



Economics of quail farming

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ABSTRACT : An attempt has been made to study the economics of quail farming. The present study revealed that the total cost of Rs. 34.39 was incurred in the production of a bird. The net return per bird was Rs. 0.61 and per batch was Rs.1525. Break - even point was identified and it was 2278 birds per batch. The farm was maintaining 2500 birds per batch which was greater than break even quantity. The producer's price was Rs.28.85 per bird and Rs.72, 125 per batch. The cost incurred by retailer per bird was Rs. 4.6 and Rs. 11,500 per batch; of which, transport cost was the major component. It could be revealed that the producer share in consumer's rupee was 64 per cent. The marketing cost and marketing margin altogether occupied 36 per cent in consumer's rupee. In quail farming, cost of feed, inadequate credit and getting license were the major problem. By overcoming these problems through government support in terms of providing financial, market facilities and extension services, quail farmers can run the business in a profitable way thereby there is a vast potential for reducing protein deficiency and creating employment opportunities for young people.

KEY WORDS : Quail farming, Cost of production, Break event point, Marketing cost, Margin, Price spread

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INTRODUCTION

The continued rise in human population in the developing countries necessitates the need to establish additional sources of animal protein. In this situation, the demand for poultry products has been increasing. To meet up the growing demand for poultry products without importing them, the development of poultry industry is very important. Quail does not only supply animal protein in the form of meat and eggs, but also provides a source of income. The quail farming as a supplement to chicken and duck farming has the unique advantage of tapping the growing market demand for poultry products. A large

number of educated people also have to look for self-employment, given the limited scope for employment in the public sector. The time has now come for creating alternative employment opportunities for the educated people. The self-employment scheme is one probable answer and quail farming seems to be a promising enterprise in this direction. The quail farming witnessed rapid expansion in urban areas. These farms are producing meat, eggs and quail-chicks/pullets. However, quail farming has not yet been popularized in rural areas. It is very important to know the potential of and constraints to commercial quail farming in the socio-economic environment of India. Quail was introduced in India during the year 1974 from California. There are two species of quail in India; the black-breasted quail found in jungle (*Coturnix coromandelica*) and the brown-coloured Japanese quail (*Coturnix coturnix japonica*) which is bred for meat or the one used for commercial quail production. The Japanese quail is the largest species, it is

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much smaller than pigeon. While Indian quail weighs upto 100 g and lays 100 eggs a year, the Japanese quail weighs upto 250 g and lays 250 eggs a year.

Quail egg is roughly one-fifth the size of a chicken's egg and weighs around 10g. The eggshells are spotted, with colours ranging from white to brown. Nutritionally, the quality of these eggs is at par with that of chicken eggs; rather they contain less cholesterol. The proportion of yolk (the yellow inside part) to albumen (the white part), is at 39:61 which is higher compared to chicken eggs. The quail has the advantage of small size, short life cycle, rapid growth rate, good reproductive potential and shorter hatching periods when compared with the different species of poultry. The quail meat is popular for its high protein, essential fatty acids and minerals such as sodium, potassium and iron.

In view of the importance of quail production in meeting protein requirement of human population, an attempt has been made to identify the economics of quail production and marketing of quail birds in Cuddalore district of Tamil Nadu.

MATERIAL AND METHODS

The study was taken up in Cuddalore district of Tamil Nadu. SKN unit of quail rearing farm in Cuddalore district was selected for the present study. The primary data was collected from the quail farmer by the personal interview method, using a pre – tested structured schedule. SKN unit was started in the year of 2002; it was located at Thenkuthur village of Vadalore taluk at Cuddalore district. Size of the farm was 220 × 58 sq.ft of length and breadth. These are divided in to three part of shed; 2500 chicks are kept in each shed and 10000 chicks per month were sent to nearby districts. They are maintaining quails for meat purpose only. The information related to the objective of the study were collected and analysed using the following tools of analysis.

– Cost of production was estimated by adopting cost concepts like fixed cost and variable cost. Gross income was calculated based on monthly average production and average price of quails. Net income was derived by subtracting the total cost incurred in production from the gross income.

– Price spread analysis consists of two concepts *i.e.*, marketing cost and marketing margin.

Marketing cost is the cost incurred by farmer and marketing intermediaries for the function performed in marketing process. The following measure was used.

$$C = C_f + C_{m1} + C_{m2} + C_{m3} + \dots + C_{mn}$$

where,

C = Total cost of marketing of the commodity

C_f = Cost paid by the producer from the time, the produce leaves the farm till sale

C_{mn} = Cost incurred by the n^{th} middle man in the process of buying and selling the product.

Marketing margin is the profit earned by different intermediaries involved in the marketing process. It was calculated using the following formula :

$$\text{Absolute margin of middle man (A}_{mi}) = P_{ri} - (P_{pi} + C_{mi})$$

where,

P_{ri} = Total value of receipts per unit of produce (sale price)

P_{pi} = Purchase value of goods per unit of produce (purchase price)

C_{mi} = Cost incurred in marketing per unit.

Producer's price is actual price received by farmer-producer at primary assembling market.

$$P_p = P_A - C_f$$

where,

P_p = Producer's price

P_A = Price at primary assembling market

C_f = Marketing cost incurred by farmer

Producer's share in consumer's rupee is the ratio of producer's price and retailer's price and it is expressed in terms of percentage.

$$P_s = P_p / P_r * 100$$

where,

P_s = Producer's share in consumer's rupee

P_p = Producer's price

P_r = Retailer's price.

– Break even quantity.

Break - even point can be defined as the business volume that balance total cost with total gains.

$$BEQ = \frac{FC}{(P - VC)}$$

where,

BEQ = Break even quantity

FC = Fixed cost

P = Selling price/ bird

VC = Variable cost/ bird.

RESULTS AND DISCUSSION

Results are discussed in three sections *viz.*, cost of production, break even analysis and marketing.

Cost of production of quails :

Cost of production of quails was worked out and the cost items are divided into fixed cost and variable cost which was calculated for a bird and one batch. One batch consists of 2500 bird and results are presented in Table 1.

It could be seen from the Table 1 that the total cost accounted for a bird was Rs. 34.39 and Rs. 85975 for a batch. The major share of the total cost was occupied by the feed cost (45%) followed by chick cost (20%). Since the duration of quails is 28 days, the producer has given least importance the cost of veterinary (3%) and cost of labour (2%). The net income was Rs. 0.61 for a bird and Rs. 1525 for a batch. The benefit cost ratio was greater than one which indicates the profitability of farm.

Break even analysis :

The present study estimated the break even quantity of quails and results are presented in Table 2.

The break even quantity was calculated and it was 2278 birds per batch. The selected farm was maintaining 2500 birds per batch which is greater than break even quantity. Hence, the selected farm is in profitable zone with the profit of Rs. 6100 per month.

Marketing of quail :

The marketing channels play an important role in marketing process. In the study area, quails were marketed through only one channel viz., Producer → Retailer → Consumer. The marketing cost and the marketing margin were calculated and it is given in Table 3.

Table 1 : Cost of production of quails		(In Rs.)	
Sr. No.	Particulars	Amount	
		Per bird	Per batch
Cost A (variable cost)			
1.	Feed cost	15.5 (45.07)	38750 (45.07)
2.	Hired labour cost	0.65 (1.89)	1625 (1.89)
3.	Veterinary and medicine	1 (2.91)	2500 (2.91)
4.	Electricity and water	1.5 (4.36)	3750 (4.36)
5.	Chick cost	7 (20.35)	17500 (20.35)
6.	Interest on working capital	2.47 (7.18)	6175 (7.18)
	Sub total	28.12 (81.76)	70300 (81.76)
Cost B (fixed cost)			
7.	Establishment cost	2.9 (8.43)	7250 (8.43)
8.	Equipment cost	2.5 (7.27)	6250 (7.27)
9.	Depreciation	0.05 (0.15)	125 (0.15)
10.	Annual repair and maintenance	0.05 (0.15)	125 (0.15)
11.	Interest on fixed capital	0.770 (2.24)	1925 (2.44)
	Sub total	6.27 (18.24)	15675 (18.24)
	Total cost (A+B)	34.39 (100)	85975 (100)
12.	Gross income	35	87500
13.	Net income	0.61	1525
14.	BCR	1.02	1.02

Figures in parentheses indicate percentage to total

Table 2 : Break even quantity of quail		Amount (In Rs.)
Sr. No.	Particulars	
1.	Total fixed cost	15675
2.	Variable cost/bird	28.12
3.	Total receipt from one bird	35.00
4.	Break even quantity (number of bird)	2278

It could be seen from the Table 3, the marketing cost incurred by the producer was Rs.6.15 per bird and Rs.15,375 per batch. Among the cost, cost of transport occupied major share which was Rs.3.40 (7.56%) per bird Rs. 8500 per batch. The producer's price was Rs.28.85 per bird (64.11%) and Rs.72,125 per batch.

The cost incurred by retailer was Rs. 4.60 per bird and Rs. 11,500 per batch; of which, cost of transport was the major component followed by labour charge. The retailer earned Rs.5.40 per bird as profit in the marketing of quail. The summary of price spread analysis was prepared and it is presented in Table 4.

It could be revealed that 64 per cent of the consumer's rupee was realized by the farmer in the marketing of quail. Also it could be seen from the table that the marketing cost and marketing margin altogether occupied 36 per cent in consumer's price.

Conclusion :

Poultry products are good sources of protein for

human population. Exposure to agricultural and industrial chemicals as well as other environmental stressors can pose threats to the stability of wildlife populations as well as the health of domestic animals. The present study revealed that the large scale production of quails is more profit compared to small scale production of quails. Quail farming could be more profitable business if the problem related to it can be minimized. The major problems in quail farming as reported by the farmer were high price of feed and inadequate institutional credit for the development of commercial quail farms. Japanese quails are very resistant to disease and, therefore, there is no need of vaccination for them. But they need some essential vitamins and medicine for the proper health care and physical growth. It was reported that these vitamins and medicine were not supplied by the Government. Quail farmers felt that their knowledge on quail husbandry was not sufficient and therefore, they consider the lack of proper training facilities as one of the problems. Another problem hindering the production was getting license

Sr. No.	Particulars	Amount	
		Per bird	Per batch
I	Producer selling price to retailer	35.00	87,500
II	Cost incurred by producer		
1.	Transport cost	3.40 (7.56)	8500 (7.56)
2.	Labour charge	2.50 (5.56)	6250 (5.56)
3.	Packaging materials	0.25 (0.56)	625 (0.56)
	Sub total	6.15 (13.68)	15,375 (13.68)
III	Producer 's price	28.85	72,125
IV	Cost incurred by retailer		
1.	Transport cost	2.80 (6.22)	7000 (6.22)
2.	Labour charge	1.60 (3.56)	4000 (3.56)
3.	Packaging materials	0.20 (0.44)	500 (0.44)
	Sub total	4.60 (10.22)	11,500 (10.22)
V	Retailer's net margin	5.40 (12.00)	13,500 (12.00)
VI	Retailer's selling price	45 (100)	112500 (100)
VII	Producer share in consumer's rupee (pp /Pr *100)	64.11	64.11

Figures in parentheses indicate percentage to total

Sr. No.	Particulars	(Rs.) /bird	% share in the price paid by the consumer
1.	Farmers' price	28.85	64.11
2.	Marketing cost	10.75	23.90
3.	Marketing margin	5.40	12.00
4.	Price paid by the consumer	45	100

for quail farming. By overcoming these problems through government support in terms of providing financial, market facilities and extension services, quail farmers can run the business in a profitable way thereby there is a vast potential for reducing protein deficiency and creating employment opportunities for young people.

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