Accounting for Farm Income

David C. Hoverson

ACCOUNTING FOR FARM INCOME

by
David Clarence Hoverson

Bachelor of Science Business Administration 1969

An Independent Study

Submitted to the Faculty

of the

University of North Dakota

in partial fulfillment of the requirements

for the degree of

Master of Science

Grand Forks, North Dakota

May
1972

This Independent Study submitted by David Clarence Hoverson in partial fulfillment of the requirements for the Degree of Master of Science from the University of North Dakota is hereby approved by the Faculty Advisor under whom the work has been done.

(Advisor)

Permission

Title Accounting for Farm Income

Department Accounting

Degree Master of Science

In presenting this independent study in partial fulfillment of the requirements for a graduate degree from the University of North Dakota, I agree that the Library of this University shall make it freely available for inspection. I further agree that permission for extensive copying for scholarly purposes may be granted by the professor who supervised my independent study work or, in his absence, by the Chairman of the Department or the Dean of the Graduate School. It is understood that any copying or publication or other use of this independent study or part thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the University of North Dakota in any scholarly use which may be made of any material in my independent study.

Signature____________________

Date____________________

TABLE OF CONTENTS

CHAPTER I

The accounting profession has neglected the small farmer. It has failed to educate him in the proper way of keeping records of his income and expenses. The accounting profession has left this job up to the farmer's tax consultant, banker, or creditor who require income statements, or a county agent who is trying to encourage the use of an extension service computer service. While these men may be experts in their particular field, they usually have little if any accounting background. This means that while they can show a farmer how to follow certain sets of instructions for making entries in prepared books, they are unable to explain why one item is considered an expense for this year and the other a capital expenditure to be depreciated over the life time of the asset.

Don't sell the banker, tax consultant, creditor, or county agent short; they have attempted to fill a void that has been left by the accounting profession's failure to produce literature directed at the farmer. These people have adopted accounting systems used in other business enterprises to fit the farmer's accounting needs. Since the farmer needs an accounting method that tells him what his expenses and income for the year are, most methods developed were on a cash basis and simple single entry account books. These records were set up so that the farmer should be able to have the greatest tax advantage possible and he was advised from time to time on how new tax regulations affected his farming operation.

While these simple accounting methods gave the farmer a record of his farm income and expenses, they didn't allow him to use actual accounting without considerable adjustments at the accounting period's end.[1] Most of these methods were set up to keep track of expenses and income and not the capital assets purchased. When purchased, these capital assets were usually marked down on a simple depreciation schedule needed for schedule F of the 1040 Income Tax Report form and removed when disposed of. Since the larger the depreciation list, the greater the depreciation expenses were and the lesser the taxes, some farmers developed a tendency to depreciate an asset for a couple of extra years if the asset wasn't fully depreciated when disposed of. Also, the farmer developed a tendency to want to take the greatest depreciation possible in the shortest time and as a result used estimated life for their assets that was shorter than the actual length of time they planned to use the asset.

As long as the farmer stays on a cash basis reporting method, he doesn't have to worry about inventories. For accrual methods, he must determine his crop inventory and livestock inventories at the end of each year.[2] This means that he must be able to assign to the inventories all expenses incurred in their production. The expenses charged into inventory should also include a share of expenses incurred for the sake of keeping the farm in operation. An example is grain bins which are usually charged to depreciation expense for income tax purposes when, in fact, they are necessary to hold harvested grain until

---

[1]U.S., Department of the Treasury, Your Federal Income Tax, 1970 edition, p. 58.

[2]Prentice-Hall, Federal Tax Course, (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970), paragraph 2615 a, b, and c.

market prices are favorable and as such their costs should be charged to crop inventory over their estimated life. This is a concept that few farmers realize or even know about.

The farmer usually lives on the land he farms and has family living expenses like everyone else. This means that he must separate these expenses from those incurred in his farming operation. He must determine what per cent of the time his vehicles are used for business and what per cent is personal. Because he lives in his farm house and also does most of his planning for his farming operation there also, he has certain expenses incurred in the upkeep of the farm house that are both business and personal and it is necessary to have a method of separating these.

The farmer has seen a great deal of mechanization of his farming operation over the past thirty years. He has been buying bigger and better equipment and as a result increased his operating cost but along with it, he has managed to increase his yield but unfortunately the price he receives per unit has dropped. This has caused some of the more progressive farmers to account for their farm income according to enterprises. An enterprise being one segment of the farming operation, like beet production, wheat, or raising of feeder cattle. Each enterprise is then analyzed to determine if it is profitable or not. When doing enterprising accounting for farm operations, much difficulty is encountered in separate expenses incurred by use of farm equipment and personnel in more than one enterprise.

For the remainder of this study, it is proposed to describe the various methods used for accounting for farm income and analyze them as to how they can be improved without changing their basic structures.

Finally, the author will try to recommend a way in which the accounting profession can help the farmer to better record keeping by informing him of new and existing techniques in accounting.

CHAPTER II

The worst method of accounting for farm income is to keep no records at all. The individual spends his money in accordance with what income he thinks he is making. At year end, he reports what he feels his income was and what his expenses were. This method is highly undesirable because the individual has no real idea as to whether he is making a profit or not and the Internal Revenue Service will not accept it if they audit the individual's tax returns.

Any farmer who insists upon keeping no records at all should apply the net worth test the Internal Revenue Service uses to test individuals.[3] The individual determines what his net worth (assets - liabilities) is at the end of an accounting period and what it was at the beginning, the difference is his net loss or gain. This net difference then should be analyzed to determine its composition for this will determine what should have been reported for income tax purposes.

The bill receipt method of accounting for expenses is the first real start at trying to keep evidence of expenses. The person using this method keeps all the bills that he pays through the year in a special place. At the end of the accounting period these bills are analyzed to determine if they are for farm expense, purchase of capital assets, or family living expenses which may or may not be deductible

[3] *Ibid.*, paragraph 2711 a.

for income tax purposes. Once all the bills are analyzed, they are totaled according to their proper classification. Next the farmer's cash account has to be analyzed to determine what his increases or deposits through the year represent. Like the Internal Revenue Service's bank deposit method, any unexplained deposits or increases will be assumed to be income.[4] Once the income is determined, the farming expenses are deducted from it to give you net income from farming operations.

The main problem with the bill receipt method is that if the accumulated bill receipts are not carefully kept, they can be lost and the individual will lose some of his evidence of deductibility. Also, if the individual has a tendency to keep large amounts of cash on hand and not record their receipt any place, income might be left unaccounted for.

This bill receipt method can be improved upon by simply using a cash receipt and disbursement book to record every receipt and expenditure. The bills are recorded and filed upon payment and retained for a specified length of time for supporting evidence for income tax purposes. If the cash receipt and disbursement books are divided into columns with headings classified as to source of income or type of expenses, the totals at the end of the accounting period will give the gross income before deduction for non-cash expenses, like depreciation.

With modern banking service, comes the checkbook method of accounting for farm income. The farmer pays all bills with checks, keeping his receipts and deposits and all his income in the checking account. At the end of the accounting period, all the checks are analyzed

---

[4] *Ibid.*, paragraph 2711 c.

to determine if they are farm expenses, capital asset purchases, or family living expenses. Each category of expenditure is totalled and subtracted from the net income figure obtained from the deposits of income. Any income that may not have been recorded in the checkbook, and any cash equivalents received for services rendered such as release of a debt owed or a piece of equipment in lieu of money must also be included in income figures.

The main problem with the checkbook method is that the farmer doesn't have his checkbook with him or the item of expense is so small that he pays cash for it and forgets to record it in some sort of record showing cash expenditures. Also, when the checks are analyzed at the end of the accounting period, it is often hard to determine what they were originally written for or if the item was returned and a cash refund received. Unless the return of the item is recorded, it might be overlooked and as a result, expenses will be overstated. The checkbook method can be improved by using a petty cash receipt and disbursement account book to record all small or miscellaneous amounts of income and expense. Also, a notation as to the reason for issuance of a check is helpful when sorting out at a later date.

The American Banker's Association members have extended the use of the checkbook method of accounting to electronic data processing.[5] The farmers who participate use duplicate copy checks (see example in Appendix, Page A-1). When a check is issued, the duplicate is coded to tell why the check was written in accordance with a specific set of code numbers. All income is coded on another form usually called a

---

[5]American Banker's Association, Bank EDP Farm Record Programs, (New York, New York, 1968), pp. 2-35.

voucher of income. Expenses which are not paid by check are recorded on special expense vouchers. At the end of the month or accounting period, the farmer sends the duplicate checks and proper vouchers for income and expenses to a central processor. The farmer then receives a simple income statement such as shown in the Appendix on page A-2 or, if coding allows, a more detailed one such as on pages A-3 and A-4 of the Appendix.

This EDP service by the bankers is only as good as the person who fills in the code number, that is, the farmer. If improperly coded, the reports generated will be worthless and time consuming to correct. Also the more detail desired, the greater amount of code numbers needed. With many code numbers, the coder must be even more alert to prevent coding errors.

The single entry method of accounting is the first form of keeping a book of records. The record books most commonly used in this area were the "Farm Family Record Book," published by the U. S. Department of Agriculture and used by the Farm Home Administration in connection with their loan requirements and the "North Dakota Farm Account Book," prepared by the Extension Service of North Dakota State University. These record books have been divided into sections in which farm income receipts, farm expenses and expenditures, and family living expenses are recorded. The sections have been further subdivided into specific columns. At the end of the accounting period the columns are totaled and transferred to summary sheets at the end of the book upon which an income statement for the period is developed.

The single entry method is simple to use because the user need only determine if the item he wishes to report is income or expense and then classify it according to the reason for its occurrence. For example, buying a part for a plow may be a repair item and as such an expense, or if costly and an improvement to the plow's working condition, it may be an expenditure that should be capitalized.

The single entry method uses only columnar headings and no T-accounts for keeping track of various sources of income and expenses. Therefore, in order to determine the balance for any particular item, the receipts and expenditure columns are added to or subtracted from the past period's balance to obtain the current balance.

Since the account of most interest to the farmer is his cash account, it is advisable to use a checkbook for all expenditures and to keep it current in order to be able to get a fast estimate of the current cash situation. As with the previous method mentioned, the practice of keeping all paid bills is advisable. Also, the development of a good schedule of depreciation greatly facilitates preparation of the income statement and income tax reports.

The Extension Service of North Dakota State University in the 1960's developed a computer program to do farm record keeping. The program was called Extension Farm Records Program and was open only to farmers who paid a fee and complied with operating rules. A participating farmer had to inventory his whole farming operation according to a set format. (Page A-5 of the Appendix shows a copy of the units to be used in recording farm operations. Page A-6 is a copy of the page used to identify the various enterprises that the farmer wishes his farming operation to be accounted for by. Page A-7 shows the codes which the farmer uses in recording his transactions.)

Once the inventory has been completed and accepted by the computer, the farmer reports all his cash expenditures and receipts on specially designed forms which he codes to identify which enterprise is to be charged. (See pages A-8, A-9, A-10, and A-11 of the Appendix for examples.) It is also necessary for him to report inventories and depreciation of equipment at regular intervals (example, page A-12, Appendix).

The farmer is required to have his forms into the Extension Service at Fargo by the seventh of every month. The computer center sends the farmer quarterly reports of Income and Expenses for each enterprise desired (see pages A-13 and A-14 in Appendix for example). At year end, the farmer receives an income tax summary of his past year's operation (examples on page A-15) along with supporting schedules for various sections of the 1040 tax form and its schedules (see page A-15 and A-16 for example).

The main purpose of the program is to supply the farmer with information that will help him to make better management decisions concerning his farming operation.[6] Therefore, in February of each year the farmer receives summaries of the farm operation for the year according to cash receipts and cash expenses. The operation is analyzed to give rates of return on capital invested in each enterprise accounted for and labor expense therein (see pages A-17 and A-18 in Appendix). These figures give the farmer a gauge with which to judge his farming operation. Along with the summary and analysis sections, the farmer receives a statement of individual net worth (see page A-19 in Appendix)

---

[6]Extension Service, Extension Farm Records, A Mail-in Electronic Farm Account and Analysis Program (Extension Service: North Dakota State University, 1972).

which is a simple balance sheet with the beginning of year and end of year balances from all accounts.

The information generated by the NDSU Extension Service's program is very useful for the farmer who is willing to take the time to prepare his input information in the proper formats to obtain it in the breakdowns that will analyze his farming operation. The program only gives the balance in the accounts quarterly for income and expense accounts and yearly for asset, liability, and proprietorship accounts. This means the farmer must keep some other records if he wants to know what the balance is in a particular account, like cash. He might be wise to use a checkbook method of accounting in conjunction with the computer services, since this would give him an idea of his cash balance. He might also use T-accounts of some accounts that he desires and record any changes that occur to them when he fills out his monthly forms for the computer center.

Production Credit Association purchased the rights to use NDSU Extension Service's computer program. They offer the program to all members of their association under the name of Agrifax. PCA offers two variations of the Agrifax program. The Model 100 is identical to NDSU Extension Service's and offers the same output for the same price but the Model 200 produces a cash flow statement each month (page A-21 of Appendix). The cash flow statement tells the farmer where his income comes from, where he spent it, and what his checkbook balance should be at the end of the month. The year end statements are basically the same as the NDSU program, except that with Agrifax, a year to date income statement is generated in November showing the farmer what his income and expenses for the year are and what amount of tax he is liable for. This gives the farmer an opportunity to take action that can alter his tax situation before it is too late. This feature saves many a tax dollar for farmers.

Agrifax Model 200 is better than the other computer programs from the standpoint of the cash flow statement and the November income statement (which comes in Agrifax 100) but like NDSU Extension Service's program it doesn't generate any other account balances until year end.

PCA, unlike NDSU Extension Service, created a separate division in its organization to handle Agrifax and trained its personnel in the correct way of setting the program up for a farmer and how to find errors. The Agrifax personnel are always ready to help a member on the Agrifax program get his problems straightened out. Agrifax personnel found that the farm wife was the best person to keep the record since the farmer himself tended to get too busy to take the time to fill in the monthly report. Pages A-20 through A-24 of the Appendix are copies of literature on Agrifax as advertised by PCA.

The double entry bookkeeping method of accounting uses journals and ledgers to record business transactions and their effects. The mechanics of the double-entry bookkeeping method are such that every transaction affects and is recorded in two or more accounts with equal debits and credits.

Entries are made in the journals to record the various effects of business transactions. From the journals, the amounts specified in the entries are posted to the proper accounts in the T-accounts of the ledgers. A trial balance of the ledger accounts at the end of the accounting period or any other time offers a proof of the recording accuracy since the sum of the credits must equal the sum of the debits.

If they are not equal, one must determine what caused the difference and correct it.[7]

Once the trial balance is in balance, certain accounts must be analyzed to determine if their balance properly represents their present worth. The depreciation of equipment must be entered and various other accounts adjusted if the farmer is on an accrual basis rather than a cash basis. On accrual, such accounts as interest receivable, interest payable, inventory adjustment, and prepaid expenses have to be adjusted.

Upon completion of adjusting the trial balance, closing entries can be made closing all revenues and expenses items into the income account. Also from the adjusted trial balance, an income statement and balance sheet can be prepared for the accounting period just ended.

From the balance sheet and income statement, the individual can develop any ratio analysis that he desires. If the farmer wishes to account for his farm income by enterprises, he need only to keep separate journals and ledgers for each enterprise and at the end of the accounting period consolidate the enterprises statements to form the overall farm operation statements.

The double entry method of accounting can account for farm income on either a cash basis or an accrual basis. Upon posting entries from the journals, the balance of each account is known along with the transaction that affected its balance. This may be of great aid to a budget conscious farmer.

The main problem with a double entry method of accounting for farm income is that it is more time consuming than the methods previously

---

[7]William W. Pyle and John Arch White, Fundamental Accounting Principles (Homewood, Ill.: Richard D. Irwin, Inc., 1963), p. 29.

mentioned. This problem of time consumption should be more than offset by the advantage of being able to develop an income statement any time during an accounting period after completing an adjusted trial balance.

CHAPTER III

Before a farmer adopts any of the methods of accounting for farm income, he must determine how much time he can allocate to keeping records and what he can afford to spend to have others do his accounting for him. This means the farmer must consider whether his time is more profitably spent in operating his farm or in generating accounting records and managerial reports for use in analyzing the farm operation. The question remains if his budget can stand the cost of having his accounting records done by someone else.

The Agriculture Committee of the American Banking Association classified farmers into three groups; they are farmers who: (1) belong to farm management associations offering a farm record keeping system, (2) keep good accounting records of their own choice, and (3) maintain casual records of their business transactions (comprising the largest group).[8]

The Committee found that the most common participant in the farm management associations is the young to middle-aged farmer (20-45). The farmer has good managerial habits and wants to grow with changing times. His farm operation is usually largely crop production, with a good, sound livestock program. He wants a record keeping method that affords him with more time for management and supplies him with

---

[8]American Banker's Association, Bank EDP Farm Record Programs (New York, New York, 1968), p. 2.

reports that give him a complete analysis of his operation so he can determine where extra effort should be exerted.[9]

With the above points in mind, one could say that the North Dakota State University Extension "Farm Record Program" and Production Credit Association "Agrifax" fit the needs of a farmer who has both crop and livestock in his operation.

Also, farmers who raised either potatoes or sugar beets along with small grain crops were starting to use electronic data processing to determine where their profits came from, according to Mr. Robert Rose, County Agent for Grand Forks County. Rose added that this is accomplished by dividing the farm operation into income and expense segments called enterprises and accounting for each enterprise separately. An example of an enterprise is the accounting for the beet production activities of a farm separately from its small grain production.

Both Agrifax and the "Farm Record Program" offer enterprise reports for each enterprise the farmer wishes to have accounted for in addition to the overall report of the farming operation. Each additional enterprise costs $20 and must be coded correctly when submitting input data.

The "Farm Record Program" and the Model 100 of Agrifax cost $150 per year to use and produce quarterly income statements. This makes them well suited for the farmer who has a seasonal production such as small grains, beets, or potatoes and has no need for a monthly statement of income.

The Model 200 of Agrifax offers a monthly income statement and a cash flow statement for $250 per year. This type of reporting

---

[9] Ibid.

is well suited to a dairy farmer or beef rancher since their operations are not seasonal and depend upon marketing conditions.

This takes care of the farmer who wants accounting reports that help him manage his farm without taking the time to produce them himself, and who can afford the cost of electronic data processing.

Many farmers feel that the cost of electronic data processing of their accounting records is too great to justify, even when the time saved in not having to keep the records is considered. Also, the time period between submitting data for processing and the return of the accounting reports may be too long to benefit their operation. Therefore, they prefer to keep their own accounting records and usually choose between the single entry or double entry methods of accounting.

A farmer with very little accounting background is most likely to choose the single entry method of accounting because there are published farm record books using this method and they are simple to use. Two of the most popular farm record books in this area are the "Farm Family Record Book" published by the U. S. Department of Agriculture and used by the F. H. A. and the "North Dakota Farm Account Book" published by the Extension Service of NDSU and sold for the charge of $1. Both of these record books guide the farmer in recording his revenues and expenses for the year and preparing an income statement for the year. The "North Dakota Farm Account Book" offers an extra bonus to its users in that for a fee of $15 a farmer can have his farm records computer analyzed (just as the farmer using the Farm Record Program) by filling out special forms at the year end. He will receive a report including: (1) a Profit and Loss Statement, (2) a Determination of Net Farm Income, (3) Returns to Capital, Labor and

Management, (4) Analysis of the Cropping Portion of the Farm Business, (5) Analysis of the Livestock Portion of the Farm Business, and (6) Analysis of the Machinery Investment and Machinery Costs.[10]

The double entry method of accounting is used less frequently than the single entry method because it requires some accounting knowledge to use effectively and is more time consuming. The double entry method is very effective for farmers who are engaged in operations where it is advantageous to know daily balances of particular accounts. Income statements can be readily prepared from an adjusted trial balance anytime in the accounting period. Also, the double entry method of accounting can be used with ease in recording income or expense on a cash basis or accrual basis. Therefore, farmers desiring to account for their farm operations on an accrual basis of accounting usually use the double entry method.

The farmer who prefers to maintain his records on a casual basis should consider using the checkbook method of accounting and back it up with the bill receipts method of accounting for expenses. By using this method, the farmer will be able to determine his cash balance at all times and thus have an idea of what his financial condition is.

No matter what method of accounting the farmer uses, it is only as good as the effort he puts into it. Therefore, accountants should make an effort to inform farmers of the benefits of good accounting records and how to use good methods in accounting for their farm income.

---

[10] Extension Service, Extension Farm Records, A Mail-in Electronic Farm Account and Analysis Program (Extension Service: North Dakota State University, 1972), p. 64.

The accounting profession has long stressed that principles of consistency be followed when accounting for all other types of business operations.[11] But the farmer has altered his methods of accounting to take advantage of every tax law change that has occurred. I feel that it is time to require the principle of consistency to be applied to accounting for farm income.

---

[11]American Institute of Certified Public Accountants, Statements on Auditing Procedures No. 33 (New York, 1963), Chapter 8, paragraph 13, p. 45.

BIBLIOGRAPHY

American Bankers Association. Bank EDP Farm Recordkeeping Programs. New York, 1968.

American Institute of CPA's. Auditing Standards and Procedures. New York, 1963.

Extension Service, Mail-in Farm Accounting. "Extension Farm Records." Fargo, North Dakota: North Dakota State University, 1969.

Extension Service. "North Dakota Farm Account Book." Fargo, North Dakota: North Dakota State University, 1969.

Farmers Home Administration. "Farm Family Record Book." U. S. Department of Agriculture, 1967.

"Farmers' Tax Guide." U. S. Treasury Department, 1970.

Finney, H. A., and Miller, Herbert E. Principles of Accounting, Intermediate. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1965.

Moore, Carl L., and Jaedicke, Robert K. Managerial Accounting. Chicago: South-Western Publishing Company, 1963.

Prentice-Hall. Federal Tax Course. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1970.

Production Credit Association. "A Word About Agrifax." 1972.

Production Credit Association. "What Agrifax is Doing for You." 1972.

Production Credit Association. "What Can Agrifax Do for You." 1971.

Pyle, William W., and White, John Arch. Fundamental Accounting Principles. Homewood, Illinois: Richard D. Irwin, Inc., 1963.