CHAPTER 2

REVIEW OF LITERATURE

Several studies at various regional, state, national and international levels on different aspects of the industry have been conducted by Researchers, Academicians, Government departments, Research Institutions. Some of the conclusions of main and important studies can be summarised as under.

Spamer (1930) identified important questions of the marketing system of poultry and poultry products in the Union of South Africa. He has described on the present methods of marketing, transportation, cost of marketing, co-operation marketing, standardisation and foreign trade. He stated that the development of the poultry industry in South Africa has been very rapid since the outbreak of the Great War. Before the war South Africa was a heavy importer of eggs, but since then economic and political factors have favoured South Africa and a considerable export trade has developed. There is a marked improvement in the class of bird produced and the average production per bird has been increased. Methods of feeding and housing have improved and there has also been an improvement in the method of marketing, although apart from the changes brought about by the Co-operative Egg circle and specialist poultry farmers, marketing is still done on the original methods, but seems now ready for entire reorganization.

Mathur and Gupta (1979) have studied Management in Small Poultry Farms for Maharashtra and Gujrat Regions. They identify the structural characteristics of commercial poultry entrepreneurs in relation to their socio-economic characteristics, managerial skills, farms structure, and poultry farming practices. They also examine resource availability and its utilization in commercial poultry units. They studied the input structure of egg production and the relationship between input and output and identified the marketing channels and their effectiveness in relation to the structure of the units. They concluded that poultry farming may be advocated as a subsidiary occupation to supplement incomes of the rural poor. Use of appropriate technology can further improve the lot of poultry entrepreneurs. The largest expenditure was incurred on poultry feed. This influenced the price of eggs and meat. Small farms
need marketing help both to procure chicks of desirable strains and to market eggs and birds for meat.

Anita Reddy (1985) has, in her dissertation, attempted to study Problems and Prospects of Poultry Industry of Ranga Reddy District”. She identified and analyzed the problems faced by the poultry industry, the growth potential for poultry industry and the economic size of the units-layers and broilers and linkages amongst different components of the industry.

Patil et al. (1993), in their article, attempted to study on 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 broiler 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 Rs.98467 respectively.

Agrawal (1994) has studied on the production and Marketing of Poultry products in India. He stated that poultry industry provides employment to a person throughout the year on an even basis, whereas agriculture is itself a case of disguised unemployment. His stress is that with a view to generating enormous employment opportunities and removing the incidence of poverty amongst the rural folk poultry farming should be encouraged more and more and be given an added significance with all the schemes for rural development. The Government has decided to develop India by developing rural economy for having a sound and pollution free balanced development of the economy and without developing villages, the development of the economy is unthinkable. Without developing villages, our plans for economic development would stand a myth. For developing rural India more and more stress be laid on the development of poultry industry with dairying on scientific lines for ensuring adequate earning to the rural poor.

Joseph (1995) has in his doctoral thesis, 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 rationalization of input cost in the business of poultry farms.

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, thereby indicating vast potential for poultry industry while other states like Uttar Pradesh, Madhya 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.

Biswaneith (1996) has, in his doctoral thesis examined the financial problems of poultry farming in the district of Midnapur, 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. 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.

Iddamalgoda et al. (1998) made an attempt to examine the present situation of Sri Lankan poultry industry and existing condition of the rural poultry sector. They found that poor marketing facilities are a main problem with those farmers who are doing their independent farming outside the contract growing system. Demand for poultry products has been increasing due to urbanization and increasing disposable income and therefore fully integrated companies with good processing facilities will have a prosperous future. Established companies are engaged in contract growing.
which increases the farmer’s income and employment opportunities with no risk in marketing. The cost estimates reveals that feed alone accounts for about two third of total costs. Thus availability of quality feed at reasonable price for rural areas would provide an opportunity to produce more poultry products. Proper marketing facilities and price for products would go a long way in expanding the rural poultry industry in Sri Lanka.

Chauhan (1997) in his study examined the growth rate in poultry population and egg production in Himachal Pradesh, though milk remains today the major source of animal protein universally acceptable in the country, poultry production namely egg plays a significant role in augmenting the much needed supply of animal protein. The egg production in the country during 1994-95 was 26, 130 million with the per capita availability of 29 per year against the nutritional requirement of 180 eggs per year. Poultry producers (9.49%) of Himachal Pradesh have taken to specialized poultry farming only during the last two decades. Due to profit earning nature of this industry the commercialization has spread into the rural and urban areas. They found that Kangra district continued to be at number one as far as poultry-population is concerned, however, district Bilaspur recorded the highest growth rate of 7.12% p.a. followed by district Solan (6.73% p.a.). The poultry population in the state registered an increase of 4.21 % p.a. A positive correlation to the order of 0.64 was notice (between poultry population and the human population of the districts thereby indicating that where the human population was more, the poultry population was also high.

Shroff (1998) has made an attempt to study on Economics of poultry development and Role of Unorganised sector in Maharashtra. She found that, in poultry business, broiler farming seems to be a more profitable venture than layer farming and there also seems to be a preference among farmer for rearing broilers than layers.

Raut et al. (2002) in their research study, made an attempt to study inequality in livestock development in India. He found that the States Haryana, Punjab, Rajasthan and Uttar Pradesh were well developed in livestock improvement programmes. Some eastern States particularly Assam, Bihar, Orissa and Andhra Pradesh are lacking in livestock development measures and as such, they are far behind the
development process. These states may be encouraged to maintain more crossbred cows, graded buffaloes, improved poultry birds and crossbred sheep in addition to improving important indigenous breeds and to upgrade the non-descript ones. Most of the States should have better veterinary facilities.

Mehta (2003) in his research paper describes the salient features of Indian Poultry Industry and analyzes the dismantling of the protection regime. He found that since, 1980 the Indian Poultry Industry has recorded extraordinary growth, and demand for poultry products has also grow steeply. Indian Poultry Industry’s most salient feature is that it is highly fragmented. There are several thousand independent poultry producers, little or no promotion of brands, and significant variations in poultry industry development across regions. The four southern states Andhra Pradesh, Karnataka, Kerala and Tamil Nadu account for about 45 per cent of the country’s egg production, with an annual per capita consumption of 57 eggs and 0.5 kg of broiler meat. The eastern and central regions account for about 20 per cent of egg production and have a per capita consumption of 18 eggs and 0.13 kg of broiler meat, while the northern and western regions record much higher figures than these. Indian Poultry industry needs to continue to adapt to the changing world environment, in particular by greatly increasing the scale of its production, marketing and processing.

Shamsuddoha and Sohel (2003) in their research paper examined the picture of the growth of poultry industry, status of existing labour or workforces. They identified the problems of poultry industry in Bangladesh on some selected areas and pointed out the various problems and suggested recommendations regarding its policy matter. They concluded that skilled man power can be able to lead to the society in a significant way in various sectors. There is extraordinary competition in free market economy. Everybody compete with their efficient human resource and increase their productivity, innovation of new products, ensures quality assurance and create new market positioning. Moreover, efficient man power should be created from a good institution. Consequently, human resource development through good institutions should be given the top most preference in the poultry development process of Bangladesh.
Landes et al. (2004) in their Agricultural and Trade Report have studied developments in India’s Poultry Sector. They found that Poultry meat is the quickest growing component of global meat demand. India, the world’s second largest developing country, is contributing to the expansion through the rapid growth of its poultry sector. In India, poultry sector growth is being driven by rising incomes, together with the emergence of vertically integrated poultry producers that have reduced consumer prices by lowering production and marketing costs. Integrated production, a market conversion from live birds to chilled and frozen products, and policies that help ensure supplies of competitively priced domestic or imported corn and soybeans are keys to future poultry industry growth in India and in other developing countries.

Bhardwaj and Ashok Kumar (2005) have studied the existing status of poultry sector in India, examine the growth pattern of poultry in different region, constructed development indices for poultry production in different states.

Kakade et al. (2005) have conducted a study on Employment and Income Generation under Contract Farming: A case study of poultry. They studied the role of contract farming in direct and indirect employment generation, examined the structure and functioning of contract farming in broiler production and explored the motivating factors to the farmers for entering in contract farming.

Kondaiah and Pragati (2005) in their article stated that, optimum utilization of meat animal resources through development of meat sector is important not only to provide meat and byproducts of human utility but also to sustain livestock production ensuring better returns to farmers.

Mack et al. (2005) have made an attempt to study The Contribution of poultry to Rural development. He found that increased investment in livestock production is needed given the rapidly growing demand for animal products and the important contribution of livestock to the incomes and welfare of the rural poor. Investment, from private, public and international sources however needs to be guided by policies and institutions that promote equitable, sustainable, and environmentally friendly long-term outcomes. A systems approach, with consultation among all
contributing groups is required for the formulation of the above policies if smallholder (poultry) production development is to overcome the devastation of recent disease events as well as its normal constraints

Saran et al. (2005) concluded that the key factors driving the recent growth of the Indian poultry sector were, first, consumer demand for poultry was rising, due to both income growth and favourable changes in prices of poultry products relative to other goods; secondly, the structure of India's poultry market was changing. In particular, vertical integration of poultry production and marketing lowered costs of production, marketing margins, and consumer prices of poultry meat. The future pace of vertical integration in the industry would affect the pace at which consumers shifted from a preference for live birds to a processed (chilled or frozen) products, a shift that would enable poultry integrators to expand their market reach and scale of operations. Finally, feed availability and prices have a central role in determining costs of production, consumer prices and future prospects of poultry sector.

Sulaiman and Vijaychandran (2005) conducted a study on Working of Poultry Industry in India. In this study they analyse the various functional areas of the broiler poultry industrial units functioning under private sector in the state of Kerala and Tamil Nadu. The study attempts to review the socio-economic conditions of the poultry entrepreneurs and structural characteristics of the poultry farms; and poultry management practices followed by the units in the two states. The study also analyse the cost and profitability of the broiler farming units in Kerala and Tamil Nadu. Further, the assessment of performance of the units in the areas of finance, production and marketing and identification of the problems in these functional areas. They concluded that the socio-economic conditions of the poultry farmers in the state of Tamil Nadu are comparatively better. The total cost of production of the poultry units is more in Kerala. The profitability of the poultry industrial units in Kerala is lower than that of Tamil Nadu. The financial position of the poultry units in Tamil Nadu is better than of Kerala. The poultry units in both the states of Kerala and Tamil Nadu are facing problems in the marketing of products, which are significantly different.
The National Bank for Agriculture and Rural Development has conducted an evaluation study (2005) on Poultry (Broiler) Farming in Uttar Pradesh as a part of financial scheme implementation. The study assessed the implementation of poultry schemes by the banks, besides assessing the economics of investment in selected districts of the state. They found that in Uttar Pradesh, the growth of the poultry sector in eastern part of the state is more pronounced than in western UP. The fluctuating price of broilers, high rate of mortality due to various diseases, faulty site selection, lack of proper heating and cooling systems, lack of proper awareness, under financing by banks, poor post loan disbursement follow up by banks etc. were the main reason for closure of many units, particularly in the western part of the state.

Mandal and Khandekar (2006) in their study reported that the rural poultry owners had poor knowledge about feeding, breeding and management practice, which led to poor performance of the birds. Therefore, extension programmes in BYPF should commensurate so that the poultry owners become more knowledgeable and skillful about the new technologies as well as the recommended practices and can maximize the productivity and consequently the income. On-farm training of rural poultry owners is also necessary so as to bring about changes in their practices. India has tremendous potential in organic poultry because of the existence of traditional backyard system. Thus with the help of appropriate approach and technology, the backyard system of poultry rearing can be transformed to a successful organic venture.

Ramaswami et al. (2006) in their discussion paper analyzed the gains from contract farming in the case of poultry production in the state of Andhra Pradesh in India. They found that contract production is more efficient than noncontract production. The efficiency surplus is largely appropriated by the processor. Despite this, contract growers still gain appreciably from contracting in terms of lower risk and higher expected returns.

Thangamani (2006), in her dissertation made an attempt to analyse the social and economic development through poultry farming in Namakkal district. She found that poultry farming is one of the agro based rural industries which provides large
amount of employment opportunities, income generation and improve standard of living of the respected area people. Poultry farm in Namakkal district is one of the world famous for the eggs and meat to all over the nation and exports eggs to various countries. Apart from the poultry farm the related industries such feed industries, egg powder industries, paper board industries and Transport industries also providing employment opportunities, income generation him, savings of Namakkal and around the people. The socio economic conditions in Namakkal district are highly satisfactory level because of the poultry industries help to promote the social and economical conditions of the people.

Abedullah and Bukhsh (2007) in their article highlighted the major problems in poultry production and then focused to estimate the percentage share of different stakeholders in total profitability from poultry industry because inequitable distribution of profit share was assumed to be one of the major obstacle in the expansion of poultry industry. They found that commission agents were earning 47% of the total profit in poultry industry, followed by retailers (28%) and producers (25%). This indicates that it would be impossible to improve the contribution of poultry in total nutrients uptake of human beings in the country without reversing the trends in profit share.

Ahuja and Sen (2007) has, in his working paper an attempt to study Scope and Space for small scale poultry production in developing countries. He identified that the main challenge for small-scale/rural poultry is organizational, not technical. The conclude that it is important to continue promote village poultry to contribute towards household nutrition security and livelihood support but concerted efforts must be made to find organizational solutions to minimize public health risks and provide appropriate extension support on issues like disease prevention, predation, improving hatchability etc.

Chidananda (2007), in his dissertation, attempted to study Economics of Contract Farming in Broiler Production in Karnataka. He found that all categories of broiler farmers have the same terms and conditions under a written contract which is more leaning towards the integrators than the farmers with a glaring practice of collecting two blank cheques. And none of the integrators have insurance to cover the risk.
Hardly any farmer has a copy of the written agreement and the document has little or no legal teeth in favour of the farmer in the court of law. The farmer gets a growing charge for steering the chicks from day one to marketable age. The base fee varies across firms ranging between Rs. 1.80 to Rs. 2.65 in addition to market price, production cost, and FCR linked incentives. The number of farmers contracted by each integrator varies between 60 and 300. The integrator practices like batch length, batch number, and additional organic supplements have affected the net profitability of broiler contract farms. Despite market uncertainties, independent farmers are in poultry business for decades mainly due to own feed mixing, own retail outlets or trusted vendors. The profits per kg body weight are comparable to contract farms. The independent farmers preferred to continue to be independent. The Cobb-Douglas production function indicated that flock size significantly influenced per batch returns for CF while for independent farms it was flock size and poultry farming experience. The broiler integration has its inherent problems both for farmers as well as integrators. The farmers do not get quality chicks (minimum weight 40g.) which are most important basic input in broiler production. Even feed quality is not easily quantifiable and varies between batches. The integrators charge higher rates for chicks, feed, vaccines, medicines, sanitizers etc., and also insist use of medicines though not warranted, thus increasing the cost of production; the cost is debited from the growing charges. Delays in stocking of chicks were a common complaint from farmers and the study revealed that the average number of batches per year was fewer than the maximum possible of 6 batches. The flock density is less particularly during summer months reducing farmers returns. Higher mortality, surpassing the fixed cost of production attracts penalty. The penalty clause is only for farmers and no mention of it for integrators for any delay, deviations or violations.

Bhatta et al. (2008) studied the most frequently admitted problematic side of the business, that is, financial aspect. Discussion with the farmers of Chitwan district in Nepal formed the basis of this research, followed by a detailed business analysis of a commercial poultry grower. Analysis revealed the business to be profitable, sustainable, and less sensitive to adverse conditions. The positive and high value of net worth shows that the business is in a strong position. Again, the financial ratio, liquidity ratio, and solvency ratio showed that the business is on a strong foundation,
is capable of repaying its loans anytime if demanded, has sufficient liquid balance, and is financially viable. Net cash earnings are also positive, along with considerable profits as shown by the profit margins. Simple rate of return on investments is also high, hence the business could be said to be earning high profits.

Zakir (2008), in his dissertation, made a study on Management of Contract Farming in Livestock: A Case Study of Poultry Industry. He found that, in case of procurement management, the total value of inputs procured per bird was Rs. 48.89 in contract farmers’ case and was Rs. 52.81 in non-contract farmers’ case. The non-contract farmers procured their inputs through three sources viz., poultry dealers, integrators and local market. Under cost comparison, in case of contract farming, the total cost incurred was Rs. 3.75 per bird. In case of non-contract total costs incurred per bird was Rs. 58.31. The net returns obtained per bird were Rs. 1.94 in case of contract and was Rs. 1.23 in case of non-contract. The Meat feed price ratio was 1.74 in contract arrangements and it was 1.56 in case of non-contract. Similarly, the benefit-cost ratio in case of contract poultry farming was 1.52 and it was 1.02 in non-contract case. The various problems faced by contract and non-contract farmers were analyzed by employing cluster analysis and were grouped under high, medium and low aggregate clusters. The major problems in case of contract were that of delay in payment, non-availability of credit, inadequate capital and disease occurrence. On the other hand, the major problems faced by non-contract farmers were that of high initial investment, water scarcity, lack of technical guidance, and the diseases occurrence. The problems faced by the contracting firms were demand for the products and price fluctuations, problem of diseases, input diversion by the farmers and extra contractual sales.

Ketharaj and Jeyakumar (2009) revealed that, the poultry sector is today one of the fastest growing in the Indian agricultural arena. While the production of crops has been rising at a rate of 1.5 to 2 per cent per annum, of eggs and broilers has been rising at a rate of 8 to 10 per cent per year. As a result, India is now the world’s fifth largest egg producer and the eighteenth largest producer of broilers. The Indian poultry industry has the inherent potential to become the world leader. Consumers all over the world are demanding quality products at cheaper prices, particularly in developed countries. India is blessed with natural sunshine round the year, cultivable
land, and a vast pool of cheap labour and sufficient rains. The future is also bright for this sector because consumption is not seasonal. The government should take steps to develop this industry, since its future depends on both government support and Indian entrepreneurship.

Rajendran (2009), in his dissertation made an attempt to analyse the cost structure of various sizes of farms and marketing procedure for eggs and socio economic impact on the family of the poultry farmers towards economic development. He identifies the position of poultry owners before and after the poultry business. He found that, in the larger national interest of generating rural employment and combating malnutrition / protein deficiency, the poultry industry has to grow manifold. In fact, India is the only country which has the capacity, technology and facilities to produce all essential inputs required for successful poultry farming and do not need to import any inputs for modernization / upgradation.

The poultry production units will ensure nutritional requirement by ready availability of poultry products at affordable cost. It will also generate additional income and employment opportunities to rural population and ultimately check the migration of rural people to already over populated cities. To promote and strength the rural poultry industry, introducing supplementary feeding along with scavenging and use of appropriate management practices so that it can augment the rural economy by enhanced profitability.

Hamra (2010) in his study stated that the broiler business in Lebanon is profitable assuming variation in prices of chicks, feed and price/kg of meat remain within reasonable levels, while all other costs are fixed. Even when the cost of feed is high, the price/kg of meat could be above the average, compensating for the high costs of the operation. Also when the cost/chick is high, the feed cost could be low, compensating for the initial high cost per flock.

Manimekalai (2010) has stated that poultry farming has tremendous potential for expansion and employment generation. Youth in general and educated unemployed youth in particular can take up this profession easily. The inputs required for poultry farming are available locally in rural areas. Simple equipment for feeding, watering and sheltering for small units can be manufactured from materials locally available.
in the villages with the help of local artisans. Land required for starting poultry units is small. Qualified veterinary doctors and even some businessmen have entered the field. Women are also engaged in decision-making related to poultry production. Public and private sectors need to take up training programme for middle-level management at poultry farms. Several policy interventions are required to protect and improve the poultry farming and create more employment opportunities in the country.

Manimekalai (2010) has, in his article, attempted to study is poultry farm business worth doing? He stated that Poultry farming plays an effective role in rural development as it helps the rural population earn regular income. The inputs required for poultry farming are available locally in rural areas. Simple equipment for feeding, watering and sheltering for small units can be manufactured with locally available materials in the villages with the help of local artisans. Land required for starting poultry units is small. Also, poultry farming needs less amount of capital. Poultry farming provides direct and indirect employment to about 1.5 million people. Some businessmen and professionals have entered the field. More women are employed in poultry farming as well as in marketing of eggs. Poultry keeping provides employment not only for those who are engaged in the production of eggs and chicken meat but also for hatchery operators, feed dealers, providers of building materials, egg cases and trucks, processors of egg and poultry products and all dealers engaged in the marketing of eggs.

Singh et al. (2010) observed that the broiler farming is a profitable venture and has a bright future in the Punjab agriculture for improving economic status of the farming community. The study has shown that the total fixed investments per bird have been highest on small farms, followed by medium and large farms. The total variable cost per bird has been reported highest on small farms, followed by medium and large farms. The total cost of meat production per bird has been found highest on small broiler farms, followed by medium and large farms. The net returns per bird over the variable costs have been recorded highest on large farms and economies of scale prevail on these farms. The meat-feed price ratio and benefit-cost ratio have been found to increase with increase in farm-size of broiler farms, which indicates better utilization of inputs on large farms. On the basis of net present value, benefit-cost
ratio and internal rate of return, investment in broiler farming has been found profitable in all farm-sizes, it being most profitable on large farms, followed by medium and small farms. The small broiler farms have been observed highly sensitive to increase in costs and decrease in net returns.

Thamizhselvi and Rao (2010) revealed that the contract is one sided, favouring the integrator as the contract stipulates standards for the outputs from the farmer but it does not specify any standards for the inputs the integrator supplies such as weight of the day-old chick, quality standards for feed and medicines. They found that the weight of the day-old chicks supplied was less than the standard weight of 40 g, an important cause for low body weight gain as well as high mortality. Although the integrators are bearing the risk of production and marketing, the contract broiler farming is exploitative as the integrators are paying on an average 4.61/bird, mostly on the basis of production cost. The integrators may do well by bearing the cost of the miscellaneous inputs being provided by the farmers and by taking feed conversion ratio as the basis for payment rather than production cost on which the farmer has very little control.

Anjani Kumar and Rai (2011) in their article analyzed the trends and volatility in the prices of livestock products and the extent of transmission of international prices to domestic markets. They found that the international prices of dairy products have been more volatile than domestic prices. The prices and the level instability of meat products were similar in both the markets. The transmission of global prices would help in reducing the domestic prices of meat products except bovine meat. The prices of bovine meat would increase as a consequence of transmission of prices from international to domestic markets.

Basford (2011) in his study, he stated that chicken consumption is fast growing in India in response to a number of variables, one of the most important of which is the rise of vertical integration in the poultry industry. Poultry integrators themselves are connected to foreign direct investment, arriving in larger numbers with greater flows of foreign investment in the Indian economy from transnational corporations like Church’s Chicken. It and similar companies exemplify the reach of globalization into Indian society. As a result of the connections between vertical integration,
foreign direct investment, and globalization, the rate of growth in chicken consumption in India stands as a reliable proxy measure of the rate of growth of globalization in India over the same time.

Gandhi and Jain (2011) in their working paper Institutional Innovations and Models in the Development of Agro-Food Industries in India: Strengths, Weaknesses and Lessons, found that Agro-industries have been given significant priority in economic development in India. Mahatma Gandhi’s emphasis on developing village-based agro-industries in the movement for independence marked the beginning of this strategic view. Is the priority given to agro-industries justified today? This analysis finds that the agro-industrial sector in India contributes a large share of the overall employment in industry, as well as in value addition and income generation. Its continued role in promoting development and reducing poverty will depend on its capacity to contribute to small farm income and rural employment, particularly among the landless poor.

Khandait et al. (2011) conducted a study on adoption of backyard poultry rearing practices in Bhandara district of Maharashtra was carried out at Nagpur Veterinary College, Nagpur in 2008. Regarding adoption of backyard poultry rearing practices it was found that, majority of the respondents (57.50%) were medium level adopters followed by high level (21.67%) and low level (20.83%) adopters. The practice wise adoption showed that marketing (69.20%) were highly adopted followed by feeding and watering (59.17%), housing (49.70%), general management (46.67%) and breeds and breeding (43.48%). The least adoption as for health care practices (27.44%). The overall adoption of different backyard poultry rearing practices showed medium level adoption. High incidence of diseases, attack of predators, lack of knowledge about scientific practices, lack of time due to farm work, damage to vegetable crop by backyard poultry, complaints from neighbors, unhygienic condition and improper veterinary services were major constraints encountered by backyard poultry owners. On the basis of the important findings of the study the following conclusions are drawn and presented here under backyard poultry rearing is playing an important role in increasing socio-economic status of rural community and employment in these areas. Backyard poultry rearing can form an important part of the integrated farming system. Importance to be given equally on poultry as
an income generating as well as it is very helpful to cover nutritional need of the resource poor farmers with very less input and minimum care. Study highlighted the medium level of knowledge about rearing of backyard poultry. Hence, there is need to impart training for backyard poultry owners.

Paria et al. (2011) in their article titled “Indian Carp polyculture integrated with ducks and poultry” stated that fish farming integrated with ducks or poultry would be highly effective for achieving cost effective fish production as well as for maintaining the ecosystem health.

Shaikh and Zala (2011) examined production performance, the average feed conversion ratio, liveability percentage; average body weight and age at marketing have been worked out. They stated that though broiler production is capital-intensive, it has been found profitable. The average cost of production per broiler has been found to be 64 and per kilogram live weight of broiler as 32. The variable cost and fixed cost constitute 84.5 per cent and 15.5 per cent of total cost, respectively. The major cost components have been found as feed cost (58.6%), chick cost (21.5%) and depreciation on buildings (10.7%). The net profit per broiler as well as per kilogram body weight has been found as 7.20 and 3.59, respectively for the sample as a whole. The benefit-cost ratio has worked out to be 1.11 for the sample as a whole and it increases with increase in farm-size, indicating that as farm-size increases, the net margin over the rupee invested on broilers also increases. The break-even analysis has revealed that the producers have to maintain minimum of 1531, 2611 and 10437 broilers, respectively on small, medium and large farms to meet the cost incurred in production of broilers.

Bharambe and Garud (2012), in their article, stated that feed consumption was lower in purebreds and they produced more eggs and utilized their feed more efficiently along with more gross returns as compared to crossbreds. The results also proved that Delhemred purebred was superior to other crossbreds and purebreds. Rearing of purebreds is a good profitable venture, considering minimum feed consumption and feed cost with maximum egg production.
Chandrakumarmangalam and Vetrivel (2012) in their article, attempted to study to analyze the profitability of the poultry farmers, to review the factors influencing the growth, instability and profitability of the poultry farmers. They found that the size of firm is depending on profit. The relationship between profit and education is not significant. Number of members in the family is not significant in the profit earning capacity. Sources of capital whether owned or borrowed have insignificant relation with profit. Nature of occupation (ie: whether ancillary or main) has no consideration to profit.

Gunasekaran (2012) has, in his doctoral dissertation examined the present marketing practices followed by farmers and middlemen. He studied the production and marketing process of eggs. He analyzed the socio-economic aspects of the poultry farmers and the cost structure of various sizes of farms and identified the cost effectiveness. He found that the phenomenal growth in the egg production has led to the exploration of various economical marketing channels. The market should be expanded in such a way that the production equals consumption. It is interesting to note that a majority of the rural population have little religious taboo against consumption of eggs. The study area, Namakkal District is highly associated with poultry industry and the future is also very bright for this industry. Being an agro-based related industry, this farming provides employment opportunities to lakhs of people directly and indirectly. Efficient and modern technology based management practices can increase the profitability of poultry farming. The problems faced by this industry can be reduced by utilizing the Business Process Re-engineering methods.

Mohanraj and Manivannan (2012), in their article have studied the factors that influence the farmers launching poultry farms, identified the adequacy of income of the various poultry farm owners and found the reason for taking up poultry business. They stated that, the majority of the poultry farmers prefer the poultry business as their family business but they were not having adequate experience. Hence, it is suggested that they may be given adequate information, education, communication and orientation training programmes.

Suresh, Kavita and Choudhary (2012) in their article, analysed the structure of India’s meat export, the commodity and market diversification and the prospectus of
ushering the meat export. The domestic meat production increased from 2.6 million tonnes in 1980 to 6.3 million tonnes in 2010, fuelled by the growth in poultry and buffalo meat production. While buffalo meat accounts for about 23% total production, its contribution in meat export accounts for more than 85%, mostly in frozen form. The growth of meat export has slowed down in the last decade compared to the previous decade with increased instability. Indian meat export has been increasingly getting specialized towards buffalo meat whereas its export markets are gradually getting diversified. Cashing in the competitiveness of India’s buffalo, pig and small ruminant production and improving the competitiveness of poultry meat production would help to improve its export performance. Greater investment in disease control and safe meat production so as to adhere with the Sanitary and Phyto-Sanitary Measures of WTO would help in sustainable meat export.

Vetrivel (2012), in his dissertation, attempted to study on A study on Production and Marketing of Poultry Eggs in Tamilnadu. He found that the poultry industry occupies an important role in the economy of India because of its contribution to the industrial output as well as the generation of the employment. As many restrictions are removed, the poultry entrepreneurs should concentrate on modern technologies, innovative ideas and improved quality to compete with the global competition and to run the industry with higher profitability. The state Government also has to take meticulous care and should analyze the problems of poultry industry and create awareness among the poultry entrepreneurs to manage efficiently by analyzing new trends in the study area. In course of time, due to lack of attention and innovation towards the poultry industry, the study area will reach the level of under development. Healthy competitions have not yet been made and the concerned poultry entrepreneurs have been suffering without new technologies owing to the lack of financial assistance. The Government has to take immediate steps and quench the thirst of the poultry entrepreneurs.

David Farrell (2013), in his article stated that the poultry has a major role to play in developing countries. Produce is relatively inexpensive and widely available. The commercial poultry industry provides employment and is growing rapidly. To produce 1 kg of meat from a commercial broiler chicken only about 1.7 kg of feed is
needed. Poultry production has a less detrimental impact on the environment than other livestock, and uses less water. Semi-scavenging backyard indigenous poultry are extremely important in providing income and high-quality protein in the diets of rural people whose traditional foods are typically rich in carbohydrate but low in protein. The vexed question of the cholesterol content of eggs and human health seems to have been exaggerated.

Gasura et al. (2013) conducted a study to identify the constraints in poultry farming by collecting data from 110 poultry farm entrepreneurs in Banaskantha district of Gujarat. The constraints faced were availability of birds and personal, situational, economic and marketing aspects of the poultry enterprise. Most poultry entrepreneurs faced low egg prices during summer, high costs of feed and medicine, lack of adequate credit facilities, fluctuating prices for the poultry products, increased risks and uncertainty of the poultry enterprise, high mortality of chicks and non-availability of veterinary aids. These were the major constraints perceived by poultry entrepreneurs. The establishment of poultry co-operative societies, mobile lab diagnostics available in 24 hours, provision of loans to needy poultry farmers at reasonable interest rates and awareness programmes on various scientific poultry farm management practices will lessen the prevailing constraints, improve poultry production and create better livelihood opportunities and more economic activity in rural areas.

Karthikeyan and Nedunchezhan (2013), in their article titled “Vertical Integration Paving Way to Organised Retailing in Indian Poultry Industry” stated found that Rapid growth of Indian poultry industry is driven by a combination of rising incomes, young and urbanizing population and declining real poultry prices. The vertical integration in the poultry industry and the retail boom in India are paving way to organized retailing. Besides, government’s support in terms of basic infrastructures like adequate warehouse/cargo space, efficient cold-chain system and exemption from excise duty on branded poultry products, simplified policies and efficient marketing network are essential for promoting domestic market prospects of poultry products. It is imperative for the Ministry of Food Processing Industries, Agricultural and Processed Food Products Export Development Authority (APEDA), poultry producers-cum-processors, food processors, food scientists-
technologists, extension specialists and other stakeholders to identify and address the constraints to evolve, appropriate mechanism for the transformation of the nascent poultry processing and product development sector into a dynamic, vibrant and versatile enterprise. The vertical integrated approach is identified to create an efficient poultry production-cum-processing and interface for accelerating the pace of growth of Indian poultry industry.

Karthikeyan and Nedunchezhian (2013) in their article titled “Market Dynamics in Indian Poultry Industry”, stated that The Indian poultry-meat industry has been growing at a very rapid rate in the last three decades, transforming gradually from unorganized, small-scale backyard farming into large-scale, organized farming. The poultry industry is one of the fastest growing sectors in India with the growth rate of 20% per annum. The market dynamics in Indian poultry industry because of vertical integration and also lower poultry prices, conversion from vegetarianism, increasing purchasing power of people largest growing population, urbanization, boom in retail sectors, increasing health consciousness and festival seasons. The preference of people plays a major role in the market. The pace of transition from a live-bird market to a chilled/frozen product market will likely be a factor in the future expansion of poultry sector integration. The future of poultry market will be processed, packed, convenient ready-to-eat and ready to serve. A shift away from live-bird sales to mechanical and more hygienic processing will also have public health benefits.

Kiran and Rao (2013) in their article, made an attempt to analyze the production and marketing of Poultry farm products and study the socio-economic background, investment and employment pattern of the selected sample poultry farm limited farmers. They concluded that in comparison to other livestock, poultry farming requires less investment to start the farming on commercial scale. Agricultural labourers, marginal and small farmers, will profit adequately if they start this business on a small scale. The average investment on fixed capital and total cost of rearing 100 chicks to the point of lay, works out to be very less.

Pathak and Nath (2013), in their article, pointed out that the livestock and poultry rearing is an imperative factor for improving the nutritional security of rural poor in
India. Rural farmers rear Desi type chicken with low egg and meat production in backyard system. For developing the rural poultry farming, improved backyard poultry like Vanaraja / Gramapriya birds rearing is of utmost important. These improved birds can rear in both intensive and free ranging system. Birds can be reared for egg production in small numbers (10-20) in free range conditions if plenty of natural feed resources are available. Chicks need brooding during initial 6 weeks of age to maintain the required body temperature and to protect from predators. In nursery rearing, feeding of broiler starter up to 28 days is better option but it can also be formulated with locally available materials. At 42 days of age, the birds can be let out under backyard free-range conditions. Birds should be vaccinated specifically against the Newcastle disease and fowl pox. The backyard poultry farming with improved birds provide a solution to food security to the needy villagers paving a way for sustainable agriculture in rural areas of India.

Sridharan and Saravanan (2013), in their research paper have studied the various factors which enabled the farmers to enter into poultry farming. They identified the constraints in broiler farming and suggested remedial measures. They concluded that that “Additional Income” was ranked as the first reason with a score 75.39 Garrett points. “Easy to manage” was ranked as second reason with a score of 56.53 points. “Early returns” was ranked as the third reason with a score of 55.59 points. “Availability of Land and Water” was ranked as the fourth reason with a score of 55.57 points. “Failure of agriculture” was ranked as the fifth reason with a score of 46.31 points. “Availability of techniques and inputs at doorstep” was ranked as the sixth reason with a score of 44.13 points. “Knowledge of rearing” was ranked as the seventh reason with a score of 38.33 points. ”Non-availability of labour for agriculture” was ranked as the eighth reason with a score of 34.83 points. Hence, it is concluded as the main reason for choosing the poultry farming is “Additional Income.”

Vetrivel and Chandrakumarmangalam (2013) conducted a study to find out the existing status of poultry industry in India and examine the growth pattern of poultry in different regions. They found that the increasing demand for poultry products has transformed poultry production activity into a full-fledged industry from a mere household/backyard activity until recently. Technological advances have
revolutionized the role and the structure of poultry industry in India. The distribution of the poultry population suggests that it is concentrated in some limited pockets. Forty two percent of the total population of poultry is confined to the Southern region, with 22% in the Eastern Region and 20% in Western Region, with only about 16% in the Northern region. Improved poultry breeds account for 59% of the total bird population, contributing with about 89% of the total egg production in the country. The funds allocated for poultry farming development during the various plans are minimal. However, the poultry sector has achieved production goals satisfactorily. The stage of poultry farming development in different states reveals that in most of the states, the poultry sector is still not well developed. Only few states like Andhra Pradesh, Maharashtra, Haryana, Punjab, Tamil Nadu and Gujarat have significant poultry production.
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