11	.06
x10										1.00	.11	.25	-.08	-.04
x11											1.00	.59	.87	.66
x12												1.00	.51	.65
x13													1.00	.86
x14														1.00

NOTE: r = .21 is significant at .05 level. r = .27 is significant at .01 level.

- y1 = total number of copies of agricultural-titled Extension publications ordered.
- y2 = total number of copies of agricultural-titled Extension publications ordered per full-time agricultural staff equivalent (FASE).
- y3 = total number of copies of agricultural-titled Extension publications in inventory.
- y4 = total number of orders for agricultural-titled Extension publications.
- x5 = total number of county Extension staff members.
- x6 = total number of full-time agricultural staff equivalents (FASE).
- x7 = total number of full-time farm family equivalents.

TABLE LIX (continued)

$x_8$  = total number of full-time farm family equivalent per full-time agricultural staff equivalent (FASE).  
 $x_9$  = total value of agricultural products sold.  
 $x_{10}$  = total value of agricultural products sold per full-time agricultural staff equivalent (FASE).  
 $x_{11}$  = total appropriation to County Agricultural Agents.  
 $x_{12}$  = total appropriation to County Agricultural Agents per full-time agricultural staff equivalent (FASE).  
 $x_{13}$  = total real and personal assessed taxable property.  
 $x_{14}$  = total real and personal assessed taxable property per full-time agricultural staff equivalent (FASE).

TABLE LX

INTERCORRELATION BETWEEN PAIRS OF VARIABLES IN 32 HIGH ORDER TENNESSEE COUNTIES, 1965-1967

Variable Number	y1 r	y2 r	y3 r	y4 r	x5 r	x6 r	x7 r	x8 r	x9 r	x10 r	x11 r	x12 r	x13 r	x14 r
y1	1.00													
y2	.56	1.00												
y3	.22	.26	1.00											
y4	.26	-.12	-.34	1.00										
x5	.00	-.57	-.13	.29	1.00									
x6	.18	-.46	-.18	.90	.90	1.00								
x7	.03	-.47	.02	.32	.79	.68	1.00							
x8	-.13	-.22	.23	.13	.26	.04	.73	1.00						
x9	.22	-.35	.12	.13	.46	.48	.45	.29	1.00					
x10	.08	-.06	.22	.00	-.09	-.12	.06	.32	.78	1.00				
x11	.14	-.42	-.11	.31	.88	.96	.70	.13	.50	-.05	1.00			
x12	-.15	-.47	.13	.39	.66	.50	.80	.61	.27	.02	.59	1.00		
x13	.14	-.33	-.13	.38	.84	.90	.76	.24	.33	-.18	.93	.63	1.00	
x14	.04	-.33	-.08	.47	.72	.63	.87	.56	.17	-.01	.67	.79	.47	1.00

NOTE: r = .35 is significant at .05 level.

r = .45 is significant at .01 level.

y1 = total number of copies of agricultural-titled Extension publications ordered.

y2 = total number of copies of agricultural-titled Extension publications ordered per full-time agricultural staff equivalent (FASE).

y3 = total number of copies of agricultural-titled Extension publications in inventory.

y4 = total number of orders for agricultural-titled Extension publications.

x5 = total number of county Extension staff members.

x6 = total number of full-time agricultural staff equivalents (FASE).

TABLE LX (continued)

- x7 = total number of full-time farm family equivalents.
- x8 = total number of full-time farm family equivalent per full-time agricultural staff equivalent (FASE).
- x9 = total value of agricultural products sold.
- x10 = total value of agricultural products sold per full-time agricultural staff equivalent (FASE).
- x11 = total appropriation to County Agricultural Agents.
- x12 = total appropriation to County Agricultural Agents per full-time agricultural staff equivalent (FASE).
- x13 = total real and personal assessed taxable property.
- x14 = total real and personal assessed taxable property per full-time agricultural staff equivalent (FASE).

TABLE LXI

INTERCORRELATION BETWEEN PAIRS OF VARIABLES IN 32 LOW ORDER TENNESSEE COUNTIES, 1965-1967

Variable Number	y <sub>1</sub> r	y <sub>2</sub> r	y <sub>3</sub> r	y <sub>4</sub> r	x <sub>5</sub> r	x <sub>6</sub> r	x <sub>7</sub> r	x <sub>8</sub> r	x <sub>9</sub> r	x <sub>10</sub> r	x <sub>11</sub> r	x <sub>12</sub> r	x <sub>13</sub> r	x <sub>14</sub> r
y <sub>1</sub>	1.00	.78	.36	.33	.51	.32	.59	.36	.38	.24	.36	.56	.35	.30
y <sub>2</sub>		1.00	.21	.11	-.02	-.30	.22	.30	.03	.10	-.05	.33	.12	.19
y <sub>3</sub>			1.00	.23	.32	.25	.37	.23	.29	.18	.20	.28	.17	.12
y <sub>4</sub>				1.00	.35	.19	.48	.25	.48	.39	.36	.42	.24	.18
x <sub>5</sub>					1.00	.78	.56	.13	.42	.14	.64	.62	.54	.39
x <sub>6</sub>						1.00	.47	.01	.41	.07	.56	.33	.25	.03
x <sub>7</sub>							1.00	.72	.79	.62	.71	.65	.54	.45
x <sub>8</sub>								1.00	.51	.53	.47	.48	.39	.40
x <sub>9</sub>									1.00	.90	.75	.52	.56	.51
x <sub>10</sub>										1.00	.64	.39	.54	.59
x <sub>11</sub>											1.00	.78	.82	.72
x <sub>12</sub>												1.00	.79	.72
x <sub>13</sub>													1.00	.96
x <sub>14</sub>														1.00

NOTE: r = .35 is significant at .05 level.

r = .45 is significant at .01 level.

y<sub>1</sub> = total number of copies of agricultural-titled Extension publications ordered.

y<sub>2</sub> = total number of copies of agricultural-titled Extension publications ordered per full-time agricultural staff equivalent (FASE).

y<sub>3</sub> = total number of copies of agricultural-titled Extension publications in inventory.

y<sub>4</sub> = total number of orders for agricultural-titled Extension publications.

y<sub>5</sub> = total number of county Extension staff members.

y<sub>6</sub> = total number of full-time agricultural staff equivalents (FASE).

TABLE LXI (continued)

- x<sub>7</sub> = total number of full-time farm family equivalents.
- x<sub>8</sub> = total number of full-time farm family equivalent per full-time agricultural staff equivalent (FASE).
- x<sub>9</sub> = total value of agricultural products sold.
- x<sub>10</sub> = total value of agricultural products sold per full-time agricultural staff equivalent (FASE).
- x<sub>11</sub> = total appropriation to County Agricultural Agents.
- x<sub>12</sub> = total appropriation to County Agricultural Agents per full-time agricultural staff equivalent (FASE).
- x<sub>13</sub> = total real and personal assessed taxable property.
- x<sub>14</sub> = total real and personal assessed taxable property per full-time agricultural staff equivalent (FASE).

## VITA

Jesse Eagleton Francis, son of Mrs. Charles Ernest and the late Mr. Francis, was born in Cannon County, Tennessee on August 8, 1927. He attended Readyville Elementary School and graduated from Woodbury High School in 1944. Following service in the United States Navy, 1945-1946, he received a Bachelor of Science degree in Agriculture from the University of Tennessee in June 1949. He accepted a position as Assistant County Agricultural Agent, Claiborne County with the University of Tennessee Agricultural Extension Service in August 1949, and has been a staff member of the Extension Service continuously since that date; serving as Assistant County Agent, Hamble County, 1953-1962; Assistant Rural Defense Specialist, 1963-1964 and District Supervisor-Management, 1965 to present. He served as president of the Tennessee County Agricultural Agents Association in 1962. He is a member of Kiwanis International, the United Methodist Church, and Alpha Zeta honorary fraternity. He is currently a candidate for the Master of Science degree in Agricultural Extension.