

CHAPTER 8

Farm Records and Accounts

OBJECTIVES

At the end of the chapter, students should be able to:

- â—† state the meaning and importance of farm records.
- â—† state the important types of farm records.
- â—† develop a farm record.
- â—† design important farm records.
- â—† state the meaning and importance of farm accounts.
- â—† draw up a farm account, e.g., preparation of profit and loss account.

8.1 Introduction

Agriculture as a business requires proper and accurate record keeping in order to monitor the performance of agribusiness. A farmer needs to keep the records of his farming activities so that he will be able to account for his time, and what has happened to his gains and losses at the end of the production season.

Accurate records and accounts ensure good control over an agribusiness. Therefore, farmers need to acquire basic skills in farm records design and account preparation. This will facilitate correct decisions which would lead to effective and efficient management of the farming business.

8.2 Meaning of Farm Records

Farm records are written documentation of work or events on the farm. It shows the major activities and transactions that take place in a farm enterprise over a period of time.

8.3 Importance of Farm Records

1. Farm records give a history of what has happened on the farm for the period during which they have been kept.
2. They are used to keep a close check on the schedule of activities and their execution on the farm.
3. They are used to make projections with regard to expected yield from crops and livestock.
4. They indicate how much the farmer earns from the enterprise and his total worth.
5. Farm records help to guide the farmer's decision regarding diversification of his farming business.
6. Farm records are useful for tax purposes, i.e., to determine the amount paid as tax.
7. Farm records are available resources in securing loans from banks.
8. Farm records provide the necessary facts and figures for planning and budgeting.
9. They help to determine the value of the farm (worth) in case of winding up or death of the owner of the farm.
10. Farm records are useful in fulfilling legal requirements that will assist the government in decision making.

8.4 Types of Farm Records

The types of farm records kept by most farmers include

1. Farm diary
2. Farm inventory record
3. Input record
4. Production record
5. Sales record
6. Consumption record

7. Labour record

8.4.1 Farm diary

This is the record of daily activities going on in the farm. The particulars of farm diary may include dates of ridging, planting, weeding, fertilizer application, pest control and harvesting. Table 8.1 is an example of the farm diary.

8.4.2 Farm inventory record

A farm inventory is a record of all the farm assets and monetary values per given time. Such assets may include land, machinery, farm buildings and structures, livestock, farm inputs, produce stored and growing crops. Inventory record is taken at the beginning and at the end of the year.

TABLE 8.1 Farm diary

DATE	ACTIVITY/ WORK DONE	NO. OF LABOURERS	AREA OF LAND	REMARKS

TABLE 8.2 An example of inventory record

ITEM	QUANTITY	VALUE (₦)
A. Land	10 hectares (ha)	20,000,000.00
B. Structures		
i. Staff quarters	2	10,000,000.00
ii. Farm office	2	5,000,000.00
iii. Livestock building	6	12,000,000.00
iv. Storage building	2	4,000,000.00
v. Feed mill	1	1,200,000.00
vi. Silos	2	1,400,000.00
C. Machinery and equipment		
i. Tractor	2	4,000,000.00
ii. Plough	1	200,000.00
iii. Harrow	1	200,000.00
iv. Planter	1	200,000.00
v. Harvester	1	1,000,000.00
vi. Motor cars	2	1,000,000.00
vii. Feed mill equipment	2	800,000.00
viii. Sprayers	2	100,000.00
D. Supplies		
i. Fertilizers	2 tonnes	300,000.00
ii. Drugs	2 cartons	10,000.00
iii. Herbicides	2 cartons	10,000.00
iv. Pesticides	5 cartons	25,000.00
v. Animal feed	1 tonne	200,000.00
E. Growing crops		
i. Cocoa	5 ha	500,000.00
ii. Oil palm	10 ha	1,500,000.00
iii. Cassava	2 ha	100,000.00
iv. Plantain and banana	2 ha	100,000.00

(continued)

TABLE 8.2 Continued

ITEM	QUANTITY	VALUE (₦)
F. Livestock		
i. Cattle	2,000 herd	20,000,000.00
ii. Goats	500 herd	3,000,000.00
iii. Sheep	200 herd	2,500,000.00
iv. Pigs	200 herd	2,000,000.00
v. Poultry fowl	100,000 birds	50,000,000.00
G. Stored products		
i. Maize	2 tonnes	100,000.00
ii. Yam	3 tonnes	60,000.00
iii. Cowpea	2 tonnes	80,000.00
Gross Total		141,585,000.00

8.4.3 Input record

This shows all the inputs acquired and utilized in production in the farm over a period of time. This record is used in combination with output record to prepare profit and loss account at the end of the production period.

TABLE 8.3 Example of input record

DATE	ITEM (INPUT)	QUANTITY USED	VALUE (₦)
03/04/11	Maize seeds	4 bags	16,000.00
04/05/11	Tomato seedlings	10 crates	10,000.00
10/05/11	NPK fertilizer	50 bags	100,000.00
10/05/11	Herbicides	4 cartons	8,000.00
10/05/11	Pesticides (insecticide)	2 cartons	6,000.00
Total			140,000.00

8.4.4 Production record

This shows the yields or output from all the units of production. It may include crop yield record, egg production record, milk production record and weight gains of farm animals. Production record may be kept daily, weekly, fortnightly or monthly.

TABLE 8.4 Example of production record (Milk yield)

DATE	QUANTITY PRODUCED (L)	VALUE (₦)	QUANTITY SOLD (L)	QUANTITY CONSUMED (L)
4/9/10	20	10,000.00	19	1
5/9/10	22	11,000.00	22	1
6/9/10	14	7,000.00	14	1
7/9/10	18	9,000.00	18	1
8/9/10	22	12,000.00	21	1

8.4.5 Sales record

It shows the details of all sales made by the farmer during or over a period of time. The farmer compares his sales with his expenses to know his profit or loss at a glance. Sales record may be kept daily, weekly or monthly.

TABLE 8.5 Example of sales record

DATE	PRODUCT	QUANTITY SOLD	RATE (AMOUNT PER UNIT)	AMOUNT (₦)
01/10/10	Yam	100 tubers	₦50/tuber	5,000.00
01/10/10	Maize	10 bags	₦2000/bag	20,000.00
05/10/10	Tomatoes	40 baskets	₦500/basket	20,000.00
05/10/10	Eggs	10 crates	₦500/crate	5,000.00
08/10/10	Old layers	200 birds	₦400/bird	80,000.00
08/10/10	Broiler	40 birds	₦800/bird	32,000.00
10/11/10	Yam	100 tubers	₦80/tuber	8,000.00
			Total sales	170,000.00

8.4.6 Consumption record

This record shows the farm produce consumed by the farmer and his family as well as farm products given out as gifts. This record is important when preparing profit and loss. It is recorded on the credit side. This record is kept daily, weekly or monthly.

TABLE 8.6 Example of consumption record

DATE	PRODUCT	QUANTITY CONSUMED	VALUE (₦)
01/10/10	Yam tubers	2 tubers	200.00
01/10/10	Egg	4 eggs	100.00
01/10/10	Tomatoes	5 kg	200.00
02/10/10	Broiler	1 bird	800.00
02/10/10	Palm oil	1 bottle	200.00
08/10/10	Rice	10 cups	200.00
		Total	1,700.00

8.4.7 Labour record

This is also called payroll record which shows how casual farm workers are regularly hired. The record is useful whenever there are disputes on the farm especially on the payment of wages.

TABLE 8.7 Example of labour record or payroll

S. NO	NAME OF THE WORKER	DAY	HOURS WORKED	RATE PER HOUR	WAGE	JOB DONE	REMARKS
1.	Bode Tom	Mon	4	₦200.00	₦800.00	Weeding	Wages paid same day
2.	James Bot	Tue	4	₦200.00	₦800.00	Weeding	
3.	Wale Omojo	Wed	3	₦150.00	₦600.00	Weeding	
4.	Luke Talo	Thur	2	₦100.00	₦400.00	Weeding	
5.	Math Theo	Fri	1	₦50.00	₦200.00	Weeding	
6.	Grace Joy	Sat	1	₦50.00	₦200.00	Weeding	
7.	Uche John	Mon					
		Tue					
		Wed					
		Thur					
		Fri					
		Sat					
8.		Mon					
		Tue					
		Wed					
		Thur					
		Fri					
		Sat					

8.5 Meaning of Farm Accounts

Farm accounts are financial records of what the farmer spends and receives. It shows the total receipt and payment made by the farmer at a particular time. It also shows the movement of cash in and out of the business.

8.6 Importance of Farm Accounts

Farm accounts are kept by farmers for the following reasons:

1. It enables the farmer to know whether he is running the farm at a profit or loss.
2. It guides the farmer to take sound management decisions.
3. It shows the financial weakness or strength of the farm.
4. It enables the farmer to obtain loans from the bank.
5. It makes accurate determination of his annual tax possible.
6. It enables the farmer to determine the actual worth of his farm for any given purpose.
7. It is important for transferring a business from one person to another.
8. It facilitates farm auditing.
9. It provides data for planning and budgeting.
10. It enables the farmer to detect fraudulent practices such as theft.
11. It is used for comparing management efficiency over a period of time.
12. It helps farmers to monitor changes in prices of commodities.
13. It is valuable for evaluation of farm auditing.

8.7 Types of Farm Accounts

The following are common farm accounts kept by the farmer on farming activities:

1. Expenditure/purchases account
2. Income/sales account
3. Profit and loss account
4. Balance sheet

8.7.1 Expenditure or purchases account

This is an account that shows all purchase transactions on the farm within the accounting period.

TABLE 8.8 Example of purchase account

DATE	QUANTITY	PARTICULARS	RATE (₦)	COST (₦)	TOTAL (₦)
March 4		Planting materials			
	20 kg	Maize seeds	100.00	20,000.00	
	10 tonnes	Yam seeds	10,000.00	100,000.00	
	10 tonnes	Plantain suckers	1,000.00	10,000.00	112,000.00
April 10		Agrochemicals			
	10 tonnes	Fertilizers	10,000.00	100,000.00	
	10 cartons	Pesticides	2,000.00	20,000.00	
	5 cartons	Herbicides	8,000.00	40,000.00	160,000.00

(continued)

TABLE 8.8 Continued

DATE	QUANTITY	PARTICULARS	RATE (₦)	COST (₦)	TOTAL (₦)
May 5		Farm machinery			
	1	Tractor	2,000,000.00	2,000,000.00	
	1	Plough	40,000.00	40,000.00	
	1	Harrow	45,000.00	45,000.00	
	1	Ridger	40,000.00	40,000.00	
	1	Harvester	2,500,000.00	2,500,000.00	
	1	Sprayer	10,000.00	10,000.00	4,635,000.00
Total					4,907,000.00

8.7.2 Income or sales account

This shows all the sales or receipts on the farm within the accounting period.

TABLE 8.9 Example of income or sales account

DATE	PARTICULARS/ QUANTITY	RATE (₦)	COST (₦)	TOTAL (₦)
April	Crop product			
	300 tubers of yam	20.00	6,000.00	
	10 bags of maize	1000.00	10,000.00	
	4 bunches of plantain	1000.00	4,000.00	
	2 baskets of tomato	500.00	1,000.00	
	2 bags of beans	2000.00	4,000.00	25,000.00
	Animal/Products			
	30 crates of egg	500.00	15,000.00	
	100 broiler birds	1000.00	100,000.00	
	5 litres of milk	400.00	2,000.00	
	4 live goats	1000.00	4,000.00	125,000.00
May 5	Others			
	20 tonnes of farm yard manure	200.00	40,000.00	
	2 bags of maize offals	500.00	1,000.00	5,000.00
Total				155,000.00

Note: A profit and loss account can be prepared using:

8.7.3 Profit and loss account

This is a summary account prepared from the trial balance in order to find out what profit has been made during a particular period. A profit and loss account is important because:

—† It gives a measure of the profit or loss obtained during the accounting period, usually a year.

—† It helps to determine the overall performance of the farm at the end of the accounting period.

—† It also helps in the future planning of the farm for better results. In preparing a profit and loss account:

—† All purchases and expenses are entered on the left side while sales and receipts are on the right side.

—† Also, the opening valuation is entered on the left side, while the closing valuation on the right.

—† The net profit is also entered on the left side, while the net loss (if any) is on the right side.

Example: Prepare a profit and loss account for Okeke Farm Limited using the following information:

(i) Single entry method

(ii) Double entry method

TABLE 8.10 Profit and loss account for Okeke Farms Limited for the year ending 31st December, 2001

S. NO	PURCHASES AND EXPENSES (DEBIT)		SALES AND RECEIPTS (CREDIT)		
		AMOUNT (₦)			AMOUNT (₦)
1.	Maize seeds	25,000.00	1.	Maize cobs	250,000.00
2.	Fertilizers used	14,800.00	2.	Yam tubers	200,000.00
3.	Seed yams	50,000.00	3.	Closing valuation	200,000.00
4.	Tractor hire	60,000.00	4.	Net loss	9,800.00
5.	Transport cost	10,000.00			
6.	Workers wages	40,000.00			
7.	Opening valuation	440,000.00			
	Total	659,800.00		Total	659,800.00

Single entry method: This states each entry separately. In this case, the debit is prepared separately from the credit.

Double entry method: This states both the credit and debit account together side by side.

Example: Profit and loss account for Okeke Farms Limited for the year ending 31st

SALES/INCOME	N	K
Sales of maize cobs	250,000. 00	
Sales of yam tubers	200,000. 00	
Closing of valuation	200,000. 00	
Net Loss	9,800. 00	
Total Income	659,800. 00	

SALES/INCOME	N	K
Maize seeds	25,000. 00	
Fertilizers used	14,800. 00	

SALES/INCOME	N	K
Seed yams	50,000. 00	
Tractor hire	60,000. 00	
Transport cost	10,000. 00	
Workers wages	40,000. 00	
Opening valuation	440,000. 00	
Total expenses	659,800. 00	

8.7.4 Balance sheet

This is a statement showing the financial position of the farm at the end of the accounting period, usually a year. List of assets is entered on the right-hand side while the list of liabilities or debts is on the left-hand side.

â—† A balance sheet is important because it is useful for future planning purposes and assessment of management performance.

TABLE 8.11 Example of Omoniyi farms balance sheet as on 31st December, 2002

S. NO	LIABILITY	AMOUNT (₦)		ASSETS	AMOUNT (₦)
1.	Loan from bank	10,000.00	1.	Land	15,000.00
2.	Loan from co-operative	5,000.00	2.	Implement	10,000.00
3.	AGM provisions	5,000.00	3.	Farm building	5,000.00
4.	Net capital	25,000.00	4.	Livestock	5,000.00
			5.	Feed	5,000.00
			6.	Cash in hand	5,000.00
	Total	45,000.00		Total	45,000.00

Other types of farm accounts are:

1. Ledger: This is a special account book in which each page is divided into two sides by a double line. Each type of farm business transaction has its own ledger page or account page called **folio**.

TABLE 8.12 A typical ledger page

DEBTOR (DR)				CREDITOR (CR)			
DATE	PARTICULARS	FOLIO	N : K	DATE	PARTICULARS	FOLIO	N : K

2. Trial balance: This is a gathering together of all the ledger account balances, showing all the debit and credit balances of the different ledgers. The

PARTICULARS	DEBIT (₦)	CREDIT (₦)
Capital account		6,000.00
Building account	1,000.00	
Tractor account	2,000.00	
Chicks account	1,500.00	
Feed account	2,000.00	
Medication account	500.00	
Salaries&wages account	100.00	
Electricity account	50.00	
Sales account		5,000.00
Cash account	3,850.00	
Total	11,000.00	11,000.00

debit side of the trial balance must agree with the credit side of the trial balance.

3. Assets and liabilities account: This type of account provides all information about the monetary value of farmer's possessions such as buildings, motor vehicle, tractors, livestock, permanent crops and cash in bank or at hand.

Definition of some Accounting Terms

1. Asset: This is anything of value in the possession of the farmer. It relates to all the resources owned by the farmer that enable him to produce. It may be classified into:

(a) Fixed assets: Examples are landed property, farm machinery, farm buildings and structure.

Fixed assets are not used up or consumed during production (durable).

(b) Current assets: Examples are fertilizers, feeds, water, drugs, chemicals, cash in bank and fuel. They are used up during production.

2. Liabilities: This includes all the money owed to external persons or corporate bodies such as bank loans. There are two groups of liabilities:

(a) Current or short-term liabilities: These are debts that must be paid within one accounting year such as creditor's loan.

(b) Long-term liabilities: These are debts that are not to be paid within one accounting year such as long term loans from bank.

3. Net capital, net worth or owner's equity: This is the total amount of money supplied by the owner of the farm business. It is the difference between assets and liabilities (Assets - liabilities = owner's equity)

4. Liquidity: This is the ability of farm business to meet the financial commitments and obligations they fall due.

5. Solvency: The ability of the farm business to cover the liquidation of the asset.

6. Appreciation: This is the increase in the value of an asset recorded as the asset is being used over time. Young animals, growing crops, lactating animals, cash crops and land can all appreciate in value over time.

7. Depreciation: This is the loss or reduction in the value or worth of an asset recorded due to use and old age over time. This represents the loss in value of capital asset as a result of wear and tear over a period of time. Examples of assets that depreciate include farm buildings, machinery, tools and implements. Depreciation is calculated as follows:

$$\text{Depreciation} = \frac{\text{Original cost} - \text{Salvage value}}{\text{Life span}}$$

For example, a tractor costs ₦50,000.00. It is estimated to last for 10 years at the end of which it is estimated that it could be sold for ₦5,000.00.

Calculate the

- (i) Total depreciation
- (ii) Annual depreciation

$$\begin{aligned} \text{(i) Total depreciation} \\ &= \text{Cost price} - \text{salvage value} \\ &= \text{₦ } 50,000.00 - \text{₦ } 5,000.00 \\ &= \text{₦ } 45,000.00 \end{aligned}$$

$$\begin{aligned} \text{(ii) Annual depreciation} \\ &= \frac{\text{Original cost} - \text{salvage value}}{\text{Useful life in years}} \\ &= \frac{50,000.00 - 5,000.00}{10 \text{ years}} \\ &= \frac{\text{₦ } 45,000.00}{10 \text{ years}} \\ &= \text{₦ } 4,500.00 \end{aligned}$$

8. Salvage value: This is the amount of money received from the disposal of fixed assets after their normal useful life. An asset may depreciate to an extent that it attracts little value. When the asset has ceased to be useful or of economic value, it is termed *Obsolete* and sold off as scrap.

9. Useful life of an asset: The number of years an asset can effectively serve a farmer.

ACTIVITY

1. Visit a commercial farm nearby and ask for the different records kept by the farmer or farm manager. Identity the differences between the different farm records and accounts. Record your observations

2. On your school farm, keep farm records and farm accounts for a production period. Prepare a profit and loss account from your records.

SUMMARY

† Farm record is a written documentation of work or events on the farm.

† Farm records are kept for the following reasons:

- To know what has happened on the farm within a period of time.
- To assess the performance of the farm.
- To determine the amount of tax paid.
- For securing loans from banks.
- For planning and budgeting, etc.

† Examples or types of records kept on the farm include, farm diary, farm inventory, input record, sales record and labour record.

† Farm accounts are financial statement of what the farmer receives or spends within a period of time.

† Importance of farm account includes:

- To know if the farm is gaining or losing.
- For taking sound management decisions.
- Accurate determination of annual tax.
- To know the worth of the farm at any point in time.
- To detect fraudulent practices, etc.

† The different types of farm accounts are expenditure accounts, sales account, profit and loss account, balance sheet, ledger and trial balance.

† Salvage value is the amount for which an asset is sold after its normal useful life.

REVISION QUESTIONS

ESSAYS

1. (a) Define farm record.
(b) State six reasons for keeping accurate farm records.
(c) List five types of farm record.
2. (a) Explain the meaning of each of the following terms in relation to agricultural practices:
(i) Appreciation
(ii) Depreciation
(iii) Salvage value
(b) A fiat tractor was purchased by a farmer in 1978 for N12,000.00. In 1987, the tractor was sold off for N 3,000.00 when it was no longer economical to maintain it. Calculate the:
(i) Salvage value of the tractor
(ii) Total depreciation
(iii) Annual depreciation
(iv) Appreciation (**WASSCE 1993**)
3. (a) Define farm account.
(b) State eight reasons why farm accounts are kept.
4. Using the following information, prepare a profit and loss account for UNITY FARM, for the year ending December, 2005.

i.	Cost of maize seeds	D1,400.00
ii.	Cost of fertilizers	D1,200.00
iii.	Cost of insecticides	D1,900.00
iv.	Tractor hiring	D2,000.00
v.	Cost of herbicides	D1,100.00
vi.	Cost of cassava stems	D1,200.00
vii.	Sales of maize	D29,000.00
viii.	Sales of Yam	D7,000.00
ix.	Sales of cassava tubers	D5,500.00
x.	Cost of processing cassava tubers	D1,500.00
xi.	Wages of workers	D6,000.00
xii.	Miscellaneous expenses	D4,400.00
xiii.	Maize consumed	D300.00
xiv.	Potato gift to visitors	D1,000.00

(WASSCE 2006)

5. Explain the following terms as used in agricultural economics.
(a) Farm asset
(b) Farm inventory
(c) Liabilities
(d) Net worth
(e) Solvency

OBJECTIVE QUESTIONS

1. The farm record which contains the list of all items in the farm is called
(a) farm diary. (b) farm inventory.
(c) labour record. (d) production record.
Use the information below to answer Questions 2 to 4.
2. A farmer purchased a sprayer for N12,500 in 1974, at the end of the fourth year, he sold it at N 4,300. The total depreciation is
(a) N16,800 (b) N 8,200
(c) N 7,250 (d) N 820
3. The salvage value is

- (a) N1,075 (b) N 2,150
(c) N 4,300 (d) N 8,400

4. The annual depreciation of the equipment is

- (a) N 33,600 (b) N 20,050
(c) N 2,050 (d) N 2,005

5. The main aim of preparing a farm income and expenditure statement is to

- (a) record all purchases.
(b) outline the sales of the farm.
(c) outline both sales and purchases.
(d) calculate profit or loss.

6. Which of the following statements is not true about the profit and loss account of a farm?

- (a) It is prepared at the end of business period usually a year
(b) All expenses and purchases are listed on the right-hand side
(c) All expenses and purchases are listed on the left-hand side
(d) All receipt and sales are listed on the right-hand side

7. Which of the following is a day-to-day record of work on a farmer's farm?

- (a) Labour record (b) Farm inventory
(c) Crop yield record (d) Profit and loss

8. Farm records and accounts help the farmer to

- (a) manage his farm as a business.
(b) repair his tools and machinery.
(c) be less dependent on farming for an income.
(d) adopt modern techniques of farming.

9. Net worth statement can be referred to as

- (a) farm trading account. (b) balance sheet.
(c) depreciation. (d) profit and loss account.

10. The loss in value of an asset due to wear and tear in the course of its use is known as

- (a) salvage value. (b) net worth.
(c) appreciation. (d) depreciation.

Answers to Objective Questions

1. b 2. b 3. c 4. d 5. b
6. b 7. a 8. a 9. b 10. d