MONOGRAPH ON

ACCOUNTING FOR POULTRY FARMING

Research Committee
The Institute of Chartered Accountants of India
New Delhi

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FOREWORD

Proper maintenance of accounting records is not one of the strongest points of the Indian agricultural sector. This is largely due to its un-organised nature, widespread illiteracy of the farmers and uneconomic land holdings. The prominent place which this sector enjoys in the national economic plans, and the massive investments which are necessary in this sector, however, make it imperative that agriculturists keep adequate accounting records. Of late, this aspect has assumed greater significance as agriculture and its allied activities, such as poultries, are rapidly getting commercialised and modernised on the lines of the industrial sector. In view of this, the Research Committee of the Institute, took upon itself the task of preparing monographs on accounting systems for agriculture and its allied activities. The present monograph on 'Accounting for Poultry Farming' is one of this series.

This work is primarily meant for use by poultry farmers and members of the profession who assist them. In addition to the financial accounting details, other aspects such as management accounting, inventory control, financing and taxation have also been covered. I am grateful to my eminent colleague, Mr. G. Sita Rama Rao for preparing the basic draft of this study. I must also acknowledge the considerable pains taken by Mr. A.C. Chakrabortti, Chairman of the Research Committee and by Mr. Kamal Gupta, Technical Director and Mr. Avinash Chander, Assistant Director in giving the study its final shape and form.

I hope, this work will go a long way to promote the application of accounting techniques in the area of agriculture.

New Delhi,
5th September, 1980

Y.H. MALEGAM
President

PREFACE

Agriculture continues to remain the occupation of a majority of our people. Its contribution to the GNP is also much more than any other sector. We must also remember that agriculture is not only important per se, but that without adequate performance in this sector, all our efforts at industrial development, improving GNP, reducing in-equalities and poverty, etc., are most likely to end up in failure. So far, agriculture has largely been carried on by millions of unorganised small farmers all over the country, and, as such, the need for accounting, inventory control and other such services was considered beyond the capability of the farmers and an unnecessary cost. However, with technological developments in the agricultural sector, introduction of other phenomena like state farms, farmers' associations in the case of food and cash crops, and compulsory procurement and distribution of food items by the Government, and general financial assistance by the banks, the need for organised, systematic accounting can hardly be over-emphasised for appropriate computation of costs, profits, subsidies, levy prices, etc.

Hitherto, not much attention was paid towards this important aspect of this vital sector and our Institute, being the governing body of the accounting profession, assumed the responsibility of bringing out monographs on agricultural accounting and allied areas for the benefit of its members and others operating in that particular area. The present monograph is an attempt to present an accounting system for poultry farming-one of the vital areas of agricultural sector, which is showing signs of continued growth on a fairly large scale. The basic draft of this monograph, which was prepared by Mr. Sita Rama Rao, has subsequently been studied in detail and revised by our Technical Director, Mr. Kamal Gupta and his colleague, Mr. Avinash Chander. I am, indeed, grateful to them for having spent their valuable time in doing so, and for sharing their invaluable experience with the rest of us.

I hope that the monograph will be found useful by members and others concerned with poultry farming. Suggestions on improvements in the accounting procedures contained therein will be gratefully received.

Calcutta,
5th September, 1980

A.C. CHAKRABORTTI
Chairman

CHAPTER 1

INTRODUCTION

Within the last two decades or so, a substantial change has taken place in the poultry industry in our country. This has been brought about by the emergence of genetically superior breeds and the entry into this field of 'gentlemen farmers' who have been very receptive to improved techniques of poultry management and production. The fascinating output of the ameliorated hen laying 200 eggs a year as against 60 of the 'desi' type has been an irresistible incentive for the new entrepreneurs. The shift in favour of quality birds is clearly reflected in the rise in egg production from 2,500 million in 1961 to 7,700 million in 1973, and around 12,500 million in 1979. In a typical year, the 29 million genetically improved layers contributed 5,200 million eggs in the nation's egg basket and the 42 million 'desi' birds produced less than one-third of the total production. In spite of such a vast increase in egg production, the country has a long way to go to meet its requirement of 1,00,000 million eggs; the per capita annual availability of eggs in India is 15 whereas it is 200 to 250 eggs in advanced countries. Andhra Pradesh, West Bengal, Tamilnadu, Maharashtra, Kerala, Punjab and Karnataka are the important egg producing states. The growers in Kerala have demonstrated that poultry rearing can be as successful on a small scale as it is with giant ventures having sophisticated housing and management.

A number of poultry breeding farms in the country have taken up programmes to evolve genetically superior chicken strains for commercial rearing. The new strains of poultry developed indigenously will soon replace the imported poultry breeds.

Poultry business has increasingly become popular because of the following inherent advantages :

i) it can be adopted in a wide range of climatic conditions ;
ii) it does not require as large an area of land as agricultural farming.

iii) its investment requirements are not very high ;
iv) its gestation period is low ;
v) the special skills which are required are attainable and the daily management can be carried on by the family members ; and
vi) it enables the production of a high quality food that cannot be adulterated.

With these advantages poultry farming has a vast potential in developing countries. In India from the mid sixties poultry farming has steadily grown. The Government has taken cognizance of the fact that poultry farming can play an effective part in the socio-economic uplift of the rural population in general and the small agriculturist in particular.

Technical Aspects

In recent years, poultry farming has become a highly specialised industry. This industry can be divided into three classes which is a consequence of specialisation resulting from mass production.

Breeder : Breeding is now carried out scientifically in large breeding farms. Such farms produce two types of poultry-first is the egg laying fowl (layers) for the egg producer and the second is the meat bird (broilers) for the grower. In the process they have to develop strains both for the smaller, highly productive layer and for the fat and delicious broiler. Many breeding farms or hatcheries in India have established reputation for supplying specified strains of birds.

Grower : The grower deals exclusively with meat producing poultry. He buys such strains of poultry which can be reared within the shortest possible time as delicious and weighty table-birds. His endeavour is to so organise his farm that the input costs in terms of feed etc and the output in terms of meat are optimised.

Egg Producer : The egg producer purchases his laying fowls from the breeder, attempts to maximise his egg production from the various flocks, and discards the hens as culls after the production cycle is over.

There are mainly two systems of rearing poultry :—

Deep Litter System : Under this system birds live on the floor which is covered up to a depth of six to eight inches with litter material viz. straw raw-dust and shavings, dry leaves or grass, groundnut kernels, maize stalk or even dry seaweed. Once in the life time of a batch this litter can be gathered. The litter manure fetches good returns.

Cage System : The cage system of rearing poultry is catching up particularly in urban and semi-urban areas where increasing cost of building materials has posed problems in setting up deep litter units. In this system three to four birds are kept in one cage and there may be two to three tiers in the system. The cage is preferred because more birds-three to four times that of deep litter system-can be reared in the same space and, it is easy to observe the individual bird's performance and cull the unproductive ones. Lack of direct contact between the birds and their droppings reduces the risk of spread of contagious diseases. The other advantages of cage system are :—

- The capital cost per bird for the cage is Rs. 17.40 as against Rs. 23 in case of deep litter, according to the data furnished by the Indian Poultry Year Book 1978-79.
- Reduction in feed consumption.
- Reduction in floor space per bird.
- Increase in the total laying capacity.

On the negative side the larger number of birds reared in a limited space may cause heat effect and prostration of birds. Fatigue and leanness have also been noticed in birds 6 to 8 months after they start laying which is ascribed to calcium and phosphorus deficiency. Birds in cages also get easily frightened which affects their laying.

Other systems of rearing poultry are also in use e.g. the slat system.

Kinds of Birds

The emphasis in broiler production is on cutting down the growing period of birds and increasing their body weight with minimum feed. Hybrid broilers attain a weight of 800 gms. in eight weeks. A new broiler evolved by the University of Agricultural Sciences in Bangalore, is

capable of reaching one kilogram body weight in six weeks, with feed efficiency of two Kgs. and 97% livability. Brahma, Cochin, Karnish, Apsed, Chitagang, White Rock etc. are some of the noted broiler types of birds.

The emphasis in case of layers is on more egg production per year with minimum feed consumption. Hyline, Babbcock, Keystone, White Leg Horn, Ranishaver, Rhode-Island Red, Poona Pearls, Hisex etc. are some popular varieties amongst layers. A new bird, HH-260 was released from the Central Poultry Breeding Farm at Hessarghatta in 1979. This hybrid hen can lay 250 to 260 eggs per year and is thrifty, requiring only 110 gms. of feed per day.

Marketability

So far poultry development programmes in the country have largely been production oriented with little attention being paid to marketing. Any poultry production programme for rural areas, however imaginatively conceived and implemented, can make a headway only with assured marketing infrastructure. The success of the Kerala venture has been due to efficient marketing organised from villages.

Generally, eggs are transported in packets to the nearest towns. Wholesale vendors collect eggs from various farms in which case the risk of spoilage and cost of transportation is minimum to the producers. Local demand from the villagers is practically nil. Eggs are usually sold in units of hundreds to the vendors.

Demand for eggs during summer is low and hence prices generally are at a lower level. The peak of demand for eggs is in winter season.

Poultry development corporations have been established in States which take care of marketing of eggs on the one hand, and supply of inputs on the other.

CHAPTER 2

FINANCIAL ACCOUNTING IN POULTRIES

In the context of modern business and industry, accounting has to be a versatile system serving a large number of various goals simultaneously. The goal requirements of taxation, creditworthiness, earning power, resource control, managerial efficiency, owners' satisfaction and Government policy are different and sometimes conflicting. The poultry accounts are no different in this respect. The poultry farmer trades in living things. It is the characteristic of his trading stock that it constantly changes quality, quantity and form, therefore the accounting system for poultries has to be suitably adapted to these distinctive features.

The goals discussed above can be achieved through a well designed and well implemented system of accounting which should not only keep a record of financial transactions and events but also of costs and other information useful for management and operational decision making. In this chapter various aspects of financial accounting are discussed.

Financial Accounting System for Poultries

Financial accounting is defined as the art of recording, classifying and summarising in terms of money, transactions and events of financial nature and interpreting results thereof. In other words, keeping accounts is simply a method of recording financial transactions in a systematic way.

Poultry farming, as carried out under modern conditions is a form of commercial undertaking and involves a large number of financial transactions. Properly maintained accounts enable the poultry farmer to find out at any time, the exact financial position of his business and to calculate the profits or losses he has made over a given period of time. Apart from giving information about the cash position at all points of time the financial accounts also show how much money the poultry farm owes to other people and how much money is owing to it. From the point of view of income tax also, well maintained financial accounts are helpful.

The smaller poultry farms may not be able to follow the more sophisticated and advanced financial accounting systems. Therefore, the accounting system for poultries should be simple to operate and involve the minimum cost.

The basic concepts governing the preparation of poultry accounts are the same as those for other businesses Given below is the financial accounting system for poultries.

(i) Maintenance of Primary Books and Records

a) Cash Book

The cash book shows the daily cash inflows and outflows. In poultry business, examples of cash transactions are cash sales of eggs, culls, litter; cash purchases of feed, medicines, capital assets; and cash payments for salaries, wages, cartage, rent, and electricity expenses. In view of this, the necessity of a separate book for recording cash transactions cannot be over emphasised. Cash book, thus, records transactions concerning cash receipts and cash payments. Receipts of cash are entered on the left side (known as the Debit side) of the cash book and payments are entered on the right side (known as the Credit side). A proforma of cash book is given on page 7. For small proprietory concerns 'Bank' column may be dispensed with because bank transactions may not be frequent. In such a case transactions related to the bank may be entered like any other entry concerning a personal account in the name of the bank.

Dr. CASH BOOK Cr.

Date	Receipts	L.F. No.	Receipt No.	Bank	Cash	Date	Payments	L.F. No.	Voucher No.	Bank	Cash

b) General Journal

General Journal is used for recording such transactions which occur so infrequently that they do not warrant setting up of a separate book of records. For instance, entries for correction of errors, depreciation, sale of fixed assets on credit or other entries of non-recurring nature are passed through general journal, Those non-cash transactions for which no special record has been suggested, for example, credit purchase of feed medicines and chicks should also be passed through this book of prime-entry. The form in which the journal is maintained is given below :

GENERAL JOURNAL

Date	Particulars	L. F.	Amount Dr.	Amount Cr.

(c) Sales Book (Sales Register)

Sale of eggs is the main source of income for a poultry farm. So it is essential to maintain a separate book for sales. The proforma of Sales Register appers on page 9.

SALES REGISTER

Name of Chicks | Batch No. | Batch size

S. No.	Date	No. of eggs sold	Price of each egg	Total Amount	Cash/ credit	Name of the Buyer	Date of receipt for cash/ credit sales with details.	Balance Amount due	Date of Receipt of final Due Amount	Remarks
1.	1.6.78	5,000	0.30	1500.00	Credit	ABC whole-saler	Ch. No. 169967 date 1.6.78 for Rs. 1000	Rs. 500	Ch. No. 168888 dt. 4.6.78.	Total Amount Received
2.	15.6.78	15,000	0.31	4650.00	Cash	XYZ whole saler	Cash	Nil	—	—

The sales register proposed above shows at the same time the total sales as well as the amounts due from the customers.

For keeping a record of the sale of culled birds (birds sold after their egg-laying cycle is complete) the proforma on page 11 may be used.

ii) Posting of Ledger

Posting is the process of entering in the ledger the information given in the books of prime entry described in (i) above. Different accounts may be opened in the ledger. The number of accounts opened in ledger will depend upon the size of business, extent of information required, legal requirements etc. Posting from the books of prime entry is usually done periodically, may be, weekly or fortnightly or monthly as per the convenience of the business.

LEDGER : HEAD OF ACCOUNT

Date	Description	F. No.	Debit (Rs.)	Credit (Rs.)	Balance (Rs.)

iii) Profit & Loss Account

Profit and loss account for a Poultry farm is prepared in the same manner as that for any other business. In the columnar form of the profit & loss account, the left side (known as the 'Debit' side) will include all expenses and losses, and the right side (known as the 'Credit' side) will include all incomes and gains. However, certain difficulties are involved in the preparation of this account for Poultry business.

Sales Register for Culled Birds

S. No. (1)	Date (2)	No. of culled Birds (3)	Rate per Bird (4)	Total amount (5)	Name of Buyer (6)	Cash or Credit (7)	Payment Details (8)	Due amount Details (9)	Final settle-ment Details (10)	Batch No. (11)

According to the 'matching concept' of accounting, costs and revenues during a period must be matched. Application of this principle to poultry accounts is slightly cumbersome. Chicks are purchased during a financial year, the revenue from which may be obtained in the next year/years, because the average life of an egg laying batch is 18 months. It will not be right therefore, to debit the profit and loss account of this year with the acquisition cost of chicks and other development expenses till the chicks reach the egg laying stage. Another related problem is the valuation of the flock at the balance sheet date. Given below is the suggested accounting treatment.

1) Total expenditure incurred on chicks till they reach egg laying stage should be calculated. Where the egg producer buys one day old chicks, the total expenditure will include the purchase cost and rearing costs like feed, medicines, proportionate rent, salaries etc. for the period. In case, the egg producer purchases 16-20 weeks old chicks from the 'grower' which have already reached the egg laying age, only purchase cost need be calculated. The total expenditure thus calculated is akin to capital expenditure, since it will give some benefit in future year/years also.

2) The egg output achievable during the life-time of the batch, which is usually 18 months from the day one day old chicks are purchased, should be estimated.

3) The actual production of eggs as on the closing date of the current accounting year should be calculated.

4) The amount to be debited to the Profit and Loss account should be calculated as follows :

$$\frac{\text{Total expenditure calculated as under (1) above}}{\text{Total Estimated Egg Production (2)}} \times \text{Actual Egg Production during the year (3)}$$

5) The difference between (1) and (4), if any, should be shown in the Balance Sheet as 'closing stock of chicks'.

6) Expenses incurred after the birds reach the egg laying stage should be debited to the Profit and Loss account of the period in which these are incurred or accrued.

7) Revenue from sale of culled birds should be included in the Profit and Loss account of the year in which the sale takes place.

8) In those poultry farms where the purchase of chicks and sale of culled birds take place very frequently, it may be a reasonably good practice to write-off all expenses in the year in which they are incurred without making any distinction whatsoever.

9) Since the birds are very much prone to disease and since the output is dependent upon many uncertain factors, it is advisable to create a contingency reserve in the balance sheet, to which a part of the profit say 10 per cent is transferred every year. This reserve could be used to offset any extraordinary losses like abnormal loss of stock of birds.

PROFORMA PROFIT AND LOSS ACCOUNT

Profit and Loss Account of M/s. Poultry for the year ending.....

Opening Stocks	Sales
Chicks	Eggs
Medicines	Culled birds
Growers feed	Manure
Layers feed	Empty bags
Eggs	

Purchases One day old chicks Medicines Growers feed Layers feed Electricity charges Water charges Wages Insurance Carriage inwards Freight Conveyance & Travel Postage, Telephone and Telegrams Carriage Outwards Interest on loan capital Salaries Office expenses Remuneration to visiting doctor Entertainment Selling expenses Repairs & Maintenance Misc. Expenses Depreciation - Buildings Equipment Furniture & Fixtures Provision for Bad and Doubtful Debts Transfer to Contingency Reserve. Net Profit.	Closing Stocks Chicks Medicines Growers Feed Layers Feed Eggs Other incomes Any subsidy received from the Government

(iv) Balance Sheet

In this case also, usual fundamental accountancy principles hold good. The exact format of balance sheet depends on the type of organisation. If it is a company, it should comply with Schedule VI of the Companies Act. In case of proprietory and partnership farms no particular proforma is prescribed under any law. The following is a suggested format of a balance sheet for a poultry farm.

PROFORMA BALANCE SHEET

BALANCE SHEET OF M/s————

as at————

LIABILITIES

1. Capital	In the case of sole proprietory farms only capital introduced will be shown. Likewise in case of partnership farms, capital introduced by all partners to be shown separately. But if the farm is a limited company, details of authorised, issued, called up, paid up capital to be given as required by Schedule VI of the Companies Act. 1956.
2. Reserves And Surplus :	General reserve and contingency reserve (if any) can be shown here. Any other reserves and surplus are to be shown here only. Profit and Loss A/c balance to be shown here.
3. Secured Loans :	All medium and long term loans raised from whatever source, which are secured by creating a charge on any asset of the business, are to be disclosed here.
4. Unsecured Loans :	Loans from friends and others or any other unsecured loans are shown here.
5. Current Liabilities And Provisions :	a) Creditors for expenses. b) Other liabilities. c) Provision for taxation. d) Provision for other liabilities.

ASSETS	
Cash on Hand :	
Cash at Bank :	
Stock	: Feed Medicines Eggs Chicks
Sundry Debtors	
Furniture & Fixtures	
Equipment	Brooders Waterers Chick feeders Net boxes Egg grading equipment Egg trays & boxes Electrical equipment & Fittings Well and pump Sets Nose cutting machine (debeaking) Feed mixture mill
Buildings :	Brooder-house Isolation shed Layer house Feed godown Broiler-house

Egg grading &
Store room
Office buildings
Others

Land

Preliminary Expenses
and other expenses to the
extent not written off
(if any)

CHAPTER 3

MANAGEMENT ACCOUNTING IN POULTRIES

Management accounting covers all those services by which the accounting department assists the managers in policy formulation, planning, control and decision making. There are a number of advantages of having a good management accounting system for a poultry farm. Apart from providing relevant and timely information on the costs and various other aspects of the operations, such a system will also help the poultry farmer in exercising proper control. Introduction of a management accounting system does not mean that each poultry farmer has to appoint a full time qualified accountant. In small and medium sized farms, any intelligent and educated person can run the system once it is properly designed and installed. In this study the management accounting system in poultries has been divided into the following heads :

i) Cost Accounting
ii) Inter-farm comparison
iii) Inventory Control (discussed in a separate Chapter)

Cost Accounting for Poultries

Two main objectives of maintaining cost records are :
i) Cost ascertainment, and (ii) Cost Control.

i) Cost ascertainment : Preparation of a cost sheet facilitates determination of cost per hundred eggs or cost per broiler/kgs. The cost sheet should be prepared for each batch separately. This information can be used for price fixation in future and for making cost comparisons with other batches/farms etc. Cost per hundred eggs may be calculated upto four decimal places. A proforma cost sheet for layers is given on page 19. Similar cost sheets can be prepared for broilers.

PROFORMA COST SHEET FOR LAYERS

Batch No. ———— Total Egg Production ————

Batch Size ————

	Total Rs.	Per 100 eggs Rs.
a) Cost of Laying Stock (Purchase cost)		
b) Feed cost (Growing period & laying period)		
Yellow Maize		
Rice Polish		
Groundnut Cake		
Fish Meal		
Mineral Mixture		
Others		
c) Direct Labour Cost		
d) Vitamins and direct medicines		
e) Water Charges		
Total Direct Cost.	————	————
f) Salaries to office & Supervisory Staff.		
g) Other medicines		
h) Repairs and Maintenance		
i) Rent		
j) Depreciation of cages, shed, equipment etc.		
k) Cartage and other selling & distribution expenses	————	————
l) Total cost of sales	————	————
m) Sale of eggs		
n) Sale of culled birds		
o) Sale of litter		
p) Total sales	————	————
q) Net Profit (p-l)		

Data for the preparation of the cost sheet requires batch-wise maintenance of relevant information which may not be directly obtainable from the financial records like Cash Book etc. For maintaining the relevant data, daily or weekly operational records for each batch have to be kept. These records can vary depending on the size and nature of the poultry farms. Some proformae are discussed on the next page.

Growing Period record :

This record shows the feed quantity, the daily mortality and other relevant information per batch. A proforma for collecting and maintaining this information is given below :

GROWING PERIOD RECORD

Shed/Flock No./Batch No.....

Daily Record					Weekly Record	Other Remarks
Days	Mortalities	Feed Qty	Feed Cost	Remarks		
1					Ist *Mort No...% Cum Mort No...%... Feed/wk kg... *P/B..... Cum. feed kg .. P/B.....	Name..... Address..... ..... Hatchery..... Hatch date..... ..... Date 20 Wks..... No. of Chicks No. raised..... .....
2						
3						
4						
5						
6						
7						
1					2nd Mort No.. % Cum. Mort No % Feed/wk-kg .. P/B..... Cum feed kg... P/B	LIGHTING PLANS Intensity. Watts per 100 sq. ft..... Light period to 10 Wks..... 10 Wks. to 20 Wks .....
2						
3						
4						
5						
6						
7						
1					3rd Mort No ..% .. Cum. Mort. No,% Feed/wk-kg ..... P/B..... Cum. feed Kg... P/B.....	VACCINATION RECORD Date For Brand Cost protection against ....
2						
3						
4						
5						
6						
7						
1					4th Mort. No...% .. Cum. Mort. No..% Feed/wk kg..... P/B ..... Cum. feed kg .. P/B	
2						
3						
4						
5						
6						
7						

*Mort=Mortality *Cum=Cumalative
*P/B=Per Bird.

Contd.

DAILY RECORD WEEKLY RECORD OTHER REMARKS

BODY WEIGHT RECORDS

Age	Ave. Wt.	Normal Range in Kg.
4 Wks.	--	0.26 to 0.33
8 Wks.	--	0.57 to 0.68
12 Wks.	--	0.82 to 0.95
16 Wks.	--	1.00 to 1.18
20 Wks.	--	1.14 to 1.36

COMMENTS

Services .....

Debeaked .....

Depletion ....%.....

Feed Qty per bird .....

Feed Cost per bird .....

No. of Pullets ready for housing

.....

Laying Period Record

Once the laying starts (normally after 20 weeks), a record may be maintained of the eggs collected, mortality rate, culls (the birds taken out and sold because of their low productivity), the feed quantity and cost etc. A suggested proforma is given on page 22.

LAYING PERIOD RECORD

No. of Birds Housed.....

MONTH.....Effective no. of birds.....Shed No./Flock No/ Batch No.....

Date	Age Wks.	Wks in prod.	Eggs collection	%	To date Eggs.	Mortalities & Culls	To date Deplet-ion	%	Feed Kg per day	To Date feed in Kgs.	Feed per Bird To date	Feed cost to date.	Remarks

Daily Egg Production Card

To keep a control over the productivity of individual birds in the cage system of poultry farming (wherein a cage is provided for 3-4 birds), adoption of Daily Egg Production Card system gives a clear picture about the production in that cage. In this system each cage is given a number and a card (format of which is given below). At the time of collection of eggs from a cage, recording should be made in the appropriate columns of the Card. Though it is a tedious job yet it facilitates culling of birds in a cage which do not come up to the required norms of production, thus, saving considerable feed and other costs.

DAILY EGG PRODUCTION CARD

Cage No. 41 Batch No.....

No. of birds in the cage : Three/Four

Date of first egg laying in the cage :

S. No.	Date	No. of eggs collected	Cum. totals	Daily per-centage	Monthly average percentage.

Batch Health Record

In larger poultry farms, a detailed record is maintained regarding the health of flocks. A proforma is suggested below :

BATCH HEALTH RECORD

BATCH No.....

	Date	Voucher No.	Amount (Rs.)		Date	Voucher No.	Amount (Rs.)
F1 Vaccination F2 Vaccination F. Pox Others				Debeaking Other Operations			

Date	Diagnosis	Treatment and other advice	Voucher No.	Amount (Rs.)	Initials

Apportionment of Certain Expenses

Certain expenses will have to be apportioned on suitable basis as they are common to various batches.

For instance, the following items of cost may be apportioned as below :

Item of Cost	*Basis of Apportionment*
i) Lighting	a) If separate metres for each shed occupied by a batch available then this can be taken directly or b) No. of light points.
ii) Rent	Area occupied in Sq. Metrs.
iii) Depreciation of cages. Sheds, Equipment etc.	a) If separate records kept then direct ; otherwise, b) Capital cost of each asset
iv) Repairs and Maintenance	Capital cost of the assets.
v) Cartage	No. of eggs/chicks.
vi) Indirect labour, supervisor's salaries, water charges etc.	No. of chicks.

Cost Control : The costing data as collected above can be analysed in many ways to control and optimise the costs. Following are some of the popular costing techniques, which may be used in poultry farming :

a) Marginal costing
b) Budgetary control
c) Standard Costing.

a) Marginal Costing : Marginal costing technique essentially requires segregation of costs into fixed and variable categories. In case of poultries, variable costs which vary with production (i.e. eggs

or broilers) are feed cost, water, vitamins and direct medicines, direct labour, purchase cost of chicks etc. Fixed costs are those costs which do not vary with output but remain constant over a period of time, for example, rent of the sheds, insurance premium etc.

From sales, variable costs are deducted to obtain 'contribution. Fixed costs are then deducted from the contribution to determine net profit. This approach, thus, avoids arbitrariness in the apportionment of fixed costs to different batches.

Marginal costing information is presented in the following form :-

		Batch H		Batch L	Total
		521		226	
Eggs produced		10,00,000		8,00,000	
	Per egg	Rs.	Per egg	Rs.	Rs.
Sales	0.25	2,50,000	0.25	2,00,000	4,50,000
Variable costs					
Laying stock	.01	10,000	.005	4,000	14,000
Feed & Medicine	.18	1,80,000	.195	1,56,000	3,36,000
	.19	1,90,000	.20	1,60,000	3,50,000
Contribution	.06	60,000	.05	40,000	1,00,000
Fixed Costs					60,000
Profit					40,000

Marginal costing information facilitates decision making as explained below.

a) Making a choice among different varieties of chicks

In the example given above, it is shown that contribution per egg in case of H is .06, whereas in case of L it is .05. It means that H is more profitable. Another way is to calculate contribution to sales ratio. For instance, in the above example it may be calculated as follows :

	H	L
$\frac{\text{Contribution}}{\text{Sales}} \times 100$	$\frac{60,000}{2,50,000} \times 100 = 24\%$	$\frac{40,000}{2,00,000} \times 100 = 20\%$

Once again H is found more profitable. Thus, in future, the farmer may prefer H type of chicks

b) Make or buy decision for feed mash :

Quality apart, whether to make or buy feed can be decided on the principle that if variable cost of making the feed is greater than the purchase price of the feed mash, then the farmer should go for buying and vice versa.

c) Determination of Break-even point and Activity Level planning of poultry.

Break-even point is that point where a business neither earns profit nor incurs any loss. Thus, at this point total revenue is equal to total cost. Algebraically, a break-even point can be calculated as follows :

$$\text{BEP (in sales)} = \frac{\text{Fixed Cost X Sales}}{\text{Sales} - \text{Variable Cost}}$$

From this point, a poultry farmer can plan his level of activity at which he should operate.

Budgetary Control : A budget is a plan of the policy to be pursued during the defined period of time to attain a given objective. Control consists of the action necessary to ensure that the performance of the organisation conforms to the plans and objectives. Control of performance is possible with pre-determined standards which are laid down in a budget. A budget can either be in financial or quantitative terms or both.

For the purpose of preparation of annual functional budgets, a batch can be taken as a budget centre. Following information may be obtained from each budget centre :

Batch No.
Date on which it is expected
to be started.
Date on which egg production expected.
Total purchase cost of one-day old chicks.

Total budgeted egg production till the end of the year.
Feed cost budgeted till the end of the year.
Medical expenses budgeted till the end of the year.
Other budgeted expenses till the end of the year.
Total sales expected till the end of the year:
i) of eggs.
ii) of culled birds.

From the information obtained for all the batches, following functional budgets can be prepared :

1. Egg Production Budget (In quantities only)
2. Feed Purchase Budget (In volume as well as in value)
3. Medical and other expenses Budget
4. Sales Budget (In volume as well as in value)

In addition to these budgets, a Cash Budget and a Master Budget can also be prepared.

Cash Budget may be prepared monthly or quarterly. For this purpose the information obtainable from different batches may be received monthly or quarterly in order to know the expected receipts and disbursements for that period. Cash Budget is very useful at the time of applying for credit facilities from banks.

Master Budget is a budgeted profit and loss account and balance sheet, the information for which is obtained from the functional budgets as detailed above.

At the end of the period, budgeted data is compared with the actuals and the reasons for variances looked into.

Cash Budget

	I	II	III	IV
Receipts				
Opening Cash Balance				
Sale of Eggs				
Sale of Culled Birds				
Sale of Litter				
Fresh Capital Introduced				
Sale of Fixed Assets				
Other Receipts				
Payments				
Purchase of one-day old chicks				
Purchase of Feed				
Purchase of Medicines				
Salaries and wages				
Purchase of equipment & other capital assets				
Doctor's Fees				
Water Expenses				
Other payments				
Balance transferred to Next Quarter				

Standard Costing : The term standard cost may be defined as the predetermined cost based on a technical estimate for materials, labour and overhead for a selected period of time and for a prescribed set of working conditions. Standard costing is the preparation of standard costs, measurement of the variations of actual costs from such costs and analysing the causes of variations with a view to maintain maximum efficiency in production. Standard costing, thus, is an effective control tool which involves two major steps, viz., (i) Setting Standards, and (ii) Analysis of Variances.

Setting Standards :

Standards may be established for each component of cost i.e. materials, labour and overheads. In poultries, feed consumption standards are available from various agencies. Similarly, standards are available in respect of water-consumption, space, etc. Problems however, may arise in fixing price standards, as these may fluctuate from time to time.

Some estimate may be made in this respect also, keeping in view the factors affecting prices in future. Setting standards for feed cost covers 65% to 80% of the total costs, therefore, it is essential that at least quantitative standards of feed consumption are worked out.

(*ii*) *Analysis of Variances* :

The purpose of calculating variances is to pinpoint the causes of variations in cost from standard. For feed consumption following variances can be calculated.

(a) Feed Cost Variance : This is the difference between the standard cost of feed allowed (as per standard laid down) for the egg production achieved and the actual cost of feed consumed.

(b) Feed Price Variance : It is that portion of the Feed Cost Variance which is due to the difference between the standard price specified and the actual price paid i. e.

Feed Price Variance = Actual Usage (Standard Unit Price— Actual Unit Price)

(c) Feed Usage Variance : It is that portion of the Feed Cost Variance which is due to the difference between the standard quantity of feed specified for the actual egg production and the actual quantity of feed consumed. It may be expressed as :

Standard Price Per Unit (Standard Quantity—Actual Quantity)

(d) Feed Mix Variance : In poultries, egg production may vary when the actual mix of feed does not comply with the standard mix. Feed mix variance is that portion of the Feed Usage Variance which is due to the difference between the standard and the actual composition of mixture.

After the variances are calculated, reasons should be found out in order to take remedial action.

Inter-Farm Comparison

Based on costing and other data collected, certain ratios may be calculated to carry out inter-farm comparison. In this manner, the problem-areas in a farm can be identified. For instance, following ratios can be calculated and compared :

a) Feed Efficiency Ratios

i) Average feed consumed per bird during a week (in kgs.) $= \frac{\text{Weekly Feed consumption}}{\text{Effective no. of birds}}$

ii) Average feed consumed per bird upto egg laying stage (in kgs.) $= \frac{\text{Total cumulative feed quantity upto the date of egg-laying}}{\text{Effective No. of birds}}$

iii) Average feed consumed per bird after egg laying stage is reached (in kgs) $= \frac{\text{Total cumulative feed quantity after egg production stage reached}}{\text{Effective No. of birds}}$

iv) Average feed consumed per bird till close of the batch $= \frac{\text{Grand total of feed consumed.}}{\text{Effective no. of birds}}$

Effective Number of birds for a period can be calculated by the use of the following formula :

$$\frac{\text{Opening stock of birds} + \text{Closing stock of birds}}{2}$$

b) Mortality Ratios

i) Mortality percentage during the growing stage $= \frac{\text{Total no. of deaths during that stage}}{\text{No. of birds}} \times 100$

ii) Mortality percentage during the egg laying stage $= \frac{\text{Total no. of deaths during that stage}}{\text{No. of birds}} \times 100$

c) Egg Production Ratios

i) Average per bird egg production during a month $= \frac{\text{Total production during the month}}{\text{Effective birds}}$

ii) Daily average production per batch $= \frac{\text{Total no. of eggs in the month}}{\text{30 or 31 (No. of days in the month)}}$

c) Return On Investment (ROI)

Return on investment ratio can be used to measure the efficiency of the business as a whole. This ratio will indicate to the poultry farmer whether or not he is getting adequate return on the investment made by him. He can also compare his ROI with other poultry farms. Conceptually, there are many methods to calculate ROI, but the formula given below is usually considered to be a good measure of return on investment :

$$\text{ROI} = \text{Net Profit Ratio} \times \text{Assets Turnover Ratio}$$

$$= \frac{\text{Net Profit}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Total Tangible Assets}} \times 100$$

(i.e. Fixed Assets + Current Assets)

As a measure of overall performance, the above formula can provide clues as to the reasons for deterioration or improvement in the ROI.

CHAPTER 4
INVENTORY CONTROL

There is an optimum level of investment for every asset. The major goal of "inventory control" is to discover and maintain the optimum level of inventory. There are two danger points which the management must avoid. The first is of inadequate inventories. For instance, egg production will go down if proper feed is not given at proper time. The second danger is of excessive inventories which may involve unnecessary carrying costs. The optimum inventory level lies somewhere between these two points.

In the light of the above discussion, a poultry farm must have adequate inventories of feed, medicines, etc. High feed cost is one of the disincentives to a large number of poor people desirous of entering this business. Feed is the biggest single element in the economics of poultry farming, accounting for 65 to 80 per cent of total cost. The extent of an inventory control system depends upon the requirements and size of a poultry farm. Therefore, the inventory control system suggested in the succeeding paragraphs may be suitably adapted in a given situation

Inventory Records

The following inventory records may be mentioned -

a) Bin Card

Maintenance of bin cards for each inventory item facilitates timely information of their movement. This ensures that stocks are kept at proper levels. A bin card is attached to the bin in which the Inventory item is kept. Whenever any receipt or issue of such an item is made, an entry is made in the appropriate column. The balance of stock is given at the end of each such transaction.

BIN CARD

Name of feed ingredient : Rice Polish

Units : Kilograms/Quintals

Lead Time : 2 days or 3 days

Max level..... Re- Order Level..... Min level

S. No.	Date of Purchase	Receipts (in Kgs)	Issues (In Kgs)	Batch No.	Balance (in Kgs)	Remarks

b) Stores Register

Stores register is similar to bin card except that the monetary equivalents of different quantities are also shown. To each item of ingredient, a separate page may be allotted.

STORES REGISTER

Name of Ingredient	Maize
Units	Kgs./Qtls.
Maximum Level	10 Qtls.
Minimum Level	2 Qtls.
Re-Order Level	4 Qtls.
Issue Price Method	FIFO

Date	Receipts			Batch	Issues			Balance		
	Qty.	Rate	Amount	No.	Qty.	Rate	Amount	Qty.	Rate	Amount

How much to Buy ?

A key factor in inventory policy is computing the optimum size of a normal purchase order for different materials. The widely used formula to determine the ordering quantity, may be expressed as follows :

$$EOQ = \sqrt{\frac{2AP}{S}}$$

Where EOQ = Economic Order Quantity

A = Annual Consumption in units

P = Cost of placing an order e.g. clerical costs of making an order, postage, stationery costs, etc.

S = Annual cost of storing one unit in stock for one year e.g. rent of warehouse, imputed cost of interest on capital locked up in inventories, insurance, etc.

Application of ABC Control System in Poultries

It is usually not worthwhile to exercise detailed control in respect of each and every inventory item. A greater degree of control is required for more expensive items as compared to the cheaper items. For instance, in poultries certain food ingredients are more costly than others, e.g. mineral mixture, fish meal, etc. A classification of these inventory items into A, B and C may be made on the following lines :

	% Consumption in Quantities	% Value
A	10	80
B	25	15
C	65	5
	100	100

A greater degree of control is to be exercised on 'A' category items, moderate control on 'B' category items, and least control on 'C' category items.

Physical Inventory Control

Feed wastage on account of improper type of feeders can amount to as much as 30 to 40 grams per-bird per-day which is as much as 12 tonnes a year for a 1,000 bird farm. To minimize this kind of wastages only improved feeders with proper projections should be used.

Stocks lying in the godowns should be protected from rats, rains etc. Since 70% to 80% of the total investment during a period (18 months) is made up of inventory costs for a batch, it indicates that this is the key area in which one can implement strict control of the costs of feed.

Another area of inventory control is to see that in preparing growers' mash, brooders' mash and layers' mash, proper mix of feed ingredients is made, otherwise cost per egg is likely to increase.

Level Setting

Calculation of maximum and minimum levels in the case of poultry business is not very difficult as the consumption of stores, particularly feed is fairly predictable. While calculating these levels, one must recognize not merely the average rate of usage but also its range i.e., highest and the lowest rates of consumption. There will not be much variation in these rates in case of poultries, because once the batch size of the flock is known, the feed consumption cannot vary except in a narrow range. Other factors which determine these levels are the economic quantities to order; availability of discounts, storage facilities, possibility of deterioration; general market conditions and so on.

Re-order level is another useful limit which should be calculated. It is the point to which if stock of the material in store falls, efforts are to be made to obtain fresh supplies. This level is fixed somewhere between the maximum and minimum levels in such a way that the difference of quantity of material between the re-ordering level and the minimum level will be sufficient to meet the requirements of production upto the time the fresh supply of the material is received. This period is known as re-order period. Following formulae may be used for the calculation of these levels.

i) Re-ordering level = Maximum consumption x Maximum Re-order period

ii) Minimum Stock Level = Re-ordering Level—(Normal Consumption x Normal Re-order Period)

iii) Maximum Stock Level = Re-ordering Level + Re-ordering Quantity—(Minimum Consumption × Minimum Re-order period)

CHAPTER 5

FINANCING OF POULTRIES

Banks have contributed in a large measure to the growth and development of poultry farming. Bank loans are available for financing every aspect of this activity viz. construction of poultry sheds, storage rooms, purchase of poultry equipment, rearing and purchase of one day old chicks, brooders, growers and layers, feeds and medicines during the growing or laying period. The principles of lending are common throughout the banking system—productive purpose, repaying capacity, liquidity and profitability. The number of applications for advances to poultry farming has increased substantially in the recent past. Applicants belong to all income groups-high, middle and low. Each section is attracted to this line for its own reasons.

It is almost a decade since the commercial banks entered the field of agricultural financing in an organised way. With their initiative, poultry farming is becoming more and more popular, especially in rural areas. The easy flow of credit to poultry farmers, co-operatives and their related organisations is vital for the sustenance and growth of poultry in the country. Banks are at present, providing loans to meet as much as 75 to 80 per cent of the capital investment as well as the working capital requirements for the production of eggs, broilers and day old chicks.

The Agricultural Refinance and Development Corporation has also come forward to extend refinance facility against medium and long-term loans granted by the co-operative credit institutions and commercial banks. For financing small borrowers on a large scale, the Government has also set up the Credit Guarantee Corporation of India in 1971, to provide guarantee cover to banks in respect of small loans.

Till now institutional credit was availed of mainly by the relatively affluent individuals or group of big farmers but not by the medium or small farmers.

For supplementing the meagre income of the rural poor, the Central Government prepared guidelines, based on the recommendations of the National Commission on Agriculture, for implementing special poultry production programmes in selected districts of the country. The main feature of this programme is to provide a 25% subsidy of the projected outlay in the case of small farmers and up to 33.3% in the case of marginal farmers who are underemployed.

Agreements for credit facilities are being progressively liberalised and widely extended. Now loans upto Rs. 5,000 are being sanctioned without insisting on any collateral security such as mortgage of land. Further the beneficiary is not required to contribute the margin money of 25% from his own resources in view of the Government subsidy that is now available. Many villagers are not yet fully aware of the credit facilities available to them through banks.

There is an urgent need for Government agencies, financial institutions, voluntary agencies and others engaged in the task of socio-economic uplift of villagers, to create an awareness of these facilities.

Financial facilities are available under various schemes through the following agencies :

a) Small Farmers Development Agency.
b) Marginal Farmers Agricultural Loan.
c) State Government, Department of Animal Husbandry.
d) Co-operative Societies.
e) Commercial Banks.
f) Credit Guarantee Corporation.
g) Agricultural Refinance and Development Corporation.

Credit facilities in respect of technical feasibility, commercial feasibility and financial feasibility are being assessed through the following procedures.

1. Technical Feasibility

a) Choice of site.

b) Farm layout and location of poultry farm.
c) Choice of chicks.
d) Feed and equipment.
e) Other supporting amenities.
f) Veterinary services.
g) Competence of the applicant.
h) Assured water supply and electricity.
i) Installation of electrical and water fixtures.
j) Is egg production normal?
k) Is the mortality rate of birds normal?

2. **Commercial Feasibility**

a) Marketing
b) Transport charges.

3. **Financial Feasibility**

a) Cost of birds.
b) Cost of feed during various stages.
c) Annual production of eggs, their selling price and demand.
d) Income from the sale of culled birds, empty bags, intreset on borrowed capital, overhead expenses.
e) Liquidity position as shown by Cash Flow Statement for repayment of interest and principal.

Generally, the capital investment is to be repaid in the succeeding 2 to 5 years, and working capital requirements in 12 monthly instalments commencing from the 7th month in case of egg producing farms, and from the 10th week in case of broilers. Rate of interest is generally lower than that charged from other industries. Banks generally take sheds, chicks, land insurance policy etc. as securities. Modes of creating charge are usually through hypothecation of chicks, eggs and other stock and equitable mortgage of immovable property. Advances are also given on guarantees from sureties.

Income-tax Concession for Poultries

Under Section 80JJ of the Income-tax Act, 1961, where the gross total income of the assessee includes any profits and gains derived from a business of poultry farming there shall be allowed, in computing the total income of the assessee, a deduction as calculated below :-

a) in a case where the amount of such profits and gains does not exceed, in the aggregate Rs. 10,000/- the whole of such amount; and

b) in any other case, one third of the aggregate amount of such profits and gains or Rs. 10,000/- whichever is higher.

However, from the assessment year 1981-82 and onwards, where such income does not exceed Rs. 15,000, the entire amount will be allowed by way of deduction. Where the amount of such profits and gains exceeds Rs. 15,000, the deduction would be allowed to the extent of one fifth of such amount or Rs. 15,000 whichever is higher. However, for the purposes of calculating the quantum of deduction available under the provision, such profits and gains in excess of Rs. 75,000 will be ignored. Thus, in no case, the deduction under this section can exceed Rs. 15,000.

In order to avail of this deduction, it is all the more imperative to keep proper accounts.