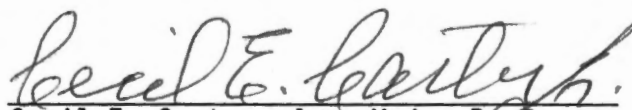
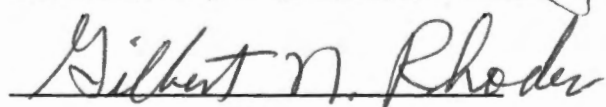


To the Graduate Council:

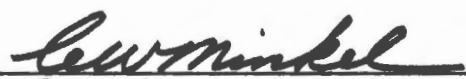
I am submitting herewith a thesis written by Glenn Kevin Turner entitled "Relationships Between Burley Tobacco Marketing Practice Use and Tennessee Producers' Personal and Farm Characteristics and Their Contacts with County Extension Agents." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Agricultural Extension.


Cecil E. Carter, Jr., Major Professor

We have read this thesis and
recommend its acceptance:

Accepted for the Council:


Vice Provost
and Dean of The Graduate School

STATEMENT OF PERMISSION TO USE

In presenting this thesis in partial fulfillment of the requirements for a Master's degree at The University of Tennessee, Knoxville, I agree that the Library shall make it available to borrowers under rules of the Library. Brief quotations from this thesis are allowable without special permission, provided that accurate acknowledgment of source is made.

Permission for extensive quotation from or reproduction of this thesis may be granted by my major professor, or in his absence, by the Head of Interlibrary Services when, in the opinion of either, the proposed use of the material is for scholarly purposes. Any copying or use of the material in this thesis for financial gain shall not be allowed without my written permission.

Signature Glenn Kevin Turner

Date May 10, 1985

RELATIONSHIPS BETWEEN BURLEY TOBACCO MARKETING PRACTICE USE AND
TENNESSEE PRODUCERS' PERSONAL AND FARM CHARACTERISTICS
AND THEIR CONTACTS WITH COUNTY EXTENSION AGENTS

A Thesis

Presented for the

Master of Science

Degree

The University of Tennessee, Knoxville

Glenn Kevin Turner

June 1985

AG-VET-MED.

Thesis
85
.T875

ACKNOWLEDGMENTS

The author wishes to express his sincere appreciation to his graduate committee chairman, Dr. Cecil E. Carter, Jr., Professor, Department of Agricultural Extension Education, for his guidance, assistance and encouragement during this study. He also wishes to express his appreciation to the other members of his graduate committee, Dr. Robert S. Dotson and Mr. Gilbert Rhodes, for their continual support, encouragement and helpful suggestions in reviewing this thesis.

Appreciation is expressed to Philip Morris, U.S.A. for funding the assistantship that made graduate study possible.

Much appreciation is expressed to Mary Hudson, Mioko Oliver and Virginia Payne, secretaries in the Department of Agricultural Extension Education, for their encouragement and typing of this study.

The author expresses special appreciation to his parents, Dr. and Mrs. Gene W. Turner for their continual support and encouragement during his graduate studies.

ABSTRACT

The major purpose of this study was to determine the relationships between burley tobacco marketing practice use and Tennessee burley tobacco producers' personal and farm characteristics and their contacts with Agricultural Extension Agents. Data were obtained through personal interviews by county Extension Agents with 1,358 randomly selected burley tobacco producers in 55 Tennessee counties where burley tobacco production was important. Information was obtained about the general production characteristics of burley tobacco producers, their use of recommended burley tobacco production practices in 1983 and the number of contacts they had with Extension Agents over a 12-month period.

The data were coded and punched on computer cards and computations were made by The University of Tennessee Computing Center. One-way analysis of variance F-test was used to determine strength and significance of the relationships between the dependent and independent variables.

Major findings included the following:

1. Only 12 percent of the burley tobacco producers were college graduates and over 50 percent were part-time farmers.
2. Burley tobacco producers had averaged making 8.1 contacts per year with county Extension Agents. They attended on the average 0.5 tobacco meetings, 1.1 other Extension meetings, made 2.0 visits to the Extension office, made 2.7 telephone calls to the Extension

office, and received 1.8 farm visits from county Extension Agents. Seventeen percent of the producers had no contact with Extension Agents.

3. Forty-two percent of the producers had no tobacco land in permanent sod during the previous three years.

4. Forty-three percent of the producers fertilized and limed tobacco land according to a soil test recommendation.

5. Thirty-one percent of the producers applied over 200 pounds of nitrogen per acre.

6. The producers made an average of three grades of burley tobacco. Producers hand tied 40 percent of their tobacco, baled 55 percent of their tobacco, and sheeted 6 percent of their tobacco.

7. Producers with larger allotments and more pounds sold hand tied significantly less tobacco than producers with smaller allotments and fewer pounds sold. Producers with larger allotments and more pounds sold baled and sheeted significantly more tobacco than producers with smaller allotments and fewer pounds sold.

8. Younger producers and producers with more formal education hand tied significantly less tobacco than older producers and producers with less formal education. Younger producers and producers with more formal education baled significantly more tobacco than older producers and producers with less formal education.

9. Producers attending more tobacco meetings, attending more other Extension meetings, making more visits to the Extension office, making more telephone calls to the Extension office, receiving more

farm visits and having more total Extension contacts hand tied significantly less tobacco than producers having fewer Extension contacts. Producers attending more tobacco meetings, attending more other Extension meetings, making more visits to the Extension office, making more telephone calls to the Extension office, receiving more farm visits and having more total Extension contacts baled and baled and/or sheeted significantly more tobacco than producers having fewer Extension contacts.

Implications and recommendations were also made.

TABLE OF CONTENTS

CHAPTER	PAGE
I. THE PROBLEM AND ITS SETTING	1
Introduction.	1
Need for the Study.	3
Purpose of the Study.	3
Limitations of the Study.	4
Methods of Investigation.	4
Definition of Terms	6
II. REVIEW OF RELATED LITERATURE.	8
Characteristics of Producers and Their Farm Operations.	8
Relationships Between Producer Use of Extension's Recommended Production Practices and Yields Per Acre.	9
Relationships Between Producer Use of Extension's Recommended Practices and the Numbers and Types of Contacts They Had With Extension.	11
Relationships Between Personal and Farm Characteristics of Producers and the Number of Contacts They Had With Extension.	12
III. CHARACTERISTICS OF TENNESSEE BURLEY TOBACCO PRODUCERS	14
Characteristics of Burley Tobacco Producers, Their Farm Operations, and the Numbers and Types of Contacts They Had With Extension.	15
Burley Tobacco Producer Use of Extension's Recommended Production Practices.	23
Numbers and Percents of Tennessee Burley Tobacco Respondents Who Marketed in Hand Ties, Bales, and Sheets and Mean Percents Marketed by Methods and Counties, 1983.	46

CHAPTER	PAGE
IV. RELATIONSHIPS BETWEEN SELECTED FARM AND PERSONAL CHARACTERISTICS OF BURLEY TOBACCO PRODUCERS, AND THE NUMBER OF CONTACTS BURLEY TOBACCO PRODUCERS HAD WITH EXTENSION AND THE MARKETING PRACTICES THEY USED	56
Relationships Between Selected Farm and Personal Characteristics of Burley Tobacco Producers and the Marketing Practices They Used.	56
Relationships Between the Numbers of Contacts Burley Tobacco Producers Had With Extension and the Marketing Practices They Used.	66
V. SUMMARY OF MAJOR FINDINGS	75
Purposes and Specific Objectives.	75
Methods of Investigation.	76
Major Findings.	77
Implications.	87
Recommendations for Use of Findings and Further Study.	88
BIBLIOGRAPHY.	89
APPENDIX.	92
VITA.	97

LIST OF TABLES

TABLE	PAGE
1. Characteristics of Burley Tobacco Producers, Their Farm Operations, and the Numbers and Types of Contacts They Had With Extension.	16
2. Burley Tobacco Producer Use of Extension's Recommended Production Practices.	24
3. Numbers and Percents of Tennessee Burley Tobacco Respondents who Marketed in Hand Ties, Bales, and Sheets and Mean Percents Marketed by Methods and Counties, 1983.	47
4. Relationships Between Selected Farm and Personal Characteristics of Burley Tobacco Producers and the Marketing Practices They Used	58
5. Relationships Between the Numbers of Contacts Burley Tobacco Producers Had With Extension and the Marketing Practices They Used	67

CHAPTER I

THE PROBLEM AND ITS SETTING

1. INTRODUCTION

Tobacco production is an important part of the agricultural income in Tennessee. Many small farmers throughout East and Middle Tennessee depend almost entirely on tobacco for their income (14).*

Statistics from the Tennessee Crop Reporting Service show the importance of tobacco to the Tennessee farmer. In 1983, tobacco was the most valuable crop produced in Tennessee and the third most valuable agricultural commodity produced (13:80). Tennessee farmers harvested 72,910 acres, producing 118,197,000 pounds of tobacco in 1983 (12:23). Cash receipts from farm marketing of the 1983 tobacco crop exceeded \$238,000,000 (13:80). Also, Tennessee ranks high in tobacco production when compared to other tobacco producing states in the United States. In 1983, Tennessee ranked third behind North Carolina and Kentucky among 16 tobacco producing states (13:8).

Over 80 percent of the tobacco produced annually in Tennessee is burley tobacco. In 1983, Tennessee farmers harvested 60,000 acres, producing 98,400,000 pounds of burley tobacco (13:21). Of eight states producing burley tobacco, Tennessee ranked second in burley production in 1982 (12:18).

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

Because tobacco production is such an important part of Tennessee agriculture, it is essential that the tobacco producer have available plenty of research-verified information to help maintain efficient production. Efficient tobacco production can be maintained by decreasing production costs with the adoption of recommended production and marketing practices.

According to the Smith-Lever Act of 1914, the Cooperative Extension Service is an organization charged to:

aid in diffusing among the people of the United States useful and practical information on subjects relating to agriculture and home economics, and to encourage the application of the same (6:29)

The Tennessee Agricultural Extension Service is organized to provide the necessary information to help tobacco producers to maintain the most efficient production. Research-verified information is supplied to the general public and more specifically to tobacco producers through a variety of educational methods. These teaching methods include group meetings, farm visits, telephone calls and office visits. Extension Agents use these contacts to encourage producers to adopt and use recommended production and marketing practices.

The present study was done to help characterize burley tobacco producers and their farms and to determine the influence of the number and types of contacts producers had with Extension Agents upon their adoption of recommended practices.

2. NEED FOR THE STUDY

The Cooperative Extension Service is a public agency funded by federal, state and county government. Extension as a public agency is accountable for the time and money used in its educational program. In order to maintain an effective educational program, it is necessary to know the situation in the county in order that emphasis can be placed in needed subject matter areas. This study was needed to help Extension evaluate its current burley tobacco programs and to aid in goal setting and program planning to maintain effective educational programs for the future.

3. PURPOSE OF THE STUDY

The stated purpose of this study was to characterize burley tobacco producers and their farms as to their use of tobacco marketing practices along with other recommended production practices and the types and numbers of contacts they had with Extension.

The specific objectives of this study were:

1. To characterize burley tobacco producers and their farm operations.
2. To determine the extent of use of recommended production practices by burley tobacco producers.
3. To determine the extent of use of burley tobacco marketing practices by burley tobacco producers by counties responding to the 1983 Tennessee Burley Tobacco Production Survey.

4. To determine the relationships between selected characteristics of burley tobacco producers and their farms, and the marketing practices they used.

5. To determine the relationships between the numbers of contacts burley tobacco producers had with Extension and the marketing practices they used.

4. LIMITATIONS OF THE STUDY

This study was limited to data obtained from 1,358 burley tobacco producers in 55 counties in East, Middle and West Tennessee. Data for the study were obtained from the 1983 Tennessee Burley Tobacco Production Survey. The data were obtained by Extension Agents through personal interviews with burley tobacco producers in the 55 Tennessee counties.

5. METHODS OF INVESTIGATION

Population and Sample Studied

The population used in this study included 1,358 burley tobacco producers in those burley producing counties in Tennessee where the county Extension Agent conducted the 1983 Tennessee Burley Tobacco Production Survey. The Nth number technique was used by each Extension Agent to identify which burley tobacco producers would be surveyed. Number of producers surveyed per county varied from 10 to 40 depending on the number of acres grown in the county.

Survey Instrument

The survey instrument used in this study was an interview schedule developed by specialists from The University of Tennessee, Knoxville. The questionnaire consisted of five main parts which included: (1) General Information, (2) Plant Bed Practices, (3) Field Practices, (4) Personal Information about the Farmer, and (5) Information regarding the type and number of contacts the farmer had with Extension over the previous 12 months. The sections regarding plant bed practices and field practices included questions related to recommended production practices for burley tobacco. These questions dealt with the variety grown, fertilization, weed control, insect control, disease control, topping and suckering, harvesting practices and marketing practices.

Interview Technique

Personal interviews were scheduled between the Extension Leader and burley tobacco producers in each participating county in order to complete the 1983 Tennessee Burley Tobacco Production Survey. The interviews were done in the Fall of 1983 and upon completion, survey instruments were returned to the Agricultural Extension Education Section at the University of Tennessee for analysis.

Method of Analysis

After the data were returned to the Agricultural Extension Education Section at the University of Tennessee the data were transferred to computer cards and processed for further analysis.

Data were analyzed by the University of Tennessee Computing Center. Descriptive statistics were used to summarize the survey data. These included frequencies, means, medians, modes and ranges. Statistical tests were used to determine relationships between various dependent and independent variables and one way analysis of variance tests were used to determine the strength of relationships between these variables. The .05 probability level was used to make decisions regarding the significance of relationships between variables.

6. DEFINITION OF TERMS

1. Burley Tobacco Producer. Is an individual who obtains part of their income from the production and sale of burley tobacco.

2. Extension Contacts. The term Extension contacts refers to the number of tobacco meetings attended, number of total Extension meetings attended, number of visits made to the Extension office, number of telephone calls made to the Extension office, number of Extension farm visits received and the total number of Extension contacts burley tobacco producers reported having with Extension over the previous 12-month period.

3. Practice. A practice is a research-verified and commonly-accepted procedure which, if used correctly and on a regular basis, will increase production.

4. Hand Tied. A marketing practice for burley tobacco where tobacco is stripped from the stalk by grades and tied in hands or bundles. Each tie or bundle is made up of 20 to 30 leaves.

5. Baled. A marketing practice for burley tobacco where tobacco is stripped from the stalk by grades and marketed in loose leaf (untied) form which has been pressed into a bale.

6. Sheeted. A marketing practice for burley tobacco where tobacco is stripped from the stalk by grades and marketed in loose leaf (untied) form.

CHAPTER II

REVIEW OF RELATED LITERATURE

The purpose of this chapter was to review findings from other studies that involved research related to the present investigation. Available studies were reviewed relating to: (1) Characteristics of producers and their farm operations, (2) Relationships between producer use of Extension's recommended production practices and yields per acre, (3) Relationships between producer use of Extension's recommended practices and the numbers and types of contacts they had with Extension, and (4) Relationships between personal and farm characteristics of producers and the numbers of contacts they had with Extension.

1. CHARACTERISTICS OF PRODUCERS AND THEIR FARM OPERATIONS

Statistics from the Tennessee Crop Reporting Service relating to the characteristics of farm operations in Tennessee show that there were approximately 97,000 farms in Tennessee in 1978, with an average size of 143 acres. In 1982 there were 95,000 farms in Tennessee with an average size of 141 acres (12:93). These data indicate that the number of farms and the average size of farms in Tennessee are slightly decreasing. Data further indicated that the total net income per farm in 1978 was \$3,705 and in 1982 was \$4,274 (12:85).

In a 1966 study, James Cunningham surveyed 100 Burley tobacco producers in Greene County. Cunningham's study revealed the following characteristics of Burley tobacco producers and their farm operations; the average age of the producer was 54, 78 percent operated farms of less than 100 acres, and 76 percent of the producers owned the farm where tobacco was produced (2:71).

In a study of Trousdale County Burley tobacco producers in 1964, Clyde Webster found that 87 percent of the farmers surveyed were over 40 years of age (15:93).

Roger Robison in a 1981 study of Tennessee Burley tobacco producers reported that over 70 percent of the Burley producers surveyed were producing Burley tobacco on land that they owned (10:13). Robinson also found that the mean yield per acre of those Burley tobacco producers surveyed was 2,268 pounds (10:14).

Further, S. Darrell Mundy in a report of a Tennessee Survey of Burley tobacco growers in 1984 found the average Burley tobacco acreage per farm during the 1983 crop year was 2.7 acres. The average yield per acre in 1982 was 2,250 pounds and it was 1,856 pounds in 1983 (8:12). This survey also found that 60 percent of the respondents preferred to bale, 30 percent preferred to hand tie, and 10 percent preferred to sheet their Burley tobacco (8:13).

2. RELATIONSHIPS BETWEEN PRODUCER USE OF EXTENSION'S RECOMMENDED PRODUCTION PRACTICES AND YIELDS PER ACRE

In a 1962 study of Burley tobacco producers in Williamson County, Nathan Lowe found that tobacco producers with considerably

above average per acre yields were more likely to be using research-verified recommended cultural practices than were producers with below average yields (7:71).

Clyde Webster found in his 1964 study of approach to teaching recommended production practices to Burley tobacco producers in Trousdale County that growers in above average yield groups were following more research-verified practices than those in below average yield groups (15:92).

E. F. Ivens reported in his 1964 study of tobacco production practices and net return per acre from Burley tobacco in Anderson County, that producers with above-average net returns were found to be using more of the recommended cultural practices than were growers with below-average net returns (4:89).

In a 1981 study of Tennessee Burley tobacco producers, Roger Robinson's data revealed that those producers using certain groups of practices (i.e., plant bed practices, field production practices, and harvesting and marketing practices) had significantly higher yields per acre than those not using these practices. However, Robinson also found that producers' use of other recommended practices (i.e., controlling disease in the plant bed, transplanting recommended varieties, fertilizing according to soil test recommendations and marketing) was not significantly related to yield per acre (10:81).

Ronald B. Johnson found in his 1982 study of Tennessee corn producers that yield per acre of corn harvested for grain and silage was significantly related to the number of corn production practices used (5:65-66).

3. RELATIONSHIPS BETWEEN PRODUCER USE OF EXTENSION'S RECOMMENDED
PRACTICES AND THE NUMBERS AND TYPES OF CONTACTS THEY
HAD WITH EXTENSION

Roger Robinson showed in his 1981 study of Tennessee Burley tobacco producers that producers using the recommended practices generally attended more tobacco meetings, made more office visits, made more telephone calls to the Extension Office and received more farm visits from Extension Agents than producers not using the recommended practices. This held true in all cases except for the practices of fertilizing and liming according to soil test recommendations (10:82).

In a 1978 study of Tennessee Grade A Dairy producers, Pat Freeman's data revealed that the producer's total number of Extension contacts and the number of Extension farm visits he received were significantly related to the total number of recommended dairy practices he used. Freeman found that producers who used more of the total number of recommended dairy practices tended to make significantly more total Extension contacts and to receive significantly more Extension farm visits than those producers who used fewer of the total number of recommended dairy practices (3:195).

Solomon Yabaya reported in his 1978 study of Tennessee corn producers that the total number of Extension contacts was significantly related to the producer's use of five of eight recommended corn production practices considered (16:135).

Floyd Rutter found in his 1982 study that Tennessee beef producers who used 13 recommended beef production practices had significantly more total contacts with Extension Agents than producers who did not use the recommended beef production practices (11:84).

4. RELATIONSHIPS BETWEEN PERSONAL AND FARM CHARACTERISTICS OF PRODUCERS AND THE NUMBER OF CONTACTS THEY HAD WITH EXTENSION

Melvin Arnett found in his 1973 study in Wilson County that the education level of 203 farmers who visited the Extension Office was significantly related to the number of office visits made during a 3-year period. Farmers who had attended high school or college made more visits to the Extension Office than did those completing fewer grades (1:96).

In a 1978 study of Tennessee Grade A dairy producers, Pat Freeman found that the number of Extension contacts had a significant positive relationship to the size of the dairy operation. Producers with larger farm operations attended more Extension meetings and had more Extension contacts than did producers with smaller farm operations (3:187). Freeman also found that as the age of Grade A dairy producers increased the number of Extension meetings attended and the number of Extension contacts decreased significantly (3:188).

James Perry in a 1980 study of Tennessee swine producers reported that full-time producers attended more Extension meetings and received more Extension contacts than did part-time producers (9:74).

Thus, relatively few previous Extension studies were found to have related to the specific objectives of the present study. This was particularly true with regard to marketing practices singled out for emphasis in this investigation.

CHAPTER III

CHARACTERISTICS OF TENNESSEE BURLEY TOBACCO PRODUCERS

The purposes of this chapter include:

1. To characterize Burley tobacco producers with regard to their personal characteristics, characteristics of their farm, and the numbers and types of contacts they had with Extension,
2. To characterize Burley tobacco producers with regard to the types of Extension's recommended production practices they used in their farm operations, and
3. To characterize Burley tobacco producers with regard to the numbers of producers, percents of respondents and mean percents of tobacco marketed in hand ties, bales and sheets by counties in the 12 month period prior to this study.

This chapter includes three sections:

1. Section 1, "Characteristics of Burley Tobacco Producers, Their Farm Operations, and the Numbers and Types of Contacts They Had With Extension,"
2. Section 2 consists of information regarding "Burley Tobacco Producer Use of Extension's Recommended Production Practices," and
3. Section 3 includes "Numbers and Percents of Tennessee Burley Tobacco Respondents Who Marketed in Hand Ties, Bales and Sheets and Mean Percents Marketed by Methods and Counties, 1983."

1. CHARACTERISTICS OF BURLEY TOBACCO PRODUCERS, THEIR FARM
OPERATIONS, AND THE NUMBERS AND TYPES OF CONTACTS
THEY HAD WITH EXTENSION

This section presents findings regarding selected characteristics of Burley tobacco producers, their farm operations, and the numbers and types of contacts they had with Extension in the 12 month period prior to this study. The three subsections include: (1) Producer Characteristics, (2) Farm Characteristics, and (3) Extension Contacts. Data regarding these characteristics are found in Table 1. The number and percent of total producers are given for each variable. The mean and range are given where appropriate.

Producer Characteristics

Selected producer characteristics found in Table 1 included age of producer, education of producer and employment of producer. Each characteristic will be discussed in separate headings below.

Age of producer. These data in Table 1 revealed that of 1,358 total respondents 415 or 30.6 percent of the producers were 20 to 40 years of age. Some 548 producers (40.4 percent) were 41 to 59 years of age, 241 producers (17.7 percent) were 60 to 69 years of age and 68 producers (5 percent) were 70 to 85 years of age. The mean age of all the Burley tobacco producers was 48 with a range of 65.

Education of producer. These data indicated that 952 (70.1 percent) of 1,358 total respondents had no formal education after

TABLE 1. Characteristics of Burley Tobacco Producers, Their Farm Operations, and the Numbers and Types of Contacts They Had With Extension

Characteristic	Number of Producers	Percent of Producers
<u>Producer</u>		
Age of Producer		
20-40	415	30.6
41-59	548	40.4
60-69	241	17.7
70-85	68	5.0
No response	168	6.3
Total	1,358	100.0
Mean = 48.2, Range = 65		
Education of Producer		
High School or less	952	70.1
Some College	146	10.8
College Graduate	168	12.4
No response	92	6.8
Total	1,358	100.0
Employment of Producer		
Full-time farm	642	47.3
Part-time job off farm	255	18.8
Full-time job off farm	270	19.9
Retired	103	7.6
Other	13	1.0
No response	75	5.5
Total	1,358	100.0
<u>Farm</u>		
Pounds tobacco allotted 1983 crop		
134-1499	338	24.9
1500-4999	623	45.9
5000-over	329	24.2
No response	68	5.0
Total	1,358	100.0
Mean = 4,317, Range 49,866		

TABLE 1 (Continued)

Characteristic	Number of Producers	Percent of Producers
Pounds tobacco sold 1983 crop		
130-1499	335	24.7
1500-4999	633	46.6
5000-over	367	27.0
No response	23	1.7
Total	1,358	100.0
Mean = 4,619, Range = 99,864		
Acres of tobacco grown		
1-less	649	47.8
2	278	20.5
3	144	10.6
4-over	276	20.3
No response	11	.8
Total	1,358	100.0
Mean = 2.9, Range = 49		
Yield per acre		
500-1299	250	18.4
1300-2199	640	47.1
2200-over	359	26.4
No response	109	8.0
Total	1,358	100.0
Mean = 1,836, Range = 3,780		
<u>Extension Contacts</u>		
Number of tobacco meetings attended		
0	766	56.4
1	499	36.7
2-4	92	6.8
No response	1	.1
Total	1,358	100.0
Mean = .5, Range = 4		
Number of other Extension meetings attended		
0	722	53.2
1-over	636	46.8
Total	1,358	100.0
Mean = 1.1, Range = 11		

TABLE 1 (Continued)

Characteristic	Number of Producers	Percent of Producers
Number of office visits made		
0	546	40.2
1-3	568	41.8
4-over	244	18.0
Total	1,358	100.0
Mean = 2.0, Range = 50		
Number of telephone calls made to Extension office		
0	429	31.6
1-4	684	50.4
5-over	245	18.0
Total	1,358	100.0
Mean = 2.7, Range = 30		
Number of farm visits received from Extension Agent		
0	495	36.5
1-5	782	57.6
6-30	81	6.0
Total	1,358	100.0
Mean = 1.8, Range = 30		
Total number of Extension contacts		
0	234	17.2
1-3	433	31.9
4-6	482	35.5
7-10	209	15.4
Total	1,358	100.0
Mean = 8.1, Range = 70		

high school. Some education past high school was received by 146 (10.8 percent) of the producers while 168 producers (12.4 percent) were college graduates.

Employment of producer. Survey of these data indicated that 642 (47.3 percent) of the 1,358 producers derived all of their income from the farm. Some 255 producers (18.8 percent) reported having a part-time job off of the farm, while 270 producers (19.9 percent) reported maintaining a full-time job in addition to maintaining the farm. Those producers classified as retired numbered 103 (7.6 percent).

Farm Characteristics

In this subsection of Table 1 farm characteristics are analyzed. These characteristics include pounds of tobacco allotted to the 1983 crop, pounds of tobacco sold from the 1983 crop, acres of tobacco grown, and yield per acre.

Pounds tobacco allotted 1983 crop. Analysis of these data indicate that of the 1,358 total respondents 338 producers (24.9 percent) had a 1983 allotment of between 134 and 1,499 pounds of tobacco. Some 623 producers (45.9 percent) had an allotment ranging from 1,500 to 4,999 pounds, and 329 producers (24.2 percent) had an allotment over 5,000 pounds. The mean pounds allotted for the 1983 Burley tobacco crop was 4,317 with a range of 49,866.

Pounds tobacco sold 1983 crop. Examination of these data revealed that of the 1,358 total respondents 335 producers (24.7 percent)

sold between 130 and 1,499 pounds of tobacco in 1983. Some 633 producers (46.6 percent) sold between 1,500 and 4,999 pounds of tobacco while 367 (27 percent) sold over 5,000 pounds. The mean pounds of tobacco sold for the 1983 crop was 4,619 with a range of 99,864.

Acres of tobacco grown. These data indicated that 649 (47.8 percent) of the 1,358 total respondents grew 1 acre or less of tobacco. Some 278 producers (20.5 percent) grew 2 acres of tobacco while 144 (10.6 percent) grew 3 acres. Four acres or more of tobacco grew on the farms of 276 or 20.3 percent of the producers. The mean number of acres of tobacco grown was 2.9 with a range of 49.

Yield per acre. Data in this portion of Table 1 indicated that of the 1,358 total respondents 250 producers (18.4 percent) had a yield per acre of between 500 and 1,299 pounds of tobacco. The yield per acre was between 1,300 and 2,199 pounds for 640 producers (47.1 percent). Some 359 producers (26.4 percent) had a yield per acre over 2,200 pounds. The mean yield per acre was 1,836 pounds with a range of 3,780.

Extension Contacts

In this subsection of Table 1 Extension contacts are analyzed. These contacts include number of tobacco meetings attended, number of other Extension meetings attended, number of office visits made, number of telephone calls made to the Extension office, number of farm visits received from the Extension agent, and the total number of Extension contacts.

Number of tobacco meetings attended. Survey of these data indicated that 766 (56.4 percent) of the 1,358 total respondents had attended no tobacco meetings. One tobacco meeting was attended by 499 producers (36.7 percent) while 92 producers (6.8 percent) attended between 2 and 4 tobacco meetings. The mean number of tobacco meetings attended was 0.5 with a range of 4.

Number other Extension meetings attended. These data indicated that 722 producers (53.2 percent) of the 1,358 total respondents did not attend any other Extension meetings. Some 636 producers (46.8 percent) attended over 1 Extension meeting. The mean number of other Extension meetings attended was 1.1 with a range of 11.

Number of office visits made. Data in this portion of Table 1 indicated that 546 producers (40.2 percent) did not make any visits to the Extension office of the 1,358 total respondents. Some 568 (41.8 percent) made between 1 and 3 visits to the Extension office while 244 producers (18 percent) made 4 or more visits to the Extension office. The mean number of office visits made was 2 with a range of 50.

Number of telephone calls made to Extension office. Analysis of these data indicate that of the 1,358 total respondents 420 producers (31.6 percent) did not make any telephone calls to the Extension office. Some 648 producers (50.4 percent) made between 1 and 4 telephone calls to the Extension office while 245 producers (18 percent) made 5 or more telephone calls to the Extension office. The mean number of

telephone calls made to the Extension office was 2.7 with a range of 30.

Number of farm visit received from Extension agent. These data indicated that of the 1,358 total respondents 495 (36.5 percent) did not receive any farm visits from the Extension agent. Some 782 producers (57.6 percent) received between 1 and 5 farm visits from the Extension agent while 81 (6 percent) received between 6 and 30 farm visits from the Extension agent. The mean number of farm visits received from the Extension agent was 1.8 with a range of 30.

Total number of Extension contacts. Data in this portion of Table 1 indicated that of the 1,358 total respondents 234 (17.2 percent) did not have any Extension contacts. Some 433 producers (31.9 percent) had between 1 and 3 total Extension contacts while 482 (35.5 percent) had between 4 and 6 total Extension contacts. Some 209 producers (15.4 percent) had between 7 and 10 total Extension contacts. The mean total number of Extension contacts was 8.1 with a range of 70.

Summary

Examination of data in this section revealed that the average age of Burley tobacco producers surveyed was 48 years old. Only 12 percent of the producers were college graduates and 47 percent of the producers were full-time farmers. The average pounds allotted for the 1983 Burley tobacco crop was 4,317 pounds while the average pounds sold was 4,619 pounds. One acre or less of tobacco was grown by 48 percent of the producers while the average number of acres grown

was 2.9 acres. The average yield per acre for the 1983 crop was 1,836 pounds. With regard to producer contacts with Extension, it was determined that producers attended an average of 0.5 tobacco meetings, attended an average of one other Extension meeting, made an average of two visits to the Extension office, made an average of three telephone calls to the Extension office, received an average of two farm visits, and had an average of eight total contacts with Extension in the 12 months prior to this study.

2. BURLEY TOBACCO PRODUCER USE OF EXTENSION'S RECOMMENDED PRODUCTION PRACTICES

This section presents data regarding burley tobacco producer use of Extension's recommended production practices and is divided into three subsections which include: (1) Plant Bed Practices, (2) Field Practices, and (3) Marketing Practices. Data regarding these practices are found in Table 2. The number and percent of producers are given for each variable. The mean and range are given where appropriate.

Plant Bed Practices

Selected plant bed practices included in this analysis of Table 2 included method of weed control used, chemical used for weed control before seeding, when chemical applied, pounds fertilizer applied per 9 x 100 ft. bed, teaspoons seed used per 9 x 100 ft. bed, month seeded, number of plant bed insect problems, spray or dust to control insects, blue mold a problem in plant bed, angular leaf spot

TABLE 2. Burley Tobacco Producer Use of Extension's Recommended Production Practices

Recommended Practice	Number of Producers	Percent of Producers
<u>Plant Bed Practices</u>		
Method of weed control used		
Chemical	1,251	92.1
Burned	41	3.0
Other	6	.4
No response	60	4.4
Total	1,358	100.0
Chemical used for weed control before seeding		
Methyl Bromide	1,233	90.8
Other	19	1.4
No response	106	7.8
Total	1,358	100.0
When chemical applied		
Fall	539	39.7
Spring	726	53.5
No response	93	6.8
Total	1,358	100.0
Pounds fertilizer applied per 9 x 100 ft. bed		
0	36	2.7
1-49	70	5.2
50-55	890	65.5
56-98	271	20.0
No response	91	6.7
Total	1,358	100.0
Mean = 54.4, Range = 98		
Teaspoons seed used per 9 x 100 ft. bed		
1	195	14.4
2	829	61.0
3	189	13.9
4-Over	79	5.8
No response	66	4.9
Total	1,358	100.0
Mean = 2.1, Range = 5		

TABLE 2 (Continued)

Recommended Practice	Number of Producers	Percent of Producers
Month seeded		
February	344	25.3
March	841	61.9
April	108	8.0
Other	4	.3
No response	61	4.5
Total	1,358	100.0
No. of plant bed insect problems		
0	1,036	76.3
1	220	16.2
2-6	102	7.5
Total	1,358	100.0
Mean = .033, Range = 6.0		
Spray or dust to control insects		
No	545	40.1
Yes	735	54.1
No response	78	5.7
Total	1,358	100.0
Blue Mold a problem in plant bed		
No	1,237	91.1
Yes	66	4.9
No response	55	4.1
Total	1,358	100.0
Angular Leaf Spot in plant bed		
No	1,103	81.2
Yes	194	14.3
No response	61	4.5
Total	1,358	100.0
Number of plant bed disease problems		
0	1,073	79.0
1	218	16.1
2-4	67	5.0
Total	1,358	100.0

Mean = 0.27, Range = 4.0

TABLE 2 (Continued)

Recommended Practice	Number of Producers	Percent of Producers
Total number of plant bed insect and disease problems		
0	885	65.2
1	267	19.7
2-7	206	15.2
Total	1,358	100.0
Mean = 0.60, Range = 7.0		
Treated plant bed with Ridomil		
No	662	48.7
Yes	637	46.9
No response	59	4.3
Total	1,368	100.0
<u>Field Practices</u>		
Tobacco variety grown		
Burley 37	53	3.9
Burley 49	15	1.1
Burley 64	44	3.2
KY 17	136	10.0
VA 509	236	17.4
KY 14	30	2.2
MS Burley 21 x KY 10	309	22.8
MS KY.14 x L8	284	20.9
No response	251	18.5
Total	1,358	100.0
Percent of tobacco land in permanent sod last 3 years		
Not any	575	42.3
Part	287	21.1
All	478	35.2
No response	18	1.3
Total	1,358	100.0
Mean = 45.3, Range = 100		
Tobacco land fertilized by soil test		
No	762	56.1
Yes	588	43.3
No response	8	.6
Total	1,358	100.0

TABLE 2 (Continued)

Recommended Practice	Number of Producers	Percent of Producers
Tobacco land limed by soil test		
No	768	56.6
Yes	578	42.6
No response	12	.9
Total	1,358	100.0
Pounds of Nitrogen per acre		
0	48	3.5
1-99	49	3.6
100-150	302	22.2
151-200	521	38.4
201-over	420	30.9
No response	18	1.3
Total	1,358	100.0
Mean = 203, Range = 600		
Month tobacco set in field		
April	45	3.3
May	911	67.1
June	397	29.2
No response	5	.4
Total	1,358	100.0
Major weed problem in field		
Grass	474	34.9
Broadleaf	774	57.0
No response	110	8.1
Total	1,358	100.0
Method of weed control used in field		
Cultivation	421	31.0
Chemicals	155	11.4
Both	777	57.2
No response	5	.4
Total	1,358	100.0
Treated for soil insects		
No	937	69.0
Yes	400	29.5
No response	21	1.5
Total	1,358	100.0

TABLE 2 (Continued)

Recommended Practice	Number of Producers	Percent of Producers
Number of field soil insect problems		
0	1,132	83.4
1	193	14.2
2-4	33	2.4
Total	1,358	100.0
Mean = 0.20, Range = 4.0		
Were foliage insects a problem		
No	484	35.6
Yes	838	61.7
No response	36	2.7
Total	1,358	100.0
Major foliage insects		
Aphids	80	5.9
Budworms	392	28.9
Flea Bettles	91	6.7
Grasshoppers	55	4.1
Japanese Beetles	8	.6
Hornworms	286	21.1
Stinkbugs	2	.1
Vegetable Weevil	2	.1
No response	442	32.5
Total	1,358	100.0
Spray foliage insects		
No	289	21.3
Yes	1,028	75.7
No response	41	3.0
Total	1,358	100.0
Scout field before spray		
No	291	21.4
Yes	910	67.0
No response	157	11.6
Total	1,358	100.0
Soil treatment for foliage insects		
No	804	59.2
Yes	531	39.1
No response	23	1.7
Total	1,358	100.0

TABLE 2 (Continued)

Recommended Practice	Number of Producers	Percent of Producers
Insecticide in transplant water		
No	797	58.7
Yes	526	38.7
No response	35	2.6
Total	1,358	100.0
Blue Mold a problem in field		
No	1,183	87.1
Yes	166	12.2
No response	9	.7
Total	1,358	100.0
Black Shank a problem in field		
No	1,217	89.6
Yes	131	9.6
No response	10	.8
Total	1,358	100.0
Number of field disease problems		
0	980	72.2
1	289	21.3
2-5	89	6.5
Total	1,358	100.0
Mean = 0.36, Range = 5.0		
Number of field soil insect and disease problems		
0	847	62.4
1	337	24.8
2-5	174	12.8
Total	1,358	100.0
Mean = 0.55, Range = 5.0		
Total number of tobacco insect and disease problems (plant bed and field)		
0	647	47.6
1	319	23.5
2-10	392	28.9
Total	1,358	100.0
Mean = 1.2, Range = 10		

TABLE 2 (Continued)

Recommended Practice	Number of Producers	Percent of Producers
Disease on resistant varieties		
No	1,011	74.4
Yes	275	20.3
No response	72	5.3
Total	1,358	100.0
Used Ridomil to control Blue Mold		
No	612	45.1
Yes	735	54.1
No response	11	.8
Total	1,358	100.0
Black Shank on farm		
No	946	69.7
Yes	393	28.9
No response	19	1.4
Total	1,358	100.0
Resistant variety used		
No	540	39.8
Yes	624	45.9
No response	194	14.3
Total	1,358	100.0
Stage tobacco topped		
Button-early flower	291	21.4
Early flower-midflower	622	45.8
Midflower-fullflower	439	32.3
No response	6	.4
Total	1,358	100.0
Method of sucker control used		
Systemic	971	71.5
Contact	119	8.8
Contact + Systemic	135	9.9
None	118	8.7
No response	15	1.1
Total	1,358	100.0

TABLE 2 (Continued)

Recommended Practice	Number of Producers	Percent of Producers
Number of days between topping and cutting		
1-7	40	2.9
8-14	206	15.2
15-21	557	41.0
22-29	300	22.1
30-40	215	15.8
No response	40	2.9
Total	1,358	100.0

Mean = 21.8, Range = 39

Marketing Practices

Number of grades		
0	6	.4
1	17	1.3
2	118	8.7
3	1,004	73.9
4	196	14.4
5	16	1.2
6	1	.1
Total	1,358	100.0

Mean = 3.0, Range = 6.0

Percent tobacco hand tied		
0	778	57.3
1-59	51	3.8
60-99	18	1.3
100	505	37.2
No response	6	.4
Total	1,358	100.0

Mean = 39.6, Range = 100

Percent tobacco baled		
0	561	41.3
1-55	41	3.0
56-99	28	2.1
100	699	51.5
No response	29	2.1
Total	1,358	100.0

Mean = 55.3, Range = 100

TABLE 2 (Continued)

Recommended Practice	Number of Producers	Percent of Producers
Percent tobacco in sheets		
0	1,233	90.8
1-99	27	2.0
100	67	4.9
No response	31	2.3
Total	1,358	100.0
Mean = 5.7, Range = 100		
Total market		
Percent tobacco baled and/or sold in sheets		
Not any	484	35.6
Part	72	5.3
All-100%	764	56.3
No response	38	2.8
Total	1,358	100.0
Mean = 61, Range = 100		
Plan to bale in future		
No	272	20.0
Yes	850	62.6
Do not know	184	13.5
No response	52	3.8
Total	1,358	100.0
Plan sheets if price support granted		
No	730	53.8
Yes	213	15.7
Do not know	375	27.6
No response	40	2.9
Total	1,358	100.0

in plant bed, number of plant bed disease problems, total number of plant bed insect and disease problems, and treated plant bed with ridomil.

Method of weed control used. These data in Table 2 showed that 1,251 (92.1 percent) of the 1,358 total respondents used chemicals for weed control, and 41 producers (3 percent) burned to control weeds in the plant bed.

Chemical used for weed control before seeding. These data indicated that 1,233 (90.8 percent) of the 1,358 total respondents used methyl bromide as a chemical weed control before seeding. Only 19 producers (1.4 percent) used other chemicals for weed control before seeding. Some 106 (7.8 percent) of the producers did not respond.

When chemical applied. Survey of these data indicated that 539 (39.7 percent) of the 1,358 total respondents applied chemicals for weed control in the fall. Some 726 producers (53.5 percent) applied chemicals for weed control in the spring.

Pounds fertilizer applied per 9 x 100 ft. bed. These data in Table 2 revealed that 36 (2.7 percent) of the 1,358 total respondents did not apply any fertilizer per 9 x 100 ft. plant bed, and 70 producers (5.2 percent) applied between 1 and 49 pounds of fertilizer in the plant bed. Some 890 (65.5 percent) applied between 50 and 55 pounds of fertilizer per plant bed, and 271 producers (20 percent) applied between 56 and 98 pounds of fertilizer. The mean pounds of

fertilizer applied per 9 x 100 ft. plant bed was 54.4 with a range of 98.

Teaspoons seed used per 9 x 100 ft. bed. Analysis of these data indicate that of the 1,358 total respondents 195 (14.4 percent) used 1 teaspoon of seed per 9 x 100 ft. bed. Some 829 producers (61 percent) used 2 teaspoons seed per plant bed, and 189 (13.9 percent) used 3 teaspoons seed per 9 x 100 ft. plant bed. Seventy-nine producers (5.8 percent) used 4 or more teaspoons seed per plant bed. The mean teaspoons seed used per 9 x 100 ft. bed was 2.1 with a range of 5.

Month seeded. These data indicated that 344 (25.3 percent) of the 1,358 total respondents seeded the plant bed in February, while 841 producers (61.9 percent) seeded the plant bed in March. Some 108 producers (8 percent) seeded the plant bed in April.

Number of plant bed insect problems. Data in this portion of Table 2 indicated that 1,036 (76.3 percent) of the 1,358 total respondents had no insect problems in the plant. Some 220 producers (16.2 percent) had 1 insect problem in the plant bed, and 102 producers (7.5 percent) had between 2 and 6 insect problems in the plant bed. The mean number of plant bed insect problems was .033 with a range of 6.

Spray or dust to control insects. These data indicated that 545 producers (40.1 percent) of the 1,358 total respondents did not spray or dust to control insects in the plant bed. Some 735 producers (54.1 percent) did spray or dust to control insects in the plant bed.

Blue mold in the plant bed. Survey of these data indicated that 1,237 (91.1 percent) of the 1,358 total respondents had no problem with blue mold in the plant bed. Only 66 producers (4.9 percent) did have a problem with blue mold in the plant bed.

Angular leaf spot in the plant bed. Data in Table 2 revealed that of the 1,358 total respondents 1,103 (81.2 percent) had no problem with angular leaf spot in the plant bed, and 194 producers (14.3 percent) had a problem with angular leaf spot in the plant bed.

Number of plant bed disease problems. Survey of these data indicated that 1,073 (79 percent) of the 1,358 total respondents had no problems with disease in the plant bed, and 218 producers (16.1 percent) had 1 problem with disease in the plant bed. Some 67 producers (5.0 percent) had between 2 and 4 disease problems in the plant bed. The mean number of plant bed disease problems was 0.27 with a range of 4.

Total number of plant bed insect and disease problems. Analysis of these data indicate that 885 (65.2 percent) of the 1,358 total respondents had no plant bed insect and disease problems, and 267 producers (19.7 percent) had 1 problem with plant bed insects and diseases. Some 206 producers (15.2 percent) had between 2 and 7 insect and disease problems in the plant bed. The mean total number of plant bed insect and disease problems was 0.60 with a range of 7.

Treated plant bed with ridomil. Data in this portion of Table 2 indicated that 662 (48.7 percent) of the 1,358 total respondents did not treat the plant bed with ridomil, and 637 producers (46.9 percent) did treat the plant bed with ridomil.

Field Practices

In this subsection of Table 2, field practices are analyzed. These characteristics include tobacco variety grown, percent of tobacco land in permanent sod last 3 years, tobacco land fertilized by soil test, tobacco land limed by soil test, pounds of nitrogen per acre, month tobacco set in field, major weed problem in field, method of weed control used in field, treated for soil insects, number of field soil insect problems, were foliage insects a problem, major foliage insects, spray foliage insects, scout field before spray, soil treatment for foliage insects, insecticide in transplant water, disease blue mold, disease black shank, number of field disease problems, number of field soil insect and disease problems, total number of tobacco insect and disease problems, disease on resistant varieties, used ridomil to control blue mold, black shank on farm, resistant variety used, stage tobacco topped, method of sucker control used, and number of days between topping and cutting.

Tobacco variety grown. Data in this portion of Table 2 indicated that 136 (10 percent) of the 1,358 total respondents grew the tobacco variety KY 17, and 236 producers (17.4 percent) grew the tobacco variety VA 509. Some 309 producers (22.8 percent) grew the

tobacco variety MS Burley 21 x KY 10, and 284 (20.9 percent) grew the tobacco variety MS KY.14 x L8. Four tobacco varieties were grown respectively by less than 4 percent of the producers. These varieties are Burley 37, Burley 49, Burley 64, and KY 14. Some 251 producers (18.5 percent) did not respond.

Percent of tobacco land in permanent sod last 3 years. Data in Table 2 show that 575 (42.3 percent) of 1,358 total respondents did not have any tobacco land in permanent sod the previous 3 years, and 287 producers (21.1 percent) had part of their tobacco land in permanent sod the previous 3 years. Some 478 (35.2 percent) of the producers had all of their tobacco land in permanent sod the previous 3 years. The mean percent of tobacco land in permanent sod the last 3 years was 45.3 percent with a range of 100.

Tobacco land fertilized by soil test. These data indicated that 762 (56.1 percent) of the 1,358 total respondents did not fertilize tobacco land according to a soil test recommendation, and 588 producers (43.3 percent) did fertilize tobacco land according to a soil test recommendation.

Tobacco land limed by soil test. Survey of these data revealed that 768 (56.6 percent) of the 1,358 total respondents did not lime tobacco land according to a soil test recommendation, and 578 producers (42.6 percent) did lime tobacco land according to a soil test recommendation.

Pounds of nitrogen per acre. Analysis of these data indicate that 302 (22.2 percent) of the 1,358 total respondents applied between 100 and 150 pounds of nitrogen per acre, and 521 producers (38.4 percent) applied between 151 and 200 pounds of nitrogen per acre. Some 420 producers (30.9 percent) applied over 200 pounds of nitrogen per acre. The mean pounds of nitrogen applied per acre was 203 with a range of 600.

Month tobacco set in field. Data in this portion of Table 2, page 24, indicated that 45 (3.3 percent) of the 1,358 total respondents set tobacco in the field in April, and 911 producers (67.1 percent) set tobacco in the field in May. Some 397 (29.2 percent) of the producers set tobacco in the field in June.

Major weed problem in field. These data indicated that 474 (34.9 percent) of the 1,358 total respondents had a problem with grass in the field, and 774 producers (57 percent) had a problem with broadleaf weeds in the field.

Method of weed control used. Data in Table 2 revealed that of 1,358 total respondents 421 (31 percent) cultivated to control weeds in the field and 155 producers (11.4 percent) used chemicals to control weeds in the field. Some 777 producers (57.2 percent) used both cultivation and chemicals to control weeds in the field.

Treated for soil insects. These data revealed that 937 (69 percent) of the 1,358 total respondents did not treat the field

for soil insects, and 400 producers (29.5 percent) did treat the field for soil insects.

Number of field soil insect problems. Survey of these data indicated that 1,132 (83.4 percent) of the 1,358 total respondents had no soil insect problems in the field, and 193 producers (14.2 percent) had 1 or more soil insect problems in the field. The mean number of soil insect problems in the field was 0.20 with a range of 4.

Were foliage insects a problem. Analysis of these data indicate that 484 (35.6 percent) of the 1,358 total respondents had no problem with foliage insects, and 838 producers (61.7 percent) had a problem with foliage insects.

Major foliage insects. Examination of these data revealed that 392 (28.9 percent) of the total respondents had a problem with budworms, and 286 producers (21.1 percent) had a problem with hornworms in the field. Between 4 and 7 percent of the producers had a problem with aphids, flea beetles, and grasshoppers. Less than 1 percent of the producers had a problem with Japanese beetles, stinkbugs, and vegetable weevils. Some 442 (32.5 percent) of the producers did not respond.

Spray foliage insects. Data in this portion of Table 2, page 24, indicated that 289 (21.3 percent) of the 1,358 total respondents did not spray for foliage insects, and 1,028 producers (75.7 percent) did spray for foliage insects.

Scout field before spray. Data in Table 2, page 24, revealed that of the 1,358 total respondents 291 (21.4 percent) did not scout the field before spraying for foliage insects, and 910 producers (67 percent) did scout the field before spraying for foliage insects.

Soil treatment for foliage insects. These data indicated that 804 (59.2 percent) of the 1,358 total respondents did not use a soil treatment to control foliage insects, and 531 producers (39.1 percent) did use a soil treatment to control foliage insects.

Insecticide in transplant water. Survey of these data indicate that 797 (58.7 percent) of the 1,358 total respondents did not use insecticide in the transplant water, and 526 producers (38.7 percent) did use insecticide in the transplant water.

Blue mold a problem in field. Analysis of these data indicate that 1,183 (87.1 percent) of the 1,358 total respondents had no problem with blue mold, and 166 producers (12.2 percent) had a problem with blue mold.

Black shank a problem in field. Examination of these data revealed that 1,217 (89.6 percent) of the 1,358 total respondents had no problem with black shank, and 131 producers (9.6 percent) had a problem with black shank.

Number of field disease problems. Data in this portion of Table 2 indicated that 980 (72.2 percent) of the 1,358 total respondents had no field disease problems, and 289 producers

(21.3 percent) had 1 field disease problem. Some 89 producers (6.5 percent) had between 2 and 5 field disease problems. The mean number of field disease problems was 0.36 with a range of 5.

Number of field soil insect and disease problems. Study of Table 2, page 24, data reveals that 847 (62.4 percent) of the 1,358 total respondents had no field soil insect and disease problems, and 337 producers (24.8 percent) had 1 field soil insect and disease problem. Some 174 (12.8 percent) had between 2 and 5 field soil insect and disease problems. The mean number of soil insect and disease problems was 0.55 with a range of 5.

Total number of tobacco insect and disease problems (plant bed and field). These data indicated that 647 (47.6 percent) of the 1,358 total respondents had no tobacco insect and disease problems in the plant bed and field, and 319 producers (23.5 percent) had 1 insect and disease problem in the plant bed and field. Some 392 producers (28.9 percent) had between 2 and 10 tobacco insect and disease problems in the plant bed and field. The mean total number of tobacco insect and disease problems in the plant bed and field was 1.2 with a range of 10.

Disease on resistant varieties. Survey of these data indicated that 1,011 (74.4 percent) of the 1,358 total respondents had no disease on resistant varieties, and 275 producers (20.3 percent) had disease on resistant varieties.

Used ridomil to control blue mold. Analysis of these data reveal that 612 (45.1 percent) of the 1,358 total respondents did not use ridomil to control blue mold, and 735 producers (54.1 percent) used ridomil to control blue mold.

Black shank on farm. Examination of these data revealed that 946 (69.7 percent) of the 1,358 total respondents had no black shank on the farm, and 393 producers (28.9 percent) had black shank on the farm.

Resistant variety used. Data in this portion of Table 2, page 24, indicated that 540 (39.8 percent) of the 1,358 total respondents did not grow a resistant variety, and 624 (45.9 percent) of the producers did grow a resistant variety. Some 194 producers (14.3 percent) did not respond.

Stage tobacco topped. Data in Table 2 reveal that 291 (21.4 percent) of the 1,358 total respondents topped tobacco at the button to early flower stage, and 622 producers (45.8 percent) topped tobacco at the early flower to midflower stage. Some 439 producers (32.3 percent) topped at the midflower to fullflower stage.

Method of sucker control used. These data indicated that 971 (71.5 percent) of the 1,358 total respondents used a systemic for sucker control. Some 119 (8.8 percent) used a contact for sucker control, and 135 producers (9.9 percent) used a combination of a contact and systemic for sucker control. Some 118 (8.7 percent) of the producers did not control suckers.

Number of days between topping and cutting. Survey of these data indicated that 246 (18.1 percent) of the 1,358 total respondents had between 1 and 14 days between topping and cutting tobacco. Some 557 producers (41 percent) had between 15 and 21 days between topping and cutting, and 300 (22.1 percent) had between 22 and 29 days between topping and cutting tobacco. Some 215 producers (15.8 percent) had between 30 and 40 days between topping and cutting tobacco. The mean number of days between topping and cutting tobacco was 21.8 with a range of 39.

Marketing Practices

Selected marketing practices included in this analysis of Table 2, page 24, included number of grades, percent tobacco hand tied, percent tobacco baled, percent tobacco in sheets, total market--percent tobacco baled and/or sold in sheets, plan to bale in future, and plan sheets if price support granted.

Number of grades. Analysis of these data indicate that 125 (10 percent) of the 1,358 total respondents marketed tobacco in 1 or 2 grades. Some 1,004 producers (73.9 percent) marketed tobacco in 3 grades. Some 213 producers (15.7 percent) marketed tobacco in between 4 and 6 grades. The mean number of grades was 3 with a range of 6.

Percent tobacco hand tied. Examination of these data revealed that 778 (57.3 percent) of the 1,358 total respondents did not hand tie any tobacco. Some 69 producers (5.1 percent) hand tied between

1 and 99 percent of their tobacco. Some 505 producers (37.2 percent) hand tied 100 percent of their tobacco. The mean percent of tobacco hand tied was 39.6 with a range of 100.

Percent tobacco baled. Data in this portion of Table 2, page 24, indicated that 561 (41.3 percent) of the 1,358 total respondents did not bale any tobacco. Some 69 producers (5.1 percent) baled between 1 and 99 percent of their crop. Some 699 producers (51.5 percent) baled 100 percent of their crop. The mean percent of tobacco baled was 55.3 with a range of 100.

Percent tobacco in sheets. Analysis of these data indicate that 1,233 (90.8 percent) of the 1,358 total respondents did not sheet any of their tobacco crop. Only 67 producers (4.9 percent) marketed 100 percent of their crop in sheets. The mean percent of tobacco marketed in sheets was 5.7 with a range of 100.

Total market--percent tobacco baled and/or sold in sheets. These data indicated that 484 (35.6 percent) of the 1,358 total respondents did not market any tobacco in bales and/or sheets, and 764 producers (56.3 percent) marketed all of their tobacco in bales and/or sheets. Only 72 producers (5.3 percent) marketed part of their tobacco in bales and/or sheets. The mean percent tobacco baled and/or sold in sheets (total market) was 61 with a range of 100.

Plan to bale in future. Survey of these data indicated that 272 (20 percent) of the 1,358 total respondents do not plan to bale

in the future, and 850 producers (62.6 percent) do plan to bale in the future. Some 184 producers (13.5 percent) do not know if they plan to bale in the future.

Plan sheets if price support granted. Analysis of these data indicate that 730 (53.8 percent) of the 1,358 total respondents do not plan to market tobacco in sheets if price support is granted, and 213 producers (15.7 percent) do plan to market tobacco in sheets if price support is granted. Some 375 producers (27.6 percent) do not know if they will market tobacco in sheets if price support is granted.

Summary

Examination of data in this section dealing with the producers' use of Extension's recommended practices revealed that the average pounds of fertilizer applied per plant bed was 54 pounds. On the average, producers reported having less than 1 plant bed insect and disease problem. The average percent of tobacco land in permanent sod the previous 3 years was 45 percent while 56 percent of the burley producers surveyed did not fertilize tobacco land according to a soil test recommendation. In terms of pounds of nitrogen applied per acre, 31 percent of the producers applied over 200 pounds of nitrogen and the average pounds of nitrogen applied per acre was 203 pounds. Budworms were a major foliage insect problem for 29 percent of the producers, while 21 percent of the producers reported hornworms as a major foliage insect. Producers reported having an average of 1 insect and disease problem in the plant bed and field, while 46 percent of

the producers used a disease resistant variety. In terms of marketing practices, the average number of grades was 3. The average percent of tobacco hand tied was 40 percent, the average percent of tobacco baled was 55 percent, the average percent of tobacco sheeted was 6 percent, and the average percent of tobacco baled and/or sold in sheets was 61 percent.

3. NUMBERS AND PERCENTS OF TENNESSEE BURLEY TOBACCO RESPONDENTS
WHO MARKETING IN HAND TIES, BALES, AND SHEETS AND MEAN
PERCENTS MARKETING BY METHODS AND COUNTIES, 1983

This section presents findings regarding numbers of burley tobacco producers, percent of respondents and mean percent of tobacco marketed in hand ties, bales and sheets by counties. The three subsections include: (1) Hand Tied, (2) Baled, and (3) Sheeted. Data regarding these marketing practices are found in Table 3. The number of respondents by county is given along with the number of producers, percent of respondents, and mean percent of the tobacco crop marketed in either hand ties, bales, or sheets. These findings are also given as district totals.

Hand Tied

This subsection presents findings in Table 3, regarding those producers who hand tied tobacco in Extension Districts II, III, IV, and V.

TABLE 3 (Continued)

County	Number of Respondents	Method of Market Preparation											
		Hand Tied			Baled			Sheeted					
		Number of Producers	Percent of Respondents	Mean Percent of crop	Number of Producers	Percent of Respondents	Mean Percent of Crop	Number of Producers	Percent of Respondents	Mean Percent of Crop			
District IV (Continued)													
Overton	30	18	60%	89%	16	53%	88%	0	0	0	0	0	0
Pickett	20	1	5%	100%	19	95%	100%	0	0	0	0	0	0
Putnam	30	23	77%	100%	7	23%	93%	0	0	0	0	0	0
Scott	7	4	57%	100%	4	57%	100%	0	0	0	0	0	0
Smith	34	9	26%	74%	28	82%	98%	0	0	0	0	0	0
Trousdale	30	9	30%	76%	24	80%	93%	1	3%	1	100%	100%	100%
White	27	26	96%	100%	4	15%	100%	0	0	0	0	0	0
District Total	341	140	41%	93%	222	65%	95%	2	<1%	2	<1%	60%	60%
District V													
Anderson	10	1	10%	50%	9	90%	92%	2	20%	2	20%	60%	60%
Blount	30	14	47%	79%	16	53%	91%	8	27%	8	27%	54%	54%
Campbell	20	6	30%	81%	16	80%	95%	0	0	0	0	0	0
Carter	20	0	0	0	19	95%	99%	2	10%	2	10%	60%	60%
Caliborne	40	30	75%	97%	10	25%	98%	1	3%	1	3%	100%	100%
Coke	36	16	44%	95%	19	53%	95%	4	11%	4	11%	72%	72%
Grainger	34	15	44%	100%	20	59%	98%	1	3%	1	3%	50%	50%
Greene	27	21	78%	100%	6	22%	100%	0	0	0	0	0	0
Hamblen	35	18	51%	100%	16	46%	94%	1	3%	1	3%	100%	100%
Hancock	31	22	71%	100%	1	6%	100%	8	26%	8	26%	79%	79%
Hawkins	40	7	18%	83%	12	30%	89%	24	60%	24	60%	98%	98%
Jefferson	35	21	60%	95%	14	40%	98%	2	6%	2	6%	70%	70%
Johnson	30	8	27%	100%	22	73%	100%	0	0	0	0	0	0
Knox	30	5	17%	93%	12	40%	98%	15	50%	15	50%	91%	91%
Loudon	30	7	23%	90%	19	63%	93%	7	23%	7	23%	79%	79%
Roane	20	9	45%	87%	13	65%	89%	1	5%	1	5%	60%	60%
Sevier	30	23	77%	100%	4	13%	100%	2	7%	2	7%	100%	100%
Sullivan	35	12	34%	100%	22	63%	100%	1	3%	1	3%	100%	100%
Unicoi	20	7	35%	100%	13	65%	100%	0	0	0	0	0	0
Union	20	7	35%	90%	11	55%	97%	3	15%	3	15%	100%	100%
Washington	31	4	13%	88%	28	90%	98%	0	0	0	0	0	0
District Total	604	253	42%	96%	302	50%	93%	82	14%	82	14%	84%	84%

District II. These data indicated that 10 counties in District II had 50 percent or less of their respondents marketing in hand ties. These counties include Bedford, Davidson, Giles, Lawrence, Lincoln, Marshall, Maury, Rutherford, Williamson, and Wilson. Some 5 counties had 51 percent or more of their respondents marketing in hand ties and include Cheatham, Houston, Montgomery, Robertson, and Sumner Counties. All 12 producers responding in Cheatham County hand tied 100 percent of their crop. Only 1 producer (3 percent) of the respondents in Williamson County marketed tobacco in hand ties. District totals reveal that 144 producers (42 percent) of the 340 total respondents hand tied tobacco. The mean percent of the crop hand tied in District II was 92 percent.

District III. Examination of these data revealed that all 4 counties included in the survey in District III had 50 percent or more of their respondents marketing tobacco in hand ties. District totals show that 39 producers (57 percent) of the 69 total respondents hand tied tobacco and the mean percent of the crop hand tied was 90 percent.

District IV. Data in this portion of Table 3 indicated that 11 counties in District IV had 50 percent or less of their respondents marketing in hand ties. The counties include Cannon, Clay, Cumberland, DeKalb, Fentress, Jackson, Macon, Morgan, Pickett, Smith, and Trousdale. Some 4 counties had over 50 percent of their respondents marketing in hand ties and include Overton, Putnam, Scott, and White

Counties. Only 1 producer (5 percent) of the respondents in Pickett County marketed tobacco in hand ties while 26 producers (96 percent) of the respondents in White County marketed tobacco in hand ties. District totals reveal that 140 producers (41 percent) of the 341 total respondents hand tied tobacco. The mean percent of the crop hand tied in District IV was 93 percent.

District V. Analysis of these data indicate that 15 counties in District V had 50 percent or less of their respondents marketing in hand ties. These counties include Anderson, Blount, Campbell, Carter, Cocke, Grainger, Hawkins, Johnson, Knox, Loudon, Roane, Sullivan, Unicoi, Union, and Washington. Some 6 counties had over 50 percent of their respondents marketing in hand ties. These counties include Claiborne, Greene, Hamblen, Hancock, Jefferson, and Sevier. In Carter County none of the 20 producers responding marketed tobacco in hand ties. District totals show that 253 producers (42 percent) of the 604 total respondents hand tied tobacco. The mean percent of the crop hand tied in District V was 96 percent.

Baled

This subsection presents findings in Table 3 regarding those producers who baled burley tobacco in Extension Districts II, III, IV, and V.

District II. Survey of these data indicated that 5 counties in District II had 50 percent or less of their respondents marketing tobacco in bales. These counties include Cheatham, Davidson, Houston,

Montgomery, and Robertson. Some 10 counties had over 50 percent of their respondents marketing in bales. These counties include Bedford, Giles, Lawrence, Lincoln, Marshall, Maury, Rutherford, Sumner, Williamson, and Wilson. In Cheatham County none of the 12 producers responding marketed tobacco in bales, while 29 producers (97 percent) of the respondents in Williamson County marketed tobacco in bales. District totals reveal that 215 producers (63 percent) of the 340 total respondents marketed tobacco in bales. The mean percent of the crop baled in District II was 95 percent.

District III. Analysis of these data indicate that in all 4 counties included in the survey 50 percent or less of the respondents marketed tobacco in bales. These counties include Franklin, Monroe, Moore, and Polk. Data for Polk County indicate that none of the producers responding baled tobacco. District totals indicate that 31 producers (45 percent) of the 69 total respondents marketed tobacco in bales. The mean percent of the crop baled in District III was 96 percent.

District IV. These data indicated that only 2 counties in District IV had 50 percent or less of their respondents marketing tobacco in bales. These counties are Putnam and White. Some 13 counties had over 50 percent of their respondents marketing tobacco in bales. These counties include Cannon, Clay, Cumberland, DeKalb, Fentress, Jackson, Macon, Morgan, Overton, Pickett, Scott, Smith, and Trousdale. Data for Pickett County show that 19 producers (95 percent)

of 20 total respondents baled tobacco. District totals reveal that 222 producers (65 percent) of the 341 total respondents marketed tobacco in bales. The mean percent of the crop baled in District IV was 95 percent.

District V. Survey of these data indicated that 8 counties in District V had 50 percent or less of their respondents marketing tobacco in bales. These counties include Caliborne, Greene, Hamblen, Hancock, Hawkins, Jefferson, Knox, and Sevier. Some 13 counties in District V had over 50 percent of their respondents marketing tobacco in bales. Hancock County had only 1 producer (6 percent) of the 31 total respondents marketing tobacco in bales, while Carter County had 19 producers (95 percent) of the total respondents marketing tobacco in bales. District totals show that 302 producers (50 percent) of the 604 total respondents marketed tobacco in bales. The mean percent of the crop baled in District V was 93 percent.

Sheeted

This subsection presents findings in Table 3 regarding those producers who sheeted burley tobacco in Extension Districts, II, III, IV, and V.

District II. Analysis of these data indicate that 12 counties in District II had no producers marketing tobacco in sheets. These counties include Bedford, Cheatham, Davidson, Giles, Houston, Lawrence, Marshall, Maury, Montgomery, Rutherford, Williamson, and Wilson. Of the 15 counties surveyed in District II only 3 had

producers marketing tobacco in sheets. These counties are Lincoln, Robertson, and Sumner. District totals indicate that only 5 producers of the 340 total respondents marketed tobacco in sheets. The mean percent of the crop sheeted by those 5 producers in District II was 50 percent.

District III. Examination of these data revealed that producers in Franklin County and Moore County, responding to the 1983 burley tobacco survey, did not market any tobacco in sheets. Only 1 producer (3 percent) of the 35 total respondents in Monroe County sheeted, while 4 producers (100 percent) of the respondents in Polk County sheeted tobacco. District totals show that only 5 producers (7 percent) of the 69 total respondents marketed tobacco in sheets. The mean percent of the crop sheeted by those 5 producers in District III was 55 percent.

District IV. Data in this portion of Table 3 indicated that 13 counties in District IV had no producers marketing tobacco in sheets. These counties include Cannon, Clay, Cumberland, DeKalb, Fentress, Macon, Morgan, Overton, Pickett, Putnam, Scott, Smith, and White. Jackson and Troup Counties in District IV both had 1 producer (3 percent) of the total respondents that marketed tobacco in sheets. District totals reveal that only 2 producers of the 341 total respondents in District IV marketed tobacco in sheets. The mean percent of the crop sheeted by those 2 producers in District IV was 60 percent.

District V. Analysis of these data indicate that 20 counties of 21 counties surveyed in District V had 50 percent or less of their respondents marketing tobacco in sheets. These counties include Anderson, Blount, Campbell, Carter, Claiborne, Cocke, Grainger, Greene, Hamblen, Hancock, Jefferson, Johnson, Knox, Loudon, Roane, Sevier, Sullivan, Unicoi, Union, and Washington. Only 1 county in District V, Hawkins County had over 50 percent of their respondents marketing tobacco in sheets. Hawkins County had 24 producers (60 percent) marketing tobacco in sheets. District totals indicate that only 82 producers (14 percent) of the 604 total respondents marketed tobacco in sheets. The mean percent of the crop sheeted by those 82 producers in District V was 84 percent.

Summary

Results of data analyzed in this section revealed that 42 percent of the respondents in District II, 57 percent of the respondents in District III, 41 percent of the respondents in District IV, and 42 percent of the respondents in District V hand tied some of their tobacco crop. With regard to tobacco baled, 63 percent of the respondents in District II, 45 percent of the respondents in District III, 65 percent of the respondents in District IV, and 50 percent of the respondents in District V baled some of their tobacco crop. With regard to tobacco sheeted, less than 1 percent of the respondents in District II, 7 percent of the respondents in District III, less than 1 percent of the respondents in District IV, and 14 percent of the

respondents in District V sheeted some of their tobacco crop. In District V more producers are marketing tobacco in sheets than in any other district.

CHAPTER IV

RELATIONSHIPS BETWEEN SELECTED FARM AND PERSONAL CHARACTERISTICS OF BURLEY TOBACCO PRODUCERS, AND THE NUMBER OF CONTACTS BURLEY TOBACCO PRODUCERS HAD WITH EXTENSION AND THE MARKETING PRACTICES THEY USED

The purposes of this chapter are to present findings regarding the relationships between selected farm and personal characteristics of burley tobacco producers and the marketing practices they used, and to present findings regarding the relationships between the numbers of contacts burley tobacco producers had with Extension and the marketing practices they used.

The two sections of this chapter include Section 1, "Relationships Between Selected Farm and Personal Characteristics of Burley Tobacco Producers and the Marketing Practices They Used," and Section 2, "Relationships Between the Numbers of Contacts Burley Tobacco Producers Had with Extension and the Marketing Practices They Used." Discussion will be presented below under these headings.

1. RELATIONSHIPS BETWEEN SELECTED FARM AND PERSONAL CHARACTERISTICS OF BURLEY TOBACCO PRODUCERS AND THE MARKETING PRACTICES THEY USED

This section presents findings regarding the relationships between selected farm and personal characteristics of burley tobacco

producers and the marketing practices they used. The two subsections include: (1) Marketing Practices and Farm Characteristics, and (2) Marketing Practices and Producer Characteristics. Data regarding these characteristics and relationships are found in Table 4. The marketing practices analyzed in Table 4 include hand tied, baled, sheets and baled and/or sheeted.

An analysis of variance F test was used to determine relationships between independent and dependent variables. The .05 probability level was used to determine significant relationships.

Marketing Practices and Farm Characteristics

Selected farm characteristics found in Table 4 include pounds allotted, pounds sold, and yield per acre.

Pounds allotted. These data revealed that of those producers with allotments between 134 and 1,499 pounds, 336 producers had hand tied a mean of 46 percent of their tobacco, 325 producers baled 54 percent, 322 producers sheeted 4 percent, and 322 producers baled and/or sheeted 57 percent of their tobacco. For producers with allotments between 1,500 and 4,999 pounds, 621 producers had hand tied a mean of 43 percent of their tobacco, 613 producers baled 53 percent, 610 producers sheeted 5 percent, and 610 producers baled and/or sheeted 58 percent of their tobacco. For producers with allotments over 5,000 pounds, 329 producers hand tied a mean of 29 percent of their tobacco, 327 producers baled 63 percent, 327 producers sheeted 8 percent, and 327 producers baled and/or sheeted 72 percent of their

TABLE 4. Relationships Between Selected Farm and Personal Characteristics of Burley Tobacco Producers and the Marketing Practices They Used

Characteristic	Methods of Market Preparation					
	Hand Tied		Baled		Sheets	
	Number of Producers	Mean Percent of Tobacco	Number of Producers	Mean Percent of Tobacco	Number of Producers	Mean Percent of Tobacco
Farm						
Pounds Allotted						
134-1,499	336	46%	325	54%	322	4%
1,500-4,999	621	43%	613	53%	610	5%
5,000-over	329	29%	327	63%	327	8%
Total	1,286	40%	1,265	56%	1,259	6%
	F-value=13.4	p=.001	F-value=3.7	p=.024	F-value=4.0	p=.018
						F-value=7.65
						p=.001
Pounds sold						
130-1,499	335	54%	327	45%	327	3%
1,500-4,999	629	40%	621	56%	615	6%
5,000-over	367	27%	363	67%	363	7%
Total	1,331	40%	1,311	56%	1,305	6%
	F-value=28.6	p=.001	F-value=12.9	p=.001	F-value=3.3	p=.037
						F-value=19
						p=.001
Yield Per Acre						
Under 1,500	372	41%	370	59%	369	2%
1,500-2,100	482	42%	477	53%	475	7%
2,101-over	394	35%	391	57%	391	8%
Total	1,248	40%	1,238	56%	1,235	6%
	F-value=2.66	p=.071	F-value=1.03	p=.357	F-value=7.55	p=.001
						F-value=1.05
						p=.351
Producer						
Age of Producer						
20-40	413	33%	405	65%	403	6%
41-59	547	38%	538	57%	536	7%
60-69	240	50%	238	48%	237	3%
70-85	68	59%	67	37%	67	4%
Total	1,268	40%	1,248	57%	1,243	6%
	F-value=10.4	p=.001	F-value=8.2	p=.001	F-value=1.55	p=.199
						F-value=10
						p=.001

TABLE 4 (Continued)

Characteristic	Hand Tied				Methods of Market Preparation				Baled and/or Sheeted			
	Number of Producers	Mean Percent of Tobacco	Number of Producers	Mean Percent of Tobacco	Number of Producers	Mean Percent of Tobacco	Number of Producers	Mean Percent of Tobacco	Number of Producers	Mean Percent of Tobacco	Number of Producers	Mean Percent of Tobacco
Education of Producer												
High School or less	948	43%	936	54%	931	6%	931	59%	931	59%	931	59%
Some College	146	28%	142	66%	142	7%	142	73%	142	73%	142	73%
College Graduate	168	32%	163	64%	163	6%	163	69%	163	69%	163	69%
Total	1,262	40%	1,241	56%	1,236	6%	1,236	62%	1,236	62%	1,236	62%
	F-value=9.17	p=.001	F-value=4.32	p=.014	F-value=.24	p=.784	F-value=5.26	p=.005				
Employment of Producer												
Full-time farm	641	38%	634	56%	632	6%	632	62%	632	62%	632	62%
Part-time job off farm	252	44%	248	56%	245	5%	245	61%	245	61%	245	61%
Full-time job off farm	270	35%	263	61%	263	6%	263	68%	263	68%	263	68%
Retired	103	51%	101	47%	101	4%	101	51%	101	51%	101	51%
Other	13	73%	12	29%	12	0%	12	29%	12	29%	12	29%
Total	1,279	40%	1,258	56%	1,253	6%	1,253	62%	1,253	62%	1,253	62%
	F-value=4.5	p=.001	F-value=2.07	p=.082	F-value=.58	p=.675	F-value=2.9	p=.020				

tobacco. Total pounds allotted reveals that 1,286 producers had hand tied a mean of 40 percent of their tobacco, 1,265 producers baled 56 percent, 1,259 producers sheeted 6 percent, and 1,259 producers baled and/or sheeted 61 percent of their tobacco. Analysis of variance F test results indicated there was a significant relationship at the .05 probability level between pounds allotted and each marketing practice used. Burley tobacco producers with large allotments hand tied significantly less tobacco than producers with smaller allotments. Burley producers with larger allotments baled significantly more tobacco than producers with smaller allotments. Burley tobacco producers with larger allotments sheeted significantly more tobacco than producers with smaller allotments. Burley tobacco producers with larger allotments baled and/or sheeted significantly more tobacco than producers with smaller allotments.

Pounds sold. These data indicated that of those producers selling between 130 and 1,499 pounds of tobacco, 335 producers had hand tied a mean of 54 percent of their tobacco, 327 producers baled 45 percent, 327 producers sheeted 3 percent, and 327 producers baled and/or sheeted 49 percent of their tobacco. For producers selling between 1,500 and 4,999 pounds of tobacco, 629 producers had hand tied a mean of 40 percent of their tobacco, 621 producers baled 56 percent, 615 producers sheeted 6 percent, and 615 producers baled and/or sheeted 61 percent of their tobacco. For producers selling over 5,000 pounds of tobacco, 367 producers had hand tied a mean of 27 percent of their tobacco, 363 producers baled 67 percent, 363

producers sheeted 7 percent, and 363 producers baled and/or sheeted 74 percent of their tobacco. Total pounds sold shows that 1,331 producers had hand tied a mean of 40 percent of their tobacco, 1,311 producers baled 56 percent, 1,305 producers sheeted 6 percent, and 1,305 producers baled and/or sheeted 62 percent of their tobacco. Analysis of variance F test results showed there was a significant relationship at the .05 probability level between pounds sold and each marketing practice used. Burley tobacco producers selling more pounds of tobacco hand tied significantly less tobacco than producers selling fewer pounds of tobacco. Burley tobacco producers selling more pounds of tobacco baled significantly more tobacco than producers selling fewer pounds of tobacco. Burley tobacco producers selling more pounds of tobacco sheeted significantly more tobacco than producers selling fewer pounds of tobacco. Burley tobacco producers selling more pounds of tobacco baled and/or sheeted significantly more tobacco than producers selling fewer pounds of tobacco.

Yield per acre. Survey of these data indicated that of those producers with yields per acre under 1,500 pounds, 372 producers had hand tied a mean of 41 percent of their tobacco, 370 producers baled 59 percent, 369 producers sheeted 2 percent, and 369 producers baled and/or sheeted 61 percent of their tobacco. For producers with yields per acre between 1,500 and 2,100 pounds, 482 producers had hand tied a mean of 42 percent of their tobacco, 477 producers baled 53 percent, 475 producers sheeted 7 percent, and 475 producers baled and/or

sheeted 60 percent of their tobacco. For producers with yields per acre over 2,101 pounds, 394 producers had hand tied a mean of 35 percent of their tobacco, 391 producers baled 57 percent, 391 producers sheeted 8 percent, and 391 producers baled and/or sheeted 65 percent of their tobacco. Total yields per acre reveals that 1,248 producers had hand tied a mean of 40 percent of their tobacco, 1,238 producers baled 56 percent, 1,235 producers sheeted 6 percent, and 1,235 producers baled and/or sheeted 62 percent of their tobacco. Analysis of variance F test results showed there was a significant relationship at the .05 probability level between yield per acre and the marketing practice of sheeting. Yield per acre was not significantly related to the marketing practices of hand tying, baling, and baling and/or sheeting.

Marketing Practices and Producer Characteristics

Selected producer characteristics found in Table 4 included age of producer, education of producer, and employment of producer.

Age of producer. Data in this portion of Table 4 indicated that of those producers between 20 and 40 years of age, 413 producers had hand tied a mean of 33 percent of their tobacco, 405 producers baled 65 percent, 403 producers sheeted 6 percent, and 403 producers baled and/or sheeted 71 percent of their tobacco. For producers between 41 and 59 years of age, 547 producers had hand tied a mean of 38 percent of their tobacco, 538 producers baled 57 percent, 536 producers sheeted 7 percent, and 536 producers baled and/or sheeted

63 percent of their tobacco. For producers between 60 and 69 years of age, 240 producers had hand tied a mean of 50 percent of their tobacco, 238 producers baled 48 percent, 237 producers sheeted 3 percent, and 237 producers baled and/or sheeted 51 percent of their tobacco. For producers between 70 and 85 years of age, 68 producers had hand tied a mean of 59 percent of their tobacco, 67 producers baled 37 percent, 67 producers sheeted 4 percent, and 67 producers baled and/or sheeted a mean 44 percent of their tobacco. Analysis of variance F test results showed there was a significant relationship at the .05 probability level between the age of the producer and the marketing practices of hand tying, baling, and baling and/or sheeting. The age of the producer was not significantly related to sheeting at the .05 probability level. Older producers hand tied significantly more tobacco than younger producers. Older producers baled significantly less tobacco than younger producers. Older producers also baled and/or sheeted significantly less tobacco than younger producers.

Education of producer. Examination of these data revealed that of those producers with high school or less education, 948 producers had hand tied a mean of 43 percent of their tobacco, 936 producers baled 54 percent, 931 producers sheeted 6 percent, and 931 producers baled and/or sheeted 59 percent of their tobacco. For producers who attended some college, 146 producers had hand tied a mean of 28 percent of their tobacco, 142 producers baled 66 percent, 142 producers sheeted 7 percent, and 142 producers baled and/or sheeted 73 percent of their

tobacco. For producers who graduated from college, 168 producers had hand tied a mean of 32 percent of their tobacco, 163 producers baled 64 percent, 163 producers sheeted 6 percent, and 163 producers baled and/or sheeted 69 percent of their tobacco. Analysis of variance F test results showed there was a significant relationship at the .05 probability level between the education of the producer and the marketing practices of hand tieing, baling, and baling and/or sheeting. The education of the producer was not significantly related to sheeting at the .05 probability level. Producers with more education hand tied significantly less tobacco than producers with less education. Producers with more education baled significantly more tobacco than producers with less education. Producers with more education baled and/or sheeted significantly more tobacco than producers with less education.

Employment of producer. These data indicated that of those producers employed full time on the farm, 641 producers had hand tied a mean of 38 percent of their tobacco, 634 producers baled 56 percent, 632 producers sheeted 6 percent, and 632 producers baled and/or sheeted 62 percent of their tobacco. For producers with a part time job off the farm, 252 producers had hand tied a mean of 44 percent of their tobacco, 248 producers baled 56 percent, 245 producers sheeted 5 percent, and 245 producers baled and/or sheeted 61 percent of their tobacco. For producers with a full time job off the farm, 270 producers had hand tied a mean of 35 percent of their tobacco, 263 producers baled 61 percent, 263 producers sheeted 6 percent,

and 263 producers baled and/or sheeted 68 percent of their tobacco. For producers who are retired, 103 producers had hand tied a mean of 51 percent of their tobacco, 101 producers baled 47 percent, 101 producers sheeted 4 percent, and 101 producers baled and/or sheeted 51 percent of their tobacco. Analysis of variance F test results revealed there was a significant relationship at the .05 probability level between the education of the producer and the marketing practices of hand tying and baling and/or sheeting. The employment of the producer was not significantly related to baling and sheeting at the .05 probability level.

Summary

Examination of data in this section revealed that the farm characteristics pounds allotted and pounds sold were significantly related to each marketing practice (i.e., hand tied, baled, sheeted, baled and/or sheeted) used. Yield per acre was significantly related to the marketing practice of sheeting. Producers with larger allotments and more pounds sold, hand tied significantly less tobacco than producers with smaller allotments and fewer pounds sold. With regard to personal characteristics, the age of producer and education of producer was significantly related to the marketing practices hand tied, baled, and baled and/or sheeted. Employment of producer was significantly related to the marketing practices of hand tied and baled and/or sheeted. Older producers hand tied significantly more tobacco than younger producers, while producers with more education hand tied significantly less tobacco than producers with less education.

2. RELATIONSHIPS BETWEEN THE NUMBERS OF CONTACTS BURLEY TOBACCO PRODUCERS HAD WITH EXTENSION AND THE MARKETING PRACTICES THEY USED

This section presents findings regarding the relationships between the numbers of contacts burley tobacco producers had with Extension and the marketing practices they used. Extension contacts are characterized into six categories and include tobacco meetings attended, other Extension meetings attended, office visits made, telephone calls made, farm visits received, and total Extension contacts. The marketing practices analyzed include hand tied, baled, sheets, and baled and/or sheets. Data regarding these characteristics and relationships are found in Table 5.

An analysis of variance F test was used to determine relationships between independent and dependent variables. The .05 probability level was used to determine significant relationships.

Tobacco Meetings Attended

Data in this portion of Table 5 reports findings regarding the number of tobacco meetings attended by burley tobacco producers. For producers who attended no tobacco meetings, 764 producers had hand tied a mean of 47 percent of their tobacco, 761 producers baled 49 percent, 762 producers sheeted 3 percent, and 759 producers baled and/or sheeted 52 percent of their tobacco. For producers who attended 1 tobacco meeting, 496 producers had hand tied a mean of 32 percent of their tobacco, 476 producers baled 64 percent, 473 producers sheeted

TABLE 5. Relationships Between the Numbers of Contacts Burley Tobacco Producers Had With Extension and the Marketing Practices They Used

	Methods of Market Preparation				Baled and/or Sheeted Number of Producers	Mean Percent of Tobacco	p=
	Hand Tied Number of Producers	Mean Percent of Tobacco	Baled Number of Producers	Sheets Number of Producers			
Tobacco Meetings Attended							
0	764	47%	761	49%	762	3%	759
1	496	32%	476	64%	473	7%	452
2-more	92	20%	92	61%	92	18%	92
Total	1,352	40%	1,329	55%	1,327	6%	1,323
	F-value=23.3	p=.001	F-value=13.5	p=.001	F-value=22.2	p=.001	F-value=30.5
Other Extension Meetings Attended							
0	720	45%	715	50%	717	49%	714
1-2	423	36%	409	57%	404	10%	404
3-more	209	26%	205	70%	206	5%	205
Total	1,352	40%	1,329	55%	1,327	6%	1,323
	F-value=14.6	p=.001	F-value=13.2	p=.001	F-value=10.3	p=.001	F-value=19
Office Visits Made							
0	545	45%	540	49%	541	5%	539
1-3	563	37%	551	58%	548	6%	546
4-more	244	33%	238	62%	238	7%	238
Total	1,352	40%	1,329	55%	1,327	6%	1,323
	F-value=7.6	p=.0005	F-value=7.5	p=.0006	F-value=1.02	p=.362	F-value=10.7
Telephone Calls Made							
0	429	48%	426	48%	427	2%	425
1-3	570	40%	551	56%	547	6%	546
4-more	353	28%	352	62%	353	10%	352
Total	1,352	40%	1,329	55%	1,327	6%	1,323
	F-value=18.6	p=.001	F-value=8.2	p=.0003	F-value=10.9	p=.001	F-value=20.2
Farm Visits Received							
0	495	48%	493	48%	495	3%	493
1-3	664	36%	656	57%	652	8%	651
4-more	193	30%	180	69%	180	5%	179
Total	1,352	40%	1,329	55%	1,327	6%	1,323
	F-value=14	p=.001	F-value=14.3	p=.001	F-value=5.42	p=.005	F-value=21
Total Extension Contacts							
0	234	55%	233	42%	234	1%	233
1-9	709	39%	700	56%	699	6%	697
10-more	408	32%	395	63%	393	8%	392
Total	1,351	40%	1,328	55%	1,326	6%	1,322
	F-value=17.6	p=.001	F-value=13.1	p=.001	F-value=5.9	p=.003	F-value=23.6

7 percent, and 452 producers baled and/or sheeted 71 percent of their tobacco. Of those producers who attended 2 or more tobacco meetings, 92 producers had hand tied a mean of 20 percent of their tobacco, 92 producers baled 61 percent, 92 producers sheeted 18 percent, and 92 producers baled and/or sheeted 79 percent of their tobacco.

Analysis of variance F test results indicated there was a significant relationship at the .05 probability level between tobacco meetings attended and each marketing practice used. Burley tobacco producers who attended more tobacco meetings hand tied significantly less tobacco than producers who attended fewer tobacco meetings. Burley producers who attended more tobacco meetings baled significantly more tobacco than producers who attended fewer tobacco meetings. Burley producers who attended more tobacco meetings sheeted significantly more tobacco than producers who attended fewer tobacco meetings. Burley producers who attended more tobacco meetings baled and/or sheeted significantly more tobacco than producers who attended fewer tobacco meetings.

Other Extension Meetings Attended

These data in Table 5 report findings regarding the number of other Extension meetings attended by burley tobacco producers. For producers who attended no other Extension meetings, 720 producers had hand tied a mean of 45 percent of their tobacco, 715 producers baled 50 percent, 717 producers sheeted 4 percent, and 714 producers baled and/or sheeted 54 percent of their tobacco. Of those producers who attended one or two other Extension meetings, 423 producers had hand tied a mean of 36 percent of their tobacco, 409 producers baled

57 percent, 404 producers sheeted 10 percent, and 404 producers baled and/or sheeted 66 percent of their tobacco. For producers who attended three or more other Extension meetings, 209 producers had hand tied a mean of 26 percent of their tobacco, 205 producers baled 70 percent, 206 producers sheeted 5 percent, and 205 producers baled and/or sheeted 74 percent of their tobacco. Analysis of variance F test results indicated there was a significant relationship at the .05 probability level between other Extension meetings attended and each marketing practice used. Burley tobacco producers who attended more other Extension meetings hand tied significantly less tobacco than producers who attended fewer other Extension meetings. Burley tobacco producers who attended more other Extension meetings baled significantly more tobacco than producers who attended fewer other Extension meetings. Burley tobacco producers who attended more other Extension meetings sheeted significantly more tobacco than producers who attended fewer other Extension meetings. Burley tobacco producers who attended more other Extension meetings baled and/or sheeted significantly more tobacco than producers who attended fewer other Extension meetings.

Office Visits Made

Data in this portion of Table 5 report findings regarding the number of office visits made to the Extension office by burley tobacco producers. For producers making no visits to the Extension office, 545 producers had hand tied a mean of 45 percent of their tobacco, 540 producers baled 49 percent, 541 producers sheeted 5 percent, and

539 producers baled and/or sheeted 54 percent of their tobacco. For producers making between one and three visits to the Extension office, 563 producers had hand tied a mean of 37 percent of their tobacco, 551 producers baled 58 percent, 548 producers sheeted 6 percent, and 546 producers baled and/or sheeted 64 percent of their tobacco. For producers making four or more visits to the Extension office, 244 producers had hand tied a mean of 33 percent of their tobacco, 238 producers baled 62 percent, 238 producers sheeted 7 percent, and 238 producers baled and/or sheeted 69 percent of their tobacco. Analysis of variance F test results indicated there was a significant relationship at the .05 probability level between office visits made and the marketing practices of hand tying, baling and baling and/or sheeting. Office visits made was not significantly related to sheeting at the .05 probability level. Burley tobacco producers making more office visits hand tied significantly less tobacco than producers making fewer office visits. Burley tobacco producers making more office visits baled significantly more tobacco than producers making fewer office visits. Burley tobacco producers making more office visits baled and/or sheeted significantly more tobacco than producers making fewer office visits.

Telephone Calls Made

These data in Table 5 report findings regarding the number of telephone calls made to the Extension office by burley tobacco producers. For producers making no telephone calls to the Extension office, 429 producers had hand tied a mean of 48 percent of their tobacco, 426

producers baled 48 percent, 427 producers sheeted 2 percent, and 425 producers baled and/or sheeted 50 percent of their tobacco. For producers making between one and three telephone calls to the Extension office, 570 producers had hand tied a mean of 40 percent of their tobacco, 551 producers baled 56 percent, 547 producers sheeted 6 percent, and 546 producers baled and/or sheeted 62 percent of their tobacco. For producers making four or more telephone calls to the Extension office, 353 producers had hand tied a mean of 28 percent of their crop, 352 producers baled 62 percent, 353 producers sheeted 10 percent, and 352 producers baled and/or sheeted 72 percent of their tobacco. Analysis of variance F test results indicated there was a significant relationship at the .05 probability level between telephone calls made and each marking practice used. Burley tobacco producers making more telephone calls to the Extension office hand tied significantly less tobacco than producers making fewer telephone calls. Burley tobacco producers making more telephone calls to the Extension office baled significantly more tobacco than producers making fewer telephone calls. Burley tobacco producers making more telephone calls to the Extension office sheeted significantly more tobacco than producers making fewer telephone calls. Burley tobacco producers making more telephone calls to the Extension office baled and/or sheeted significantly more tobacco than producers making fewer telephone calls.

Farm Visits Received

Data in this portion of Table 5 report findings regarding the number of farm visits received by burley tobacco producers. For producers receiving no farm visits, 495 producers had hand tied a mean of 48 percent of their tobacco, 493 producers baled 48 percent, 495 producers sheeted 3 percent, and 493 producers baled and/or sheeted 51 percent of their tobacco. For producers receiving between one and three farm visits, 664 producers had hand tied a mean of 36 percent of their crop, 656 producers baled 57 percent, 652 producers sheeted 8 percent, and 651 producers baled and/or sheeted 65 percent of their tobacco. For producers receiving four or more farm visits, 193 producers had hand tied a mean of 30 percent of their crop, 180 producers baled 69 percent, 180 producers sheeted 5 percent, and 179 producers baled and/or sheeted 74 percent of their crop. Analysis of variance F test results indicated there was a significant relationship at the .05 probability level between farm visits received and each marketing practice used. Burley tobacco producers receiving more farm visits hand tied significantly less tobacco than producers receiving fewer farm visits. Burley tobacco producers receiving more farm visits baled significantly more tobacco than producers receiving fewer farm visits. Burley tobacco producers receiving more farm visits sheeted significantly more tobacco than producers receiving fewer farm visits. Burley tobacco producers receiving more farm visits baled and/or sheeted more tobacco than producers receiving fewer farm visits.

Total Extension Contacts

These data in Table 5, page 67, report findings regarding the number of total Extension contacts by burley tobacco producers. For producers with no Extension contacts, 234 producers had hand tied a mean of 55 percent of their tobacco, 233 producers baled 42 percent, 234 producers sheeted 1 percent, and 233 producers baled and/or sheeted 43 percent of their tobacco. For producers with between one and nine total Extension contacts, 709 producers had hand tied a mean of 39 percent of their tobacco, 700 producers baled 56 percent, 699 producers sheeted 6 percent, and 697 producers baled and/or sheeted 61 percent of their tobacco. For producers with 10 or more total Extension contacts, 408 producers had hand tied a mean of 32 percent of their tobacco, 395 producers baled 63 percent, 393 producers sheeted 8 percent, and 392 producers baled and/or sheeted 70 percent of their tobacco. Analysis of variance F test results indicated there was a significant relationship at the .05 probability level between total Extension contacts and each marketing practice used. Burley tobacco producers with more total Extension contacts hand tied significantly less tobacco than producers with fewer total Extension contacts. Burley tobacco producers with more total Extension contacts baled significantly more tobacco than producers with fewer total Extension contacts. Burley tobacco producers with more total Extension contacts sheeted significantly more tobacco than producers with fewer total Extension contacts. Burley tobacco producers with more total Extension contacts baled and/or sheeted more tobacco than producers with fewer total Extension contacts.

Data regarding totals for each type of Extension contact in Table 5, page 67, consistently reveal that 40 percent of the tobacco was hand tied, 55 percent of the tobacco was baled, 6 percent of the tobacco was sheeted, and 61 percent of the tobacco was baled and/or sheeted

Summary

Results of data analyzed in this section revealed that tobacco meetings attended, other Extension meetings attended, telephone calls made, farm visits received, and total Extension contacts were significantly related to each marketing practice (i.e., hand tied, baled, sheeted, baled and/or sheeted) used. Office visits made was significantly related to the marketing practices of hand tying, baling and baling and/or sheeting but was not significantly related to the marketing practice of sheeting. Producers who had more contacts with Extension hand tied less tobacco than producers who had fewer contacts with Extension. Producers who had more contact with Extension baled, sheeted and baled and/or sheeted more tobacco than producers who had fewer contacts with Extension.

CHAPTER V

SUMMARY OF MAJOR FINDINGS

1. PURPOSES AND SPECIFIC OBJECTIVES

Purposes

The purpose of this study was to characterize burley tobacco producers and their farms as to their use of tobacco marketing practices along with other recommended production practices and the types and numbers of contacts they had with Extension.

Specific Objectives

The specific objectives were:

1. To characterize burley tobacco producers and their farm operations.
2. To determine the extent of use of recommended production practices by burley tobacco producers.
3. To determine the extent of use of burley tobacco marketing practices by burley tobacco producers by counties responding to the 1983 Tennessee Burley Tobacco Production Survey.
4. To determine the relationships between selected characteristics of burley tobacco producers and their farms, and the marketing practices they used.
5. To determine the relationships between the numbers of contacts burley tobacco producers had with Extension and the marketing practices they used.

2. METHODS OF INVESTIGATION

Population and Sample Studied

The population used in this study included 1,358 burley tobacco producers in those burley producing counties in Tennessee where the county Extension Agent conducted the 1983 Tennessee Burley Tobacco Production Survey. The Nth number technique was used by each Extension Agent to identify which burley tobacco producers would be surveyed.

Survey Instrument

The survey instrument used in this study was an interview schedule developed by specialists from The University of Tennessee. The questionnaire consisted of five main parts which included: (1) General Information, (2) Plant Bed Practices, (3) Field Practices, (4) Personal Information about the Farmer, and (5) Information regarding the type and number of contacts the farmer had with Extension over the previous 12 months. The sections regarding plant bed practices and field practices included questions related to recommended production practices for burley tobacco. These questions dealt with the variety grown, fertilization, weed control, insect control, disease control, topping and suckering, harvesting practices and marketing practices.

Interview Technique

Personal interviews were scheduled between the Extension Leader and burley tobacco producers in each participating county in order

to complete the 1983 Tennessee Burley Tobacco Production Survey. The interviews were done in the Fall of 1983 and upon completion, survey instruments were returned to the Agricultural Extension Education Section at The University of Tennessee for analysis.

Method of Analysis

After the data were returned to the Agricultural Extension Education Section at the University of Tennessee the data were transferred to computer cards and processed for further analysis. Data were analyzed by The University of Tennessee Computing Center. Descriptive statistics were used to summarize the survey data. These included frequencies, means, medians, modes and ranges. Statistical tests were used to determine relationships between various dependent and independent variables and one way analysis of variance tests were used to determine the strength of relationships between these variables. The .05 probability level was used to make decisions regarding the significance of relationships between variables.

3. MAJOR FINDINGS

Characteristics of Burley Tobacco

Producers in 1983

Burley tobacco producers and farm characteristic findings along with findings regarding producers number of Extension contacts will be presented in this section.

Producer characteristics.

1. It was found that the average age of burley tobacco producers was 48 years.
2. Twelve percent of the burley tobacco producers were college graduates.
3. Full-time farmers made up 47 percent of the burley tobacco producers.

Farm characteristics.

1. The average pounds allotted for the 1983 crop was 4,317 pounds.
2. The average pounds sold for the 1983 crop was 4,619 pounds.
3. One acre or less tobacco was grown by 48 percent of the producers while the average number of acres grown was 2.9 acres.
4. The average yield per acre for the 1983 crop was 1,836 pounds.

Extension contacts.

1. Fifty-six percent of the burley tobacco producers attended no tobacco meetings. The average number of tobacco meetings attended was 0.5
2. The average number of other Extension meetings attended was 1.1.
3. The average number of office visits made was 2.0.
4. The average number of telephone calls made to the Extension office was 2.7.

5. The average number of farm visits received from the Extension agent was 1.8.

6. Seventeen percent of the producers had no Extension contacts. The average number of total Extension contacts was 8.1.

Use of Recommended Burley Tobacco

Production Practices

The recommended burley tobacco production practices are presented under the headings plant bed practices, field practices and marketing practices.

Plant bed practices.

1. Ninety-two percent of the producers used chemicals to control weeds in the plant bed.

2. Methyl Bromide was used by 90 percent of the producers to control weeds before seeding.

3. Chemicals for weed control was applied in the spring by 54 percent of the producers.

4. The average pounds of fertilizer applied per plant bed was 54 pounds.

5. The average teaspoons of seed used per plant bed was 2.1 teaspoons.

6. Sixty-two percent of the producers seeded the plant bed in March.

7. Seventy-six percent of the producers reported no plant bed insect problems at all.

8. Fifty-four percent of the producers used a spray or dust to control insects.

9. Blue mold was a problem in the plant bed for 5 percent of the producers.

10. Angular leaf spot was a problem in the plant bed for 14 percent of the producers.

11. Seventy-nine percent of the producers had no problem with disease in the plant bed at all.

12. Sixty-five percent of the producers reported no plant bed insect and disease problems at all.

13. Forty-seven percent of the producers treated the plant bed with ridomil.

Field practices.

1. The burley tobacco variety MS Burley 21 x KY 10 was grown by 23 percent of the producers. MS Ky 14 x L8 was grown by 21 percent of the producers. VA 509 was grown by 17 percent of the producers while Ky 17 was grown by 10 percent of the producers. All varieties were recommended. Disease resistance varied.

2. Forty-two percent of the producers had no tobacco land in permanent sod the previous three years. The average percent tobacco land in permanent sod the previous three years was 45 percent.

3. Fifty-six percent of the producers did not fertilize tobacco land according to a soil test recommendation.

4. Fifty-seven percent of the producers did not lime tobacco land according to a soil test recommendation.

5. Thirty-one percent of the producers applied over 200 pounds of nitrogen per acre. The average number of pounds of nitrogen per acre applied was 203 pounds.

6. Sixty-seven percent of the producers set tobacco in the field in May.

7. Grass was a major weed problem for 35 percent of the producers while broadleaves were a major problem for 57 percent of the producers.

8. Both cultivation and chemicals were used as weed control by 57 percent of the producers.

9. Sixty-nine percent of the producers did not treat for soil insects.

10. Eighty-three percent of the producers had no field soil insect problems at all.

11. Foliage insects were a problem for 62 percent of the producers.

12. Budworms were a major foliage insect for 29 percent of the producers while hornworms were a major foliage insect for 21 percent of the producers.

13. Seventy-six percent of the producers sprayed to control foliage insects.

14. Sixty-seven percent of the producers scouted the field before spraying.

15. A soil treatment for foliage insects was used by 39 percent of the producers.

16. Insecticide was used in the transplant water by 39 percent of the producers.

17. Blue mold was a problem in the field for 12 percent of the producers.

18. Black shank was a problem for 10 percent of the producers.

19. Seventy-two percent of the producers had no field disease problems at all.

20. Sixty-two percent of the producers had no field soil insect and disease problems at all.

21. Forty-eight percent of the producers had no insect and disease problems in the plant bed and field. The average number of insect and disease problems in the plant bed and field was 1.2.

22. Disease on resistant tobacco varieties was a problem for 20 percent of the producers.

23. Ridomil was used to control blue mold by 54 percent of the producers.

24. Black shank was present on the farms of 29 percent of the producers.

25. A resistant variety was used by 46 percent of the producers.

26. Twenty-one percent of the producers topped tobacco at the button-early flower stage while 46 percent topped tobacco at the early flower-midflower stage. Thirty-two percent of the producers topped tobacco at the midflower-fullflower stage.

27. A systemic method of sucker control was used by 71 percent of the producers.

28. The average number of days before topping and cutting was 22 days.

Marketing practices.

1. The average number of grades of burley tobacco was three.
2. The average percent of tobacco hand tied was nearly 40 percent.
3. The average percent of tobacco baled was 55 percent.
4. The average percent of tobacco sheeted was about 6 percent.
5. Sixty-three percent of the producers planned to bale tobacco in the future.
6. Only 16 percent of the producers planned to sheet tobacco if price support is granted.

Numbers and Percents of Tennessee Burley Tobacco
Respondents Who Marketed in Hand Ties, Bales, and
Sheets and Mean Percents Marketed by Methods and
Counties, 1983

Hand tied.

1. All 100 percent of the respondents in Cheatham County hand tied tobacco.
2. Forty-two percent of the respondents in District II hand tied tobacco.
3. Fifty-seven percent of the respondents in District III hand tied tobacco.

4. Forty-one percent of the respondents in District IV hand tied tobacco.

5. None of the respondents in Carter County hand tied tobacco.

6. Forty-two percent of the respondents in District V hand tied tobacco.

Baled.

1. None of the respondents in Cheatham County baled tobacco.

2. Ninety-seven percent of the respondents in Williamson County baled tobacco.

3. Sixty-three percent of the respondents in District II baled tobacco.

4. None of the respondents in Polk County baled tobacco.

5. Forty-five percent of the respondents in District III baled tobacco.

6. Sixty-five percent of the respondents in District IV baled tobacco.

7. Only 6 percent of the respondents in Hancock County baled tobacco.

8. Fifty percent of the respondents in District V baled tobacco.

Sheeted.

1. Only 5 producers, less than 1 percent of the respondents in District II, sheeted tobacco.

2. All 100 percent of the respondents in Polk County sheeted tobacco.

3. Only 5 producers 7 percent of the respondents in District III sheeted tobacco.

4. Only 2 producers, less than 1 percent of the respondents in District IV, sheeted tobacco.

5. Fourteen percent of the respondents in District V, more than any other district, sheeted tobacco.

Relationships Between Selected Farm and
Personal Characteristics of Burley Producers
and the Marketing Practices Used

Marketing practices and farm characteristics.

1. Producers with larger allotments hand tied significantly less tobacco than producers with smaller allotments. Producers with larger allotments baled and sheeted significantly more tobacco than producers with smaller allotments.

2. Producers with more pounds sold hand tied significantly less tobacco than producers with fewer pounds sold. Producers with more pounds sold baled and sheeted significantly more tobacco than producers with fewer pounds sold.

3. Producers with larger yields per acre sheeted more tobacco than producers with smaller yields per acre.

Marketing practices and producer characteristics.

1. Younger producers hand tied significantly less tobacco than older producers. Young producers baled significantly more tobacco than older producers.

2. Producers with more education hand tied significantly less tobacco than producers with less education. Producers with more education baled more tobacco than producers with less education.

Relationships Between the Number of Contacts

Producers Had With Extension and the Marketing

Practices Used

1. Burley producers attending more tobacco meetings hand tied significantly less tobacco while they baled and sheeted significantly more tobacco than producers attending fewer tobacco meetings.

2. Burley producers attending more other Extension meetings hand tied significantly less tobacco while they baled and sheeted significantly more tobacco than producers attending fewer other Extension meetings.

3. Producers making more visits to the Extension office hand tied significantly less tobacco while they baled significantly more tobacco than producers making fewer visits to the Extension office.

4. Producers making more telephone calls to the Extension office hand tied significantly less tobacco while they baled and sheeted significantly more tobacco than producers making fewer telephone calls to the Extension office.

5. Producers receiving more farm visits from Extension Agents hand tied significantly less tobacco while they baled and sheeted significantly more tobacco than producers receiving fewer farm visits.

6. Producers with more total Extension contacts hand tied significantly less tobacco while they baled and sheeted significantly more tobacco than producers with fewer total Extension contacts.

4. IMPLICATIONS

1. Since over 50 percent of the burley tobacco producers surveyed were part-time farmers and 70 percent had no formal education past high school, Extension Agents work with a wide range of farmers in regard to burley tobacco producers; therefore, it is implied that Extension Agents continue to have contacts with all burley tobacco producers regardless of employment or education.

2. Since over 55 percent of the burley tobacco producers surveyed did not fertilize or lime tobacco land according to a soil test recommendation and 30 percent of the producers were applying over 200 pounds of nitrogen per acre, it is implied that Extension Agents emphasize the significance of proper soil fertility in maintaining efficient burley tobacco production.

3. Due to the significant relationship between Extension contacts and marketing practices used and since over 55 percent of the burley tobacco producers surveyed had attended no tobacco meetings and 17 percent had no Extension contacts it is implied that Extension Agents need to reach this group of burley tobacco producers in order to maintain efficient production.

4. Since research has shown that labor and labor cost can be saved by marketing tobacco in loose-leaf methods (i.e., bales and sheets),

and since about 40 percent of the producers surveyed marketed tobacco in hand ties it is implied that Extension Agents emphasize the significance of baling and sheeting in maintaining efficient burley tobacco production.

5. RECOMMENDATIONS FOR USE OF FINDINGS AND FURTHER STUDY

1. As long as burley tobacco production maintains its importance to Tennessee agriculture, similar studies should be made periodically to determine the use of recommended burley production practices by burley producers and the relationship between practice use and Extension contacts.

2. Study findings should be useful to all Extension personnel in burley tobacco producing areas to help improve Extension's educational programs for burley tobacco producers.

3. A further study to determine factors affecting marketing practice use by burley tobacco producers in specific counties (i.e., Cheatham, Pickett and Polk), would be helpful.

4. Similar studies should be conducted in other work areas in Tennessee to determine the effect of Extension's educational programs upon the adoption and use of recommended practices.

BIBLIOGRAPHY

BIBLIOGRAPHY

1. Arnett, Melvin Haskel. "Influence of Selected Factors on Numbers of Office Visits and Telephone Calls Made to the Wilson County Extension Office, Lebanon, Tennessee." Unpublished Master's Thesis, The University of Tennessee, Knoxville, 1973.
2. Cunningham, James O. "Evaluation of Experimental Teaching Approaches for Use with Above and Below Average Burley Tobacco Production Groups in Greene County, Tennessee." Unpublished Master's Thesis, The University of Tennessee, Knoxville, 1966.
3. Freeman, Pat Perkins. "Relationship Between Characteristics of Grade A Dairy Producers, Their Farming Operation and Their Use of Management Practices and the Number of Contacts They had with Extension." Unpublished Master's Thesis, The University of Tennessee, Knoxville, 1978.
4. Iven, E. F. "Tobacco Production Practices and Net Returns per Acre from Burley Tobacco in Anderson County, Tennessee." Unpublished Master's Thesis, The University of Tennessee, Knoxville, 1977.
5. Johnson, Ronald B. "Relationships Between Characteristics of Corn Producers, Their Farming Operations and Their Use of Recommended Production Practices and the Number of Contacts They had with Extension in 1979." Unpublished Master's Thesis, The University of Tennessee, Knoxville, 1982.
6. Kelsey, Lincoln David and Cannon Chiles Hearne. Cooperative Extension Work. Ithaca, N.Y.: Cornell University Press, 1955.
7. Lowe, Nathan J. "A Study of the Production Practices of Burley Tobacco Growers in Williamson County." Unpublished Master's Thesis, The University of Tennessee, Knoxville, 1962.
8. Mundy, S. D. and Z. A. Henry. "Systems Management Approach to Harvesting, Curing and Market Preparation of Stalk Cut Burley Tobacco--Phase Two." Unpublished Report by The University of Tennessee Agricultural Experiment Station and Philip Morris, U.S.A. Cooperating, Knoxville, May 1, 1985.
9. Perry, James Dewayne. "Relationships Between Characteristics of Tennessee Swine Producers, Numbers of Contacts They Had with County Agricultural Extension Agents and Numbers of Recommended Swine Production Practices Adopted." Unpublished Master's Thesis, The University of Tennessee, Knoxville, 1980.

10. Robinson, Roger Dale. "Characteristics of Tennessee Burley Tobacco Producers and Relationships Between Selected Production Practices and Extension Contact Variables." Unpublished Master's Thesis, The University of Tennessee, Knoxville, 1981.
11. Rutter, Floyd David. "Relationships Between Characteristics of Beef Producers, Their Production Operations and Their Use of Management Practices and the Number of Contacts They had with Extension." Unpublished Master's Thesis, The University of Tennessee, Knoxville, 1982.
12. Tennessee Department of Agriculture--Tennessee Crop Reporting Service. Tennessee Agricultural Statistics 1983 Annual Bulletin. Bulletin T-20, 1983.
13. Tennessee Department of Agriculture--Tennessee Crop Reporting Service. Tennessee Agricultural Statistics 1984 Annual Bulletin. Bulletin T-21, 1984.
14. The University of Tennessee Agricultural Extension Service Publication 358. "Burley Tobacco Production in Tennessee." Knoxville, Tennessee, 1983.
15. Webster, W. Clyde. "Development of an Extension Approach to Teaching Recommended Production Practices to Burley Tobacco Producers in Trousdale County, Tennessee." Unpublished Master's Thesis, The University of Tennessee, Knoxville, 1964.
16. Yabaya, Solomon Ahyuwa. "Relationship Between the Frequency of Contacts Corn Producers in Tennessee Had with County Extension Agents and Their Adoption of Eight Corn Production Practices." Unpublished Master's Thesis, The University of Tennessee, Knoxville, 1978.

APPENDIX

UNIVERSITY OF TENNESSEE
AGRICULTURAL EXTENSION SERVICE1983 Burley Tobacco Survey*
(See Instructions on Last Page)Card No. 1
(1)
Respondent No. 0 0
(5) (6)County
(2) (3) (4)

A. General Information (1983 crop)

1. Pounds allotted? (pounds) 3. Acres grown on this farm?
(7) (8) (9) (10) (11) (acres) (17) (18)
2. Pounds sold? (pounds) 4. Yield per acre?
(12) (13) (14) (15) (16) (pounds/acre) (19) (20) (21) (22)

B. Plant Beds (1983 crop)

1. Weed control (plant bed)
a. Method used?* (1 = chemical; 2 = burned; 3 = other; 9 = DNA)
(23)
b. Chemicals used before seeding? (1 = Methyl Bromide; 2 = other; 9 = DNA)
(24)
c. When applied? (1 = Fall; 2 = Spring; 9 = DNA)
(25)
d. How effective? (1 = not very effective; 2 = effective; 3 = very effective; 9 = DNA)
(26)
e. Did you use Enide after seeding where clover was a problem? (1 = no; 2 = yes)
(27)
f. How effective? (1 = not very effective; 2 = effective; 3 = very effective; 9 = DNA)
(28)
2. Fertilization (plant bed)
How many pounds of 4-16-8, or its equivalent, did you apply per 9 x 100 foot bed?
(pounds) (29) (30)
3. Seeding (plant bed)
a. Number of level teaspoons seed used per 9 x 100 foot bed? (teaspoons)
(31)
b. Month seeded? (1 = Feb.; 2 = March; 3 = April; 4 = other)
(32)
4. Type of plant bed cover used? (1 = Cotton; 2 = Nylon; 3 = Polyester; 4 = other)
(33)
5. Insects (plant bed)
a. Did you have a problem with the following insects in your plant bed(s) in 1983? (1 = no; 2 = yes)
1. Flea Beetles? 4. Grub Worms?
(34) (37)
2. Aphids? 5. Cutworms?
(35) (38)
3. Vegetable Weevil Larvae? 6. Slugs?
(36) (39)
b. Did you spray or dust to control insects? (1 = no; 2 = yes); If yes, insecticide
(40)
used? (1 = Di-syston; 2 = Malathion; 3 = Orthene; 4 = Dylox; 5 = Diazinon; 6 =
(41)
Sevin; 9 = DNA)
c. How effective? (1 = not very effective; 2 = effective; 3 = very effective; 9 = DNA)
(42)
6. Diseases (plant bed)
a. Did you have a problem with the following diseases in your plant beds in 1983? (1 = no; 2 = yes)
1. Blue Mold? 3. Damping-off? 5. Angular Leaf Spot?
(43) (45) (47)
2. Anthracnose? 4. Wildfire? 6. Mosaic?
(44) (46) (48)
b. Did you treat plant bed at seeding time with Ridomil to control Blue Mold? (1 = no;
(49)
2 = yes)
c. How effective? (1 = not very effective; 2 = effective; 3 = very effective; 9 = DNA)
(50)
d. Did you treat plant bed to control other diseases? (1 = no; 2 = yes)
(51)

*Coding Instructions:

- All entries are right justified.
- Fill each blank column.
- A zero (0) = none.
- A nine (9) in each column = do not know, does not apply, or no response.

C. Field Practices (1983 crop)

1. Variety grown? (52) (1 = Burley 37; 2 = Burley 49; 3 = Burley 64; 4 = Kentucky 17; 5 = Virginia 509; 6 = Kentucky 14; 7 = MS Burley 21 x Ky. 10; 8 = KY 14 x L8; 9 = other)
2. Land selection (1983 crop)
Tobacco after grass? (53) (54) (55) (% of tobacco land which was in permanent sod within past three years)
3. Fertilization (1983 crop)
 - a. Was tobacco land fertilized by soil test? (56) (1 = no; 2 = yes)
 - b. Was tobacco land limed by soil test? (57) (1 = no; 2 = yes)
 - c. Pounds of nitrogen (N) applied per acre? (58) (59) (60) (pounds N)
4. Transplanting to field
When (month) did you set your tobacco? (61) (1 = April; 2 = May; 3 = June)
5. Weed control in field
 - a. Major weed problem? (62) (1 = grasses; 2 = broadleafed weeds)
 - b. Method used? (63) (1 = cultivation; 2 = chemicals; 3 = both cultivation and chemicals)
 - c. If chemical used, which one? (64) (1 = Pearlan; 2 = Prowl; 3 = Tillam; 4 = Devrinol; 5 = Enide; 6 = Combination; 9 = DNA)
 - d. How effective was the herbicide? (65) (1 = not very effective; 2 = effective; 3 = very effective; 9 = none used)
6. Soil Insects
 - a. Did you have a problem with the following soil insects in 1983? (1 = no; 2 = yes)
 1. Cutworms? (66)
 2. Grubworms? (67)
 3. Wireworms? (68)
 4. Other? (69)
 - b. Did you treat the soil for insects? (70) (1 = no; 2 = yes)
 - c. If treated, what did you use? (71) (1 = Lorsban; 2 = Diazinon; 3 = Di-syston 15G; 4 = Dyfonate; 5 = Mocap; 6 = Dasnit 15G; 7 = other; 9 = DNA)
 - d. How effective was the treatment? (72) (1 = not very effective; 2 = effective; 3 = very effective; 9 = DNA)
7. Foliage insects
 - a. Foliar treatment
 1. Were foliage insects a problem in 1983? (73) (1 = no; 2 = yes)
 2. If yes, major insect? (74) (1 = Aphids; 2 = Budworms; 3 = Flea Beetles; 4 = Grasshoppers; 5 = Japanese Beetles; 6 = Hornworms; 7 = Stink Bugs; 8 = Vegetable Weevil; 9 = DNA)
 3. Did you spray for foliage insects? (75) (1 = no; 2 = yes)
 4. If yes, insecticide used? (76) (1 = Orthene; 2 = Lannate or Nudrin; 3 = Thiodan; 4 = Pennco-M; 5 = Dylor/Promol; 6 = Sevin; 7 = Supracide; 8 = Malathion; 9 = DNA)
 5. How effective? (77) (1 = not very effective; 2 = effective; 3 = very effective)
 6. Did you scout field before spraying? (78) (1 = no; 2 = yes)

Card No. 2
(1)County No. (2) (3) (4)Respondent No. (5) (6)

b. Soil treatment

1. Did you apply a soil treatment for foliage insects in 1983? (79) (1 = no; 2 = yes)
2. If yes, what material did you apply? (80) (1 = Furedan; 2 = Di-syston; 9 = DNA)
3. How effective? (81) (1 = not very effective; 2 = effective; 3 = very effective)
4. Did you apply an insecticide in transplant water? (82) (1 = no; 2 = yes)
5. If yes, what material did you apply? (83) (1 = Orthene; 2 = Vydate; 3 = Diazinon; 9 = DNA)

8. Diseases

a. Were the following diseases a problem in 1983? (1 = no; 2 = yes)

1. Blue Mold?
(12)5. Mosaic?
(16)2. Black Shank?
(13)6. Fusarium Wilt?
(17)3. Black Root Rot?
(14)7. Tobacco Vein Mottling Virus
(TMV)?
(18)4. Wildfire?
(15)b. Did you have any disease on resistant varieties? (1 = no; 2 = yes)
(19)c. Did you use Ridomil to control Blue Mold? (1 = no; 2 = yes) 1. Rate per acre?
(20) (1 = one (1) quart; 2 = two (2) quarts; 3 = three (3) quarts; 4 = four (4) quarts;
(21)

5 = more than 4 quarts; 9 = DNA)

d. Is Black Shank present on your farm? (1 = no; 2 = yes) 1. Did you use resistant
(22)variety? (1 = no; 2 = yes) 2. Did you use 4 quarts of Ridomil per acre?
(23) (24)

(1 = no; 2 = yes; 9 = DNA)

9. Topping and suckering

a. Stage when most of tobacco was topped? (1 = button to early flower; 2 = early
(25)

flower to midflower; 3 = midflower to fullflower)

b. Sucker control method used? (1 = systemic; 2 = contact; 3 = contact plus systemic;
(26)

4 = none)

c. How effective? (1 = not very effective; 2 = effective; 3 = very effective; 9 = DNA)
(27)

10. Harvesting

a. Approximate number of days between topping and cutting? (days)
(28) (29)b. Harvesting method? (1 = left in field standing on stick; 2 = scaffold; 3 = hauled
directly to barn) (30)

11. Preparation for market

a. Number of grades made of 1983 crop? (grades)
(31)b. Percent of tobacco hand tied? (percent)
(32) (33) (34)c. Percent of tobacco baled? (percent)
(35) (36) (37)d. Percent of tobacco placed in sheets? (percent)
(38) (39) (40)e. Do you plan to use baling in the future? (1 = no; 2 = yes; 3 = do not know)
(41)f. If price support is granted for sheeted tobacco in the future, do you plan to put
tobacco in sheets? (1 = no; 2 = yes; 3 = do not know)
(42)

Information about Farmer

1. Approximate age? (years)
(43) (44)2. Approximate education? (1 = high school or less; 2 = some college; 3 = college
graduate) (45)3. Employment? (1 = full-time farm; 2 = part-time job off farm; 3 = full-time job off
(46) farm; 4 = retired; 5 = other)

Extension contacts

(NOTE: Agent and/or farmer should estimate the number of contacts the producer had with Ex-
tension over the past 12-month)1. Tobacco meetings attended? 2. Other Extension meetings attended? 3.
(47) (48) (49)Visits to Extension office? 4. Telephone calls to Extension office?
(50) (51) (52) (53)5. Farm visits received?
(54) (55)

GENERAL INSTRUCTIONS
(1983 Burley Tobacco Survey)

1. Date Due: January 15, 1984
2. Disposition: To Associate Supervisor
3. Counties to be Surveyed:
 - a. Those with 30 or more acres of Burley tobacco
 - b. Optional for other counties
4. Survey Population: All Burley Producers
5. Sample Size:
 - a. Counties with 30 to 100 acres Burley interview ten (10) producers
 - b. Counties with 101 to 300 acres Burley interview twenty (20) producers
 - c. Counties with 301 to 1000 acres Burley interview thirty (30) producers
 - d. Counties with 1001 to 2000 acres Burley interview thirty-five (35) producers
 - e. Counties with over 2000 acres Burley interview forty (40) producers
6. Sampling Procedure: Use the Nth number technique.

The Agricultural Extension Service offers its programs
to all eligible persons regardless of race, color, national origin,
sex or handicap and is an Equal Opportunity Employer.

E12-2015-00-001-83

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS

The University of Tennessee Institute of Agriculture, U.S. Department of
Agriculture, and county governments cooperating in furtherance of
Acts of May 8 and June 30, 1914

Agricultural Extension Service
M. Lloyd Dennen, Dean

VITA

Glenn Kevin Turner was born in Memphis, Tennessee on December 20, 1957. He began his formal education in Knoxville, Tennessee and later attended schools in Jackson, Tennessee. He graduated from Jackson Central Merry High School, Jackson, Tennessee, in 1976.

Glenn attended Jackson State Community College at Jackson and received an Associate Degree in Science in June 1978. He earned his Bachelor of Science Degree in Agriculture at The University of Tennessee, Knoxville in December 1980. His major study was Plant and Soil Science.

From June 1981 to June 1983 Glenn worked on the island of Mindanao in the Philippines as an Agricultural Missionary Journeyman with the Foreign Mission Board of the Southern Baptist Convention.

In the fall of 1983 he entered graduate school at The University of Tennessee, Knoxville to obtain a Master's Degree in Agriculture with a major in Agricultural Extension. During his graduate study he served as Philip Morris Graduate Assistant.

During his years in college he served on the Graduate Student Council, was active at the Baptist Student Union and was a member of the Central Baptist Church of Bearden in Knoxville.

He is the son of Dr. and Mrs. Gene W. Turner of Jackson, Tennessee and has one brother, Wesley.