

## **Present system of agricultural accounting: some issues and challenges.**

**Manoj Sharma\***

### **ABSTRACT**

Agriculture is one of the primitive activities from the beginning of human civilisation and it is maintained throughout the centuries as household activity. Later on agriculture for commercial purpose came into existence. Indian farmer`s without proper education in accounting for their agricultural activity facing difficulties to ascertain correct profit or loss of the operation. Some suggestions in some key areas of agricultural operations and a simple format for profit or loss statement are advocated.

**Key words:** Farm business activity, Accounting system, Accounting period, Inventory schedule.

### **I. Introduction**

It is well known that rural economy of India is overwhelmingly on agro based economy. In agriculture the role of farm records, book keeping, maintaining accounts and analysis of the records of the farm is of immense importance because agri-business or agri-household activities should reveal what the entrepreneur has incurred as cost, what return is he getting and how much profit is being generated from the efforts of the owner of the farm. Therefore, whatever transactions have undergone must be accurately recorded, books of accounts be maintained, the record be analysed and the picture of the farm be crystal clear.

India the cradle of agricultural civilisation has its folklores and literature rich in vivid description of farming practices and animal raising. In India, Kautilya, Finance Minister of Emperor Chandra Gupta Mourya I , in his book Arthashastra, mention the existence and need of accounting in relation to agriculture.

Though India is predominantly an agricultural country, a few scientific studies on farm management have been conducted. The agricultural department established in 1905-1906 in the various states, maintained a detailed account of the cost of cultivation and livestock raised on the farms. But the data, useful as they are, do not reflect the farming costs and returns obtaining under the cultivator`s conditions. Hence they are unrelated and limited in scope.

Here some major issues and problems relating to farm accounting is being discuss below and will try to formulate the short comings and remedies for the problems which are faced by the farmers for accounting purposes.

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\* Assistant professor in Commerce, Cluny Women`s College, Kalimpong.

## II. Objectives

The main objectives of this paper are (a) to see the present system of agricultural accounting available in India and (b) to see the problem and shortcomings of agricultural accounting. More specifically, the paper will deal the following issues:

- Present system of agricultural accounting which is available in India through books of accounts.
- Shortcomings of the available accounting technique.
- Suggestion for shortcomings or defect

## III. Methodology

For studying the present system of agricultural accounting we will take the help of different published books on farm management and accounting, also different journals and publications.

## IV. The activities of a farm business

To understand the design and role of the accounting system, it is useful to consider the four activities involved in the management of a business – investment, financing, production and marketing activities. Each type of activity involved different types (**Castle E.N.et.al, 1987**)

Activities	Sample Accounting Transactions
Investment	i) Purchase capital assets ii) Depreciate capital assets iii) Sell capital assets
Financing	i) Borrow capital ii) Repay loans iii) Pay interest
Production	i) Incur expenses ii) Pay for material and services
Marketing	i) Sell products and services ii) Earn net income

## V. Options in choosing an accounting system

Before anyone can begin entering transactions into an accounting system, several decisions must be made about the type of system to be used. A number of options are available and generally fall into the following areas (**Kay Ronald D.et.al, 2005**):

- 1 .What accounting period should be used?
2. Should it be cash or an accrual system?
3. Should it be a single or double entry system?
4. Should it be a basic or complete accounting system?

## VI. Initial Design consideration

Designing accounting system for farm business presents some special problems because of the interdependence of the home, farm business, and nonfarm business interests. This interdependence makes it more difficult to identify the financial transaction that properly belongs to only farm business. Home and family transactions include food, clothing, home improvements, family auto expenses, family life insurance and so forth. Nonfarm business interest, might be investment in stocks and bonds, an off farm job, or part ownership in a nonfarm business such as vegetable processing cooperative, cash often flows back and forth between farm, home, and nonfarm business(**Castle E.N.et.al,1987**).

An accounting system: (1) be easy to keep. (2) provide necessary information (3) provide the information when it is needed.

At times, these requirements may be in conflict, it is, records that are the easiest to keep may not satisfy the other two essential requirements. In accordance with the economic principle the farmer should continue to spend time on accounting records until it becomes more profitable to spend time elsewhere. It is possible to record information that has less value than would be earned if the time had been spent in another way.

## VII. Accounting Period

Accounting period may be taken on any date in the year. But once a date is selected the farmer should stick to it. Therefore, the selection of the date should be preceded with careful consideration. The selected date should be such when most of the farms produce has been harvested and stores or sold. This will minimise the problem of evaluating the standing crops. The farmer can select any of the following dates (**Sharma A.N. and Sharma V.K. 1981**):

- a) The date of the start of the farm.
- b) The start of calendar year (1<sup>st</sup> January to 31<sup>st</sup> December).
- c) Start of the financial year (1<sup>st</sup> April to 31<sup>st</sup> March).
- d) The beginning of the agricultural year (1st July to 30<sup>th</sup> June).
- e) Accounting for every crop separately.

## VIII. Financial Accounting

Financial accounting is the method of recording transactions involving the transfer of value money or money's worth, so that financial results of the business as a whole may be readily ascertained at any time.

There are two system of Book- Keeping:

- i) Single entry system.
- ii) Double entry system.

**Single entry system** reduces the work in keeping record and each item of sales or expenditure is recorded once.

These are organised as:

Inventory

Crops and livestock records

Accounts payable and receivable

Recording cash transactions

**Double entry system** is the recording transaction is in two-fold aspects, that is, two entries made for each transaction in the same set of books, one being debit entry and the other a credit entry.

### **Heads of accounts in agricultural business.**

Capital A/C

Private or Drawing A/C

Cash A/C

Land A/C or Land Improvement A/C

Building A/C

Machinery or Implements A/C

Office Fixture or Furniture A/C

Live Stock A/C

**Accounts for expenses:** These are the expenses involved in operating agri-business. These involve costs of production, viz. rent, wages, land revenue or rent, discount, seed, fertilizer, manure ,feed, general account etc.

**Accounts of income:** Income on the farm comes by the sales of farm products and also from interest, rent, and discount.

**Crop produce account comprises of:** Crop produce A/C, Live stock produce A/C, Dairy A/C, Poultry A/C, and Miscellaneous A/C (**Broadway A.C. and Broadway Arif, 2001**).

## IX) Depreciation of Capital Equipment

Farmer purchased a variety of production assets with different periods of useful life. Items expected to last one year or less are charged to the agricultural business as an operating expense for that year. Fertilizer, seed, and spray materials are examples of such items that are

charged as operating expenses. Farmers also purchased for production purpose items which last many years such as bullock, implements and buildings, irrigation facilities. Such items should not be charged to the agri-business as operating expenses for any single year because they contribute to production for a number of years. However, a “fair share” of the cost should be charged to each year’s operation until the full purchase price recovered.

Depreciation is the loss in value of an equipment or live stock through use, age or any other cause. This loss in value may be calculated in one of the following ways (**Tandon R.K and Dhondyal S.P., 1971**).

There are many methods for ascertainment of depreciation out of that Straight line method (except cattle depreciation), Diminishing value method (except cattle depreciation) and Revaluation method can be used. Revaluation method is the best method for valuation of live stock and generally followed in calculating the value of the cattle at the end of each agricultural year.

As the farmers have face the trouble in implementing depreciation method and in most of the cases they are not well aware of charging the depreciation of capital equipments, as a result accurate profit or loss of the agricultural activity is not possible.

### **X) Inventory Schedules**

It is the first step in agricultural accounting. It is a list of all physical property of a business along with their values at a specified date. The best time to take a farm inventory on most farms is at the beginning of the agricultural year, on or near 1<sup>st</sup> July, usually, at this time of the year, the crop season is finished and work for the next season has not yet begun. Also, stored crops and feed supplies on hand are ordinarily low at this time, which makes the inventory jobs of physical measurement of these items and estimates of value relatively easy. Actually, the time, the inventory is taken, is not an important factor, it can be done in any month of the year, but to be of the most value, is must be taken about the same time each year. Taking an inventory involves two processes: (i) Physical counting and (ii) valuation of physical assets (**Jhol S.S and Kapur T.R., 2001**).

Broadly Speaking, inventory is of two types: (a) Simple and (b) Comparative farm inventory.

- (a) **Simple farm inventory.** The simplest possible form of record would be an inventory taken once a year. This is simply an enumeration of assets. It is usually taken on the same date each year. It shows the financial status and liquidity position of business and relative importance of various properties. Illustrations of simple inventories are given in tables.

**Table-1 Inventory of crop and livestock product**

Type of product	Quantity/No.	Value on 1 <sup>st</sup> July (Rs.)
Maize	100 kg	500
Paddy	500 kg	1200
Wheat	150 kg	1500
Gram	50 kg	600
Gur	50 kg	1000
Pigs	10 pcs.	10000
Poultry birds	50 pcs.	7500
Butter	2 kg	400
Ghee	2 kg	600
Total	-	23300

(Imaginary figures)

**Table-2 Inventory of farm machinery**

Machinery	Description No.	Date of purchase	Original cost	Value on 1 <sup>st</sup> July(Rs.) (After depreciation)
Tractors	1 No ( Arjun 150 )	30.06.2010	400000	320000
Ploughs	4 No	30.06.2010	8000	7200
Harrow - Cultivators	2 No	30.06.2010	2000	1800
Sprayers	1 No	30.06.2010	500	450
Trailer	1 No	30.06.2010	3000	2700
Track	1 No (Matador)	30.06.2010	200000	180000
Water - Pumps	1 No	30.06.2010	20000	18000
Total	-	-	633500	530150

(Imaginary figures)

**Table-3 Inventory of farm buildings**

Description	No.	Type	Value on 1 <sup>st</sup> July (Rs.)
Store	1	Corrugate shed	20000
Machinery shed	1	Brick wall	25000
Poultry house	1	Corrugate shed	20000
Cattle shed	1	Corrugate shed	20000
Miscellaneous building	1	Brick wall	25000
Total	-	-	110000

(Imaginary figures)

**Table-4 Inventory of livestock**

Type of livestock	No.	Value on 1 <sup>st</sup> July (Rs.)
Bullocks	2	10000
He-buffaloes	2	10000
She-buffaloes	2	8000
Cows	2	12000
Calves	2	4000
Sheep	4	8000
Goats	4	8000
Hens	5	1000
Others	-	-
Total	-	61000

(b) **Comparative farm inventory.** The usefulness of annual inventory is very limited, but by comparing inventory in succeeding year the farmer can usually get a fairly good idea of the progress of the farm as a whole. A comparison of inventories will show the growth or increase in the capital from year to year and the distribution of this capital among the various types of property. If net capital is found to be larger than that at the corresponding date a year before, it is an evidence of success or growth of the business (Sharma A.N. and Sharma V.K., 1981).

**Table- 5 Comparative inventory of farm produce**

Produce	On 1 <sup>st</sup> July 2011 (Previous Year)		On 1 <sup>st</sup> July 2012 (Current Year)	
	Quantity/No.	Value(Rs.)	Quantity/No.	Value(Rs.)
Maize	50 kg	300	100 kg	500
Paddy	400 kg	1000	500 kg	1200
Wheat	100 kg	1000	150 kg	1500
Gram	40 kg	800	50 kg	1000
Gur	30 kg	600	50 kg	1000
Pigs	5 pcs	4000	10 pcs	10000
Poultry birds	30 pcs	3000	50 pcs	5000
Butter	1 kg	200	2 kg	400
Ghee	1 kg	300	2 kg	600
Total	-	11200	-	21200

(Imaginary figures)

Recording of inventory for agri-business is the beginning of accounting, inventory schedule preparation is a routine work and it depends on free time available to the farmer. The farmers have minimum leisure time to engage themselves for other works; because of this they are not willing to do record keeping work.

#### **XI) Farm Income Statement**

The objective of preparing the income statement is to summarize the data on income and expenses to present truthful picture of the year's performance. An income statement is the list of all farm expenses or business debt on one hand and all receipts or business credits on the other. After bringing these together in a convenient form, expenses are subtracted from receipts to determine the net income for the year.

Three distinct seasons depending on rainfall and meteorological rhythms are generally marked in India and West Bengal in particular for agriculture activity. Kharif season (Rainy season) starts normally during the month of June to September followed by Rabi season (winter season) from November to March. Pre-Kharif season is referred to the period before kharif season.



**Farm income statement of (Name of the farmer) for the period (1<sup>st</sup> July to 30<sup>th</sup> June).**

**A. Receipts**

Sources	Cash	In kind	Rate / Qtl.	Amount (Rs)	Remarks
	Qty in Qtl.	Qty.in Qtl.			
1. Crop Sales:					
Aush	5	-	600	3000	-
Aman	5	-	800	4000	-
Boro	4	-	700	2800	-
Jute	4	-	1000	4000	-
Wheat	4	-	1000	4000	-
Vegetables	-	-	-	-	-
Tree plantation and others	-	-	-	-	-
2. Nonfarm income:					
Poultry	1	-	10000	10000	-
Fisheries	-	-	-	-	-
Dairy	-	-	-	6000	-
Others	-	-	-	-	-
3. Work other than on his farm by him and his family member	-	-	-	5000	-
4. Hire of Bullock /Tractor /Machine to other persons	-	-	-	2000	-
5. Rent of Land and Building	-	-	-	-	-
6. Earning on money loan	-	-	-	-	-
7. Other occupation	-	-	-	-	-
8. Govt. relief and other subsidies.	-	-	-	1000	-
<b>Total Receipts</b>	-	-	-	41800	-

**B. Expenses**

Sources	Physical units	Value in (Rs.)
1. Human labour:		
Hired	50 men	7500
Own	-	-
2. Bullock labour:		
Hired	6 hours	1200
Own	10 hours	2000
3. Tractor/Machine:		
Hired	1 No	3000
Own	1No	4000
4. Seeds:		
Hired	10 kg	1200
Own	5 kg	800
5(a) Manure		

Own	-	-
Purchase	100 kg	1200
(b)Fertilisers	200 kg	3000
6.Insecticides,pesticide,weedicides	-	500
7.Irrigation charges		
Channel	-	-
Deep tube well	-	-
Electric	1 No	9600
8.Interest on working capital		
Owned	-	-
Loan	-	1000
9.Miscellaneous charges	-	-
<b>Total Expenses</b>	-	<b>35000</b>

(Imaginary figures)

**Net income=Total income (A) – Total expenses (B).**

Most of the farmers in India belong to small and medium category they need easy technique to record their transactions, here is some suggestion for selected areas, because for ascertaining accurate profit or loss recording of inventory, charging of depreciation and the statement of profit or loss is highly important.

### **Short comings of the available agricultural accounting system**

Most of the Indian farmers do not like to keep accounting records for agricultural activities due to illiteracy, lack of systematic knowledge and poverty ratio which is very high amongst the farmers and further they do not have leisure time to spare time for keeping records or books of accounts. The system or techniques which are available in books of accounts required specialised knowledge and skill, most of the literatures which are available based on the workings of the developed countries.

Due to some of the difficulties the farmers do not like to maintain the records and accounts for the agriculture activities:

1. In India seventy five percent farmers are small and marginal and their land holding is very small. The incomes of small and marginal farmers remain very low and they cannot afford to have an outside support by appointing a skilled person.
2. The small and marginal farmers engaged themselves for all type of works for the agriculture. A farmer performs the duties of a labourer, managerial and financier. Generally farmer remains busy in doing different types of labourious work from morning to evening. At the end of the day he find himself completely exhausted and consequently he is not in a position to spare time to record the entries and keeping of accounts for agricultural activities.
3. There is a lack of business awareness amongst the farmers as most of them are illiterate. Most of the agricultural businesses are of family or household nature. Agriculture business also is expected to have uncertainty due to environmental change

and other natural calamities. Because of this uncertainty farmers do not find any interest in keeping records.

4. Another shortcoming before the farmers for maintaining the books of accounts and keeping records is the non availability of simple and standardised books of accounts or proforma. Due to this reason the farmers who are willing to maintain the accounts but they do not find books of accounts in local language. It is necessary that the simple and standardised books of accounts should be made available in local languages so as to enable the poor farmers to keep records for agriculture.

## **Suggestions**

To popularise the advantages of agricultural accounting amongst the farmers following measures are suggested:

1. The advantages of recording and keeping agricultural accounting may be brought to notice of farmers, through wide publicity by NGOs or agricultural departments of the governments.
2. Organised training programme for the literate farmers may be started at the block level or panchayet level for educating them about maintaining of accounts for the agricultural activity. The procedure for maintaining agricultural accounting should be quite simple and easy so that every farmer may be able to follow it easily.
3. Farmers should aware themselves about different facilities provided by the Banks, Governments and other Financial Institutions.

## **Conclusions**

India has yet to go a long way for raising its agricultural production and productivity at par with the developed countries of the world for which it is necessary to pursue the scientific system of farming which need specific conditions, use of modern technology, high yielding variety seeds etc.. But at the same time it is also necessary like other developed countries to popularise agricultural accounting in India which would be quite helpful in further increasing the agricultural production. For keeping agricultural accounting under single entry system or any suitable proforma may be quite helpful to the small, medium and marginal farmers, big farmers can keep their books of accounts under single entry or double entry system. Thus we can say that if the records and accounts of agricultural activities are maintained properly under scientific accounting system the production and productivity of agriculture will increase further and agriculture business would become more profitable.

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