

COURSE CODE:	FIS403
COURSE TITLE:	Fish Production, Management Techniques and Accounting Practice.
NUMBER OF UNITS:	3 Units
COURSE DURATION:	Three hours per week

COURSE DETAILS:

Course Coordinator:	Dr. A.A. Idowu
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Office Location:	Room D209, COLERM
Other Lecturers:	Dr. (Mrs.) O.T. Agbebi and Dr. O.J. Olaoye

COURSE CONTENT:

Practical aspects of fish breeding techniques in cross breeding for stock improvement. Induced breeding, hypophysation techniques. Use of HCG, fish pituitary and others hormones in induced breeding. Appraisal of management structure and effectiveness of fisheries management policies. Record keeping and accounting procedures in fish farms

COURSE REQUIREMENTS:

This is a compulsory course for all students in Departments of Aquaculture & Fisheries Management and Forestry & Wildlife Management. In view of this, students are expected to participate in all the course activities and have minimum of 75% attendance to be eligible to write the final examination.

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READING LIST:

- Abbot, J.C. and Makeham, J.P. (1980). Agricultural Economics and Marketing in the Tropics, Longman Ltd., Pg. 7, 12, 35.
- Adepegba, O.B. (2007). Improving fish processing and marketing in Nigeria. A paper presented at a National Stakeholder Workshop on inland capture Fisheries Development in Lagos State. Pp. 16-21.
- Ayanda, J.O. (1989). Economics of Fish Marketing and Distribution in Jebba Lake. Annual Report. National Institute of Freshwater Fisheries Research, New Bussa
- Olukosi, J.O. and Isitor, S.U. (1990). Introduction to Agricultural Marketing and Prices: Principles and Applications. Living Book Series, Abuja
- Shaw, S.O. (1990). Marketing a practical guide for fish farmers fishing New Books. Great Britain

LECTURE NOTES

THE NEEDS FOR FARM RECORDS AND ACCOUNTING

- Farm management is concerned with the process of decision making by the farmers.
- It also embraces the application of physical and biological sciences in keeping with the economics of profitable resource allocation and maximization of the farmers' net farm income and welfare goals.
- Farm records and accounts are the sine quanon of effective farm management and the backbone of farm enterprises aiming at profit maximization or any other goals.
- Farm records and accounts are not usually written down by small or peasant farmers, but some kind of mental record keeping and accounting is done.
- Hence, a need to encourage the documentation, even at the small farm level, of activities on the farm as well as the expenses and the returns in physical as well as monetary terms in which the framework of a general farmer education programme.

FARM RECORD

EXPLANATION

- This is the recording of the various activities in the farm.
- It is also the systematic way of recording financial transactions and the use of labour and other services to produce fish and other aquatic products.
- Farm record is written documents showing major activities going on in the farming business.
- The various types of records required to be kept by all farmers are classified into two major categories. These are Cash Records and Non-Cash Records.

IMPORTANCE OF FARM RECORDS

- It gives the history of what happens in the farm from the beginning to the end of the farm business
- Provides the necessary facts and figures for farm planning and budgeting
- It helps to determine the level of profit or loss made by the farm
- It enables the farmers to obtain loans from the bank
- It creates room for farm evaluation in order to determine the farmer's management skills- net worth statement, profit-loss statement; the cash flow statement
- It helps to determine value of the farm in case of winding up or death of the owner of the farm
- The actual yield of the farm is determined
- It enables tax inspectors to accurately asses the farm and know the total tax to be paid
- Certain decisions relating to the farm can be taken in order to facilitate long term planning
- It also enables the farmer to keep abreast with all the activities in the farm

FARM ACCOUNTS

- This helps to show the total receipt and payment made by the farm at a particular time. It also shows the movement of cash in and out of the business. The other name for Farm account is balanced sheet.

IMPORTANCE OF FARM ACCOUNT

- Farmers can monitor the changes in prices of produce bought or sold by the farm
- It enables the farmer to carry out the necessary planning required for the smooth running of the farm
- It shows the financial weakness/strength of the farm
- It helps to show the value of assets and liabilities of the farm
- It helps the farmer to know whether profit or loss is made by the farm
- Fraudulent practices on the farm can be detected
- Certain management decisions like whether to continue or discontinue with a section of the farm can be made
- With good farm accounts, farmers can use it to obtain loans from the banks
- Farmer's annual tax is accurately determined
- To obtain information or knowledge of the actual value or worth of the farm

TYPES OF FARM RECORDS AND ACCOUNTS

- The Farm Records which a good farmer should keep are:
- Income and Expenditure or receipts and payments or cash returns
- Yield or Production record
- Farm Inventory of tools and properties
- Annual valuations
- Farm diary
- Profit and loss account
- Labour records
- Farm input utilization record
- Sales record
- Purchase record
- Special or supplementary records

INCOME AND EXPENDITURE RECORDS

EXPLANATION

- This is derived from production records of which they are money values.
- They comprise purchases, wages (expenditures) and sales (income).
- Income and expenditure records together with production records normally form the basis of day-to-day management decisions.

FEATURES

- This shows clearly both income and expenditure
- Income is known as receipt while expenditure equals payment
- Receipts are recorded on the left side while payment equals right side
- The cash book contains column for date on which the farmer made transaction, the source of income received or purpose of payment made
- Debit receipts and credit payment
- The financial position can be determined at year end

SPECIAL/SUPPLEMENTING RECORDS

The farm (layout) map, which can change over time and the farm soil map, legal documents pertaining to the farm.

- These are necessary for the consistent planning and economical use of the land and its improvements.

YIELD /PRODUCTION PROCESS

- It is also known as physical records.
- They are records of quantities of inputs used in the farm and outputs obtained from it.
- Labour input records are in man days or man hours as part of Production records.

INVENTORY PROCESS

- An inventory is the complete count and evaluation of all assets and liabilities on the farm at a specific date.

- **Assets-** All materials i.e goods and services, owned by the farmer and used in the production process e.g cash in hand and at bank, land, landed properties like buildings, machinery, fixtures, fishes etc
- **Liabilities-** the goods and services which farm owes to others e.g obligations that has to be met over time e.g loan repayment and interest on loan

There are **two** steps in taking an inventory

- 1. Physical count of the assets and liabilities (physical records). This involves a simple listing of the assets and liabilities of the farm.
- 2. The valuation of the assets and liabilities already listed.

IMPORTANCE OF INVENTORY RECORDS

- It shows the network of the farm at a point in time as well.
- As the stocks such as feeds, medicines etc on hand.
- It records the expenses due to depreciation.

PERFORMANCE EVALUATION

- Farm records and accounts are used mainly in calculating aggregate and ratio measures for the purpose of assessing the farm business.
- Aggregate measures include the Net worth statement or the Balance sheet and the Income statement or what is sometimes called the Profit and Loss statement.

NETWORTH STATEMENT

- It is used in determining the overall performance of a farm within a period of time.
- It is usually the balance sheet that shows vividly the financial position of the business at a specific point in time.
- It is defined as the total value of assets less the total value of liabilities.
- It gives a measure of the ultimate solvency of the farm.
- In aquaculture, these assets and liabilities are time-specific
- The net worth of any farm depends on a number of **factors** namely:
 - The changes in the general level of prices
 - The success of the farm
 - The amount of profit saved and ploughed back into the farm business
 - The aqua-business requires the use of the net worth statement for the following important **reasons**:
 - It shows a specific financial position
 - It reveals the various collaterals that the investor has (for the support of a loan request)
 - It determines the effects of the financial position on the economic and monetary stability of the investor
- **Net worth statement= Total assets - Total Liabilities**
- It becomes very useful when compared to past values of net worth indicating whether the farm's general performance is getting better or getting worse.
- Ratio measures that can be calculated from the Net worth Statement are:
 - **A. Net capital Ratio (NCR) = Total asset divided by Total liabilities**
 - Measure the farm's degree of financial safety. The smaller the value the less safe is the farm financially.
 - Then ratio measure, like other ones is preferred in most cases to aggregate measures because of the absence of units and the fact that the degree of financial safety of both small farms and big farms can only be compared using ratio measures.
- **B. Working Capital Ratio (WCR) or the intermediate ratio** is given by

- WCR = sum of working and current assets divided by Sum of medium, term and current liabilities
- It measures the degree of financial safety of the farmer over an intermediate period of time say a year to a couple of years. The usefulness of the measure is however in comparing it with past and future WCR measures.
- **C. Current Capital Ratio (CCR)** measures the degree of immediate solvency of the farm that is the ability of the farm to meet current obligations. It is given by
- CCR = sum of current assets divided by Sum of current liabilities
- Again, a comparison of this measure with past and future measures is important in determining performance of the farm

AN INCOME STATEMENT (A PROFIT AND LOSS STATEMENT)

- This is a summary of expenditure and income and it aims at giving a snapshot of a production cycle's performance.
- Income statements over the years in addition to other information are useful in determining where to cut down production or increase production. They thus help in farm management decisionmaking.
- It measures the value of the true fish production on the farm. In fish farming it encompasses (a) receipts (b) operating and fixed expenses /costs (c) net cash Income

CHARACTERISTICS OF PROFIT AND LOSS ACCOUNT

- Prepared at the end of a business period usually a year.
- All expenses and purchase are listed on the left hand side or debit side.
- All receipts or sales are recorded on the right side or credit sale.
- The two tables are normally equal by adding the profit or loss.
- Profit is added to the left hand while loss is added to the right side.
- Enables farmers to know his networth at the end of every year.
- Closing valuation is on the right side while opening valuation is on the left side.

CASH FLOW STATEMENT

- The cash flow statement summates the flow of findings in and out of the aqua business.
- It is prepared on a monthly or yearly basis.
- The major importance of the cash flow statement is that it allows the fish farmer to determine how best to meet monthly obligations and to plan ahead of months e.g when to procure fish feeds, when to decide to borrow, when to arrange or re-arrange a repayment schedule, when to apply financial control measures etc.
- Indeed, accurate preparation of cash flow statement is an important tool in aquaculture. More so, most of the cultural operations are seasonal and time conscious.

DEPRECIATION

- The falling of value; reduction of worth.
- The act of lessening, or seeking to lessen, price, value, or reputation.

CAUSES OF DEPRECIATION

- Physical factors (e.g. dampness, floods and heat).
- Wear and tear.
- Passage of time (e.g. patents, copyrights, etc).
- Obsolescence as a result of government policy and changes in technology.
- Inadequacy.

REASONS FOR DEPRECIATION

- _ Since it reduces net profits, tax will be reduced.
- _ The value of the assets will not be overstated in the balance sheet.
- _ The firm may have fund to replace the assts.
- _ It ensures that the cost of an asst is spread in an acceptable fashion over its estimated life.

METHODS OF DEPRECIATION

- Straight line methods.
- Reducing balance/diminishing method
- Depletion method.
- Revaluating method.
- Machine hour rate method.
- Sum of the years digit methods.
- Annuity method

ASSIGNMENTS

- Differentiate between trading account and profit and loss account.
- Outline the characteristics of fixed assets, current liabilities and current assets.