CHAPTER II
REVIEW OF LITERATURE

Literature review aims to portray the critical points of current and collected knowledge on the topic under study. It seeks to describe, summarize, evaluate, clarify and integrate the content of primary reports. Moreover it forms the basis for the justification for future research in the area. As such, review of literature has become an inevitable part of any scientific investigation. Hence a brief review of available literature, related to the study is presented in this chapter.

2.1 PROCESSING COST

Osotimehin et al. (2002) examined the profitability as well as operational efficiency of milk processing enterprise in Kogi State, Nigeria. Data were generated using a questionnaire as well as direct observation (cost-route method). Descriptive statistics, budgetary analysis as well as operational efficiency index were used to analyze the data. Results showed that milk processing enterprise was profitable and flexible-A net farm income was realized by an average processor, while the fixed costs accounted for about 1 per cent of the total costs of processing milk into different products. It was also shown that operational efficiency was not generally high among the processors. Based on these results, the study advised less efficient processors to adopt the practices of the efficient ones in order to make the enterprise more profitable.

Panday et al. (2006) have undertaken the study to work out average processing cost and net return from wheat flour and gram at Hissar district of Haryana. The results revealed that processing cost per quintal of gram dal and wheat flour marginally decline with increase in size of plant, which lead to the economies of scale. The net return per quintal in processing of wheat flour and gram dal marginally increase with the increase in size of plant which is to economically viable proposition.

Ibrahim et al. (2010) evaluated processing of groundnut by women in five rural area of north central Nigeria state, using a sample of 100 women processors randomly selected from the study area. Data analysis was done using descriptive statistics, net farm income model and data envelopment analysis. The average pure technical and scale efficiency scores were 80 and 83 percent respectively. The major constraints confronting the processing of groundnut include inadequate capital for
expansion and lack of processing machines. A significant opportunity exists for empowering rural women through groundnut processing. As per the cost and returns analysis from groundnut processing in cost Rs.20,250.9/qtl. and net return Rs.10,586.6/qtl.

Imandi and Yoga (2012) analysed the economic appraisal of manufacturing and marketing of Jaggery in Andhra Pradesh state, India. Multistage sampling technique was adopted in selecting the sampling units. Averages Benefit–Cost Ratio (BCR), Net Present Worth (NPW), Internal Rate of Return (IRR), Break Even Output (BEO), Payback Period (PBP), Garrets Ranking Technique and Kendall’s coefficient of concordance (W) test were employed as analytical tools. Lack of infrastructural facilities in Jaggery production and insufficient price dissemination in Jaggery marketing were major constraints. Market concentration in whole sellers was moderately high and in commission agents was medium. For profitable and sustained way of Jaggery manufacturing and marketing these constraints should be addressed at war foot basis.

Ramanathan (2012) analyzed an economic study on cashew processing and its by products. The survey covers various cashew nut processing units in different parts of West Bengal. The two method of extraction of CNSL viz., kiln and expeller method are adopted by farmers/processors. The study revealed that the cost of production per kg of oil in kiln method was Rs.7.68 and expeller method was Rs.9.30. The BCR and IRR analysis worked out to 1.15 and 47.40 percent in kiln method, whereas, they have been 1.14 and 41.38 per cent in expeller method. The solution to the problems conforming cashew nut processing lies in intensifying research in order to develop cost effective, eco-friendly technology to boost efficiency and productivity and reduce costs of processing.

Banerjee and Shrivastava (2014) carried out economic analysis of cashew nut processing in India. India is leading producer and processor of cashew nuts. The survey covers various cashew nut processing units in different parts of West Bengal. The results showed that if the plant be operated with full capacity and efficiency then there would be profit of Rs.1329.07 per day, excluding all expenses. This is quite profitable, but the profit margin could be increased more by plant mechanization and modernization.
Naidu (2014) studied economics of mango processing in Chittoor district of Andhra Pradesh. Analysis tools were total revenue, total costs, net returns and rate of return in percentage. Form the study it was concluded that the total processing costs in owned processing was higher compared to pre contract system. This was mainly due to not taking into the cost of raw fruits, barrels or cans and other chemicals in case of pre contract system of processing. And the total processing costs per one tone of mango pulp was higher in aseptic packing units compared to canning units both in pre-contract system of processing and owned processing. Because of the aseptic packing both variable costs and fixed costs were at higher level of magnitude in aseptic packing processing units compared to canning units.

Surwase et al. (2015) carried out financial feasibility analysis of capital investment in sapota orchard in Thane district of Maharashtra. The study revealed that per hectare capital investment for establishing sapota orchard for period of first five years was Rs. 93609. The annual per hectare cost of production (Cost C) for sapota worked out to Rs. 120138. The analysis of investment in sapota orchard showed that, the investment made in sapota plantation is economically viable with Benefit Cost Ratio (BCR) greater than unity (1.87), Net Present Value (NPV) was positive (Rs. 495835) and Internal Rate of Return (IIR) was higher than prevailing rate of interest (12 per cent). The payback period also desirable considering the total economic life of sapota orchard (50 years). The establishment of sapota orchard is profitable enterprise.

Varalakshmi (2016) studied an economic analysis of chicken nuggets processing unit. The analysed the cost, returns and feasibility of chicken nuggets production on different categories of processing units. Simple benefit-cost analysis, break-even level, project evaluation techniques were used to explain the results of the study. The results indicated that the cost of production of nuggets was highest on small units compared to medium and large scale units. All the processing units are found to be economically feasible with NPV of Rs. 7.76, 39.88 and 92.31 lakhs and IRR of 36 per cent, 47 per cent and 71 per cent for small, medium and large scale units respectively. B-C ratio was estimated at 1.52, 1.75 and 2.23 with payback period of 3.17, 2.78 and 2.19 years for small, medium and large scale units respectively. Economies of scale are evident from all perspectives like production costs, profits, discounting measures and breakeven point.
2.2 AWARENESS OF FARMERS

Shah (1989) revealed that the yield of fertilized plots was higher than that of non-fertilized plots. The main constraints were lack of adequate knowledge about the application of fertilizers and other inputs at the right time, lack of awareness about the latest technological developments and recommended packages of inputs, and above all, farmer’s belief the use of fertilizers is risky in rain fed situations.

Anil and Baba (2009) studied on utilization of electronic mass media as source of agricultural information by farmer in northern part of Taraba stat of Nigeria. They concluded that among the electronic mass media studied, radio was the most utilized by the respondents had positive coefficients and significant relationship with the utilization of provisions of digital electronics gadgets to meet with the recent development in technologies in agricultural information dissemination.

Malakodi and Bharathi (2010) revealed that 100 per cent awareness of bio fertilizer was found in the area of study but awareness on crop specific usage of bio fertilizers was only 19 per cent. The main source of information about bio fertilizers was the shop owners (46 per cent) and Agriculture Officers (29 per cent). Usages level of bio fertilizers was 60 per cent and the main reason for using bio fertilizers were to restore the soil fertility (34 per cent) and increase crop yield (32 per cent). Reason for not using step has to be taken to educate the farmers about bio fertilizers.

Shadiadeh (2011) studied the cucumber farmers' awareness and perception in 'Jordan valley' toward fertigation technology to determine cucumber farmers' awareness and perception in Jordan valley toward fertigation technology. Random sample of 250 farmers were selected for participation in the study. Data were collected through personal structured interviews with participants at their farms. Overall, farmers tended not to be aware or have low levels of awareness with respect to fertigation technology. Farmers tended to agree or were unsure about fertigation technology. Concerns over awareness of fertigation practices, technology and responsibility for conservation are discussed. The study recommends strengthening the role of agricultural extension in educating cucumber farmers through the preparation of the plan dealing with the detailed results of this study.

Adibe et al. (2011) studied the level of awareness of NHIS activities among employees of a Nigerian university. Study showed that levels of awareness were
categorized as summated mean awareness scores below 90 were as unaware, ‘>90 to 110’ as marginally aware, ‘> 110 to 130’ as moderately aware and ‘> 130 to 150’ as highly aware of NHIS activities. This study also revealed that employees of university of Nigeria were marginally aware of NHIS activities.

Apata (2012) studied the awareness and adoption of fish production technologies in south-Western, Nigeria. Most of the respondents were aware of the technologies and 65.8 per cent of them claimed that they use more than one sources of information.

Gupta and Kaur (2013) studied the brand awareness of daily consuming goods in rural area of Ludhiana district. For the study, viz., sidhwan Bet, sherpur, Sridhra and Hathoor of Jagraon region were selected and the result showed increasing trend about awareness of various brands of daily consumed goods.

Krishnakumar and Kala (2014) studied the brand awareness of personal care products in Chennai. The survey helped in understanding the consumer perception on brand awareness and position of product in the market. The results showed that consumers are well aware of brand usage, brand recognition, symbol, logo, brand commitment, brand prominent and brand knowledge.

2.3 ADOPTION OF FARMERS

Ani et al. (2004) studied the relationship between the socio-economic characteristics of rural women farmers and their adoption of farm technologies in Southern Ebonyi State of Nigeria. It was found that the mean adoption for all the technologies was 26.2 per cent.

Yadav (2006) revealed that majority (64.00 per cent) of the farmers had medium level of adoption about improved production technology of mandarin.

Maraddi et al. (2007) studied the extent of adoption of integrated pest management practices by sugarcane growers and reported that majority of the sugarcane growers had lower adoption of biological tool, mulching, paired row planting, judicious use of nitrogen and irrigation, set treatment in management of pest in sugarcane.

Kesarkar (2010) revealed that majority (65.50 per cent) of the cashew nut growers were in the medium category of extent of use, while 17.50 per cent and 17.00
per cent of them were in high and low extent of use of organic cashew nut practices category, respectively.

Singh et al. (2011) analysed the adoption behaviour of vegetable growers towards improved technologies. The result showed that about 84 per cent of the total farmers were in medium to high adoption categories in respect to improved toward tomato technologies while 37 per cent farmers belonged to medium to high adoption categories as far as improved technologies for cauliflower were concerned.

Adesope et al. (2012) studied the effect of socio-economic characteristics of farmers on their adoption of organic farming practices. The result showed that about 68.9 per cent of farmers adopted crop rotation and mixed cropping where as adoption level of hoeing and hand weeding was 63.3 per cent slash and burn was 58.9 per cent and intercropping was 50 per cent. The level adoption of organic farming practices was low as farmers’ adopted 5 out of 14 practices.

Maraddi et al. (2014) studied Extent of adoption of improved technologies by groundnut farmers. The result revealed that 55 per cent farmers fully adopted the inter cultivation followed by varieties (45 per cent). Where as 70.83 per cent farmers partially adopted the spacing followed by seed rate (65.83 per cent), seed treatment (61.66 per cent) and fertilizer management (60.00 per cent) while 76.67 per cent farmers not adopted the disease management practices followed by organic manure (43.00 per cent).

Mohamed et al. (2016) studied the new lands farmers' adoption for bio fertilizer on sugar beet area. It is clear from the result that about 85.8 per cent farmers refused to adopt the bio-fertilizers in sugar beet whereas 54.4 per cent farmers belonged to low adoption category, 45.5 per cent farmers belonged to medium to high adoption categories.

**2.4 FACTORS INFLUENCING PURCHASE DECISION**

Goswami and Sharma (2008) studied on tapping marketing strategies of agro products in rural India. Factors which generally influences in decision making have been fellow farmers, retailers, Gram Sevak, own decision and company people. In nearer category of farms, 51.98 per cent farmer’s decision making had been influenced by retailers, followed by fellow farmers and company people to the extent of 24.83 and 12.25 per cent respectively. The factors which had been found to
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influences the farmer has price, name of company, quality, own experience of farmers, results obtained by use of a particular agro-chemical to particular crop and retailer’s propaganda for a particular brand of agro-chemical. Among the promotional activities, field demonstration for near farms has been more effective to 55.96 per cent farmers followed by farmers meeting by 31.78 per cent. In the distant farms, field demonstration and farmers meeting had more or less equal responses to the extent of 46.07 and 46.75 per cent respectively. Among the advertisement media 45.69 percent farmers had relied on display of posters followed by news paper by 21.52 per cent and further listening to radio talks by 17.21 per cent.

Mariyono and Battharai (2009) analyzed factors that determine level of pesticide use in chili farming. Farmers also apply very high doses of pesticides on chili field. There is a wide range of variation on level of pesticide use across farmers and across the location within the province. The result shows that factors leading to higher doses of application of pesticides are market price of chili, number insect pest on the field as observed by farmers, non-hybrid variety of chili grown, more frequency of spray in a season and production location. Factors that contribute in less use of pesticides use are increased price of pesticides, higher level of farmers’ education, long year of farming experience, more number of diseases observed by farmers and large acreage cultivated to chili. On an average, farmers are using about 12kg of pesticide per hectare of chili. To reduce pesticide use in chili farming, farmers need more training and exposure to the improved crop management practices, growing resistant to common pest and diseases, reduce the frequency of spray and apply single method of targeted pesticide.

Niyarepola et al. (2009) examined the insecticide buying behaviour of Paddy farmers. Demand for insecticide depends on the impact of the extension service, price of the insecticide, brand/trade name of chemicals and the influence of the peer farmers. Farmer also do consider the brand name/ trade name of the insecticide. If this situation continued over a long period of time in an area where agriculture extension service is not functioning properly farmers’ choice of the insecticide will be influenced by level of the product promotion efforts carried out by the company. Farmers have also select insecticides based on the opinion of the peer farmer when farmers are not readily access to the agriculture extension services. The absence of reliable source of technical information farmers had used various source of
information but, the source other than the agriculture extension service are imperfect and could be misguide. Majority farmers influence by brand name/ trade name of the chemical, influence of peer farmers, extension service and price of the chemicals at the time of purchasing insecticide.

Soni et al. (2010) conducted the study on factors affecting consumer purchase decision of laptop. None of the brands can be seen as enjoying their product as exceedingly superior to its competition. Customers want increased customization of personal computers. Then it comes to laptops, customers are demanding more portability and durability. In addition demanding more physical features of laptops, customer need greater performance capabilities. The findings are majority 95 percent respondent state that mobility is an important or very important priority extra features. 63 percent respondent state that look is important factor.

Dharmraj et al. (2013) studied the factors that affect consumers purchasing behavior towards agricultural inputs like fertilizer, seeds, agrochemicals, oils and lubricants etc. Buying behavior refers to the act of consumers obtaining and using goods and services and the decision process that determines these acts. Buying decision is a set of many decisions which may involve a product, brand, style, quality, dealer, time, price and mode of payment. They revealed that the price is the most important consideration at the time of purchasing agriculture inputs followed by packaging and branding, fair billing and home delivery are considered relatively less important and study also find out the problems faced by the farmers on purchasing of agricultural inputs.

Karunia et al. (2013) studied the simultaneous and partial effects of culture, social, personal, psychological, product and price variables on buying decision of formula milk and to analyze the variables having a dominant influence on the purchasing decisions of formula milk at Malang City. A multiple linear regression models was used to predict the effects of culture, social, personal, psychological, product and price variables on purchasing decision. The results showed that the six variables simultaneously affected significantly the purchasing decision of formula milk at Malang City. The six variables contributed 83.5% of the variation in the formula milk purchasing decision. Partially, culture, social, personal, psychological, and product variables positively influenced the purchasing decisions of formula milk, while price variables did not significantly influence the purchasing decision of
formula milk. Culture variable was the most dominant variable influencing purchasing decision of formula milk.

Malviya et al. (2013) studied that second decade of the century sees a sharp rise in the total number of mobile phones users in the country. There are more than 27 million Smart phones users in urban India, which constitute 9 percent of all mobile users in urban India. This research is to identify the key factors which have a dominating effect on the consumers’ minds while making a purchase of Smartphone. By reading relevant literature, various factors have been found, based on which the consumer chooses the Smartphone.

Suroto et al. (2013) analyzed the factors influencing consumer’s purchase decision of formula milk in Malang city. This study analyzed the simultaneous and partial effects of culture, social, personal, psychological, product and price variables on buying decision of formula milk, and to analyze the variables having dominant influence on the purchasing decisions of formula milk at Malang City. The results showed that the six variables simultaneously affected significantly the purchasing decision of formula milk at Malang City. The six variables contributed 83.5% of the variation in formula milk purchasing decision. Partially, culture, social, personal, psychological, and product variables positively influenced the purchasing decisions of formula milk, while price variables did not significantly influence the purchasing decision of formula milk. Culture variable was the most dominant variable influencing purchasing decision of formula milk. Purchasing decision can also be influenced by personal characteristics that comprising age, occupation, economic condition, lifestyle, and personality and buyer’s self-concept. Results conducted that cultural, social and personal factors influence consumer decisions in the purchase of infant formula milk at Tiara Gods Supermarket Denpasar. In an effort to improve marketing performances at the target markets, the company often uses the marketing mix (product, price, place, promotion) as a marketing device.

Sivakumar and Kaliyamoorthy (2014) revealed that consumers make purchase decisions in each and every aspects of their life. They studied the factors influencing the purchase of agricultural tractors and to evaluate the most important factors like brand name, subsidy, horsepower, maintenance etc. considered for the purchase of agricultural tractors. The study was carried out in Sivaganga district of Tamilnadu state. Factor analysis was used to find out the most influencing factors considered by
the respondents while making the purchase decision of tractor. It is found as per the ranking is given by the respondent's subsidy is first and followed by sources consulted, horsepower, after sales service, price and brand name respectively are considered for purchase of tractors.

2.5 FACTORS DISCRIMINATING

Lwayo (2007) studied the discriminant analysis of factors associated with the adoption of certified organic farming by smallholder farmers in Kwazulu-Natal, South Africa. The results from the two estimated discriminant functions suggested that farmers with higher household sizes, inputs costs per hectare and number of chickens owned, locations further from innovators and less risk aversion were more likely to be certified as organic.

Anim et al. (2008) investigated the factors contributing to contract farming among small scale sunflower farmers at University of South Africa, Department of Agriculture, human health and human ecology during 2006-07. Lack of quality of sunflower seeds, entrepreneurial skills and formal contract agreements were the most important factors inhibiting contract farming in that area. It was recommended that access to farmers to support services, improved technologies, legal policies aimed to encourage contract farming and short term training in business entrepreneurs be made available to small scale sunflower farmers in the area to promote growth of micro and small enterprises.

Olarinde (2010) studied the use of linear discriminant analysis approach of baseline conditions to develop household categories in the Sudan Savanna, Nigeria. This study employed some baseline data of the SudanSavanna TF in a multivariate discriminant analysis to investigate some of the factors that characterized the farmers based on some starting conditions. The results revealed that different villages chosen for the program evaluation were correctly identified within their groups. Therefore, three distinct categories of villages are available for the evaluation of program impact. It could be concluded that the critical factor that were considered in the selection of farmers and sites for the baseline and the implementation of the IAR4D in the Sudan Savanna agro ecological zone of West Africa could be regarded as those variables which distinguish farmers into those that predictably belong to IAR4D, conventional and clean sites.
Sinha and Dhaka (2013) studied the risk of credit default using discriminate approach of tribal dairy farmers’ from Jharkhand. The study has suggested that higher per capita income from crop production (38.72 per cent), higher per capita income from dairying (31.62 per cent), and percentage of expenditure in total income (16.87 per cent), off – farm income sources (6.43 per cent) and more earning adults in the family (6.36 per cent) are the important factors to make the borrowers non-defaulters and vice-versa for defaulters. Hence, the model can be regarded to be valid in predicting a defaulter precisely based on the localized social farmers.

Gandhimati and Mookambigai (2014) studied the determinants of interlinked credit contracts in informal agricultural credit market using discriminant function analysis. It was found that small farmers were the major beneficiaries of informal credit market. But marginal farmers were not able to get adequate credit in informal credit market. More than 90 percent of the farmers involved in all types of credit contracts, such as cash to cash, cash to labour, seeds to cash and fertilizers to cash contracts. The value of farm equipments and expenses in seeds were the dominant factors in discriminating the borrowers under all credit contracts in to large and small borrowers. Though the farmers benefited from the informal sources, the farmers were highly exploited in the interlinked credit market through high implicit rates of interests.

Jha (2015) studied the factors which discriminate the contract farmers from non-contract farmers in Bazpur districts. The discriminant function was used to analyze the results. The results revealed that 10 socio-economic variables were used through stepwise linear discriminant technique out of which, four variable i.e. family head, education score, income from sugarcane and input cost per hectare were significant and discriminating both contract farming and non-contract farming.

Srikanth and Karnool (2015) studied the over dues of Karnataka Vikasa Grameena Bank using discriminant function. The result revealed that out of the five characteristics, education and income levels were the two important characteristic in discriminating the two groups were found 33.27 per cent and 54.61 per cent, respectively. Standardised canonical discriminant coefficients showed that the variables education (-0.573) and income status (0.798) had higher magnitude which were significantly influencing dependent variable and the variation in these explanatory variable maximised the distance among the objects (respondents) which ultimately led in to separation of two mutual events.