Chapter 2

Review of Literature

The present research attempts to conduct a comparative analysis on the different aspects of the working of poultry industry in Kerala and Tamil Nadu. Several studies at various regional and state levels on different aspects of the industry have been conducted by Researchers; Academicians; National Bank for Agriculture and Rural Development; and Research Institutions. Therefore, it is quite relevant to review the available literature that has relevance, so as to identify the gaps that exist in the field of present research. This chapter is an earnest attempt in this direction.

For the purpose of this review the relevant studies conducted in the poultry sector have been classified into two groups.

1. Studies conducted by institutional agencies and
2. Studies conducted by individuals.

A brief review of the existing literature coming under the above groups is presented in chronological order in the following pages.
2.1. Studies Conducted by Institutional Agencies

The National Bank for Agriculture and Rural Development has conducted an evaluation study\(^1\) (1986) on Commercial poultry in Krishna District of Andhra Pradesh as a part of financial scheme implementation. The study assessed the adequacy and effectiveness of forward and backward linkages, input availability, marketing facilities, veterinary and extension services, and financial viability of the investment. The study also covered the economics of investment with different size of poultry units financed by the bank. They found that the average physical performance of functional sample units in terms of egg production per layer and laying period was more or less in conformity with the scheme assumption. The study suggested that the units situated close to the consumer market enjoy the advantage of economy in handling cost and therefore, turn out to be viable and more research addressed to these questions should be necessary to facilitate decision-making.

The National Bank for Agriculture and Rural Development has conducted another evaluation study\(^2\) (1987) on poultry farming in the state of Punjab as a part of two area development poultry schemes sanctioned. The study assessed the actual benefits of the schemes and compared the efficiency of small and large size poultry (layer) farm. The study also covered the management factor affecting the profitability of poultry farm. The study team found that the schemes mainly benefited medium and large farmers and size of operations of poultry farm was directly related to the size of land holding. They stated that high rate of mortality was one of the apparent factors responsible for inefficiency of investment in the poorly managed poultry farm. They pointed out that the main reasons attributed to higher feed consumption were inadequate
feeding facilities leading to larger wastage, higher mortality due to overcrowding, use of unscientific equipment, lack of control on heat and cold condition due to unscientific design of poultry houses and accumulation of diseases which led to regular depletion of the flock. They suggested that total involvement of the banks so far as planning and post credit supervision should be considered and increased assistance of the poultry department in the field of training and extension should be ensured.

In another study by National Bank for Agriculture and Rural Development³ (1988) on poultry development (layer) in Salem district of Tamil Nadu analysed the technical aspects and other aspects of the schemes implemented, existing infrastructure facilities, marketing arrangement and price structure of eggs. The study also assessed the cost of economics of different size groups of poultry units and estimated the income from investment and profitability of investment. The study pointed out that the feature of development of poultry in Tamil Nadu has been its over concentration in certain areas. This, coupled with poor management of the units, has led to the outbreak of disease affecting many poultry units. They found that the cost of feed shows a more than proportionate increase when compared to the price of eggs.

The Agro-Economic Research Centre, University of Allahabad⁴ (2000) in a paper, have made an empirical study on the economics of poultry production and role of unorganised sector in Uttar Pradesh. They estimated the cost of production on different size of poultry farm and assessed the economic viability of unorganised sectors of poultry farm. The study reported that the average utilisation of material input per farm, the average profit per farm, the average profit per bird and the average profit per egg wereRs.1457, 1113.25, 70.03 and .095
respectively in the state. The average production of eggs per farm was 1797 and average input per farm, average input per bird, the average output per farm and average output per bird were Rs. 2701, 160.28, 3814 and 230 respectively. The study recommended that the feed ingredients should be provided on fair price, trade tax on poultry feed and equipment should be exempted, weather and environment control equipment, cages and other inputs should be made available on cheaper and subsidised rates, sufficient financial assistance by government credit agencies, adequate technical know-how by the State Department of Animal Husbandry, adequate supply of medicines, sufficient facilities of veterinary doctors, development of infrastructure facilities and extension activities and suitable Act must be imposed in the state of Uttar Pradesh to control and regulate the quality of poultry as well as other animal feed.

2.2. Studies Conducted by the Individuals

Saxena and Gupta\(^5\) (1971), in their article, examined the cost, revenue and productivity aspects of layer and broiler poultry farms in India. They found that the involvement of own labour increased the productivity and the input cost like feed, day old chicks, preventives and medicines showed a more than proportionate increase than that of revenue. But the enhanced production of fowls, due to the increased demand for the product, made the total cost per unit to come down.

Agarwal\(^6\) (1974) has, made an attempt to examine the pattern of production and marketing of poultry products in India with special reference to state of Uttar Pradesh. His study covered the areas of poultry disease prevention programme, management of broilers, role of
the state in promoting poultry industry, employment potential, financial requirement and problems in getting adequate finance.

Pushkaran\(^7\) (1975), in his dissertation, has made an attempt to study the preferential choice of information sources by poultry farmers in Thrissur district of Kerala. He examined the sources of information, preferential choice of sources and the personal and social characteristics in association with choice of seeking additional information. He found that among the major sources of information through which poultry farmers came to know about scientific poultry farming, mass media accounted for 73 per cent, government sources 14 per cent and neighbourhood sources 13 per cent.

Singh and Rai\(^8\) (1976) have made an attempt to study the economic aspects of production and marketing of poultry and poultry products in the state of Haryana. They conducted an empirical study by collecting data from farmers and sellers. They assessed the capital requirement, cost of raising chicks for egg production and per piece of broilers. The study estimated the cost of production per egg, cost and returns per year per bird on different size of farm the cost of marketing poultry and its products. They also analysed break-even point of egg production on different size of farms at different levels of feed prices, price fluctuations in different markets, structure of existing marketing channels and the producer's share in consumer's rupee through different marketing channels.

Marutiram et al.\(^9\) (1978) have, in their study report, estimated cost of production of poultry and eggs in Hoshiarpur district of Punjab by an empirical study. They also secured the information on factors helpful in
lowering the cost of production and examined the price spread at various stages from producer to consumer.

Mathur and Gupta\textsuperscript{10} (1979) have made an attempt to study the important structural characteristics of small poultry farms, input structure of egg production, marketing channels and examined resource availability and its utilisation. The study was conducted in an empirical nature by collecting data from two district of Gujarat and one district of Maharashtra. They found that capital investment per 100 birds was higher in the cage system of rearing rather than in the deep litter system and cost of rearing increased with an increase in the farm size. They stated that farms having 500 to 1499 birds were uneconomical from the viewpoint of capital investment. The net returns per 100 birds and output ratio was favourable to big farms.

Nadkarni, Somayasulu and Jain\textsuperscript{11} (1979), in their article, made an attempt to study the maintenance and production cost of layer in different commercial poultry farm in Punjab. They found that commercial farms in rural areas incurred higher cost of maintenance and production than those in the urban areas due to lack of better technical know-how for efficient farm management. They also pointed out that the farmers of co-operative societies incurred less cost than the individual farmers because the co-operative farmers obtained inputs at cheaper rates and also get advice and guidance of the extension services organised by the government.

Jain and Nadkarni \textsuperscript{12}(1980) have, in their study report, examined the relationship of fixed and working capitals with egg production. They studied the pattern of investment of fixed capital and working capital,
effect of these capitals on egg production and find optimum combination of the two capitals for varying levels of egg production.

Karanjkar and Soni (1980), in their article, made an attempt to study on economics of poultry enterprises in Jabalpur. They examined the input-output relationship of poultry units and concluded that net profit per broiler was highest in large size group and lowest in smaller size group. They also pointed out that labour earnings increased in the same proportion.

Punia, Sharma and Subhan (1981), in their article, made an attempt to examine the factors associated with poultry farms in Haryana. They identified the problems with an empirical study among twenty-nine farmers in the region and pointed out the various problems. From among sample, twenty-four farmers complained about high cost of feed, twenty-six farmers opined about lack of finance, nineteen farmers stated it as heavy risk, fourteen farmers stated marketing problem and seventeen farmers complained about non-availability of veterinary facilities.

Velusamy (1981) has conducted a study on the economics of egg production in Namakkal Block, Salem district. He analysed the cost of production of eggs for different flock size and reported the cost per 100 eggs on the flock size of 600, 1700 and 2700 birds as Rs. 34.13, 32.34 and Rs. 30.54 respectively. He states that the increase in flock size resulted in the decrease in cost of production and increase in net profit.

Sathis Chandra, Bhikam Singh and Balister (1982), in their article, made an attempt to analyse the economics of poultry enterprises in Ajmeer. They found that increase in farm size resulted in increase in
profits per farm or per bird and economies of scale arises from the above 1500 birds.

Suresh Kumar\textsuperscript{17} (1983), in his dissertation, has stated the economics of egg production and marketing in Coimbatore Taluk. He found that the net profit increases and cost of production reduces with increase in flock size. He pointed out that the cost of production for 100 eggs in 1500 and 1600 flock size was Rs. 32.18 and 27.09 respectively and net profit earned was Rs. 8.67 & 11.84 respectively.

Chezhian\textsuperscript{18} (1983), in his dissertation, has made a study on economics of egg production in Vennathur Block, Salem district. He found that the cost of production per bird's whole life was Rs. 88.76 and revenue as Rs 130.64. He points out that the cost of production of Day-Old-Chicks as Rs. 5.11 and major expenses of production cost involve cost of feed.

Marimuthu\textsuperscript{19} (1984) has, in his article, made an attempt to study the cost reduction by utilising non-conventional feeds. He suggested the low cost self-compounded feed for minimising the rate of mortality and optimising the return from layer poultry farm.

Ganesan\textsuperscript{20} (1986) has made an attempt to study on the management of broiler farms in Coimbatore Taluk. He found that the average cost of production per broiler was Rs. 18.46 and average income per farm in 1000 birds and 5000 birds were Rs. 26813.02 and 199306.86. He identified the fixed cost and variable cost per broiler was Rs. 92 and 17.54 respectively. He analysed the break-even volume of sample farm and point out that it was 2678 birds or 6535 Kilograms.
Sadgopan and Srivastava\textsuperscript{21} (1987), in their article, stated that balanced feed when provided at definite intervals with minimum feed wastage could make the poultry enterprise a successful venture.

Reddy\textsuperscript{22} (1987) has, compared the advantages of rearing layer and broiler fowls in deep litter backyard and cages. He stated that under cage system, feed convertibility ratio and rate of mortality was very low and system was highly suited for poultry farm in coastal regions.

Thulasi \textit{et al.}, \textsuperscript{23} (1988), in their article, have made an attempt to examine different marketing channels and price spread for broiler chicken in Madras city. They identified five marketing channels for broilers i.e. (1) producer-Wholesaler-Retailer-Consumer (2) Producer-Retailer-Consumer (3) Producer-Chain Stores-Consumers (4) Producer-Consumer (5) Producer-Agent-Wholesaler-Retailer-Consumer.

Aboobacker\textsuperscript{24} (1988) has made an attempt to study the capital productivity and profitability of selected breeds of fowls in and around the district of Thrissur in Kerala state. He found that the large sized farm shows more profitability and the small sized farm represents more productivity.

Pothuluran,\textsuperscript{25} (1988) has made an attempt to study the economics of layer and broiler poultry farms in Andhra Pradesh. He found that small sized poultry farms have optimum viability and economy.

Nanda and Deepak Sharma\textsuperscript{26} (1989), in their article, stated that the poultry production was infancy stage in Tripura and it lacks proper development because of many constraints like non-availability of feed
and high cost of materials. Private poultry farms were almost non-existing in the state and limited to back yard farming.

Agarwal\textsuperscript{27} (1990) has made a case study of a poultry unit in Chhattisgarh Region of Madhya Pradesh and explored the breed that gives better performance and parameters affect its performance. He found that the mortality and feed intake were the major constraints in egg production. He suggested that the selection of breeds of high egg producing strains suited for different agro-climatic regions and educating farmers on scientific management of superior poultry breeds and supplying them with good quality feeds, medicines and chicks regularly at cheaper rates at their door steps. He recommended that the poultry enterprises should be organised as an independent enterprise on commercial basis by providing capital and credit at subsidised rates and encouraging the establishment of more co-operative societies to provide production and marketing services to poultry farmers in rural areas.

Bhat\textsuperscript{28} (1991), in his article titled “Problems of marketing poultry and poultry products” probed into the problems of the industry in the field of marketing. He found that the major problems in the marketing of poultry and poultry products are monopoly of middleman, low consumption of poultry meat and eggs, seasonal price fluctuation, lack of pre-grading and poor market research.

Prasanna\textsuperscript{29} (1991) has, in her dissertation, observed that batch system of rearing broilers yielded optimum profits. She found that farm size of 4000 broilers i.e.; 1000 birds in four batches would result in optimum profits. She recommended farm mixing of feed as the best way of achieving optimum profits.
Gengaraj\textsuperscript{30} (1991), in his dissertation, has made an attempt to identify the constraints of layer industry in Tamil Nadu. He identified the increased cost of inputs, poor feed and chicks quality were major constrains of layers in Tamil Nadu. He suggested that intensive training programme should be implemented to meet shortage of skilled personnel, proper machinery should be established for controlling the unhealthy pricing procedures followed by leading farmers and banks and financial institution should consider poultry farming as worthwhile business venture.

Thulasi \textit{et al.}, \textsuperscript{31}(1992) have, in another article, pointed out that the broiler market structure in Chennai city was purely an oligopoly, as few wholesalers were observed to be dominating the market i.e., about 60.51 per cent of the total market sales were engaged by the two leading wholesalers. They also identified five different channels in Chennai city for broiler marketing i.e. (1) Producer-wholesaler-retailer-Consumer (2) Producer-Retailer-consumer (3) Producer-Chain stores-Consumer (4) Producer-Consumer (5) Producer (local)-Consumer's agent (outside)-wholesaler-Retailer-Consumer.

Patil, Ambatkar and Kajale\textsuperscript{32} (1993), in their article, attempted to study the economics of broiler farming in high rainfall areas of Konkan region of Maharashtra. He found that the fixed capital requirement excluding cost of land, for 1000 broiler unit was Rs. 107050. He also stated that the broil raising was a profitable venture and assessed the expenses for raising 1000 broiler birds for 12 cycles was Rs. 397853. The return and net profit per year generated from this operation was Rs. 496320 and 98467 respectively.
Narmatha\textsuperscript{33} (1994), in her dissertation has made an attempt to study on the role of women in poultry farming by collecting data from Namakkal block. She analysed the relationship between certain personal, psychological and socio economic characteristics of women and their involvement in decision-making in poultry farming activities. She found that majority of women were young, educated up to secondary level and have poultry as their subsidiary occupation with medium experience and medium flock size.

Jebarani \textsuperscript{34} (1994) has, in her dissertation, made an attempt to analyse the operational efficiency in broiler farms in and around Chennai city. She found that total investment in fixed asset excluding land in small, medium and large-scale farm were Rs. 4.39, 4.76 and 4.83 per bird respectively. The average fixed cost in small, medium and large-scale farm was Rs. 2.13, 1.86 and 1.93 per bird respectively and average variable cost was Rs. 23.11, 22 and 20.78 per bird respectively. She also found that the mortality rate in small, medium and large-scale farm were 4.08 per cent, 7.92 per cent, and 6.46 per cent respectively, feed consumption per kg of broiler were 2.286, 2.085 and 2.005 respectively and labour utilisation per 100 broilers were 11.2, 8.4 and 8 man days respectively.

Bhardwaj\textsuperscript{35} (1995), made an attempt to examine the growth of poultry industry and to analyse the regional disparity in the poultry production in India. He found that there had been a massive growth in the improved parent stock and existed regional disparity in the distribution of improved parent stock and poultry production. The disparity in the prices of poultry products and the production of coarse gains in a region were found to be mainly responsible for imbalanced growth of poultry in India.
Rajput\textsuperscript{36} (1995) has, in his article made an attempt to study economics of poultry farming in Indore district of Madhya Pradesh. He examined the cost and returns per layer, the net returns, the cost of production per egg and benefit -cost ratio on small, medium and large size groups of poultry farms.

Biju.\textsuperscript{37} (1995), in his dissertation also identified the problems of poultry farmers in the rural areas of Malappuram district of Kerala. He identified the problems such as high cost of feed and chicks, substandard quality of feed, non-availability of quality chicks, marketing problems, poultry diseases, and non-availability of financial assistance. He suggested that the control should be imposed on the distributors of feed, strengthening of Co-operative sectors and offering the service of skilled doctors.

Joseph \textsuperscript{38}(1995) has, in his doctoral dissertation, made an attempt to study economics of poultry farming in Kerala with special reference to broiler farms. He studied the trends in the cost and revenue items and its impact on the financial performance of commercial poultry farms in Kerala. He also evaluated the impact of farm size on the profitability and financial position and identified an appropriate size suitable to the state of Kerala. He found that there exists inverse relationship between size of farm and capital intensity and direct proportion between productivity, fixed capital, working capital and inventory to the size of the farm. He suggested that maintaining feed compounding units, as part of poultry farms would be an effective method of achieving rationalisation of input cost in the business of poultry farms.

Saminathan\textsuperscript{39} (1995) has studied the marketing pattern of egg in Namakkal poultry pocket. He identified three different marketing
channels such as the first includes producer, traders (Namakkal), wholesalers, retailers and consumers; second channel comprises producer, wholesalers (Namakkal), retailer and consumer; third channel includes producer, retailer and consumer (Namakkal). He found that among these three channels 80 per cent of eggs were marketed through the first channel.

Rao (1996) has, in his article, made an attempt to study the role of National Bank for Agriculture and Rural Development in poultry development. He found that some of the states like Andhra pradesh, Maharashtra, Karnataka, Punjab and Haryana had used maximum refinance from National Bank for Agriculture and Rural Development, there by indicating vast potential for poultry industry and other states like Uttar pradesh, Madya pradesh and Bihar, which have very large human population and considerable potential for poultry development have not availed much of institutional finance for the purpose.

Mishra (1996) in his article has made an attempt to study on poultry production in eastern and northeastern states in India. He found that the people of these regions have not felt the impact of new technology due to a number of constraints; such as non-availability of parent stock, lack of research and development, lack of modern hatchery facilities and irregular supply of chicks, non-availability of balanced feed and high feed cost, lack of marketing network, lack of trained man-power, higher electricity tariff, non-availability of vaccine and medicine and lack of interest of financial institutions to provide financial assistance.

Kathiravan (1996) has made an attempt to study on structure of egg market at Namakkal in Salem District of Tamil Nadu. He observed
that despite the appearance of slightly concentrated oligopoly structure at producer's level, considering other features such as competitive wholesaler or trader group, product substitution and degree of market intelligence, and it was concluded as pure competitive market.

Biswaneith⁴³ (1996) has, in his doctoral dissertation examined the financial problems of poultry farming in the district of Midnapore, West Bengal. He found that usual source of finance available to other small-scale units in West Bengal could not be availed because of its low rate of return on capital employed and investment in current asset was not sufficient. He stated that in spite of earning minimum profit, the poultry industry could survive as they can meet the imputed cost of services (cost of family employment of owners). He suggested that necessary financial assistance should be provided to poultry units at a nominal rate of interest for meeting working capital requirement, establishing storage facilities of eggs and meat and forming national marketing agency.

Pourouchottamané⁴⁴ (1997) has studied on the Managemental practices and production performance of commercial layers in Namakkal. He stated that a poultry owner having 1000 layers would save a minimum of Rs. 13000 for one year in the cage system by saving feed wastage and energy wastage that was found in the litter system.

Reddy, Shanmugam and Mohan⁴⁵ (1997) have, in their article made an attempt to analyse economic and financial aspect of broiler production in kamarajar district of Tamil Nadu. They found that cost of production per bird of broiler chicken as Rs. 22.18 and net profit obtained by the producer per bird as Rs.3.01. They also found the share of variable cost, depreciation, rental value of land and interest on capital,
which constitute 93.34 per cent, 2.03 per cent, 2.21 per cent and 2.52 per cent of total cost in broiler production respectively. They state that, among the total cost of production, share of chicks cost and labour cost involves 25.29 per cent and 3.07 per cent respectively. They assessed the break-even point of broiler production was 127 birds and feed consumption per kilogram's weight gain in broilers was 2.57 kilograms.

Nakeeran (1997) has made an economic and managerial analysis of broiler farming in Coimbatore district. He examined the financial requirement and analysed the role played by the different funding agencies towards broiler farming. He also studied the financial management of broiler farming and problems encountered in broiler chain. He categorised the farm in to own farm and commercial farm and analysed the data on this basis. He found that per bird investment cost on building in small, medium and large-scale farm were Rs. 38.51, 28.03 and 28.45 respectively in the own farm and Rs. 41.8, 33.63 and 35.71 respectively in the commercial farm and on equipment it would be Rs. 8.86, 9.5 and 11.26 respectively in the own farm and Rs. 8.99, 8.75 and 8.51 respectively in the commercial farm. He stated that total revenue per bird on small, medium and large-scale farm were Rs. 60.11, 60.49 and 59.99 respectively in the own farm and Rs. 4.41, 4.31 and 4.25 respectively in the commercial farm. The variable cost per bird on small, medium and large-scale farm were Rs. 53.03, 50.60 and 49.85 respectively in the own farm and Rs. 2.33, 1.84 and 1.43 respectively in the commercial farm. The own farmers met their financial requirement (34.07 per cent) from the borrowed sources and commercial farmers met their fund (42.46 per cent) from the distributors. He also identified the problems on getting financial requirement from different sources. He found that the procedural rigidity and inadequate asset to pledge were
major problems of getting financial assistance from commercial bank and co-operative societies.

Imam Shaik\textsuperscript{47} (1997) has, in his article, attempted to identify the innovative marketing of broiler chicken in Coimbatore district. He found that three-hatchery company individually started contract farming in Coimbatore district and one of them disposed their produce through institutional sales, the other one was transporting their broilers to Chennai and Kerala and the third one marketed the broilers through retail chicken outlets and sold as further processed chicken.

Ganesh Hedge\textsuperscript{48} (1998) in his dissertation, made an attempt to study on the management and production performance of broilers in Palladam area of Coimbatore district. The influence of various Managemental practices under field condition on the production parameters of broilers is taken for study. The production parameters considered were age at marketing, body weight at marketing, feed efficiency and liveability. He found that marketing, price fluctuation, low profits, disease, poor quality of feed, water and chick's scarcity, heat stress and labour problems are constraints in poultry industry.

Vijay Bhasati \textit{et al.}, \textsuperscript{49}(1998) have, in their article made an attempt to study input use efficiency in poultry farming in Chittoor district of Andra pradesh. They used Cobb-Douglas production function for estimation of input use efficiency.

Rajan Nair\textsuperscript{50} (1998), in his report tries to find out the defects in the existing marketing channels and institutions followed by the poultry industry in Kerala. He assessed the efficiency of the existing marketing system and identified the constraints in the marketing and the support
services for eggs and meat. He examined critical factors determining the current viability of poultry production units. He found that the major constraint in the marketing of poultry and poultry products is the intervention of contract farms sponsored by actual units or wholesalers alter the existing marketing channel and the real owners of units. The price factor is highly sensitive and low market price, which leads to the closure of the unit or reduction of flock size and widening the demand and supply. Further, he points out that the per capita consumption of eggs is increasing and no effort is taken integrate layer units and marketing outlets either at producer’s level or organisation’s level or government level.

Rajendran\textsuperscript{51} (1998) has, in his dissertation, attempted to study on economics of broiler production in and around Palladam area of Coimbatore district. He found that the net return was higher in farms operating in batch system rearing than all in all out system and own mixed feed had the advantage of lower cost of production and increased profit margin. He states that as the farm size increased, there was reduction in capital investment, cost of production, liveability, and benefit cost ratio/profit.

Saravanan\textsuperscript{52} (1998) has studied the systems of broiler marketing in Palladam broiler pocket. He analysed the existing marketing system and role of different marketing channels and estimate the price spread in broiler marketing in different marketing channels. He identified five channels i.e.; first channel involve producer, wholesaler, secondary wholesaler, and retailer, second involve producer, trader, wholesaler, secondary wholesaler, and retailer, third involve producer, trader, wholesaler, and retailer, fourth involve producer, wholesaler and retailer and last channel was direct marketing. He stated that the producers
marketed the product under the uniform price fixed by the Broiler Co-
ordination Committee in channel second & third and Rs.1 less per
Kilogram in channel first. Producer's share of consumer's rupee was
highest in channel fourth and this channel has the highest operational
efficiency. He points out that the Palladam broilers market was purely an
oligopoly in structure and most of the farmers adopted the indirect
marketing system and marketing through integrators system. The
average marketing age and body weight was 49.53 days and 1.86
kilograms respectively.

Khan\textsuperscript{53} (1999) has, in his article made an attempt to study the role
of youth in poultry development for alleviating protein deficiency. He
states that increase of egg per capita consumption would generate 25000
jobs and 100 gm increase in per capita meat consumption would
support 40000 jobs.

Bhatta, Gupta and Sharma.\textsuperscript{54} (1999), conducted a study to find
out the impact of farm size, educational status and land holding on the
adoption of broiler farming in Haryana by an empirical analysis. They
found that majority of the farmers started broiler farming to get
additional income. The educational status had highly significant
association with adoption of broiler farming and overall 88.67 per cent of
farmers acquired latest knowledge through inherited tradition,
neighbours, progressive farmers, friends and relatives. The land holding
had no significant association with justification for start, knowledge
acquisition and communication source for starting of broiler farming.
They suggested that the implementation of improved broiler managerial
practices, application of bio technological and breeding techniques and
bio security measures should be adopted to minimise input cost and
maximise return.
Shiva Sharnappa and Veeranna\textsuperscript{55} (1999), in their article made an attempt to study on attitude and adoption of the poultry management practices by the farmers of Kolar district in Karnataka. The study revealed that 90 per cent of the farmers had a favourable attitude towards poultry farming and also more than two-third of them adopted the recommended poultry management practices except housing, floor space and deforming.

Amudha and Veerabhadrajah\textsuperscript{56} (2000), in their article have studied the participation of farmwomen in different activities of commercial poultry farm in rural areas in Tamil Nadu by an empirical analysis. They found that participation of women was mostly confined to activities like feeding and litter management, while important aspects like marketing, production and medical care were left for the men to handle. They suggested that women should be made more organised and aware of improved poultry practices and disease control measures.

Thus, it is obvious from a review of the work done so far in the field that most of the studies are micro in approach and regional in nature. There had been no systematic and comprehensive study on the working of poultry industry in Kerala in comparison with Tamil Nadu covering the areas of poultry management practices; cost and profitability analysis; financial position and problems; production performance and problems; marketing practices, performance and problems. Moreover, none of the reports and studies has attempted to review the socio-economic conditions of poultry farmers in Kerala vis-à-vis Tamil Nadu. Thus, it is in this context the researcher has made a humble attempt to fill this lacuna.
Works Cited


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