To the Graduate Council:

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

Robert S. Dotson, Major Professor

We have read this thesis
and recommend its acceptance:

Accepted for the Council:

Vice Chancellor
Graduate Studies and Research

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

SURVEY AND EDUCATION PROGRAM

CRANES CREST

A Thesis

Presented for the

Master of Science

Degree

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DEDICATION

This thesis is dedicated to my wife, Marzelle. I would also like to remember my parents, Mr. and Mrs. Howard E. Trail, and my father-and mother-in-law, Mr. and Mrs. William Lamar Tompkins. Others I want to remember are my brothers, Joel and Steve, and sisters-in-law, Glenda and Billie.

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Gratitude is expressed to all Extension personnel who have contributed to some degree during my studies.

A special thanks is expressed to Mrs. Fran Hatley for the typing of this thesis.

ABSTRACT

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

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

From the 1975 Tennessee Corn Production Survey, it was found that the average production in bushels of corn per acre for 811 growers randomly surveyed was approximately 78 bushels of grain per acre for the state. Significantly higher percents of those producing yields of over 78 bushels per acre from the 1975 survey, on the average, used a larger number of the eight recommended practices.

Recommended practices under Primary TEMIS Subject One, "Corn Fertilization"; Subject Two, "Corn Pest"; Subject Three, "Corn Production"; and Subject Four, "Corn Management and Harvesting"; were all above the concern level of 60 percent. Of the four Subjects mentioned above, Subjects One and Two were the weaker of the four, based on 1970 data, suggesting the need to emphasize them more in Extension's corn educational program as priority areas.

There was a decrease in total agent days planned and expended on corn subjects between FY 1972 and FY 1975. An increase was noted

in total contacts made by agents with corn producers between FY's 1972 and 1975.

Of Extension methods studied, increases in percents of agent time devoted to corn Extension work varied from district to district but were greatest for Individual Methods of instruction, decreases or no change occurring for Group and Mass Methods.

Though agents did not appear to have considered priority corn areas identified via the 1970 survey when planning for the period 1972-76, it was implied that Extension's educational efforts had paid off in increased production and practice use. It was obvious that further study would be necessary to show the true nature and extent of Extension's role in the indicated changes. Recommendations were included.

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CHAPTER I

INTRODUCTION

A. STUDY BACKGROUND

One of the important project areas of the Tennessee Agricultural Extension Service has traditionally been agricultural production and natural resources. Since a large number of Tennessee farmers grow corn for either grain and/or silage, this work area has been given priority educational emphasis through the years. In 1976 there were 715,000 acres of corn harvested for grain with an average yield of 79 bushels per acre (7:12)*.

Extension's charge in work with corn producers is like that in other areas: to diffuse research verified facts and encourage adoption of the same (8:55). This has involved agent time and contacts devoted to, among other corn subject areas, site selection and seedbed preparation, varietal selection and seeding, control of plant population, weed, insect and other pest control, and harvesting at the proper time based on research. Individual, group and mass methods have all been used in their appropriate places.

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

B. PURPOSE OF THE STUDY

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

Specific objectives included the following:

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

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

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

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

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C. DEFINITIONS OF TERMS

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

Corn Producers. This refers to individuals making all or part of their farming incomes from the production of corn.

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

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

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

Other. This teaching method category accounts for Extension Reporting, Planning, Evaluation, and Not Applicable items.

Tennessee Corn Practice Checklist Survey (TCPCS). Refers to the 1970 and 1975 surveys used for the study.

Tennessee Extension Management Information System (TEMIS). TEMIS provides a vehicle for the flow of management information to be used in program planning, evaluation, and reporting. TEMIS is designed to provide information for purposes of improved decision making and program accountability (9:1a).

Concern Level. A concern level was set for use in this study. It is generally considered that if a research-verified corn or other practice is being used by 60 percent or less of corn producers or others, it should be considered of educational concern (e.g., concern level).

All Other Corn Subjects. This refers to corn subjects listed in FY 1972 and FY 1975 TEMIS Handbooks that were not related to the four priority (i.e. Corn Fertilization, Corn Pest, Corn Production, Corn Management and Harvesting) corn subjects used in relation to recommended corn practices.

CHAPTER II

REVIEW OF LITERATURE

A search of relevant literature disclosed few items relating directly to the present study. Those that did relate in some way are mentioned below.

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

A Tennessee study was found to have related TEMIS data to practice checklist survey results. This 1977 study by Allen (1) was conducted in the soybean work area. It related agent time planned and expended and contacts made in FY 1972 and FY 1975 to information from the 1972 Statewide Tennessee Soybean Practice Checklist Survey (TSPCS). Allen found little relation between weak soybean subject areas identified, and time planned and spent by agents. He was able to cross-walk TSPCS data into TEMIS primary subjects listed for soybeans.

B. STUDIES OF CORN PRACTICES USED IN TENNESSEE

The Palmer study (5) on corn as a function of several management factor expressed as variables in quadratic prediction equations was the only study relating to corn production practices found. This study was initiated in Bradley County, Tennessee, 1960. The purposes of the study were:

1. To ascertain who among farmers then producing corn in the selected county or counties were non-users (defined here as those

regularly using less than one-half of the minimal fertilizer recommendation based on soil test).

2. To determine some factors that tended to hinder the adoption of recommended fertilization and production practices.

3. To measure differences in corn yields, production costs, and management factors under specified conditions.

4. To determine the educational effectiveness of the trial acre method of presenting corn fertilizer and associated production practices to non-users in terms of: (a) changes attitudes toward the proper use of fertilizers on corn, (b) increased knowledge concerning the proper use of fertilizer in corn production, and (c) practices adopted following an experimental educational program. This study showed that corn yiels in Tennessee could be greatly increased by following recommended management practices. Also, the trial-acre method of teaching was shown to be effective.

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

Henderson made a study (4) in 1975 concerning the description and evaluation of the Tennessee Extension Management Information System (TEMIS). Data for this study were collected by personal interviews with 28 selected Extension Leaders from across the State. Findings of the study are stated as follows: (1) the majority of Extension Leaders were keeping some type of record of their daily activities; (2) the majority of Extension Leaders felt that the Weekly Activity Report data were most useful for purposes of evaluating and less useful for

planning and reporting; (3) a majority of the leaders also felt that the data could show what they did, but not the effectiveness of the programs conducted; (4) the majority of Extension Leaders recommended no significant changes in the report form; and (5) the majority of the Extension Leaders felt that the fields on the report form that were most difficult and least accurate were the Subject code and the Purpose code. Numbers recorded for audiences and time expended were thought inaccurate also.

A study (3) was made by Cary in 1975 concerned with the description and evaluation of the Tennessee Agricultural Extension Service Practice Checklist Survey approach to establishing educational priorities and evaluating progress. Data for this study were collected from 28 selected Tennessee County Extension Leaders across the State. Findings of the study are stated as follows: (1) the majority of Extension Leaders were following recommended Tennessee Agricultural Extension Service procedures for conducting practice checklist surveys; (2) the majority of Extension Leaders felt that the survey data obtained were accurate; (3) the majority of Extension Leaders recommended no change in the survey instrument content and felt that change in practice use by producers was a good criterion measure for purposes of planning and evaluating the county Extension program; (4) the majority of Extension Leaders felt that practice checklist data were useful for purposes of Extension planning and evaluation; and (5) the majority of Extension Leaders considered the overall practice checklist approach to planning and evaluation to be practical, pertinent, functional, accurate, valid, and reliable.

Since the present study is the first of its kind relating Tennessee Corn Practice Checklist Survey (TCPCS) to TEMIS data on time planned, expended, and contacts made by Extension Districts including teaching methods; no other relevant studies were found.

CHAPTER III

METHODS AND PROCEDURES

The primary sources of information for this study were the 1970 and 1975 Tennessee Corn Production Surveys (see Appendix A); and TEMIS data for FY 1972 and FY 1975. The 1970 and 1975 statewide Corn Production Surveys (see Appendix B) summarized practices of Tennessee corn producers in regard to their use of the eight recommended corn production practices. The information received from these surveys allowed the Extension agent to group corn producers according to their need for educational assistance related to production. It also allowed Extension personnel to determine the subject areas most in need of improvement. The statewide surveys were conducted during 1970 and 1975. In 1970, a total of 1,415 adult corn producers was randomly surveyed, basically 30 growers per county, including 562 in District I; 221 in District II; 240 in District III; 180 in District IV; and 212 in District V. As for 1975, a total of 721 adult corn producers was randomly surveyed, basically 20 growers per county, including 187 in District I; 131 in District II; 140 in District III; 115 in District IV; and 148 in District V. Data from TEMIS computer printouts of agent days planned, expended, and contacts made, and teaching methods used for corn subjects were collected and arranged in order of corn production priorities in descending order, that is from least used (i.e., weakest) practice to most used (i.e., strongest) practice, in each of the Extension Districts and the state total.

Each of the eight recommended corn production practices was classified under one of four major TEMIS corn subjects, namely: Corn Fertilization, Corn Pest, Corn Production, Corn Management and Harvesting. All of the recommended practices were considered to be equally important (e.g. of equal weight) for study purposes. They were arranged in order from the least used practice in the 1970 Survey under each subject to those used most that year.

It was decided that any practice whose use was 60 percent and below would be considered as needing improvement. This was selected arbitarily as the concern level in this study based on established Extension practice (6). Data from 1970 and 1975 surveys were compared to note changes in percents of producers using the various practices.

All data from TEMIS were arranged in order of subject priority for the corn producers by districts and for the State. This study considered four main areas. These were numbers and percents of agent days planned and expended, contacts made, and teaching methods used. Raw data appears in Appendix C.

Calculations of increases or decreases in actual numbers of agent days planned and allocated to corn subjects were made by subtracting FY 1975 from those for FY 1972. These resulting figures represent absolute changes from 1972 and 1975.

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

CHAPTER IV

FINDINGS OF THE STUDY

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

A. EDUCATIONAL NEEDS OF CORN PRODUCERS

Though yield data were not available from the 1970 Tennessee Corn Practice Checklist Survey (TCPCS), such information were collected in 1975 (see Appendix B). In brief summary:

1. A total of 811 Tennessee corn producers surveyed in 1975 had an average yield of 78 bushels per acre.
2. A total of 345 producers surveyed averaged 16.8 tons of silage per acre.
3. The numbers of eight Extension recommended practices used by producers surveyed in 1975 for both corn for grain and silage production were positively associated with yields--the higher the production, the higher the number of practices used ($P < .005$) (2).

As seen in Table I, recommended practices included in the 1970 Tennessee Corn Practice Checklist Survey (TCPCS) were grouped according to the four Tennessee Extension Management Information System (TEMIS) primary subjects of Corn Fertilization, Subject 1; Corn Pests, Subject 2; Corn Production, Subject 3; and Corn Management and Harvesting, Subject 4. All Other Corn Subjects, Subject 5, appear in later tables. Table I lists the four major corn subjects in descending order of educational priority need for adult Tennessee corn producers. Priority needs were determined based on weak practices (i.e. those used by 60 percent or fewer of producers in counties) identified by the 1970 TCPCS (6:38). Practices were then grouped in bundles and ordered under the reconciled FY 1972 and 1975 TEMIS subjects to which they related.

In 1970 District I agents had interviewed the largest numbers of producers with 562 (39 percent), District II had 221 (16 percent), District III had 240 (17 percent), District IV had 180 (13 percent), District V had 212 (15 percent) for a state total of 1,415 interviewees. Again in 1975 District I agents interviewed the largest number of producers with 187 (26 percent), District II had 131 (18 percent, District III had 140 (19 percent), District IV had 115 (16 percent), and District V had 148 (21 percent) for a state total of 721 interviewees.

Comparison by Subjects

Only one 1970 subject (i.e. Bundles of practices) average approached the specified concern level of 60 percent when subtotals were summed. Subject 1, Corn Fertilization, had the lowest percentage

TABLE I

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

TEMIS 1972 and 1975 Primary Corn Subject and Related Recommended Practices	1970 Survey (N=1415)	1975 Survey (N=721)	Changes 1970-1975 (+ or -)
	----------Percent----------		
1. Corn Fertilization			
(a) Used correct lime and fertilizer rate	33	45	+12
(b) Used correct application of fertilizer	88	90	+ 2
Subtotal Average	61	68	+ 7
2. Corn Pest			
(a) Protect stored grain from pest	53	61	+ 8
(b) Used recommended weed control	76	79	+ 3
Subtotal Average	65	70	+ 5
3. Corn Production			
(a) Planted recommended variety	80	83	+ 3
(b) Had recommended plant population	81	76	- 5
(c) Used correct planting date	84	90	+ 6
Subtotal Average	81	83	+ 2
4. Corn Management and Harvesting			
(a) Harvested corn at proper stage	90	94	+ 4
Subtotal Average	90	94	+ 4
Total Average	74	79	+ 5

*1970 was used as the base year for statement of practice and for ordering.

of use at 61 percent. It had increased to 68 percent by 1975.

The grand totals for average practice use in all subjects were: in 1970, 74 percent, and in 1975, 79 percent. None of the four subjects averaged below the concern level of 60 percent; and an average improvement of 5 percent was noted for the period 1972-1975. Only one consequential practice difference, an improvement of (+) 12 percent on Practice 1A, "Used correct lime and fertilizer rate," is noted in Table I. All other changes registered improvement excepting a slight decrease (-) 5 percent on Practice 3B, "Had recommended plant population."

Reference to date in Table II through Table VI permits comparison of corn producers in the five Extension districts according to changes in subjects and practice use between 1970 and 1975.

Total average improvement for the four practice-related TEMIS subjects ranged from (+) 1 percent in District I to (+) 8 percent in District IV. Subject subtotal improvements of consequence between 1972 and 1975 ranged from none in Districts I and V to one subject each (i.e. Subject 1) in Districts II and III; and three subjects in District IV (i.e. Subjects 1, 2, and 4).

The largest single practice improvement registered was in District IV where the very consequential change was (+) 42 percent on Practice 2A, "Protect stored grain from pests." Additional consequential improvements were indicated in District IV on Practice 1A, "Used correct lime and fertilizer rate," (+) 20 percent, and Practice 4A, "Harvested corn at proper stage," (+) 10 percent. Also, consequential loss, (-) 17 percent was the largest decrease noted for District IV or any other district. It was shown on Practice 3A, "Had recommended plant population."

TABLE II

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

TEMIS 1972 and 1975 Primary Corn Subject and Related Recommended Practices	1970 Survey (N=562)	1975 Survey (N=187)	Changes 1970-1975 (+ or -)
	----------Percent----------		
1. Corn Fertilization			
(a) Used correct lime and fertilizer rate	33	37	+ 5
(b) Used correct application of fertilizer	93	97	+ 4
Subtotal Average	63	67	+ 4
2. Corn Pest			
(a) Protect stored grain from pest	56	48	- 8
(b) Used recommended weed control	80	89	+ 9
Subtotal Average	68	69	+ 1
3. Corn Production			
(a) Used correct planting date	80	83	+ 3
(b) Planted recommended variety	87	86	- 1
(c) Had recommended plant population	91	81	-10
Subtotal Average	86	83	- 3
4. Corn Management and Harvesting			
(a) Harvested corn at proper stage	95	95	0
Subtotal Average	95	95	0
Total Average	78	79	+ 1

*1970 was used as the base year for statement of practice and for ordering.

TABLE III

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

TEMIS 1972 and 1975 Primary Corn Subject and Related Recommended Practices	1970 Survey (N=221)	1975 Survey (N=131)	Changes 1970-1975 (+ or -)
	----------Percent----------		
1. Corn Fertilization			
(a) Used correct lime and fertilizer rate	43	51	+ 8
(b) Used correct application of fertilizer	84	96	+12
Subtotal Average	64	74	+10
2. Corn Pest			
(a) Protect stored grain from pest	70	69	- 1
(b) Used recommended weed control	78	80	+ 2
Subtotal Average	74	75	+ 1
3. Corn Production			
(a) Planted recommended variety	67	79	+12
(b) Had recommended plant population	68	73	+ 5
(c) Used correct planting date	81	78	- 3
Subtotal Average	72	77	+ 5
4. Corn Management and Harvesting			
(a) Harvested corn at proper stage	91	95	+ 4
Subtotal Average	91	95	+ 4
Total Average	75	80	+ 5

*1970 was used as the base year for statement of practice and for ordering.

TABLE IV

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

TEMIS 1972 and 1975 Primary Corn Subject and Related Recommended Practices	1970 Survey (N=240)	1975 Survey (N=140)	Changes 1970-1975 (+ or -)
	----------Percent----------		
1. Corn Fertilization			
(a) Used correct lime and fertilizer rate	39	65	+26
(b) Used correct application of fertilizer	94	91	- 3
Subtotal Average	67	78	+11
2. Corn Pest			
(a) Protect stored grain from pest	52	64	+12
(b) Used recommended weed control	79	81	+ 2
Subtotal Average	66	73	+ 7
3. Corn Production			
(a) Had recommended plant population	83	86	+ 3
(b) Used correct planting date	96	95	- 1
(c) Planted recommended variety	96	91	- 5
Subtotal Average	92	91	- 1
4. Corn Management and Harvesting			
(a) Harvested corn at proper stage	93	97	+ 4
Subtotal Average	93	97	+ 4
Total Average	80	85	+ 5

*1970 was used as the base year for statement of practice and for ordering.

TABLE V

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

TEMIS 1972 and 1975 Primary Corn Subject and Related Recommended Practices	1970 Survey (N=180)	1975 Survey (N=115)	Changes 1970-1975 (+ or -)
	----------Percent----------		
1. Corn Fertilization			
(a) Used correct lime and fertilizer rate	30	50	+20
(b) Used correct application of fertilizer	82	80	- 2
Subtotal Average	56	65	+ 9
2. Corn Pest			
(a) Protect stored grain from pest	35	77	+42
(b) Used recommended weed control	67	61	- 6
Subtotal Average	51	69	+18
3. Corn Production			
(a) Had recommended plant population	78	61	-17
(b) Planted recommended variety	85	77	- 8
(c) Used correct planting date	86	93	+ 7
Subtotal Average	83	77	- 6
4. Corn Management and Harvesting			
(a) Harvested corn at proper stage	81	91	+10
Subtotal Average	81	91	+10
Total Average	68	76	+ 8

*1970 was used as the base year for statement of practice and for ordering.

TABLE VI

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

TEMIS 1972 and 1975 Primary Corn Subject and Related Recommended Practices	1970 Survey (N=212)	1975 Survey (N=148)	Changes 1970-1975 (+ or -)
	----------Percent----------		
1. Corn Fertilization			
(a) Used correct lime and fertilizer rate	19	30	+11
(b) Used correct application of fertilizer	84	82	- 2
Subtotal Average	52	56	+ 4
2. Corn Pest			
(a) Protect stored grain from pest	47	54	+ 7
(b) Used recommended weed control	73	80	+ 7
Subtotal Average	60	67	+ 7
3. Corn Production			
(a) Planted recommended variety	62	80	+18
(b) Had recommended plant population	76	73	- 3
(c) Used correct planting date	90	96	+ 6
Subtotal Average	76	83	+ 7
4. Corn Management and Harvesting			
(a) Harvested corn at proper stage	89	91	+ 2
Subtotal Average	89	91	+ 2
Total Average	69	74	+ 5

*1970 was used as the base year for statement of practice and for ordering.

District I corn producers had a consequential improvement, (+) 9 percent, on Practice 2B, "Used recommended weed control," and showed a consequential loss in practice use on Practices 2A, "Protect stored grain from pest," (-) 8 percent, and 3C, "Had recommended plant population," (-) 10 percent.

District II producers showed consequential improvement on Practice 1B, "Used correct application of fertilizer," (+) 12 percent, and Practice 3A, "Planted recommended variety," (+) 12 percent.

Producers in District III showed a very consequential improvement of (+) 26 percent on Practice 1A, as well as on Practice 2A, (+) 12 percent.

Those in District V had consequential increases on Practice 1A, (+) 11 percent, and 3A, "Planted recommended variety," (+) 18 percent.

With respect to weak practices, then, Practice 1A was considered weak (i.e. deserving of educational program emphasis) in all districts in 1970 and in all but District III in 1975. Practice 2A also was weak in all districts excepting II in 1970 but in only I and V in 1975.

Though Subjects 1 and 2 appeared to be weak in only Districts IV and V in 1970, these were the ones apparently needing greatest program emphasis during the period 1970 through 1975 for the entire state.

B. SHIFTS IN AGENT CORN TIME PLANNED COMPARING FY 1972 AND FY 1975

Tables VII and VIII present increases and/or decreases between the numbers and percents of agent days planned, respectively, for FY 1972 and FY 1975. TEMIS Primary Subjects are arranged in descending order of educational priority. The rankings are as follows: Subject 1,

TABLE VII

NUMBER INCREASES OR DECREASES (ACTUAL SHIFTS) COMPARING EXTENSION AGENT DAYS PLANNED IN EACH EXTENSION DISTRICT FROM FISCAL YEAR 1972 TO FISCAL YEAR 1975 BY CORN SUBJECTS ARRANGED IN ORDER OF PRIORITY NEED

Priority Subject (Ranked)	Total	Extension District I	II	III	IV	V
	Number of Agent Days					
1. Corn Fertilization	- 67	- 40	12	- 24	- 1	- 14
2. Corn Pest	- 179	- 61	- 98	- 16	3	- 7
3. Corn Production	52	32	26	- 19	3	10
4. Corn Management and Harvesting	22	6	1	- 4	9	10
5. All Other Corn Areas	- 147	- 72	- 21	- 8	- 29	- 17
Total	~~- 329~~ 319	-135	- 80	- 71	- 15	- 18
Total Agent Days, 1972	1075	426	256	174	110	109
Total Agent Days, 1975	756	291	176	103	95	91

TABLE VIII

PERCENT INCREASES AND DECREASES (RELATIVE SHIFTS) COMPARING TENNESSEE EXTENSION AGENT DAYS PLANNED IN EACH EXTENSION DISTRICT FROM FISCAL YEAR 1972 TO FISCAL YEAR 1975 BY CORN SUBJECTS ARRANGED IN ORDER OF PRIORITY NEED

Priority Subject (Ranked)	Total	Extension District				
		I	II	III	IV	V
		Percent of Agent Days				
1. Corn Fertilization	- 0.98	- 2.75	11.07	-7.85	.67	-10.85
2. Corn Pest	- 8.09	- 3.32	-30.29	1.51	5.75	- 2.07
3. Corn Production	11.94	14.37	21.00	- 4.58	5.02	13.71
4. Corn Management and Harvesting	4.99	2.94	2.52	1.65	10.91	12.81
5. All Other Corn Areas	- 7.86	-11.24	- 4.30	9.27	-22.35	-13.60
Total	0.00	0.00	0.00	0.00	0.00	0.00

Corn Fertilization; Subject 2, Corn Pests; Subject 3, Corn Production; Subject 4, Corn Management and Harvesting; and Subject 5, All Other Corn Areas. The TEMIS data are presented for the five Extension Districts and the State total.

Comparison by Numbers of Agent Days

As seen in Table VII, there was a net decrease (-) of 329 agent days planned from FY 1972 to FY 1975. Total agent days planned in 1972 were 1,075 while total agent days planned in 1975 decreased to 756. Weaker subjects, Subject 1 and 2, showed decreases (-) in agent days planned, 67 fewer for the former and 179 for the latter. Increases (+) were shown for Subject 3, 52 days, and Subject 4, 22 days; while a decrease (-) was noted for Subject 5, 147 days. The number of days planned by all districts decreased (-), ranging from 135 fewer days in District I to 15 days fewer in District IV.

Subject 1, Corn Fertilization, had a net decrease (-) of 67 days planned, the districts ranging from a decrease (-) of 40 days in District I to an increase (+) of 12 days in District II.

Subject 2, Corn Pests, had the greatest net decrease (-) of 179 days planned. Here the range was from a decrease (-) of 98 days in District II to a small increase (+) of 3 days in District IV.

Subject 3, Corn Production, registered the greatest net increase (+) of 52 days planned, the shift ranging from a decrease (-) of 19 days in District III, the only loss, to an increase (+) of 32 days in District I.

Subject 4, Corn Management and Harvesting, had a net increase (+) of 22 days planned. The districts ranged from a decrease (-) of 4 days in

District III to increases (+) in all other districts, the largest being in District V, 10 days.

Subject 5, All Other Corn Areas, had a large decrease (-) of 147 days planned, the districts ranging from a decrease (-) of 72 days in District I to 8 in District III.

Comparison by Percents

Table VIII presents information regarding changes in relative percents of agent days planned according to the Corn Priority Subjects for the various districts and total state between FY 1972 and FY 1975. The percents of agent time planned by Subjects ranged from a decrease (-) of 8.09 percent for Subject 2 to an increase (+) of 11.94 percent for Subject 3.

Subject 1, Corn Fertilization, had a net relative decrease (-) of .98 percent, district figures ranging from a negative (-) 10.85 percent in time planned in District V to a positive (+) 11.07 percent in District II.

Subject 2, Corn Pests, had a net relative decrease (-) of 8.09 percent, district figures ranging from a negative (-) 30.29 in time planned in District II to a positive (+) 5.75 percent in District IV.

Subject 3, Corn Production, has a net relative increase (+) of 11.94 percent, district figures ranging from a negative (-) 4.58 percent in time planned in District III, to a positive (+) 21.00 percent in District II.

Subject 4, Corn Management and Harvesting, has a net relative increase (+) of 4.99 percent, district figures ranging from a positive

(+) 1.65 percent in time planned in District to a positive (+) 12.81 percent in District V.

Subject 5, All Other Corn Areas, has a net relative decrease (-) of 7.86 percent, district figures ranging from a decrease (-) 22.35 in time planned in District IV to an increase (+) of 9.27 percent in District III.

C. SHIFTS IN AGENT CORN TIME EXPENDED COMPARING FY 1972 AND 1975

Comparison by Agent Days

Table IX presents increases and/or decreases between the number of agent days actually expended in FY 1972 and FY 1975. There was a net decrease (-) of 19.73 days expended from 1972 to 1975. Total agent days expended in 1972 were 615.28; while total agent days expended in 1975 decreased to 595.55. Agent days expended by subjects ranged from a decrease (-) of 58.72 days expended for Subject V, All Other Corn Areas, to an increase (+) of 54.81 days expended for Subject 3, Corn Production. The total number of days expended for all districts shows a range of decrease (-) 31.92 days in District IV, to an increase (+) of 27.16 days expended in District I.

Subject 1, Corn Fertilization, had a net decrease (-) of 1.99 agent days expended from 1972 to 1975. There were decreases (-) in three districts: District II (-4.38), District III (-5.85), and District V (-4.74). District I increased (+) 6.25 agent days; and District IV increased (+) 6.73 agent days expended from 1972 to 1975.

Subject 2, Corn Pests, had a net increase (+) in agent days expended of 10.71 agent days. District II had a decrease (-) of 7.86

TABLE IX

NUMBER OF INCREASES AND DECREASES (ACTUAL SHIFTS) COMPARING TENNESSEE EXTENSION AGENT DAYS EXPENDED IN EACH DISTRICT FROM FISCAL YEAR 1972 TO FISCAL YEAR 1975 BY CORN SUBJECTS ARRANGED IN ORDER OF PRIORITY NEED

Priority Subject (Ranked)	Total	Extension District I	II	III	IV	V
		Number of Agent Days				
1. Corn Fertilization	- 1.99	6.25	- 4.38	- 5.85	6.73	- 4.74
2. Corn Pest	10.71	4.22	- 7.86	10.62	3.48	.25
3. Corn Production	54.81	40.81	7.64	- 3.38	- 9.38	19.12
4. Corn Management and Harvesting	- 24.54	- 6.14	7.25	- 8.39	- 21.50	4.24
5. All Other Corn Areas	- 58.72	- 17.98	- 6.62	- 17.91	- 11.25	- 4.96
Total	- 19.73	27.16	- 3.97	- 24.91	- 31.92	13.91
Total Agent Days, 1972	615.28	207.96	81.19	101.23	130.68	94.22
Total Agent Days, 1975	595.55	235.12	77.22	76.32	98.76	108.13

-19.73

agent days expended. All other districts show an increase (+) in agent days expended. District I increased (+) 4.22 agent days; District III increased (+) 10.62 agent days; District IV increased (+) 3.78 agent days; District V increased (+) .25 agent days expended from 1972 to 1975.

Subject 3, Corn Production, had a net increase (+) of 54.81 agent days expended from 1972 to 1975. There were decreases (-) in two districts; District IV (-9.38) and District III (-3.38). District II increased (+) 7.64 agent days; District V increased (+) 19.12 agent days; and District I increased (+) 40.81 agent days expended from 1972 to 1975.

Subject 4, Corn Management and Harvesting, had a net decrease (-) of 24.54 agent days expended from 1972 to 1975. There were decreases (-) in three districts; District IV (-21.50), District III (-8.39) and District I (-6.14). District V increased (+) 4.24 agent days; and District II increased (+) 7.25 agent days expended from 1972 to 1975.

Subject 5, All Other Corn Areas, showed a net decrease (-) of 58.72 agent days expended from 1972 to 1975. All districts showed decreases of agent days expended. District I decreased (-) 17.98 agent days; District III decreased (-) 17.91 agent days; District IV decreased (-) 11.25 agent days; District II decreased (-) 6.62 agent days; and District V decreased (-) 4.96 agent days.

Comparisons by Percents

Table X presents the changes in relative percents of agent time expended according to the Corn Priority Subjects for the various districts

TABLE X

PERCENT INCREASES AND DECREASES (RELATIVE SHIFTS) COMPARING TENNESSEE EXTENSION AGENT DAYS EXPENDED IN EACH EXTENSION DISTRICT FROM FISCAL YEAR 1972 TO FISCAL YEAR 1975 BY CORN SUBJECTS ARRANGED IN ORDER OF PRIORITY NEED

Priority Subject (Ranked)	Total	Extension District				
		I	II	III	IV	V
	----------Number of Agent Days----------					
1. Corn Fertilization	.06	1.19	- 4.85	- 4.45	7.59	- 7.10
2. Corn Pest	2.72	- 1.54	- 8.65	21.97	11.49	- 3.82
3. Corn Production	9.82	15.44	11.25	.20	- 2.95	15.06
4. Corn Management and Harvesting	-3.74	- 3.30	9.72	- 6.75	-13.61	2.94
5. All Other Corn Areas	-8.86	-11.79	- 7.46	-10.97	- 2.52	- 7.08
Total	0.00	0.00	0.00	0.00	0.00	0.00

between FY 1972 and FY 1975. Subjects ranged from a decrease (-) of 8.86 percent agent days expended for Subject 5, All Other Corn Areas, to an increase (+) of 9.82 percent agent days expended for Subject 3, Corn Production.

Subject 1, Corn Fertilization, had a net relative increase (+) in agent days of .06 percent. District V decreased (-) 7.10 percent in agent days; District II decreased (-) 4.85 percent in agent days; District III decreased (-) 4.45 percent in agent days expended. District I increased (+) 1.19 percent. District IV increased (+) 7.59 percent in agent days expended.

Subject 2, Corn Pests, showed a net relative increase (+) in percent of agent days expended of 2.72 percent. District II decreased (-) 8.65 in agent days; District V decreased (-) 3.82 in agent days; District 1 decreased (-) 1.54 percent in agent days expended. District III increased (+) 21.97 percent; and District IV had an increase (+) of 11.49 percent in agent days expended.

Subject 3, Corn Production, had a net relative increase (+) in agent days expended of 9.82 percent. District IV decreased (-) 2.95; however, District III (.20 percent), District II (11.24 percent), District V (15.06 percent), District I (15.44 percent), all showed relative increases (+) in agent days expended.

Subject 4, Corn Management and Harvesting, had a net relative decrease (-) in agents days expended of 3.74. District IV decreased (-) 13.61 percent in agent days; District III decreased (-) 6.75 percent in agent days; and District I decreased (-) 3.30 percent in agent days expended. District V increased (+) 2.94 percent; and District II

increased (+) 9.72 percent in agent days expended.

Subject 5, All Other Corn Areas, had a net relative decrease (-) of 8.86 percent in agent days expended. All districts decreased (-) in agent days expended. District I decreased (-) 11.79 agent days; District III decreased (-) 10.97 agent days; District II decreased (-) 7.46 agent days; District V decreased (-) 7.08 agent days; District IV decreased (-) 2.52 agent days expended from 1972 to 1975.

D. SHIFTS IN AGENT CORN CONTACTS MADE COMPARING FY 1972 AND FY 1975

Comparison by Numbers of Contacts Made

Table XI presents the numbers of increases and/or decreases between agent contacts made for FY 1972 and FY 1975 by Corn Priority Subjects and the districts studied.

Total contacts among all districts showed a net increase (+) of 835 contacts from FY 1972 to FY 1975. Total contacts increased (+) from 14,455 in 1972 to 15,290 in 1975. Subject 5, All Other Corn Areas, showed a decrease (-) of 3,607 contacts. Subject 3, Corn Production, showed a substantial increase (+) of 3,973 contacts from 1972 to 1975. District V had a decrease (-) of 1,719 contacts; while District III had a net increase (+) of 3,045 contacts.

Subject 1, Corn Fertilization, had a decrease (-) in contacts of 257. District V decreased (-) 1,073 contacts while District III decreased (-) to 55 contacts. No change was indicated for District II. District IV increased (+) 36 contacts; and District I increased (+) 835 contacts.

TABLE XI

NUMBER OF INCREASES AND DECREASES (ACTUAL SHIFTS) COMPARING TENNESSEE EXTENSION AGENT CONTACTS MADE IN EACH DISTRICT FROM FISCAL YEAR 1972 TO FISCAL YEAR 1975 BY CORN SUBJECTS ARRANGED IN ORDER OF PRIORITY NEED

Priority Subject (Ranked)	Total	Extension District I	II	III	IV	V
		Number of Contacts				
1. Corn Fertilization	- 257	835	0	- 55	36	-1,073
2. Corn Pest	494	- 251	- 39	1,260	72	- 548
3. Corn Production	3,973	1,734	301	1,704	- 32	266
4. Corn Management and Harvesting	232	94	20	223	- 279	174
5. All Other Corn Areas	-3,607	-2,243	- 94	- 87	- 645	- 538
Total	835	169	188	3,045	- 848	-1,719
Total Agent Contacts, 1972	14,455	7,146	691	1,169	1,744	3,705
Total Agent Contacts, 1975	15,290	7,315	879	4,214	896	1,986

Subject 2, Corn Pest, had a net increase (+) in contacts of 494. District V decreased (-) 548 contacts, District I decreased (-) 251 contacts, and District II decreased (-) 39 contacts. District IV increased (+) 72 contacts; and District III increased (+) 1260 contacts.

Subject 3, Corn Production, had the largest net increase (+) of contacts with 3,973. District IV showed a decrease (-) of 32 contacts. District V had an increase (+) of 266 contacts, District II had an increase (+) of 301 contacts, District III had an increase (+) of 1,704 contacts, and District I had an increase (+) of 1,734 contacts.

Subject 4, Corn Management and Harvesting, had a net increase (+) of 232 contacts. District IV showed a decrease (-) of 279 contacts. District II had an increase (+) of 20 contacts, District I an increase (+) of 94 contacts, District V an increase (+) of 174 contacts, and District III had an increase of (+) 223 contacts.

Subject 5, All Other Corn Areas, had the largest net decrease (-) of contacts with 3,607. All districts showed a decrease in number of contacts. Disctict I had a decrease (-) of 2,243 contacts, District IV had a decrease (-) of 645 contacts, District V had a decrease (-) of 538 contacts, District II had a decrease (-) of 94 contacts, and District III a decrease (-) of 87 contacts.

Comparison by Percents of Contacts Made

Table XII presents information regarding changes in relative percents of agent contacts made according to the Corn Priority Subjects for the various districts and total state between FY 1972 and FY 1975. Percents for subject contacts ranged from a relative net

TABLE XII

PERCENT INCREASES AND DECREASES (RELATIVE SHIFTS) COMPARING TENNESSEE EXTENSION AGENT CONTACTS MADE IN EACH DISTRICT FROM FISCAL YEAR 1972 TO FISCAL YEAR 1975 BY CORN SUBJECTS ARRANGED IN ORDER OF PRIORITY NEED

Priority Subject (Ranked)	State Total	Extension District				
		I	II	III	IV	V
	----------Percent of Contacts----------					
1. Corn Fertilization	- 2.32	11.35	- 2.82	- 6.50	5.60	-24.13
2. Corn Pest	1.46	- 4.36	- 9.88	4.44	18.07	- 3.11
3. Corn Production	25.03	23.35	27.07	16.08	8.31	26.66
4. Corn Management and Harvesting	1.26	1.24	1.25	1.64	- 9.54	10.84
5. All Other Corn Areas	-25.43	-31.58	-15.62	-15.66	-22.44	-10.26
Total	0.00	0.00	0.00	0.00	0.00	0.00

decrease (-) of 25.43 percent for All Other Corn Areas to a relative net increase (+) of 25.03 percent for Corn Production.

Subject 1, Corn Fertilization, had a relative net decrease (-) of 2.32 percent in contacts. District V decreased (-) 24.13 percent, District III decreased (-) 6.50 percent, and District II decreased (-) 2.82 percent. District IV increased (+) 5.60 percent, and District I increased (+) 11.35 percent of contacts made.

Subject 2, Corn Pest, had a relative net increase (+) of 1.46 percent in contacts. District II decreased (-) 9.88 percent, District I decreased (-) 4.36 percent, and District V decreased (-) 3.11 percent. District III increased (+) 4.44 percent, and District IV increased (+) 18.07 percent of contacts made.

Subject 3, Corn Production, had the largest relative net increase (+) of 25.03 percent in contacts. All districts show an increase (+) in percent of contacts made. District IV had an increase (+) of 8.31 percent, District III increased (+) 16.08 percent, District I an increase (+) of 23.35 percent, District V increased (+) 26.66 percent, and District II increased (+) 27.07 percent in contacts made.

Subject 4, Corn Management and Harvesting, had a net increase (+) of 1.26 percent in contacts made. District IV had a decrease (-) of 9.54 percent. District I increased (+) 1.24 percent, District II increased (+) 1.25 percent, District III increased (+) 1.64 percent, and District V increased (+) 10.84 percent in contacts made.

Subject 5, All Other Corn Areas, had a relative net decrease (-) of 25.43 percent in contacts. Each district showed a decrease (-)

in percent of contacts made. District I had a decrease (-) of 31.58 percent, District IV had a decrease (-) of 22.44 percent, District III a decrease (-) of 15.66 percent, District II a decrease (-) of 15.62 percent, and District V a decrease (-) of 10.26 percent in number of contacts made.

E. SHIFTS IN AGENT TIME DEVOTED TO CORN SUBJECTS USING VARIOUS TEACHING METHODS

Four commonly used groups of Extension methods were compared to determine whether any changes had occurred between FY 1972 and FY 1975. Again, data were analyzed by districts and according to the five corn subject categories used throughout the study.

Methods Compared by Number of Agent Days

Table XIII presents a comparison of shifts in numbers of agent days devoted to corn subjects using selected Extension methods according to districts and for the State. Regarding changes in days spent using different teaching methods on corn subjects in the State between FY 1972 and FY 1975, days ranged from a high increase (+) of 48.29 days of Individual Methods spent on Subject 3 to a low decrease (-) of 40.30 days, also of Individual Methods devoted to Subject 5.

Other State changes of any size included an increase (+) of 17.61 days of Individual Methods on Subject 2; and decreases (-) of 16.17 days of Other Methods (e.g. Planning, Preparation, Reporting, Non-Applicable) on Subject 4, 11.14 days of Group work on Subject 2, 8.89 days of Individual work on Subject 4, and 8.88 days of Group methods on Subject 5. Other changes were relatively small.

TABLE XIII

SHIFTS IN NUMBERS OF AGENT DAYS EXPENDED ON SELECTED CORN SUBJECTS USING EXTENSION TEACHING METHODS BY DISTRICTS, FY 1972 AND FY 1975

TEMIS Corn Subject and Teaching Methods	State Total	Extension District I	II	III	IV	V
	----------Number of Agent Days Expended----------					
1. Corn Fertilization						
(a) Individual	- .38	8.63	- 6.01	- 7.73	6.23	- 1.50
(b) Group Meetings	- .87	- 2.50	.50	1.88	0.00	- .75
(c) Mass Media	- 3.25	.50	- .38	0.00	- .38	- 2.99
(d) Other	2.51	- .38	1.51	0.00	.88	.50
Total	- 1.99	6.25	- 4.38	- 5.85	6.73	- 4.74
Total Days 1972	72.44	26.47	13.00	9.98	3.14	19.85
Total Days 1975	70.45	32.72	8.62	4.13	9.87	15.11
2. Corn Pest						
(a) Individual	17.61	8.46	- 8.37	8.13	.63	8.78
(b) Group Meetings	- 11.14	- 6.38	.25	- 1.63	2.75	- 6.13
(c) Mass Media	- .91	.75	- .75	1.99	- .38	- 2.52
(d) Other	5.15	1.39	1.01	2.13	.50	.12
Total	10.71	4.22	- 7.86	10.62	3.48	.25
Total Days 1972	171.10	60.08	24.24	24.99	32.15	29.64
Total Days 1975	181.81	64.30	16.38	35.61	35.63	29.89

TABLE XIII (Continued)

TEMIS Corn Subject and Teaching Methods	State Total	Extension District I	II	III	IV	V
	----------Number of Agent Days Expended----------					
3. Corn Production						
(a) Individual	48.29	33.67	5.51	- 1.39	-10.12	20.62
(b) Group Meetings	- 2.51	- .62	- 1.13	- 1.12	3.74	- 3.38
(c) Mass Media	3.58	1.57	.57	1.00	- .62	.88
(d) Other	5.45	6.19	2.51	- 1.87	- 2.38	1.00
Total	54.81	40.81	7.64	- 3.38	- 9.38	19.12
Total Days 1972	115.78	34.41	21.24	14.38	26.50	19.25
Total Days 1975	170.59	75.22	28.88	11.00	17.12	38.37
4. Corn Management and Harvesting						
(a) Individual	- 8.89	- 3.51	4.28	-10.89	- 2.38	3.61
(b) Group Meetings	- .74	- 2.50	1.63	0.00	.13	0.00
(c) Mass Media	1.26	.25	.25	.75	0.00	.01
(d) Other	- 16.17	- .38	1.09	1.75	-19.25	.62
Total	- 24.54	- 6.14	7.25	- 8.39	-21.50	4.24
Total Days 1972	70.87	12.38	5.11	13.12	33.01	7.25
Total Days 1975	46.33	6.24	12.36	4.73	11.51	11.49
5. All Other Subjects						
(a) Individual	- 40.30	- 4.00	- 5.56	-12.92	-13.23	- 4.59
(b) Group Meetings	- 8.88	- 6.26	- .99	.38	.62	- 2.63
(c) Mass Media	- 4.36	- 1.73	- .13	- 1.50	- .38	- .88
(d) Other	- 5.18	- 5.99	- .20	- 3.87	- 1.74	- 3.14
Total	- 58.72	-17.98	- 6.62	-17.91	-11.25	- 4.96
Total Days 1972	185.00	74.62	17.60	38.76	35.88	18.23
Total Days 1975	126.37	56.64	10.98	20.85	24.63	13.27

When districts are compared, it may be noted that shifts in days devoted ranged from an increase (+) of 33.67 days in Individual Methods on Subject 3, District I, to a decrease (-) of 19.25 days in Other Methods on Subject 4, District IV. Other relatively large positive (+) changes included 20.62 days in Individual Methods on Subject 3 in District V, 8.63 on Subject 1 in District I, 8.46 on Subject 2 in District I, 8.13 in District III, and 8.78 days in District V, Individual Methods, Subject 2..

Other relatively large negative (-) changes included 13.23 days fewer, Individual Methods, Subject 5, District IV; 12.92 days fewer, Individual Methods, Subject 5, District III: 10.12 fewer days, Individual Methods, Subject 3, District IV; and 8.37 fewer days devoted, Individual Methods, Subject 2, District II.

In brief summary, it appears that any relatively large changes in days devoted between FY 1972 and FY 1975 occurred in Individual Methods, District I and District V showing largest increases on a stronger subject, Subject 3; District II showing decreases on the weaker subjects, Subject 1 and 2; and Districts III and IV having largest decreases on stronger subjects, Subject 3, 4, and 5. Districts I, III and V did, however, show some increase in emphasis of a weaker subject, Subject 2, and District I did have an increase on weaker Subject 1 emphasis.

F. METHODS COMPARED BY PERCENTS OF AGENT DAYS

Information in Table XIV permits comparison of shifts in percents of agent days spent by agents on corn subjects using certain Extension methods according to districts and the State. Changes in

TABLE XIV

PERCENT SHIFTS IN NUMBERS OF AGENT DAYS EXPENDED ON SELECTED CORN SUBJECTS USING EXTENSION TEACHING METHODS BY DISTRICTS, FY 1972 AND FY 1975

TEMIS Corn Subject and Teaching Methods	State Total	Extension District I	II	III	IV	V
	----------Number of Agent Days----------					
1. Corn Fertilization						
(a) Individual	4.13	9.21	- .92	-64.43	8.61	14.23
(b) Group Meetings	- .71	-11.64	5.80	59.59	0.00	- 3.88
(c) Mass Media	- 4.20	1.32	- 1.04	0.00	-17.53	-13.77
(d) Other	.84	2.30	- 8.69	.39	16.51	- 3.68
Total	.06	1.19	- 4.85	- 4.45	7.59	- 7.10
2. Corn Pest						
(a) Individual	7.52	6.99	5.65	- 4.01	- 3.82	33.55
(b) Group Meetings	- 6.41	-10.85	2.62	-10.11	7.67	-18.01
(c) Mass Media	- .61	1.02	- 1.80	4.69	- 1.16	- 7.11
(d) Other	2.22	1.30	-15.12	31.40	8.80	-12.25
Total	2.72	- 1.54	- 8.65	21.97	11.49	- 3.82
3. Corn Production						
(a) Individual	3.81	- 3.76	.81	.49	-18.67	33.28
(b) Group Meetings	- 5.31	- 9.16	- 6.01	- 6.14	23.73	-16.07
(c) Mass Media	.63	- .07	2.44	8.86	- 1.08	- 1.10
(d) Other	10.69	28.43	14.00	- 2.74	- 6.93	- 1.05
Total	9.82	15.44	11.24	.20	- 2.95	15.06

TABLE XIV (Continued)

TEMIS CORN SUBJECT and Teaching Methods	STATE Total	Extension District I	II	III	IV	V
		Number of Agent Days				
4. Corn Management and Harvesting						
(a) Individual	13.77	10.67	-24.31	-59.48	47.29	- 4.26
(b) Group Meetings	.83	-20.61	13.89	0.00	5.38	0.00
(c) Mass Media	3.32	4.01	.58	19.10	1.41	- 1.14
(d) Other	-21.66	2.63	20.56	33.63	-67.69	8.34
Total	- 3.74	- 3.30	9.72	- 6.75	-13.61	2.94
5. All Other Corn Subjects						
(a) Individual	.85	9.61	1.35	4.78	-19.13	- 8.47
(b) Group Meetings	- 3.11	- 8.64	- 3.10	7.63	4.46	-13.15
(c) Mass Media	- 1.78	- 2.26	2.44	- 2.32	- .49	- 4.16
(d) Other	- 4.82	-10.50	- 8.15	-21.06	12.64	18.70
Total	- 8.86	-11.79	- 7.46	-10.97	- 2.52	- 7.08

percents of days devoted between FY 1972 and FY 1975 ranged from an increase (+) of 13.77 percent in days spent using Individual Methods on Subject 4 to a decrease (-) of 21.66 percent using Other Methods on the same subject. Only one other State figure exceeded 10 percent. That was the 10.69 percent increase (+) noted for Other Methods on Subject 3. Other changes were relatively small.

When districts were compared, it was found that shifts in percents of days devoted ranged from an increase (+) of 59.59 percent in Group Meetings on Subject 1 in District III to a decrease (-) of 67.69 percent in Other Methods on Subject 4 in District IV. Other consequential positive (+) shifts included 47.29 percent in Individual Methods on Subject 4, District IV; 33.63 in Other Methods on Subject 4, District III; 33.55 percent in Individual Methods on Subject 2, District V; 33.28 percent in Individual Methods on Subject 3, District V; 31.40 percent in Other Methods on Subject 2, District III; 28.43 percent in Other Methods on Subject 3, District I; 23.73 percent in Group Methods on Subject 3, District IV; 20.56 percent in Other Methods, Subject 4, District II; 19.10 percent in Mass Methods, Subject 4, District III; 18.70 percent in Other Methods, Subject 5, District V; 16.51 percent in Other Methods, Subject 1, District IV; 14.23 percent in Individual Methods on Subject 1, District V; 12.89 percent in Group Methods on Subject 4, District II; 12.64 percent in Other Methods on Subject 5, District IV; 10.67 percent in Individual Methods on Subject 4, District I; 9.61 percent in Individual Methods on Subject 5, District I; and 9.21 percent in Individual Methods on Subject 1, District I.

Other consequential negative (-) changes included 64.43 percent in Individual Methods on Subject 1, District III; 59.48 percent in Individual Methods on Subject 4, District III; 24.31 percent in Individual Methods on Subject 4, District II; 21.06 percent in Group Methods on Subject 4, District I; 19.13 percent in Individual Methods on Subject 5, District IV; 18.67 percent in Individual Methods on Subject 3, District IV; 18.01 percent in Group Methods on Subject 2, District V; 17.53 percent in Mass Methods on Subject 1, District IV; 16.07 percent in Group Methods on Subject 3, District V; 15.12 percent in Other Methods on Subject 2, District II; 13.77 percent in Mass Methods on Subject 1, District V; 13.15 percent in Group Methods on Subject 5, District V; 12.25 percent in Other Methods on Subject 2, District V; 11.64 percent in Group Methods on Subject I, District I; 10.85 percent in Group Methods on Subject 2, District I; 10.50 percent in Other Methods on Subject 5, District I; 10.11 percent in Group Methods on Subject 2, District III; and 9.16 percent in Group Methods on Subject 3, District I.

In brief summary, overall slight increases were noted on percents of time devoted to weaker Subject 1, especially in District I, with a shift from Group to Individual Methods, in Districts IV and V, with shifts from Mass Media to Individual, and District III from Individual to Group; and to weaker Subject 2, especially in Districts I, II and V, with shifts from Group and Other Methods to Individual Methods, and Districts III and IV where the reverse was true. Considerable variation was noted from district to district for all other subjects.

G. METHODS COMPARED BY NUMBER OF CONTACTS MADE

Table XV presents a comparison of shifts in numbers of contacts made using selected Extension methods according to districts and for the State. Regarding changes in contacts made using different teaching methods on corn subjects in the State between FY 1972 and FY 1975, contacts rnaged from a high increase (+) of 4,000 contacts by means of Mass Methods reported on Subject 3 to a low decrease (-) of 1,604 contacts, also on Mass Methods but for Subject 5.

Other state changes of any size included increases (+) of 445 contacts by means of Mass Methods on Subject 2 and 413 contacts through Other Methods on Subject 3. There were decreases (-) of 982 contacts via Group Methods on Subject 5, 616 contacts by means of Individual Methods on Subject 5, 603 contacts through Group Methods on Subject 3, 406 contacts of Group Methods on Subject 2, and 405 contacts by means of Other Means on Subject 5. Other state changes were relatively small.

When districts are compared, it may be noted that shifts in contacts ranged from an increase (+) of 1,968 contacts through Mass Methods on Subject 3, District I, to a decrease (-) 934 contacts via Mass Methods on Subject 1, District V. Other relatively large positive (+) changes included 1,708 contacts by means of Mass Methods on Subject 3 in District III, 1,133 contacts via Mass Methods on Subject 2 in District III, 799 contacts through Mass Methods on Subject 1 in District I, 289 contacts via Other Methods on Subject 3 in District I, 265 through Mass Media on Subject 4 in District III, 258 via Mass

TABLE XV

SHIFTS IN NUMBERS OF CONTACTS MADE ON SELECTED CORN SUBJECTS USING EXTENSION TEACHING METHODS BY DISTRICTS, FY 1972 AND FY 1975

TEMIS Corn Subject and Teaching Methods	State Total	Extension District I	II	III	IV	V
		Number of Contacts				
1. Corn Fertilization						
(a) Individual	- 74	56	- 5	- 41	29	- 113
(b) Group Meetings	- 43	- 21	- 6	12	- 2	- 26
(c) Mass Media	- 135	799	0	0	0	- 934
(d) Other	- 5	1	11	- 26	9	0
Total	- 257	835	0	- 55	36	-1,073
Total Contacts 1972	1,672	188	91	84	29	1,280
Total Contacts 1975	1,415	1,023	91	29	65	207
2. Corn Pest						
(a) Individual	160	91	- 10	9	60	10
(b) Group Meetings	- 406	- 158	- 29	- 13	28	- 234
(c) Mass Media	445	- 381	0	1,133	0	- 307
(d) Other	295	197	0	131	- 16	- 17
Total	495	- 251	- 39	1,260	72	- 548
Total Contacts 1972	4,694	2,873	176	412	185	1,048
Total Contacts 1975	5,188	2,622	137	1,672	257	500

TABLE XV (Continued)

TEMIS Corn Subject and Teaching Methods	State Total	Extension District I	II	III	IV	V
		Number of Contacts				
3. Corn Production						
(a) Individual	163	- 36	62	41	- 95	191
(b) Group Meetings	- 603	- 487	- 88	- 85	100	- 43
(c) Mass Media	-4,000	1,968	258	1,708	- 31	97
(d) Other	413	289	69	40	- 6	21
Total	3,973	1,734	301	1,704	- 32	266
Total Contacts 1972	2,511	1,098	232	394	219	568
Total Contacts 1975	6,484	2,832	533	2,098	187	834
4. Corn Management and Harvesting						
(a) Individual	21	- 37	17	- 53	12	82
(b) Group Meetings	- 139	- 25	3	0	-117	0
(c) Mass Media	290	0	0	265	0	25
(d) Other	60	156	0	11	-174	67
Total	232	94	20	223	-279	174
Total Contacts 1972	869	117	33	59	398	89
Total Contacts 1975	928	211	53	282	119	263
5. Other Corn Subjects						
(a) Individual	- 616	- 158	- 45	- 88	-220	-105
(b) Group Meetings	- 982	- 782	- 48	- 19	- 75	- 58
(c) Mass Media	-1,604	- 750	0	- 9	-400	-436
(d) Other	- 405	- 544	1	29	50	61
Total	-3,607	-2,243	- 94	- 87	-645	-538
Total Contacts 1972	4,882	2,870	159	220	913	738
Total Contacts 1975	1,275	627	65	133	268	182

Methods on Subject 3 in District II, 197 by means of Other Methods on Subject 2 in District I, 191 through Individual Methods on Subject 3 in District V, 156 via Other Methods on Subject 4 in District I, 131 by means of Other Methods on Subject 2 in District III, 100 in Group Methods on Subject 3 in District IV, 97 through Mass Methods on Subject 3 in District V, 91 in Individual Methods on Subject 2 in District I, 82 via Individual Methods on Subject 4 in District V, 69 in Other Methods on Subject 3 in District II, 67 by means of Other Methods on Subject 4 in District V, 62 in Individual Methods on Subject 3 in District II, 61 in Other Methods on Subject 5 in District V, 60 through Individual Methods on Subject 2 in District IV, 56 by means of Individual Methods on Subject 1 in District I, 50 in Other Methods on Subject 5 in District IV, 41 via Individual Methods on Subject 3 in District III, 40 through Other Methods on Subject 3 in District III, 29 by means of Individual Methods on Subject 1 in District IV, 29 in Other Methods on Subject 5 in District III, 28 via Group Methods on Subject 2 in District IV, 25 through Mass Methods on Subject 4 in District V, 21 in Other Methods on Subject 3 in District V, 17 by means of Individual Methods on Subject 4 in District II, 12 via Individual Methods on Subject 4 in District IV, 12 through Group Methods on Subject 1 in District III, 11 in Other Methods on Subject 1 in District II, and 10 contacts by means of Individual Methods on Subject 2 in District V.

Other relatively large negative (-) changes included 782 contacts fewer, Group Methods, Subject 5, District I; 759 fewer, Mass Methods, Subject 5, District I; 544 fewer, Other Methods, Subject 5, District I; 487 fewer, Group Methods, Subject 3, District I; 436 fewer

Mass Methods, Subject 5, District V; 400 fewer, Mass Methods, Subject 5, District IV; 381 fewer, Mass Methods, Subject 2, District I; 307 fewer, Mass Methods, Subject 2, District V; 234 fewer, Group Methods, Subject 2, District V; 220 fewer, Individual Methods, Subject 5, District IV; 174 fewer, Other Methods, Subject 4, District IV; 158 fewer, Group Methods, Subject 2, District I; 117 fewer, Group Methods, Subject 4, District IV; 113 fewer, Individual Methods, Subject 1, District V; 95 fewer, Individual Methods, Subject 3, District IV; 88 fewer, Individual Methods, Subject 5, District III; 88 fewer, Group Methods, Subject 3, District II; 85 fewer, Group Methods, Subject 3, District III; 75 fewer, Group Methods, Subject 5, District IV; 58 fewer, Group Methods, Subject 5, District V; 53 fewer, Individual Methods, Subject 4, District III; 48 fewer, Group Methods, Subject 5, District II; 45 fewer, Individual Methods, Subject 5, District II; 43 fewer, Group Methods, Subject 3, District V; 41 fewer, Individual Methods, Subject 1, District III, 37 fewer, Individual Methods, Subject 4, District I; 36 fewer, Individual Methods, Subject 3, District I; 31 fewer Group Methods, Subject 3, District IV: 29 fewer, Group Methods, Subject 2, District II; 26 fewer, Other Methods, Subject 1, District III; 26 fewer, Group Methods, Subject 1, District V; 25 fewer, Group Methods, Subject 4, District I; 21 fewer, Group Methods, Subject 1, District I; 19 fewer, Group Methods, Subject 5, District III; 17 fewer, Other Methods, Subject 2, District V; 16 fewer, Other Methods, Subject 2, District IV; 13 fewer, Group Methods, Subject 2, District III; and 10 fewer, Individual Methods, Subject 2, District II.

In brief summary, some decreases in contacts made via all methods were noted for weaker areas, Subjects 1 and 2, though District I posted relatively large increases in Mass Media contacts on Subjects 1 and District III recorded the increases on Subject 2. Stronger Subjects 3 and 4 definitely showed increased emphasis, excepting in District IV; while Subject 5, Other Corn Subjects, decreased everywhere.

H. METHODS COMPARED BY PERCENTS OF CONTACTS MADE

Information in Table XVI permits comparison of shifts in percents of contacts made by agents on corn subjects using certain Extension methods according to districts and the State. Changes in percents of contacts for the State between FY 1972 and FY 1975 ranged from an increase (+) of 48.35 percent contacts using Mass Methods on Subject 3 to a decrease (-) of 32.54 percent contacts using Mass Methods on Subject 5.

Other State changes of any size included increases (+) of 31.25 percent using Mass Methods on Subject 4, 30.69 percent using Individual Methods on Subject 5, 19.40 percent using Other Methods on Subject 3; and decreases (-) of 29.78 percent using Group Methods on Subject 3, 24.20 percent using Individual Methods on Subject 3, 20.47 percent using Group Methods on Subject 4, 15.81 percent using Group Methods on Subject 5, 10.59 percent using Individual Methods on Subject 4. Other changes were relatively small.

When districts were compared, it was found that shifts in percents of contacts ranged from an increase (+) of 93.97 percent in Mass Methods on Subject 4 in District III to a decrease (-) of

TABLE XVI

PERCENT SHIFTS IN NUMBERS OF CONTACTS MADE ON SELECTED CORN SUBJECTS USING EXTENSION TEACHING METHODS BY DISTRICTS, FY 1972 AND FY 1975

TEMIS Corn Subject and Teaching Methods	State Total	Extension District I	II	III	IV	V
		Number of Contacts				
1. Corn Fertilization						
(a) Individual Contacts	.13	-56.61	- 5.50	-58.62	- 6.95	42.60
(b) Group Meetings	- 2.23	-17.25	- 6.59	58.62	- 6.90	- 2.03
(c) Mass Media	.54	76.80	0.00	0.00	0.00	38.65
(d) Other	- .76	8.41	9.27	- 6.50	19.45	-103.35
Total	- 2.32	11.35	- 2.82	- 6.50	5.60	- 24.13
2. Corn Pest						
(a) Individual Contacts	1.27	5.08	13.30	-27.46	- 1.64	24.68
(b) Group Meetings	- 8.77	- 5.45	-14.19	-15.77	10.29	- 22.01
(c) Mass Media	3.98	- 6.74	0.00	46.51	0.00	- 4.76
(d) Other	4.98	2.75	- 8.99	1.16	9.42	- 1.02
Total	1.46	- 4.36	- 9.88	4.44	18.07	- 3.11
3. Corn Production						
(a) Individual Contacts	-24.20	-29.81	-18.31	-18.79	-36.40	13.61
(b) Group Meetings	-29.78	-47.63	-42.80	-25.79	54.05	- 8.53
(c) Mass Media	48.35	69.73	48.41	42.92	-14.03	- 8.06
(d) Other	19.40	31.06	14.37	14.42	4.69	23.68
Total	25.03	23.35	27.07	16.08	8.31	26.66

TABLE XVI (Continued)

TEMIS Corn Subject and Teaching Methods	State Total	Extension District I	II	III	IV	V
		Number of Contacts				
4. Corn Management and Harvesting						
(a) Individual Contacts	-10.59	-51.30	- 5.66	-97.87	61.92	34.98
(b) Group Meetings	-20.47	-22.33	5.66	0.00	-24.69	0.00
(c) Mass Media	31.25	0.00	0.00	93.97	0.00	9.50
(d) Other	1.07	74.87	1.25	5.54	-46.77	-33.64
Total	1.26	1.24	1.25	1.64	- 9.54	10.84
5. All Other Corn Subjects						
(a) Individual Contacts	30.69	41.14	28.50	- .80	12.98	13.42
(b) Group Meetings	-15.81	-26.12	-27.25	- 3.79	- 6.12	10.35
(c) Mass Media	-32.54	-26.35	0.-0	- 2.59	-43.91	-61.41
(d) Other	- 7.74	-20.25	-16.87	- 8.48	14.61	27.38
Total	-25.43	-31.58	-15.62	-15.66	-22.44	-10.26

103.35 percent in Other Methods on Subject 1 in District V. Other consequential positive (+) shifts included 76.80 percent in Mass Methods on Subjects 1, Disctict I; 74.87 percent in Other Methods on Subject 4, District I; 69.73 percent in Mass Methods on Subject 3, District I; 61.92 percent in Individual Methods on Subject 4, District IV; 58.62 percent in Group Methods on Subject 1, District III; 54.05 percent in Group Methods on Subject 3, District IV; 48.41 percent in Mass Methods on Subject 3, District II; 46.51 percent in Group Methods on Subject 2, District III; 42.92 percent in Mass Methods on Subject 3, District III; 42.60 percent in Individual Methods on Subject 1, District V; 41.14 percent in Individual Methods on Subject 5, District I; 38.63 percent Mass Methods on Subject 1, District V; 34.98 percent in Individual Methods on Subject 4, District V; 31.06 percent in Other Methods on Subject 3, District I; 28.50 percent in Individual Methods on Subject 5, District II; 27.38 percent in Other Methods on Subject 5, District V; 24.68 percent in Individual Methods on Subject 2, District V; 23.68 percent in Other Methods on Subject 3, District V; 14.61 percent in Other Methods on Subject 5, District IV; 14.42 percent in Other Methods on Subject 3, District III; 14.37 percent in Other Methods on Subject 3, District II; 13.61 percent in Individual Methods on Subject 3, District V; 13.42 percent in Individual Methods on Subject 5, District V; 13.30 percent in Individual Methods on Subject 2, District II; 12.98 percent in Individual Methods on Subject 5, District IV; 10.35 percent in Group Methods on Subject 5, District V; 10.29 percent in Group Methods on Subject 2, District IV; 9.50 percent in Mass Methods on Subject 4, District V; 9.42 percent in Other Methods on Subject 2, District IV;

and 9.27 percent in Other Methods on Subject 1, District II.

Other consequential negative (-) changes included 61.41 percent in Mass Methods on Subject 5, District V; 58.62 percent in Individual Methods on Subject 1, District III: 56.61 percent in Individual Methods on Subject 1, District I; 51.30 percent in Individual Methods on Subject 4, District I; 47.63 percent in Group Methods on Subject 3, District I; 46.77 percent in Other Methods on Subject 4, District IV; 43.91 percent in Mass Methods on Subject 5, District IV; 42.80 percent in Group Methods on Subject 3, District II; 36.40 percent in Individual Methods on Subject 3, District IV; 33.64 percent in Other Methods on Subject 4, District V; 29.81 percent in Individual Methods on Subject 3, District I; 27.46 percent in Individual Methods on Subject 2, District III: 27.25 percent in Individual Methods on Subject 5, District II; 26.35 percent in Individual Methods on Subject 5, District I; 26.12 percent in Group Methods on Subject 5, District I; 25.79 percent in Group Methods on Subject 3, District III; 24.69 percent in Group Methods on Subject 4, District IV; 22.33 percent in Group Methods on Subject 4, District I; 22.01 percent in Group Methods on Subject 2, District V; 20.25 percent in Other Methods on Subject 5, District I; 18.79 percent in Individual Methods on Subject 3, District III; 18.31 percent in Individual Methods on Subject 3, District II; 17.25 percent in Group Methods on Subject 1, District I; 16.87 percent in Other Methods on Subject 5, District II; 15.77 percent in Group Methods on Subject 2, District III: 14.19 percent in Group Methods on Subject 2, District II; and 14.03 percent in Mass Methods on Subject 3, District IV.

In brief summary, weaker Subjects 1 and 2 showed no appreciable changes, in percents of contacts via Individual Methods, though considerable variation was noted from district to district. Trends in percents of contacts were toward increased (+) use of Mass Media and decreased (-) use of Group Methods on all subjects, excepting Subject 5 for Mass Contacts.

CHAPTER V

SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

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

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

reflected in the 1975 Survey; and (4) to study Extension methods used in FY 1972 and FY 1975 and note shifts in methods used and consider the relative effectiveness of the methods in teaching corn producers.

Information from the SCPCS conducted in 1970 comparing corn producers in the five districts of Tennessee regarding their use of recommended corn practices was used as the basis for identifying priority educational needs of the producers. In 1970, a total of 1,415 adult corn producers was randomly surveyed, basically 30 growers per county, including 562 in District I; 221 in District II; 240 in District III; 180 in District IV; and 212 in District V. In 1975 a total of 721 adult corn producers was randomly surveyed, basically 20 growers per county, including 187 in District I; 131 in District II: 140 in District III; 115 in District IV; and 148 in District V. Information collected from TEMIS computer printouts included agent days planned, expended, contacts made, and teaching methods used in terms of days expended and contacts made according to districts.

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

A. SUMMARY OF FINDINGS

It was noted in the study that 1975 average production for producers surveyed in bushels of corn per acre was approximately 78 bushels of grain and 16.8 tons of silage per acre. The number of eight Extension recommended practices used by producers surveyed in

1975 for both corn for grain and silage production were positively associated with yields, the higher the production, the higher the number of practices used ($P < .005$) (2).

Relation of CPCS and TEMIS Data

The eight recommended practices were classified under four TEMIS subject headings to permit relating CPCS and TEMIS information. They were ordered from least used (i.e., weakest) to most used (i.e., strongest). It was assumed that data from the two sources could be related. No TEMIS corn subjects were found to be less than the 60 percent concern level for either the 1970 or the 1975 CPCS in the State. All TEMIS subjects were above the concern level including Subject 1, Corn Fertilization--61 percent; Subject 2, Corn Pest--65 percent; Subject 3, Corn Production--81 percent; and Subject 4, Corn Management and Harvesting--74 percent; in 1970. This was true also for 1975, when Subject 1, Corn Fertilization was 68 percent; Subject 2, Corn Pest was 70 percent; Subject 3, Corn Production was 83 percent; and Subject 4, Corn Management and Harvesting was 79 percent.

The grand total average practice use for all subjects in 1970 was 74 percent; and in 1975 was 79 percent for the State. Average percents of corn producers in all districts were above the concern level in 1970 and 1975 except for Districts IV, Subject 1, Corn Fertilization--56 percent, and Subject 2, Corn Pest--51 percent, District V, Subject 1, Corn Fertilization--52 percent, Subject 2, Corn Pest--60 percent in 1970; and District V, Subject 1, Corn Fertilization--56 percent, for 1975.

Comparisons of Shifts in Agent Time Planned by Districts

There was a net decrease (-) of 329 agent days planned from FY 1972 to FY 1975. Subjects ranged from a decrease (-) of 147 days on Subject 5 to an increase (+) of 52 days for Subject 3.

The overall shift in numbers of agent days planned by districts from FY 1972 to FY 1975 showed a decrease (-). Decreases ranged from a decrease (-) of 135 in District I to a decrease (-) of 15 in District IV.

Subjects 1, 2 and 5 all showed decreases (-) in relative percents of agent days planned of .98 percent, 8.09 percent and 7.86 percent, respectively. Districts ranged from a decrease (-) of 30.29 percent on Subject 2, District II, to an increase (+) of 21.00 percent on Subject 3, District II.

Comparisons of Shifts in Agent Time Expended by Districts

There was a net decrease (-) of 19.73 agent days expended from FY 1972 to FY 1975. Two subjects, Subject 2 and Subject 3, showed increases (+) in agent days expended of 10.71 and 54.81, respectively. All other subjects (i.e., 1, 4, and 5) showed decreases (-) in agent days expended ranging from 58.72 days on Subject 5, 24.54 for Subject 4, and 1.99 days in Subject 1. All districts showed overall decreases (-) in agent days expended, except Districts I and V. Decreases (-) ranged from 31.92 days in District IV to 3.97 days in District II. The increases (+) of 27.16 and 13.91 were shown in Districts I and V, respectively. Increases (+) in agent days expended according to subjects occurred in District I, on Subjects 1, 2, and 3;

District II, on Subjects 3 and 4; District III, on Subject 2; District IV, on Subjects 1 and 2; and District V, on Subjects 2, 3, and 4. Decreases (-) in agent days expended according to subjects occurred in District I, on Subjects 4 and 5; District II, on Subjects 1, 2 and 5; District III, on Subjects 1, 3, 4 and 5; District IV, on Subjects 3, 4 and 5; and District V, on Subjects 1 and 5.

Relative percents of agent days expended ranged from a decrease (-) of 8.86 percent on Subject 5 to an increase (+) of 9.82 percent in agent days expended on Subject 3. District I showed decreases (-) on three subjects (i.e., Subjects 2, 4, and 5); District II decreased (-) on Subjects 1, 2, and 5; District III decreased (-) on Subjects 1, 4, and 5; District IV decreased (-) on Subjects 3, 4, and 5; and District V decreased (-) on Subjects 1, 2, and 5 in terms of shifts in agent days expended.

Comparisons of Shifts in Contacts by Districts

Total contacts among all audiences showed a net increase (+) of 835 corn producer contacts from FY 1972 to FY 1975. Two subjects, Subjects 1 and 5, showed decreases (-) in contacts of 257 and 3,607 contacts, respectively. All other subjects (i.e., 2, 3, and 4) showed increases (+) in contacts of 232 on Subject 4, 494 on Subject 2, and 3,973 on Subject 3. Overall increases (+) for the districts were District I, 169 contacts; District II, 188 contacts; District III, 3,045 contacts; and decreases (-) included District IV, 848 contacts and District V, 1,719 contacts. Decreases (-) in contacts made

according to subjects occurred in District I, on Subjects 2 and 5; District II, on Subjects 2 and 5; District III, on Subjects 1 and 5; District IV, on Subjects 3, 4 and 5; and District V, on Subjects 1, 2 and 5.

Percents of contacts by subject ranged from a relative decrease (-) of 25.43 percent on Subject 5 to a relative increase (+) of 25.03 percent on Subject 3. District I showed decreases (-) on Subjects 2 and 5; District II decreased (-) on Subjects 1, 2 and 5; District III decreased (-) on Subjects 1 and 5; District IV decreased (-) on Subjects 4 and 5; and District V decreased (-) on Subjects 1, 2 and 5.

Comparisons of Shifts in Agent Time Expended by Methods

Changes in days spent using different teaching methods on corn subjects in the State between FY 1972 and FY 1975, ranged from a high increase (+) of 48.29 days of work using Individual Methods recorded on Subject 3 to a low decrease (-) of 40.30 days, also on agent work using Individual Methods recorded for Subject 5.

When districts were compared, it was noted that shifts in days devoted ranged from an increase (+) of 33.67 days for Individual Methods on Subject 3, District I, to a decrease (-) of 19.25 days in Other Methods (e.g., planning, preparation, evaluation) on Subject 4, District IV.

It appears that any relatively large changes in days devoted between FY 1972 and FY 1975 occurred in Individual Methods, Districts I and V showing largest increases (+) on a stronger subject, Subject 3, District II showing decreases (-) on the weaker subjects, Subjects 1 and 2; and Districts III and IV having largest decreases (-) on

stronger Subjects 3, 4 and 5. Districts I, III and V did, however, show some increase (+) in emphasis of a weak subject, Subject 2, and District I did have an increase (+) on emphasis of a weaker area, Subject 1.

Changes in percents of days devoted between FY 1972 and FY 1975 for the State ranged from an increase (+) of 13.77 percent in days spent using Individual Methods on Subject 4 to a decrease (-) of 21.66 percent using Other Methods on the same subject.

When districts were compared, it was found that shifts in percents of days devoted ranged from an increase (+) of 59.59 percent in Group Meetings on Subject 1 in District III to a decrease (-) of 67.69 percent in Other Methods on Subject 4 in District IV.

Overall slight increases (+) were noted on relative percents of time devoted to weaker Subject 1, especially in District I, with a shift from Group to Individual Methods, in District IV and V, with shifts from Mass Media to Individual, and District III from Individual to Group; and to weaker Subject 2, especially in Districts I, II and V, with shifts from Group and Other Methods to Individual Methods, and Districts III and IV when the reverse was true. Considerable variation was noted from district to district for all other subjects.

Comparisons in Shifts in Contacts by Methods

Changes in numbers of contacts made on corn subjects in the State between FY 1972 and FY 1975 ranged from a high increase (+) of 4,000 contacts via Mass Methods made on Subject 3 to a low decrease (-) of 1,604 contacts, also on Mass Methods on Subject 5.

When districts were compared, it was noted that shifts in contacts ranged from an increase (+) of 1,968 contacts through Mass Methods on Subject 3, District I, to a decrease (-) of 934 contacts by means of Mass Methods on Subject 1, District V.

Some decreases (-) in contacts made via all methods were noted for weaker areas, Subjects 1 and 2, though District 1 posted relatively large increases (+) in Mass Media contacts on Subject 1 and District III recorded increases (+) on Subject 2. Stronger Subjects 3 and 4 definitely showed increased (+) contacts, excepting in District IV; while Subject 5, Other Corn Subjects, decreased (-) everywhere.

Changes in percents of contacts for the State between FY 1972 and FY 1975 ranged from an increase (+) of 48.35 percent contacts using Mass Methods on Subject 3 to a decrease (-) of 32.54 percent contacts using Mass Methods on Subject 5.

When Districts were compared it was found that shifts in percents of contacts ranged from an increase (+) of 93.97 percent in Mass Methods on Subject 4 in District III to a decrease (-) of 103.35 percent in Other Methods on Subject 1 in District V.

Weaker Subjects 1 and 2 showed no appreciable change in percents of contacts via Individual Methods, though considerable variation was noted from district to district. Trends in percents of contacts were toward increased (+) use of Mass Media and decreased (-) use of Group Methods on all subjects, excepting Subject 5 for Mass Contacts.

B. IMPLICATIONS

The cross-walking approach in this study, simultaneously examining percents of producers using recommended corn production practices from the SCPCS and numbers and percents of agent days devoted and clientele contacts made from TEMIS according to districts and by Extension teaching methods, appeared to permit desired comparisons and relationships.

Since both numbers and percents of agent days planned for two weaker corn subjects (i.e. and related practices) decreased following the 1970 SCPCS; and time planned for two stronger subjects (i.e., and related practices) increased, and since little change was noted in percent of time actually devoted to subjects from the previous period; it appears that agents may have paid little heed to the 1970 survey findings as they formulated educational work in corn production for the period. They continued to devote about the same percents of time as before surveying. At the same time, all subjects were above the "concern level" to start with, thus, tending to minimize the consequence of this implication.

The variations from district to district in percents of corn producers using various practice related subjects and numbers and percents of agent days planned and spent and contacts made implies that differences resulting from peculiar geographical, production, supervisory and other conditions and situations may make data for each district relatively unique.

Increases in percents of agent time devoted to corn Extension work were greatest for Individual Methods of instruction, decreases or no change occurring for Group and Mass Methods, suggesting that the nature of problems faced in FY 1975 may have demanded personal visits or help of agents more than those encountered in FY 1972.

Since average yields of corn in Tennessee counties appeared to have increased (e.g. State average, 1970-72 = 57 bushels versus 1973-75 = 68 bushels) during the study period and these study findings show Tennessee Extension workers continued to plan and expend time contacting and teaching more producers subject matter regarding eight recommended corn production practices grouped under four TEMIS primary subjects and higher percents were using recommended practices, it is implied that Extension's educational efforts have paid off in increased production, though obviously further study would be necessary to show the true nature and extent of Extension's role in the indicated changes.

C. RECOMMENDATIONS

1. Encourage agents through appropriate training to plan based on SCPCS findings.

2. Conduct similar studies in other agricultural commodity or work areas over time.

3. More closely relate SCPCS practice and TEMIS subjects.

4. Conduct other similar studies to prove the true nature of the relationship here implied between Extension inputs in agent days devoted to corn production using various methods to outputs measured in

increased corn yields and higher percents of producers using research-verified corn production practices.

CRANES CREST

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BIBLIOGRAPHY

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APPENDICES

CRANES CREST

APPENDIX A

THE AGRICULTURAL EXTENSION SERVICE, UNIVERSITY OF TENNESSEE
Knoxville, Tennessee

TENNESSEE CORN PRODUCTION SURVEY

Name of Farmer_____ Address_____

County_____ Date_____ Interview Number_____

1. How many acres of corn did you plant last year for grain?_____
   For silage?_____

2. How many acres of corn did you harvest last year for grain?_____
   For silage?_____

3. Per acre yield: Bushels of grain?_____ Tons of silage?_____

4. How much of the harvested acreage was: Owned?_____ Cash
   rented?_____ Shared?_____

5. What percent of the grain acreage was harvested by picker sheller?
   _____ Picker?_____ Other?_____

6. What percent of last year's corn grain crop did you sell?_____
   Feed?_____

7. If you fed part or all of last year's harvested corn grain crop,
   about how many bushels were fed to swine?_____ Beef?_____
   Dairy?_____ Other?_____

RECOMMENDED PRACTICE (See corresponding number on explanatory guide [illegible])	YES	NO
(1) Did you plant a corn variety or varieties recommended by U.T. last year?		
(2) Did you plant: a) in East and Middle Tennessee, between April 20 and June 1; b) in West Tennessee and Southwest Corn Borer infested counties in Middle Tennessee between April 1 and May 1; or c) in the delta area, the same as in item b or earlier?		
(3) Did you have a recommended stand (plant population) of plants last year? (12,000-18,000 for grain; 18,000-20,000 for silate)?		
(4) Did you lime and fertilize your corn land according to soil test recommendations?		

RECOMMENDED PRACTICE (See corresponding number on explanatory guide sheet)	YES	NO
(5) Did you use recommended procedures in applying fertilizer? (especially taking care to separate seed and nitrogen containing fertilizer)		
(6) Were weeds effectively controlled in a recommended way last year?		
(7) Did you harvest your corn (grain and/or silate) at the proper stage(s)?		
(8) Did you adequate protect your stored grain from pests?		

THE AGRICULTURAL EXTENSION SERVICE, UNIVERSITY OF TENNESSEE
Knoxville, Tennessee

1975 TENNESSEE CORN PRODUCTION SURVEY

Name of Respondent_____ Address_____

1 (1) Card Number

___ ___ ___ (2) (3) (4) County_____ Date_____
(Use TEMIS Code)

A. General

1. How many acres of corn did you plant last year?

___ ___ ___ (5) (6) (7) a. For grain (Actual acres planted.) A 999=1,000 or more.

___ ___ ___ (8) (9) (10) b. For silage (Actual acres planted.)

2. How many acres of corn did you harvest last year:

___ ___ ___ (11) (12) (13) a. For grain (Actual acres harvested.)

___ ___ ___ (14) (15) (16) b. For silage (Actual acres harvested.)

3. Per acre yield:

___ ___ ___ (17) (18) (19) a. Bushels of grain

___ ___ ___ (20) (21) (22) b. Tons of silage

4. How much of the harvested acreage was:

___ ___ ___ (23) (24) (25) a. Owned?

___ ___ ___ (26) (27) (28) b. Cash rented?

___ ___ ___ (29) (30) (31) c. Shared?

5. Waht percent of the grain acreage was harvested by:

_____ _____ _____ a. Picker sheller?
(32) (33) (34)

_____ _____ _____ b. Picker?
(35) (36) (37)

_____ _____ _____ c. Other?
(38) (39) (40)

6. What percent of last year's corn grain crop did you:

_____ _____ _____ a. Fell?
(41) (42) (43)

_____ _____ _____ b. Feed?
(44) (45) (46)

_____ _____ _____ c. Other?
(47) (48) (49)

7. If you fed part or all of last year's harvested corn grain crop, about how many bushels were:

_____ _____ _____ a. Fed to swine
(50) (51) (52)

_____ _____ _____ b. Beef?
(53) (54) (55)

_____ _____ _____ c. Dairy?
(56) (57) (58)

_____ _____ _____ d. Other?
(59) (60) (61)

B. Recommended Practices

RECOMMENDED PRACTICE	(See corresponding number on explanatory guide sheet)	1 = yes; 2 = no
_____ (62)	(1) Did you plant a corn variety or varieties recommended by U.T. last year?	
_____ (63)	(2) Did you plant: a) in East and Middle Tennessee, between April 20 and June 1; b) in West Tennessee and Southwest Corn Borer infested counties in Middle Tennessee between April 1 and May 1; or c) in the delta area, the same as in item b or earlier:	

RECOMMENDED PRACTICE	(See corresponding number on explanatory guide sheet)	1 = yes 2 = no
(64)	(3) Did you have a recommended stand (plant population) of plants last year? (12,000-18,000 for grain; 18,000-20,000 for silage)	
(65)	(4) Did you lime and fertilize your corn land according to soil test recommendations?	
(66)	(5) Did you use recommended procedures in applying fertilizer? (especially taking care to separate seed and nitrogen containing fertilizer)	
(67)	(6) Were weeds effectively controlled in a recommended way last year?	
(68)	(7) Did you harvest your corn (grain and/or silage) at the proper stage(s)?	
(69)	(8) Did you adequately protect your stored grain from pests?	

C. The number of contacts producer had with County Extension Agents during *previous 12 months* (record actual number):

(70) (71) a. Number of Extension meetings of all kinds attended?

(72) (73) b. Number of Extension meetings where corn production was discussed?

(74) (75) c. Number of visits made to the County Extension office?

(76) (77) d. Number of telephone calls made to the County Extension office?

(78) (79) e. Number of farm visits received by the corn producer from all County Extension Agents?

(80) 10. Tenure Status (1 = owner; 2 = other)

CRANFIELD CREST

APPENDIX B

TABLE XVII

MEAN PER ACRE CORN YIELDS FOR GRAIN AND SILAGE BY NUMBERS AND PERCENTS OF PRODUCERS USING DIFFERENT NUMBERS OF EIGHT RECOMMENDED CORN PRODUCTION PRACTICES IN 1975 AND F VALUES*

Number of Practices Used	Yield per Acre Corn for Grain				Yield per Acre Corn for Grain			
	No. of Producers	Mean Bu. Grain/Acre	F Value	Probability Level	No. of Producers	Mean Tons Silage/Acre	F Value	Probability Level
0	1	60.0			1	18.0		
1	2	60.0			0	0		
2	10	50.9			5	11.4		
3	26	52.8			11	11.9		
4	71	69.6			21	14.3		
5	130	69.4			56	16.1		
6	221	77.9			89	16.7		
7	226	83.8			97	17.5		
8	124	89.3			65	18.4		
Total	811	78.0	19.4	P<.005	345	16.8	7.3	P<.005

*From Cecil E. Carter, Table III, "Summary of 1975 Survey of 961 Corn Producers in 61 Tennessee Counties," Tennessee Agricultural Extension Education Section, Knoxville, November 11, 1976.

TABLE XVIII

SUMMARY OF 1975 SURVEY OF 961 CORN PRODUCERS IN 61 TENNESSEE COUNTIES: MEAN PER ACRE YIELD OF CORN FOR GRAIN AND CORN FOR SILAGE BY THE NUMBER OF RECOMMENDED CORN PRODUCTION PRACTICES USED AND BY THE NUMBER AND TYPE OF CONTACTS PRODUCERS HAD WITH EXTENSION*

	Yield per Acre Corn for Grain				Yield per Acre Silage in Tons			
	No. of Producers	Mean Bu. Grain/Acre	F Value	Probability Level	No. of Producers	Mean Tons Silage/Acre	F Value	Probability Level
No. Practices Used								
0	1	60.0	19.4	P<.005	1	18.0	7.3	P<.005
1	2	60.0						
2	10	50.9			5	11.4		
3	26	52.8			11	11.9		
4	71	69.6			21	14.3		
5	130	69.4			56	16.1		
6	221	77.9			89	16.7		
7	226	83.8			97	17.5		
8	124	89.3			65	18.4		
Total	811	78.0			345	16.8		
No. Ext. Mtgs. attended past 12 mos.								
0	311	74.5	3.5	P<.005	94	16.0	1.2	NS
1	143	74.0			58	16.4		
2	122	81.0			65	16.7		
3	85	81.4			44	17.7		
4	50	85.1			25	16.7		
5	22	91.7			15	17.5		
6	32	81.9			17	18.2		
7	4	77.0			4	21.3		
8	16	88.0			6	16.3		

TABLE XVIII (Continued)

	Yield per Acre Corn for Grain				Yield per Acre Silage in tons			
	No. of Producers	Main Bu. Grain/Acre	F Value	Probability Level	No. of Producers	Mean Tons Silage/Acre	F Value	Probability Level
9	4	98.8			3	17.3		
10	11	82.7			5	18.2		
12	9	67.8			4	17.5		
15	1	110.0			4	17.8		
16	1	75.0						
25					1	22.0		
Total	811	78.0			345	16.8		
No. Ext. mtgs. attended on crops past 12 mos.								
0	468	73.5	13.5	P<.005	152	16.0	3.0	P<.01
1	257	81.7			129	17.1		
2	66	91.2			54	18.1		
3	14	96.0			6	19.3		
4	5	83.0			3	16.3		
5	1	110.0			1	15.0		
Total	811	78.0			345	16.8		
No. Visits to Ext. Off. past 12 mos.								
0	187	73.3	2.0	P<.05	75	15.9	1.2	NS
1	106	74.6			38	16.3		
2	180	80.4			64	17.2		
3	77	81.4			43	16.8		
4	78	75.7			28	16.7		
5	44	77.5			28	18.5		
6	45	81.4			25	16.9		
7	5	89.4			4	14.8		

TABLE XVIII (Continued)

	Yield per Acre Corn for Grain				Yield per Acre Silage in tons			
	No. of Producers	Main Bu. Grain/Acre	F Value	Probability Level	No. of Producers	Mean Tons Silage/Acre	F Value	Probability Level
8	19	85.2			5	17.4		
9	4	90.0						
10	15	78.3			10	16.8		
11	1	100.0						
12	21	86.2			9	19.6		
14	1	60.0						
15	13	88.9			8	14.6		
16	2	62.5			2	19.5		
20	4	65.0			1	12.0		
24	1	60.0						
25	3	104.3			1	18.0		
27	1	100.0			1	23.0		
30	2	64.5			1	20.0		
32					1	17.0		
36	1	110.0			1	15.0		
50	1	100.0						
Total	811	78.0			345	16.8		
No. tel calls to Ext. Off. past 12 mos.								
0	168	71.5	2.5	P<.05	41	16.1	0.7	NS
1	68	78.8			19	17.3		
2	128	76.5			44	16.1		
3	107	76.7			49	16.7		
4	66	80.8			30	17.4		
5	57	79.9			28	16.8		
6	49	75.8			28	17.1		
7	15	72.9			10	17.4		

TABLE XVIII (Continued)

	Yield per Acre Corn for Grain				Yield per Acre Silage in tons			
	No. of Producers	Main Bu. Grain/Acre	F Value	Probability Level	No. of Producers	Mean Tons Silage/Acre	F Value	Probability Level
8	24	83.0			20	16.5		
9	6	75.3			3	11.0		
10	38	80.2			21	16.6		
11	4	87.0			3	16.0		
12	19	90.8			14	18.6		
14	2	97.5			2	19.0		
15	22	85.6			12	17.3		
16	2	85.0			2	16.0		
18	3	106.7			2	17.5		
19	1	121.0						
20	9	84.8			4	19.3		
24	2	107.5			1	16.0		
25	10	95.0			5	17.4		
26	1	100.0						
30	4	85.0			2	18.5		
50	3	91.0			2	13.5		
52	1	125.0			1	20.0		
99	2	92.0			2	16.5		
Total	811	78.0			345	16.8		
No. farm visits received from Ext. Agts. past 12 mos.								
0	161	69.0	3.1	P<.005	32	13.9	2.4	P<.01
1	110	75.5			39	17.1		
2	136	82.4			72	15.7		
3	100	81.4			57	17.4		
4	77	76.4			30	17.9		
5	44	84.3			26	18.3		

TABLE XVIII (Continued)

	Yield per Acre Corn for Grain				Yield per Acre Silage in tons			
	No. of Producers	Main Bu. Gain/Acre	F Value	Probability Level	No. of Producers	Mean Tons Silage/Acre	F Value	Probability Level
6	58	81.7			26	17.5		
7	14	75.9			9	15.0		
8	27	78.1			13	19.2		
9	6	78.0			3	16.7		
10	28	80.8			11	16.4		
11	2	95.0						
12	8	84.1			5	16.6		
13	1	130.0						
14	7	100.9			4	18.5		
15	9	76.1			8	17.5		
16	1	75.0			2	21.0		
18	3	105.0			1	20.0		
20	12	76.7			5	16.4		
24	2	80.0						
25	]	75.0			2	18.0		
30	3	86.7						
Total	811	78.0			345	16.8		

COUNTIES CONTRIBUTING YIELD DATA FOR 1970 AND 1975

DISTRICT I

Benton
Carroll
Chester
Crockett
Decatur
Dyer
Fayette
Gibson
Hardin
Haywood
Henderson
Henry
Lake
Lauderdale
McNairy
Obion
Shelby
Tipton
Weakley

DISTRICT II

Bedford
Humphreys
Montgomery
Robertson
Rutherford
Sumner
Williamson

DISTRICT III

Bradley
Franklin
Grundy
McMinn
Monroe
Polk
Rhea
Van Buren

DISTRICT IV

Cumberland
Morgan
Overton
Pickett
Putnam
Scott

DISTRICT V

Blount
Campbell
Carter
Cocke
Grainger
Hamblen
Loudon
Sullivan

APPENDIX C

TABLE XXIX

DAYS PLANNED, DAYS EXPENDED, AND CONTACTS MADE FOR ALL DISTRICTS AND STATE IN FY 1972 AND FY 1975 BY AGENT DAYS

	Agent Days Planned Districts						Agent Days Expended Districts						Agent Contacts Made Districts					
	State	I	II	III	IV	V	State	I	II	III	IV	V	State	I	II	III	IV	V
1. Corn Fertilization																		
1972	201	101	24	39	12	25	72.44	26.47	13.00	9.98	3.14	19.85	1,672	188	91	84	29	1,280
1975	134	61	36	15	11	11	70.45	32.72	8.62	4.13	9.87	15.11	1,415	1,023	91	29	65	207
2. Corn Pest																		
1972	397	162	143	43	18	31	171.10	60.08	24.24	24.99	32.15	29.64	4,694	2,873	176	412	185	1,048
1975	218	101	45	27	21	24	181.81	64.30	16.38	35.61	35.63	29.89	5,188	2,622	137	1,672	257	500
3. Corn Production																		
1972	129	31	35	35	13	15	115.78	34.41	21.24	14.38	26.50	19.25	2,511	1,098	232	394	219	568
1975	181	63	61	16	16	25	170.59	75.22	28.88	11.00	17.12	38.37	6,484	2,832	533	2,098	187	834
4. Corn Management and Harvesting																		
1972	52	8	11	14	10	10	70.87	12.38	5.11	13.12	33.01	7.25	696	117	33	59	398	89
1975	75	14	12	10	19	20	46.33	6.24	12.36	4.73	11.51	11.49	928	211	53	282	119	263
5. All Other Corn Areas																		
1972	295	124	43	43	57	28	185.09	74.62	17.60	38.76	35.88	18.23	4,882	2,870	159	220	913	720
1975	148	52	22	35	28	11	126.37	56.64	10.98	20.85	24.63	13.27	1,275	627	65	133	268	182
Total:																		
1972	1,075	426	256	174	110	109	615.28	207.96	81.19	101.23	130.68	94.22	14,455	7,146	691	1,169	1,744	3,705
1975	756	291	176	103	95	91	595.55	235.12	77.22	76.32	98.76	108.13	15,290	7,315	879	4,214	896	1,986

VITA

Randall E. Trail was born on October 7, 1949, in Manchester, Tennessee. He was graduated from Coffee County Central High School, Manchester, Tennessee, in 1967. He spent four years in the Navy before entering Middle Tennessee State University and graduating with a B.S. Degree in Agriculture, 1975. He is married to the former Marzelle Tompkins. He entered graduate school at The University of Tennessee, Knoxville, in the field of Agricultural Extension, January 1976, and completed his work in December 1977.