CHAPTER 2

REVIEW OF LITERATURE

2.1 REVIEW OF EXISTING STUDIES FOR RESEARCH

This chapter endeavours to make a brief review of previous literature dealing with the subject of the present study. The related review was collected from periodicals, journals, magazines, newspapers and a project report and it provides a proper direction to carry out the research work and enables to arrive at meaningful results. Keeping the above things in view, the available literatures relevant to the objectives of the present study are reviewed and presented here under the following headings.

1. Broiler Poultry Farming and economies of Production
2. Contract Farming and its Problems and Challenges

1. Broiler Poultry Farming and Economies of Production

Bhattu & Sharma (1999) made an attempt to study region wise constraints encountered by broiler farmers in Haryana. The major constraints observed were: high cost and poor quality of inputs, oligopoly marketing structure, high electricity charges, incidence of diseases, non-remunerative prices of broilers, and existence of rigid procedure for government grant or bank loans, and lack of broiler insurance schemes.

Singh (2003) says that “The care and management of chicks during the early part of their life (upto 4 to 6 weeks of age) constitutes brooding and
successful brooding will lead to the production of healthy pullets and they in turn, will show their full potential in laying and finisher houses in terms of egg and meat production.”

Robert A Swick (2004) says that the relationship between temperature and humidity on stress in broilers is depicted in factors such as age, length of exposure to warm conditions, temperature of deicing water, movement of air, radiant heat load, stocking density, nutrition and others affect the exact temperature and humidity that cause mortality and reduced performance. The effect of high temperature is always much greater when humidity is high.

Ganeshkumar & Rai (2006) studied the economic status of poultry farming enterprises in Andaman and Nicobar Islands. The study compared the investment patterns, labour utilization pattern, cost and returns, and efficiency measures of small (300 birds), medium (900 birds) and large (1500 birds) farms. The total cost per bird was found to be Rs. 68.84, Rs. 65.85 and Rs. 63.07 respectively. The net returns per bird was Rs. 8.36 for small farms and Rs. 11.35 and Rs. 14.13 for medium and large farms respectively. The study concluded that the broiler farming was a profitable enterprise and a main source of income to a sizable number of farmers.

Rajendran et al (2008) in their study find out the economic aspects of cost of production per broiler and he had recorded in the study was Rs.60.97, Rs.58.69 and Rs.55.97 in small, medium and large farms respectively. It indicated that the production cost decreased with increase in farm size. The reason for comparatively lower production cost of broilers in large sized farms than in small and medium sized farms in the present study could be attributed to the fact that most of the large sized farms used their own mixed feed and continuously rearing the broilers without break. The fixed cost on broiler production was 12.30, 10.43 and 10.36 per cent of the
total cost in small, medium and large farms respectively. As the farm size increased, the fixed cost decreased. The variable cost in the present study formed 87.70 per cent in small, 89.57 per cent in medium and 89.64 per cent in large farms. As the farm size increased, the variable cost also increased.

Singh (2011) in his book he has given the record keeping produces and its importance for the poultry farm. The poultry farm records’ format for each batch and formula for calculating FCR and rate of return on investment for the batch. The book also concluded that, no farm can be efficiently managed unless proper records are kept. A good record provides information for appraisals, which indicates the improvement of or weakness of the business organization and also indicates the line of action for improvement.

Singh (2011) in his book, he has elucidate the latest trends in prevention and control of infectious burial disease. This disease is a major problem in concentrated poultry production areas throughout the world. However, it is often not recognized due to a sub-clinical form. Affected chickens have reduced antibody response to vaccinations, strong post vaccine reactions, and increased susceptibility to concurrent or secondary infections.

Charles et al (2013) in their study investigated the training needs of small scale commercial poultry farmers on various improved poultry production practices. The findings showed that they are highly aware of improved / automatic housing system, feeds and feeding, diseases / parasites prevention and control, daily and special routine operations and low awareness of vital records to be kept and marketing strategies. However, they have low knowledge on poultry housing, feeds and feeding, diseases/parasites, prevention and control, daily and special routine operations, and high knowledge on record keeping and marketing strategies of poultry products. Therefore, small scale commercial poultry farmers need high
training on housing, feeds and feeding, diseases/parasites prevention and control, daily and special routine operation.

Gangwara et al (2013) study explains that the economics of prevailing poultry production systems have revealed that the poultry could be successfully reared both in backyard and intensive farms. The broilers farm capacity ranges from 500 to 5000 per batch with 7.55 per cent mortality. In the total cost, the feed cost has a lion’s share (72.0%), followed by the cost of day old chicks (21.5%). The average rearing cost has been found to be 99/broiler. The gross returns are 110/broiler with net profit of 11/broiler. The intensive broilers production has been found to provide very thin profit margins as the B to C ratio was only 1.11. High cost of day old chicks and feed has been identified as the major constraint in adoption of integrated poultry farming. The system has been successful in addressing women empowerment, equity and livelihood security.

Agbamu (2014) explains that the average poultry farmer in ughelli north local government area of delta state was predominantly male, has an average age of 38 years, well educated, has a flock size of 2,254 birds and rarely had contact with agricultural extension agents. The study revealed that new castle disease was the commonest poultry disease in the study area. The study revealed that veterinary officers, friends and contact farmers constitute the communication sources mostly used by farmers in handling poultry diseases. It was observed that television, radio and newspaper ranked least in usage. The study found that the techniques mostly adopted for poultry disease prevention are good ventilation, good hygiene, vaccination of birds, and application of antibiotics in drinking water and feed. The result of regression analysis proved that the three communication factors that made significant contribution to adoption of poultry disease prevention techniques are agricultural extension workers, use of friends and veterinary officers.
Eny Martindah et al (2014) in their study stated that most farmers in poultry production cluster did not properly apply biosecurity standard operating procedure partly because all input for poultry production including disease prevention measures through vaccination program were the responsibility of the company. Level of biosecurity in the poultry production clusters still lags behind a good biosecurity standard. Company should have a right and power to encourage farmers to practice the biosecurity measures. The recommendations for farmers are keeping chickens in a healthy condition, keeping chickens in conducive environment and prevent people from entering the enclosure.

Mohammad & Khursheed (2014) observed that the poultry growers usually keep around 2000 birds due to project cost constraint whereas, the optimum was of 4000 birds per cycle for majority of farming units; the broiler grow out was a seasonal activity for many farmers who have undertaken it as a subsistence activity that begins in the spring time and runs for eight to nine months with 6 to 7 growing cycles possible. The commercial poultry in valley was mainly owner controlled where all the investments and risks associated are borne by the farmer himself. The latest poultry business models of contract farming recently explored and in vogue in country, where broilers are grown under a contract for the integrator firm. In the arrangement the integrator places day old chicks and feed on private farms, as well as periodic management over seeing of the broilers. The farmers are paid, based on the live weight sent to the integrator firms slaughter facility and a premium for few benchmarks like feed efficiency, mortality and flock uniformity.

Raymond K Dziwornu (2014) has revealed that feed and one day-old chick costs constitute almost three-quarters of the average variable cost of broiler production. This indicates the relative importance of feed and one day-old chick in broiler production. Reduction in the cost of these two inputs will
increase profitability of broiler production. The study also discovers that feed cost, one day-old chick cost, labour cost as well as market age of broilers and capacity utilization are the main factors that significantly affect competitive advantage of broiler agribusinesses in Ghana. Reduction in the cost of feed, one day-old chick cost, labour cost and market age at which broilers are ready for sale will promote competitive advantage in broiler production. Recommended policy actions should, therefore, be directed at building the capacity and technical know-how of broiler producers to adopt proper farm management practices to ensure efficient utilization of feed resources. This will reduce expenditure on feed and consequently production cost to ensure competitive advantage of broiler agribusinesses.

Etuah Seth (2014) in his study stated that the economies of scale of the broiler farms of the study area were computed to be 1.513. This indicates the presence of positive scale economies among the broiler farms. Even though this study was applied to small-scale broiler farms, the result appears that an increase in the present scale of broiler production would bring down the average production cost per bird. The analyses on cost confirmed that the farmers with larger farm sizes recorded lower production cost per bird.

2. **Contract Poultry Farming and Its Issues and Problems**

Freivalds (1984) analyzed and discussed the market experiences of best dressed chicken in Jamaica while studying the growth and integration of broiler production in Jamaica. He opined that the integration has increased the bargaining position of farmers. The researcher studied the grower’s equity and structure of poultry industry before recommending the concepts of integration.

Minot (1986) studied the effect of contract farming exclusively on small farmers in underdeveloped countries. He reported that majority of the
small farmers face the problems of infrastructure and also reported the financial ways of improvement and policies undertaken by Michigan State of the United State of America.

Key & Runsten (1999) examined the cause of the observed variations in the scale of production and the success of small holder contract farming. The authors elucidates how the organizational structure of agro processing firms and the characteristics of contract farmers were influenced by imperfections in the markets for credit, insurance, information, factors of production, the raw product and the transaction costs. The main disincentive for firms to contract with small holder appeared to be the transaction costs associated with providing inputs, credit, extension services and product collection and grading. Many firms had found it easier and more profitable to deal with a few large growers. The study suggested to increase small holders participation in contract farming with a renewed effort on the part of growers to organize themselves or to organize with the help of government agencies, non-profit organizations, or the agro processors.

Singh (2000) identified the faults of contracting system both at company and at farmers’ level. About two thirds of Hindustan Lever Limited growers and more than 50 per cent of the Nijjer growers did not face any major problem in contacting. The other reported problems were poor coordination of activities, poor technical assistance, delayed payments, outright cheating in dealings and manipulation of norms by the firm. Some of the Pepsi potato farmers had a few problems with the company system, but a large number of them that is 60 per cent were happy. The study also highlighted the implications of contract farming on the cropping pattern, land lease market, sustainability, farm income and employment. Despite various problems and conflicts between companies and growers, 62 per cent of
Hindustan Lever Limited, 80 per cent of Niger and 68 to 73 per cent of Pepsi farmers wanted to continue contract farming.

Shivkumar G (2002) observed that the major problems faced by the contract farmers were low contract price and irregular payments. The other problems faced were unawareness of potentiality of crops, poor technical assistance, manipulation of norms by farms, and higher rejection rate. He opined that major problems faced by contract farms were land constraints and fixing of contract price. The other problems were farmers’ discontent and holding up of vehicles. The contract farmers try to put lower grade into higher grade and it was difficult to check and make sure of the grade as quantity handled was more. Farmers held up vehicles in the villages demanding that they should be paid higher prices even though agreement does not say so.

Sharma et al (2003) their study reveals that the results showed an overall range in performance indicator factor value from 79-210. The major causes of variability in performance indicator factor on contract farms were location, number of drinkers and feeders and water source. Collectively, these factors significantly influenced final market weight of birds. Using as Australian Performance indicator factor value as a standard, the best contract farms in Fiji need to improve by 16% to match the Australian performance while poorer performing farms in Fiji need to improve by 69%. This survey suggests that performance indicator factor measurements are appropriate to evaluate Performance of contract broiler growers in Fiji and will lead to a uniform regional standard of performance evaluation for broiler contract farmers.

Begum (2005) undertook a study in Bangladesh to identify incentives for poultry farmers to participate in contract farming in Bangladesh. The study explored why farmers enter into contract farming and evaluated the impact of an integrated contract poultry farming system on
farmer's income by analysing the costs and returns and labour utilization. It was revealed in the study that contract farmers get several incentives from the integrated firm, which include credit, production and price risk reduction, marketing assistance, technical knowhow etc. The study concluded that contract farmers were better off in terms of net income by getting a high net return from the poultry farm.

Phil Simmons et al (2005) in his study, the review of the contracts suggests that there is a wide array of contract types and that is related to the technical requirements of production and the associated costs. Profit analysis is used to identify factors contributing to smallholder participation in farm contracts and a two-stage estimation process used to measure the effects of farm contracts on gross margins and labour use. Results indicate participation in contracts is influenced by farm size and other factors such as smallholder's age, education, and participation in farm groups. Contracts increased returns to capital for the seed corn and broiler contracts but not for the seed rice contract. All three contracts influenced the types of labor used; however, none of them influenced total farm employment.

Gnanakumar & Baba (2005) compared the returns of integrated contract farming system in broiler production and independent poultry system in Tamil Nadu and Andhra Pradesh. He estimated that the net returns in the integrated contract farming system in broiler production were 1.7 times higher as compared to the independent farming system.

Prasad et al (2005) studied the problems in contract broiler farming as perceived by the farmers in Andhra Pradesh. The problems cited by non-contract farmers included high feed cost (90.6% of the respondents), unremunerated price (87%), high electricity charges (77%), high chick cost (69%), poor quality feed ingredients (69%), delay in lifting of birds by wholesalers (53%), mortality and disease (43%), delay in chick supply (40%)
and insufficient attention of hatchery men (39%). Contract farms cited delay in chick supply (87% of the respondents), high electricity charges (69%), mortality and diseases (40%), delay in payment (27%), less payment of hatchery to contract farmers (13%) and problems in the daily supervision of the broiler unit by the supervisor (9%) as their problems. Based on these they concluded that non-contract farms have more difficulties in broiler farming.

Guo et al (2005), writing about contract farming in China, found that informal contracts resulted in higher contract compliance, compared to written contracts. They attribute this contract performance to the importance of reputation in the social networks in which the transactions take place.

Ramaswami et al (2006). They sought to evaluate production costs of contract growers relative to non-contract growers in Andhra Pradesh, a State in Southern India. The simulated cost for contract growers is Rs. 24.3 to produce a kg of bird; for the non-contract grower, it is Rs. 26.22, i.e. a saving of Rs. 1.9 for every kg of bird produced. If the interest cost, say 15 percent, is added, the savings of contract growers amounts to Rs. 2.07. “The higher efficiency of contract grower is driven by its lower feed conversion ratio”.

Gnanakumar  &  Baba (2007) studied the financial feasibility of investments in contract poultry farming in Tamil Nadu region. 50 integrated poultry were selected randomly in Coimbatore district. He concluded that on an average, farmers received a growing cost Rs 2.36 per Kg of bird. The study calculated the profitability per chick, which was found to be Rs 1.50 in the
beginning. The study found that the returns on investment was 11.5% in the beginning and increased up to 20%.

Jagdishkumar & Prakash kumar (2008) study conducted in the Tumkur district of Karnataka state has reported the effect of contract farming on income and employment generation and has identified constraints in and prospects of contract farming. Both income and employment generation have been found higher, almost double, on contract than non-contract farms. The study has observed dominance of female labour on both types of farms. Delayed payment for crop produce, lack of credit for crop production, scarcity of water for irrigation, erratic power supply and difficulty in meeting quality requirements have been found to be the major constraints faced by contract farmers. The scarcity of water for irrigation, erratic power supply, lack of credit for crop production, and lower price for crop produce have been identified as major constraints of non-contract farmers. The major constraints expressed by the contracting agencies in expanding contract farming include violation of terms and conditions by farmers, lack of proper management by the company, frequent price fluctuations in international markets, and scarcity of transport vehicles during peak periods in the way of expansion of contract farming.

Nagaraj et al (2008) Contract farming is not a solution to address all the problems of agriculture production and marketing systems. But contract farming could be evaluated as a way of providing earlier access to credit, input, information and technology and product markets for the small scale farming structure. Contract farming might also be seen as a way or as a part of rural development and promoted to improve agricultural performance especially in third world countries. Besides farming to both sides, there are some problems. For successful implementation of contract farming having co-ordination and collaboration consciousness and acting in an organized manner
are advisable for both sides. On the other hand, government attitudes and incentives are also important aspects.

Parvathamma & Narayanaswamy (2010) in their study concluded that Contract farming could be an institutional arrangement that enables farmers to access markets while contractual arrangements can vary by crop and by country, contracting is a form of joint production where grower supplies tools, land labor and management while the firm supplies technical assistance, some inputs such as seeds pesticides and undertakes to buy the growers output at a pre-determined price. Without a contract risks would be too much and small growers can not take advantage of fruits of globalization in agriculture. Hence, contract farming can be a boon for the farming community.

Chidananda et al (2010) study determine that contract broiler farming in south India accounts for 80 per cent of production covering broiler integrators with regional, national, and international presence revealed that a combination of several factors are considered to arrive at base fee per kilogram of broiler live weight for contract growers. The marketing of birds is through wholesale lifters who make payment to the integrating company. Commercial poultry farms rearing capacity range between 1000 to 50,000 birds in select poultry pockets, while only a few major cities like Bangalore, Mysore, Mangalore and Belgaum are major consumption centers. Among the respondents, 55 farmers entered directly into integration, while the remaining experienced in poultry production as independent producers who in turn entered contract production. The most important reason for preferring broiler contract farming was that there was no need for farmers to mobilize huge amounts of operating capital to buy day old chicks, feed, and medicines and also marketing risk was shifted to integrators. However, integrators are able to exercise dominant control on input as well as output supply both in terms of
quality and quantity. The strong consumer preference for dressed meat from wet market is a driver for the presence of many poultry integrators in India apart from quick turnover and profitability.

Santhosh & Veerabhadrappa (2010) study explains that the Coordination, motivation and transaction costs are the three pillars of a contract arrangement. There is no need to look for permanence in contract farming arrangements though short or medium term sustainability is desirable for availing of its effects on the growers and the local economy. But as market conditions for a crop or commodity change, contract farming can wither away as market becomes efficient. Contract farming as a vertical co-ordination mechanism is only a response to a situation of market failure and depends on commodity or crop or sector dynamics which are liable to change anytime, especially in globalized and liberalized world. But, there are many indications that contract farming can continue even in the presence of competitive markets as has been the case in the developed countries. Hence, contract farming is only an instrument or means to agricultural and rural development, not an end in itself.

Vipin singh & Nidhi verma (2010) in their research paper, they explain that the success of any contract farming scheme depends primarily on the degree of trust that is developed among the contracting partners. When trust is present, contracts can be very simple, including only those clauses that establish the general conditions under which the commercial relationship is to be developed. When trust is not present, contractual complexity is likely to grow, as more and more clauses tend to be added to safeguard the parties. In any case, it is always desirable that a legally binding instrument exists to govern the commercial relationship; it is also desirable that this instrument is backed by an appropriate legislative framework that ensures its validity and enforcement. More than simply protecting the transaction parties, a binding
contract can bring additional benefits to those engaged in it. A case in point is the growing role of value chain financing mechanisms, whereby contracts are accepted as “de facto” collateral by lending institutions: the contract is seen as evidence that the parties belong to a value chain and for this reason they have their credit worthiness improved.

Gummagolmath & Paty (2010) in their studies they explains that the contract Farming incentives should be given to the sponsoring companies for disseminating technical knowledge or introduction of new technology amongst the farmers in the line of the Punjab Model of partial reimbursement of extension expenditure of the sponsoring companies. This incentive should be increased to its full percentage over a period three years, i.e. a company in its first year of Contract Farming will be getting less incentive than a company in its third year of operation. This will prevent a fly-by-night operator from availing the full incentive in its first year of operation itself.

Ismat Ara Begum et al (2011), in his study determine the efficiency of the poultry farm in Bangladesh and to assess the influence of contract farming system, using a data envelopment analysis. The results reveal that efficiency scores vary across sample farms. To explain some of these variations, the efficiency scores were regressed on some human capital variables and farming system. The study also estimates elasticity to provide the information on the magnitude of the influence of variables on Technical Efficiency (TE), Allocative Efficiency (AE) and Economic Efficiency (EE). The results show that the contracting system is positively and significantly related to the farm's TE, AE and EE. This is expected because under contractual agreement, in order to obtain sufficient supplies of the right quality of poultry meat at the right time, the company provides technical knowhow assistance through company's recruited supervisor, production inputs and services, and production credit along with intensive supervision,
which in turn improves farm efficiency. Thus, by receiving technical knowhow contract farmers have gained more knowledge on their resource and practices, which enables them to use resources more efficiently.

2.2 RESEARCH GAP IDENTIFIED FOR THE STUDY

There are many studies carried out in the field of contract farming. Most of the studies have been conducted and the literature has considered gains of growers under contract farming system and some examined the gains to both integrators and growers from contracting in poultry production. Some of the studies also examined the economies of small and large farm poultry production.


Bhattu & Sharma (1999) made an attempt to study region-wise constraints encountered by broiler farmers. Sivakumar (2002) opined that the major problems faced by the contract farmers were low contract price and irregular payments. Shiva Kumar Gupta (2002) studied the major constraints in contract farming as the difficulty in allocating the risk between the firm and farmers, where the distribution of risk was dependent largely on factors such as bargaining power, availability of alternative and access to information. Prasad (2005) studied the problems in contract broiler farming as perceived
by the farmers in Andhra Pradesh with reference to contract and non-contract farmers. Gnanakumar P Baba (2005) compared the returns of vertically integrated contract farming system in broiler production and independent poultry system and the financial feasibility of investments in contract poultry farming.

The present research study has been conducted to find out the problems and challenges in contract farming with reference to farmers and integrators for which little or no study has been found so far with regard to Western Tamilnadu. The profiles of the contract farmers are included in the study to understand the socio economic level of the contract farmers in the region. Integrator’s profile is included in this study to understand the business operations of the integrators and their contract farming requirements in the region. Contract Farmers and Integrators are facing problems in the contract farming model in the region. This study is an attempt to study the problems and challenges faced by the contract farmers and integrators. Problems defined in the study are related to broiler production related problems, financial problems faced by the farmers in this business, problems related to people in the supply chain, problems related to information and communication in business process, and problems related to compliance in the contract business process. The study also showed the challenges faced by the farmers and integrators in the business. These challenges are related to economic and social related issues. There is no in-depth study on the problems and challenges in poultry contract farming with reference to the farmers and integrators. There is no study available on the integrators in the industry and this study may be the first of its kind. Therefore, the research would like to address the problems and challenges of contract farming in poultry industry with reference to Western Tamilnadu.
2.3 Conclusion

It is evident from the review of literature that many studies were conducted on cost benefit analysis based researches and some of the studies elucidate the comparison between contract farming and non-contract farming. But none of the studies made an attempt to study the problems and challenges of contract farming in poultry industry. Therefore, there exists a research gap. Hence, the researcher would like to address the research gap by investigating the problems and challenges of contract farming in poultry industry with reference to Western Tamilnadu.