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## Accounting for a Farm Business: A Conceptual Study

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#### **Abstract**

This paper presents a conceptual study on accounting for farm businesses in the Indian agricultural sector. Despite a 1983 monograph by the Institute of Chartered Accountants of India, challenges persist in adopting accounting practices. The study emphasizes the need for a simplified approach, highlighting the utility of farm records in assessing performance and aiding decision-making. It introduces a conceptual framework for understanding farm transactions, categorizes assets and liabilities, and discusses major cost and revenue components. The goal is to contribute to improved financial management and decision-making in agriculture, acknowledging the unique challenges faced by farmers.

#### Keywords

Agricultural sector, Accounting practices, Small-scale operations, Limited education, Farm records, Crop performance, Financial status, Management decisions, Transactions, Valuation methods, Assets and liabilities, Cost elements, Revenue components, Cost and profit concepts, Common costs, Integrated accounting system, Unique challenges.

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# Accounting for a Farm Business: A Conceptual Study

### 1. Objective of the Paper

This paper aims to conduct a conceptual study on accounting for farm businesses in the Indian agricultural sector. It seeks to identify challenges, explore the utility of farm records, propose an accessible accounting system, introduce a conceptual framework for transactions, categorize assets and liabilities, and provide insights into cost and revenue components, fostering improved financial management and decision-making in agriculture.

#### 2. Introduction

Although the Institute of Chartered Accountants of India published a Monograph in August 1983, agricultural accounting has struggled to gain traction. Apathy to accounting records stems from following main reasons:

- ➤ The Indian agriculture sector is mostly disorganized and dominated by small-scale home-based enterprises. The primary obstacle to the adoption of an agricultural accounting system among small and marginal farmers is their level of knowledge.
- ▶ Big farms lack a complete understanding of using accounting data for management choices and the benefits of data-driven management.
- ➤ Average farmers can not afford a bookkeeper and even if they know how to keep record, they find it tiring and useless. The traditional belief runs saying the cost involved in accounting either actual or notional is not commensurate with the emerging benefit.
- Agricultural income tax laws promulgated by the state governments are not rigorously followed up insisting maintenance of proper books of accounts.
- Accounting profession is not adequately equipped to face the challenging task. Perhaps this backdrop explains sufficiently

the cause of dithering the absorption of accounting practices in the agricultural sector and also put the designer of agricultural accounting in a defensive track to adopt a simplistic approach that can be grasped easily by the average farmers who are supposed to keep record after their day's work.

What are the utilities of farm records particularly when the average farm size is not big and transactions and events encountered by an average farmer also not numerous, that need little elaboration before taking up the issues and design of accounting for agricultural operations which are intended in the article.

A suitable designed accounting system can be squeezed for extracting the following :

- 1. Analysis of crop-specific performance and the overall performance of the agricultural business.
- 2. The financial condition at a certain moment, including assets and obligations.
- 3. Detailed data on yield, revenue, input, and costs of the firm compared to similar enterprises in the area to determine efficiency or deficiencies in overall performance.
- 4. A database used for management decisions such as acquiring assets or contracting services for various agricultural activities, selecting crop varieties, determining farm size, diversifying farm operations by adding livestock or non-farm activities, and deciding on discontinuing agricultural operations.
- 5. Supporting data to the lenders to assess firm's financing requirement as well as debt-servicing ability.
- 6. Reliable source documents for farm management survey which is presently carried out on the basis of a questionnaire to be filled taking data supplied by the farmers from their memory.
- 7. Reliable source document for assessment of agriculture income-tax.

## 3. Conceptual Framework

Nature of Transactions - transactions of an agricultural farm are four types - cash, credit, exchange and notional transactions. In the agricultural sector often some kinds of goods or services are exchanged for others. These barter transactions are termed as exchange transactions. Following are the examples of exchange transactions:

- ➤ Exchange of workers between two farms (badli workers)
- ➤ Exchange of animal labour for human labour.
- >> Exchange of seed,

Exchange transactions may be valued at the opportunity price, i.e. what the goods or services exchange would fetch in the market had these been sold in the open market instead of exchange.

Transactions between farm and farm household are called notional transactions since farm is views as an independent entity only notionally.

(Truly it is difficult to draw a border line between the activities of farm and farm household). Transactions between farm and farm household are of the following types:

- ▶ Supplies of food by household to the attached or hired workers,
- **▶** Consumption of farm output by the household.

Also, the agricultural economists have counted the land rental on owned land, interest on owned capital other than land and wages of the family workers notionally and taken these as elements of crop cost. These notional cost elements have been dealt in detail and generally, opportunity price-based valuation of notional transitions has been suggested. However, in some cases services rendered by farm household may not be readily marketable. For example, supplies of food for attached or hired workers do not have ready market. But in the agricultural sector cost imputation cannot be avoided since in most cases the notional transactions have material impact on the overall farm transaction. If family consumption of output is taken at cost, the subsistence farms will show no profit leading to a fallacious interpretation that subsistence farms are not profitable. If the salaries of family workers are not included, the goods of small and marginal farms will be undervalued since these farms largely rely on family labour. When the opportunity cost of hypothetical transactions is unknown, an estimate might be generated by examining the expenses of other farmers facing comparable situations.

#### 4. Assets and Liabilities

These are standard agricultural farm assets and liabilities. This will aid in asset and loan registry design and balance sheet financial statement presentation.

#### **Fixed Assets**

Land

Farm shed, go down, Granary, etc.

Irrigation structure

Shallow tubewell and irrigation machinery

Power teller, tractors

Draught animal

Harvesting Machine, Weeder, Sprayer, Thresher

Other Tools and Implements

#### **Current Assets**

Input stock-seed, fertilizer and pesticides

Standing crops

Output stock -main product and by -product

**Debtors** 

Cash at bank and cash in hand.

Liabilities

Farm householding capital

Long term loan

Short term crop loan

Sundry creditors for input supplies.

#### 5. Cost and Revenue

Major cost elements of an agricultural are:

Seed

Fertilizer

**Pesticides** 

Irrigation

Wage

Running and maintenance cost of agricultural

Machinery and implement

Maintenance cost of draught animal

Depreciation of fixed assets

Interest on borrowing capital

Rental on leased-in-land

Notional rental on owned land

Notional interest on owned capital

Notional wages of family workers

Revenue consists of sale of main products and by-products.

A family's affiliated business receives a portion of the value of the crops and by-products that are consumed by the family. worth of the product gained during a transaction.

### 6. Economist's Concepts of Cost and Profit

A thorough system that categorized agricultural expenses into A1, A2, B, and C was proposed by the Agriculture Prices Commission's standing technical committee.

Cost A includes the value of hired human labour, the value of owned bullock labour, the value of fixed bullock labour, the value of owned equipment usage, and hired machinery costs. (f) worth of fertilizers, (g) worth of owned and bought manure Value of seed from both agricultural production and purchases (i) worth of insecticides and pesticides, (j) irrigation fees - for both owned and rented equipment Canal water fees. (l) Land revenue, cesses, and other taxes (m) Depreciation of agricultural implements, including those hauled by bullocks and operated by human labour. (n) Depreciation on agricultural buildings, farm equipment, and irrigation structures. (o) Interest on working capital and incidental expenditures include costs for craftsmen' ropes and (p) repairs to minor agricultural tools.

Cost A2 = costA1 + rent paid for leased-in-land.

Cost B = cost A2\* imputed rental value of owned land (less land revenue paid thereupon)

\*Imputed interest on fixed capital (excluding land)

Cost  $C = \cos B + imputed$  value of family labour.

 $Later\ on, the\ special\ Expert\ Committee\ revised\ classifications\ are:$ 

Cost A1= All costs associated with manufacturing, whether paid in cash or via exchanges.

Cost A2 = cost A1 + Rental on leased-in-land.

Cost B1 = cost B1 + imputed rental on owned land + rental on leased-in-land.

Cost C1 = cost B1+ imputed wages of the family workers.

Cost C2 = cost B2 + imputed wages of the family workers.

Basic thrust in such cost classification is decomposition of agricultural profit or total family profit in to contribution for land, labour, capital and management.

Revenue - cost A1 = Accounting profit for a family increases when the farmer does not use any rented land.

Revenue - cost A2 = Accounting profit is generated by a farmer while using both owned land and leased-in land.

Revenue - cost B = Profit for family members who work as both employees and bosses.

Revenue - cost C = managerial profit.

Profit B1, profit B2, profit C1 and Profit C2 imply further decompositions of the total family profit. Apparently cost imputation in the agricultural sector may be confusing. However, it is difficult to ignore the organizations pattern in the agricultural sector and the transactions and events emanating from such pattern. At the macro-level, the policy making authority should refer to cost C while fixing up support price of the agricultural commodities. Revenue -cost C =0 is the break-even point at which the farmer can earn opportunity price of his labour. On the other hand, for micro-level decision making different layers of profit indicate how to cover opportunity costs. If there is no profits C a farmer cannot stay at the farm in the long run.

## 7. Direct Crop Costs and Common Costs

Crops allow for the identification of seed, fertilizer, manure, pesticides, direct pay (both nominal and real), and land rental (both nominal and actual). Nomenclature alone is insufficient to categorize additional expenses, such as irrigation, agricultural equipment services, tools, animal power, and depreciation interest. Tilling, irrigation, weeding, harvesting, and similar tasks sometimes include the use of rented equipment, tools, and animal power. hire charge are traceable in relation to a crop. If the farmer on the other hand uses owned assets running costs re directly identifiable but the maintenance cost and depreciation become common cost. Similarly, maintenance costs and depreciation of farm shed, interest on capital -notional and actual are also common cost in nature.

Some elements of direct crop cost and common cost are listed in Table-1, the list is not exhaustive for obvious reason:

Table-1: List of Direct Crop Costs and Common Crop Cost

Direct Crop Cost	Common Crop Cost
Seed	Draught maintenance
Fertilizer, Manure	Animals, machines, tools.
Pesticides, Insecticides	Farm shed upkeep Depreciation
Wages - Notional and Actual	Capital borrowing interest
Hire Charged of Animal Power Machinery	Interest on invested money.
Implements Ruining Cost of owned Machinery and Implements Land Rental - National and Actual.	

### 8. Apportionment Bases for Common Costs

The common expenses of the farms should be fairly distributed among the crops that incurred them. Businesses dealing with crops and animals sometimes experience similar expenditures. In such situations, the first step is to identify the applicable cost that agricultural firms are liable for. An example of such events is the maintenance of draught animal along with other cattle stock. Since milch animals, draught animal animals and young animals are generally maintained together, the common costs are to be distributed firstly between livestock enterprise and crop enterprise using some suitable points for each animal considering age and other qualitative (Monograph: an accounting for Livestock ICAI 1983) factors and the relevant costs quantitative factors for draught animal used in the agriculture is to be redistributed among the crop enterprises. However, the aspects of cost apportionment has not been dealt with in the paper simply to avoid complexity. Wherever possible, common expenses should be distributed across agricultural firms according to consumption. The duration of the growing season is another relevant variable. While taking out a working capital loan or crop loan, the interest should be divided up among the crops in the same proportion as the cash flow from the loan.

## 9. Apportionment Bases of Common Costs in Agriculture

Apportionment of common costs in agriculture involves allocating shared expenses among different cost centers or enterprises

within a farming operation. This process helps farmers accurately determine the costs associated with each activity or product, aiding in better decision-making and financial management. Common cost categories in agriculture include overhead costs, such as equipment, labour, utilities, and administrative expenses.

- ➤ Animal Base equals the maintenance of draught animal and depreciation.
- ▶ Maintenance of agricultural equipment, tools, and depreciation are calculated based on machine hours.
- ➤ The upkeep of a farm shed is directly related to the duration of the agricultural season.
- ➤ Interest on fixed capital is directly proportional to the duration of the agricultural season. Interest on working capital is calculated based on the working capital investment for different crops.

Three assumption for design of agricultural accounts in this paper are :

- ▶ Farm transactions are not numerous so that adoption double entry book keeping system is not essential.
- ➤ Cost imputations make agricultural accounting more meaningful for ascertaining crop costs.
- ▶ Integrated financial and cost accounting system release better information for macro-and micro-level decision making.

#### 10. Conclusion

In conclusion, this conceptual study sheds light on the challenges and opportunities associated with accounting for farm businesses in the agricultural sector of India. The key findings and conclusions drawn from the paper are summarized as follows:

- **1. Challenges in Agricultural Accounting :** The reluctance to adopt accounting practices in the agricultural sector is attributed to various factors, including the unorganized nature of farming operations, the predominance of small-scale farming, limited education among farmers, and a lack of awareness regarding the benefits of maintaining accounting records.
- **2. Utility of Farm Records:** The study emphasizes the crucial role of farm records in providing valuable insights into crop performance, overall enterprise performance, and financial

- status. It highlights the significance of these records in supporting various management decisions related to farm operations, diversification, and financing.
- **3. Need for a Simplified Accounting Approach:** Acknowledging the constraints faced by average farmers, such as the inability to afford bookkeepers and the perceived tedium of record-keeping, the paper underscores the importance of adopting a simplified accounting approach that is accessible and manageable for farmers after their daily agricultural activities.
- **4. Conceptual Framework for Transactions :** The paper introduces a conceptual framework categorizing farm transactions into cash, credit, exchange, and notional transactions. It acknowledges the difficulty in drawing a clear line between farm and farm household activities, emphasizing the notion of notional transactions.
- **5. Assets and Liabilities in Agriculture :** Common assets and liabilities associated with agricultural farms are outlined, providing a foundation for designing asset and loan registers. The classification includes fixed assets, current assets, and liabilities such as long-term loans and sundry creditors for input supplies.
- **6. Cost and Revenue Components :** The major cost elements and revenue components in agricultural operations are discussed. The paper introduces economists' concepts of cost and profit, offering comprehensive schemes for classification, including Cost A1, A2, B, and C, to facilitate a deeper understanding of the components contributing to agricultural profit.
- 7. Direct Crop Costs and Common Costs: Distinctions between direct crop costs and common costs are elaborated upon, with a focus on apportionment bases for common costs among various crop enterprises. The importance of considering factors such as usage and the length of the crop season in the apportionment process is highlighted.
- **8. Assumptions for Designing Agricultural Accounts:** The paper outlines three crucial assumptions guiding the design of agricultural accounts. It suggests that farm transactions are not numerous, making double-entry bookkeeping non-essential; cost imputations enhance the meaningfulness of agricultural accounting; and an integrated financial and cost accounting

system provides superior information for macro- and micro-level decision-making.

In essence, this study advocates for the adoption of tailored accounting practices in the agricultural sector, emphasizing the need for a pragmatic and simplified approach that addresses the unique challenges faced by farmers. By doing so, the paper aims to contribute to improved financial management, decision-making, and overall sustainability within the agricultural industry.

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