

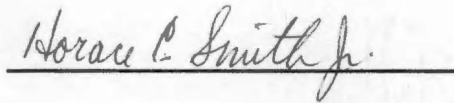
February 25, 1964

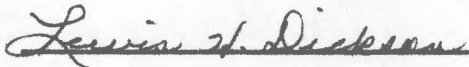
To the Graduate Council:

I am submitting herewith a thesis written by Samuel Estil Mullins entitled "Urban and Rural Differentials in Change in the Agricultural Phase of Adult Extension Work in Selected Tennessee Counties 1941-1961." I recommend that it be accepted for nine quarter hours of credit in partial fulfillment of the requirements for the degree of Master of Science, with a major in Agricultural Extension.


Major Professor

We have read this thesis and
recommend its acceptance:





Accepted for the Council:


Dean of the Graduate School

URBAN AND RURAL DIFFERENTIALS IN CHANGE IN THE
AGRICULTURAL PHASE OF ADULT EXTENSION WORK
IN SELECTED TENNESSEE COUNTIES, 1941-1961

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

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

by
Samuel Estil Mullins

March 1964

20
33

ACKNOWLEDGMENT

The author is grateful to the many individuals who helped make this study possible. First and foremost he is deeply indebted to his major advisor, Dr. Robert S. Dotson, for his helpful suggestions and guidance. Acknowledgment is made for helpful suggestions from Professors Lewis H. Dickson and Horace C. Smith who read the thesis.

The author expresses sincere appreciation to all County Agents--working and retired, who participated willingly in the personal interviews. His thanks are due Mrs. Georgia Troglen and Mrs. Betty L. Gilmore for their services.

Lastly and most important, the author expresses thanks to his wife Gladys. Her suggestions were helpful, but more important was her encouragement and attitude during the period of this study.

TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION.	1
Statement of the Problem	4
Purposes of the Study.	6
Need for the Study	6
Methods of Procedure	8
II. REVIEW OF LITERATURE.	14
Urbanization and Its Impact.	14
Urban Extension Work	17
Extension's Clientele.	20
Trends in Teaching Methods	23
Staff Time Spent	26
Brief Summary.	28
III. FINDINGS AND DISCUSSION	32
The Situation in 1941.	32
Objectives.	32
General objectives	32
Program objectives	34
Teaching objectives.	34
Teaching methods used	38
Staff time devoted to various phases of work.	40
Extent to which objectives were realized.	42

CHAPTER

PAGE

III. (CONTINUED)

The Situation in 1951.	45
Objectives.	45
General objectives	45
Program objectives	45
Teaching objectives.	49
Teaching methods used	49
Staff time devoted to various phases of work.	54
Extent to which objectives were realized.	54
The Situation in 1961.	57
Objectives.	57
General objectives	57
Program objectives	59
Teaching objectives.	59
Teaching methods used	64
Staff time devoted to various phases of work.	66
Extent to which objectives were realized.	68
Shifts and Trends (1941-1961).	72
Objectives.	72
General objectives	72
Program objectives	74
Teaching objectives.	77
Teaching methods used	81
Staff time devoted to various phases of work.	84

CHAPTER	PAGE
IV. SUMMARY AND CONCLUSIONS	91
Review of Findings	97
Objectives held	97
Teaching methods used	98
Staff time expenditure.	99
Findings related to hypotheses.	99
A condensation of the findings.	100
Suggestions for Further Study.	102
BIBLIOGRAPHY.	103
APPENDIXES	
A. URBAN AND RURAL COUNTY STUDY DATA COLLECTION FORM	108
B. SELECTED AGRICULTURAL CENSUS DATA COLLECTION FORMS.	110
C. TENNESSEE COUNTY PROGRAM OBJECTIVE RATING SHEET	112
D. TENNESSEE COUNTY TEACHING OBJECTIVE RATING SHEET.	113

LIST OF TABLES

TABLE		PAGE
I.	The Composition of Urban and Rural Populations, Populations of County Seats, and Relation of Gross County Agricultural Incomes and Total County Incomes in 1960.	11
II.	A Comparison of 1941 Adult Agricultural General Objectives Mentioned by Staffs in Four Urban, Four Rural and All Study Counties According to Frequency of Mention	33
III.	A Comparison of 1941 Adult Agricultural Program Objectives Mentioned by Staffs in Four Urban, Four Rural and All Study Counties According to Frequency of Mention	35
IV.	A Comparison of 1941 Adult Agricultural Teaching Objectives Mentioned by Staffs in Four Urban, Four Rural and All Study Counties According to Frequency of Mention	37
V.	A Comparison of Principal Teaching Methods Used in Disseminating Agricultural Information During 1941 to Adults in Four Urban, Four Rural and All Study Counties by Frequency of Mention.	39
VI.	A Comparison of Average Amounts of Staff Time Used in Various Phases of Adult Extension Work During 1941 in Four Urban, Four Rural and All Study Counties.	41

TABLE

PAGE

VII. A Comparison of 1939-1949 Selected Data for Four Urban and Four Rural Counties Studied, Taken from Agricultural Census Reports	43
VIII. A Comparison of 1951 Adult Agricultural General Objectives Mentioned by Staffs in Four Urban, Four Rural and All Study Counties According to Frequency of Mention	46
IX. A Comparison of 1951 Adult Agricultural Program Objectives Mentioned by Staffs in Four Urban, Four Rural and All Study Counties According to Frequency of Mention	47
X. A Comparison of 1951 Adult Agricultural Teaching Objectives Mentioned by Staffs in Four Urban, Four Rural and All Study Counties According to Frequency of Mention	50
XI. A Comparison of Principal Teaching Methods Used in Dis- seminating Agricultural Information in Adult Extension Work During 1951 in Four Urban, Four Rural and All Study Counties by Frequency of Mention	52
XII. A Comparison of Average Amounts of Staff Time Used in Various Phases of Adult Extension Work During 1951 in Four Urban, Four Rural and All Study Counties	55
XIII. A Comparison of 1949-1959 Selected Data for Four Urban and Four Rural Counties Studied, Taken from Agricultural Census Reports	56

TABLE

PAGE

XIV.	A Comparison of 1961 Adult Agricultural General Objectives Mentioned by Staffs in Four Urban, Four Rural and All Study Counties According to Frequency of Mention.	58
XV.	A Comparison of 1961 Adult Agricultural Program Objectives Mentioned by Staffs in Four Urban, Four Rural and All Study Counties According to Frequency of Mention	60
XVI.	A Comparison of 1961 Adult Agricultural Teaching Objectives Mentioned by Staffs in Four Urban, Four Rural and All Study Counties According to Frequency of Mention	62
XVII.	A Comparison of Principal Teaching Methods Used in Disseminating Agricultural Information in Adult Extension Work During 1961 in Four Urban, Four Rural and All Study Counties by Frequency of Mention	65
XVIII.	A Comparison of Average Amounts of Staff Time Used in Various Phases of Adult Extension Work During 1961 in Four Urban, Four Rural and All Study Counties.	67
XIX.	A Comparison of the Extent to Which 1961 Adult Agricultural Program Objectives were Realized in Four Urban, Four Rural and All Study Counties by Frequency of Mention.	69
XX.	A Comparison of the Extent to Which 1961 Adult Agricultural Teaching Objectives Were Realized in Four Urban, Four Rural and All Study Counties by Frequency of Mention.	71

TABLE

PAGE

XXI. A Comparison of 1941-1961 Adult Agricultural General Objectives Mentioned by Staffs in Four Urban, Four Rural and All Study Counties According to Frequency of Mention	73
XXII. A Comparison of 1941-1961 Adult Agricultural Program Objectives Mentioned by Staffs in Four Urban, Four Rural and All Study Counties According to Frequency of Mention.	75
XXIII. A Comparison of 1941-1961 Adult Agricultural Teaching Objectives Mentioned by Staffs in Four Urban, Four Rural and All Study Counties According to Frequency of Mention	78
XXIV. A Comparison of Principal Teaching Methods Used in Disseminating Agricultural Information in Adult Extension Work in Four Urban, Four Rural and All Study Counties During the Time Period 1941-1961	83
XXV. A Comparison of Percentages of Average Amounts of Staff Time Used in Various Phases of Adult Extension Work in 1941 and 1961 in Four Urban, Four Rural and All Study Counties	89
XXVI. Selected Agricultural Census Data Form for Four Urban Counties (1939, 1949, and 1959).	110
XXVII. Selected Agricultural Census Data Form for Four Rural Counties (1939, 1949, and 1959).	111

LIST OF FIGURES

FIGURE	PAGE
1. Four Urban and Four Rural Counties Selected for Study	10
2. Percents of Staff Time Devoted to Adult Agricultural Phase of Extension Work in Four Urban and Four Rural Counties by Years.	85
3. Percents of Staff Time Devoted to Adult Non-Agricultural Phase of Extension Work in Four Urban and Four Rural Counties by Years.	86
4. Percents of Staff Time Devoted to Extension Organization, Planning, Evaluation and Reporting Phase of Adult Extension Work in Four Urban, Four Rural Counties by Years	87
5. Percents of Staff Time Devoted to Other Phases (In-Service Training, Public Relations, Work with Other Agencies and Organizations and Other) of Adult Extension Work in Four Urban and Four Rural Counties by Years	88

CHAPTER I

INTRODUCTION

The Cooperative Extension Service is an out of school system of education for both adults and young people. This system teaches people to learn to do by doing. It is a three-way partnership between the county government, the State Land Grant Colleges, and the United States Department of Agriculture.

Extension's primary function is education. Extension education is directed to helping people solve the various problems they encounter from day to day in agriculture, home economics and related subjects. In performing its prime function, "education for action," Extension operates informally in line with the most important needs and opportunities of the people whom it serves.

The passage of the Smith-Lever Act established an out of school system of education for the people of the United States in agriculture, home economics and related subjects. Traditionally, Extension's first responsibility has been to the farm family.

Since the rapid growth of Extension following the passage of the Smith-Lever Act in 1914, many adjustments have necessarily been made in its programs. County agricultural programs have progressed from those which once included only emphasis on farm information to those which now also include emphasis on marketing, landscape gardening, public affairs, community development, economics and other similar topics too numerous to mention here.

One basic characteristic of Extension has been its ability to change its programs and methods to meet the changing conditions of the country and the changing demands of the people.

One significant change that has taken place and, apparently, will continue, is the shift in the population pattern of the United States and Tennessee from rural to urban situations. In 1790, only 1 out of every 20 of the 3,929,214 inhabitants of the United States were living in urban territory (1:XIII)*. In 1910, just prior to the passage of the Smith-Lever Act, the United States population was still predominantly rural. Only 45.7 percent of the 91,972,266 people lived in urban areas (1:4). In 1960 the urban residents outnumbered the rural by a ratio of 8 to 5 (24:XIII). Approximately 70 percent of the 179,323,175 United States inhabitants were urban at that time (24:1-4).

The rural to urban trend in Tennessee's population also has been noticeable during the time period mentioned above. Here the changes from 1940 to 1960 were particularly significant. While the total population increased from 2,915,841 in 1940 (25:2) to 3,567,089 in 1960 (26:2), the farm population decreased from 1,271,944 (25:2) to 585,002 (26:2), a decrease of 54 percent. At the same time, the rural non-farm population increased from 616,691 (25:2) to 1,116,500 (26:2),

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

and the urban population increased from 1,027,206 (25:2) to 1,865,587 (26:2), increases of 81 and 81.6 percents respectively.

The population trends toward urbanization in the state and nation have brought changes in community patterns, residential patterns, family relations, occupational choices and educational and recreational opportunities for rural and urban people alike. Differences between the cultures of the rural and urban segments of the population still exist, but they are not so great as they have been in the past. These differences are being eliminated by a greater mixing of rural and urban families in the community. The full-time and part-time farmers, professional people, skilled workers, business managers and people in other vocations can be found living in the same community. They read the same newspapers, watch the same television programs, attend the same churches and send their children to the same schools.

A large number of farm families have one or more members working in nearby towns or cities. They are ever more closely associated with urban residents.

Urbanization has been characterized by movements of people from small communities concerned chiefly with agriculture to other communities, generally larger, whose activities are primarily centered in government, trade, manufacture or allied interests.

The social and economic effects of modern urbanization are only beginning to be understood. A high degree of culture and great size in cities are known to be related. The concentration of wealth in

cities usually permits larger expenditures for education and recreation. Historically, intellectual activities have tended to flourish more in towns and cities than in the country (23:189).

Conspicuous differences in modes of living of rural and urban people are fast disappearing. The part-time farmer's economic and family life patterns become more and more conditioned by urban society because of continued association.

Modern methods of transportation enable the farmer to enjoy the cultural and intellectual advantages of the urban centers. Mass communications media serve to draw his attention to the urban world. These influences tend to make the farmer of today a different type of person than the farmer of 1914 (the year when the Smith-Lever Act was enacted).

The significant population trends and the urban influence on farm and other people alike have combined to create a greater and broader demand for Extension education (22:6). The change from seasonally teaching farmers how to control the boll weevil in the early years of Extension, to the conducting of farm management schools for farmers and lawn clinics for urban dwellers today, may partially illustrate this increased demand.

I. STATEMENT OF THE PROBLEM

Two of the major needs facing Extension today are: 1) to try to keep up with the change in the size and character of its clientele,

and 2) to recognize and make allowances for the effects these changes are having on the agricultural phase of its work.

The aforementioned population shift which took place in the United States and Tennessee from 1940 to 1960 brought about the corresponding need for shifts in Extension programs and methods. To what degree has Extension shifted its programs and methods to meet these ever-changing conditions in both rural and urban counties?

The population of the four urban counties in Tennessee (i.e. Davidson, Hamilton, Knox and Shelby) is becoming increasingly more urban. The percentage of urban people in these four counties has changed from 72 in 1940 to 83 in 1960. Similar population trends have taken place in Tennessee's rural agricultural counties (e.g. Franklin, Gibson, Greene and Marshall). The total urban population of these four counties has increased from 22 percent of the total county population in 1940 to 31 percent in 1960.

A part of the new urban population in both rural and urban Tennessee counties has rural farm background, and is acquainted with the work of the Cooperative Extension Service. These urban people have different problems and aims than those of the full-time farm family on which Extension has traditionally focused much of its past attention. If Extension is to adequately serve the growing urban segment of the population, in addition to the rural farm population, it must of necessity continue to seek to make desirable changes in its program and methods in order that it may more nearly meet

appropriate needs of all the people of Tennessee. Certain facts concerning Extension efforts in urban and rural situations are not currently available. Such facts should be useful in future program planning. It was to this end that the present study was designed.

II. PURPOSES OF THE STUDY

1. To compare trends in the amounts of emphasis (staff time) placed on adult agricultural work, non-agricultural work and Extension organization, planning, evaluations and reporting by staff members in the four urban counties (Davidson, Hamilton, Knox and Shelby), and in four selected rural agricultural counties (Franklin, Gibson, Greene and Marshall) in Tennessee for the years 1941 through 1961.

2. To consider other changes taking place (e.g. the nature of the objectives, teaching methods used and strengths and weaknesses) in adult agricultural work during the time period 1941-1961 in the selected counties.

III. NEED FOR THE STUDY

Changes which have occurred in the living patterns of rural and urban people have of necessity brought about changes in the programs and methods of the Tennessee Agricultural Extension Service. Efforts have been made to base Extension programs and teaching methods of the past on the needs of the people.

This study grew out of a need and a desire to know more about the past and present situations in regard to Extension programs, teaching methods and trends in the amounts of emphasis Extension has placed on adult agricultural and non-agricultural work over a twenty-year period of time in urban and rural agricultural counties in Tennessee. Detailed study of the past and present Extension programs and teaching methods in these counties should make more intelligent plans for the future possible.

This study should point out more clearly the changing nature of Extension's clientele and the consequent changing types of information that are needed from Extension if needs are to be satisfied. It seems obvious that Extension can neither legally nor literally be all things to all people. It must place its emphasis within legal limits where it finds the greatest need and most demand. This study should point out where the need and demand have been in prior years and indicate some of the major trends in emphasis. It should help Extension workers to decide how much emphasis to place on adult agricultural and non-agricultural educational efforts in given urban and rural situations. Should it broaden its field and disseminate agricultural information and education to all residents of the state, regardless of their occupation or place of residence? Should the same be the case with non-agricultural information and education? These questions and others perplex Tennessee county Extension workers in such situations. No previous known effort has been made to comparatively study the changes

that have occurred in the adult agricultural phase of Tennessee Extension work in urban and rural counties during the period 1941-1961.

IV. METHODS OF PROCEDURE

The design of this study is of a comparative-causal nature. A comparison was made of trends during the period 1941 to 1961 in terms of county Extension staff time devoted to the adult agricultural and non-agricultural phases of work and Extension organization, planning, evaluation and reporting by staff members in two different types of counties (urban and rural agricultural) in Tennessee. Extension teaching methods used and the nature of the objectives held also were compared in the counties studied. The term "adult phase" as used throughout this study will refer to that part of the county Extension program dealing with adults. "Agricultural phase" will mean that part of the county Extension program dealing with such subject matter as efficiency in agricultural production, farm management, marketing of agricultural products and conservation of natural resources. The term "non-agricultural phase" will refer to all subject matter parts of the county Extension program excepting those that are agricultural. Time spent on "county Extension organization, planning, evaluation and reporting and in-service training" will be considered separately and apart from that devoted to agricultural and non-agricultural work.

Three hypotheses were formulated for this study, including:

1. The relative amount of staff time devoted to the adult agricultural phase of the Extension program in the urban counties of Tennessee has decreased during the time period studied; while correspondingly, it has remained the same or increased in selected rural agricultural counties.

2. The relative amount of staff time devoted to the adult non-agricultural phase of the Extension program in the urban counties in Tennessee has increased during the time period studied; while correspondingly, it has remained the same or increased at a slower rate in the rural agricultural counties.

3. The relative amount of staff time devoted to organization, program planning, evaluation and reporting was larger in urban counties in 1941, 1951 and 1961 than in the rural agricultural counties, and it has increased more proportionally during the over-all period (1941-1961) studied.

Eight Tennessee counties were selected for this study (see Figure 1 page 10). Four were urban (Davidson, Hamilton, Knox and Shelby), and shall be referred to as "urban counties" throughout the remainder of this study. The other four were rural agricultural (Franklin, Gibson, Greene and Marshall), and shall be called "rural counties" throughout the rest of the study.

Selection of Counties

The bases for the selection of the counties in the study were that the following conditions must have existed in 1961 (see Table I, page 11):

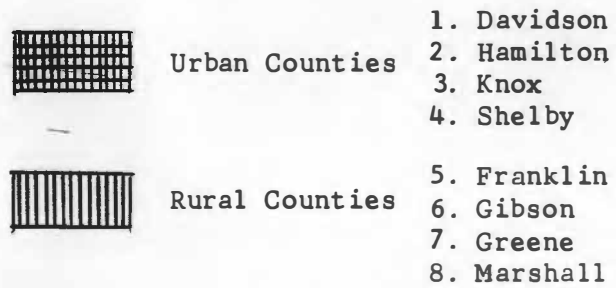
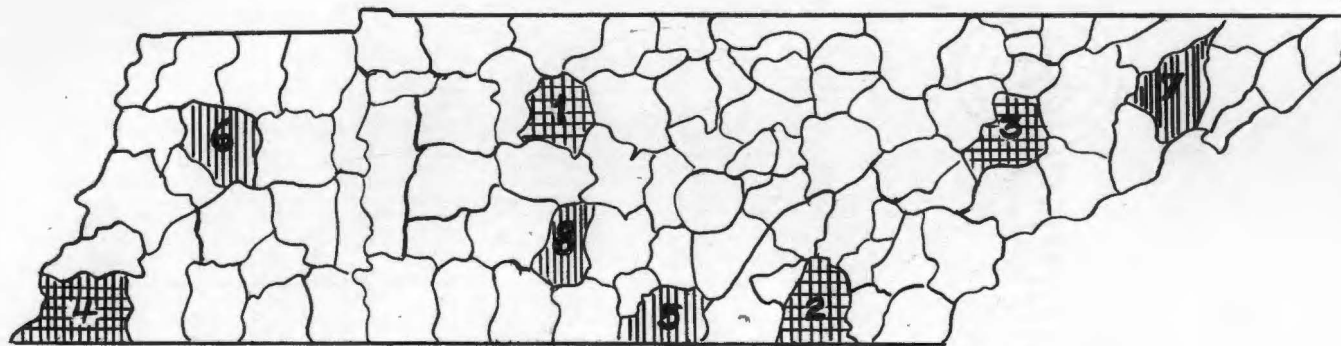


Figure 1. Urban and rural counties selected for study.

TABLE I

THE COMPOSITION OF URBAN AND RURAL POPULATIONS AND POPULATION OF COUNTY SEATS, AND RELATION OF GROSS COUNTY AGRICULTURAL INCOMES AND TOTAL COUNTY INCOMES IN 1960

	Composition of County Population ¹					Percentage That Gross Agricultural Income was of Total County Income
County	Urban Percentage	Rural Percentage	Population of County Seat ²	Total Gross County Income ³	Total Gross Agricultural Income ⁴	
Urban						
Davidson	77.70	22.30	170,874	\$708,000,000	\$ 5,817,000	0.82
Hamilton	79.20	20.80	130,009	397,000,000	3,647,000	0.96
Knox	68.90	31.10	111,827	390,000,000	7,076,000	1.81
Shelby	87.80	12.20	497,524	996,000,000	14,703,000	1.47
Per County						
Average	78.40	21.60	227,558	622,750,000	7,808,250	1.25
Rural						
Franklin	19.20	80.80	4,760	28,000,000	6,924,000	24.70
Gibson	40.10	59.90	4,225	45,000,000	18,522,000	41.20
Greene	27.90	72.10	11,759	43,000,000	11,733,000	27.30
Marshall	37.10	62.40	6,338	19,000,000	5,677,000	29.90
Per County						
Average	31.20	68.80	6,770	33,750,000	10,704,000	30.77

¹United States Bureau of Census; County Data Hand Book 1962. (A Statistical Abstract Supplement) Washington: Government Printing Office, 1962, p. 332-42.

²United States Bureau of Census; Population, Tennessee Number of Inhabitants (Washington: Government Printing Office, 1960), p. 44-12.

³United States Bureau of Census; County Data Hand Book 1962, op. cit., p. 332-42.

⁴Ibid., p. 340-50.

1. Each urban county must have had a minimum of sixty-eight percent urban* population (as seen in Table I, page 11)

2. The population of the county seat of each urban county must have exceeded 100,000 (Knoxville had the smallest population, 111,827, and Memphis was the largest with 497,524 people as shown in Table I, page 11)

3. The gross farm income of each urban county must have constituted less than two percent of the total gross county income

4. The population of the county seat of each rural agricultural county must have been less than 12,000 (Table I, page 11 shows that Greenville was the largest county seat with a population of 11,759)

5. The gross farm income of each rural agricultural county must have constituted more than twenty-four percent of the total gross county income (as seen in Table I, it ranged from 24.7 percent in Franklin County to 41.2 percent in Gibson county)

6. There must have been full Extension staffs, including county agricultural agents and home demonstration agents and their assistants (especially in 4-H Club work), in each county throughout the entire study period (1941-1961).

Data Collected

The data for this study were gathered by conducting field interviews with Extension agents, by examining agents' program statements,

*All persons living all incorporated and unincorporated places having 2,500 inhabitants or more in 1960 (26:XIV, XV).

annual plans of work and reports and by summarizing selected items in the Agricultural Censuses.

Certain forms were developed to use for the collection of data. The form found in Appendix A was used in the field interviews to collect data dealing with objectives, accomplishments, methods used in disseminating agricultural information and strengths and weaknesses of the agricultural programs. It also was used to record data from annual plans of work and annual narrative reports. The form found in Appendix B was used to collect useful background information from the 1940, 1950 and 1960 census reports.

CHAPTER II

REVIEW OF LITERATURE

This chapter will consider available Extension literature related to urbanization and its impact, the growth of urban Extension work, the changing nature of Extension's clientele, trends in Extension teaching methods used and trends in the expenditure of staff time.

I. URBANIZATION AND ITS IMPACT

Fawcett (5:44), in an article entitled "The Impact of Urbanization on Extension," pointed out the fact that the educational needs and desires of farm people have been changing rapidly in response to the economic and social changes and pressures placed on them from rapidly expanding urban influences. He further stated that he believed that the greatest single factor in the impact of urbanization on Extension was the sheer increase in the numbers of potential clients. He noted that newcomers to suburban communities soon learned of Extension's service to the community and often become the most active participants in Extension programs.

Maitland (14:2), in discussing "The New Social Frontier," (a study conducted by the United States Department of Agriculture) indicated that the population increase in urban fringe areas had far outstripped the increases in central cities and other urban areas during

the decade between the 1950 and 1960 censuses. He (14:3)' noted that, while the land in these urban fringe areas was predominantly agricultural, only from 12 to 14 percent of the households were located on farms, and less than ten percent of all household heads were full-time farm operators. Maitland (14:7) further pointed out that fringe area residents typically demonstrate a preference for a way of life that attempts to combine the best aspects of rural and urban living.

Nobe (19:30) in a report entitled "Urbanization Creates New Problems," declared that the history of the United States might be characterized by three great migrations: 1) the general move from East to West, 2) the move from rural areas to the cities, and 3) the urbanization of the open country.

The first great migration -- the move from East to West -- resulted in much unwise agricultural development, exploitation and waste. The subsequent migration to the cities also went unguided and finally resulted in the numerous problems of city management with which our city fathers are faced today. The non-farm segment in rural areas has steadily increased in the open country fringes surrounding all major urban centers. Nobe (19:31) further discussed the idea that the open country has become a new kind of "ru-urban" community that can no longer be called rural because its components are too heterogeneous. Without guidance, he feared such heterogeneity could only result in further conflict and disharmony. He noted certain fundamental differences in attitudes between farmers and urban workers.

Nobe (19:34) further stated that the migration to the country was not just a passing fancy. He felt that the many economic and sociological problems that accompany this trend should be recognized and attempts made to solve them.

McKain (18:76) noted the dramatic changes that have occurred in the rural American countryside. In its brief life, the Agricultural Extension Service has seen some rural communities wither and die, while it has seen others grow and flourish. He noted that suburban development has been the dominant pattern of settlement in the middle half of the twentieth century, resulting in what may well be referred to as the "rural suburb." McKain found that, following World War II, people began to move to suburban locations some distance from large urban areas. Housing developments were mushrooming all over the countryside. Small rural villages were becoming bustling suburbs almost overnight. Peaceful country roads were becoming lined with homes of workers who made long treks to the city to work every day and back home at night.

Such changes in the population structure as those mentioned above have become of major concern to educational institutions--particularly those whose programs have had primarily a rural orientation.

Anderson (1:1) in his 1956 study entitled "The Flight of the Fringe" documented the fact that the people in New York State have been moving into territory surrounding the cities and into the open country at a dramatic rate during the last three or four decades. He described the population shift as the urban encircling, rural penetrating population movement.

Anderson stated that he believed this has come about as a result of the revolution in transportation (especially the increase in the use of automobiles and the completion of more and more paved roads), the general development of electricity, the changes in communications, including the development of the radio and television, the mechanization of agriculture, the mechanization of the rural home and the changes in our rural institutions (especially the schools). Anderson (1:3) further stated that our rural population was customarily subdivided into those persons who worked and lived on farms, or "the farmers," and those who lived in the small villages and who also had their work there. A vast American population that is rural in residence but urban in occupation has gradually developed over the years.

While the emphasis has been upon the movement of people to the urban fringe areas and the open country, it must be added that the movement now noticeable includes business and industry as well.

Martin (15:5) in his study entitled "The Place of 4-H Clubs in Urban Areas," took note of the fact that, in the country at large, the farm population has decreased very rapidly and the farms have become larger and fewer, with the exception of an increasing number of small, specialized farms to be found near the great cities.

II. URBAN EXTENSION WORK

Collings (2:1), in a study entitled "Survey of Extension Work in Urban Areas," pointed out that each of the forty-eight states was

carrying on some sort of Extension program in urban areas by 1949. In thirty-two states this was an extension of the regular program. In one or more counties in each of 16 states, Extension was found to be conducting, in addition to the regular program, a special program for the urban areas.

The survey (2:3) further disclosed that men working in urban areas were most frequently assigned to teaching gardening, landscaping, horticulture, floriculture and poultry production. It was estimated that, on the average, one-seventh of one agent's time was being spent per urban county doing urban work in the adult agricultural phase of the program.

Collings (2:6) listed various factors that led to the development of urban Extension work, including the demands made by individuals and organizations in both urban and rural areas.

It is generally recognized that, in most states, there has been a growing demand for Extension work in urban areas. The demand has ranged from practically none in some areas to strong, organized demand in others. Requests for information have been received in practically all urban areas. Demands have been expressed not only by individuals but also by some groups (2:7).

Sprowls (21:47), in a study entitled "Organized Programs Conducted by County Extension Agents with Urban and Suburban People in Selected Counties in Washington and Oregon," pointed out that Extension workers in all counties studied were doing some urban and suburban Extension

work, but that not all counties had organized programs. The study revealed that the county Extension staff members had been spending from 28 to 38 percent of their total time working with urban and suburban people.

He (21:51) further identified the major areas of urban and suburban Extension work to be related to landscaping, work with garden clubs, work with Parent Teacher Associations, work with community clubs, work with service clubs, turf demonstration plots, and pruning demonstrations.

Sprowles' study (21:55) indicated that the attitudes of county agents contacted were favorable toward Extension work with urban and suburban families regardless of the amount of urban and suburban work done at the time of the study. Reasons given for such favorable attitudes were many, but those mentioned most often were:

1. Extension has a responsibility to all people.
2. Extension is tax supported and urban and suburban people pay taxes.
3. Extension has a responsibility to teach subject matter in agriculture, home economics and related areas to all people.
4. Demand from urban and suburban people for information in agriculture, home economics and related areas has been increasing.
5. There exists excellent opportunity to expand the program to include all people.

III. EXTENSION'S CLIENTELE

The Smith-Lever Act (28:7), in stating the purpose of the Cooperative Extension Service, referred to "the people of the United States," indicating broadly those who constitute Extension's clientele.

Written in 1958, the so-called "Scope Report" (23:13) indicated that no one could legitimately question that Extension's first responsibility continued to be with farm families. However, it was stated, other groups could not be ignored. In differing degrees and for somewhat different types of problems, other groups had become increasingly more interested in getting the results of research and other services available from Extension.

Over the years Extension has been called on to provide educational assistance to a broadening audience, including farm families, non-farm rural residents, urban residents, and farm commodity and related organizations.

Martin (15:1), in a 1953 study entitled "The Place of 4-H Clubs in Urban Areas," noted that traditionally people think of Extension work as a service only for rural people. But, it was noted, there are no legal barriers to the development of Extension work in urban areas. The Federal Smith-Lever Act neither mentions Extension work with youth nor limits its services to rural people. However, various discussions reported in the Congressional Record at the time the law was enacted and since, imply that it was intended primarily for rural people on an out-of-school basis, irrespective of their place of residence, age,

economic status, group affiliations, or other factors that might be used to draw lines of distinction. First responsibility is seen to be to people living on farms, but it is not restricted to them.

Gallup and Fulghum (7:19) based on a 1958 study, stated that many once-rural counties now have diversified populations. Because of this, Extension agents have had to learn how to work with many different groups -- farm families, families in the open country not farming, suburbia, fringe area families, part-time farmers and others.

Though there are fewer commercial farmers today than in years gone by, their output is just as vital as ever to the country (if not more so). Authorities agree that farmers' problems are more specialized and more complicated (due to high investment, high potential and high risk) than ever before.

Extension is working with an increasing number of people who serve farmers -- people who process, distribute and market farm products. Such groups also are clearly defined Extension audiences having their own unique problems, goals, values, needs and interests.

McKain (18:84), in 1963 suggested that the adjustment to a new community, particularly one that is suffering from the pains of rapid expansion, is largely an individual matter. But, nevertheless, community resources may be enlisted to remove a measure of the discontent that must exist. The Cooperative Extension Service in these fast growing rural suburbs has at once an obligation and an opportunity to be of assistance to the ever-growing number of newcomers to such communities, according to McKain.

Wilson (29:1) in a study entitled "Extension's Coverage of Its Clientele" explains that the problem of extending coverage to the 34 percent of the nation's farmers not being reached in 1952 by Extension programs is definitely related to the question of their socio-economic status. Extension studies have indicated that the proportion of farmers having no contact with Extension is twice as great for farmers in the lower socio-economic one-half of the farm group than for those in the higher socio-economic one-half. From the Extension teaching standpoint, reaching those at the lower end of the socio-economic scale is seen to require greater emphasis on personal contacts, possible only through a relatively large county Extension staff. Wilson (29:2) gave further information showing that 3,545,220 farm families and 1,052,626 rural non-farm families were reached by Extension with agricultural programs in 1952. This was 66 percent of the farm families and 12 percent of the rural non-farm families of the nation at that time. The average work load per agent year with rural adults in agricultural work in 1952 was 1,487 farm families and 2,380 rural non-farm families. Extension actually reached 980 and 291 of these families respectively.

Gordy (9:45) found that Extension had assisted 3,697,401 farm families and 963,693 non-farm families in 1950; while Matthews (16:34) reported that 3,704,817 farm families and 11,897,736 non-farm families were assisted by Extension in 1960.

Anderson (1:9), based on his study pointing out opportunities for Extension activities, stated that the commercial farmer will probably

need technical aid from Extension in the future even more than previously. The rural non-farm class also has asked increasingly for technical aid. Since many rural non-farming people have 35 to 40-hour work weeks, many who have plots of land can engage in limited part-time farming. Others at least have gardens and some livestock or poultry. Many are interested in developing special avocational interests, such as flowers, bird sanctuaries and formal and informal plantings. As more of these new residents learn about the services available through Extension, Anderson believes they will ask for increased help for home care and beautification, gardening, care of animals, care of small power machinery and other assistance related to their areas of special need and interest.

IV. TRENDS IN TEACHING METHODS

Fulghum (6:71), in an article (based on a study to determine a trend in the use of mass teaching methods in six states), pointed out that Extension's use of mass media is changing. County agricultural agents are shifting to more widespread use of mass media in urban areas and less in farm counties.

He further indicated that agricultural agents from six states reported their use of press, radio, television and bulletins for a five-year period (1954-1958). During the five years, agents in counties having urban populations exceeding 70 percent showed a 30 percent increase in the use of the press, radio and television. Agents in counties

with farm populations exceeding 51 percent reported a 13 percent decrease in the use of the same mass media teaching methods.

A similar trend to that above showed up with regard to bulletins distributed per agent. Urban agents reported a 16 percent increase in bulletins distributed, while those in farm counties reported 14 percent fewer.

Gordy (9:3) reported that in 1951 "personal contact" methods of Extension teaching decreased in use from the previous year, while attendance at Extension meetings reached an all time high. According to Gordy (9:8), county Extension agents also reported preparing an average of 95 news articles and 17 radio broadcasts per county.

Dail (4:67), in a 1961 article entitled "County Communications Patterns Change," demonstrated the value of using the monthly newsletters to group information for leaders, reaching the various farm, urban and suburban audiences.

McDonald (17:129), in a 1961 article entitled "Educational Promotion Moves Outdoors," described how Lenawee County Michigan Extension agents were using outdoor advertising to supplement other common forms of mass media to inform residents of educational services available to them.

The Extension Activities and Accomplishments of 1961 (10:10) shows that County Extension Agents used a variety of methods to get the latest results of agricultural research before the people in their counties. Agents have learned from experience and research

(12:412) (30:74) that the more ways and times a person is contacted, the greater are his chances of adopting a practice.

Though "personal contacts" remain important basic methods of work, agents have continued to develop other methods that reach more people faster. Literature indicates that they have worked more with groups in meetings, and are making ever increasing use of press, radio, television, bulletins and other mass communications media. (10:10) (3:1)

Research conducted by Wilson and Gallup (30:73) on Extension teaching methods indicates that wise selection and use of teaching methods directly influence the Extension worker's accomplishment. Also, of 81 practices in 100 adopted as the result of the various teaching methods, 25 were credited to "individual contacts," 33 to "group contacts" and 23 to "mass contacts."

When relative cost of teaching methods and their relative effectiveness are both considered, "radio broadcasts" and "news stories" were found to be the cheapest methods of bringing about desired behavioral change. Next came "circular letters," "office calls," "general meetings" and "bulletins," in that order.

Gooch (8:190) in an article entitled "Teaching Via Special Short Courses" said, ". . . conventional farm meetings, like the old Model T, are being replaced with new models." He said the one-shot meeting where rural people once gathered to get the latest word on subjects like chemical weed control and furniture repair seems to be giving way to a

series of meetings. In a sense these are locally adapted off-campus short courses.

V. STAFF TIME SPENT

Wilson (31:190) in his article entitled "How County Extension Agents Use Their Time" points out that the use of time by county Extension workers has been researched from many points of view.

A. Some Extension people have been concerned with the amount of time spent in the field compared to the amount spent in the office.

B. Some have wanted to know how much time was given to 4-H Club work and others how much to adult work.

C. Some have wanted to know how much time was spent in planning each phase of work, and others how much was devoted to getting action.

Wilson found that the county Extension workers' reports indicated that approximately 60 percent of their working time was spent in the field and 40 percent in the office in 1945. The time devoted to Extension organization and planning amounted to approximately one-sixth of all agents' time, and five-sixths was spent in getting action on what was planned. County agents were found to have spent 20 percent of their time working with the 4-H Club program and about 80 percent of it working with adults.

Gordy (11:11) in analyzing 4-H Club work conducted in 1951 found that county agents and assistants had spent 37.6 percent of their time in the office and 62.4 percent in the field. The percent of time

spent doing 4-H Club work that year was 29.7, while that spent doing adult work was 70.3 percent.

Wilson (29:2), in his study entitled "Extension's Coverage of Clientele" pointed out that all county agricultural agents and assistant agents had devoted about 31 percent of their total time to youth work and 69 percent to adult work in 1954.

Porter (20:5), in reviewing how county agents had spent their time in 1942, noted that 65.9 percent of county agricultural agents' time was spent on agricultural work, 7.3 percent doing non-agricultural work, 17.2 percent doing Extension organization and planning and 9.6 percent on miscellaneous work.

Gordy (9:44), in pointing out how county agents spent their time in 1951, stated that the agricultural phase of the work accounted for about 60 percent of the agents' time, non-agricultural work for 10 percent, Extension organization and program planning for 22 percent and miscellaneous work about 8 percent.

Gordy (10:17) pointed out in his report "How County Agents Spent Their Time in 1961" that 62.6 percent of the agents' time that year was spent on the agricultural phase of the program, 10.3 percent on the non-agricultural phase, 17 percent on Extension organization and program planning and 10.1 percent on miscellaneous activities.

VI. BRIEF SUMMATION

1. The educational needs and desires of farm and rural people are changing in response to the economic and social changes and pressures placed on them by rapidly expanding urban and other related influences.

2. The open country has become a new kind of rural-urban community (i.e., it is no longer strictly rural, its components being extremely heterogeneous). Without adequate guidance, such heterogeneity may result in conflict and disharmony.

3. The migration to the country cannot be regarded as just a passing fancy. It is time to recognize and attempt to surmount the many economic and sociological problems that accompany this well-established trend.

4. America's rural population was traditionally subdivided into those persons who lived on farms (the farmers) and those who lived in the small villages and had their work there. Now, a vast part of the population is rural in residence but urban in occupation.

5. Each of the forty-eight states was carrying on some sort of an Extension program in urban areas by 1949. The subject-matter fields most frequently mentioned for those assigned to the agricultural phase of the work were: gardening, landscaping, horticulture, floriculture and poultry production.

6. Demands made by individuals and groups in both urban and rural areas led to development of Extension work in urban areas.

7. The Smith-Lever Act (as amended in 1962), in stating the purpose of Extension work, referred to "the people of the United States" -- broadly indicating who constitutes Extension's clientele.

8. The so-called Scope Report indicates that Extension's first responsibility appears to be to farm families. However, it is increasingly clear that others cannot be ignored.

9. Traditionally, people have thought of Extension work as a service only for rural people. But there are no legal barriers to the development of Extension work in urban areas, and a new image (incorporating urban responsibilities) is emerging.

10. Extension's educational responsibilities extend to "all the people of the United States" having an interest in agriculture and home economics and subjects related thereto.

11. Extension is working with an increasing number of people who serve farmers -- those who process, distribute and market farm products.

12. About 66 percent of all farm families and about 12 percent of all rural non-farm families in the nation were reached by Extension during 1952. In 1960 Extension actually reached 3,704,817 farm families and 11,897,736 non-farm families.

13. Extension's use of mass media is changing. County agricultural agents are shifting to more widespread use of mass media in the urban areas and are using it less in the farm counties.

14. In urban areas agents are beginning to use the press, radio and television for direct teaching; while in the rural counties they are used mainly for announcements and news.

15. Extension agents use a variety of methods to get the latest results of agricultural research before the people in their counties. They have learned from research that the more ways and times a person is contacted, the greater are his chances of adopting a practice.

16. One of the greatest changes in Extension's teaching methods has been the shift away from personal and group contacts to mass media. This has been mainly due to the increase in the numbers of families having access to newspapers, magazines, radio and television.

17. County Extension workers reports in 1945 indicated that approximately 60 percent of their working time was spent in the field and 40 percent in the office. Reports indicate in 1951 it had changed to 62.4 and 37.6 respectively.

18. In 1951, county agricultural agents and assistants spent 29.7 percent of their working time with the 4-H Club phase of the work and 70.3 percent working with adults. In 1961 the percentage of working time changed 21.8 and 78.2 respectively.

Research pointed out that in 1942 all county agricultural agents and assistant agents had devoted about 65.9 percent of their working time to agricultural work, 7.3 percent to non-agricultural work, 17.2 percent doing Extension organization and planning, and 9.6 percent to miscellaneous work.

In 1951 the agricultural phase of the work accounted for about 60 percent of the agents' time, non-agricultural work for 10 percent, Extension organization and program planning for 22 percent and miscellaneous work about 8 percent.

The agricultural phase accounted for 62.6 percent of all agricultural agents working time in 1961, while 10.3 percent was spent on the non-agricultural phase, 17 percent on Extension organization and program planning and 10.1 percent on miscellaneous activities.

CHAPTER III

FINDINGS AND DISCUSSION

I. THE SITUATION IN 1941

Adult agricultural Extension work at the time studied was somewhat influenced by the start of World War II. Some Extension emphasis at the time was placed on national defense and attention was given to the production of food and fibre, problems arising from new military camps and war industries, civilian defense and other war work such as the collection of scrap metal. Just prior to 1941, Extension's objectives were related to conservation farming and food for defense. These objectives carried over into 1941.

Objectives

Objectives are expressions of the ends toward which our efforts are directed. It is generally agreed that the word objective refers to a direction of movement (13:117,118). According to the Tennessee Extension Workers Handbook:

. . .an objective is an aim; an end aimed at; a purpose for which group and/or individual actions are organized and directed. Groups or individuals who work toward objectives expect to attain or reach them. They should be stated in such fashion that progress toward them can be measured. (21:67).

General objectives. After observing data in Table II, comparing 1941 urban and rural county general objectives of the adult agricultural phase of Extension work (as stated, in personal interview, by county

TABLE II

A COMPARISON OF 1941 ADULT AGRICULTURAL GENERAL OBJECTIVES
MENTIONED BY STAFFS IN FOUR URBAN, FOUR RURAL AND ALL
STUDY COUNTIES ACCORDING TO FREQUENCY OF MENTION

General Objective	Frequency of Mention		
	All Study Counties	Urban Counties	Rural Counties
1. To improve and conserve the soil	7	4	3
2. To develop a satisfactory milk market	1	1	0
3. To develop a source of farm credit	1	1	0
4. To increase crop yields by soil improvement	1	0	1
5. To increase the numbers of dairy and beef cattle in the county	1	0	1
Total mentions	11	6	5

agents who were on the staff at that time), it would appear that improvement and conservation of the soil were major objectives of both urban and rural counties at the time. Other objectives held by the urban counties were to develop a milk market and a source of farm credit. Also, the rural counties expressed an interest in increasing crop yields and numbers of livestock.

Program objectives. Program objectives are seen to be long range (usually 5 year) more or less generally stated objectives in a particular area of county Extension program emphasis selected by a county program development committee and Extension staff. Such objectives are included in the county Extension program statement (21:67,68).

As seen in Table III, a comparison of 1941 urban and rural county program objectives of the adult agricultural phase of Extension work (as stated, in personal interview, by county agents who were on the staff at that time), twenty-nine of the thirty-four objectives mentioned emphasized soil conservation and improvement. More mentions were given this objective by those in the rural counties than by those in the urban counties (eighteen in rural counties and eleven in urban counties). Three other objectives held by the rural counties emphasized agricultural production, while two held by the urban counties emphasized marketing and farm credit. Here again it is to be noted that the most prominent program objectives concerned soil conservation and improvement.

Teaching objectives. The major function of the Cooperative Extension Service as stated in the Smith-Lever Act is:

TABLE III

A COMPARISON OF 1941 ADULT AGRICULTURAL PROGRAM OBJECTIVES
MENTIONED BY STAFFS IN FOUR URBAN, FOUR RURAL AND ALL
STUDY COUNTIES ACCORDING TO FREQUENCY OF MENTION

Program Objective	Frequency of Mention		
	All Study Counties	Urban Counties	Rural Counties
<u>Related to soil conservation and/or improvement</u>			
1. The growing of more cover crops	7	3	4
2. To use more lime on soil conserving crops	7	3	4
3. To use more phosphate on soil conserving crops	7	3	4
4. The growing of more permanent pasture	6	2	4
5. To get more alfalfa sown	1	0	1
6. To produce more crimson clover for soil improvement and for seed	1	0	1
Sub-total	29	11	18
<u>Related to agricultural production</u>			
1. To increase livestock numbers	1	0	1
2. To increase milk production	1	0	1
3. To increase tobacco yield	1	0	1
Sub-total	3	0	3
<u>Related to marketing</u>			
1. To get a milk market organized	1	1	0
Sub-total	1	1	0
<u>Related to farm credit</u>			
1. To get a production credit association organized	1	1	0
Sub-total	1	1	0
Total mentions	34	13	21

To aid in diffusing among the people of the United States useful and practical information on subjects related to agriculture and home economics, and to encourage the application of the same. (22:3).

Extension teaching refers to the intentional process of organizing learning experience in order to achieve predetermined desired objectives (21:68).

A teaching objective is seen as a short range (usually annual), more or less specifically stated objective related to a priority program objective and setting forth three primary items, including: 1) the audience to be taught, 2) subject matter involved, and 3) behavior changes sought (21:68).

As noted in Table IV, comparing 1941 urban and rural county teaching objectives of the adult agricultural phase of Extension work (as stated, in personal interview, by county agents who were on the staff at that time), most teaching objectives mentioned (twenty-two out of twenty-four) were related to the growing of soil improving and soil conserving crops. The values of lime, phosphate, cover crops and permanent pasture for increasing crop yields and in preventing soil erosion were mentioned six times by the urban counties and seven times by the rural counties. The other eleven teaching objectives mentioned related to the teaching of essential practices in producing permanent pasture, better livestock management, crop production, proper seeding methods and the value of crimson clover for soil conservation and for a cash crop. Nine of the eleven were made by those in rural counties. In general the teaching objectives of the time period studied were related to teaching the value of, and how to seed soil improving crops. Those in rural counties mentioned teaching objectives related to the use of

TABLE IV

A COMPARISON OF 1941 ADULT AGRICULTURAL TEACHING OBJECTIVES
MENTIONED BY STAFFS IN FOUR URBAN, FOUR RURAL AND ALL
STUDY COUNTIES ACCORDING TO FREQUENCY OF MENTION

Teaching Objective	Frequency of Mention		
	All Study Counties	Urban Counties	Rural Counties
<u>Related to the growing of soil conserving and/or improving crops</u>			
1. The effects of phosphate and lime on yields of hay and pasture crops	7	3	4
2. The essential practices in producing permanent pasture	6	2	4
3. The value of using cover crops for increasing yields and in preventing soil erosion	5	2	3
4. How to properly prepare a seed bed and seed alfalfa	1	0	1
5. Proper seeding for crimson clover	1	0	1
6. The value of clover for soil conservation and a cash crop	1	0	1
7. The value of permanent pasture in a rotation	1	1	0
Sub-total	22	8	14
<u>Related to livestock management</u>			
1. Better livestock management	1	0	1
Sub-total	1	0	1
<u>Related to increasing crop yields</u>			
1. How to get higher crop yields	1	0	1
Sub-total	1	0	1
Total mentions	24	8	16

soil improving crops twice as frequently as did those in urban counties.

Principal Teaching Methods Used

Since the beginning of Cooperative Extension work, one major concern of the Extension worker has been to try to get optimum returns for his teaching efforts. It is known that the teaching method used in disseminating information by the Extension worker influences the effectiveness of his work.

Wilson and Gallup grouped the major teaching methods used in Extension as follows:

1. Individual contacts (farm visits, office calls, telephone calls, result demonstrations and personal letters)
2. Group contacts (meetings of all kinds, conferences and tours)
3. Mass contacts (publications, radio, television, news stories, circular letters and exhibits) (29:4).

As seen in Table V, the principal teaching methods used in disseminating agricultural information during 1941 (as stated, in personal interview, by county agents who were on the staff at that time), were mainly classifiable as "individual contact" methods. Out of the total mentions, more than one-half (seventeen of the thirty-one) were "individual contact" methods, of which "farm visits" and "office calls" were most frequently mentioned. "Mass contact" methods were the next most prominent teaching methods used with eight mentions out of the thirty-one, or nearly one-fourth of all mentions. "Circular letters" were the most important of this last group. Least in importance, as measured by frequency of mention, were "group contact" methods.

TABLE V

A COMPARISON OF PRINCIPAL TEACHING METHODS USED IN DISSEMINATING
 AGRICULTURAL INFORMATION DURING 1941 TO ADULTS IN FOUR
 URBAN, FOUR RURAL AND ALL STUDY COUNTIES BY
 FREQUENCY OF MENTION

Teaching Method	Frequency of Mention		
	All Study Counties	Urban Counties	Rural Counties
<u>Group contacts</u>			
1. General meetings	4	1	3
2. Method demonstrations	2	0	2
<u>Sub-total</u>	<u>6</u>	<u>1</u>	<u>5</u>
<u>Individual contacts</u>			
1. Farm visits	8	3	5
2. Office calls	6	3	3
3. Result demonstrations	3	2	1
<u>Sub-total</u>	<u>17</u>	<u>8</u>	<u>9</u>
<u>Mass contacts</u>			
1. Circular letters	4	1	3
2. News stories	2	1	1
3. Bulletins	1	0	1
4. Radio	1	1	0
<u>Sub-total</u>	<u>8</u>	<u>3</u>	<u>5</u>
<u>Total mentions</u>	<u>31</u>	<u>12</u>	<u>19</u>

The "individual contact" methods were shared almost equally between urban and rural counties, while the "group contact" methods and the "mass contact" methods were each mentioned more than twice as frequently by those in rural counties as they were by those in the urban counties.

Staff Time Devoted To Various Phases Of Work

One characteristic of Extension has been its ability to change its programs and methods to meet the changing conditions of the country and the changing demands of the people. The population trends toward urbanization in Tennessee have brought changes in the needs of its people and, consequently, such changes have been reflected in the use of staff time in Extension work.

As seen in Table VI, a comparison of the amounts of staff time devoted to various phases of adult Extension work during 1941 (according to data collected from county annual statistical reports), a major portion of total staff time (two-thirds) was spent doing "agricultural" work in both urban and rural counties. "Other" phases of work (e.g. in-service training, public relations and work with other agencies and organizations) accounted for approximately one-fifth of the time spent in each group of counties. The remaining time was equally divided between the "non-agricultural" phase and "Extension organization, planning, evaluation and reporting." Slightly more time was reportedly spent on the "agricultural" phase in the rural than in the urban counties (72 percent compared with 66 percent respectively); whereas, the urban counties reportedly spent slightly more time on the "non-agricultural" (7 percent in urban counties

TABLE VI

A COMPARISON OF AVERAGE AMOUNTS OF STAFF TIME USED IN VARIOUS PHASES OF ADULT EXTENSION WORK
DURING 1941 IN FOUR URBAN, FOUR RURAL AND ALL STUDY COUNTIES
(FROM COUNTY ANNUAL STATISTICAL REPORTS)

Phase of Work	Average Amount of Staff Time Used per County ^a					
	All Study Counties		Urban Counties		Rural Counties	
	Days	Percent	Days	Percent	Days	Percent
1. Agricultural	445	69	464	66	426	72
2. Non-agricultural	31	6	46	7	15	3
3. Extension organization, planning, evaluation and reporting	35	5	52	7	18	3
4. Other	137	21	141	20	132	22

^a Rounded to the nearest whole number.

compared with 3 percent in the rural counties) and "Extension organization, planning, evaluation and reporting" (7 percent in urban counties compared with 3 percent in the rural counties) phases of work than did the rural counties.

Approximately a total average of 69 percent of the county Extension staff time in the eight counties studied was devoted to the "agricultural" phase of the work, 5 percent was spent on the "non-agricultural" phase, 21 percent on "other" work, and 5 percent on "Extension organization, planning, evaluation and reporting."

Extent To Which Objectives Were Realized

Of the general objectives listed earlier in Table II (as stated, in personal interview, by county agents who were on the staff at that time), only three of the objectives aimed at (numbers 1, 4 and 5) were apparently achieved to a satisfactory degree, while no facts were found to substantiate evidence of achievement of the other two objectives held (numbers 2 and 3).

With regard to general objectives number 1 (to improve and conserve the soil) census data in Table VII show alfalfa acreage increased 8,255 acres in the urban counties from 1939 to 1949 and 12,061 in the rural counties during the same period of time; while the amount of fertilizer used increased 19,796 tons in the urban counties and 30,764 tons in the rural counties.

Data in Table VII also substantiate some degree of progress toward objective number 4 (relating to increased crop yields) and objective

TABLE VII

A COMPARISON OF 1939-1949 SELECTED DATA FOR FOUR URBAN
AND FOUR RURAL COUNTIES STUDIED, TAKEN
FROM AGRICULTURAL CENSUS REPORTS*

Census Item	Urban Counties		Rural Counties	
	1939 ¹	1949 ²	1939 ¹	1949 ²
Farms	18,247	15,687	16,632	16,092
Land in farms (acres)	969,268	961,396	1,122,536	1,130,421
Alfalfa acreage	5,662	13,917	5,450	17,411
Fertilizer used (tons)	33,149	12,414	40,906	14,426
Corn yield per acre (bushels)	19.7	25.5	22	30.5
Number of dairy cows	43,163	55,218	44,486	71,134

*SOURCES:

¹United States Bureau of Census, United States Census of Agriculture: 1940. Vol. I, Part 4, East South Central States. Government Printing Office, 1942, pp. 168-275.

²United States Bureau of Census, United States Census of Agriculture: 1950. Vol. I, Counties and State Economic Areas, Part 20. Government Printing Office, 1950, pp. 58-164.

number 5 (relative to increased livestock numbers). Census data in Table VII show that corn yield increased approximately eight bushels per acre in both groups of counties. The number of dairy cows in the urban counties increased from 43,163 in 1939 to 55,218 in 1949; while, correspondingly, they increased proportionately more, from 44,486 to 71,134 in the rural counties. It was interesting to note that these increases came about during a period of time when the total number of farms and the acres of land in farms were declining in both groups of counties.

Program objectives found in Table III, when rated by selected criteria from Tennessee Extension Training and Studies county program objective rating sheet (see Appendix C), did not appear to be adequate. All the objectives appeared to be Extension objectives rather than objectives of particular segments of Extension's clientele. None of the objectives which appeared in Table III were supported by facts, and none would offer adequate guidelines for making future plans of work. Most of them were not measurable. Likewise, the teaching objectives shown earlier in Table IV, when rated using selected criteria from Tennessee Extension Training and Studies county teaching objective rating sheet (see Appendix D) appeared to be inadequate. The audience to be taught was not identified in any of the teaching objectives mentioned, nor were the specific behavioral changes sought spelled out or made clear. Few of the objectives offered definite guidelines to agents in scheduling organized learning experiences. It was also noted that the teaching objectives could not be adequately measured in terms of practice adoption or behavioral change.

II. THE SITUATION IN 1951

Objectives

General objectives. As seen in Table VIII, a comparison of 1951 urban and rural county agricultural general objectives of the adult phase of Extension work (as stated, in personal interview, by county agents who were on the staff at that time), the major objective held by those in both groups of counties was to bring about better farming practices through community organization. This objectives was mentioned twice as frequently by those in the urban counties as it was by those in the rural counties. The development of a livestock program was the second objective in importance as measured by frequency of mention and it appeared one time in each group of counties. One mention was made of marketing and one of servicing farmers who requested help. Three objectives held by the rural counties dealt with increased yields. In general half of the objectives mentioned were production oriented.

Program objectives. As noted in Table IX, a comparison of 1951 urban and rural county program objectives of the adult agricultural phase of Extension work (as stated, in personal interview, by county agents who were on the staff at that time), the objectives mentioned represented a wide range of subject matter. The greatest mention (twelve out of twenty-one) were made of objectives which would aid in getting more agricultural production. These objectives were shared almost equally between the

TABLE VIII

A COMPARISON OF 1951 ADULT AGRICULTURAL GENERAL OBJECTIVES
MENTIONED BY STAFFS IN FOUR URBAN, FOUR RURAL AND ALL
STUDY COUNTIES ACCORDING TO FREQUENCY OF MENTION

General Objective	Frequency of Mention		
	All Study Counties	Urban Counties	Rural Counties
1. To bring about better farming practices through community organization	3	2	1
2. To develop a livestock program that will make use of the pasture and cover crop programs developed during the forties	2	1	1
3. To establish a farmers market	1	1	0
4. To get a widespread use of a black shank resistant variety of tobacco	1	0	1
5. To increase efficiency in agricultural production	1	0	1
6. To increase milk production in the county	1	0	1
7. To service the farmers who request help	1	1	0
Total mentions	10	5	5

TABLE IX

A COMPARISON OF 1951 ADULT AGRICULTURAL PROGRAM OBJECTIVES
MENTIONED BY STAFFS IN FOUR URBAN, FOUR RURAL AND ALL
STUDY COUNTIES ACCORDING TO FREQUENCY OF MENTION

Program Objective	Frequency of Mention		
	All Study Counties	Urban Counties	Rural Counties
<u>Related to increased agricultural production</u>			
1. Grow more permanent pasture	3	1	2
2. Improve livestock production through use of a better breeding program	2	2	0
3. To increase yields of field crops	2	1	1
4. Get more silage grown	1	0	1
5. Grow a large acreage of alfalfa	1	0	1
6. Increase milk production per cow	1	0	1
7. To get more quality dairy cattle on the farms	1	1	0
8. To improve the soil of the county by the use of lime, phosphate and cover crops	1	1	0
Sub-total	12	6	6
<u>Related to efficiency in agricultural production</u>			
1. Develop a livestock water supply on the farms	1	0	1
2. Fertilize according to soil test	1	0	1
3. Grow adapted varieties of crops	1	1	0
4. Improve the livestock management program	1	1	0
5. Introduce chemical weed control	1	0	1
6. To improve poultry management	1	1	0
7. Use a variety of tobacco resistant to black shank	1	0	1
Sub-total	7	3	4

TABLE IX (CONTINUED)

Program Objective	Frequency of Mention		
	All Study Counties	Urban Counties	Rural Counties
<u>Related to marketing</u>			
1. Improve fruit and vegetable markets	1	0	1
2. To establish a farmers' market	1	1	0
Sub-total	2	1	1
Total mentions	21	10	11

urban and rural counties. Other objectives mentioned concerned livestock water supply, marketing, soil testing, growing adapted crop varieties, livestock and poultry management, chemical weed control and soil improvement. In general both groups of counties placed major emphasis on objectives related to increased agricultural production, and secondly on objectives related to efficiency in agricultural production.

Teaching objectives. After observing data in Table X, comparing 1951 urban and rural county teaching objectives of the adult agricultural phase of Extension work (as stated, in personal interview, by county agents who were on the staff at that time), it appeared that several different fields of subject matter were mentioned in the teaching objectives. Teaching objectives most frequently mentioned (nine out of twenty-three) were related to efficiency in livestock production. Second in importance (seven out of twenty-three) concerned the increasing of crop yields. Those in the rural counties gave slightly more emphasis to objectives relating to crop yields, while those in the urban counties mentioned objectives that affected efficiency in livestock production twice as often as did those in the rural counties. Other objectives mentioned concerned the seeding of permanent pasture, marketing, livestock water supply, plant diseases and chemical weed control.

Principal Teaching Methods Used

As seen in Table XI, the principal teaching methods used in disseminating agricultural information during 1951 (as stated, in personal

TABLE X

A COMPARISON OF 1951 ADULT AGRICULTURAL TEACHING OBJECTIVES
MENTIONED BY STAFFS IN FOUR URBAN, FOUR RURAL AND ALL
STUDY COUNTIES ACCORDING TO FREQUENCY OF MENTION

Teaching Objective	Frequency of Mention		
	All Study Counties	Urban Counties	Rural Counties
<u>Related to efficiency in live- stock production</u>			
1. The value of good beef bulls	2	2	0
2. Get more participation in artificial breeding programs	1	1	0
3. The cost and return of good permanent pasture	1	1	0
4. The factors in good livestock management	1	1	0
5. The value of alfalfa for dairy cattle	1	0	1
6. The value of a low fibre ration	1	0	1
7. The value of quality dairy cows	1	1	0
8. The value of silage to a live- stock farmer	1	0	1
Sub-total	9	6	3
<u>Related to increasing crop yields</u>			
1. Get more widespread use of recommended crop varieties	3	2	1
2. Acquaint farmers with soil testing	2	0	2
3. How to increase cotton yield	1	0	1
4. The value of lime, phosphate and cover crops on increased yields	1	1	0
Sub-total	7	3	4
<u>Related to how to grow permanent pasture</u>			
1. What to seed for permaneht pasture and how to seed it	2	0	2
Sub-total	2	0	2

TABLE X (CONTINUED)

Teaching Objective	Frequency of Mention		
	All Study Counties	Urban Counties	Rural Counties
<u>Related to marketing farm products</u>			
1. Explain proposed farmers market and get bonds approved with which to finance it	1	1	0
2. The value of an organized vegetable market	1	0	1
Sub-total	2	1	1
<u>Related to a livestock water supply</u>			
1. How to build a farm pond	1	0	1
Sub-total	1	0	1
<u>Related to disease of tobacco</u>			
1. How to diagnose diseases of tobacco	1	0	1
Sub-total	1	0	1
<u>Related to chemical weed control</u>			
1. The how, what, and who of chemical weed control	1	0	1
Sub-total	1	0	1
Total mentions	23	10	13

TABLE XI

A COMPARISON OF PRINCIPAL TEACHING METHODS USED IN DISSEMINATING
 AGRICULTURAL INFORMATION IN ADULT EXTENSION WORK DURING 1951
 IN FOUR URBAN, FOUR RURAL AND ALL STUDY COUNTIES
 BY FREQUENCY OF MENTION

Teaching Method	Frequency of Mention		
	All Study Counties	Urban Counties	Rural Counties
<u>Group contacts</u>			
1. General meetings	6	3	3
2. Leader training meetings	1	1	0
3. Method demonstrations	1	0	1
Sub-total	8	4	4
<u>Individual contacts</u>			
1. Farm visits	6	2	4
2. Office calls	5	2	3
3. Result demonstrations	3	1	2
4. Telephone	2	2	0
Sub-total	16	7	9
<u>Mass contacts</u>			
1. News stories	4	2	2
2. Radio	4	3	1
3. Circular letters	3	1	2
4. Bulletins	1	1	0
Sub-total	12	7	5
Total mentions	36	18	18

interview, by county agents who were on the staff at that time), were classified as "individual contact" methods and "mass contact" methods. Out of the total mentions, almost one-half were of the "individual contact" methods, of which "farm visits" and "office calls" were most frequently mentioned. One-third were of the "mass contact" methods, of which "news stories," "radio" and "circular letters" were most frequently mentioned. The "group contact" methods were least in importance as measured by frequency of mention and accounted for less than one-fourth of the total mentions. General meetings appeared to be the most important teaching method in the "group contact" category.

The "radio" was mentioned three times more frequently by those in the urban counties than by those in the rural counties, while those in the rural counties mentioned "farm visits" twice as frequently as did those in the urban counties. The "telephone" was a principal teaching method only in the urban counties. "Bulletins" and "leader training meetings" were teaching methods used on a limited scale by those in the urban counties; similarly, "method demonstrations" were used by those in the rural counties. "Circular letters" and "result demonstrations" each had twice the prominence as teaching methods in the rural counties as they had in the urban counties. Those in the urban counties mentioned "office calls" slightly less frequently than those in the rural counties.

Some differences were noted in the use of all teaching methods mentioned except "news stories."

Staff Time Devoted To Various Phases Of Work

As seen in Table XII, a comparison of the amounts of staff time devoted to various phases of adult Extension work during 1951 (according to data collected from county annual statistical reports), approximately four-fifths of total staff time in each group of counties was spent on the "agricultural" phase of the work. The remaining one-fifth was almost equally divided between the "non-agricultural" phase, "Extension organization, planning, evaluation and reporting" and "other" phases of the work. Slightly more time was spent on the "agricultural" phase and one and one-half times as much on the "non-agricultural" phase in the rural counties as was spent in the urban counties. The urban counties spent almost twice as much time on "Extension organization, planning, evaluation and reporting" as was spent in the rural counties.

Extent to Which Objectives May Have Been Realized

Of the general agricultural objectives listed in Table VIII, page 46 (as stated, in personal interview, by county agents who were on the staff at that time), only three (numbers 1, 5 and 6) were achieved to a satisfactory degree. No facts were found to substantiate evidence of achievement of the other four objectives (2, 3, 4 and 7).

From census data shown in Table XIII, a slight increase in good farming practices were noted. For example, alfalfa acreage and the tons of lime used, increased during the period 1951-1961. Some increase in the degree of efficiency in agricultural production was probably apparent; the yield of corn increased approximately nine bushels per acre and income

TABLE XII

A COMPARISON OF AVERAGE AMOUNTS OF STAFF TIME USED IN VARIOUS PHASES OF ADULT EXTENSION WORK
DURING 1951 IN FOUR URBAN, FOUR RURAL AND ALL STUDY COUNTIES
(FROM COUNTY ANNUAL STATISTICAL REPORTS)

Phase of Work	Average Annual Amount of Staff Time Used per County ^a					
	All Study Counties		Urban Counties		Rural Counties	
	Days	Percent	Days	Percent	Days	Percent
1. Agricultural	604	82	695	80	513	84
2. Non-agricultural	47	7	44	5	50	8
3. Extension organization, planning, evaluation and reporting	55	7	81	9	28	5
4. Other	38	4	53	6	22	3
Total	744	100	873	100	613	100

^aRounded to the nearest whole number.

TABLE XIII

A COMPARISON OF 1949-1959 SELECTED DATA FOR FOUR
URBAN AND FOUR RURAL COUNTIES STUDIED, TAKEN
FROM AGRICULTURAL CENSUS REPORTS*

Census Item	Urban Counties		Rural Counties	
	1949 ¹	1959 ²	1949 ¹	1959 ²
Alfalfa grown (acres)	13,917	11,731	17,411	21,391
Fertilizer used (tons)	25,826	25,290	46,017	44,698
Lime used (tons)	12,414	29,216	14,426	63,033
Corn yield per acres (bushels)	25.5	34.4	30.5	38.9
Income per dairy cow (dollars)	98.16	113.88	67.99	87.55
Dairy products sold (dollars)	5,420,397	5,472,805	4,836,752	7,112,320

*SOURCES:

¹United States Bureau of Census, United States Census of Agriculture: 1950. Vol. I, Counties and State Economic Areas, Part 20. Government Printing Office, 1950, pp. 58-164.

²United States Bureau of Census, United States Census of Agriculture: 1959. Vol. I, Counties, Part 31, Tennessee. Government Printing Office, 1961, pp. 144-267.

per dairy cow increased an average of approximately eighteen dollars from 1951 to 1961. During this same period of time, total dairy income increased approximately fifty-two thousand dollars in the urban counties and slightly more than two million dollars in the rural counties.

Program objectives found in Table IX (as stated, in personal interview, by county agents who were on the staff at that time), when rated by selected criteria taken from Tennessee Extension Training and Studies county program objective rating sheet, did not appear to be fully adequate. The objectives were not supported by facts. Some of the objectives were measurable in terms of practice adoption, while others, such as to improve poultry management and improve the livestock management program, would be difficult to measure. The teaching objectives found in Table X (as stated, in personal interview, by county agents who were on the staff at that time), when rated using selected criteria from Tennessee Extension Training and Studies county teaching objective rating sheet, were found inadequate in the following criteria:

1. The audience to be taught was not clearly identified
2. The specific behavioral change sought was not identified
3. Most objectives could not be efficiently measured in terms of practice adoption or behavioral change.

III. THE SITUATION IN 1961

Objectives

General objectives. As noted in Table XIV, a comparison of 1961 urban and rural county agricultural general objectives of the adult phase

TABLE XIV

A COMPARISON OF 1961 ADULT AGRICULTURAL GENERAL OBJECTIVES
MENTIONED BY STAFFS IN FOUR URBAN, FOUR RURAL AND ALL
STUDY COUNTIES ACCORDING TO FREQUENCY OF MENTION

General Objective	Frequency of Mention		
	All Study Counties	Urban Counties	Rural Counties
1. Efficiency in agricultural production	4	2	2
2. The production of an adequate supply of roughage for the livestock of the county	2	0	2
3. To develop a livestock marketing program	1	1	0
4. To find methods of reaching part-time farmers, urban and suburban people	1	1	0
5. To help farmers develop an improved feeding program for dairy cattle	1	1	0
Total mentions	9	5	4

of Extension work (as stated, in personal interview, by county agents who were on the staff at that time), the most frequently mentioned objective was efficiency in agricultural production, which was mentioned twice by those in each group of counties. The production of an adequate supply of roughage for livestock appeared to be second in importance as measured by frequency of mention, but only in the rural counties. Three objectives which were mentioned once each by those in the urban counties dealt with marketing, working with urban people and feeding dairy cattle. In general the most frequently mentioned objectives (7 out of 9) related to efficiency in agricultural production. They were shared almost equally between the urban and rural counties.

Program objectives. As noted in Table XV, a comparison of 1961 urban and rural county program objectives of the adult agricultural phase of Extension work (as stated, in personal interview, by county agents who were on the staff at that time), most mentions (24 out of 28) were made of objectives which dealt with efficiency in agricultural production. This included all objectives in Table XV except numbers 3, 8 and 19. This emphasis on efficiency in agricultural production was shared almost equally between the urban and rural counties. One objective on marketing and one on whole farm planning were mentioned by those in each group of counties.

Teaching objectives. As noted in Table XVI, a comparison of 1961 urban and rural county teaching objectives of the adult agricultural

TABLE XV

A COMPARISON OF 1961 ADULT AGRICULTURAL PROGRAM OBJECTIVES
MENTIONED BY STAFFS IN FOUR URBAN, FOUR RURAL AND ALL
STUDY COUNTIES ACCORDING TO FREQUENCY OF MENTION

Program Objective	Frequency of Mention		
	All Study Counties	Urban Counties	Rural Counties
<u>Related to efficiency in agricultural production</u>			
1. Fertilize according to soil test	5	2	3
2. Improve yields and quality of tobacco	3	1	2
3. More efficiency in the production of field crops	2	1	1
4. Produce more silage per acre	2	2	0
5. Alfalfa weevil control	1	0	1
6. Balance livestock program with feed produced	1	0	1
7. Expand the use of chemical weed control in crops	1	0	1
8. Get more dairymen to keep records	1	0	1
9. Get more farmers to grow adapted crop varieties	1	1	0
10. Grow more permanent pasture per farm and per acre	1	0	1
11. Grow more supplemental pasture on dairy farms	1	0	1
12. Improve the quality of beef cattle	1	1	0
13. Improve poultry management	1	1	0
14. Improve the quality of the feeder calves produced	1	1	0
15. Increase alfalfa acreage and yields per acre	1	0	1
16. Introduce chemical weed control in row crop production	1	1	0
Sub-total	24	11	13

TABLE XV (CONTINUED)

Program Objective	Frequency of Mention		
	All Study Counties	Urban Counties	Rural Counties
<u>Related to marketing</u>			
1. Develop tomato market	1	0	1
2. Organize a feeder pig sale	1	1	0
Sub-total	2	1	1
<u>Related to farm planning</u>			
1. Do more whole farm planning	2	1	1
Sub-total	2	1	1
Total mentions	28	13	15

TABLE XVI

A COMPARISON OF 1961 ADULT AGRICULTURAL TEACHING OBJECTIVES
MENTIONED BY STAFFS IN FOUR URBAN, FOUR RURAL AND ALL
COUNTIES ACCORDING TO FREQUENCY OF MENTION

Teaching Objective	Frequency of Mention		
	All Study Counties	Urban Counties	Rural Counties
<u>Related to efficiency in agricultural production</u>			
1. The value of fertilizing according to soil test	6	2	4
2. How to handle tobacco in order to sell a quality product	2	1	1
3. How to produce and store good silage	2	2	0
4. The advantage of using insecticides and herbicides on crops	2	1	1
5. The value of performance-tested beef bulls	2	2	0
6. The value of growing recommended varieties of crops	2	1	1
7. General poultry management practices	1	1	0
8. How and when to treat alfalfa for the control of weevil	1	0	1
9. How to balance a livestock and feed program	1	0	1
10. How to lower production costs on the farm	1	0	1
11. Steps to higher crop yields	1	1	0
12. Importance of a good dairy cow	1	1	0
13. Steps necessary for growing high yields of alfalfa	1	0	1
14. The value of dairy records	1	0	1
15. The value of quality pigs and calves when selling in a feeder sale	1	1	0
16. Value of supplemental pastures and the best crops to grow	1	0	1
Sub-total	26	13	13

TABLE XVI (CONTINUED)

Teaching Objective	Frequency of Mention		
	All Study Counties	Urban Counties	Rural Counties
<u>Related to farm planning</u>			
1. The value of whole farm planning	2	1	1
Sub-total	2	1	1
<u>Related to cooperative marketing</u>			
1. The value of cooperative marketing	1	0	1
Sub-total	1	0	1
Total mentions	29	14	15

phase of Extension work (as stated, in personal interview, by county agents who were on the staff at that time), most teaching objectives mentioned (twenty-six out of twenty-nine) were related to efficiency in agricultural production. The value of fertilizing according to soil test appeared to be the objective of most importance as measured by frequency of mention. Of the twenty-six objectives mentioned which relate to efficiency in agricultural production, fourteen were mentioned by those in the urban counties and twelve were mentioned by those in the rural counties. A further breakdown in objectives which relate to efficiency in agricultural production indicated crops were mentioned sixteen times and livestock ten times. Livestock were given greater emphasis by those in the urban counties, while crops were given more emphasis by those in the rural counties. Other teaching objectives mentioned were whole farm planning and cooperative marketing.

Principal Teaching Methods Used

As seen in Table XVII the teaching methods used in disseminating agricultural information during 1961 (as stated, in personal interview, by county agents who were on the staff at that time), were classified into three groups. In comparing the three groups by frequency of mention the "mass contact" group had the greatest mention, fifteen out of thirty-seven. "News stories," "radio" and "circular letters" accounted for 12 of the 15 teaching methods mentioned in this group. "Group contact" and "individual contact" teaching methods were of equal importance, as measured by frequency of mention. Each of these groups of teaching methods were

TABLE XVII

A COMPARISON OF PRINCIPAL TEACHING METHODS USED IN DISSEMINATING
 AGRICULTURAL INFORMATION IN ADULT EXTENSION WORK DURING
 1961 IN FOUR URBAN, FOUR RURAL AND ALL STUDY COUNTIES
 BY FREQUENCY OF MENTION

Teaching Method	Frequency of Mention		
	All Study Counties	Urban Counties	Rural Counties
<u>Group contacts</u>			
1. General meetings	7	4	3
2. Method demonstrations	4	1	3
Sub-total	11	5	6
<u>Individual contacts</u>			
1. Farm visits	7	4	3
2. Office calls	2	0	2
3. Result demonstrations	2	1	1
Sub-total	11	5	6
<u>Mass contacts</u>			
1. News stories	5	2	3
2. Radio	4	1	3
3. Circular letters	3	2	1
4. Television	2	1	1
5. Bulletins	1	1	0
Sub-total	15	7	8
Total mentions	37	17	20

mentioned eleven times. "General meetings" were mentioned seven times in the "group contact" category, while "farm visits" accounted for 7 of the 11 mentions in the "individual contact" group.

The "mass contact," the "group contact" and the "individual contact" groups of teaching methods were each mentioned one time more by those in the rural counties than they were by those in the urban counties.

Staff Time Devoted To Various Phases Of Work

As seen in Table XVIII, a comparison of the amount of staff time devoted to various phases of adult Extension work during 1961 (according to data collected from county annual statistical reports), approximately 57 percent of the county staff time in each group of counties was spent on the "agricultural" phase of the work. The other 43 percent of the time reportedly spent was almost equally divided between the "non-agricultural" phase (13 percent), "Extension organization, planning, evaluation and reporting" (13 percent), and the "other" phase (17 percent) which includes in-service training, public relations and work with other organizations and agencies. Slightly more time was reportedly spent by those in the rural counties on the "agricultural" and "non-agricultural" phases of the work than was reportedly spent by those in the urban counties. Time devoted to "Extension organization, planning, evaluation and reporting" in the urban counties was two and a half times that spent in the rural counties on the same phase of work.

TABLE XVIII

A COMPARISON OF AVERAGE AMOUNTS OF STAFF TIME USED IN VARIOUS PHASES OF ADULT EXTENSION WORK
DURING 1961 IN FOUR URBAN, FOUR RURAL AND ALL STUDY COUNTIES
(FROM COUNTY ANNUAL STATISTICAL REPORTS)

Phase of Work	Average Annual Amount of Staff Time Used per County ^a					
	All Study Counties		Urban Counties		Rural Counties	
	Days	Percent	Days	Percent	Days	Percent
1. Agricultural	612	57	638	53	586	60
2. Non-agricultural	138	13	139	12	137	14
3. Extension organization, planning, evaluation and reporting	153	13	222	19	83	8
4. Other	190	17	197	16	182	18
Total	1093	100	1196	100	988	100

^aRounded to the nearest whole number.

Extent to Which The Objectives Were Realized

Three of the five general objectives found above in Table XIV were apparently achieved, according to the statements (as stated, in interview, with county staff members who were working at that time) found below:

1. The soil building program of 1941 is now showing results in increased crop yields
2. We had outstanding results with soil fertility demonstrations. Many people visited the demonstrations during the growing season, especially the days they were harvested
3. The price pigs brought in the first feeder pig sale convinced hog farmers that such sales were very valuable
4. Farmers have adopted practices which make for more efficiency in agricultural production
5. A very large increase in the use of silage was probably the most outstanding accomplishment of the year.

These statements note progress on 1961 objectives (number 1, 2 and 3) dealing with efficiency in agricultural production, the production of an adequate supply roughage for livestock and dairy cattle, and the development of a livestock marketing program.

Data in Table XIX (as stated, in personal interview, by county agents who were on the staff at that time), pointed out that fourteen mentions out of thirty indicate "considerable" progress was made toward accomplishing the 1961 program objectives. "Some" progress toward

TABLE XIX

A COMPARISON OF THE EXTENT TO WHICH 1961 ADULT AGRICULTURAL PROGRAM
OBJECTIVES WERE REALIZED IN FOUR URBAN, FOUR RURAL AND
ALL STUDY COUNTIES BY FREQUENCY OF MENTION

Extent to which Objectives were Realized	Frequency of Mention		
	All Study Counties	Urban Counties	Rural Counties
1. Considerable ^a	14	5	9
2. Some ^b	14	9	5
3. Little ^c	2	1	1
Total mentions	30	15	15

^aConsiderable = 75%.

^bSome = 50%.

^cLittle = 25%.

achievement of the 1961 program objectives was also mentioned fourteen times. A "considerable" degree of achievement was mentioned more frequently by those in the rural counties (9 times) than it was by those in the urban counties (5 times); whereas, those in the urban counties mentioned "some" degree of achievement nine times, while those in the rural counties mentioned it five times.

The program objectives found in Table XV, when rated by Tennessee Extension Training and Studies county program objective rating sheet, appeared to be inadequate. They were not stated specifically enough to offer definite guidelines for future plans of work, neither were they supported by adequate facts. They did not indicate in quantity or quality of achievement which would be measurable in terms of socio-economic change and/or practice adoption.

Data in Table XX dealing with the extent to which teaching objectives were realized (as stated, in interview, with county agents who were on the county staff at that time), indicate "considerable" progress was made toward achievement of the 1961 teaching objectives in seventeen mentions out of thirty. Twelve of the remaining thirteen mentions indicated "some" progress was made toward achieving the 1961 teaching objectives. The degree of achievement appeared to be almost equal in each group of counties.

Tennessee Extension Training and Studies county teaching objectives rating sheet was applied to the teaching objectives found in Table XVI, and all objectives appeared to be inadequate, in that they neither clearly

TABLE XX

A COMPARISON OF THE EXTENT TO WHICH 1961 ADULT AGRICULTURAL TEACHING OBJECTIVES WERE REALIZED IN FOUR URBAN, FOUR RURAL AND ALL STUDY COUNTIES BY FREQUENCY OF MENTION

Extent to which Objectives were Realized	Frequency of Mention		
	All Study Counties	Urban Counties	Rural Counties
1. Considerable ^a	17	7	10
2. Some ^b	12	7	5
3. Little ^c	1	1	0
Total mentions	30	15	15

^aConsiderable = 75%.

^bSome = 50%.

^cLittle = 25%.

identified an audience to be taught, nor did they specify the behavioral changes sought. If the objectives had been more specifically stated they would have offered more definite guidelines to agents in scheduling effective organized learning experiences.

IV. SHIFTS AND TRENDS - 1941-1961

Objectives

General objectives. The adult agricultural general objectives held in the early years of the time period studied were probably strongly influenced by previous programs and by the impact of a world war. The general objectives most frequently mentioned in 1941 (see Table II, page 33) were related to soil improvement and conservation in both urban and rural counties. By 1951 (see Table VIII, page 46), major emphasis had shifted to objectives dealing with the adoption of better farm practices through community organization work. Those in the urban counties mentioned this objective twice as frequently as did those in the rural counties. Of secondary importance in both types of counties was a general objectives dealing with the development of a comprehensive livestock program. By 1961 (see Table XIV, page 58), both urban and rural counties mentioned general objectives which, in the main, dealt with efficiency in agricultural production.

As seen in Table XXI, there was a marked trend toward general objectives related to efficiency in agricultural production. While seven of the total of eleven general objectives mentioned in 1941 were related to

TABLE XXI

A COMPARISON OF 1941-1961 ADULT AGRICULTURAL GENERAL OBJECTIVES
MENTIONED BY STAFFS IN FOUR URBAN, FOUR RURAL AND ALL
STUDY COUNTIES ACCORDING TO FREQUENCY OF MENTION

General Objective	Frequency of Mention					
	All Study Counties		Urban Counties		Rural Counties	
	1941	1961	1941	1961	1941	1961
1. To improve and conserve the soil	7	0	4	0	3	0
2. Efficiency in agricultural production	0	4	0	2	0	2
3. Production of an adequate supply of roughage for the livestock of the county	0	2	0	0	0	2
4. To develop a livestock marketing program	0	1	0	1	0	0
5. To develop a satisfactory milk market	1	0	1	0	0	0
6. To develop a source of farm credit	1	0	1	0	0	0
7. To find methods of reaching part-time farmers, urban and suburban people	0	1	0	1	0	0
8. To help farmers develop an improved feeding program for dairy cattle	0	1	0	1	0	0
9. To increase crop yields by soil improvement	1	0	0	0	1	0
10. To increase the numbers of dairy and beef cattle in the county	1	0	0	0	1	0
Total mentions	11	9	6	5	5	4

soil conservation and improvement, seven of the total of nine general objectives mentioned in 1961 were related to efficiency in agricultural production. The trend was evident in both urban and rural counties.

Program objectives. The program objectives mentioned most frequently during the early years of the time period studied were related to soil conservation and improvement. Program objectives given minor emphasis by urban counties in 1941 (see Table III, page 35) concerned marketing and farm credit; while in the rural counties emphasis was mainly on increased agricultural production. By 1951 (see Table IX, page 47) major emphasis had shifted to program objectives which were related to increased agricultural production. Most of the other program objectives mentioned for that year dealt with efficiency in agricultural production. By 1961 (see Table XV, page 60), the vast majority of the program objectives mentioned were related to efficiency in agricultural production. Objectives related to marketing and whole farm planning also were mentioned, but less frequently.

As noted in Table XXII (as stated, in personal interview, by county agents who were on the staff at that time), major program emphasis had shifted from soil conservation and improvement in 1941 to efficiency in agricultural production by 1961. This shift in emphasis appears to have been similar in the two groups of counties. Minor emphasis on increased production by the rural counties in 1941 gave way to marketing and whole farm planning by 1961. Marketing continued to be of minor importance in the urban counties throughout the time period. In 1941,

TABLE XXII

A COMPARISON OF 1941-1961 ADULT AGRICULTURAL PROGRAM OBJECTIVES MENTIONED BY STAFFS IN FOUR URBAN,
FOUR RURAL AND ALL STUDY COUNTIES ACCORDING TO FREQUENCY OF MENTION

Program Objective	Frequency of Mention					
	All Study		Urban		Rural	
	Counties		Counties		Counties	
	1941	1961	1941	1961	1941	1961
<u>Related to soil conservation and/or improvement</u>						
1. Growing of more cover crops	7	0	3	0	4	0
2. Growing of more permanent pasture	6	1	2	0	4	1
3. To use more lime on soil conserving crops	7	0	3	0	4	0
4. To use more phosphate on soil conserving crops	7	0	3	0	4	0
5. Get more alfalfa sown	1	1	0	0	1	1
6. Produce more crimson clover for soil improvement and for seed	1	0	0	0	1	0
Sub-total	29	2	11	0	18	2
<u>Related to efficiency in agricultural production</u>						
1. Fertilize according to soil test	0	5	0	2	0	3
2. Improve yields and quality of tobacco	1	3	0	1	1	2
3. Improve the quality of beef cattle	0	2	0	2	0	0
4. More efficiency in the production of field crops	0	2	0	1	0	1
5. Production of more silage per acre	0	2	0	2	0	0
6. Alfalfa weevil control	0	1	0	0	0	1
7. Balance livestock program with feed produced	0	1	0	0	0	1
8. Expand use of chemical weed control in crops	0	1	0	0	0	1
9. Get more dairymen to keep records	0	1	0	0	0	1
10. Get more farmers to grow adapted crop varieties	0	1	0	1	0	0
11. Grow more supplemental pasture on dairy farms	0	1	0	0	0	1
12. Improve poultry management practices	0	1	0	1	0	0
13. Introduce chemical weed control in row crop production	0	1	0	1	0	0
Sub-total	1	22	0	11	1	11

TABLE XXII (CONTINUED)

Program Objective	Frequency of Mention					
	All Study Counties		Urban Counties		Rural Counties	
	1941	1961	1941	1961	1941	1961
<u>Related to marketing</u>						
1. Develop tomato market	0	1	0	0	0	1
2. Organize feeder pig sale	0	1	0	1	0	0
3. To get a milk market organized	1	0	1	0	0	0
Sub-total	1	2	1	1	0	1
<u>Related to agricultural credit</u>						
1. To get a production credit association organized	1	0	1	0	0	0
Sub-total	1	0	1	0	0	0
<u>Related to livestock</u>						
1. Increase livestock numbers	1	0	0	0	1	0
2. Increase milk production	1	0	0	0	1	0
Sub-total	2	0	0	0	2	0
<u>Related to farm planning</u>						
1. Do more whole farm planning	0	2	0	1	0	1
Sub-total	0	2	0	1	0	1
Total mentions	34	28	13	13	21	15

twenty-nine of the thirty-four program objectives mentioned appeared to emphasize soil conservation and improvement; while in 1961 twenty-one of the twenty-eight program objectives mentioned seemed to relate most nearly to increasing efficiency of agricultural production.

Teaching objectives. During 1941 (see Table IV, page 37), more than one-half of the teaching objectives mentioned were concerned with the growing of soil-conserving and soil-improving crops. By 1951, this emphasis in Extension teaching had decreased to scarcely one-ninth of the teaching objectives mentioned. The major teaching objectives held in 1951 (see Table X, page 50) concerned subject matter to be taught that would have an influence on increasing the efficiency of livestock and crop production. A definite shift to teaching objectives that emphasized increasing the efficiency of agricultural production was noted for 1961 (see Table XVI, page 62), since twenty-four of the twenty-eight teaching objectives mentioned seemed to be concerned with this subject.

In comparing urban and rural county teaching objectives (see Table XXIII), the declining trend in teaching objectives related to soil conservation and improvement was slightly more pronounced in the latter than in the former counties. There was at the same time a very rapidly increasing trend in teaching objectives held that were related to efficiency in agricultural production in both groups of counties. Twenty-two of the twenty-four teaching objectives mentioned in 1941 were related to soil conservation and improving crops, while in 1961 twenty-six of the

TABLE XXIII

A COMPARISON OF 1941-1961 ADULT AGRICULTURAL TEACHING OBJECTIVES MENTIONED BY STAFFS IN FOUR URBAN, FOUR RURAL AND ALL STUDY COUNTIES ACCORDING TO FREQUENCY OF MENTION

Teaching Objective	Frequency of Mention					
	All Study Counties		Urban Counties		Rural Counties	
	1941	1961	1941	1961	1941	1961
<u>Related to soil conserving and improving crops</u>						
1. The effects of lime and phosphate on yields of hay and pasture	7	0	3	0	4	0
2. Essential practices in producing permanent pasture	6	0	2	0	4	0
3. Value of using cover crops for increasing yields and preventing erosion	5	0	2	0	3	0
4. How to properly prepare a seed bed and seed alfalfa	1	0	0	0	1	0
5. Proper seeding methods for crimson clover	1	0	0	0	1	0
6. Value of clover for soil conservation and for a cash crop	1	0	0	0	1	0
7. Value of pasture in a rotation	1	0	1	0	0	0
Sub-total	22	0	8	0	14	0
<u>Related to efficiency in livestock management</u>						
1. Better livestock management	1	0	0	0	1	0
Sub-total	1	0	0	0	1	0
<u>Related to higher crop yields</u>						
1. How to get higher crop yields	1	0	0	0	1	0
Sub-total	1	0	0	0	1	0

TABLE XXIII (CONTINUED)

Teaching Objective	Frequency of Mention					
	All Study Counties		Urban Counties		Rural Counties	
	1941	1961	1941	1961	1941	1961
<u>Related to efficiency in agricultural production</u>						
1. The value of fertilizing according to soil test	0	6	0	2	0	4
2. How to produce quality tobacco	0	2	0	2	0	0
3. How to produce and store good silage	0	2	0	2	0	0
4. The advantage of using insecticides and herbicides on crops	0	2	0	1	0	1
5. Value of performance tested bulls	0	2	0	2	0	0
6. Value of growing recommended varieties of crops	0	2	0	1	0	1
7. General poultry management practices	0	1	0	0	0	1
8. How and when to treat alfalfa for weevil control	0	1	0	0	0	1
9. How to balance a livestock and feed program	0	1	0	0	0	1
10. How to lower production costs on farm	0	1	0	0	0	1
11. Steps to higher crop yields	0	1	0	0	0	1
12. Value of dairy records	0	1	0	0	0	1
13. Importance of a good dairy cow	0	1	0	1	0	0
14. Value of quality calves and pigs when selling in a graded feeder sale	0	1	0	1	0	0
15. Value of supplemental pastures and the best crops to grow	0	1	0	0	0	1
16. Steps necessary for growing high yields of alfalfa	0	1	0	0	0	1
Sub-total	0	26	0	12	0	14
<u>Related to farm planning</u>						
1. Value of whole farm planning	0	2	0	1	0	1
Sub-total	0	2	0	1	0	1

TABLE XXIII (CONTINUED)

Teaching Objective	Frequency of Mention					
	All Study Counties		Urban Counties		Rural Counties	
	1941	1961	1941	1961	1941	1961
Related to cooperative marketing						
1. The value of cooperative marketing	0	1	0	0	0	1
Sub-total	0	1	0	0	0	1
Total mentions	24	29	8	13	16	16

twenty-nine teaching objectives mentioned related to some phase of efficiency in agricultural production.

Principal Teaching Methods Used

Early in the time period 1941-1961, the principal teaching methods used in disseminating agricultural information (as stated, in personal interview, by county agents who were on the staffs at that time), were mainly "individual contact" methods. The most prominent were "farm visits" and "office calls." Teaching methods based on "mass contacts" were of secondary importance during this period. These same teaching methods continued to hold their place of importance through 1951. By 1961 there had been a shift in principal teaching methods used from "individual contacts" to "mass contacts." By that time, "individual contacts" and "group contacts" were given equal mention.

These shifts in principal teaching methods used in disseminating agricultural information during the time period 1941-1961 (as stated, in personal interview, by county agents who were on the staff at that time), indicated rapidly and vastly increased use of "mass contacts," decreased use of "individual contacts" and continued use of "group contacts."

"Farm visits" was given greater importance as an individual teaching method in 1941 in rural counties than in urban counties, as shown in Table V, page 39. Equal emphasis was placed on "office calls" by staffs in both types of counties. The urban counties gave notably greater emphasis to use of "result demonstrations." Almost equal

emphasis was given to "individual contact" methods of teaching during 1941 in both urban and rural counties. In 1951, according to Table XI, page 52, "farm visits" and "office calls" were mentioned more frequently by staffs in the rural counties than by those in the urban counties; while "news stories," "radio," "television" and "bulletins" were more often mentioned by those in the urban counties. Both groups of counties made wide use of "mass contact" teaching methods in 1961 as shown by Table XVII, page 65. "News stories," "radio," "television" and "circular letters" were used fairly equally in both groups of counties.

As seen in Table XXIV, study of the principal teaching methods reportedly used in disseminating agricultural information during the time period 1941-1961 (from data collected from annual statistical reports) shows that a very definite trend toward increased use of "mass contacts" had taken place in both types of counties. The increase was particularly great in the use of "radio," "television," "news articles," and "bulletins." The rural counties showed more increase in the use of "radio" (urban counties from 11 broadcasts in 1941 to 139 in 1961, rural counties from 0 broadcasts in 1941 to 163 in 1961), "news articles" (from 79 in 1941 to 98 in 1961 in the urban counties and from 55 in 1941 in the rural counties to 218 in 1961) and "bulletins" (the increase was 2,170 more in the rural counties than it was in the urban counties from 1941 to 1961); whereas, the urban counties showed greatest increase in the use of "television." An increase was evidenced in nine of the ten teaching methods used from 1941 to 1961. Only "office calls" showed a

TABLE XXIV

A COMPARISON OF PRINCIPAL TEACHING METHODS USED IN DISSEMINATING AGRICULTURAL INFORMATION IN ADULT EXTENSION WORK IN FOUR URBAN, FOUR RURAL AND ALL STUDY COUNTIES DURING THE TIME PERIOD 1941-1961
(BASED ON DATA FROM ANNUAL STATISTICAL REPORTS)

Teaching Method	Average Number of Mentions per County ^a								
	All Study Counties			Urban Counties			Rural Counties		
	1941	1961	Change ^b	1941	1961	Change ^b	1941	1961	Change ^b
<u>Group contacts</u>									
1. All other meetings	133	378	+245	72	182	+110	61	196	+135
2. Leader training meetings	36	22	- 14	14	9	- 5	22	13	- 9
Sub-total	169	400	+231	86	191	+105	83	209	+126
<u>Individual contacts</u>									
1. Farm or home visits	1,684	3,190	+ 1,506	854	1,213	+ 359	830	1,977	+1,147
2. Office calls	6,155	4,716	- 1,439	1,537	1,469	- 68	4,618	3,247	-1,371
3. Telephone calls	2,904	11,238	+ 8,334	2,771	4,838	+2,067	2,133	6,400	+4,267
4. Adult result demonstrations	96	146	+ 50	36	40	+ 4	60	106	+ 46
Sub-total	10,839	19,290	+ 8,451	5,198	7,560	+2,362	7,631	11,730	+4,089
<u>Mass contacts</u>									
1. News articles	130	316	+ 186	75	98	+ 23	55	218	+ 163
2. Radio broadcast	11	302	+ 291	11	139	+ 128	0	163	+ 163
3. Television broadcast	0	41	+ 41	0	38	+ 38	0	3	+ 3
4. Bulletins	2,212	25,652	+23,440	1,946	12,714	+10,768	266	12,938	+12,672
Sub-total	2,353	26,311	+23,958	2,032	12,989	+10,957	321	13,312	+13,001
Total	13,361	46,001	+32,640	7,316	20,740	+13,424	8,035	25,251	+17,216

^aRounded to the nearest whole number.

^bA plus sign (+) means an increase and a minus sign (-) means a decrease.

slight decrease in both types of counties. The increase in the use of "farm visits," "telephone calls," "general meetings" and "result demonstrations" was greater in the rural counties than it was in the urban counties.

Staff Time Devoted To Various Phases of Work

During the early part of the time period 1941-1961 (according to data collected from county annual statistical reports), approximately 69 percent of the county Extension staff time in both urban and rural counties was spent on the "agricultural" phase of the work (see Table VI, page 41). This phase of the work decreased to approximately 57 percent by 1961 (see Figure 2). From Figure 3 it is noted that time spent on the "non-agricultural" phase of work increased from an average of 5 percent in 1941 to 7 percent in 1951, then to 13 percent in 1961; while the average percentages of staff time spent on "Extension organization, planning, evaluation and reporting" as noted in Figure 4, were 5 in 1941, 7 in 1951 and 13 in 1961.

Figure 5 indicates that the average percents of staff time devoted to "other" phases of adult work (e.g. in-service training, public relations, working with other agencies and other) were 21 in 1941, 5 in 1951 and 17 in 1961.

As noted in Table XXV, a comparison of the amounts of staff time devoted to various phases of adult Extension work during the time period 1941-1961 (according to data collected from county statistical reports) indicates that there was a declining trend in the amount of county staff time spent on the "agricultural" phase of the work (downward from 69 per-

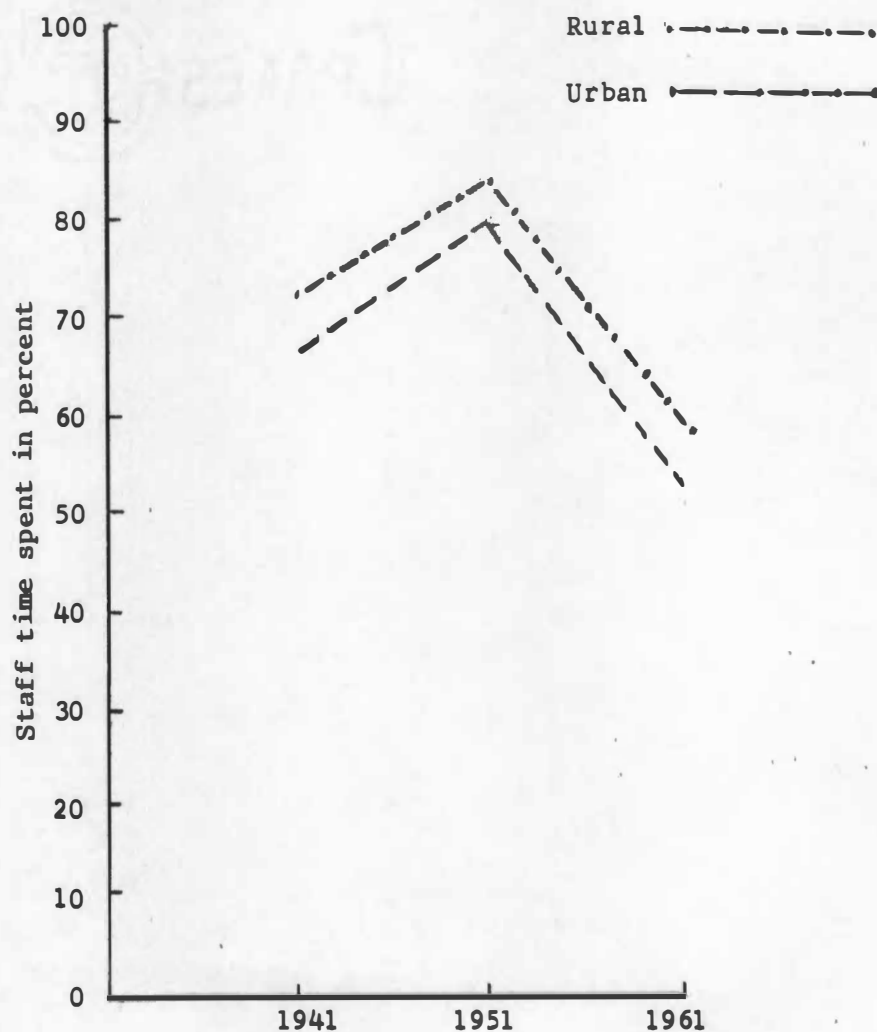


Figure 2. Percent of staff time devoted to agricultural phase of adult Extension work in four urban and four rural counties by years.

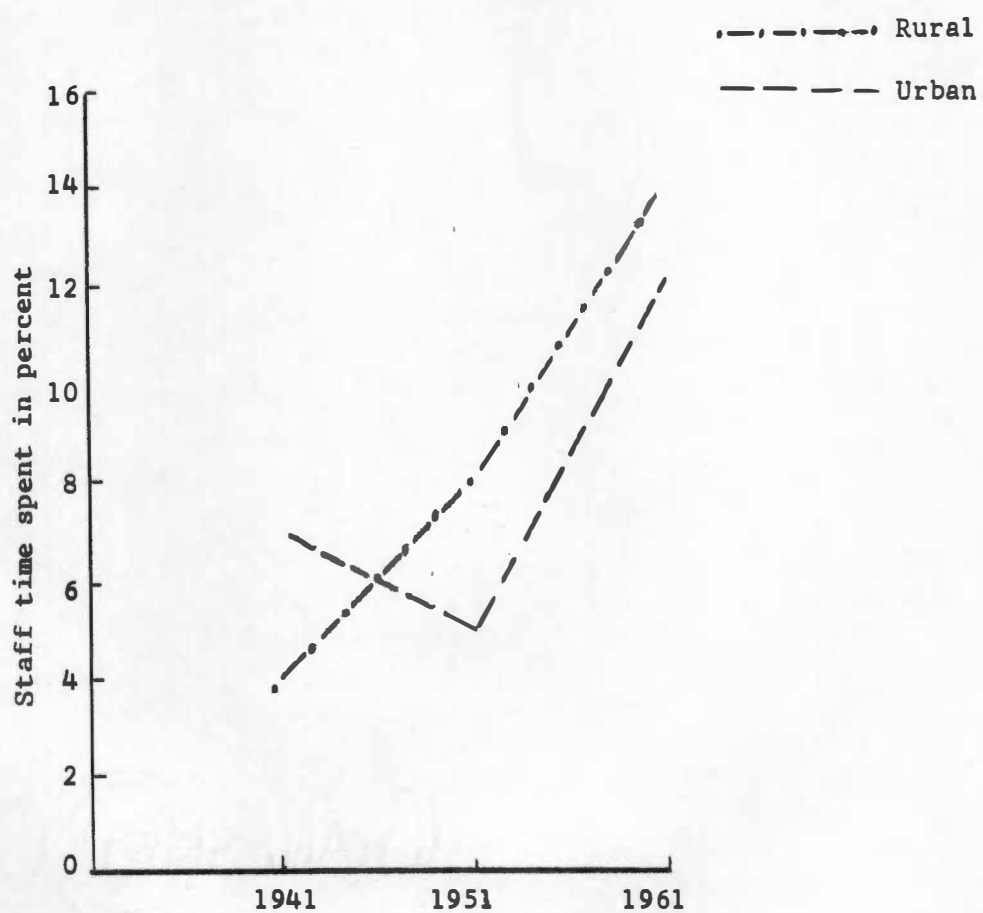


Figure 3. Percent of staff time devoted to non-agricultural phase of adult Extension work in four urban and four rural counties by years.

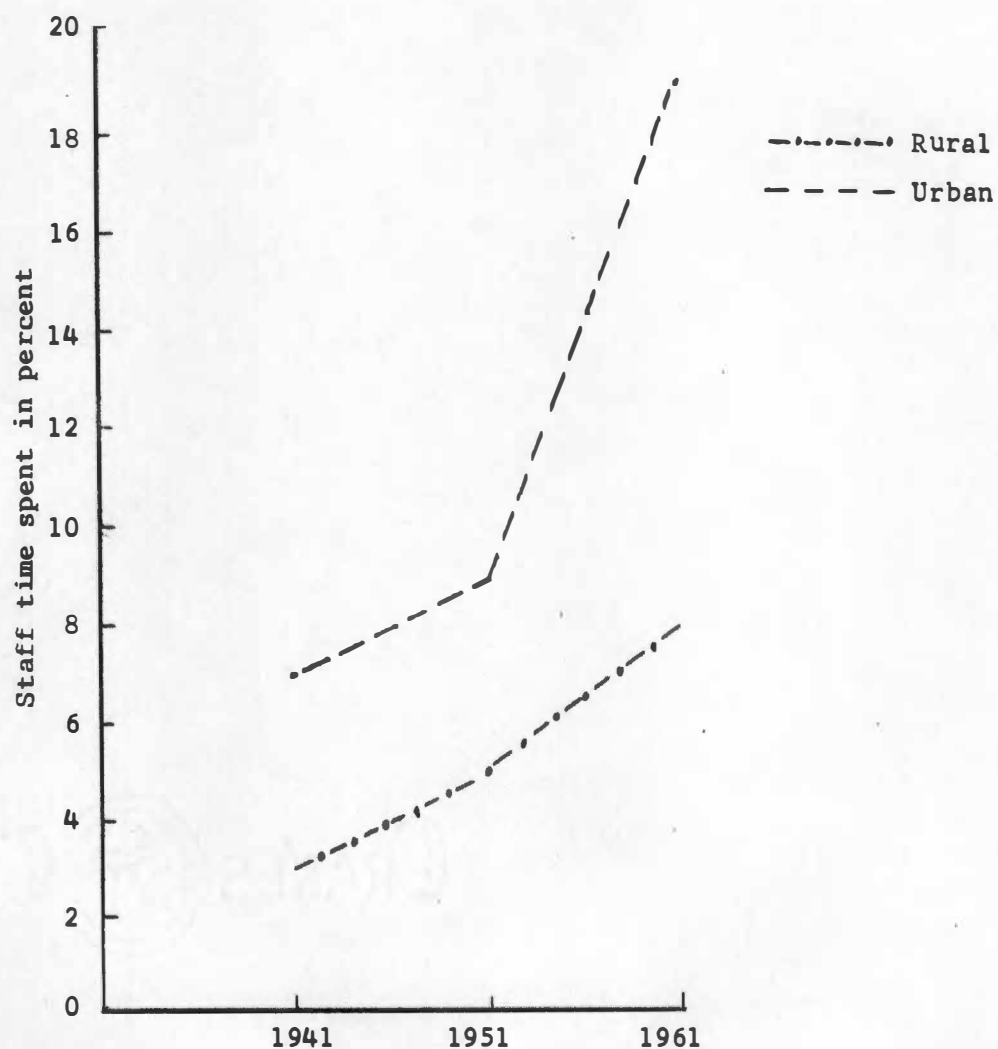


Figure 4. Percent of staff time devoted to Extension organization, planning, evaluation and reporting phase of adult Extension work in four urban and four rural counties by years.

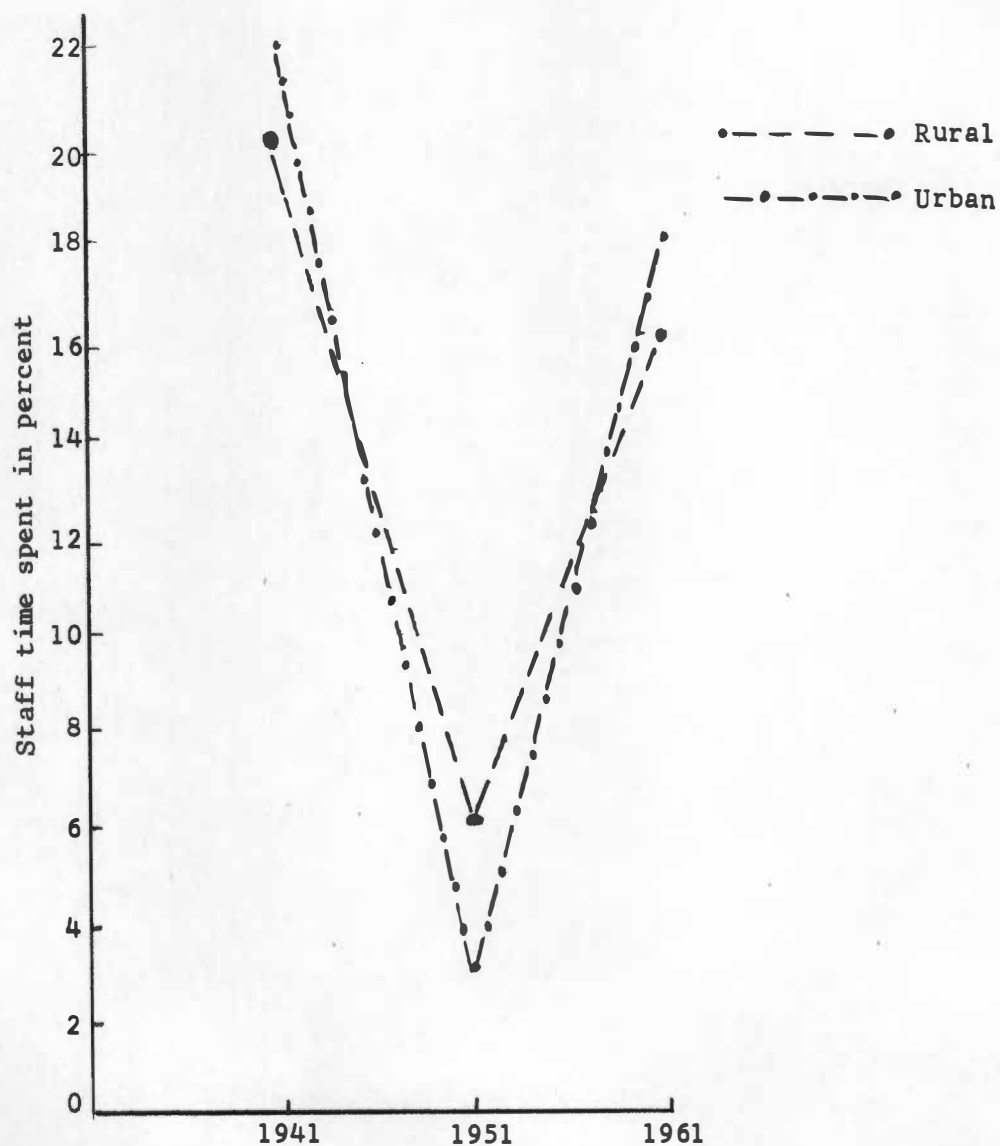


Figure 5. Percent of staff time devoted to other phases (in-service training, public relations, working with other agencies and organizations, and other) of adult Extension work in four urban and four rural counties by years.

TABLE XXV

A COMPARISON OF PERCENTAGES OF AVERAGE AMOUNTS OF STAFF TIME USED IN VARIOUS PHASES OF ADULT EXTENSION WORK IN 1941 AND 1961 IN FOUR URBAN, FOUR RURAL AND ALL STUDY COUNTIES
(FROM COUNTY ANNUAL STATISTICAL REPORTS)

Phase of Work	Percentage of Average Annual Amount of County Staff Time Used per County ^a								
	All Study Counties			Urban Counties			Rural Counties		
	1941	1961	Change ^b	1941	1961	Change ^b	1941	1961	Change ^b
1. Agricultural	69	57	-12	66	53	-13	72	60	-12
2. Non-agricultural	5	13	+ 8	7	12	+ 5	3	14	+11
3. Extension, organization, planning, evaluation and reporting	5	13	+ 8	7	19	+12	3	8	+ 5
4. Other	21	17	- 4	20	16	- 4	22	18	- 4
Total	100	100		100	100		100	100	

^aRounded to nearest whole number.

^bA plus sign (+) means an increase and a minus sign (-) means a decrease.

cent in 1941 to 57 percent in 1961). The trend was slightly more pronounced in the urban counties than it was in the rural counties. There was an increasing trend (from 5 percent in 1941 to 13 percent in 1961) during the time period studied in time spent on the "non-agricultural" phase of the work. The percentage increase was greatest in the rural counties, going from 3 in 1941 to 14 in 1961; while, correspondingly, it went from 7 to 12 percent in the urban counties. An increasing trend in time spent on "Extension organization, planning, evaluation and reporting" is evidenced by percentage figures of 5 in 1941 and 13 in 1961. This trend was slightly greater in the urban counties.

CHAPTER IV

SUMMARY AND CONCLUSIONS

Two of the major problems facing Extension today are: 1) changes in the size and character of its clientele, and 2) the effect these changes are having on the adult agricultural phase of its work in both urban and rural counties.

Population shifts which have taken place in Tennessee and, particularly, in eight counties studied for the period 1941 through 1961, have brought with them other changes and proclaimed the corresponding need for readjusting Extension programs and methods.

The total percentage of urban people in the four urban counties of Tennessee had increased from 72 in 1940 to 83 in 1960. Similar population trends had taken place in four rural counties selected for comparison and study. The total urban population of the four rural counties had increased from 22 percent of the total county population in 1940 to 31 percent in 1960.

Tennessee Extension educational theorists and practitioners are in general agreement that if Extension is to adequately serve the growing urban segment of the population, in addition to the rural farm population, it must continue to seek to make desirable changes in its program and methods. Otherwise, the needs of all the people of Tennessee may not be met. Certain facts concerning Extension's efforts in urban and rural situations are not currently available. Such facts should

be useful in future program planning. It was to this end that the present study was designed.

The purposes of the study were:

1. To compare trends in the amounts of emphasis (staff time) placed on adult agricultural work, non-agricultural work and Extension organization, program planning, evaluation and reporting by staff members in four urban counties and in four selected rural agricultural counties in Tennessee for the years 1941 through 1961
2. To consider other changes taking place (e.g. the nature of the objectives, methods used and program strengths and weaknesses) in adult agricultural work during the time period 1941-1961 in the selected counties.

This study grew out of a need and desire to know more about the past and present situations in regard to Extension programs and methods and trends in the amounts of emphasis Extension has placed on adult agricultural and non-agricultural work over a period of time in urban and rural agricultural counties in Tennessee.

The study was of a comparative-causal nature. Comparisons were made of changes and trends for the period 1941-1961 in terms of the amounts of county Extension staff time devoted to the adult agricultural and non-agricultural phases of work and to Extension organization, planning, evaluation and reporting by staff members in two types of counties (urban and rural) in Tennessee. Extension methods used and the nature of the objectives held at points during the time period also were compared.

It was hypothesized that the relative amount of staff time devoted to the adult agricultural phase of the Extension program in the four urban counties of Tennessee had decreased during the time period studied; while, correspondingly, it had remained the same or even increased in the four selected rural agricultural counties. Also, it was hypothesized that more time was spent on the non-agricultural phase of the work in the four urban counties than in the four rural counties during the time period studied; while, correspondingly, it had remained the same, or increased at a slower rate in the rural than in the urban counties.

It was further hypothesized that the relative amount of staff time devoted to organization, program planning, evaluation and reporting was larger in the urban counties in the years 1941, 1951 and 1961 than in the rural counties, and that it had increased more during the over-all period studied (1941-1961).

Eight Tennessee counties then were selected for the study. Four were urban (Davidson, Hamilton, Knox and Shelby) and the other four were rural agricultural (Franklin, Gibson, Green and Marshall). They were selected on the following bases:

1. Each urban county must have had a minimum urban population of at least two-thirds in 1960
2. The population of the county seat of each urban county must have been over 100,000 in 1960
3. The gross farm income of each urban county must have been less than two percent of the total gross county income in 1960

4. The population of the county seat of each rural county must have been less than 12,000

5. The gross farm income of each rural agricultural county must have approximated one-fourth of the total gross county income

6. There must have been full Extension staffs, including county agricultural agents and home demonstration agents and their assistants (especially in 4-H Club work) in each county throughout the entire study period (1941-1961).

Data were collected by personally interviewing agents who were on the county Extension staffs during 1941, 1951 and 1961 in the eight counties studied, by examining annual plans of work, annual narrative and statistical reports of agents and by examining appropriate census and other reports.

In order to assess the previous work done pertinent to the study, a review of available related literature was made.

In the main, the literature review disclosed the facts listed below:

1. The educational needs and desires of farm and rural people in both urban and rural counties have changed and are changing in response to the economic and social changes and pressures placed on them by rapidly expanding urban influences.

2. The open country has become a new kind of combination rural and urban community. It can no longer be called strictly rural because its components are so heterogeneous.

3. The steady migration to the open country has become thoroughly established.

4. Traditionally, America's rural population has been subdivided into those persons who live on farms, "the farmers," and those who live in the small towns and villages and have their work there. An increasing percentage of the population has become rural in residence, but urban in occupation.

5. By 1949, each of the forty-eight states was carrying on some sort of an Extension program in certain urban areas. The adult agricultural subject-matter fields most frequently mentioned in such urban areas were: gardening; landscaping; horticulture; floriculture; and poultry production.

6. Various factors led to the start of Extension work in urban areas, including many peculiar demand made by individuals and organizations in both rural and urban locales.

7. The Smith-Lever Act (as amended in 1962), in stating the purpose of Extension work, continued to refer to ". . . the people of the United States" as Extension's clientele, and to refer to agriculture, home economics and related areas as appropriate subjects.

8. The so-called Scope Report indicated that Extension's first responsibility continues to be to farm families, though also making clear that certain others cannot be ignored.

9. Traditionally, people have thought of Extension work as a service primarily for rural people. But there appears to be no real block to the continued development of Extension work in urban areas.

10. Extension is working with an increasing number of people who serve farmers--those who process, distribute and market the farm products.

11. About two-thirds of the nation's farm families and about one-ninth of the rural non-farm families were reached by Extension during 1952.

12. Extension's use of mass media has increased--particularly in urban areas.

13. In urban areas, agents are beginning to use the press, radio and television for direct teaching, while in the rural counties they are used mainly for announcements and news.

14. Extension agents are using an increasing variety of methods to get the latest results of agricultural research before the people in their counties.

15. One of the greatest changes in Extension's use of teaching methods has been the increased emphasis on mass media due to the increase in number of families having access to newspapers, magazines, radio and television.

16. Across the nation, county Extension workers' reports indicated that approximately 60 percent of their working time was spent in the field and 40 percent in the office in 1945. At the same time, one-sixth of the agents' time was devoted to Extension organization and planning and five-sixths was spent getting action on what was planned.

In 1951 county agents and assistants across the nation averaged 29.7 percent of their time working with the 4-H Club phase of the work and 70.3 percent working with adults.

Reports of Extension workers further indicate that county agents spent 65.9 percent of their time on agricultural work in 1942, 60.0 percent in 1951 and 62.6 percent in 1961. Non-agricultural work accounted for 7.3 percent of agents' time in 1942, 10.0 percent in 1951 and 10.3 percent in 1961; while the percentage of the agents' working time spent on Extension organization and planning was 17.2, 22.0 and 17.0 respectively.

I. REVIEW OF FINDINGS

The analysis of findings was divided into four main parts, including:

- 1) The situation in 1941
- 2) The situation in 1951
- 3) The situation in 1961
- 4) Shifts and trends during the 1941-1961 period.

Objectives Held

The general objectives (in the adult agricultural phases of Extension work) mentioned most frequently in 1941 were related to soil conservation and improvement. By 1951 they had shifted to emphasis on the spread of recommended farm practices through community organization efforts. By 1961, the objectives showed a definite trend toward those related to increasing the efficiency of agricultural production.

Urban and rural county staffs gave almost equal emphasis to objectives relating to soil conservation and improvement in 1941, and to efficiency of agricultural production in 1961; while in 1951, urban counties gave twice as much emphasis to objectives relating to spreading recommended farm production practices through community organization work.

The program and teaching objectives were similar to the general objectives in all years studied. When rated with relevant criteria selected from the Tennessee county program and teaching objective rating sheets (see Appendixes C and D), program and teaching objectives, respectively, seemed almost equally inadequate in failing to give definite guide-lines to staffs for teaching and evaluation. Most of them appeared to be staff-oriented rather than clientele-oriented.

Teaching Methods Used

The principal teaching methods used in urban and rural counties for disseminating agricultural information in 1941 were mainly "individual contacts" (farm visits and office calls) with "mass contacts" ranking second in importance. The same relationship continued through 1951. By 1961, however, the principal teaching methods used had shifted from "farm visits" and "office calls" to methods classifiable as "mass media" of which "news articles," "circular letters," "radio" and "television" were most frequently mentioned in both types of counties.

"Individual contacts" (farm visits and office calls) were used slightly more by the rural counties than by the urban counties in 1941 and 1951; while the same applied to the use of "mass contacts" in 1961.

Staff Time Expenditure

In 1941, approximately 69 percent of county Extension staff time in both urban and rural counties was spent on the "agricultural" phase of the work. Time devoted to this phase of the work increased to about 80 percent by 1951, then decreased to approximately 57 percent in 1961. The final decreasing nature of the trend was slightly more pronounced in the urban than in the rural counties.

The time spent on the "non-agricultural" phase of the work increased consistently from 5 percent in 1941 to 7 percent in 1951 and 13 percent in 1961. This increasing trend was noted to be greatest in the rural counties.

The time spent on Extension organization, program planning, evaluation and reporting increased from 5 percent of the total staff time in 1941 to 13 percent in 1961. This trend was noted to be slightly more pronounced in the urban than in the rural counties.

Findings Related to Hypotheses

With regard to hypothesis number one, the first part of it was accepted since the relative amount of staff time devoted to the adult agricultural phase of the Extension program in the urban counties of

Tennessee had decreased during the time period studied; while the second part of it was rejected since it had also decreased in the rural counties. However, the rate of decrease for rural counties was slightly less than it was for urban counties.

With regard to hypothesis number two, the first part of it was accepted since the relative amount of staff time devoted to the adult non-agricultural phase of the Extension program in the urban counties in Tennessee had increased during the time period studied; while the second part of it could only partially be accepted since staff time spent on the non-agricultural phase of the work had increased in the rural counties studied but the increase had been faster than that in the urban counties.

Hypothesis number three was accepted as stated since the relative amount of staff time devoted to organization and program planning, evaluation and reporting was greater in urban counties in 1941, 1951 and 1961, than it was in the rural counties, and it had increased more proportionately during the study period.

A Condensation of the Findings

1. The trend in the character of the population in each of the eight counties studied is toward ever-increasing urbanization.

2. The objectives stated by agents who were members of the staff during the time studied; when rated with selected items from Tennessee Extension Training and Studies rating sheets, were found to be lacking in a number of important regards (e.g. they did not provide adequate

guidance, did not identify audiences and were not sufficiently measurable).

3. The "individual contact" methods for use in disseminating agricultural information in the eight counties studied had decreased in use. The use of "group contact" methods had remained about the same throughout the study. With an expanded clientele and expanded subject matter to be taught, the trend toward greater Extension use of "mass contact" methods of disseminating agricultural information will probably continue in all study counties.

4. Emphasis (as shown by the amount of staff time spent) on the adult agricultural phase of Extension work in the eight counties studied had declined from 1941 to 1961. The extent of the decline in emphasis was slightly more in the urban counties than it was in the rural counties.

5. The amount of staff time spent on the non-agricultural phase of adult Extension work in the eight counties studied had increased very sharply during the period 1941-1961. The increase was slightly more in the rural counties than it was in the urban counties.

6. The amount of staff time spent on Extension organization, program planning, evaluation and reporting in the eight counties studied more than doubled during the period 1941-1961. The increase was slightly more in the urban counties than it was in the rural counties.

7. The percentage of staff time spent in "other" work (in-service training, public relations, working with other agencies and organizations and other) decreased slightly from 1941 to 1961.

8. The percentage of staff time devoted to the agricultural phase of adult work constituted the majority of staff time in all counties throughout the period--percentages in rural counties exceeding those in urban counties.

II. SUGGESTIONS FOR FURTHER STUDY

1. Studies similar to the present one should be conducted in Tennessee in order to determine shifts and trends in home demonstration work, 4-H Girls Club work and 4-H Boys Club work.

2. Similar studies might be conducted in other states.

BIBLIOGRAPHY

BIBLIOGRAPHY

1. Anderson, W. A. The Flight to the Fringe. Rural Sociology Publication 46. Cornell University, Ithaca, New York, 1956.
2. Collings, Mary L. Survey of Extension Work in Urban Areas. United States Department of Agriculture, Extension Service, Circular 462. Washington, D. C.: Government Printing Office, January 1950.
3. Crile, Lucinda. Educational Television Research Findings. United States Department of Agriculture, Extension Service, Circular 514. Washington, D. C.: Government Printing Office, November 1957.
4. Dail, Howard. "County Communication Patterns Change," Extension Service Review, Vol. 32 (April 1961).
5. Fawcett, James B. "Impact of Urbanization on Extension," Extension Service Review, Vol. 33 (March 1961).
6. Fulghum, Ralph M. "Trends Change Our Methods," Extension Service Review, Vol. 32 (April 1961).
7. Gallup, Gladys and Ralph M. Fulghum. "Changes in Our Approach," Extension Service Review, Vol. 29 (October 1958).
8. Gooch, James W. "Teaching Via Special Short Courses," Extension Service Review, (September 1961).
9. Gordy, Amelia S. Extension Activities and Accomplishments 1951. United States Department of Agriculture, Extension Service, Circular 481. Washington, D. C.: Government Printing Office, June 1952.
10. Gordy, Amelia S. Extension Activities and Accomplishments 1961. United States Department of Agriculture, Extension Service, Circular 539. Washington, D. C.: Government Printing Office, June 1962.
11. Gordy, Amelia S. Statistical Analysis of 4-H Club Work With Young Men and Women 1951. United States Department of Agriculture, Extension Service, Circular 482. Washington, D. C.: Government Printing Office, October 1952.
12. Kelsey, Lincoln D. and Cannon Chiles Hearne. Cooperative Extension Work. Second edition. Ithaca, New York: Comstock Publishing Associates, 1955.

13. Kelsey, Lincoln D. and Cannon Chiles Hearne. Cooperative Extension Work. Third edition. Ithaca, New York: Comstock Publishing Associates, 1963.
14. Maitland, S. T. "New Social Frontier," Farm Policy Forum, Vol. XIV, No. 4 (1961-62).
15. Martin, T. T. Place of 4-H Clubs in Urban Areas. Agricultural Experiment Station, Bulletin 591. Columbia, Missouri: College of Agriculture, University of Missouri, 1953.
16. Matthews, J. L. Extension Activities and Accomplishments 1960. United States Department of Agriculture, Extension Service, Circular 533. Washington, D. C.: Government Printing Office, June 1961.
17. McDonald, Russell F. "Educational Promotion Moves Outdoors," Extension Service Review, (April 1961).
18. McKain, Walter C. "Rural Suburbs and Their People," Journal of Cooperative Extension, Vol. 1, No. 2 (1963).
19. Nobe, Kenneth C. "Urbanization Creates New Problems," Farm Policy Forum, Vol. XIV, No. 4 (1961-62).
20. Porter, H. W. Extension Activities and Accomplishments 1942. United States Department of Agriculture, Extension Service, Circular 410. Washington, D. C.: Government Printing Office, August 1943.
21. Sprowles, J. Freemont. "A Study of Organized Programs Conducted by County Extension Agents in Urban and Suburban Families in Selected Counties of Washington and Oregon." Unpublished Master's Thesis, The University of Wisconsin, Madison, 1959.
22. Tennessee Extension Workers Handbook. Knoxville: Tennessee Agricultural Extension Service, The University of Tennessee, November 1962.
23. The Cooperative Extension Service--Today. A Statement of Scope and Responsibility. Federal Extension Service. Washington, D. C.: Government Printing Office, 1958.
24. Thompson, Warren S. "Urbanization." Encyclopedia of Social Sciences. New York: The Macmillan Company, 1951.
25. United States Bureau of Census, Characteristics of Population 1960. Washington, D. C.: Government Printing Office, 1960.
26. United States Bureau of Census, County Data Book 1947. Washington, D. C.: Government Printing Office, 1947.

27. United States Bureau of Census, County and City Data Handbook 1962. Washington, D. C.: Government Printing Office, 1962.
28. United States Department of Agriculture, Federal Legislation Regulations and Rulings Affecting Cooperative Extension Work in Agriculture and Home Economics. Miscellaneous Publication 285, Revised. Washington, D. C.: Government Printing Office, 1948.
29. Wilson, Merideth C. Extensions Coverage of Clientele. United States Department of Agriculture, Extension Service Circular 491. Washington, D. C.: Government Printing Office, 1954.
30. Wilson, Merideth C. and Gladys Gallup. Extension Teaching Methods and Other Factors that Influence Adoption of Agricultural and Home Economic Practices. Federal Extension Service, Circular 495. Washington, D. C.: Government Printing Office, August 1955.
31. Wilson, M. L. "How Extension Agents Use Their Time," Extension Service Review (December 1945).

APPENDIXES

APPENDIX A

URBAN AND RURAL COUNTY STUDY DATA COLLECTION FORM (Adult Phase of Extension Work)

Source (Please check): ☐ 1) Interviews with staff;
 ☐ 2) Program statement;
 ☐ 3) Annual plan of work;
 ☐ 4) Annual narrative report.

Year of Time Period (Please check) ☐ 1941; ☐ 1951; ☐ 1961.

- I. Agricultural general objective with which Extension was concerned in _____ Co.:
- II. Program objectives related to agricultural work at the time:
1.
2.
3.
4.
- III. Extent to which program objectives were achieved (C = considerable, 75%; S = some, 50%; L = little, 25% and N = none).
1.
2.
3.
4.
- IV. Teaching objectives related to agricultural work at the time:
(Indicate whether related to program objective listed above or not):
1.
2.
3.
4.
- V. Extent to which teaching objectives were achieved (D = considerable, 75%; S = some, 50%; L = little, 25% and N = none):
1.
2.
3.
4.
- VI. Principal teaching methods used in disseminating agricultural information (Wilson-Gallup key, p. 13):

VII. Other effects of the agricultural part of the county Extension program at the time:

VIII. What were the particular strengths and weaknesses of the agricultural work at the time?

1. Strengths

2. Weaknesses

IX. Comments:

APPENDIX B

TABLE XXVI

SELECTED AGRICULTURAL CENSUS DATA FOR FOUR
URBAN COUNTIES (1939, 1949 AND 1959)

Census Item	1939	1949	1959
1. Farms			
2. Land in farms			
3. Alfalfa grown (acres)			
4. Fertilizer used (tons)			
5. Lime used (tons)			
6. Corn yield per acre (bushels)			
7. Number of dairy cows			
8. Income per dairy cow			
9. Dairy products sold (dollars)			

TABLE XXVII

SELECTED AGRICULTURAL CENSUS DATA FOR FOUR
RURAL COUNTIES (1939, 1949 AND 1959)

Census Item	1939	1949	1959
1. Farms			
2. Land in farms			
3. Alfalfa grown (acres)			
4. Fertilizer used (tons)			
5. Lime used (tons)			
6. Corn yield per acre (bushels)			
7. Number of dairy cows			
8. Income per dairy cow			
9. Dairy products sold (dollars)			

APPENDIX C

TENNESSEE COUNTY PROGRAM OBJECTIVE RATING SHEET (100 possible points)

SPECIFIC ITEM CONSIDERED AND TOTAL POSSIBLE POINTS ASSIGNED			COUNTY PROGRAM OBJECTIVE CONSIDERED AND RATING
1. Was the objective listed according to its priority compared with other objectives? (5 points)			
2. Does the objective relate to a study area appropriate to Extension work in the county? (5 points)			
3. Is the objective stated as an objective of some segment of Extension's clientele? (10 points)			
4. Is the objective compatible with other objectives and is it likely to be acceptable to other segments of Extension's clientele? (10 points)			
*5. Is the objective stated specifically and clearly enough so that it will offer definite guidelines for future plans of work? (10 points)			
6. Is the objective stated in such a way that it is likely to promote action? (5 points)			
7. Is the importance of the objective supported by facts that are:			
a) Relevant? (5 points)			
b) Reliable? (5 points)			
c) Current? (5 points)			
d) Adequate as to number? (10 points)			
8. Is the objective attainable within the time period considered? (10 points)			
*9. Is the objective quantitatively and/or qualitatively measurable in terms of socio-economic change and/or practice adoption? (20 points)			
TOTAL (possible points = 100)			
RANKING OF COUNTY PROGRAM OBJECTIVE			

*Deemed to be relevant for the present study.

APPENDIX D

TENNESSEE COUNTY TEACHING OBJECTIVE RATING SHEET (100 possible points)

SPECIFIC ITEM CONSIDERED AND TOTAL POSSIBLE POINTS ASSIGNED	COUNTY TEACHING OBJECTIVE CONSIDERED AND RATING		
1. Was the teaching objective based on a priority program objective? (10 points)			
*2. Is the objective stated so that the specific audience is clearly identified? (10 points)			
*3. Is the objective stated so that the specific subject-matter to be taught is identified or spelled out? (10 points)			
*4. Is the objective stated so that the specific behavioral changes sought are identified or spelled out? (10 points)			
*5. Is the objective stated specifically and clearly enough so that it will offer definite guidelines to agents in scheduling effective organized learning experiences? (15 points)			
6. If the objective is attained, is it likely that it will contribute to attainment of the priority program objective on which it is based? (15 points)			
7. Is the objective stated so that it may be expected to be attainable in view of resource limitations? (10 points)			
*8. Is the objective quantitatively and/or qualitatively measurable in terms of practice adoption and/or behavioral change? (20 points)			
TOTAL (possible points = 100)			
RANKING OF COUNTY TEACHING OBJECTIVE			

*Deemed to be relevant for the present study.