CHAPTER II
REVIEW OF LITERATURE

2.1 INTRODUCTION

The introduction and research design of the study used in this research are presented in the first chapter. This chapter presents the review of literature for marketing of agricultural seeds and quality management in India and Abroad.

2.2 REVIEW OF LITERATURE

The Agriculture sector has low production due to a number of factors such as illiteracy, insufficient finance and inadequate marketing of agricultural products. Further the reasons for the decline in agriculture growth rate in India (GDP) are that in the sector the average size of the farms is very small which in turn has resulted in low productivity. Also, the growth rate of the agricultural sector in India has declined due to not adopting modern technologies and insufficient irrigation facilities. As a result of this, the farmers are dependent on rainfall, which is however very unpredictable. So, the government of India must take steps to boost the agricultural sector, for, this in its turn will lead to an increase in agricultural growth.

Copious literature exists on marketing of agricultural seeds and quality management in written by various authors and in different languages and for various purposes. This fact underscores the essence, importance and relevance of this sub-sector in the development of any given economy. The experiences of developed economies in relation to the roles played by agriculture insurance schemes in buttresses the fact that the relevance of In order to highlight the significance of agricultural seeds in relation to the growth and development of a given economy, agricultural seeds have been variously referred to as the “engine of growth”. This stems from the fact that almost all countries that have focused on the agriculture sector and ensures its vibrancy have ended up succeeding in the significant reduction and its attendant enhancement in the quality management and standard of living, reduction in crime rate, increase in
per capita income as well as rapid growth in GDP among other salutary effects. There are numerous studies made by both Indians and foreigners to examine the agricultural seeds and their related issues. Some of the important studies in this regard are as follows.

**McLeay, F. J. and Zwart, A.C., (1993)**

“**Agricultural Marketing and Farm Marketing Strategies**”, the author has attempted to differentiate between agriculture marketing and business marketing. The apparent differences between agricultural marketing and business marketing theories may not present a problem because both disciplines examine issues which are likely to require different theories and techniques for analysis. However, concern must be expressed at the failure of researchers to comprehensive examine the marketing strategies undertaken by individual farm businesses. Businesses in the agricultural sector include farmers and other often larger and more sophisticated agribusinesses, such as input suppliers and merchants. Business literature contains published articles examining the marketing strategies of large agribusiness companies; however, little research appears to reach down to the farm business level.


A study entitled Energetic in paddy cultivation in Uttara Kannada district was conducted by in the Ecological Sciences, Indian Institute of Science, Bangalore. It has aimed at to study the following aspects, to measure the quantity of energy inputs in paddy cultivation, to find out its type and share in productivity, to analyse the regional variation in the amount and type of energy used, to examine the relationship between landholding and energy consumptions, and to identify factors responsible for differences in the levels of energy consumption. For the purpose of study the Uttara Kannada district in the mid-western part of Karnataka state were taken as the study area. A detailed survey was conducted in 90 villages spread over the coast, interior and hilly zones of Kumta Taluk.
covering all categories of landholdings. The study found that detailed analyses of energy input in various categories of farmers, based on stratified random sampling, the marginal farmers get higher yield compared to others. The energy input in this category in the form of Farm Yard Manure (FYM) is almost double to that applied by large farmers (>2 ha). This greater usage of FYM by marginal farmers is attributed to higher dung availability (livestock per hectare in the marginal farmers category is almost twice that of medium farmers or four times that of large farmers).

Rasheed Sulaiman V. (2003)6 “Restructuring Agricultural Extension in India”, The researcher is strongly recommending the restructuring of institutions for agriculture extension. There is an increasing recognition all over the world that institutions are fundamental to the economic change. Agricultural development depends on an efficient flow of information among all the actors in the system, and agricultural extension has been traditionally performing this role with varying levels of success.

Jorge Fernandez-Cornejo (2004)7 “The Seed Industry in the U S Agriculture”, the unprecedented growth in crop yields and agricultural total factor productivity over the past 70 years owes much to a series of biological innovations embodied in seeds, beginning with the development of hybrid crops in the United States in the early part of the 20th century, continuing with the adoption of high-yielding varieties during the Green Revolution of the 1960s and 1970s, and more recently, modern biotechnology. Throughout this period, the seed industry evolved, as small businesses gave way to larger enterprises that integrated plant breeding, production, conditioning, and marketing functions. The industry was further shaped by widespread mergers and acquisitions in the latter part of the century, rapid growth in private research and development (R&D), shifting roles of public and private R&D, and a “coming of age” of agricultural biotechnology.

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6 Rasheed Sulaiman V, “Restructuring Agricultural Extension in India”, Institutional Change in Indian Agriculture, NCAP 2003
Siddharth Sinha (2007) “Agriculture Insurance in India”, Centre for Insurance and Risk Management, government run crop yield insurance scheme, procurement at minimum support prices and calamity relief funds are the major instruments being used to protect the Indian farmer from agricultural variability. However, crop insurance covers only about 10% of sown area and suffers from adverse claims to premium. There are problems with both the design and delivery of crop insurance schemes. These problems could be overcome with rainfall insurance with a well developed rainfall measurement infrastructure. Private and public insurers are currently experimenting with rainfall insurance products. Given the current levels of yield and rainfall variability the actuarially fair premium rates are likely to be high and in many cases unattractive or unaffordable. Instead of adopting the easy and unsustainable route of large subsidies, in the long term the government should consider risk mitigation through improvements in the irrigation and water management infrastructure.

Nagarajan, S.S. (2007) “Increasing Pulses Production with Special Reference to Black gram”, Pulse crops have remained the mainstay for centuries. This is because of their inherent capacity to fix large amount of atmospheric nitrogen in symbiotic association with Rhizobium. This has helped maintain the fertility levels of soil. The production of pulses has remained almost stagnant of quite some time. As a result of the ever increasing population, availability of pulses has shown a sharp decline. The government is therefore forced to import pulses to meet at least a part of the growing demand. Through research, a lot of high –yielding varieties have been developed. Farmers are able to use their resources more intensively resulting in getting adequate returns. However, the overall impact on total production has only been marginal. This is because wide gaps exist between the yields of improved varieties on research farms and those obtainable on farmers’ fields. Therefore,

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there is need for intensive efforts in pushing up the yields in pulses with particular reference to black gram.

**Seema Mustafa(2007)** 10 “Farmers Suicides Result of Lifeless Institutions”, Noble peace prize winner Mohammed Yunus, attributing the increasing number of suicides by ‘Indian farmers to “lifeless, emotion -less” institutions, said that this can be checked by creating for the farmer a variety of options to choose from so that suicide to be a choice or at least is at the very bottom of a long list.

**Vidyachandr, B. and et al (2007)**11 “Success Stories in Hybrid Rice seed Production-Farmers’ Perspective”. Rice is the staple food of the country proving food for more than 70 percent of the population. Rice cultivation occupies the largest area (44 million hectares) with production of 90 million tonnes. During the post - independence period, the productivity has increased three from 0.7t/ha to 2.0 t/ha. This spectacular progress helped India to achieve self – sufficiency in rice to meet the demands of increasing population and to maintain this self - sufficiency, the production level of around 90 million tonnes needs to be increased up to 120 million tonnes by the year 2020. This appears to be a difficult task with the presently available technological options. Hybrid rice is a practically feasible and a readily adaptable genetic option to increase the rice production as it has been demonstrated in China. To exploit the potential of Hybrid rice technology towards enhancing the productivity of rice, ICAR, New Delhi launched a national project on hybrid rice in 1989 with 12 net -work centers.

**Murugan, V. and Tamilmani, B. (2008)**12“Cost and Returns of Nerium Oleander (Arali) Cultivation- An Empirical Study”, agriculture has been a source of a livelihood for millions of people in India. In spite of fast growing

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indoctrination and urbanization, vast majority of the people in India depends on agriculture and allied activities for their livelihood. Agriculture is not merely an occupation but a way of life for rural folks in India that is why it is considered as the back bone of Indian economy.

**Marcel Bruins (2009)**

“Responding to the challenges of a changing world: The role of new plant varieties and high quality seed in agriculture”.

Domestication of crops started some 11,000 years ago and since then much progress has been made. In this paper, the history of plant breeding and the seed industry is discussed, together with the most important developments in this sector. Plant breeding has made an enormous contribution to global agriculture (yield, resistance to biotic stress, tolerance to abiotic stress, harvest security, improvement of quality traits including nutritional value, etc.). Yield in many crops has increased from 1 to 3 per cent per year. A large proportion (50 to 90 per cent) is due to improved varieties, rather than to other input factors, and in certain crops this percentage is increasing. The efforts of plant breeders have led to varieties with increased resistance to biotic stress, saving many millions of dollars in crop protection products per year, as well as to varieties with increased tolerance to abiotic stress, such as drought, salinity, flooding or herbicides.

**Monyo, E.S. et al (2010)**

“An Analysis of Seed Systems Development, with Special Reference to Smallholder Farmers in Southern Africa: Issues and Challenges”, most smallholder farmers living in drought-prone regions of the Southern Africa Development Community (SADC) continue to rely on drought relief and informal farmer-to-farmer exchange to obtain seed of improved varieties. Well over 90% of smallholder farmers’ requirements are met through these channels. It is therefore important to give due recognition to the informal sector a low-cost source of seed, and to use it as a vehicle for providing resource-poor farmers with improved seed of modern varieties at affordable prices.

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13 Marcel Bruins “Responding to the challenges of a changing world: The Role of New Plant Varieties and High Quality Seed in Agriculture”, September -2009, pp.1-25

Hentry Pandian, S. and Manickam, S. (2011) “Energy Use Pattern in Paddy Cultivation in Tamilnadu -A Micro Analysis”, energy in agriculture is important in terms of production of crop of any kind. The consumption of energy in agriculture and allied activities has been rising consistently over the last few decades in today’s world; energy is a pre-requisite for development. Energy use is not an end in itself but is an input into the productive sectors of economy namely agricultural industry, as well as the infrastructure, transport and so on.

Kumaravel, P. (2011) “Impact of Bio- Fertilizers in Agriculture”, Bio fertilizer is 100 per cent natural peat moss. It is the best organic fertilizer which is known to provide all the nutrients required by the plants. It helps to improve the quality of the soil with a natural microorganism environment. This fertilizer is a 100 per cent natural organic material from the nutrient – rich lands of costa rica, that could be easily applied with water over the plantations on any stage, or used as a base for creating a potent and concentrated natural organic liquid fertilizer that could be used in many different growing mediums with excellent production results for organic farming, industrial and home applications such as gardening.

Nidhi Dwivedy (2011) this is an attempt “Challenges faced by the Agriculture Sector in Developing Countries with special reference to India”, to understand the history and characteristics of the Indian agriculture sector, its transition from traditional to commercial agriculture and the problems it faces. Modern agricultural practices and the relationship with environmental depletion have also been assessed. The article discusses some of the developmental challenges faced by the Indian agriculture sector in particular and developing nations in general - illiteracy, poor socio-economic conditions, lack of

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technical knowledge and awareness, small land holdings, modernization leading to barren land and disasters leading to rural poverty, weather-dependent farming systems, low per capita income, underdeveloped physical infrastructures and inefficient bureaucratic procedures associated with the comparatively high cost of agricultural production. Natural disasters and human-induced environmental degradation are closely associated with improved farming systems.

Malyadri P. and Srinivasa Rao K. (2011)18 “Capital Formation in Agriculture”, agriculture still dominates the Indian economic scene by proving livelihood to a majority of the population. In most of the developing countries including India agriculture development is a pre-condition for economic development. The development of any sector is reflected by the productivity in that sector. In order to make the best use of resources and augment the productivity of the resources, modernization of agriculture is essential which in turn calls for a constant growth in capital formation in agriculture. India is vast country comprising of numerous region with diverse agro – climatic and weather condition. The production techniques, cropping patterns, assets and resource structure show considerable variation between these region and so do the use and productivity of capital.

Singh N.B. (2011)19 “Crop Residues - Complementary in Rice-Wheat Cropping System”, Crop residues are the non - economic parts of plants left in the field after the crops have been harvested and thrashed. These materials at times have been regarded as waste materials that require disposal, but it has come to be increasingly realized that they are an important natural resource and not waste. About 25 % of nitrogen and phosphorus, 50 % of sulphur and 75 % of potassium uptake be cereal crops are retained in crop residues, making them valuable nutrient sources. The recycling of crop residue has the advantage of converting the surplus farm waste into useful product for meeting nutrient requirement of crops.

Satya Sundaram, I. (2011) 20 “Revamping Agricultural Marketing”, Agricultural marketing and processing have become a complex problem to the farmer. He has to dispose of the marketable surpluses, and at the same time get a remunerative price for his produce. There has been some shift in consumption pattern and consumers’ tastes. This calls for sophistication in agriculture marketing. The marketing set-up should ensure remunerative price for the produce of the farmer. This serves as an incentive for him to produce more.

Maheswari, T. (2012) 21 “Sustainable Agriculture and Food Security in India” Improving food security ought to be an issue of great importance for a country like India where one-third of the population is estimated to be absolutely poor and one-half of children malnourished in one way or other. The food insecurity atlas prepared by M.S. Swaminathan research foundation (MSSRF) used two composite indices of food insecurity to show that both urban and rural poor in most of the states in India are afflicted with extreme food insecurity. According to united nations report (Feb.20,2009) about 20% of the world’s one billion hungry poor live in India and the number of undernourished in India is increasing to rank 94th in the global hunger index of 119 countries, and about half of Indian children are under weight. This paper aims to examine the nexus between sustainable agriculture and food security in India.

Mariappan, K. and Nalini G.S. (2012) 22 “Small Farmers’ Perception towards Agricultural Credit”, Small farmers constitute nearly 70% of the total number of farmers in India. The food security and peace of India is in the hands of small farmers. Without small farmers, India will be a food insecure, violent and undemocratic society. The small farmers are mostly handicapped in the area of obtaining finance for production. The majority of commercial banks’ loan portfolio is backed by collateral and absence of predictable sources of income

for repayment of loans. Small farmers could not obtain the expected amount of credit owing to minimum landholding. The main objectives of this study are to examine the difficulties of small farmers while availing agricultural credit and to strengthen the present agricultural credit system. The data samples were selected by administering snowball sampling technique. The total numbers of samples were 100. The study was conducted among small farmers in author area of Tamilnadu.

Nagarajan S. S. (2012)23 “New - Age Agriculture In The Terrace Comes of Age”. It is always common to see farmers in Tamil Nadu raise ash gourd and pumpkin in open field and very often we hear of many successful farmers reaping a profit by reaping this crop. What is not common and what makes is the story of a farmer from Thiruvaiyaru, who put his native intelligence and creativity to full use by raising pumpkin in the terrace of his house. Pumpkin is a profitable crop of seven to eight months duration that is sown in late June or early July and harvested in January. Several commercial hybrid developments by many seed companies are now available in the markets. The harvested produce can be stored for 3-4 months without spoilage. Farmers who raise the crop in open fields have to take good care of their crop to prevent grazing by cattle and goats besides damage from rats.

Nirmala, B. (2012)24 “Narrowing the Rice Yield Gab for Sustaining Food Security”, rice is the most important food crop of India both in terms of area as well as value of output. Rice plays a significant role in the national food and nutritional security. It is estimated that there will be a demand of 136 and 146 Mt of rice (taken as 50 % of total cereals) for the year 2020 and 2030, respectively. To meet the growing demand, a rapid increase in rice production is needed. There are several approaches to meet this projected demand which include expanding rice area, increase in productivity, bridging the yield gap and

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reducing post harvest losses. Among these approaches closing the yield gap between maximum attainable yield and farm level yield is promising.

Rajan, Y.S. (2012) 25 “Back to Agriculture and Manufacturing”, agriculture cannot be a stand in modern times. It requires energy, water sophisticated chemicals, bio chemicals and biotechnology inputs, machines, storage facilities, specialised transports, roads, telecommunication, etc. Also the farmers and farm works require good healthcare, continuing education and entertainment facilities. Animal, birds and fisheries require medicate too!

Sivanappan R. K. (2012) 26 “Enhancing the Living Conditions of Farmers”, India is an agriculture country and agriculture plays a vital role in the economic development of India and provides livelihood to millions of people. The agriculture sector encompasses crop production, animal husbandry, fisheries, agri business etc. Crop production depends upon crucial input such as good seeds, fertilizers, pesticides, irrigation, human labour, machinery and management. To maximize agriculture production, new, appropriate and advanced technology is essential. The Indian agriculture employs 69% of the total work force as compared to 2% in the USA, UK and 81% in Tanzania & 93% in Nepal and is a major source of poverty alleviation and empowerment of the agrarian folk. This situation is likely to remain unchanged for a long time. In order to expand our political and economic sphere, huge production at competitive prices is called upon. There is an urgent need to accelerate agriculture growth to address issues on food security, nutrition adequacy, rural income generation, employment and poverty.

Smita Singh, and et al (2012) 27 “Management of Rice - based Production”, the rice –wheat system has been practiced by farmers in Asia for more than 1000 years. It has since expanded and is currently estimated at 23.5 million ha in south Asia: India (10.0), Pakistan (2.2), Bangladesh (0.8) and Nepal (0.5). It represents 32%of the total rice area and 42%of the total wheat area in these

countries. In the Indo – Genetic Plains (IGP), which stretches across these four countries, rice is usually grown in the wet summer (may/June to October/November) and wheat in the dry winter (November/December to February/March). Although rice - wheat cropped area in the IGP is irrigated or has assured rainwater in sub - humid region, the soils and crop management undergo drastic changes during the two cropping seasons. Several yield - reducing and yield limiting factors, together with delayed planting of wheat and transplanting of rice; energy, labour, and other input shortages; resistance of the weed and crop residue burning have contributed to the stagnating or declining production, productivity and sustainability of this system.

Rajashree, V. and et al (2012)28“Bitter Gourd Cultivation Practices”, bitter gourd is extensively cultivated all over India for its bitter immature wanted fruits. Bitter gourd is believed to have originated in the tropical regions of the old world. India is the secondary centre of origin of this crop. It is widely cultivated as a vegetable crop in China, India, Malaysia and tropical Africa. It is an annual plant of slender climbing or trailing habit.

Praneetha, S. and et al (2013)29 “Improved Cultivation Practice for Chilli”, chilli is an important vegetable cum condiment. It is called Red pepper or hot pepper. Andhra Pradesh stands first in the list of leading chilli-producing states in India and also constitutes the maximum acreage for chilli cultivation in the country. It occupies 49 per cent share in the Indian total production and produces around 2,7lakh tons of chillies. The major chilli producing states in India namely Andhra Pradesh, Karnataka, Tamilnadu, Maharashtra, Orissa and Rajasthan contribute to around 86 per cent of total area for the chilli crop cultivation in the country and 90 per cent of the total Indian produce.

Sundar, J. and Lalitha Ramakrishnan (2013) this paper discusses “A Study on Farmers’ Awareness, Perception and Willing To Join and Pay for Crop Insurance”, the area of crop insurance, firstly it measures the awareness level and source of awareness, secondly examines the farmers’ perception, finally identify the farmers willingness in paying for crop insurance. The study was conducted in Kunichampet village, Puducherry District, India and 140 convenient respondents were chosen and been carried out in June and July, 2012. From the analysis farmers awareness level about crop insurance was low. Most of the farmers were not willing to pay for crop insurance because of instable income, premium rate, no or low compensation, problems with distribution channel and lack of financial knowledge.

Nagarajan, S.S. (2013) “Will Climatic Changes Affect Agriculture Production in the Future”, the vulnerability of India Agriculture to climatic changes is well acknowledge but what is not appreciated is the impact this will have on rain fed agriculture practiced mostly by small and marginal farmers who will suffer the most. Nearly seventy percent of the area under cultivation in our country is rain fed. Under rain fed condition if we can improve production by one percent it is a big production for the nation. Similarly if farming is affected under rain fed conditions it will bring down agricultural production to a considerable extent. Disturb the optimal cultivation period available for particular crops, thus throwing food and agriculture production out of gear. The worst brunt of climate change will be borne by farmers in dry land region where agriculture is rain fed, conditions are marginal and only one crop is grown per year.

Debashis Sarkar and Debajit Roy (2013) A study entitled Factors Affecting Marketed & Marketable Surplus of Paddy: A Case Study in Some


Districts of West Bengal was conducted by in the Agro-Economic Research Centre, Visva –Bharati. The main objectives of the study are: i) To estimate the marketable and marketed surplus ratio of paddy in West Bengal; and ii) To identify factors affecting marketed and marketable surplus of paddy in West Bengal. For the purpose of study, three districts namely Burdwan, Murshidabad, Birbhum were taken as the study area. The primary data for the study was collected through a multi-stage stratified random sampling method. The study found that On the whole it comes out that marketed/ marketable surplus ratio of paddy in West Bengal is much lower as compared to other agriculturally advanced states, and that the ratio of marketed/marketable surplus depends much upon the socio-economic condition of the farmer households.

Mahendra Dev, S. (2013)33 “Small Farmers in India: Challenges and Opportunities”, the roles and challenges of small holding agriculture in India. It covers trends in agricultural growth, cultivation patterns, participation of small holding agriculture, productivity performance of small holders, linking small holders with markets including value chains, role of small holders in enhancing food security and employment generation, differential policies and institutional support for small holders and, challenges and future options for small holding agriculture including information needs. It also provides lessons from the experience of India on small holding agriculture for other countries.

Makbul Hussain Khan (2013)34 “Agricultural Labour Problems in Barpeta of Assam Agricultural labours in Barpeta faces various problems”. Agricultural labours means who works on the land of others on wages. Agricultural labours are not free from the bondage or slavery, their income living standard and social status are very low having un-organising system of farms workers. Objective: To know the social status of the agricultural labourers. To study the condition of their works, to know the magnitude of agricultural labours, Methodology of the study- the study includes only
secondary methods of data collection and empirically study only. The paper includes problems of agricultural labours, government policy measures and suggestion for improvement of the agricultural labour conclusion- The study conclude that agricultural labourers condition is not good in Barpeta of Assam and government should take some proper steps to improve the conditions of agricultural labour.

Vadivelu1, A. and Kiran, B.R. (2013) 35 “Problems and Prospects of Agricultural Marketing in India: An Overview”, agriculture is different from industry and plays a significant role in the economic development of a nation. India’s prosperity depends upon the agricultural prosperity. There are many kinds of agricultural products produced in India and the marketing of all these farm products generally tends to be a complex process. Agricultural marketing involves many operations and processes through which the food and raw materials move from the cultivated farm to the final consumers. Agriculture provides goods for consumption and exports and manufacturing sectors. The suitable marketing system should be designed so as to give proper reward or return to the efforts of the tiller of the soil. Market information is a means of increasing the efficiency of marketing system and promoting improved price formation. It is crucial to the farmers to make informed decisions about what to grow, when to harvest, to which market produce should be sent and whether or not to store it. Awareness of farmers on different components of market information and its utility was very poor (11 to 37 %) as compared to that of traders (75%). Out of the expectations of farmers on grades, quality, prices in potential markets, price projections; only real time arrivals and prices were documented and disseminated with traditional approach. Hence there is a need to create awareness among the farmers through the agricultural extension agencies like the State Department of Agriculture, Krishi Vigyan Kendras so that the marketing information on agriculture commodities are incorporated in the extension services along with production aspects to the farmers.

Tamil Selvan, M. Praneetha, S. (2014) “Fig: A High Value Fruit Crop for the Sub Tropics”, fig fruit is very delicious and it contains good amount of protein, calcium, iron and vitamins. Though fig is grown all over India for thousands of years, the area under its cultivation is very low and confined to few places of Maharashtra, Karnataka and Himachal Pradesh. Its cultivation can be to other areas provided farmers are made aware of its agronomic practices and economic value.

2.3 RESEARCH GAP

The review of related literature regarding the study on marketing of agricultural seed and quality management were analysed from different sources. From the related review of literature, it is found that the studies have attempted to examine the marketing of agricultural seed, role of external trading agencies, socio economic conditions of traders climate change also affect agriculture production and the value added products categories. But no attempts have been made to study on the marketing of agricultural seeds towards quality management. Thus, the researcher has identified the aforementioned gap as research gap, after careful review of all the related literature studies. Apart from this it provides more information on the constraints faced by the farmers. Hence the researcher has chosen this topic, a study on the marketing of agricultural seeds with special reference to quality management in Nagapattinam district of Tamilnadu.

2.4 SUMMARY

Thus the researcher has explored the various studies (both Indian and Foreign reviews) on marketing of agricultural seed and quality management in Tamil Nadu and India. From the review of various literatures, the marketing of agricultural seed, quality management, seed cultivation and problems faced by the farmers, the various studies of the agriculture, vegetables and fruits are highlighted in the present study.