

A STUDY ON THE NEED AND MAJOR PROBLEMS
OF FARM RECORD KEEPING IN THE NORTHERN
STATES OF NIGERIA

by

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Chapter 1

INTRODUCTION

Modern farming is a business and requires business methods. To make an accurate and efficient farm management decision it requires extensive information concerning past costs, returns, input use, and production. The present financial and physical condition, and future costs, returns, and production are important. This information can all be acquired from farm records.

Hopkins (1955:5) wrote that high returns and efficient management have come to depend more and more on the use of records. The successful farmers in any community not only keep records but also look upon them as a means of increasing their operating efficiency. Farm records fill many purposes. They take the uncertainty out of farming and put the facts and values of the business before the operator or owner. The primary objective of keeping records is to facilitate the management of the farm. Better management means greater profits. Without records the farmer knows little about the effects of his various enterprises on the total profit or loss from his farm. Neither can he tell very clearly how to improve the outcome.

Osburn (1978:79) indicated that, although farm records are a useful management tool, they have several inherent limitations. Most farm decisions are made regarding what will happen in the future. Whether a farm record, which is a collection of historical data about a particular farm, is useful in making decisions for the future depends on how it is used.

Good farm records are important as the basis for a farm analysis report, but this does not guarantee future high earnings; one must combine management information with management sense. The ability to set priorities in the use of land, labor, and capital is one of the most important decisions in determining the importance of each alternative. The ability to plan intelligently needs reliable information to go with records in planning new enter-

prises according to Francis (1972:201).

Osburn and Schneeberger (1978:75) said that in financing agriculture, good farm records are becoming increasingly important. Credit is based in part on the ability of the borrower to repay money, and lenders expect their borrowers to keep adequate records that will show their businesses are on sound financial footing and that their operations are producing or will produce satisfactory income.

Case (1960:294) stated that an operator who keeps a record over a period of years not only can determine results for any one year but also can compare results with those of previous years. The annual inventory indicates whether the value of the capital in the farm business is increasing or decreasing, and if supplemented by a list of other assets may be compared with liabilities to determine annually the net worth of the family.

Generally, from the standpoint of physical resources and the managerial interest and competency of the operator, each farm is unique. Over a period of time farmers tend to overestimate income and underestimate costs. This is a built-in human bias. Farmers, like other people, tend to remember good experiences and forget the bad. Complete records can help a farmer keep estimates realistic.

Farm records should be kept as a means to achieve certain management objectives, and when kept carefully and conscientiously, will help a farmer recognize and identify major problems of his business. Farm records provide needed information about the farm business which could aid the farmer in measuring financial success, and provide a basis for future planning and comparisons.

Statement of the Problem

The major aims of this study are to determine the perceptions of extension staff members of the Ministry of Agriculture of the various Northern States of Nigeria as to the importance of four areas of farm record keeping. The objectives of the study are:

1. To determine the need for farm record keeping for the management and operating of the farm business.
2. To identify the major problems of farm record keeping.
3. To determine the requirements for a record keeping system.
4. To determine the best methods of teaching farmers to keep records.

Significance of the Study

Farm records are a useful management tool, as farming is becoming an increasingly complex business which requires careful planning, organization and control. The study was considered to be of value to those extension workers who were teaching farmers and future farmers to keep farm records in order to meet their farm management needs.

The study was considered to be of value for those who were working with farmers in evaluating farm records for obtaining farm loans from Government Sponsored Credit Schemes, and Commercial banks. It is hoped that this study would also be useful to those farm managers who keep farm records and promote farm management practices among the farmers who do not keep records.

The study should be helpful in understanding the simple record book requirements which could be used as a guide by the extension workers in teaching the farmers how to develop a record book keeping system. The study would also be helpful to the extension staff members for development of a curriculum for teaching farm records.

Research Hypotheses

Four hypotheses stated in the null form serve as the basis for interpreting the results of the study.

1. There are no significant differences in the opinion of extension staff members by states as to the importance of keeping farm records.
2. There are no significant differences in the opinion of extension staff members by states as to the problems which cause farmers not to keep farm records.
3. There are no significant differences in the opinion of the extension staff members by states as to the record book requirements to be included in the record book.
4. There are no significant differences in the opinion of extension staff members by states as to the importance of methods for teaching farm records.

Definition of Terms

The following are important terms defined as they applied to this study.

Null hypothesis: A statement that there is no difference in measures of the criterion variable except what would be expected from sampling; requires that a significance level be stated (.05, .01---).

Standard deviation: A measure of the variation of a set of scores obtained by taking the square root of variance.

Independent variable: A variable to which levels can be assigned at will; the variable that the researcher manipulates in an experimental study.

Ranking: An arrangement of a set of values in sequential order of magnitude (size) and assignment of a rank number to each one.

NAFPP: National Accelerated Food Production Project

Analysis of Variance: Statistical procedure used to test the hypothesis that two or more independent samples were drawn from populations having equal means. The samples may be randomly drawn from different populations then compared on a single criterion to determine whether the various populations differ with respect to the criterion.

Balance Sheet: (a) A balance sheet is a statement of the financial condition of a business at a particular time. The balance sheet shows what is owned and what is owed. (b) Net worth statement. The net worth measures the owner's share of the assets of the business. The difference between (a) and (b), is the net worth of the business.

Cash Flow Projection: A cash flow budget or projection indicates the ability of a business to generate cash inflow (sales, borrowed money, withdrawals from savings, and sale of capital items) to meet its cash demands (cash expenses, principal and interests payments on debt, capital purchases, salaries, or family living expenses) during a specific period of time.

Fixed Costs: These are costs which do not change without output (at least in the short-run). The items which make up fixed costs include rent on land, depreciation on buildings and machinery and wages for permanent staff. (AERLS 1976:2)

Variable Costs: Are farm expenses which change with output. They include fertilizer, seed, feed, repairs and maintenance costs. (AERLS 1976:2)

AERLS: Agricultural Extension & Research Liaison Services.

Enterprises: Defined as any segment of the farm business that can be readily isolated by accounting procedures or separated from others according to its receipts and expenses.

Depreciation: It is a procedure for allocating the used up value of durable assets over the period they are owned by the business or until they are salvaged. By depreciation an asset, an allowance is made for the depreciation in the asset's value as a result of use (wear and tear), age, and obsolescence (Osburn, 1978:63).

Partial Budgeting: Partial budgeting is one of the planning methods which involves the estimation of the likely costs and returns of

planned changes in the organization of a business. Partial budgeting therefore does not consider the farm as a whole.

Chapter 2

REVIEW OF RELATED LITERATURE

Mortenson and Luening (1972:375) indicated that good farm records should meet three requirements to be most useful for farm managers. First, records must be complete enough to give the managers sufficient information about their business. Secondly, if the records are to be of any value they must be accurate. And finally, the records must be used if they are to be of real value to the farm manager. Also, the kind of farm records to keep will depend on what the farmer wants to know about his business. But, the first essential of a farm record is that it should be simple and not too detailed. A farmer does not need to be an expert bookkeeper to keep his farm records, but it is important to have his records correctly analyzed, even if they are very simple.

Staats (1975:10) wrote that the records stressed were receipts, expenses, inventory, labor record, tractor and machinery record, and production records. A diary or day book is desirable in keeping records. Items can be jotted down once a week then transferred into the record book. Production records for livestock should include birth date, sex of offspring, weights at birth and at selling time, grade of animal and if slaughtered, carcass grade, death loss, and rebreeding date and sire.

Osburn (1973:83) said that record keeping systems range from single-entry record books to rather elaborate computer record systems, and how much analysis can be done will vary from one system to another. By and large a complete record system should include the following components: an inventory, a depreciation schedule, a financial statement, a receipts record, an expense record, a profit and loss statement, a cash flow statement, production records and accounts payable and accounts receivable.

AERLS 1977 stated that an inventory involves two aspects: the physical measurement and computing of all items which are owned and used in the farm

and putting values on such items. A farm inventory is taken at the beginning and at the end of the farm year. Farm assets differ in nature and the use to which they are put. For this reason, various methods may be used in determining values of assets which do not belong to the same category. Land and buildings may be computed at the original value or at current value, and appropriate deductions must be made for depreciation. In putting value on land, the cost of recent improvements such as drainage, new fences, irrigation facilities should be included.

Similar machinery and equipment should be valued but their annual depreciation usually range between 10 and 20%. Buildings depreciate 2 - 5% annually. However, the rate of depreciation depends on the material with which the buildings were built. Livestock feed and supplies may be valued at selling prices at the farm.

Good planning helps to determine how best farm objectives can be achieved with available resources. The aim of planning is to obtain the highest net return from the resources used. Farm Planning becomes necessary when a farmer decides to start a farming enterprise. He has to decide what enterprises to be involved in, how much capital he requires, what implements to acquire and how much labor to use. Planning is also necessary in an existing farm. From farm records and accounts, a farmer may determine that net returns per unit of resource used are too low for a particular enterprise. Before introducing a change in a farm enterprise a farmer should review the following: (a) What added risks are incurred? (b) What revenue will be lost? (c) What costs will be reduced? (d) What extra revenue will be gained? The farmer should also be able to work out the effect of change on fixed costs, variable costs, and the output should be planned for every change according to (AERLS:1976).

Schlender (1979:2) stated that farmers face many questions in the management of the farm business such as: (a) What livestock and crop

enterprises should be expanded? (b) Which ones should be eliminated? (c) Should a specific item of farm equipment be purchased or would it be cheaper to custom the job done? (e) How can credit be used more profitably? Records will not solve these problems. But a farmer who has maintained and who studies an adequate set of records can usually handle such problems better than one who does not. It was indicated that good farm records, when followed will produce needed information about the farm business. It will show the machinery costs per crop acre, the gross and net income of the farm, the net worth, and many other measures and needed facts of production and management.

Welton (1978) wrote that a farm business is a very complex "organism" that comes in all shapes, sizes and types. Each day money is made or lost in farming in a million different ways. There are NO easy answers to the question, "Why do some farms earn more?" Nevertheless, volume of output or production seems to be the single largest difference that we can measure.

A farmer can be a very good manager as far as organizing his business is concerned by following good practices and keeping the work well planned from week to week. But the farmer may not make a very good showing in his balance sheet because he does not know how to buy and sell well. He pays too much for what he buys and sells at too low prices. It is commonly said of such a farmer that he is not a good business man according to Black (1967:9

According to Hopkins and Heady (1973:4) modern farming requires business ability and methods to succeed. The cost-price squeeze can be made an advantage to the efficient manager if it pushes out his less efficient neighbors and gives him more resource. He must keep up with new practices, price trends, and price outlooks. He must be able to identify the profitable enterprises and practices of his business and expand them and eliminate the less profitable enterprises. These steps depend upon an efficient and useful set of farm accounts and records.

Heady (1952:442) wrote that pure risk does not, or need not, have an impact on decision making and resource use. From past experience we can tell what the risk will be over a long period of time; like how many eggs will be broken. Losses and gains which grow out of risk phenomena can be incorporated into the firms cost schedule and be insured against uncertain distribution. It means making decisions with less than perfect knowledge. Uncertainty is not insurable. With more observations and records the risk can be determined and the uncertainty reduced.

Osburn and Schneeberger (1973:106) found that to analyze performance one needs to compare what happened to a standard, a measure of what was expected or should have happened. Three types of standards derived from different information sources make comparison possible. There are 1, Historical records (past performance of the business); 2, performance of other firms under similar circumstances (state or association record summaries of the same farm types and sizes); and 3, realistic budgets and projections. It was indicated that farm records properly used, provide a management tool that is not available from any other source. Demonstrating financial progress is easy for a farmer who has kept a complete set of records over the years and prepared financial statements showing the year-to-year changes in assets, liabilities, and net worth. The same records provide a summary of profit, and loss over time. Income level and variability from year to year indicate the earning capability of a business under specific resource use and management. A financial statement is a snap shot of the financial picture of the business at a specific point in time. It provides a listing of all assets and liabilities, and enables an analysis of the liquidity and solvency position. How well the business performed over a period of time usually the accounting year is indicated by the profit and loss statement. It provide information on all expenses, sales and inventory changes so as to provide data not usually accounted by income tax returns.

Schlender (1979:10) stated that one of the important qualities that helps "make" a good farm manager is the ability to systematically keep and analyze farm business records. A comprehensive farm business analysis takes time and effort. Competent farm managers realize that facts, not guesses, about the farm business are essential to wise decision making. Good judgment does not work well in ignorance, it must have facts as a basis for decisions. Since conditions frequently call for change in the farming operation in the amount and kind of resources being used, it is important to know what can be best be changed before binding decisions are made. A good farm business analysis is the best tool for solving this kind of problem. Records in addition to receipts and expenses, are needed if or reliable farm business analysis is to be made.

It was stated training in farm financial management needed to be increased in secondary and postsecondary schools. One area that needed to be covered is credit, how to get it, terminology, interest rates, and how to obtain good credit references. The student must know about different institutions that provide credit and how they operate.

Chapter 3

METHODS AND PROCEDURES

This study was designed to determine the need and major problems of farm record keeping in the Northern States of Nigeria. Also investigated were requirements for farm record keeping and methods of teaching farmers how to keep records. The data for the study was collected from the extension staff members of the Ministries of Agriculture of the Northern States of Nigeria who were currently enrolled at Kansas State and Fort Hays State Universities. The extension staff members had considerable experience doing extension work in their areas of specialization. The areas of specialization were Animal Science, Crop Science, Agricultural Economics, Horticulture, Agricultural Mechanics and Extension.

Development of the Questionnaire

After a careful analysis of the existing farm management practices in the Northern States of Nigeria, and after thorough review of the literature in the field, the first draft of the questionnaire was prepared. The AERLS publications (farm management series) and the researchers background on farm management training were of much help. The first draft was submitted to Dr. J. J. Albracht, a professor in Agricultural Education and a researcher's major adviser for suggestions and other improvement. The second draft which included suggestions and improvements was submitted to extension members at Kansas State University and to the major professor. Further suggestions was made and were included in the third draft which became the final form for the questionnaire.

The questionnaire consisted of five parts. Parts A - D and Part E, other information, 1 through 5 represented the dependent variables of the study. The remaining section six of Part E was concerned with the personal information of the respondents.

Part A, was the purposes of farm records and consisted of thirteen items. Part B, was the farm record keeping problems. Part C, was the record book requirements, and 11 requirements were listed. Part D, was the methods of teaching record keeping. Part E, consisted of other information, and consisted of four statements: (1) Farm record keeping has an effect on the agricultural development of Nigeria. (2) Farmers have good relationships with commercial bankers for the securing of farm loans. (3) Farmers find it easier to obtain credit through Government credit schemes than from Commercial banks. (4) Farmers obtain credit without references to their farm records. Section 5 of Part E indicated the percentage of Nigerian farmers who kept adequate farm records.

Parts A and B of the questionnaire was constructed on a four point scale which allowed the respondents to express their opinions by placing check (✓) on the importance of each item for keeping farm records, and to indicate seriousness of each problem statement which might cause farmers not to keep farm records. The levels of importance for each responses were as follows:

- | | |
|--------|--------------------|
| Part A | 4 very important |
| | 3 important |
| | 2 some importance |
| | 1 no importance |
| Part B | 4 very serious |
| | 3 serious |
| | 2 somewhat serious |
| | 1 not serious |

In Part C and D the respondents were asked to place a check (✓) in the corresponding boxes which they considered appropriate. Part E, the levels of value on the four statements were designated as Yes and No. Section six of Part E was personal information. The respondents were asked their age, place of residence, years in school and the degrees held if any. The institutions they attended, Extension experience and their areas of special preparation and experience were asked.

Sampling Procedure

One hundred respondents of Extension agricultural specialties were chosen at random. The population of the respondents came from nine out of ten Northern States of Nigeria, namely Sokoto, Kano, Kwara, Benue, Niger, Plateau, Kaduna, Borno and Bauchi States. A questionnaire was sent to each individual chosen. An analysis of variance and the chi-square statistical treatment were used to compare the responses of the Extension staff members to see if there were significant differences by states.

Data Collection

The questionnaire and the cover letter which stated the objectives of the study were sent to individuals chosen as the population. The questionnaire was requested to be returned no later than January 17, 1981. The questionnaires were identified by numbers as they came in and were recorded according to the state of the respondent.

A personal call was made by the researcher to each person who had not returned the questionnaire. Later a reminder letter was sent to those who had not responded at the date specified above; and a telephone call requesting the return of the completed questionnaire was the final follow up which was made to those individuals who had not responded.

Statistical Treatment

The analysis of variance statistical method was used to test the first two hypotheses in the study. Hypothesis number one stated, "There are no significant differences in the opinions of extension staff members by states as to the importance of keeping farm records." Hypothesis number two stated, "There are no significant differences in the opinions of extension staff members by states as to the problems which cause farmers not to keep farm records."

The chi-square test of independence was used to test the third and fourth hypotheses. The third hypothesis stated, "There are no significant differences in the opinion of extension staff members by states as to the record book requirements to be included in the record book." The fourth hypothesis stated, "There are no significant differences in the opinions of extension staff members by states as to the importance of methods of teaching farm record."

Chapter 4

REPORT OF FINDINGS

The purpose of this study was to determine the need and major problems of farm record keeping in the Northern states of Nigeria as viewed by the Extension staff members of the Ministries of Agriculture. A questionnaire was developed which contained five parts: purposes of record keeping; problems of record keeping; record book requirements; teaching methods; and other information. The 13 purposes of record keeping were grouped in Part A; 20 problem statements were grouped in Part B; 11 record book requirements in Part C; ten teaching methods in Part D; and other information in part E.

Returns

This study was primarily concerned with the need and major problems of keeping farm records. One hundred questionnaires were sent to Extension staff members from the Northern states of Nigeria. Ninety-six questionnaires were returned. Of the 96 questionnaires, 24 were Extension staff members from Plateau state, 23 from Kano state, 21 from Benue state; 11 from Sokoto state; and 17 from other states. The returns from other states included 6 from Borno state, 4 from Kwara state, 3 from Bauchi state, 3 from Niger state, and 1 from Kaduna state.

Personal and Other Information

The results of this study as shown in Table 1, included the personal information of the Extension staff members who participated in the study. The composite averages for the information of all returns gave an average age of 31.9 years for the extension staff members. Slightly more of the extension staff members lived in rural areas with an average of 11.4 per state lived in rural areas and 7.8 lived in urban areas. The average years of extension experience indicated ten years average for the states. The extension staff members had 15.3 years of education prior to their services as extension staff.

The highest academic grade levels attained in school was the master's degree by two persons and one of the respondents had a DVM degree. Eight had a Bachelors degree, and eighty-six had Diplomas.

TABLE 1

Professional Preparation of the Respondents

	Plateau N=24	Kano N=23	Benue N=21	Sokoto N=11	Others N=17	Composite Average N=96
Av. Age, yrs	32.7	32.5	32.9	30.4	31.3	31.9
Rural	13	9	17	5	13	11.4
Urban	11	14	4	6	4	7.8
Education, yrs	13.4	16.4	15	14.1	17.7	15.3
Extension Experience, yrs	9.6	11.0	12.3	8.6	8.5	10.0
Degrees held						
Diploma	24	22	19	9	12	17.2
B. Science	--	1	2	2	5*	2.0
Total Respondents	24	23	21	11	17	96

*One had a M. Science Degree, and one had a DVM degree.

The extension staff members were asked to indicate the percentage of farmers who keep adequate farm records as given in Table 2. There was 72.9 percent of the 96 respondents who indicated that 21 percent or less of the farmers keep adequate farm records. Twenty-four percent of the extension staff members checked the 21-40 percent category of keeping adequate records, while 3.1 percent of the extension staff members indicated that 41-60 percent of the farmers keep adequate records.

TABLE 2

Opinions of Extension Staff Members on the Percentage
of Farmers Who Keep Adequate Farm Records

Percent with Adequate Records	Plateau N=24	Kano N=23	Benue N=21	Sokoto N=11	Others N=17	Totals N=96	
						NO	PCT
0 - 21	16	13	18	10	13	70	72.9
21 - 40	7	9	2	1	4	23	24.0
41 - 60	1	1	1	--	--	3	3.1
61 - 80	--	--	--	--	--		
81 - 100	--	--	--	--	--		
Total Respondents	24	23	21	11	17	96	100

The other information about keeping farm records in Nigeria was exhibited on Table 3. The extension staff members were asked to indicate a "yes" or "no" response to four statements. For the statement, "Farm record keeping has an effect on the agricultural development of Nigeria," 86.5 percent of the extension staff members indicated "yes" while 13.5 percent indicated "no". The statement, "Farmers have good relationships with commercial bankers for the securing of farm loans," had 14.6 percent of extension staff members indicating "yes", and 86.4 percent "no". "Farmers find it easier to obtain credit through Government credit schemes than from commercial banks" had 88.5 percent indicating "yes", while 11.5 percent indicated "no". "Farmers obtain credit without reference to their farm records" indicated 56.3 percent said "yes" and 43.7 percent indicated "no".

The results on this table could be interpreted to mean that the extension staff members are aware of the importance of farm records towards the development of agriculture and the importance of records in securing farm loans. There was almost an even opinion and reaction on the statement which stated "Farmers obtain credit without reference to their farm records" which had a mean score of 56.3 percent for "yes" and 43.7 percent for "no". There was no significant differences in the opinions of extension staff members to these statements by states.

TABLE 3

Responses of Ninety-Six Extension Staff Members on the
Expected Outcome of Keeping Farm Records in Nigeria

Statement	Plateau yes no N=24	Kano yes no N=23	Benue yes no N=21	Sokoto yes no N=11	Others yes no N=17	Totals yes no N=96	Percent yes no
Farm Record keeping has an effect on the agricultural development of Nigeria	10 4	19 4	20 1	9 2	15 2	83 13	86.5 13.5
Farmers have good relationships with commercial bankers for the securing of farm loans	1 23	5 18	4 17	4 7	0 17	14 82	14.6 85.4
Farmers find it easier to obtain credit through Government credit schemes than from commercial banks	21 3	20 3	19 2	10 1	15 2	85 11	88.5 11.5
Farmers obtain credit without reference to their farm records	15 9	12 11	7 14	9 2	11 6	54 42	56.3 43.7

Purposes of Farm Record Keeping

There were thirteen competency items on the purposes of farm record keeping as given in Table 4. A repeated measures of analysis of variance was made to see if there was a significant difference in the opinion of the extension staff members by states. The standard deviations for the competency items are given in Table 5. The items were grouped and had an F ratio of 1.80 and probability of 0.13 as given in Table 8. The findings indicated no statistically significant differences between the states. The hypothesis which stated, "There are no significant differences in the opinion of extension staff members as to the importance of keeping farm records" was retained.

The mean scores in Table 4 for the thirteen competency items, indicated the purposes of farm record keeping had a low score of 2.94 to a high score of 3.72 on a scale of four. The scale used was as follows; very important, four points; important, three points; some importance, two points; and no importance, one point. Most items were in the "some importance" and "very important" categories. None of the items were considered of "no importance" by the extension staff members who responded.

The most important item by the extension staff members was, "To provide a basis for sound management decisions," followed by "Provide a basis for farm planning," "to measure financial progress," "to help in making plans and budgets for future farming operations," "to identify strong and weak points in the farming business," and "to determine priorities for the farm." These six items had mean scores ranging from 3.72 to 3.64 on a four point scale, which represented the high regard that the extension staff members placed on farm record keeping which was useful in the management and operating of the farm business.

The four lowest rated items were "to preserve information about the business," "to compare performance with other farmers," "to help the Government plan schemes," and "to help in making extension work easier."

The mean score for these items ranged from 3.33 to 2.94 on a four point scale. Eventually they were rated lower compared with the other items, the margin is not statistically significant.

The highest rated item was "to provide a basis for sound management decision," which was rated the highest by a Plateau state at 3.65 on a four point scale. In rank order, the items were rated from 3.91 to 3.08 by the extension staff members from Plateau state; 3.65 to 2.95 by those from Kano state; 3.66 to 3.00 by those from Benue state; 3.66 to 2.91 by those from Sokoto state and 3.68 to 2.68 by those extension staff members from other states.

In spite of these differences in rating by states, it is clear that the lowest score of any item in the group, by any state was 2.68 on a four point scale, which is considered in the "some importance" category.

TABLE 4
Opinions of Extension Staff Members on the
Importance of Keeping Farm Records

Rank Order	Competency Items	Plateau N=24	Kano N=23	Benue N=21	Sokoto N=11	Others ¹ N=17	Composite Mean ² all States
1	To provide a basis for sound management decisions	3.81	3.65	3.66	3.66	3.68	3.72
2	Provide a basis for farm planning	3.87	3.60	3.71	3.66	3.68	3.71
3	To measure financial progress	3.79	3.56	3.71	3.58	3.75	3.68
4-5*	To help in making plans and budgets for future farming operations	3.79	3.60	3.57	3.58	3.62	3.64
4-5*	To identify strong and weak points in the farming business	3.75	3.60	3.66	3.50	3.62	3.64
6	To determine priorities for the farm	3.79	3.17	3.47	3.50	3.56	3.50
7-8*	Provide sound information to obtain credit	3.54	3.34	3.57	3.16	3.50	3.44
7-8*	To help provide accurate figures for agricultural surveys	3.62	3.21	3.47	3.66	3.31	3.44
9	To determine which enterprises are most profitable	3.50	3.39	3.52	3.16	3.37	3.41
10	To preserve information about the business	3.45	3.17	3.47	3.33	3.18	3.33
11	To compare performance with other farmers	3.41	3.00	3.19	3.08	2.93	3.19
12	To help the Government plan schemes	3.12	2.69	3.14	3.50	3.00	3.05
13	To help in making Extension work easier	3.08	2.95	3.00	2.91	2.68	2.94

1. Other respondents: Borno 6, Kwara 4, Bauchi 3, Niger 3, Kaduna 1.

2. Mean was calculated on four point scale. Four was "very important;" three, "important;" two "some importance;" and one, "no importance."

*Tie for fourth and fifth, and seven and eight places.

TABLE 5
Standard Deviations for Competency Items

Competency	Plateau N=24	Kano N=23	Benue N=21	Sokoto N=11	Others N=17
To provide a basis for sound management decisions	0.28	0.57	0.57	0.65	0.47
Provide a basis for farm planning	0.33	0.72	0.46	0.49	0.47
To measure financial progress	0.50	0.66	0.46	0.66	0.44
To help in making plans and budgets for future farming operations	0.50	0.49	0.67	0.51	0.50
To identify strong and weak points in the farming business	0.60	0.89	0.48	0.90	0.50
To determine priorities for the farm	0.58	0.83	0.60	0.67	0.72
Provide sound information to obtain credit	0.72	0.71	0.67	1.11	0.63
To help provide accurate figures for agricultural surveys	0.64	0.79	0.81	0.49	0.87
To determine which enterprises are most profitable	0.97	0.72	0.60	0.93	0.80
To preserve information about the business	0.93	0.71	0.67	0.77	0.65
To compare performance with other farmers	0.77	0.79	0.67	0.99	0.77
To help the Government plan schemes	0.89	1.01	0.79	0.67	1.03
To help in making Extension work easier	0.77	0.76	0.89	0.90	0.87

Problems of Farm Record Keeping

The information in Table 6 presented the problem statements which caused farmers not to keep farm records. The respondents were asked to rate each problem statement as "very serious," "serious," "somewhat serious," and "not serious." A repeated measures analysis of variance was made to see if there was a significant difference in the opinions of the extension staff members by states. The standard deviation of problem statements are given in Table 7. The problem statements were grouped, and had an F ratio of 2.39, and a probability of 0.057, as shown in Table 8.

The mean score among the statements ranged from a low of 1.81 to a high of 3.67. "Illiteracy of farmers" was rated much higher as a problem than the other statements. The highest score on this statement was from other states (3.81); Plateau (3.75), Benue (3.61); Kano (3.60); and Sokoto state (3.58). This emphasized the seriousness of this problem in the keeping of farm records.

The extension staff members rated fourteen problem statements as "serious" to "very serious." They were: (1) "Illiteracy of farmers" (3.67); (2) "Inefficiency in management skills" (3.47), (3) "Non-involvement of farmers in farm planning" (3.33); (4) "Inadequate development of Agriculture" (3.26); (5) "Lack of farm management associations" (3.21); (6) "Farming not business oriented" (3.18); (7) "Lack of trained farm managers" (3.16) (8) "Consultants on farm management are not available" (3.15); (9) "Traditional methods of farming" (3.14); (10) "Lack of loan facilities from Government and Banks" (3.13); (11) "Extension publications on farm records not reaching farmers" (3.08); (12) "Reluctance of farmers to keep records" (3.06); (13) "Lack of suitable markets and standards in prices" (3.05); and (14) "Lack of research in the areas of farm management practices" (3.03).

At the low end of the scale only one problem was rated "not serious," the others were rated in the "somewhat serious," category. The six problem

statements which were rated the lowest were from highest to lowest: "Lack of extension programs" (2.91); "Inefficiency in marketing skills" (2.87); "Inadequate number of farm enterprises" (2.86); "Inadequate extension programs" (2.78); "Curricula in agricultural schools do not include farm record keeping" (2.61); and "Farm record books are expensive" (1.81).

TABLE 6
Opinions of Extension Staff Members on Problems
Which Cause Farmers Not To Keep Farm Records

Rank Order	Problem Statement	Plateau N=24	Kano N=23	Benue N=21	Sokoto N=11	Others N=17	Composite Mean* all States
1	Illiteracy of farmers	3.75	3.60	3.61	3.58	3.81	3.67
2	Inefficiency in Management skills	3.54	3.58	3.14	3.58	3.37	3.41
3	Non-involvement of farmers in farm planning	3.50	3.21	3.14	3.58	3.31	3.33
4	Inadequate development of agriculture	3.12	3.26	3.19	3.58	3.31	3.26
5	Lack of Farm Management associations	3.45	3.00	3.00	3.50	3.25	3.21
6	Farming not business oriented	3.16	3.00	3.28	3.00	3.50	3.18
7	Lack of trained farm managers	3.00	2.95	3.38	3.50	3.18	3.16
8	Consultants on farm management are not available	3.45	2.52	3.23	3.75	3.06	3.15
9	Traditional methods of farming	3.25	3.00	3.00	3.41	3.18	3.14
10	Lack of loan facilities from Government and banks	3.33	3.13	2.90	2.83	3.37	3.13
11	Extension Publications on farm records not reaching farmers	3.37	2.82	2.80	3.25	3.25	3.08
12	Reluctance of farmers to keep records	3.04	3.04	3.19	3.16	2.87	3.06
13	Lack of suitable markets and standards in prices	3.25	2.82	3.00	3.41	2.87	3.05
14	Lack of Research in the areas of farm management practices	2.95	2.87	3.19	3.50	2.87	3.03
15	Lack of Extension programs	3.04	2.82	2.61	3.33	2.93	2.91
16	Inefficiency in marketing skills	2.91	2.60	2.85	3.08	3.06	2.87
17	Inadequate number of farm enterprises	2.83	2.78	2.57	3.58	2.87	2.86
18	Inadequate Extension programs	2.87	2.56	2.57	2.91	3.12	2.78
19	Curricula in agricultural schools do not include farm record keeping	2.95	2.39	2.42	3.08	2.31	2.61
20	Farm record books are expensive	2.25	1.47	1.71	2.00	1.61	1.81

*Mean was calculated on a four point scale. Four was "very serious;" three, "serious;" two, "somewhat serious;" and one, "not serious."

TABLE 7
Standard Deviation for Problem Statements

Problem Statement	Plateau N=24	Kano N=23	Benue N=21	Sokoto N=11	Others N=17
Illiteracy of farmers	0.53	0.58	0.58	0.51	0.40
Inefficiency in Management skills	0.65	0.51	0.91	0.66	0.71
Non-involvement of farmers in farm planning	0.65	0.73	0.96	0.79	0.79
Inadequate development of agriculture	0.94	0.96	0.81	0.51	0.87
Lack of farm management associations	0.72	0.73	1.00	0.67	0.68
Farming not business oriented	0.70	1.00	0.95	1.04	0.73
Lack of trained farm managers	1.06	0.87	0.86	0.52	0.65
Consultants on farm management are not available	0.77	0.99	1.04	0.45	0.77
Traditional methods of farming	0.89	0.85	1.04	0.79	0.99
Lack of loan facilities from Government and banks	0.70	0.91	1.04	1.26	0.61
Extension publications on farm records not reaching farmers	0.82	0.88	0.98	0.96	0.93
Reluctance of farmers to keep records	0.95	0.92	1.03	0.83	1.20
Lack of suitable markets and standards in prices	0.84	1.02	1.14	0.90	1.02
Lack of research in the areas of farm management practices	1.08	0.88	0.92	0.79	0.80
Lack of Extension programs	1.04	0.83	1.16	0.77	0.77
Inefficiency in marketing skills	0.82	0.78	0.91	1.16	0.92
Inadequate number of farm enterprises	1.09	0.95	0.97	0.66	0.80
Inadequate Extension programs	0.94	0.66	0.97	0.90	0.88
Curriculum in agricultural schools do no include farm record keeping	1.08	1.11	1.24	1.08	1.19
Farm record books are expensive	1.22	0.84	0.84	1.34	0.80

TABLE 8
Analysis of Variance for Difference Scores
by States for Purposes and Problems

SOURCE	ITEMS	SS ¹	DF ²	MS ³	F ⁴	PROB ⁵
States -	Purposes	13.9	4	3.4	1.80	0.137
-	Problems	38.2	4	9.5	2.3	0.057

Key: 1 SS = Sum of Squares

2 Degrees of Freedom

3 Mean Square

4 F Ratio

5 Tail Probability

Selected Record Book Requirements

The chi-square statistical treatment was used to determine statistical differences between states as to what should be included in the record keeping system. There were no significant differences at .05 level between the states, therefore, the null hypothesis; "There are no significant differences in the opinion of the extension staff members by states as to the record book requirements to be included in the record book was retained. The chi-square values for the individual methods are given in Table 10.

The data in Table 9 indicated that 96 extension staff members responded to the eleven record book requirements. The respondents indicated the importance of each requirements as follows: Farm expenses had 98.9 percent; "Balance Sheet," 94.7 percent; Farm inventory, 94.7 percent; Farm receipts, 89.5 percent; Income statements, 87.5 percent; Depreciation, 85.4 percent; Farm record summary, 85.4 percent; Budgets, 83.3 percent; Enterprise records, 83.3 percent; Cash flow projections, 78.1 percent; and Family living expenses, 55.2 percent. The responses for the record book requirements were ranked by individual states from a high of 100 percent to a low of 52.9 percent.

There were no large differences between the states in their responses to each requirement. The largest margin was on "Farm receipts" in which 100 percent of the extension staff members from Benue state responded while only 72 percent from Sokoto state responded to the inclusive of the same requirements. On "Budgets" 95.2 percent of the extension staff members from Benue state responded that budgets should be included in the record book while 72.7 percent from Sokoto state responded affirmatively to the same requirements.

The difference in importance for record book requirement ranged from 55.2 percent to a high of 98.9.

TABLE 9
Responses of Extension Staff Members on the
Importance of Selected Record Book Requirements

Selected Record Book Requirements	Plateau N PCT	Kano N PCT	Benue N PCT	Sokoto N PCT	Others N PCT	Totals N PCT
Farm Expenses	24 100.0	22 95.7	21 100.0	11 100.0	17 100.0	95 98.9
Balance Sheet	23 95.8	22 95.7	20 95.2	11 100.0	15 88.2	91 94.7
Farm Inventory	22 91.7	21 91.3	21 100.0	10 90.9	17 100.0	91 94.7
Farm Receipts	22 91.7	19 82.6	21 100.0	8 72.7	16 94.1	86 89.5
Income Statements	22 91.7	22 95.7	21 100.0	10 90.9	15 88.2	84 87.5
Depreciation	19 79.2	21 91.3	19 90.5	10 90.9	13 76.4	82 85.4
Farm Record Summary	20 83.0	19 82.6	19 90.5	9 81.8	15 88.2	82 85.4
Budgets	18 75.0	20 87.0	20 95.2	8 72.7	14 82.3	80 83.3
Enterprise Records	17 70.8	20 87.0	19 90.5	9 81.8	15 88.2	80 83.3
Cash Flow Projections	19 79.2	18 81.8	16 76.2	10 90.9	12 70.5	75 78.1
Family Living Expenses	15 62.0	10 45.5	11 52.4	8 72.7	9 52.9	53 55.2

*N = number of extension staff members responding

TABLE 10
Chi-Square Values for Record
Book Requirements by States

Selected Record Book Requirements	χ^2 Score	χ^2 Significance
Farm Expenses	3.20	0.52
Balance Sheet	2.47	0.64
Farm Inventory	3.33	0.50
Farm Receipts	6.78	0.14
Income Statements	2.87	0.57
Depreciation	3.59	0.46
Farm Record Summary	0.75	0.94
Budgets	5.65	0.22
Enterprise Records	3.88	0.42
Cash Flow Projection	0.49	0.97
Family Living Expenses	3.26	0.51

Teaching Methods

The results of the chi-square treatment for differences in teaching methods by states are given in Table 11. These results indicated that a significant difference was found at the .05 level for the teaching method "Farmers Meetings." The results of the importance of "Farmers Meetings" was as follows: Plateau state, 100 percent; Kano state, 95.7 percent; Benue state, 81 percent; Sokoto state, 100 percent, and other states 100 percent. The null hypothesis which stated that, "There are no significant differences in the opinion of extension staff members by states was rejected." The chi-square values for the individual methods are given in Table 12.

The results of the importance of the teaching methods by the 96 extension staff members was as follows: Farm visits, 96.8 percent; Farmers meetings, 94.7 percent; Workshops, 92.7 percent; Inservice Training, 90.6 percent; Young Farmers Clubs, 87.5 percent; Discussion Groups, 85.4 percent; Television and Radio Programs, 81.2 percent; Displays, 70.8 percent; and Lectures or Speeches, 70.8 percent.

The high percentage of extension staff members who responded to the importance of each method indicated that all of the teaching methods were useful in teaching farm record keeping.

TABLE 11
Responses of Extension Staff on the Importance
of Methods for Teaching Farm Records

Rank Order	Teaching Methods	Plateau N=24 N PCT	Kano N=23 N PCT	Benue N=21 N PCT	Sokoto N=11 N PCT	Others N=17 N PCT	Totals N PCT
1	Farm Visits	24 100.0	21 91.3	20 95.2	11 100.0	17 100.0	93 96.8
2	Farmers Meetings	24 100.0	22 95.7	17 81.0	11 100.0	17 100.0	91 94.7*
3	Workshops	23 95.8	19 82.6	21 100.0	10 90.9	16 94.1	89 92.7
4	Inservice Training	22 91.7	21 91.3	17 81.0	10 90.9	17 100.0	87 90.6
5	Young Farmers Clubs	19 79.2	22 95.7	19 90.5	10 90.9	14 82.3	84 87.5
6	Discussion Groups	19 79.2	20 87.0	18 85.7	10 90.9	15 88.2	82 85.4
7	Television and Radio Programs	18 75.0	18 78.3	16 76.2	9 81.8	15 88.2	78 81.2
8	Campaigns	18 75.0	21 91.3	13 61.9	8 72.7	12 70.5	72 75.0
9-10*	Displays	15 62.5	16 69.6	14 66.7	9 81.8	14 82.3	68 70.8
9-10*	Lectures or Speeches	15 62.5	16 69.6	16 76.2	7 63.6	14 82.3	68 70.8

*Indicates a significant difference between the states in their responses, at the .05 level of significance using the chi-square test.

**Tie for ninth and tenth place.

TABLE 12
Chi-Square Values for
Teaching Methods by States

Teaching Methods	Score	Significance
Farm Visits	4.22	0.37
Farmers Meetings	11.03	0.02*
Workshops	5.51	0.23
Inservice Training	4.02	0.40
Young Farmers Clubs	3.85	0.42
Discussion Groups	1.22	0.87]
Television and Radio Programs	1.17	0.88
Campaigns	5.51	0.23
Displays	4.40	0.35
Lectures or Speeches	2.05	0.72

*Indicates a significant difference between the states in their responses, at the .05 level using the chi-square test.

Summary

This study focused on the need for and major problems associated with keeping farm records in the Northern states of Nigeria.

Ninety-six extension staff members participated in the study and were from Plateau, Kano, Benue, Sokoto, Borno, Kwara, Bauchi, Niger, and Kaduna states. The questionnaire was developed to collect the data and test the hypotheses.

A repeated measures of analysis of variance was used to determine if there are significant differences in the opinions of extension staff member by states as to the importance of keeping farm records, and the problems which may be associated with the keeping of farm records.

A chi-square test was used to determine if there are significant differences in the opinions of extension staff members by states as to the importance of teaching methods and record keeping to be included in the record book

The means for the purposes for keeping farm records were calculated using a four point scale: 4, very important; 3, important; 2, some importance; and 1, no importance. The extension staff members ranked the thirteen purposes from a high mean of 3.72 to a low mean of 2.94.

Responses to the problems with keeping farm records were recorded using the following scale: 4, very serious; 3, serious; 2, somewhat serious; 1, not serious. The extension staff members ranked the problem items with keeping farm records from a mean score of 3.67 to a mean score of 1.87.

The selected record book requirements were ranked in order of importance. The respondents indicated an importance which ranged from a percentage of 98.9 to 55.2.

A repeated measures of analysis of variance was used to test the hypotheses. The two hypotheses were: "There are no significant differences in the opinion of extension staff members by states as to the importance of keeping farm records;" and "There are no significant differences in

the opinion of extension staff members by states as to the problems which cause farmers not to keep farm records." There was no significant differences at the .05 level and the two hypotheses were retained.

A chi-square test was used to test the third and fourth hypotheses. Hypothesis number three stated, "There are no significant differences in the opinion of the extension staff members by states as to the record book requirements to be included in the record book." No significant differences were found, therefore, the null hypothesis was retained.

Hypothesis number four stated, "There are no significant differences in the opinions of extension staff members by states as to the importance of methods for teaching farm records."

Hypothesis four was rejected for one of the ten teaching methods where a significant difference was found at the .05 level for the teaching method "farmer meetings." There were no significant differences for the opinions of extension staff members for hypotheses number one, two, and three indicating a general consensus on the importance of farm record keeping and the problems related to the keeping of farm records. There was also agreement as to the requirements which should be included in the record book. The rank order of the teaching methods indicated a consensus among the extension staff members by states for nine of the ten teaching methods for keeping farm records.

Chapter 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The purpose of this study was to determine the need for and major problems associated with farm record keeping in the Northern States of Nigeria. Ninety-six extension staff members in Nigeria responded to the four areas included in the study.

The purposes of the study included the following:

1. To determine the need for farm record keeping for the management and operating of the farm business.
2. To identify the major problems of farm record keeping.
3. To determine the requirements for a record keeping system.
4. To determine the best methods of teaching farmers to keep records.

The study involved the use of a questionnaire developed by the researcher based upon the literature review and suggestions by the major adviser. The instrument was trial tested by extension staff members from Nigeria. The final draft of the questionnaire contained five parts which included: (a) purposes of record keeping; (b) problems of record keeping; (c) record book requirements; (d) teaching methods; and (e) other information.

A four-point scale was used to allow extension staff members to determine the importance of farm records and seriousness of the problems which cause farmers not to keep farm records. A check (✓) method was used to allow the respondents to indicate the importance of the record book requirements, and teaching methods which were appropriate.

Ninety-six questionnaires out of one hundred were returned. The respondents were extension staff members from Nigeria as follows: 24, Plateau state; 23, Kano state; 21, Benue state; 11, Sokoto state; 6, Borno state; 4, Kwara state; 3, Bauchi state; 3, Niger state; and 1 from Kaduna state.

Four hypotheses which were stated in the null form served as the basis for interpreting the results of the study. The four hypotheses were:

- (1) "There are no significant differences in the opinion of extension staff members by states as to the importance of keeping farm records,"
- (2) "There are no significant differences in the opinion of extension staff members by states as to the problems which cause farmers not to keep farm records,"
- (3) "There are no significant difference in the opinion of the extension staff members by states as to the record book requirements to be included in the record book,"
- (4) "There are no significant differences in the opinion of extension staff members as to the importance of methods for teaching farm records."

A repeated measures of analysis of variance and the chi-square test were used as statistical treatments to determine if any significant differences exist in the opinion of the extension staff members by states.

There were no significant differences in the responses of the extension staff members for hypotheses numbers one, two and three. These hypotheses were retained. Hypothesis four was rejected for one of the ten teaching methods where a significant difference was found at the .05 level for the teaching method "farmers meetings."

Conclusions

The results of this study indicated that there were no significant differences in the opinions of extension staff members by states as to the importance of keeping farm records. The researcher concluded that this was due to the significance the extension staff members placed on farm records as useful tools for planning, operating and organizing the farm businesses. This was evident from the high ratings given to a majority of the purposes of record keeping as follows: "to provide a basis for sound management decisions," (3.72), "to provide a basis for farm planning," (3.71); "to measure financial progress," (3.68); "to help in making plans and budgets for future farming operations," (3.64);

"to identify strong and weak points in the farming business," (3.64);
"to determine priorities for the farm" (3.50).

There were no significant differences of opinion of the extension staff members as to the problems associated with farm record keeping. The most serious problem confronting the farmers in keeping farm records was the "Illiteracy of farmers" (3.67) which had the highest score from the extension staff members.

The researcher concluded that all the selected record book requirements were important, and should be used to educate farmers on how to keep records. There was a significant difference in the opinions of extension staff members by states as to the importance of one of the ten methods for teaching farm records. This study revealed that the number of Nigerian farmers who kept adequate farm records were in the range of 0-40 percentage.

From the findings of the study, the researcher also concluded the following:

1. That farm record keeping had an effect on the agricultural development of Nigeria.
2. That farmers had poor relationships with commercial bankers for the securing of farm loans.
3. That farmers found it easier to obtain credit through Government credit schemes than from Commercial banks.
4. That farmers obtained credit without reference to their farm records.

Recommendations

The following recommendations were made by the researcher as a result of the findings of this study.

1. The findings of this study should be distributed to the Ministries of Agriculture and the Agricultural Schools in each of the Northern States of Nigeria. A copy should be sent to the Agricultural Extension and Research Liaison Services.

2. The findings of this study should be used by the extension staff members for developing curriculum for teaching farm records.
3. The teaching of farm records through the extension services should be emphasized by the Ministries of Agriculture.
4. The extension workers who teach farmers how to keep farm records and those who evaluate farm loan applications to obtain credit through Government Sponsored Credit Schemes should be provided inservice training in teaching farmers how to keep farm records.
5. The record book requirements should be used as a guide by the extension workers in teaching farm record keeping.
6. A variety of methods should be used by extension staff members for teaching farmers how to keep farm records.
7. Farm record keeping program should be included in Young Farmers activities.

The following recommendations for additional research is advanced by the author as a result of this study.

1. A study should be made to identify which farm record keeping programs could be provided for the young farmers and young farmers organizations.
2. A study should be made to identify a curriculum for teaching farm records at Farm Institutes and Farm Training Centres.
3. A study should be made to determine the possibilities of cooperation between the commercial banks and the Ministries of Agriculture in assisting farmers how to keep and use farm records for obtaining farm loans.
4. A study should be made to determine the ability of farmers to keep and use the farm records.
5. A study should be made to identify the motivation level of farmers for keeping farm records.

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APPENDIX

QUESTIONNAIRE COVER LETTER

Jan. 10, 1981

Dear Sir:

As partial requirement for the Master of Science degree, I am conducting a study on the need and major problems of Farm Record Keeping in the Northern States of Nigeria.

The major aims of this study are to determine:

- a. The need for farm record keeping for the management and operating of the farm business.
- b. To identify the major problems of farm record keeping.
- c. To determine the requirements for a record keeping system.
- d. To determine the best methods for teaching farmers to keep records.

As I am limiting my study to Nigerian agricultural students in Kansas universities and colleges, your participation is essential to ensure reliable findings.

It would be helpful to me if you could take a few minutes to complete this questionnaire and return it to me no later than January 17, 1981.

Your responses will be treated in strict confidence since they will only be used for mass data and not for recording individual responses.

I appreciate your time and effort in assisting with this study.

Sincerely,

Mohammed S. Hassan
A 22 Jardine Terrace
Manhattan, KS 66502

January 17, 1981

Dear Sir:

On January 10, 1981, I sent you a questionnaire on the need and major problems of farm record keeping in the Northern States of Nigeria. If you have already returned the questionnaire, please consider this a special thank you for your prompt response.

Since the study is limited to Nigerian agricultural students in Kansas universities and colleges, it is important that all questionnaires are returned. If you have sent in your questionnaire, please complete the enclosed questionnaire and return it today.

Thank you for your assistance.

Sincerely,

Mohammed S. Hassan
A 22 Jardine Terrace
Manhattan, KS 66502

QUESTIONNAIRE

PART A Purposes of Farm Records

Farm record keeping is important and farmers need to use sound record keeping practices to manage and operate farm businesses successfully. Please express your opinion as to the importance of each item for keeping farm records by placing a check (✓) in the most appropriate column as follows:

VI = Very Important
 I = Important
 SI = Some importance
 NI = No importance

	IMPORTANCE OF ITEM			
	VI	I	SI	NI
1. To identify strong and weak points in the farm business.	—	—	—	—
2. Provide a basis for farm planning.	—	—	—	—
3. To compare performance with other farmers.	—	—	—	—
4. To determine priorities for the farm.	—	—	—	—
5. To provide a basis for sound management decisions.	—	—	—	—
6. To measure financial progress.	—	—	—	—
7. To help in making plans and budgets for future farming operations.	—	—	—	—
8. To preserve information about the business.	—	—	—	—
9. Provide sound information to obtain credit.	—	—	—	—
10. To determine which enterprises are most profitable.	—	—	—	—
11. To help the Government plan schemes.	—	—	—	—

12.To help provide accurate figures
for agricultural surveys.

13.To help in making Extension work
easier.

VI	I	SI	NI
—	—	—	—
—	—	—	—

PART B Farm Record Keeping Problems

Listed below are major problems which may cause farmers not to keep farm records. Please make a check (✓) as to the seriousness of each problem by responding as follows:

VS = Very Serious
S = Serious
SS = Somewhat Serious
NS = Not Serious

PROBLEM STATEMENT	SERIOUSNESS OF PROBLEM			
	VS	S	SS	NS
1. Inadequate development of agriculture.	—	—	—	—
2. Traditional methods of farming.	—	—	—	—
3. Inadequate number of Farm Enterprises.	—	—	—	—
4. Farming not business oriented.	—	—	—	—
5. Lack of suitable markets and standards in prices.	—	—	—	—
6. Inefficiency in marketing skills.	—	—	—	—
7. Illiteracy of farmers.	—	—	—	—
8. Reluctance of farmers to keep records.	—	—	—	—
9. Lack of Extension programs.	—	—	—	—
10. Inadequate Extension programs.	—	—	—	—
11. Lack of Research in the areas of Farm Management Practices.	—	—	—	—
12. Extension Publications on Farm records not reaching farmers.	—	—	—	—

	VS	S	SS	NS
13. Non-involvement of farmers in farm planning.	—	—	—	—
14. Inefficiency in management skills	—	—	—	—
15. Lack of Farm Management associations.	—	—	—	—
16. Consultants on Farm Management are not available.	—	—	—	—
17. Lack of trained Farm managers.	—	—	—	—
18. Farm Record books are expensive.	—	—	—	—
19. Lack of loan facilities from Government and Banks.	—	—	—	—
20. Curricula in Agricultural Schools do not include farm record keeping	—	—	—	—

PART C Record Book Requirements

To help educate our farmers to keep farm records, please identify from the list below which of the requirements are needed in the record keeping system. Please place a check (✓) in the corresponding box indicating which information should be included in the record keeping system.

1. Farm inventory ☐
2. Farm expenses ☐
3. Farm receipts ☐
4. Depreciation ☐
5. Enterprise records ☐
6. Income statements ☐
7. Farm record summary ☐
8. Family living expenses ☐
9. Cash flow projections ☐
10. Balance sheet ☐
11. Budgets ☐

PART D Methods for Teaching Record Keeping

Please identify which methods could be used most appropriately for teaching farmers how to keep farm records. Place a check (✓) in the corresponding box for each method which is appropriate.

- | | |
|----------------------------------|--------------------------|
| 1. Farm visits | <input type="checkbox"/> |
| 2. Young farmers clubs | <input type="checkbox"/> |
| 3. Farmers meetings | <input type="checkbox"/> |
| 4. Workshops | <input type="checkbox"/> |
| 5. Inservice training | <input type="checkbox"/> |
| 6. Television and radio programs | <input type="checkbox"/> |
| 7. Lectures or speeches | <input type="checkbox"/> |
| 8. Displays | <input type="checkbox"/> |
| 9. Discussion groups | <input type="checkbox"/> |
| 10. Campaigns | <input type="checkbox"/> |

PART E Other Information

The statements listed below are to determine your opinions and reactions about keeping farm records in Nigeria. Please respond to each statement by indicating Yes or No to statements 1 through 4.

1. Farm record keeping has an effect on the agricultural development of Nigeria.
Yes _____ No _____
2. Farmers have good relationships with commercial bankers for the securing of farm loans.
Yes _____ No _____
3. Farmers find it easier to obtain credit through Government credit schemes than from commercial banks.
Yes _____ No _____
4. Farmers obtain credit without reference to their farm records.
Yes _____ No _____

5. The following percentage of Nigerian farmers keep adequate farm records. Please place a check (✓) by the percentage which you consider to exist.

a - 0 - 21%
 b - 21 - 40%
 c - 41 - 60%
 d - 61 - 80%
 e - 81 - 100%

6. Professional Preparation

Please indicate your professional preparation by filling in the following blanks.

Age: _____ Years Address: _____ State

Place of Residence: Rural _____ Urban _____

Education: _____ Years Degrees held: _____

Institution(s) attended: _____

Extension Experience: _____ years

Please check (✓) your appropriate speciality preparation and experience

Speciality	Preparation	Experience
Animal Science	_____	_____
Crop Science	_____	_____
Agricultural Economics	_____	_____
Horticulture	_____	_____
Ag. Mechanics	_____	_____
Extension	_____	_____

A STUDY ON THE NEED AND MAJOR PROBLEMS
OF FARM RECORD KEEPING IN THE NORTHERN
STATES OF NIGERIA

by

MOHAMMED SANI HASSAN

B. S. Fort Hays State University, 1980

AN ABSTRACT OF A MASTER'S THESIS

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requirements for the degree

MASTER OF SCIENCE

Agricultural Education
College of Education

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The main purpose of this study was to determine the need for and major problems associated with farm record keeping in the Northern States of Nigeria. Ninety-six extension staff members from the Ministries of Agriculture from Nigeria, who were recognized as having expertise and experience in their speciality fields of Agriculture, responded to the four areas included in the study.

The purposes of the study included the following:

1. To determine the need for farm record keeping for the management and operation of the farm business.
2. To identify the major problems of farm record keeping.
3. To determine the requirements for a record keeping system.
4. To determine the best methods of teaching farmers to keep records.

The study involved the use of questionnaires which contained five parts: (a) purposes of record keeping; (b) problems of record keeping; (c) record book requirements; (d) teaching methods; and (e) other information.

Four hypothesis stated in the null form served as the basis for interpreting the results of the study. (1) "There are no significant differences in the opinion of extension staff members by states as to the importance of keeping farm records," (2) "There are no significant differences in the opinion of extension staff members by states as to the problems which cause farmers not to keep farm records," (3) "There are no significant differences in the opinions of the extension staff members by the states as to the requirements to be included in the record book," (4) "There are no significant differences in the opinion of extension staff members as to the importance of methods for teaching farm records."

A repeated measures of analysis of variance and the chi-square test were used as statistical treatments to determine if any significant differences existed in the opinions of the extension staff members by states.

There were no significant differences found at the .05 level in the

opinions of extension staff members by states as indicated in hypotheses number one, two and three. This would indicate a general consensus on the importance of farm record keeping, the selected book requirements and the seriousness of problems of record keeping. Hypothesis number four was rejected at .05 level. The results indicated that the extension staff members from some states placed a higher importance to the teaching methods presented while other states rated them lower.

The researcher made the following recommendations as a result of the findings of this study: (1) the findings of this study should be used by the extension staff members for developing a curriculum for teaching farm records; (2) the teaching of farm records through the extension services should be emphasized by the Ministries of Agriculture; (3) extension workers who teach farmers how to keep farm records and those who evaluate farm loan applications to obtain credit through Government Sponsored Credit Schemes should be provided inservice training in teaching farmers how to keep farm records; (4) record book requirements should be used as a guide by the extension workers in teaching farm record keeping; (5) farm record keeping programs should be included in the Young Farmers activities.

The researcher advanced additional recommendations for further study: (1) a study should be made to identify which farm record keeping programs should be provided for the farmers; (2) a study should be made to determine which curriculum should be used for teaching farm records at Farm Institutes and Farm Training Centres; (3) a study should be made to determine the possibilities of cooperation between the commercial banks and the Ministries of Agriculture in assisting farmers in keeping and using the farm records to obtain farm loans; (4) a study should be made to determine the ability of farmers to keep and use farm records; and (5) a study should be made to identify the motivation level of farmers for keeping farm records.