CHAPTER II
REVIEW OF LITERATURE
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In this section, a review of relevant research articles is presented under the following headings:

2.1 Market structure for fertilizer distribution
2.2 Farmers’ preferences for different fertilizers
2.3 Product promotion measures adopted by firms
2.4 Problems encountered by fertilizer distributors and farmers
2.5 Marketing cost and marketing margin

2.1 Market Structure for Fertilizer Distribution

The adoption of intensive agriculture practices ultimately led to the increased consumption of agricultural inputs in general and fertilizers in particular. This increased demand for supply of agricultural inputs on one hand and the increased production of those agricultural inputs on other hand have necessitated for formulation and adoption of strategies to strengthen the market structure for agricultural inputs. Many studies have been undertaken in this field and literature of such studies has been reviewed here.

Holmes (1970) studied the market structure in a North Indian Tahasil. The number, size and spatial location of marketing agents, condition of entry into the market and availability of information on prices to farmers were the factors considered in the market structure. It appeared that the food grain marketing system had a good basic strength. The analysis of structure indicated the existence of a substantially competitive environment.

Asthurkar et al. (1973) studied the distribution of fertilizers in Maharashtra and found that delay in supplies of fertilizers to cultivators
was due to lack of adequate sale points, transportation difficulties and
time consuming procedures of co-operative and Government agencies.

Galgalikar and Bhole (1973) observed that in Akola district the
rates of fertilizer application for High Yielding Varieties (HYV’s) of
Jowar, Bajra, Wheat and Cotton were hardly to the extent of 20 per cent
of the recommended doses. This was due to the decline in the number of
distribution centres managed by the co-operatives in 1970-71. The co-
operatives were getting Government stocks on consignment basis as they
were entrusted with the responsibility of distribution of fertilizers
independently. Lack of finance and management problems were coming
in the way of co-operatives coping with some of the centers previously
run by them.

Sankhyan et al. (1973) found that in the case of all fertilizers
except two, the price spreads in the case of private dealers were larger
than those in the case of co-operatives. Thus, the distribution costs were
higher in the case of private dealers as compared to the co-operatives.
This was primarily due to the shortage of fertilizers which enabled the
private dealers to charge higher than the controlled prices and retain
bigger margins.

Sinha and Verma (1973) attempted to study the input supply
conditions and marketing mechanisms in Saharsa district of Bihar. The
study revealed that the three major nutrients viz., Nitrogen, Phosphorus
and Potash were distributed at Saharsa through public and private sectors,
which was recently monopolized by co-operatives. There was no standard
performance by co-operatives and were not able to meet the demand at the
required time. Those selling on credit involved complicated procedures.
Hence, they suggested checking unhealthy competition from private
traders. The Federation of co-operatives should join the private sector in
management of indigenous procedures. There was a need for opening of
agricultural input shops in the rural areas at close distances.
Rajagopalan et al. (1973) examined the efficiency of retailing fertilizers in Coimbatore district. The study revealed that the marketing system was not efficient as increased satisfaction could be derived at increasing cost due to non-availability of desired types of fertilizers in time. The farmers preference was not technically sound and hence he was not optimizing. Hence, they suggested more intensive extension education strategies to be devised for educated farmers. The timeliness of supply influenced cost. Optimization over time and space had become increasingly crucial for distribution.

Bhide et al. (1981) studied the structural changes in the arecanut market of Mangalore, using data on the size distribution of firms and coefficients of inequality (Gini coefficients) for the period from 1965-66 to 1972-73. Further, they projected the distribution of firms in different size categories by using Markov Chain Analysis. The impact of these changes on the price structure was evaluated by using regression analysis. The analysis suggested an increasing degree of competitiveness in the market structure, characterized by a more equal distribution of shares in the market transactions.

Idachaba (1984) studied the role of private sector in farm input distribution in Nepal. He analyzed the constraints facing farm input distribution and found inefficiencies in fertilizer distribution. Hence, he suggested that the private sector should form the centerpiece of a National farm input distribution strategy, that the existing Governmental parastatals should be gradually phased out and replaced with private sector and all barriers to market entry be removed.

Quasem (1986) in his study examined the availability of two major inputs, fertilizers and pesticides in Bangladesh. It was found that wholesalers operated only in less than half of the markets surveyed. Retailers, however, were present in almost all markets. Pesticide dealers operated only in 40 per cent of the markets surveyed. The supply of
pesticides was inadequate and the prices of some of the pesticides were higher than the company’s declared maximum retail rates.

*Yaledhalli (1991)* had studied the agency-wise marketing of fertilizers in Karnataka and found that the agencies operating in the state are KAIC, MARKFED and private. The private agency had the lion shares in marketing of fertilizers. He found that the distribution of retail outlets in the districts was also dominated by private agencies.

*Bhattacharya and Paliwal (1998)* carried out study on bio-fertilizer marketing. They studied the current market structure for bio-fertilizers. According to them out of various channels of biofertilizer marketing and distribution the state government holds the key because many private organizations do not get appropriate returns from sales. They proposed the marketing efforts as manufacturer to state marketing federation to district level co-operatives to primary co-operative societies and then to farmers. They also proposed the chain of marketing efforts involving state industries corporation, district agro service, wholesaler, private retail dealers, volunteer organizations and own depot outlet.

The literature reviewed so far revealed that difficulties in transportation and time consuming procedures of co-operatives and government agencies had hindered the marketing activities. The researchers also apprehended that co-operatives are facing lack of finance and management problems. In general, it can be stated that market structure had failed to keep pace with the increasing demand.
2.2 Farmers' Preferences for Different Fertilizers

On account of green revolution the consumption of fertilizers increased. The nutritional requirement of each crop varies; to supplement this it is very much necessary to produce different fertilizers. The farmers’ preference for fertilizers depends on different factors. In case of fertilizers price is controlled by the government, so it is very much necessary for the firms to compete with each other by adopting different product promotion measures.

Though there were many studies carried out on consumer preference, hardly there exists any study that specifically deals with fertilizers. Therefore, the literature reviewed under this heading is very limited.

*Kaurshal et al. (1976)* found that educational level significantly influenced the brand loyalties in use of washing soaps. Educated people based their loyalty on easy lather formation, convenience in handling and soaps not affecting skin, while less educated people on the basis of price, attractive packaging and easy availability in the market. Sellers can adopt suitable marketing strategies dividing high quality products among educated and cheap products among illiterate class.

*Godbole (1978)* studying consumer preference for durable and non-durable consumer products found that intellectual and middle to high income class of Indian society was more quality conscious in brand preference for consumer durables while for consumer non durables this class of Indian society were price conscious and preferred products of nationally known and advertised brands than the local ones.

*Patel (1980)* studied the preference for milk in Madras city with a sample size of 300 respondents during the period. Nearly, 77 per cent of the respondents preferred standardized milk with 4.5 per cent fat content. The remaining preferred to have more fat content. On an average, 61 per
cent of the respondents preferred milk in 500 ml sachets followed by 19 per cent for 200 ml sachets and the remaining liked 100 ml sachets.

Mathew and Sudalaimuthu (1981) found that ‘Kutir’ brand name of khadi village Industries Corporation was less familiar with rural consumers, especially with women and low income groups. This could be attributed to the lack of adequate and effective promotional efforts. They found the brand name was not appealing, without any meaning and hard to pronounce and remember. They indicated that if a brand name were to be popular, it was to be catchy, easy to pronounce and commonly acceptable to all.

Naik (1984) conducted a survey in Belgaum city with a view to determine the consumer behaviour in the purchase of textiles which projected the trend in manufacturing of textiles. The consumer behaviour, thus set a path for the manufacturer to undertake a proper product mix and evolve a sound marketing strategy.

Venkateshwaralu et al. (1984) attempted to examine the reason for being brand loyal. It has been found that 50 per cent of the consumer respondents preferred a particular brand, because they were convinced that its quality is better than that of other brands. Another 38 per cent of the sample consumers felt that taste makes them to go in for a particular brand while very few consumers in the sample have stated low price and easy availability were the main reasons for selecting a brand. The implications are clear that consumers are fairly brand conscious and hence effective brand strategy has its role in effective marketing.

Haripuram (1996) studied the factors influencing the purchase of biscuits for a sample of 470 respondents. The study revealed that taste was given the highest preference followed by freshness, crisp bite, brand name, variety, price and availability. It was found that consumers preferred packed biscuits to loose ones and small pack size to big packs. Further, the decision makers and buyers of biscuits were observed to be
elders even though the children considerably influenced the decision making process.

Gupta and Singh (1989) studied the reasons for a particular brand preference for television. The analysis has shown that durability and brand image were the major reasons for preferring a particular brand. These were followed by family liking, after sale service, price and better guarantee / warranty. The other important reasons for brand preference related to advertisement and size of the screen.

Ali (1992) studied the factors influencing purchase decision for processed products. It revealed that factors such as taste, family preference, price, good keeping quality, well known brand, color and consistency were important in the buying decision of the consumers in that order.

Mohanram et al. (1996) studied the preference for organic vegetables. It was suggested that high middle income group of families should be targeted for organic produce, where vegetables consumption per day is more than 50 gm per family. Among prominent vegetables consumed, Bhendi and Brinjal were rated as being first and second in preference. Nearly, 71per cent of the consumers perceived that vegetables grown without using chemical fertilizers and pesticides being tastier and good for health. As more than 50 per cent of the respondents were observed to be aware of actual availability of organic produce, the initial thrust of marketing should be on distribution.

Ashalatha (1998) studied the factors influencing the performance of BAMUL milk for a sample of 100 respondents. The study revealed that the factors such as door deliver, clean packing quality, hygienic preparation, time saving, and reliability, good value for money, freshness and desired flavor were important in the similar order in influencing the decision of buyers for BAMUL milk.
The literature reviewed so far revealed that, well known brand, advertisement are the factors which influence the consumer buying behavior. The increase in the price of Potassic and Phosphatic fertilizers leads to buying of nitrogenous fertilizers by the farmers.

2.3 Product promotion measures adopted by firms

Promotion measure is the tool applied for getting good results in sales operation. Promotional measures have a direct impact on the sales. The prices of fertilizers are controlled by the government, so product promotion measures adopted plays an important role in the sales. Therefore under this heading an effort has been made to review the literature available in the related field.

Gangappa (1975) stated that there was significant association between application of fertilizers in cultivation of Jowar by small farmers and mass media participation, i.e., with reference to listening habits of radio, reading habits of newspaper and other extension literature. The results also revealed that most of the farmers got the information on fertilizers from extension workers of the agricultural department.

Kantharaj (1980) indicated that there was no association between adoption level including fertilizer practices and mass media participation of sunflower growers. Most of the studies cited above have indicated a significant association between mass media participation and adoption of fertilizers by farmers. But few studies have not shown any association between mass media participation and adoption level of fertilizer.

Renu (1986) while studying the sales promotion techniques defined promotional techniques as demand stimulating activities. The major tools of promotion are advertising, personal selling, publicity and sales promotion. She stated to use this tool in blend so as to form an optimum promotional mix. Advertisement is any paid form of non-personal selling, presentation of ideas, goods or services by an identified sponsor. Personal selling is oral presentation in conversation with one or more
prospective purchases for the purpose of making sales. Publicity is non-
personal stimulation of demand for a product, service or business, it can
be from radio, television or stage that is not paid for by the sponsor.
Sales promotion is a short term incentive to encourage purchase, it is
available at point of purchase.

Dave (1988) acknowledges advertising and promotion to boost
consumption of dairy products, which helps both the farmers and the
consumers. He suggested increase in the funds for promotion of sales,
only if the evidence of increase in sale due to these measures are
obtained.

Mukunda (1988) assessed the marketing challenges and constraints
of milk and its products by 21st century. He estimated there would be 200
milk sheds lying in 275 districts with 80,000 District Co-operative
Societies and procuring 2 crores liters of milk per day by 2000 AD. He
reported that potential market for liquid milk is children under 14 years
and the population is going to be reduced from 39.7 per cent to 31.1 per
cent by 2000 A.D. He felt that need to have strategies to expand milk
market. Milk and its product marketing in rural areas shall be given more
attention, because there would be 390 million people below poverty line,
and need low volume /low priced milk products which should analyze the
changes in consumption of traditional foods.

Veerendrakumar (1993) in his study revealed that for rapid
awareness mass communication extension strategy is also adopted by most
of the organization engaged in Agricultural Extension activities. The
credibility studies of various means of communication have however,
indicated that demonstrations and farmers meeting rank at the top.
Nevertheless a media mix approach is gradually adopted to accelerate the
pace of transfer of technology with the large spectrum of target audience.
Biradar (1995) conducted a study on marketing strategies for fertilizers. In his study on promotional aspects to be adopted for fertilizer distribution, he stressed the need of market segmentation on fertilizer wise, crop-wise, soil-wise etc. He added that the dealers and marketing staff should be trained in promoting sales of fertilizers. Other measures he described were the farmers training programmes, developing the audio visual programmes package of practices to farmers, more retail outlets, intensive farmer oriented market development programmes, projecting favorable image of farm organization by maintaining high standards in dealings with farmers and general public etc.

Bhattacharrya and Paliwal (1998) conducted a study on promotional measures adopted for bio-fertilizer marketing. They stressed the need on availability of credit to farmers, technical knowledge to farmers, and availability of bio-fertilizers at district and taluk levels and also to make the people aware of importance of bio-fertilizer for soil and crop growth. The promotional measures such as radio, T.V. spots, press adds hoardings, wall paints, road side boards, cinema slides, film show, puppet show, cycle rally, street drama etc.

Shakeel (1997) evaluated the sales promotion measure followed by Gulbarga. Milk Producers Union Limited. He concluded that the union is needed to change its pattern and type of sales promotion measures to the present context so as to compete with private dairies in the field.

The literature reviewed so far revealed that there was significant association between adoption of fertilizer for particular crop and mass media participation. The researchers have also felt that the dealers and marketing staff should be trained in promoting sales of fertilizers, credit be made available to farmers and technical knowledge to farmers.
2.4 Problems Encountered by Fertilizer Distributors and Farmers

Problems are inherent characteristics of any activity. In marketing of fertilizers the distributors have to come across many problems. The farmers also have to face many problems in obtaining the fertilizers. Therefore, here under this heading an effort has been made to review and present the literature available in related fields.

Rajagopalan et al. (1973) showed that prices of fertilizers that prevailed were higher than controlled prices despite supplies of these nutrients being greater than demand. This was due to the non-availability of adequate quantities of fertilizers preferred by the cultivators. The findings revealed that cultivators traveled longer distances to procure fertilizers of the preference.

Zechernitz (1979) while discussing the problems discouraging fertilizers use in developing countries, identified several problems such as inadequate information on the kinds and amounts of fertilizer; inadequate research and extension services to provide farmers with information on the efficient use of fertilizers; lack of suitable crop varieties and irrigation services; unfavorable relationship between crop prices and cost of fertilizers, inadequate supply of required fertilizer; inadequate marketing system for agricultural produce; inadequate fertilizers and other input credit; land tenure of farm lease arrangement which discouraged the economic use of fertilizer.

Bidari (1982) found that high fertilizer prices, inadequate supply of fertilizers and lack of desired type of fertilizer were the most important perceived problems of the farmers in the use of fertilizers.

Shah and Kute (1987) studied the constraints in infrastructure in promoting fertilizers in rainfed areas and observed that the major ones were transportation and warehousing. The rural areas were inadequately equipped thereby affecting the timely movement and the availability of fertilizers, product and packing was another area where the smaller
quantity packing was desired by the farmers. The other constraints were fertilizers costs, the weak distribution channel and less number of retail outlets. They suggested planned development of the same to ensure efficient distribution.

Shah (1989) in his study examined (1) the present status of fertilizers consumptions by crops (2) the economics of fertilizer use on unirrigated and irrigated crops and (3) identifies on farm and off farm constraints to fertilizers consumption. Data were collected from 600 sample holding in 17 districts of Gujarat State, India. The selected holdings belonged to five standard size classes < 1 ha, 1-2 ha, 2-4 ha, 4-6 ha and > 6 ha. The principal crops studied were pearl millet, groundnut, cotton, pigeon pea and onion. The farmers were found to be aware of the benefits of fertilizer use. The proportion of area fertilized was neutral with respect to size group. 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 farmers’ belief that the use of fertilizers is risky in rainfed situations.

Yaledhalli (1991) studied the problems faced by Agencies involved in the marketing of Agricultural inputs. In case of private agencies which sold only fertilizers, lack of transportation facilities and high competition among the sellers were the problems faced by them. In case of co-operatives problems such as lack of storage facility, inadequate retail outlets and lack of transportation facility were opined by majority of the respondents and same problems were opined by the respondents of KAIC.

The literature reviewed so far revealed that the farmers have to play higher charges to the private dealers as their supplies were available in time. The researchers revealed that the actual prices of fertilizer are
higher than the controlled prices due to non-availability of adequate quantities of fertilizers preferred by the cultivators.

2.5 Marketing Cost and Marketing Margin

Marketing cost includes all the costs that are involved in transferring the goods from production point to consumption point including that of storage, transportation and processing. The marketing costs vary from commodity to commodity and time to time depending upon factors likes perishability of the produce, time of consumption etc. Marketing cost are the derivatives of the value addition made by each marketing intermediary in the commodity value chain and the expected returns of each intermediary from the value addition on the produce.

Nagaraj et al. (1985) in their study on market appraisal for some selected fruits and vegetables in Bangalore city identified the marketing channel viz., producers-commission agents – retailers- hawker- consumers, as the single most important channel for vegetables since its share in total marketed surplus was more than 90 per cent. In spite of the higher cost of marketing incurred in brinjal (7.33%), the share of the producer in the consumer’s rupee was found to be higher (58.47%) as compared to that in tomato (45.05%).

Kiresur (1987) in his study on marketing of vegetables in Dharwad and Hubli markets found the existence of two channels namely, Channel-I: Producer – Commission agent – Wholesaler – Retailer – Consumer. Channel –II: Producer – Village Merchant – Commission agent cum Wholesaler – Retailer – Consumer. Of the two main channels identified, channel –I was found to be more efficient in terms of the net price received by the producer –seller and the price spread. Channel –I was also found to be more popular than channel –II in terms of number of farmers and quantity sold.
Subramanyam (1988) identified three channels for marketing of vegetables in Karnataka namely, Producer – Commission agent at the market (channel –I), Producer- Pre harvest contractor (channel- II) and Producer- Retailer (channel –III). The Commission charges paid was found to be the major cost contributing to 44 to 60 per cent of the total marketing cost incurred in all the vegetables namely Cauliflower (Rs.23.75/qtl), French beans (Rs.21.46/qtl), Carrot (Rs.20.36/qtl), Brinjal (Rs.19.79/qtl), and Bhendi (Rs.18.16/qtl). This was followed by cost on transportation, loading and unloading, packing and marketing fee.

Patel et al. (1997) in their study on marketing efficiency of vegetables in Anand market, Gujarat found the concentration of market power with ten big firms in the case of both cabbage (28%) and potato (20%). About 28 per cent of the marketing firms performed two or three marketing functions indicating their vertical integration. However 12 firms were having horizontal integration. They concluded that even though market was regulated since long, some malpractices were still prevailing.

Chauhan et al. (1998) reported that for marketing of vegetables in Azamgarh district of Uttar Pradesh, three channels were patronized by the vegetable growers for the disposal of their vegetables. The channel involving commission agent and retailer was found to be most important and adopted by majority of the farmers. However, the producers share in consumers rupee was maximum (90% to 94 %) in direct sale of vegetables to consumer, whereas, it ranged between 85 and 88 per cent when sold through commission agent. Further, in the most predominant channel, which included producer, commission agent, retailer, and consumer, the net price received by the producer (60.63%) was found to be lowest. Thus, there is need for the most popular channel to be efficient, cost effective and producer friendly by regulating the substantial trade margins taken by the traders.
Singh and Singh (1999) in their study on production and marketing of vegetable crops in Varanasi district of Uttar Pradesh identified the following three important channels.

Channel – I: Producer - Consumer
Channel – II: Producer – Retailer – Consumer

The share of the producers in consumers’ rupee was found to be higher in channel – I (89% to 96%) as compared to channel II (68.50% to 83.60 %) and III (62.70% to 73.15%). However, Channel- II was found to be popular among the farmers than the other two channels in terms of higher quantity disposed.

Saxena et al. (1999) while evaluating the physical distribution efficiency of vegetables in the hills of Uttar Pradesh found that marketing cost increased with the introduction of wholesaler cum commission agents in the marketing channel. The study also revealed that share of the producer increased with the high priced vegetables. The perishability of the produce had direct relationship with the cost of marketing and inverse relationship with share of the producers in consumer’s rupee.

Patel et al. (1999) reported that about 99.50 per cent of cabbage and cauliflower in the markets of Banaskantha district (North Gujarat) were sold from producers to consumers through Wholesalers–cum–Commission Agents and Retailers. There was a marginal difference in the total marketing costs incurred between cabbage (Rs.113.67/qtl) and cauliflower (Rs.116.98/qtl), of which, commission charges formed major (38.20%) component. producers share in consumer’s rupee was fond to be relatively higher in cabbage (55.24%) as compared to cauliflower (50.80%). As such, marketing efficiency was also higher in cabbage (1.23) over cauliflower (1.03)
Durga (1999) identified two important channels namely

(i) Channel-I: Producer-Whole seller – Retailer – Consumer

(ii) Channel-II: Producer-Consumer, in the marketing of vegetables in Visakhapatnam. The producer’s share in consumer’s rupee was found to be 100 per cent in all the vegetables when sold through channel –II in Ryta Bazar as against 70.89, 69.72, 65.89, and 48.74 per cents in potato, onion, tomato, and brinjal, respectively in channel- I.

Atibhudhi (1999) reported that per acre marketing cost incurred by marginal farmers was Rs 4332, Rs 4165, Rs 5228, and Rs 5280 in tomato, brinjal, cauliflower, and cabbage, respectively as against Rs 3782, Rs 4845, Rs 4998 and Rs 5536 in the case of small farmers in Cuttack district of Orissa. Of the total marketing cost incurred by both marginal and small farmers, commission charges accounted a major portion of (42% to 55%) followed by cost on transportation including loading and unloading (39% to 51%), packing cost (4% to 10%) and marketing fee (0.50%) in different vegetables.

Agarwal (1999) observed that producers share in consumers rupee in channel –I (producer–commission agent–cum–wholesaler–consumer) was more than that of the channel II (producer–commission agent–wholesaler–consumer) in different vegetables. It was 79.96 per cent in channel –I as against 47.61 per cent in channel –II in tomato. Similarly, farmers obtained 54.62 per cent of consumer’s price in channel –I as against 52.09 per cent in channel –II in cauliflower. Similar trend was noticed in the case of cabbage.

Chauhan et al. (1999) identified three channels in vegetable marketing in Uttar Pradesh namely (1) Producer-Commission agent-Retailer – Consumer (Channel – I), (2) Producer-Commission agent/ Retailer – Consumer (Channel – II), Producer-Consumer (Channel – III). The producers share in consumers rupee was found to be higher in channel
III (91-94 %) as compared to channel – II (85-88 %) and channel – I (60-63 %) in all the vegetables. This indicated that price received by the producer declined with the increase in number of intermediaries in the channels. However, the channel with more intermediaries found to be most important and popular as major portion of the produce was marketed through this channel. Thus, it was concluded that in order to improve the vegetable marketing, the farmers need to be encouraged to form producers marketing cooperatives which would not only reduce the marketing cost but also increase the producers share in consumer’s rupee and avoid inconvenience faced by the vegetable growers in bringing their produce to the markets.

Nagaraj and Chengappa (2005) investigated that farmers selling through SAFAL realized 10 to 15 per cent higher profit with service charge of about 4.5 per cent of gross returns as against traditional channel where the commission charges are about 8 to 10 per cent.

Kennedy et al. (1990) investigated production constraints in growing the three crops namely Black gram, Red gram and Bengal gram in Guntur district of Andhra Pradesh. Garrett’s ranking technique was used to test the severity of production constraints. The constraint ranked as of highest importance by farmer was lack of technical knowledge regarding pulses cultivation.

Kumar et al. (1999) identified the constraints in the Gherkin production in Dindigal. The problems in gherkins production as perceived by the farmers were ranked based on the scores using Garrett’s ranking technique. The results revealed that the availability of trained labour, marketing facilities, pest and diseases were the major constraints, followed by capital and soil fertility.

Nagaraj et al. (1999) identified the most important constraints in production and marketing of potato in Kolar district of Karnataka by assigning the ranks. In production, high cost of seed material and disease
(rank-I) where the major constraint followed by the frequent power failure (rank-II), high cost of fertilizers and plant protection of chemicals (rank-III), scarcity and high cost of Labourers (rank-IV) and non availability of good seed material on time (rank-V), low output prices (rank-VI) and high market charges (rank-VII) were the main constraints in the marketing. Under the circumstances, it was suggested to encourage the farmers to take up tuber treatment for sufficient time to avoid cost of labour especially during scarcity period and adoption of scientific production technologies and marketing strategies to get maximum returns.

Singh (2000b) studied the role of contract farming in agricultural diversification and development in terms of its practice and implications for the producers and the local economy in Punjab, India. The study was based on an interview survey of contract farmers, and the contracting companies (Hindustan Lever Limited, Pepsi, and Nijjer) in 3 different crops (tomatoes, potatoes, and chillies). The main benefits of contract farming as perceived by the contract farmers were better and reliable income, new and better farming skills, better soil management and outlet for bulk sales. The study also identified the faults of the contracting system both at company and farmers level. About two-thirds of the HLL growers and more than 50 per cent of the Nijjer growers did not faced any major problems in contracting. The other reported problems were poor coordination of activities, poor technical assistance, delayed payments, outright cheatings in dealings and manipulation of norms by the firm. Some of the Pepsi potato farmers had a few problems with the company system. But the large numbers of them (60 %) were happy. The study also highlighted the implications of contract farming on cropping pattern, land lease market sustainability, farm income and employment. Despite, various problems and conflicts between company and growers, 62 per cent of HLL, 80 per cent of Nijjer and 68 and 73 per cent of Pepsi (Potato and chilli respectively) farmers wanted to continue contract respectively.
Vishal Rawal (2003) reported that the contract farming provided the latest technology, farm inputs and extension services, which benefited the contract farmers. However contract farmer faced problems such as poor technical assistance, delayed payments and manipulation of the conditions of the contract by the company.

The review of literature in case of marketing cost and marketing channels showed that in case of almost all commodities commission agents were the first point of sale by the farmers and the price spread increased as the length of marketing channel increased. The producers of commodities got around 40% of the total value of the produce paid by the ultimate consumers and the remaining was distributed among the market intermediaries.