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Problem 21 F
American Bookkeeping Series

Bookkeeping and Cost Accounting for the Farm

by *Ernest*
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FOREWORD

The aim of this problem is instruction in the essential features of a general bookkeeping and cost keeping system for the farm.

It is thought that the record plan is simple enough and comprehensive enough to be mastered for practical purposes by many, after writing about forty illustrative entries, model forms, and explanations accompanying them.

In order to be assured of correct costs, a certain program of entry must be followed, otherwise some important item may be overlooked or some obscure item may not be seen.

It is necessary to have a system, and system implies an orderly arrangement of details. One cannot simplify bookkeeping by ignoring troublesome items unless he is satisfied with uncertain results.

This problem has been made as easy as possible for the conscientious student to master. The main purpose, however, is a record plan that is not only easy to learn, but easy to operate in actual use. Speedy record and satisfactory reference involve the use of some special forms with which the student is asked to accustom himself as he proceeds.

The main books are a cash journal and a ledger. These are supplemented by several pocket record forms illustrated through the problem of this pamphlet. The bank check book has attention.

The writer of this problem has availed himself of the suggestions and comments contained in communications with farm managers and instructors, many of whom have made use of his former course entitled "Farm Accounting," copyrighted in 1911. Since that time the development of the double-double entry principle in accounting has smoothed the rough edges of bookkeeping for businesses of great diversity of operation, among which farming is foremost.

Hence bookkeeping is now easier to learn and easier to use than was thought possible ten years ago.

The student who will take time to thoroughly master the points which may seem novel to him will soon see that the whole matter can be covered in very short order.

His ability to compute farm costs in a reliable way will give him an advantage rather unusual at the present time.

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THE AUTHOR.

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PART ONE—OPENING THE ACCOUNT BOOKS PROPERTY

The value of property is the basis of bookkeeping record.

The property should be listed according to kind (further explained later), and the value of each kind should be given. Since value is the important thing to you in your future calculations, you should make note of a few rules for fixing **Book Value** (the value written in your books) in a uniform way, which should **always** be followed.

“Book value” is the cost of buying, making, or growing the thing entered in the books. When the cost cannot be found, the book value may be an estimate or fair valuation on personal property as it stands on the farm. If marketable goods—the cost of selling and delivery to market is to be deducted from market price. If real estate—the book value may be a fair valuation of the land and buildings on March 1, 1913, (U. S. Internal revenue ruling), if the property was obtained prior to that date and records have not been kept.

Special Comment. The ideal time to open a set of books is whenever you can place a correct valuation on all property owned. This is usually after harvest and before planting. The value placed on property at the time of the last income tax return is the basis for a starting point in order that the next annual income tax return will reflect the actual gains of the intervening year.

It is assumed, however, that the system of bookkeeping previously used by you was not such as to show the exact cost of any product, hence it will be impossible to start with ascertained cost. But note this point, that whatever valuation may be placed on property at starting, if the books are kept according to the rules thereafter, the accounts will right themselves and be on an accurate basis as soon as the goods on hand at starting have been sold. Whatever **over valuation** has been placed on property at the start will eventually come out in the accounts as **less gain**, and whatever **under valuation** has been placed on property at the start will come out in the accounts as **more gain**. It is evident then, that the first valuation should be as nearly as possible on the basis of cost of buying or cost of producing.

Aside from the difficulty of making a correct list and valuation of property on hand, one time is as good for opening a set of books as another, and for practical purposes, the time to commence bookkeeping is whenever one has the plan of accounts in mind.

The properties are divided into groups according to kind; and an account is kept of each group. The purpose of the account of property is to show with reference to any one kind, the cost of it, the expenses or losses pertaining to it, and the income or gain derived from it. Generally speaking, the different kinds of property on all farms may all be divided into the same groups, and will have the same accounts in one set of farm books as in another. But it is assumed that each farm manager is likely to push certain kinds of farming differently from the general run, and to that extent he will need different accounts. Thus while one farm manager may consider one single account of "Hogs" all that is necessary to show the cost of all hogs and the gain therefrom, another might want to separate this class of property into two or more groups according to breed, feed, and care, or use made of them in order to show the cost and profit of each group; or he might find it to his advantage to keep a separate account of one single animal. In the present system of bookkeeping, you can divide your property into as many and as small groups as you like, and find with equal facility the cost, loss, and gain of each.

In the following directions for keeping the books, the instructions for opening the accounts are intended to illustrate how the ordinary accounts may be kept, and how additional accounts other than those given in the illustrations may be opened and kept when it is desirable to have additional accounts.

Directions. It is presumed that you are now preparing to open your farm books and these instructions are given to explain and picture each step of opening. The intention is that you write in the small practice blank books every item referred to, and compare your written work with the models. These directions are given to guide you in doing so. While all points of record are considered, several common items of the property are left out for the sake of brevity.

Refer to the property list, inside cover of the practice journal. This list is to be copied as the opening entry for the problem to be written. It consists of an enumeration of things owned with their cost (known or estimated) in the amounts of the first money column, also an enumeration of debts in the second money column, together with the wealth balance, or difference between total property and debt.

Write the heading "Property List of E. A. Atkinson, March 1, 1920" at top of the opposite page and copy the items thereunder, after reading the explanations referring to each in the following paragraphs, which are to serve as reminders in opening any set of farm books as well as in writing the particular items included in this problem.

REMARK. If you are not accustomed to writing on two-column journal paper, write this exercise first on a loose sheet ruled like the first page of the cash journal. As soon as this work is found to be correct, copy it in the book.

1. **Cash.** Loose money should be counted and the amount of money in the bank should be ascertained. Assuming that this has been done, and that the amount is as shown in the model property list, copy on first and second lines of the two-column paper under the heading already written.

2. **Bank Checking Account.** Ascertain your balance in the bank. This will be entered as in the model form.

3. **Bank Savings Account,** and any other cash funds you may have. List the names and amounts as above, (none in this problem).

4. **U. S. Bonds.** Enter each bond separately, giving description and par value. See form.

Other bonds in the same manner, (none in this problem).

5. **Stocks.** Enter and describe each stock certificate that you hold. Stock certificates are entered at cost, (not par value as in bonds), because stocks are simply shares in the capital of some concern which may be worth more or less, while bonds are agreements to pay you a certain amount with interest. See model form.

6. **Life Insurance.** If you have a limited payment life insurance policy or endowment policy, it is worth the paid-in reserve. This is likely to be shown in the "cash surrender value" clause printed in the policy. Enter as shown in model.

7. **Notes Receivable.** Enter each note showing payer, when due, and face. See form.

8. **Accounts Receivable.** If persons owe you on open account, write name and address of each person and the amount owed.

9. **Property for Sale or Consumption.** This may consist of many things under different headings. The items should specify "Cost" if entered at the actual ascertained cost, or "Est." when entered at an estimated value. Be conservative in estimating value. Your income figures will be based on the values at starting as before said. The following will illustrate:

(a) **Produce.** This consists of Wheat, Oats, Corn, Hay, Potatoes, and other grown products now in store. List each separately. Corn and hay are illustrated in the model form. A number of small unimportant things can be lumped as "Miscellaneous Produce."

(b) **Growing stock,** illustrated by

Hogs, which enter at value, hundred weight basis. (See model).

Other items include Sheep, Growing Cattle, etc., (not considered in this problem).

10. **Income Bearing Stock**, illustrated by:

(a) Dairy Cattle. Enter each separately and give value, if practicable. (None at opening of this problem.)

(b) Other Stock or Poultry. Enter at bulk value or separately, according to importance. (None in this problem.)

11. **Property Kept for Operative Use or Service**, illustrated by:

(a) Work Horses and Horse Machinery. List each item, with its cost, or present value if the worse for wear. It is an excellent plan to place numbers on farm machinery and household furniture so as to know them on the books by number. Anything that will help one to a quick reference as to cost of property of a permanent nature will more than pay its way in the ease with which records are kept after they are once started.

(b) Automobiles and Tractors. List separately. Hand power or motor power machinery list separately. (None in this problem.)

(c) Household Furniture. List as in machinery. The numbering plan is good, otherwise one will forget the cost. (None in this problem.)

(d) Other Property. If the possessor of patent rights, copyrights, or other things of value, an account giving the description of same and its value should be opened. (None in this problem.)

12. **Real Property**. A separate account should be kept with each separate piece or parcel; for example, each farm operated separately, each piece of land owned as an investment or speculation, each separate renting property. The heading should give description of the property and the value of buildings should be entered as separate items from the land. See form.

REMARK. Real property refers to land, buildings, and permanent improvements on the land as compared with personal property; i. e., things that may be moved, carried, or conveyed about.

After you have entered all property that you own at as carefully found value as possible, add the list and leave totals in pencil just below the last item, as in the form.

DEBT LIST

The debts will be entered in the right column in the same way that property was listed in the left column.

13. **Notes Payable**. Enter each note, giving name of payee, date due, and amount. See model form.

14. **Mortgages Payable**. See model form.

15. **Accounts Payable**. Enter names and amounts of persons whom you owe. See form.

16. **Other Debts.** Enter any amounts owing to anyone (none in this problem).

After debts are entered, total them as you did the property.

WEALTH

Find the difference between total property and total debt. This difference, or balance, is the amount of your wealth at this time. Place this amount under the debt total, after which rule and total both columns equally.

Problem Directions. For the purpose of this problem, the model property list which you have copied is to be considered the opening record of the bookkeeping system now to be developed.

THE LEDGER

The list of property, debt, and wealth balance, or "statement of condition" as it is commonly called, is now to be recorded in the ledger. Each kind of property or debt will be given a **separate account**. The purpose of account division of the total wealth is to make a place for each appreciable part, where there will be constantly before you the figures showing whatever of value owned or owed and whatever of loss or gain there is connected with it. This exhibit is made on the four columns of the "double-double" ledger.

Problem Directions. In this problem, the accounts will be condensed in as small space as practicable by using the small practice ledger. Preparatory to opening the ledger accounts, write the account names on the left side pages opposite the model printed account names on the right side pages. Where account names are written below the top, rule double head lines across the page as in model. It should be understood that if a loose leaf ledger were used, each account of a permanent character would have a separate numbered leaf, and the numbers skipped are for the insertion of account leaves to be opened in the future.

The Accounts. The name of the account is written at the top. The account name is descriptive or indicative of (a) some part of one's property as "Cash," "Corn," "Work Horses," "John Smith" (meaning our right to collect money from John Smith), "Notes Receivable," etc.; (b) some parts of one's debts as "Notes Payable" (notes that one is obligated to pay to others), "Henry Jones" (meaning one's obligation to pay money to Henry Jones), etc.; (c) some kind of loss that is connected with the business as a whole and is not associated with any one part of the business, as "Business Expense"; and (d) some kind of gain that is not connected with any one part of

the business, of which an example is "Income from salary or wages." (See account names in model ledger.)

The date of an entry in the ledger is placed to the left side, followed by the memoranda, and that by a column headed P. M. (post mark), referring to the leaf number or page of the journal from which the item was posted.

The use of the four columns in the ledger accounts may be thus briefly described and illustrated.

Referring to Property Accounts. Turning, for example, to model account No. 40, headed "Corn," on page 7 of your ledger, we have a property account. It originates in column A (property obtained column), where the first entry shows that corn on hand (regarded as obtained at the time of opening the books) amounts to 950 bushels at an estimated cost to raise of \$1.25, making the total book value \$1,150. All property accounts originate in column A—the "property obtained" column. An entry on March 5 shows the sale of 100 bushels at \$1.40, amounting to \$140. The entry for the cost of the corn sold is made in column B (property reduced). In an entry of property reduced, the amount is **always** at the same value as was previously entered when the property was obtained; that is, property reduced is always entered in column B at book value. The difference between book value and proceeds of sale, in this case \$15, is entered in the gain column.

Later on is an entry in the loss column showing the loss or expense of marketing the corn sold. The account illustrations are not all of them complete, but all entries illustrated are exactly the same as you are expected to write.

This account will serve to illustrate the entries for all property accounts as kept by double-double entry, namely:

Col. A shows the cost of the property obtained.

Col. B shows the cost of the property reduced.

Col. C shows the loss connected with the property.

Col. D shows the gain connected with the property.

Col. A—Col. B=the cost of the property remaining.

Col. D—Col. C=the net gain on the property; or,

Col. C—Col. D=the net loss connected with the property.

The above covers the essential features of the "double-double" entry property account.

NOTE. Debt accounts, exclusive Loss and exclusive Gain accounts will be explained in like manner when the first account of each kind is taken up, thus completing the four kinds of accounts.

LOOSE LEAF SYSTEM. Practically all of the accounts, except accounts with persons, are expected to continue year after year indefinitely, so that opening the accounts is making a permanent record. When a loose leaf ledger is

used, the account leaves are to be written on the side up when the paper lies to the left of the binding rings, or near the journal. When one side of an account leaf is filled, the account leaf is turned, or reversed, by binding at the opposite end of the leaf. By this means the side of any leaf in use is always up while close to the journal. When any account leaf "No. 1" is filled on both sides, the account is continued on another leaf which bears the same account number, but is "leaf No. 2." Thus the same account may continue through leaves Nos. 3, 4, 5, etc. Your practice ledger, though a bound book for convenience in working this problem, will have accounts numbered on the loose leaf plan.

Directions. In the property list which you took, the values of all property that you now own is to be entered in column "A" of their respective accounts. In order to associate "A" with property value, write "A" at the top of the first column of your property list, and write "B," which stands for debt accounts, at the top of the second column of your list. (This list is also your "financial statement," "statement of condition," or "opening entry" of your journal, whichever one cares to call it). Now post the "A" items of your list to the "A" column of the ledger accounts, as the model list is posted to the model accounts.

If you have not already done so, write the account name "Cash" at the top of account No. 1. The page of your practice journal will be the same as is used for the model entries printed opposite. Then on the first writing line of the account, write under "date," the date of the list, (do not forget the year at the top); under "memoranda," amount on hand and in bank; under "P. M." (post mark column), write the journal leaf number "1," and in money column "A," the amount. When you have posted this item, write before the amount in the journal (the list in this case) the account number and a check mark (✓). The check mark in the journal means that the item is posted. See model journal and model ledger account.

When an account is opened it should be indexed. Indexing will be omitted in this problem, since the account names and numbers have been printed on the front cover, which you may use as an index.

Plan of Accounts. The plan of accounts refers to the account subdivisions adopted, and the order in which they appear in the ledger. We here use the same order that would be adopted if an accountant had drawn them off in a statement. This order has already been observed in the list, journal leaf "1." It can be followed in a loose-leaf ledger, but not in a bound ledger; for when new accounts will be opened sheets can be inserted at any place in a loose-leaf ledger, while in a bound ledger this is impossible.

Account numbers 0-99 are reserved for accounts of property, the "A" list. The accounts of property are subdivided further:

Nos. 0-39—Cash and cash items (notes, stocks, bonds, accounts receivable).

Nos. 40-59—Produce and growing crops.

Nos. 60-79—Growing stock.

Nos. 80-89—Stock or other property kept for direct income.

Nos. 90-99—Labor, work stock, machinery, and farm land, the expenses of which are distributed to cost of products.

Account numbers 100-199 are reserved for accounts of debt, the "B" list. The accounts of debt, and a few general expense or income accounts placed in the same section, are subdivided further:

Nos. 100-109—Notes and mortgages payable.

Nos. 110 forward—Accounts payable.

Nos. 199 backward—General income or expense accounts.

Account No. 200 is reserved for the account of the wealth balance.

NOTE. Accounts of loss or gain, the "C" and "D" lists, automatically follow the "A" and "B" lists and need very little further attention except as to some three or four accounts of a general nature.

Accounts are placed as nearly as may be in statement order, with skipped unused numbers for the insertion of leaves for new accounts in sub-group order which may be opened from time to time.

NOTE. This arrangement is permanent and satisfactory with one possible exception, which will never come up on the ordinary farm. If accounts to be collected from persons exceed about forty in number, they had better be taken out of this ledger and placed in a separate "auxiliary" ledger. With the exception of personal accounts, the present ledger is large enough unless in very exceptional instances.

No. 5. U. S. Bonds. Post, post mark journal, and index as in model.

NOTE. In a loose leaf ledger, turn one leaf to left side and open this account, giving it the number 5. Do not leave any unused leaves between those that are opened. If in future an account should go between used leaves, it can be inserted.

The memoranda in ledger should be complete. See model. War Savings Stamps can be placed in the same account; or if you are buying them regularly, better give them another leaf and number.

No. 6. Stocks. Give stock shares number 6. See model. Post and post mark.

No. 7. Life Insurance Policy. Give each policy a separate account and, of course, a separate account number. Post as in model.

No. 8. Notes Receivable. Each note should be recorded separately in the same account showing payer, date due, and amount, with any other point of information as interest rate, etc., if you think advisable. See model.

Nos. 10 to 39. Accounts Receivable. Give each account a leaf number, or if it is likely to contain only a few entries, place several on the same leaf and give them the same leaf number.

NOTE. If the accounts with several persons contain only one item to be paid all at once, as some fee for services, or the like, have all such on one account leaf headed "Sundry Accounts Receivable," and give each man's name and amount one line, writing the name in the memoranda space, as you did in the case of notes receivable.

Nos. 40 to 59. Produce. Keep an account of each kind that is of sufficient importance to occasion separate inquiry as to its cost or value and the loss or gain connected with it; for example, corn, oats, wheat, potatoes, and lump minor items in "Miscellaneous Produce," giving each division a separate leaf and number, using numbers from 40 to 59, inclusive. See model accounts Nos. 40 and 41. Post to your ledger as there shown.

Nos. 60 to 79. Growing Stock. We allow twenty numbers for growing stock. This may or may not be enough. However, there are plenty of other leaves. On a large diversified farm, account Nos. 11 to 39 may be brought into this section by putting accounts receivable into a separate book. The idea is to separate these divisions so that all under one division will occupy one section of leaves.

The growing stock accounts are intended for a record of the cost and loss or gain connected with any particular group on which figures are wanted. This may be a pen of fattening steers or a single animal. Exclude from growing stock such stock as is maintained for use or service, such as work horses and milch cows, which come under the same rules as machinery.

Account No. 60 illustrates all hogs grouped together. Post as in model.

Income Stock. Accounts Nos. 80 to 89 are kept for stock that is maintained for the direct income derived therefrom. Account No. 80, "Dairy Cows," is an example.

Accounts Contributing to Farm Operations. These are given the section numbers 90 to 99. They consist of the group of accounts that involve losses which by routine entry are to be apportioned to farm products, or farm maintenance.

REMARK. The model forms of accounts Nos. 91 and 99 do not contain all items which should be made by the student. Later on it will be seen that a number of the student's entries are not illustrated in the model accounts.

DEBT ACCOUNTS

The debt accounts are given numbers 100 up to 199. They show amounts to be paid to others.

Comment on Debt Accounts. Turning, for example, to account No. 100, "Notes Payable," we have a debt account. It originates in column B (debt incurred), where the entries on March 1, first and second lines, describe two notes, as to whom payable and date due,

with amounts in column B. On March 14 is an entry showing that the note due on that date was paid. The face of the note is entered in column A to cancel the previous entry in column B. It is further seen in column C that the payment of the note included \$1.58 interest (a loss). This will serve to illustrate the entries for all debt accounts as kept by double-double entry, namely:

Column B shows amounts of debt incurred.

Column A shows amounts of debt reduced.

Column C shows loss connected with the class of debts named in the account heading.

Column D might show any gain—very unlikely—unless one were to make a compromise settlement.

Column B less Column A = amount of debt remaining.

Column C less Column D = the loss connected therewith, usually interest on notes payable, but possibly fees and expenses of obtaining loans.

No. 100. Notes Payable. Post as shown in model.

No. 101. Mortgage Payable. Entered as notes payable. Each mortgage should have an account by itself, as there will be many interest payments to record.

Nos. 110 to 199. Accounts Payable. See accounts receivable for general arrangement. Post as shown in models.

WEALTH

No. 200. Wealth Balance. This account is a summary of the whole. It shows (1) the amount of the owner's interest or equity in the entire concern on the date of opening, and (2) the revision in the net wealth once a month. It may be thought that it is unnecessary to show net wealth more than once a year as in ordinary bookkeeping. But the "double-double" system discloses change in net wealth by routine entry once a month. When the figures of one's net wealth come up automatically, there is every reason to take a line in the account to set them down. In fact, it is a good idea to see where one stands once a month, even in farming, if the exhibit involves no appreciable extra labor.

NOTE. The net wealth balance is placed in the "B" column along with debt amounts. This is not because net wealth is regarded as a debt. It is simply the summing up of all property less debt, and the amount goes in the debt side to show by how much the property exceeds the debt. If one's debt exceeded his property, the balance in this account would be placed in the "A" column and the name of the account would be changed to "Insolvency Balance."

REMARK. All ledger accounts should be indexed. In the present prepared problem, the index to the accounts is printed on the cover of the ledger so that this part of the work may be omitted by the student. The present pur-

pose is the mastery of the record and account plan. Attention to the main purpose necessarily causes a number of details to be passed over with slight consideration.

Ledger Proof. The bookkeeper's ordinary proof of posting is the "trial balance." The trial balance is a list of all account totals in the "A" columns against all account totals in the "B" columns of the accounts. The one total should equal the other **if the posting is correct.** You have observed that the column "A" total equaled the column "B" total in the statement. Consequently, if all are posted from the statement (which will be filed away as journal leaf No. 1), the journal "A" amounts in the ledger "A" columns and the journal "B" amounts in the ledger "B" columns—the ledger should balance also. Before trying the ledger, look through accounts that have several items, and place the sum under the items in pencil, red ink, or in some way to distinguish totals from posted figures. In the printed models, smaller type is used for footings. Then sum up all "A" and "B" amounts. If they are equal, you may consider the posting probably correct. If they are not equal, you may have (1) posted an "A" amount in a "B" column, (2) posted some amount using the wrong figures, or (3) failed to post something. In any case, the posting should be reviewed and the mistake found.

A correct trial balance of the model accounts follows:

TRIAL BALANCE MARCH 1, 19—

	A	B
1. Cash	\$ 352.84	
5. U. S. Bonds	1,500.00	
6. Stocks	6,010.00	
7. Life Insurance Policy	1,850.00	
8. Notes Receivable	189.89	
10. John Carmody	26.71	
11. Peter Olson	76.20	
40. Corn	1,150.00	
41. Hay	1,484.00	
60. Hogs	427.50	
91. Work Horses	575.00	
99. Farm Real Estate	43,297.50	
100. Notes Payable		478.34
101. Mortgage Payable		8,000.00
110. Gage Mercantile Co.		167.43
200. Net Wealth		48,293.87
	<u>\$56,939.64</u>	<u>\$56,939.64</u>

Comment. Opening a set of books so that the accounts reflect the true condition is the most difficult part of bookkeeping. You have done this. You have stated the financial condition. The other phases to be mastered are **making the current entries** and **distributing the costs**. Whenever one buys, sells, collects, pays, works, when things grow, fires occur, lightning strikes, or any operation of man or nature affects the property, there is increase or decrease in the value of some part or parts of the total property, or, as we say, a change in financial condition. These changes are recorded and the amounts in dollars and cents of the changes are posted to the accounts. The purpose of current records is to narrate the operations affecting the property, and to indicate in the accounts the changes of value resulting therefrom.

THE JOURNAL

The "double-double" journal is planned for the first records and entries of the business operations. The entries are posted from the journal to the ledger accounts. The model journal illustrates the style to be used. One should become thoroughly familiar with the action of the journal he uses, as he should be with any other tool he tries to work with.

The month and year are written at the top of the sheet and the day of the month is written in a column headed "Day of Month."

The space of the journal sheet to the right of the column headed "Check No." is the journal proper. The journal entry begins with a record of the particulars of the transactions written in the space headed "Memoranda." The date is written in the column headed "Day of Month." After the date column is a column in which are written the names of the accounts to which the amounts are to be posted; and after the space for account names and numbers, the amounts are written in the four money columns.

These four columns correspond with the four columns of the ledger accounts, and any amount in the journal "A" column will be posted to the ledger "A" column, "B" in journal to "B" in ledger, and so on.

One exception to exclusive four-column entry is to be noted. The cash account (a property account) is taken out of the general "A" and "B" columns and placed to the extreme left. This is for immediate reference to the cash account in order to see without posting the cash balance, which includes both money in pocket and in the bank. Column 1 is followed by "(A)" "cash received" or "property obtained"—the "A" meaning that its total will be carried to the general column "A" at the end of the month. Column 3 is followed by "(B)" "cash paid" or "property reduced"—meaning that the total

of this column belongs to the "B" column, to be carried to the general "B" column once a month.

Column 2 is merely memorandum.

In referring to entries, it appears that the time-honored book-keeping terms "Debit" and "Credit" will not permit as effective explanation as direct reference to columns by the names "A," "B," "C," and "D." Those versed in bookkeeping will recognize columns "A" and "C" as "debit" columns, and columns "B" and "D" as "credit" columns. The terms used in the following complete scheme for double-double entry record are the letters designating the four columns.

RULES FOR ACCOUNT ENTRY

Rule 1—"A" Column. On opening the books, the value (cost) of all property possessed at the time of opening is entered in the "A" column.

After opening the books, the value of all property obtained is also entered in the "A" column.

After opening the books, the amount of debt reduction (payment or otherwise) is placed in the "A" column.

Briefly, after books are opened, entries in the "A" column are used to show

Property obtained, or Debt reduced.

Reason. Either property obtained or debt reduced is equivalent to wealth increased. The "A" column in its last analysis means wealth increase.

Rule 2—"B" Column. On opening the books, the amount of debt is placed in the "B" column.

After opening the books, any debt incurred (new debt to be paid) is placed in the "B" column.

After opening the books, any reduction (sale, transfer, or loss) of property is placed in the "B" column.

Briefly, after books are opened, entries in the "B" column signify

Property reduced, or Debt incurred.

Reason. Either debt incurred or property reduced is equivalent to wealth decrease. The B column means wealth decrease.

Rule 3. To make account entry for any business operation or transaction:

(1)	After the account name, write in column A	{ The amount of Property obtained or Debt reduced.
(2)	After the account name, write in column B	{ The amount of Property reduced or Debt incurred.

(3) If the amount in B exceeds amount in A, place the difference in column C (loss).

(4) If the amount in A exceeds amount in B, place the difference in column D (gain).

The above is a formula for all entries.

Reason. An entry in column A indicates wealth increased; an entry in column B indicates wealth decreased. If, in a given transaction, the wealth increased is greater than the wealth decreased, the result is gain, entered in column D; but if the wealth increased is less than the wealth decreased, the result is loss, entered in column C.

Rule 4. When property is obtained (by purchase, manufacturing, growing, or gifts, etc.), entry is made in column A at cost (or estimate if cost cannot be found). When the property is reduced (by sale, wearing out, loss, destruction, etc.), entry is made in column B also on the basis of cost, or book value (the value previously placed in column A).

Reason. By carrying the different kinds of property on the books at cost, when property is sold or offered for sale, the owner can see from the account how much profit or loss results or would result from the sale. One should be very careful to have accounts that can be depended upon when it is desirable to know what any article or product costs.

From the above it is apparent that books kept according to the "double-double" entry principle will at all times show the value of property, the amount of debt, the amount of loss and the amount of gain, and will locate each.

The reliability of this exhibit depends upon the care with which the routine is followed. Without introducing prolonged discussion, we would say that if one starts books with only substantial correctness, the keeping of the accounts will soon develop a perception of values that will result in the farm books being as nearly "up-to-the-minute" in exhibiting results as the books of a well regulated factory.

We now turn to typical entries which are designed to cover, or rather suggest ways to cover all conditions of entry. Typical entries are here treated in Parts Two to Five.

PART TWO—TYPICAL ENTRIES (Referring to Sales)

NOTE. Profit is determined only at the time of sale. Imaginary gains due to fluctuation in prices are not entered in the accounts.

Preliminary: Place the cash balance (ledger account No. 1) in journal column 2. Memorandum merely.

March 2. Sold U. S. Bond #J1209361 for cash, \$519.43. Enter in journal the day of month and the memorandum as in model form.

What property was obtained or debt reduced? Answer, cash was obtained \$519.43; no debt reduced. Place the amount of cash received in column 1 (A). Placing an amount of cash in column 1 (A) is equivalent to placing the amount of any other property in the general column A.

Column B Entry. What property was reduced or debt incurred? U. S. Bonds were reduced by parting with the bond mentioned. Looking at the U. S. Bonds account No. 5, you will see that the book value of the bond sold is \$500.00. Therefore, enter in B as follows: "U. S. Bonds"—"5"—"\$500.00."

Loss and Gain. If the entry in column A exceeds the entry in column B, the result is a gain. If the entry in column B exceeds the entry in column A, the result is a loss. Find the difference (gain in this instance) and place in column D.

PROOF TO BE REMEMBERED. In any entry correctly made,
 $A + C$ will equal $B + D$.

At present, for sake of illustration, please post all entries as soon as made.

Cash Account. The cash entry is in a special column which is a monthly cash account so it need not be posted. You should, however, add the cash receipt to the previous balance and place the new balance in column 2. Hereafter make memorandum of the new balance in this column when cash is received or paid.

U. S. Bonds Account. Turn to account No. 5 of ledger. The entry is shown in the model. Post journal B item to ledger B column, and the gain to ledger D column. Check to show posting done.

REMARK. Property reduced by sale is credited at book value, and the difference between book value and the amount obtained for it is placed in the loss or gain column. Write "sale" in the item space just before the gain amount to indicate the nature of the gain. Place X marks before the two canceling entries to show that the value in Col. A is canceled.

March 3. Sold for cash, 10 shares Pawnee stock for \$826.50.

Entry. Property obtained: Cash \$826.50; Property reduced: "Stocks—6—\$890" (book value); loss \$63.50, column C. Post. Compare with models, journal and ledger.

March 4. Sold my note against John Guild to the bank for cash \$145. Enter in column 1 (A), cash obtained \$145; B, Notes Receivable reduced \$149.89; C, Loss \$4.89.

REMARK. In the ledger, if any B item can be identified with the corresponding A item, both are canceled by "X" marks.

Also observe that in the ledger account loss and gain columns, a brief comment like "Dis." (discount), "Int." (interest), "Sale" (meaning loss or gain on the sale), "Taxes," "Dep." (meaning depreciation), and other brief explanations

are and will be jotted down to explain the nature of the loss or gain. These brief explanations may be referred to at any time. They are sometimes convenient in explaining items included in an income tax return.

March 4. Received from John Carmody \$26.71 in full of account. Enter cash obtained in column 1 (A) and "John Carmody" (our claim against him which is property reduced) "10—\$26.71" in column B. There is no loss nor gain. For posting see models.

REMARK. When a personal account is settled, it is customary to draw lines across money columns A and B, thus closing the account. Do not draw lines across columns C and D until the close of the year.

March 5. Sold Peter Olson on account, 100 bu. corn for \$140.

This is the first entry so far considered that involves no cash received or paid. In entries, always consider first the entry of column A. What property is obtained or debt reduced? In this instance property is obtained. Our right to collect \$140 from Peter Olson is property. The account name is "Peter Olson," No. 11 in ledger, and the amount in column A.

Next, what property is reduced or debt incurred? Corn, account No. 40, is reduced. How much? Turn to account No. 40 and there find that the book value of corn is \$1.25 per bushel, or \$125 for 100 bushels. Place the account name "Corn" on the next line under "Peter Olson," the account No. "40" in the account number column, and the amount corn is reduced, \$125, in column B.

In this transaction, which is greater, the property obtained (in column A) or the property reduced (in column B)? A is greater than B, therefore, the difference is "gain." Place \$15 in column D.

On which line? Opposite the \$140, or opposite the \$125? Loss or gain is always connected with the thing sold, in this instance corn, hence place \$15 in column D opposite "Corn." The two amounts, property reduced \$125, and gain, \$15, will be posted to Corn account. Does the entry balance; that is, does amount of columns A + C equal amount of columns B + D? For posting, see model ledger accounts opposite respective ledger pages.

March 6. Sold Wm. Flynn on his note due July 6, 10 tons clover hay at \$15 per ton.

The particulars take two lines for entry, observe the form for future similar entries.

Accounts. A (obtained) "Notes Rec.—8—\$150.00"; B (reduced) Hay, 10 tons (*a* \$10.00 (book value) \$100; gain \$50.00. (See model accounts 8 and 41).

March 7. Sold for cash 1,480 lbs. hogs for \$167.60. (Column B, Hogs reduced, book value \$9.50 per cwt.). See model entries.

March 8. Made even trade, receiving dairy cow "Cress" in exchange for work horse "Dan."

Since no money passed hands and no value is named, the dairy cow obtained costs the book value of the horse given in exchange. This can be found in account No. 91. There is no gain nor loss. Gain is determined when things are sold.

Directions.—This is the first dairy cow on the farm. Open “Dairy Cows” account No. 80.

Then after you have made entry in the journal, post to the ledger.

Review. The above entries serve to illustrate, (1) that a credit entry in a property account is made to annul in part or wholly a previous debit entry, (2) that profit is found only at the time of sale of property, (3) that to find the profit or loss, the cost (or assumed cost) must be already shown on the books.

The person following these lessons will observe that in the explanatory matter to this point, cost (or estimated value) was considered first, followed by sale entries. These two kinds of entries are the extremes between which the farm operations will require some entries in order to keep a record of the cost of things produced for sale, and incidentally to keep up the cash collections and payments.

It is not difficult to see that the main problem ahead is how to find the cost. This will be taken up in its proper order.

Closing the Journal. The journal is closed once a month. For the sake of the practice, you may now close the journal on March 10th and will close it again on March 20th as though at the end of a month.

First observe in the special columns 1 (A) and 3 (B) whether any cash has been received or paid out. Some cash has been received, but none has been paid out. Add column 1 (A) as shown in the form, and carry the total to the general column A. Post this total to the ledger cash account No. 1. See models.

Place the difference between columns A and B in the lesser column, preceding it by the account name “Wealth Balance, No. 200.” Place the same amount in the lesser of columns C and D.

Rule and total the four columns. Columns A and B should be equal; so should columns C and D.

Closing the Ledger. Post the final “Wealth” entry in column B to the wealth account in the ledger column B, and the amount in column C to the same column of the same account. The ledger is “closed.”

Balance Sheet and Income Statement. Take four column paper, heading the columns A, B, C, and D, and going through all the accounts, place the totals of each account as instructed to do in making model trial balance on page 20 with this additional requirement: Place the differences between the totals of columns A and B of each ledger account in whichever column is greater, and likewise the dif-

ferences between C and D of each ledger account in whichever column is greater. Then rule and total. Column A = column B, and column C = column D. If so, all is well.

The four column trial balance after closing is the equivalent of what is generally known as a "balance sheet," i. e., columns A and B; and what is commonly known as a "Profit and Loss" or "Income" statement, columns C and D.

Balance Sheet and Income Statement, March 10, 19—.

	A	B	C	D
1. Cash	2,038.08			
5. U. S. Bonds	1,000.00			19.43
6. Stocks	5,120.00		63.50	
7. Life Insurance	1,850.00			
8. Notes Receivable ...	190.00		4.89	
11. Peter Olson	216.20			
40. Corn	1,025.00			15.00
41. Hay	1,384.00			50.00
60. Hogs	286.90			27.00
80. Dairy Cows	120.00			
91. Work Horses	455.00			
99. Farm Real Estate...	43,297.50			
100. Notes Payable		478.34		
101. Mortgage Payable ..		8,000.00		
110. Gage Mercantile Co..		167.43		
200. Wealth Balance		48,336.91	43.04	
	56,982.68	56,982.68	111.43	111.43

Suggestions and Questions. The person of little experience in bookkeeping who has followed the work thus far may have received the impression that bookkeeping is a rapid succession of opening accounts, taking trial balances, entering a few transactions, and again taking trial balances and balance sheets. This is not the case. You have been hurried through the first circuit of accounting technique (by the "double-double") in very short order. The proper perspective is this: The books are opened **once in a lifetime**. The journal, and with it the ledger, are closed **once a month**. The four column trial balance, or balance sheet and income statement, is taken off once a month, if desired, or once a year, as a great many will prefer to do.

But whenever it is taken, you have before you on one sheet:

Column A, the kinds and book value of your property.

Column B, the kinds and amounts of your debt.

Column C, the sources and amounts of your losses.

Column D, the sources and amounts of your gains.

This is a statement that will show you or your banker where you stand financially. You can fill out your U. S. income tax return in a few minutes from column C and D. If all points are not perfectly clear to you, the best suggestion the author can make is that you start all over at the beginning and write this matter through step by step as though for the first time.

Having thus made an accounting circuit, we shall turn back in the directions following, and examine the phases of bookkeeping not yet sufficiently dwelt upon; namely, the different aspects of entry for current transactions and productive operations.

SPECIAL BOOKS

Certain kinds of entries are more conveniently made in a pocket memoranda book before being written in the journal. Among such records are the check stub entries for checks issued, the entries for currency payments, labor time records, and feed records. Such records are written in the pocket memoranda book wherever one happens to be, and transferred therefrom to the journal once a week or once a month, as suits the purpose.

The Check Book contains on the stubs a record of deposits, checks drawn, and the balance remaining in the bank. The balance shown on the stub of the check book plus currency on hand at any given time should equal the balance carried by memorandum in the journal column 2, or if this column is neglected, it should equal the balance shown in the cash account when that account is balanced, usually once a month. Opening to your first check stub, write in the "balance brought forward" \$291.64, as shown on the property list at starting. Since the cash balance now is \$2,038.08, the difference between the total cash and the amount shown on check stub, \$1,746.44, must be carried.

Entry. You will now consider that all money has been deposited in the bank except \$100 to be carried in pocket. The deposit, \$1,646.44, should be written on the stub by the one carrying the check book, and the total carried down to the third line.

The Pocket Cash Payment Book is a memorandum book in which should be written any payments made in money. The amount of all such payments during a month is entered in the journal at the end of the month. By this means, the small payments of a month are placed in one entry in the journal. This book has only one money column that we shall consider; namely, column "B," cash "paid out" or "reduced."

PART THREE—TYPICAL ENTRIES (REFERRING TO BUYING, CASH, AND BANK)

Place the cash balance as shown in ledger account No. 1 in column 2 of journal, leaf 3, above the first writing line. See model. Hereafter, this preliminary should be attended to on the first of every month.

March 11. Enter check No. 40, \$127.50, given to John Donner for a work horse "Bob," seven years old.

Check Book: It is assumed that the check book has been in continuous use and checks previously issued have been numbered up to No. 39. The check for this transaction is written first. First fill the stub. The number "40" is written after "No." on check stub and on check form. Then on the stub the amount, \$127.50, date, to whom given, and for what. Then subtract the amount of the check from the total balance shown on the stub, leaving a remainder which is carried forward to the "Balance Brot. Forward" space of the next following stub.

The check is then filled out and signed; after which it is detached from the stub, and the check handed to Mr. Donner.

Hereafter, in the instructions, when a check is referred to, attend to these details before making the entry. By this means the bank balance will be kept before you on the check stub.

Journal Entry: The entry in the journal is made from the stub. Place the amount in column 3 (B), the check number in the column immediately following, and the name of the person to whom payable directly after the number. Always follow this order in recording checks on the journal. Then finish the entry. Reduce the balance in column 2.

March 12. Bought a dairy cow, "Lily," of Wm. Cressy, paying \$140.00 by check No. 41.

Same style of entry as on March 11.

March 13. Issued check to Gage Mercantile Co. for the balance due them. See amount in ledger. Rule across personal account columns A and B when the account is closed. Never rule across loss and gain columns until the end of the year.

March 14. Issued check No. 43 for \$304.58 in payment of note, face and interest, due today.

Explanation.—Referring to ledger account of Notes Payable No. 100, it may be seen that the debt stands on the books at \$300.00.

Entry. Column 3 (B) \$304.58; column A, \$300.00, the difference, or \$4.58, is entered in column C. The amount \$4.58 is interest (loss).

March 15. Collected cash from P. P. Dahn for face and interest of note due today \$40.65.

Entry: Cash obtained is entered in column 1 (A) and the balance in column 2 is increased accordingly. The property reduced (note surrendered) in column B at the same amount as standing in the

ledger account. The A column entry less B column entry leave the D column entry of 65 cents, the interest (gain) collected on the note.

March 16. Received cash \$100 from Peter Olson on account. Enter in columns 1 (A) and B. Post.

March 16. Deposited \$140.65. No journal entry is required. Enter on check stub No. 44 and add to bank balance.

March 17. Enter check to W. B. Bennett for "horse machinery" purchased at a sale as itemized in the following list:

1 Gang Plow for	\$ 62.50
1 Walking Plow for	21.00
1 Disc Harrow	18.00
1 Farm Wagon	82.00
1 Corn Planter	58.00
1 Set Double Harness	48.25

Total \$289.75

An entry may be made as in model journal. "Horse Machinery" account will be given No. 92. The items can be entered directly in the ledger account without listing them in the journal.

Work horses and horse machinery are carried in separate accounts for review purposes, although the entire loss expenses of both, including feed, repairs, and depreciation, will be distributed to production on the basis of horse hours.

ILLUSTRATION. A "horse hour" means the work of one horse during one hour. Thus a single horse working eight hours would work eight horse hours. A team of five horses working eight hours would forty horse hours. Assuming that during the entire year all horses on the farm work 4,000 horse hours, how would one find the cost of one horse hour? Looking at account No. 91 for the year, it is assumed that the expense (loss) of work horses there shown during the year may be \$940.00; likewise in account No. 92 it may appear that the expense (loss) on horse machinery during the year may be \$60.00, making a total expense (loss) on work horses and horse machinery of \$1,000.00. Divide the expense by the number of horse hours, and the result is the cost per horse hour, in this illustration, 25 cents.

March 18. Bought of A. Wendling & Co., paying by check, 400 lbs. bran @ \$1.70 per cwt.

This purchase is for feed supplies. Open account No. 59 "Supplies Bot" and post this item to that account, showing quantity and price per cwt. Hereafter charge mill feed, salt, and in fact all purchased feeds, etc., for animals, as well as oils, grease, etc., for machines, to this account. These purchases, when important, should be itemized, for the charges later will be transferred to dairy, horses, hogs, machinery, or other accounts in accordance with the use made of the supplies.

ILLUSTRATION. The 400 lbs. bran purchased was charged to "Supplies Bot" temporarily, or until the bran is either fed or otherwise disposed of. Suppose that later the feed record shows that 300 lbs. bran was fed to dairy cows, and 100 lbs. bran was fed to hogs. An entry would be made in "Supplies Bot" account, column B, showing the amount the supplies were reduced, while corresponding entries in the accounts of "Dairy Cows" and "Hogs" would show the latter named accounts charged with the bran obtained by them. Likewise the intention is that all items charged to "Supplies Bot" eventually will be transferred out of this account and charged to the accounts that will show the consumption of the supplies.

March 19. Made three sales which you will enter separately as directed in previous sales:

12 tons timothy hay @ \$18.00 for cash.

2 tons timothy hay @ 18.50 to J. Carmody on account.

10 tons clover hay @ 15.00 for cash.

March 20. Closing the Books. The books may now be closed in order to illustrate the added monthly routine connected with the check book and the pocket cash book (see form on page 25).

It is assumed that you have entered money payments (not checks) in a pocket cash payment book. The entries made therein are represented in the following form, which shows the date, kind, and amount of each payment, the total amounting to \$82.17. Under the total, double lines are drawn to indicate that the book is closed to that point.

Below the total, the items are analyzed for entry in the journal under two general heads, "Living Expense" and "Supplies." The items going into "Living Expense" are grouped under two subheads, "groceries" and "clothing," since the grocery expense will be considered separately in finding the cost of the board of farm hands. In like manner the large item "oats" is separated from small miscellaneous items going into supplies.

Now make a journal entry of all pocket cash expenditures as shown in the model journal, and post.

Explanation.—The property obtained, supplies, is placed in column A, and the property reduced, Cash, is placed in column 3 (B). The groceries, clothing, etc., obtained are a loss to the business; that is, they are regarded as consumed by the owner or his family, as soon as they are bought; this is indicated by making a charge to "Living Expense." Cash or property lost (to the business or farm) on living expenses will be given a separate account, which will normally run on the C column only.

Open account No. 199 headed "Living Expenses," and post the amount \$46.17 in two items, "groceries" and "clothing," to this ledger account in the C (loss) column.

Also post the items chargeable to "Supplies Bot."

19— No. 1
CASH PAYMENTS B

DATE	ITEM	AMOUNT
3	Groceries	1290
5	Clothing	327
7	Groceries	210
12	Groceries	1024
19	40 bu. Oats @ ⁸⁰	3200
20	Clothing	1766
20	Supplies-Misc)	400
		8217
	Analyzed:	
#159	Living Exp - Clo.	2093
	" " - Gro.	2524
#59	Supplies - Oats	3200
	" Misc)	400
		8217

Now transfer the special column totals: Draw addition lines and beneath them place the total column 1 (A), the total of 3 (B).

Proof of Cash Balance: Add the amount in column 2 at starting, \$2,038.08, to the total of column 1 (A), \$506.65, and from this subtract the total of column 3 (B), \$1,118.23. The remainder should equal the balance as you have it at the end of column 2, or \$1,426.50. This is done merely as a proof that your cash balance in the memorandum column 2 is right.

Carry the amount of column 1 (A) to column A and the amount of column 3 (B) to column B. Post Cash A and B on one line.

Add all columns and find difference between the totals of columns

A and B, which place in the lesser column to be posted to Wealth Balance; also find the difference between columns C and D, which should be the same as the difference between columns A and B. If found correct, place the amount in the lesser of the columns C and D.

Rule and total columns A, B, C, D. A should equal B, and C should equal D.

Post Wealth balance to account No. 200.

REMARK. Adding Wealth together shows that you are now worth \$48,421.81, and the balance total in column C shows that gains in the various accounts have exceeded losses \$127.94.

Balance Sheet. A balance sheet like the one taken on the 10th may now be written.

This balance sheet shows the book value (assumed to be the cost) of all property; the amounts of all debts; the losses and gains connected with the property or debt from which they were derived, and the owner's Wealth Balance and Living Expense balances as separate items.

PART FOUR—MISCELLANEOUS ENTRIES

March 21. (Illustrating income from property). Received cash from the following sources:

Quarterly interest on U.S. Bond #9445126 (Acct. No. 5, col. D) \$ 10.63
Dividend 2% on 50 sh. Elec. Ry. Stocks (Acct. No. 6, Col. D) .. 100.00
From neighbor for hire of our work horses, 40 hrs. @ .25 (Acct.

No. 91, Col. D) 10.00
Sale of milk (Acct. No. 80, Col. D)..... 12.40
Temporary rent of tenant's house to transient, one month,
(Acct. No. 99, Col. D) 15.00
(See model entries).

REMARK. Income derived from property held for interest, dividends, or use, is a gain and should be entered in column D.

March 22. (Illustrating expenses and cost of property).

Enter check No. 46 for \$87.50 payable to Equitable Ins. Co. for quarterly premium on life insurance policy #35962. (Acct. No. 7, Col. C).

REMARK. Additions to the value of the policy will be made once a year, premium payments in the intervening time will be entered as expenses.

Enter check payable to Dr. Cleveland, for vaccinating hogs (Acct. No. 60, Col. A), \$3.40.

REMARK. This item is here regarded as one of the ordinary costs of hog production and is entered in column A as part of the cost of stock raised for sale or consumption.

Enter check payable to Geo. Myers for shoeing horses, (Acct. No. 91, Col. C), \$6.40.

Enter check payable to the County Treasurer, \$245.08, for taxes first half year on farm, (Acct. No. 99, Col. C), \$216.48.

And for taxes on personal property, (Acct. No. 198, Business Expense, Col. C), \$28.60.

Enter payment by check to Farmers Insurance Company for insurance on personal property for term of one year to March 22, 1921, (Acct. No. 198, Col. C), \$24.00.

New Account. Some business expenses, for example, taxes and insurance on personal property, cannot conveniently be entered as a cost against any given production until later review, or cannot be allocated at all. These may be entered when paid, on account No. 198, "Business Expense," which account now open. Two items in the above will be posted to this account, column C.

March 23. Received cash from Peter Olson in full of account.

March 24. Sold for cash, 200 bu. corn @ \$1.79.

March 24. Deposited \$700. Enter on check stub only.

March 25. Enter payment to F. C. Reid, contractor, by check \$69.80 for repairs on residence building. Repairs are an expense loss.

March 26. Enter payment by check to Chandler & Co. for \$216.50 for sinking well and installing pump and windmill on farm.

Permanent improvements (property obtained) are added to the cost of the property. Improvements are not losses.

ILLUSTRATION. It is of the greatest importance that when a payment is made for some benefit to property, the entry clearly shows whether the thing obtained for the payment is a permanent addition to the property (indicated by placing the amount in column A, property obtained), or whether it is an expense pertaining to the property (indicated by placing the amount in column C, loss). Below are a few common instances that will serve to call attention to this very necessary distinction.

Improvements (entered in column A): Building or making new wells, new fences, new tiles and drains, new buildings, additions to buildings, and the like.

Expenses (entered in column C): Repairs of old well or windmill, repairs of fences, of tiles and drains, of buildings, repainting, repapering, reflooring, re-shingling, etc.)

The distinction is whether an addition has been made of something which the property previously was entirely without, or whether there have simply been repairs or renewals of some part of the property. If an addition, enter the amount in column A; if a repair, enter the amount in column C.

March 27. Sold John Carmody, on account, 50 bu. corn @ \$1.80.

March 28. Enter check payable to Globe L. & T. Co. for \$120, for quarterly interest payment on mortgage.

March 29. Sold for cash, 50 tons clover hay @ \$14.50. Deposited \$600.

March 30. Purchases of groceries from Gage Mercantile Co. on account, this month for private use amount to \$49.63.

After the above transactions are entered and posted, proceed to the routine of adjustments for the end of the month dated March 31.

At this point the totals of the money columns may be written in pencil and forwarded to the next leaf as shown in model leaf No. 5.

Totals of columns 1 (A), A, and C should equal totals of columns 3 (B), B, and D. So prove before proceeding.

Pocket Cash Book. It is assumed that this book shows payments that are analyzed as follows:

Groceries and provisions ("Living Expense," Col. C, No. 199) .	\$ 29.40
Henry Blair for wages as farm hand ("Labor," Col. C, No. 90) .	60.00
Material for repairing fences (Farm, Col. C, No. 99)	32.50
	\$121.90

Enter as shown in the form.

Labor Account. Open and index account No. 90, "Labor," and post to column C (loss) the amount of cash paid for labor as shown by the pocket cash book. Later the cost of labor not paid for in cash as, the board of the hands, or the time of the employer given to farm labor, will also be entered in column C of this account.

The "Labor" account will show in column D the cost of all or any part of the labor charge transferred to accounts of the productions (such as corn crop, potato crop, dairy, etc.), on which the men worked. The transfer from the Labor to the Production account is made on the basis of time records showing how many hours each man spent on each production, the man hour being considered worth the ascertained cost of it as in the case of horse hours before explained.

ILLUSTRATION. If the entire labor cost of a given year is \$2,040.00 and the hands, including employer, worked 3,400 hours during the year, the cost of the man hour would be 60 cents ($\$2,040 \div 3,400 = .60$). If the full 3,400 hours were reported as being spent on productions, the entire labor charge would be transferred from the "Labor" account to the production accounts.

PART FIVE—FARM OPERATIONS

It is thought that the transactions in Parts One, Two, Three, and Four of this problem sufficiently illustrate how the cost and loss or profit is posted directly from original entries to the accounts. All the illustrations given were confined to **transactions**, or deals between persons; i. e., selling, buying, collecting, paying, etc.

In Part Five the principal attention is taken from the transactions and directed to the farm **operations**, such as raising produce, growing live stock, etc. These operations are not deals between persons, but are rather the use or exhaustion of the things on the farm in such a way as to obtain new things. The bookkeeping entries to be effective

in cost finding must be planned to follow the value from one thing to another in order that the cost of things raised may be as well known as the cost of things bought.

Everything produced on the farm has cost something to produce it. The elements of cost going into a given production are so interwoven that one has to reduce these cost elements to book entry by a system which reminds him what to do when he should do it, before he is sure that some item has not been overlooked that, if included, would sometimes change the totals very much.

While a **system** of finding costs may seem harder to learn than just simply setting down such items as one remembers while they are fresh in mind, yet when a system or routine of method is learned, it is easier to operate, because one has a plan. He knows when and where to begin and knows when he is through. System lines up the facts like a row of corn down which a man can plow; and, when he gets to the end, he knows that every hill in that row has been cultivated. Without system in bookkeeping, he is continually scratching over the accounts in irregular ways, as he would do in a corn field, if, regardless of the straight rows, he moved this way and that in search of the hill that seemed to need him most.

There are a few points to be made perfectly clear in cost bookkeeping:

(1) Value is followed as it moves from one form to another. For example, \$10.00 value in money today may be spent for corn and thus turned into \$10.00 value in corn tomorrow, and the \$10.00 value in corn later may be turned into \$10.00 value in a pig; and so on. Bookkeeping records the transitions. When cash was paid out for corn, we make an entry, Corn, \$10.00 (Col. A—property, corn, obtained); and Cash, \$10.00 (Col. B—property, cash, reduced). When the corn has been fed to the pig, we make the entry, Pig, \$10.00 (Col. A—property, pig, obtained); Corn, \$10.00 (Col. B—property, corn, reduced). Thus the \$10.00 value was located first in cash, then in corn, and finally in the pig.

And so on through the circuit of farm activities, as in manufacturing, value is passing from one form into another. The bookkeeping entries show where the value goes. This does not imply that a book entry is made every time one feeds a horse or a cow, but it does mean that a record should be made of all things that cost anything of importance and that a regular system be employed to make sure that everything about the place that costs value has an account that will finally wind up by showing what the thing cost.

(2) The book value, as learned in Parts One and Two, is the **cost**, or the amount invested in the thing. Taking the above example, if

\$10.00 cash is paid for corn, the corn is valued on the books at \$10.00, the cost, even though the owner might be able to get more for the corn. Again, if corn costing \$10.00 is fed to a pig, the added book value obtained in the pig is \$10.00, the value of the corn, and so stands on the books regardless that the pig may have increased in selling value more than \$10.00. All this is to say that in cost accounting every value that passes from one form to another is counted at the same value as at first. One part of the farm does not make any money from another part by considering the book value of anything produced to be more than the cost of the things from which it is derived.

(3) The profit on any product is found only at the time of sale. Thus a horse that cost \$150.00 to raise may in the owner's estimation be worth on the market \$500.00. The book value of the horse stands at just what it cost, and remains at that figure until the horse really is sold. There is no profit until sale, and there should be no book entry of profit until an agreement between buyer and seller fixes a new valuation.

(4) Losses may occur regularly or irregularly which should be entered on the books without regard to sale.

A regular loss is "depreciation," the reduction in the value of permanent property through use, wear, tear, growing old, etc. Depreciation has received so much consideration by accountants, that a normal rate has been established for estimating this loss, as will be explained later in this problem.

Irregular losses, such as accidental destruction of property or loss of stock, should be recorded.

(5) Since profit is regularly determined at time of sale, the accounts showing cost should be expressed in the units sold. Thus, if corn is raised to be sold or used, the account showing the cost would be an account of **corn**, not an account of the field that the corn grows in. It should be kept clearly in mind that an account showing the cost of produce should be an account of the cost of the things that are produced in units such as they will be divided into when sold or consumed.

(6) The cost of any farm goods (corn, hay, hogs, sheep, etc.), is (a) the cost of any material going into it (example, corn fed to hogs), and (b) the cost of a fair share of the expenses of the farm (example, the cost of growing a hog would include some labor, some housing expense, in fact a fair share of a number of things).

(7) Observe this important distinction:

The cost of feed and expenses of animals **raised for sale or consumption** and likewise the cost of **seed and expenses of crops** are all

considered a part of the cost of the things produced and are entered as "property obtained" (Col. A).

On the other hand, the cost of feed, care, and other expenses of maintaining animals **kept for use** (not for sale), the expenses of machinery, such as repairs, and the expenses of the farm land, such as taxes, repairs, insurance, etc., are not considered a part of the cost of the things, but are treated as an expense pertaining to the things. Such items are entered in column C as losses.

In this system, there is a set program of reminders to be considered once a month.

We shall now proceed to allocate (to distribute or assign to locations in other accounts than the ones in which they are now standing) the items that contribute to the cost of the different farm properties.

LABOR COST NOT IN CASH

The cash cost of labor has been considered and will be found entered in the Labor account.

The board of farm hands is a labor cost taken out of the owner's Living Expense account. The actual labor time of the owner of the farm is also an element in the cost of production. The cost of these may be determined in the following manner:

Allow for board of farm hands an equal share, with members of the family, of the grocery expense of the month. Turning to account No. 199, the grocery expense is found to be \$104.27. Assuming four persons, including the hired hand, the share of the latter would be \$26.00.

The labor cost of the hired hand, Henry Blair, is \$60.00 wages + \$26.00 board = \$86.00 for the month.

As shown from the work time record, (which will be referred to in more detail later), Henry Blair reported 286 hours' labor this month. $\$86.00 \div 286 = 30$ cents, the hour rate.

This rate will also be used as a basis for computing the cost of the owner's work—forty hours' time reported by him this month.

REMARK. The owner as manager of the farm would be entitled to higher hourly pay than a hand. His recompense for management, however, is in the profits, while his manual labor is treated as the work of an average man.

On this basis, make a journal entry as illustrated in model journal.

Post to No. 197, "Owner's Income from Labor on Farm."

REMARK. According to ruling of the U. S. Internal Revenue Department, an income tax return must include as "Income" the owner's time that is charged to production.

FEED AND SUPPLIES USED

A memorandum record has been kept of feed and supplies used during the month. This is illustrated in the form here given:

FEED, SEED AND SUPPLIES RECORD						No. 1	
DATE	USED	QUANTITY		AMOUNT	PROPERTY OBTAINED OR LOSS	A OR C	
Mar	Corn	50	125	6250	Hogs	a	
	"	25	125	3125	Horses	c	
	"	5	125	625	Cows	c	
	Timothy	1 1/4	1200	1500	Horses	c	
	Cloued	4 1/2	1000	400	"	c	
	"	4 1/2	1000	600	Cows	c	
	Supplies - Oats	20	80	1600	Hogs	a	
	" "	15	80	1200	Horses	c	
	" "	5	80	400	Cows	c	
	" Misc			150	Hogs	a	
				220	Horses	c	
				1410	Cows	c	
	Sais - Skim milk			1500	Hogs	a	

The items in this record must be grouped under the proper account headings in order to have totals of each kind for entry. The most convenient means of grouping items from a memorandum record is to use a **Distribution Sheet**. This is a sheet with many money columns. At the head of the columns are written the account names, and under the account names are placed the amounts that should be posted to the accounts under which they are written. Thus several items to be posted to a given account can be added on the distribution sheet and the total posted.

The form on page 33 should be mastered by the student, for it is a general form that can be used whenever one has occasion to separate and regroup a number of miscellaneous items for posting.

All operative distributions involve two equal lists (1) of property obtained or loss, (2) of property reduced or gain. The one list equals the other.

Thus in the distribution sheet illustrated above, the amounts under "property obtained or loss" are taken from the column headed in a like manner on the feed record, and the amounts under "property reduced or gain" are taken from the column headed "Used."

After the items are entered and the column totals found, the work is proved by adding the totals of each part of the distribution sheet as shown in the column headed "proof."

In the journal,

(1) The total of feed to hogs is entered in column A (property

Property Obtained (A) or Loss (C)

Hogs	Horses	Cows	Proof
A	C	C	
6250	3125	625	7500
1600	1500	600	6445
450	400	400	2035
1500	1200	410	<u>18280</u>
7500	220	2035	
	6445		

Property Reduced (B) or Gain (D)

Corn	Hay	Supplies	Dairy	Proof
B	B	B	D	
6250	1500	1600	1500	10000
3125	400	1200		2500
625	600	400		4280
10000	2500	450		1500
		220		<u>18280</u>
		410		
		4280		

obtained, since feed is regarded as an addition to the value of the hogs which are being grown for sale or consumption.

(2) The total of feed to work horses and dairy cows is entered in column C (loss). This is part of the expense of maintaining animals kept for use or income. Feed of animals kept for use or income is not regarded as adding to their value.

(3) The corn, timothy, clover, and supplies are taken from property now entered at cost on the books and will be entered at cost in journal, column B (property reduced).

(4) Skim milk is taken at an estimated value from dairy product and is entered as in column D (gain) to dairy cows.

Caution. In this entry, see that columns A + C = columns B + D. Post.

DEPRECIATION

Depreciation is the reduction in the value of permanent property through wear, exposure to weather, age, and any universally expected conditions that cause property to gradually lose value with lapse of time. As the accounts are planned in the present ledger, depreciation

pertains to property represented by accounts numbered 80-99. This depreciation may be greater or less annually—according to the care taken of the property. It starts with the assumption, that a given article, say a corn planter, or a work horse, may be expected to last a number of years, say ten years. If the original value is reduced to nothing at the end of ten years, it is fair to estimate that the value is reduced about one-tenth of that amount in one year. It is a well established rule of accounting that entry should be made periodically to show the estimated loss on the property through depreciation. Depreciation is a part of the cost of raising crops or farm goods of any kind.

The United States Internal Revenue Department, while recognizing that depreciation in the same kind of property will differ under different care and conditions, takes the ground that the following rates of depreciation would appear on the face to be equable. These rates are used in this problem.

Depreciation on	If Repairs Are Not Entered Separately	If Repairs Are Entered Separately
Frame Buildings	4% Annually.....	2½% Annually
Brick Buildings	3% “	2 % “
Work Stock	10% “	“ .....
Ordinary Farm Machinery.....	10% “	“ .....
Automobiles	20-25% “	“ .....
Farm Tractor	20-25% “	“ .....

The entry for depreciation in the “double-double” books is very simple. After determining the amount, enter that amount in column B (property reduced) and in column C (loss). Post to the account by one-line entry.

REMARK. Before many years, science will have established a normal rate of depletion in soil as the result of ground exhaustion by crops. When such rates are established, the entry will be made in the real estate account in the same way that depreciation is now made in other permanent property accounts.

Depreciation is commonly an annual entry to be made December 31. It would be just as accurate to make 1/12 of the annual charge monthly, as is frequently done in factories; and it will be necessary to consider depreciation more frequently than once a year if the costs of products sold early in the year are to be ascertained before sale.

In this problem, depreciation will be computed for March, although to be strictly within the rules, some extra figuring will be required by taking into account that much of the property depreciated has not been owned a full month. After the amount of depreciation is determined for a full month, the same amount would be taken in all monthly entries if no changes are made in the property.

Account No. 80, Dairy Cows. At the assumed rate of 10% per year, the annual depreciation on dairy cows, book value \$260.00, would be \$26.00, and the annual depreciation entry would be in this amount if the animals had been in possession throughout the year. One-twelfth of \$26.00, or \$2.17, would be the monthly entry. Taking into account that "Lily" has been owned only 3/5 month, the total depreciation charge on dairy cows is safely \$1.90 for March.

The entry is Dairy Cows, column B (property reduced) \$1.90; column C (loss) \$1.90. Enter and post. See model.

Account No. 91, Work Horses. The annual rate is also 10%. Allowing for some changes in the account, the amount of depreciation entry for March will be placed at \$4.55.

Account No. 92, Horse Machinery. The machinery has been owned about one-half month, for which time, entry of \$1.00 is made for depreciation.

Account No. 99, Farm. Repairs are already included, the buildings are frame, hence the normal rate is $2\frac{1}{2}\%$ annual on buildings and improvements only. The value of the buildings, $\$11,297.50 \times .02\frac{1}{2} = \$282.44$, the annual depreciation charge, of which $\frac{1}{12}$ is \$23.54.

This amount, however, must be divided. The depreciation on the residence building is to be included in "Living Expense," while the depreciation on the general farm buildings (including depreciation on improvements, such as fences, tiles, ditches, etc.), is included in the cost of production. We shall, therefore, enter the March depreciation charge \$23.54 in two items: Residence building, \$9.38, and general farm buildings, \$14.16. So enter and post.

The above entries cover depreciation for March. They show in each instance the reduction of property value in column B, and the corresponding loss in column C. Depreciation is as truly a loss as though the same amount were paid out in cash, and it must be regarded if actual costs are to be found. Prove journal column totals to be in balance as before.

GENERAL OPERATING EXPENSES

Accounts Nos. 90-99 are accounts of property or labor used in the farming operations. The losses connected with these accounts are chargeable to crops or other farm products as part of the cost of their production. These losses in the present problem consist of (1) labor expense, (2) work horse and machinery expense, and (3) farm land expense. Each of these losses or expenses must be divided into the amounts chargeable to the various productions. The intention is to transfer the losses of maintaining the farm land and equipment to the things produced for sale as a part of their cost.

For convenience, the expenses connected with accounts Nos.

90-99 will be grouped and charged together on one distribution sheet as illustrated below.

Property Obtained (A) as Loss (C)

	Corn C	Hay C	Field C	Field C	Field C	Hops C	Horses C	H. Mch C	Cows C	LivingExp C
Man	930	4440	1200	600		450	900	360	900	
Horse	992	5216	1280	320						2250
Horse			6200	7500	5698					6980
Repair				1600	1650					938
Deprec	283	283				283	283		284	
	2205	9039	8680	10020	7348	733	1183	360	1184	10168

Property Reduced (B) as Gain (D)

	Man Labor	Horse Labor	Land Expense							
	9780	7808	34232							

Proof
 2205 9780
 9939 7808
 8680 34232
 10020
 7348
 733
 1183
 360
 1184
 10168
 51820 51820

Work Time Record. It is assumed that the man and horse time spent in labor during the month has been entered on the work time record. This shows what was done and what account is chargeable. The following form gives the items in somewhat condensed form, but sufficient for illustration:

WORK TIME RECORD		MAN <i>30</i>		HORSE <i>16</i>		No. <i>1</i>	
DATE	EMPLOYMENT	HOURS	AMOUNT	HOURS	AMOUNT	PROPERTY OBTAINED OR LOSS	AMOUNT
<i>Mar</i>	<i>Marketing carn</i>	<i>31</i>	<i>9.30</i>	<i>65</i>	<i>9.92</i>	<i>Carn</i>	<i>6</i>
	<i>Hay</i>	<i>148</i>	<i>44.40</i>	<i>326</i>	<i>52.10</i>	<i>Hay</i>	<i>6</i>
	<i>Grain & prep</i>	<i>10</i>	<i>1.20</i>	<i>80</i>	<i>12.80</i>	<i>Grain</i>	<i>6</i>
		<i>20</i>	<i>6.00</i>	<i>20</i>	<i>3.20</i>		<i>6</i>
	<i>Feed</i>	<i>15</i>	<i>1.50</i>			<i>Feed</i>	<i>6</i>
	<i>horses</i>	<i>30</i>	<i>9.00</i>			<i>Horses</i>	<i>6</i>
	<i>cows</i>	<i>30</i>	<i>9.00</i>			<i>Cows</i>	<i>6</i>
	<i>Repairs</i>	<i>2</i>	<i>3.60</i>			<i>Horse Mach</i>	<i>6</i>
		<i>326</i>	<i>97.80</i>	<i>488</i>	<i>78.08</i>		

The work time record is not filled out completely as here shown when first turned in, but ordinarily contains only the date, employment, man and horse hours, and possibly the name of the account to be charged. After being turned in it is to be completed by writing in the amounts of man and horse labor and the accounts to which these amounts are chargeable, if they have not been filled in before.

The Man Hour Rate is found by dividing the total man labor expense shown in account No. 90 by the man labor hours reported. The result is the labor cost per hour. This may be found on an annual basis under stable conditions when an entire year is considered, but the method will be illustrated here on a month basis. Account No. 90, Labor, shows a cost of \$98.00 for the month of March. The work time record shows 326 hours reported. Dividing \$98.00 by 326 gives the rate of 30 cents per hour as the cost of man labor under the conditions of this problem. By placing the rate at the top of the column headed "Man," and multiplying the hours reported successively by 30 cents, we have extended into the amount column the sum of \$97.80, which shows that all but 20 cents of the total labor expense for the month may be charged to the accounts.

The Horse Hour Rate is found by dividing the net expense or loss of account No. 91, Work Horses, and account No. 92, Horse Machinery, both of these expenses being distributed through the horse hour rate. Referring to these accounts, \$66.40 (\$65.40 and \$1.00) is found to be the net expense charged. To this add \$12.60 charges on horses and horse machinery on the work time record, making a total charge of \$79.00 to be distributed through the horse hour rate. Divid-

ing \$79.00 by 488 gives a horse hour rate of 16 cents within a fraction of a cent. Using this rate, extend the horse hours on the work time record as the man hours were extended.

After following the method of computing man and horse work time and cost, observe that in the column headed "Property obtained or loss" appears one new account name, "Field Cost." Before proceeding further, read the paragraph explaining this account.

Field Cost. It is assumed that the farm is divided into fields or ground divisions which will here be known by letters as, "Field A." "Field B," etc.; these ground divisions cover the entire farm.

Before crops are planted, or even before crops are fully decided upon, the ground will undergo different kinds of preparation, labor and expense, among which may be mentioned hauling fertilizer, plowing, clearing, paying taxes, etc.,—in fact, anything that has to do with the costs of the year to be charged against the products of the named fields. The cost of these items is entered as a loss of the named field, and this loss remains in the account of "Field Cost" against the field until the crop is planted, when an account of the crop is opened, and the cost of ground preparation, etc., in the area occupied by the crop is transferred usually at an acre rate from "Field Cost" to the "Corn Crop," "Hay Crop," "Oats Crop," "Potato Crop," etc., accounts. In this problem, for the sake of brevity in illustration, it is assumed that the farm consists of only three fields, known as A, B, and C.

Time Record Distributed. In the column of the work time record headed "property obtained or loss," there are a number of accounts which will be copied in the distribution sheet as shown in the model form. Enter distribution on the line opposite the explanation, "Man Labor," "Horse Labor," "Taxes," etc.

These accounts on one side of the distribution sheet are equal in total amount to the total of man labor and horse expense, entered on the opposite side of the sheet as gain (D).

REMARK. Man labor, horse expense, land expense, and field cost are here entered on the books as losses when paid, and they stand on the books as losses until they are distributed to the crop or salable production into which they enter as part of the cost (column A). When these expenses are transferred to production accounts, the production account is charged (column A), and the opposite entry is treated as gain, or more strictly a loss reduced, (column D) of the expense account. The "loss reduced" entry serves to annul the previous "loss" entry. This is a true reflection in the accounts of what actually takes place; namely, that any expenditure for any purpose is a loss until it can be identified as part of the cost of producing some salable thing, when it is "property obtained."

REMARK. The losses on horse machinery are included in the amount entered in Work Horses account as distributed. That is to say, the amount shown to be distributed in column D, Work Horses account, should equal the expenses of both accounts 91 and 92.

Land Expense. The net land expense to date is found in account No. 99, \$342.32. There is a slight unusual or accidental income which will be disregarded in this distribution. The items should be gone over in detail and allocated according to one's careful estimate of where the expense lies.

The following will be the distribution in this problem, taking the order of entries in the account:

(a) Taxes—The total tax charge of \$216.48 will be distributed according to value of property taxed to Field A, \$62.00; Field B, \$75.00; Field C, \$56.98; Living Expense, \$22.50. (The tax on the house occupied by the owner as a private residence is classed among "Living Expenses").

(b) Repairs—The repair charge on residence building is classed as Living Expense. The repairs on farm fields should be charged to the fields. In this problem consider \$16.00 as chargeable to Field B, and \$16.50 to Field C.

(c) Depreciation—The depreciation charge on the residence building is classed as Living Expense. The depreciation on other buildings, drains, tiles, ditches, fences, and improvements should be divided among the accounts according to the owner's estimate of the use made of the buildings or improvements. In the present problem, divide in equal amounts among Corn, Hay, Hogs, Cows, and Horses, giving the odd cent to the last one in order to balance.

Having completed the distribution sheet, journalize and post.

REMARK. The entire losses shown in accounts Nos. 90-99 should be distributed to some final accounts in the course of the year. Before they are so distributed the losses there shown stand as a reminder of amounts that should be charged to the proper production accounts as soon as it is possible to do so. They are losses of the business as a whole until they are taken into the cost of salable products.

Close the journal as before instructed and see that all posting is done.

A balance sheet and profit and loss statement may now be taken from the accounts.

REVIEW QUESTIONS

With the journal before you answer questions:

Leaf No. 1. Name the general divisions of property listed in the statement at opening the books.

What was the total amount of property?

What was the total amount of debt?

What was the amount of net wealth at opening?

How many ledger accounts were opened from this statement?

Leaf No. 2. Explain the use of money columns A, B, C, and D. Explain columns 1 (A) and 3 (B). Explain column 2. In each trans-

action on this leaf show that amounts in columns A and C equal amounts in columns B and D. Why?

What is done with totals of columns 1 (A) and 3 (B) when the journal is closed?

Explain how increase or decrease in the wealth balance is shown when the journal is closed.

Leaf No. 3. Explain the bank checking account; the check book; the check stub. Explain entry in journal for a check issued. Explain entries for payments out of cash in hand. Where are such payments first entered? When are the pocket cash book entries transferred to the journal? Why were groceries separated from other items in the Living Expense account?

Leaf No. 4. Explain why the payment of \$3.40 was entered in Hogs account as property obtained, while a similar payment of \$6.40 was entered in Work Horses account as loss.

Explain why on March 24, the sale of a quantity of corn for \$358.00 was entered partly in column B and partly in column D.

Explain why on March 25, an expenditure for repairs was entered in the Farm Real Estate account, column C, while on March 26 an expenditure for a well and windmill was entered in column A.

Leaf No. 5. Explain the journal entry for pocket cash payments. Explain the entry in Labor account for board of hired hand and for owner's work time.

Explain the entry for feed and supplies used during the month.

Explain the entry for depreciation.

Leaf No. 6. Explain the entry for the March expenses found in accounts Nos. 90-99.

What is a distribution sheet, and how used?

What special pocket records are recommended in this set?

With ledger before you, answer the following:

Account No. 1. What was the amount of cash March 31?

(a) How much of this was in the bank? (b) How much in hand?

No. 5. What was the par value of U. S. Bonds owned? Have any gains been derived from U. S. Bonds?

No. 6. What was the cost of stocks owned? Was there a net gain or loss on stocks?

No. 7. What was the cash value of the life insurance policy?

No. 8. What was the face amount of notes receivable owned? Explain why there is a net loss shown on notes receivable.

No. 10. How much does John Carmody owe?

No. 11. What is the condition of the Peter Olson account?

No. 40. What is the book value, or cost, of the corn now on hand?

Have corn sales resulted in gain? How much?

No. 41. What is the book value of hay on hand? What was the net gain on sales of hay?

No. 59. Why is the account of supplies in balance?

No. 60. What is the cost of hogs on hand?

No. 80. Did keeping dairy cows result in a gain or a loss in March?

What is the book value of the cows on March 31?

No. 90. What was the cost of labor in March? How much of this cost was distributed at the end of March? Why was not an exact distribution made? When will the twenty cents balance of this account be distributed?

Nos. 91-92. What was the expense loss on Work Horses and Horse Machinery? Why are the expenses of these two accounts considered one item?

No. 98. Explain Field Cost account. When will the apparent loss shown in this account be distributed to crop accounts?

No. 99. What was the total amount of losses charged to Farm Real Estate? Why were part of the losses charged to production and part to living expenses?

Nos. 100, 101, 110. What is the total of indebtedness?

Nos. 197, 198, 199. Explain the general loss and gain accounts.

No. 200. What is the amount of the Wealth Balance on March 31?

Explain the general plan of accounts; i. e., what kind of accounts would be placed in the division of account numbers 0-39? 40-59? 60-79? 80-89? 90-99?

What accounts would be placed in the division 100-199?

How are accounts in this section further divided?

INCOME STATEMENT

With balance sheet and income statement before you, give the net gain or loss to date on the following:

U. S. Bonds, stocks, life insurance policy, notes receivable, corn, hay, hogs, dairy cows.

What disposition is to be made of the expense losses of accounts Nos. 90-99?

Explain gains or losses in accounts from No. 100 to No. 199.

TEST EXERCISE

The April transactions which follow may be written as a test of the previous work and a further amplification of the instructions or suggestions previously given.

Use loose journal (Form JF) and ledger (Form LF) paper and regard the records as a continuation of the records opened in March.

Bring down the March cash balance to the balance column of a loose leaf of cash journal paper. Number this leaf No. 7, and place "April" in the space for the name of the month.

Copy all account numbers and headings on the loose ledger sheets (both sides of sheets), using space exclusive of the line for heading as follows: Account No. 1—4 lines; No. 5—4; No. 6—3; No. 7—4; No. 8—6; No. 10—5; No. 11—7; No. 40—11; No. 41—10; No. 42—6; No. 43—7; No. 44—7; No. 45—7; No. 46—9; No. 59—6; No. 60—7; No. 61—6; No. 80—10; No. 90—7; No. 91—10; No. 92—7; No. 98—7; No. 99—9; No. 100—5; No. 101—4; No. 110—7; No. 111—6; No. 197—4; No. 198—4; No. 199—10; No. 200—4.

In addition to the accounts used in March, you will have seven new accounts, which you will open in their proper order. They will be as follows: No. 42, Corn Crop, 19—; No. 43, Wheat Crop, 19—; No. 44, Oats Crop, 19—; No. 45, Alfalfa Crop, 19—; No. 46, Potato Crop, 19—; No. 61, Growing Cattle; No. 111, McCormick Seed House. Place the date in date column, the word "Forwarded" in the memoranda space, and the March totals of each column of each account in their respective columns on the first writing line of the April accounts. Accounts that are in balance are not to be forwarded.

Cost of Growing Stock. It is a good idea to estimate the cost of growing stock once a month. In this problem, growing stock is illustrated in the account of hogs. To find the cost of hogs per hundred weight, weigh the hogs, and divide the difference between totals of columns A and B in the "Hogs" account by the number of hundred weight. The result is the cost per hundred weight. Place this cost in the memoranda column of the Hogs account, and use this cost as a basis for calculations of cost in April. On the last day of April, when feed and expenses are again entered, the cost will be again brought up to date. In this problem, the weight of hogs is even hundreds is 42 cwt.

COMMENT. The student will consider the accounts now opened as continuations of the accounts kept in March, and will necessarily refer back to the March entries when items or prices are in question. If loose leaf books were used as recommended by the author, each account would have a separate leaf and the inconvenience of dividing the accounts in this way would be avoided.

Proceed to enter the April transactions in the same way that you entered the March transactions. Refer to the March forms when you

are in doubt about the procedure. No instructions will be given for entries unless a new type of transaction is taken up.

April 1. Received from John Carmody his U. S. Bond #654392, 4 1/4%, due 1938, face value \$100.00, which you will accept at the market value, \$95.42. This is given in part payment of his account. Make entries: U. S. Bonds, Col. A, \$100.00, and Col. D, (discount) \$4.58; John Carmody, Col. B, \$95.42.

Post as entries are made.

April 2. Sold to Peter Olson, Martelle, Iowa, 150 bu. of corn for \$270.00, on account.

Received cash \$70.00 from Peter Olson on account.

Sold to Chris. Bronger for his 25-day note bearing interest at 6% from date, 15 tons of timothy @ \$18.50.

April 3. Enter check No. 54 issued to Sherman Feed House for 50 bu. oats @ \$.85; 450 lb. bran @ \$1.90 per cwt.; sundry other supply items for \$9.80.

Deposited \$209.16 (enter on check stub only).

April 4. Bought at an auction a corn cultivator. Paid for it by check, \$37.50, making check payable to James Duncan.

April 5. You are going to plant crops in all of Field B and part of Field A during the month of April. Field A contains 40 acres and Field B contains 60 acres. Field A is divided into three divisions: five acres to be planted to potatoes, twenty-five acres to be planted to oats, ten acres to be left unplanted this month. Field B will contain three crops: thirty acres to be planted to corn, twenty acres to be planted to wheat, ten acres to be planted to alfalfa. Enter in your ledger accounts after the account titles of "Corn Crop," "Oats Crop," etc., the name of the field and the number of acres devoted to the crop.

Transfer to the crop accounts the proportion of the field cost pertaining to each crop, thus:

Field A—Cost entered in ledger is \$86.80 for 40 acres, of which five-eighths, or \$54.25, will be transferred to the oats crop of twenty-five acres, and one-eighth, or \$10.85, will be transferred to the potato crop of five acres. The remainder of the Field A cost will be transferred to the remaining ten acres as soon as the crop is determined. The journal entry will be:

Account Name	A	B	C	D
Oats Crop, 19—, No. 44.....	\$54.25			
Potato Crop, 19—, No. 46...	10.85			
Field A cost, No. 98.....				\$65.10

In like manner transfer Field B cost to the crops specified in that field.

Bought on account from the McCormick Seed Co.:

3 1/3 bu. alfalfa @ \$24.00 (Alfalfa Crop, No. 45)

30 bu. of wheat @ 4.20 (Wheat Crop, No. 43)

60 bu. of oats @ 1.10 (Oats Crop, No. 44)

Enter in column A, as seed is considered part of the initial cost of the crop and not as an expense.

Enter total amount in column B, McCormick Seed Co. No. 111.

April 6. Enter check \$35.00 payable to Nathan Brown for three calves. As you desire to keep account of the cost of these calves till you can place them with the dairy cows, open an account for them called "Growing Cattle," No. 61, and enter value in column A.

COMMENT. Natural increase in live stock should also be charged to a growing stock account. Calves from the dairy herd should be entered at a suitable valuation, and charged with feed and care thereafter. All such charges are made in column A (property obtained), as in the account of "Hogs" previously considered.

April 8. Sell for cash 20 tons of clover hay @ \$16.50, and 100 bu. of corn for \$200.00.

April 9. Discounted Wm. Flynn's note at the Farmers National Bank. Cash \$147.80 was received after deducting \$2.20 discount. (Notes Receivable and Interest, column B and column C).

April 10. Deposited \$500.00 in the bank.

April 11. Bought groceries for \$36.80; enter check issued to Marco's Grocery in payment.

April 12. Enter check, \$28.50, issued to Wolfe Bros. for clothing.

April 13. Enter check, \$6.75, issued to Wendall & Co. for commercial fertilizer used on potato crop (column A).

April 14. Paid Andy Gibbs check, \$85.95, for lumber and work in building a new chicken house.

April 15. Cash sales of milk since the first of April amount to \$10.50.

Bought a cow "Brownie" from Nick Berlin for \$110.00. Gave in payment your 30-day note at 6%.

April 16. Bought of the McCormick Seed Co. on account:

10 bu. seed corn @ \$3.50 (Corn Crop, No. 42)

50 bu. seed potatoes @ 6.10 (Potato Crop, No. 46)

April 17. Enter check issued to John Cormier for \$75.00 in payment for use of pasture land until Sept. 15. Call this pasture land "Field D" and place the amount of rent in Field D Cost, column C, for the present.

April 18. Bought on account from Gage Mercantile Co. groceries \$42.60.

April 19. H. E. Boyd pays you \$12.00 for the use of team and gang plow. Place total amount in column D of "Work Horses."

April 23. Paid Dr. Cleveland, veterinarian, by check, for attention to work horses, \$3.50.

April 24. Sold 1,500 lbs. of hogs for \$187.50 cash.

April 25. Sold 7 tons of prairie hay @ \$11.50 for cash.

April 26. Peter Olson made a payment of \$100.00 on account and purchased 110 bu. of corn for \$220.00 on account. (Enter as two transactions).

April 27. Chris. Bronger pays his note of April 2, and interest for 25 days.

April 28. Purchased from Gage Mercantile Co. on account, groceries for \$25.00.

April 29. Cash sale of milk from April 15, amounts to \$12.80.

April 30. Cash Payments. Your pocket cash payment book has entries which are summarized as follows:

Repairs for gang plow	\$ 2.50
Hired help	75.00
Clothing	16.80
Set of double harness	26.50
Boy for cutting potatoes	3.00
Hire of work teams	50.00
	\$173.80

Make the same type of entry as you made in your March set for this transaction.

Labor Allowance. Allow for board of farm hand, one-fourth of the grocery expense of the month.

Allow 30 cents per hour for 120 hours' labor reported by the farm owner.

Feed Record. Copy on feed record card in your outfit, compute the amounts, distribute on distribution sheet as illustrated on March 31, and enter in journal the following memoranda of feed and supplies used during the month:

Feed, Seed, and Supplies Record

Used	Quan.	@	Amt.	Property Obtained or Loss	Col.
Corn	45	\$1.25		Hogs	A
Corn	30	1.25		Work Horses	C
Corn	6	1.25		Cows	C
Corn	2	1.25		Growing Cattle	A
Hay, Timothy	1½ T	12.00		Work Horses	C
Hay, Clover	½ T	10.00		Work Horses	C
Hay, Clover	1 T	10.00		Dairy Cows	C
Hay, Prairie	¼ T	8.00		Dairy Cows	C
Supplies, Oats	25	.85		Work Horses	C
Supplies, Oats	5	.85		Hogs	A
Supplies, Bran	1 Cwt	1.90		Work Horses	C
Supplies, Bran	3 Cwt	1.90		Dairy Cows	C
Dairy, Skimmed Milk (est.)...			\$10.00	Hogs	A
Dairy, Skimmed Milk (est.)...			8.00	Growing Cattle	A
Field D, Pasture			2.50	Work Horses	C
Field D, Pasture			2.50	Dairy Cows	C
Field D, Pasture			2.50	Growing Cattle	A

Depreciation. Compute and enter April depreciation at rates used in March on the following value: Dairy Cows, \$260.00 for one month; Work Horses, \$582.50 for one month; Horse Machinery, \$327.25 for one month; Residence building, same as in March; other farm buildings, \$7,014.00 for one month.

Work Time Record. The following work record for April should now be distributed:

Work Record Summary for April

Employment	Man Hours	Horse Hours	Property Obtained or Loss	Col.
Plowing	60	240	Corn Crop	A
Harrowing	20	80	Corn Crop	A
Planting	15	30	Corn Crop	A
Plowing	10	40	Potato Crop	A
Planting	20	20	Potato Crop	A
Plowing	50	200	Oats Crop	A
Planting	20	40	Oats Crop	A
Plowing	40	160	Wheat Crop	A
Planting	15	30	Wheat Crop	A
Plowing	20	80	Alfalfa Crop	A
Planting	10	20	Alfalfa Crop	A
Delivering	30	60	Hay	C
Delivering	15	30	Corn	C
Delivering	5	10	Hogs	C
Feeding	20		Growing Cattle	A
Feeding	45		Dairy Cows	C
Feeding	20		Work Horses	C
Feeding	20		Hogs	C
Repairs to fences and bldgs., etc..	25		Farm Real Est.	C

First copy this on a work time record card in your outfit, then

(1) Divide the total man hours into the balance shown in the Labor account to find the hour rate. If the result shows one-half cent or more remainder, consider the rate one cent more.

(2) Extend amounts of man hours at the rate found.

(3) Divide the total horse hours into the loss balance of Work Horses and Horse Machinery accounts plus any losses to be posted to those accounts which are shown on the present work time summary.

(4) Extend the amounts of horse hours at the rate found.

(5) Transfer the amounts found to a General Operative Distribution Sheet as directed at the close of March.

(6) Find the farm real estate net loss, to which add \$7.50 for repairs (on the work time record), which will be posted to loss. Charge the portion on residence to Living Expense and divide the remainder among the five accounts as you divided depreciation on general buildings at the close of March.

Enter on the distribution sheet.

Closing. Carry cash totals to A and B columns and close the journal. See that all items are posted.

Balance Sheet and Profit and Loss Statement. After posting is completed, use a sheet of four-column paper for this purpose.

REVIEW QUESTIONS

With cash journal before you, answer the following questions:

1. In what column do you enter the amount when cash is received?
2. In what column do you make entry when cash is paid?
3. Why is it helpful to keep the balance column up to date?
4. How do you prove that the balance is correct?
5. Do you make an entry in the cash journal when you deposit money in the bank?
6. How complete should explanation in the "memoranda" column be?
7. What is the value of the memoranda?
8. Could you enter just the memoranda daily and then enter the account names, account numbers, and the amounts once a month?
9. Would there be any advantages in keeping accounts this way? Any disadvantages?
10. Name as many kinds of property as you can find in the account names of the April set.
11. By what ways could each of these kinds of property be wholly or partly reduced in value?

12. In what column would you make an entry to show that such a reduction had been made in their value?
  13. Do you understand the purpose of the "Field Cost" account? Explain it.
  15. Do you consider money invested in crops as "property obtained" or "loss"? Give the reason for your answer.
  15. What proof do you take when you reach the end of a page in your cash journal? What is the value of such a proof?
  16. How do you make an entry that there has been a loss or gain on a sale?
  17. In what column would you enter the amount of a note payable when the note is issued? Why?
  18. If any of your live stock died, in what column would you make the entry, and what amount would you enter?
  19. To what accounts and in what column would the following payments be posted:
    - Renting a house to live in?
    - Renting pasture land for live stock?
    - Renting land on which to plant crops?
  20. At the end of each month, what three costs are distributed? What is the purpose of this distribution?
- With your ledger before you, answer the following questions:
1. How often would you ordinarily make entries in your ledger cash account?
  2. With what should the balance of your cash account agree?
  3. Would there be any use for the C or D columns in your cash account?
  4. At what value should you always enter bonds? Why?
  5. What explanation regarding a bond should be entered in the "memoranda" column of the ledger?
  6. What is the value of placing the cash journal page number in the folio column of the ledger?
  7. At what value do you enter stocks? Why?
  8. Are fluctuations in their value entered in your books?
  9. When do you revise the property value of your life insurance policy?
  10. Did you make money or lose money on your notes receivable? Why?
  11. When all notes are paid up, how should you indicate this in your ledger?
  12. Would you prefer to have your accounts receivable turned into notes receivable? Why or why not?

13. Could there be a loss or gain in an account receivable account?
If so, how?
  14. If you were offered a few cents more a bushel for your corn than your original estimated or book value, what other items would you have to consider to know whether or not you were selling it at a loss?
  15. Under what circumstances would it be advisable to run different kinds of hay in different accounts?
  16. What do your various crop accounts show at the end of each month before harvesting?
  17. How do you find the cost per cwt. of any stock grown for sale, at the end of each month?
  18. Why should feed for dairy cows be charged as **loss**, and feed for hogs be charged as **property obtained**?
  19. On April 30, for how much would you have to sell the three calves, in order not to lose money on them?
  20. If you decided to sell the calves for market, how would you figure to ascertain their cost value per cwt.?
  21. What is the purpose of the Labor account?
  22. How is its total distributed to other accounts?
  23. Why is the board of hired men included in this account?
  24. How do you determine the horse hour cost from the Work Horses account?
  25. What possible entries could you have for gains in the "Horse Machinery" account?
  26. What is the purpose of the Field Cost account?
  27. When do you transfer amounts from this account to other accounts?
  28. Give two entries that might be made in the "B" column of the Farm Real Estate account.
  29. What information should be given in the memoranda column of the Notes Payable and Mortgages Payable accounts?
  30. Why should depreciation on residence be included under living expenses?
  31. How do you tell what your net gain has been for March and April?
  32. Is there any way that you can prove that your gain is correct?
- With the feed distribution sheet before you, answer the following questions:

1. From what do you obtain your data for this record?
2. In which accounts do you post to column A? In which to column C?
3. What feed property has been reduced during the month?

4. How do you prove that the feed distribution sheet is in balance?

5. Where do you place the totals found in this sheet?

With the expense distribution sheet before you, answer the following questions:

1. From what record do you obtain data for this sheet?

2. What three expenses are you distributing among the various accounts?

3. How do you prove the accuracy of your figures?

With your balance sheet and income statement before you, answer the following questions:

1. How many property accounts have you?

2. How many debt accounts have you?

3. By how much does total property exceed total debt?

4. What is the Wealth balance at the end of April?

5. On what items have you actually made money?

6. On what items have you lost money?

7. On what item did you make the most money?

8. Have dairy cows been kept at a net gain or loss thus far?

9. Were the expenses shown in accounts Nos. 90-99 fully distributed to productions?

10. Should expenses shown in accounts Nos. 90-99 be fully distributed by the end of the year?

PUBLISHERS' NOTICE

Journal, ledger, and record sheets together with loose-leaf binders for farm bookkeeping are kept in stock by the publishers of this course. Description and prices may be found in **Circular No. 420**, which will be mailed to any address on request. Correspondence on this subject should be directed to

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