CHAPTER-II
REVIEW OF LITERATURE:

Introduction:

This chapter is devoted to examine the research work done in the past on different aspects of the study. Review of literature provides information to the researcher regarding the previous works done in the area of research and thereby helps in identifying the theoretical framework and methodological issues relevant to the study. It provides the researcher a proper direction to carry out the research work and enables her/him to arrive at meaningful results. Keeping these facts in view, the available literature relevant to the objectives of the present study was reviewed. In India and abroad a number of studies are conducted on the marketing and production of fruits. The research work done in the past on the different aspect of the problem under study is being examined in this chapter. The theme of the chapter is to study the past reviews that have direct or indirect relation with the production, marketed surplus of fruits, market arrivals and prices, various market channels, costs, constraints in the production and marketing of fruits. The studies have been classified into two sections.

The literature on production aspects is reviewed in Section-I where as marketing aspects are reviewed in Section-II.

Section-I

Production Behaviour

Yield Versus Area

(2011), Gupta, Shallu (2012), etc., have examined the growth performance of fruit crops. These studies are as follows;

Gill et al. (1990), in their study, analyzed the marketing of grapes in Bathinda district having 52.20 per cent of area under grapes. The farmer in Bathinda district allocated 62.72 per cent of the total area to the grapes of their respective orchards during the period 1988-89. Average yield of grapes was 52.62 quintals per acre. Small, medium and large categories of farmers were having 96.58, 97.48 and 98.40 per cent marketable surplus respectively. Only 21.05 per cent of the farmers leased out their orchards to pre-harvest contractors.

Saraswat, S.P. (1996), in his article, “Economics of Marketing of Orange in Himachal Pradesh” identified that the area and production of citrus has increased manifold during last two decades particularly of orange and galgal. But this increase in area and production has also brought many problems with regard to marketing of fruits. Profit from citrus cultivation depends upon many factors i.e productivity, time of picking, care taken in grading and packing, time taken in transportation, type of storage etc. The study concludes that marketing costs are generally high which offer some scope for improvement. Most of the benefits are reaped by the middlemen. As most of the fruit producers have small holdings and as such they cannot afford to adopt more efficient methods of grading, packing and transportation. They are also not in position to bargain much with market functionaries. Therefore, the study suggested that an attempt should be made to strengthen the marketing system by organizing cooperative societies particularly for small growers. This will help in minimizing the margins of the intermediaries and will ultimately insure better producer’s share in consumer’s rupee.

Atteri and Chand (1997), have attempted to examine the spatial and temporal horticultural development in India. The results revealed that the growth rates of area and production were positive and higher for the aggregate fruits in comparison to aggregate vegetables, but the yield growth rates of fruits were negative while for vegetables these were positive during 1991 to 1995. However, due to lack of infrastructural facilities, almost one-third of total fruits and vegetable crops production worth Rs. 5000 crore was found to be lost annually. This can be saved through processing and preserving these crops well in time.
Gadre and Bhole (1997), have tried to assess the present status and district-wise performance of minor fruits in Vidarbha region of Maharashtra state for the period 1995-96. The results showed that the area under minor fruit crops in the region was 7095 hectare constituting 0.12 per cent of the gross cropped area of the region. The ber, custard, apple and pomegranate covered about 90 per cent of the area under the minor fruits. The district-wise analysis also depicted that many non-conventional fruit crops were neglected among the minor fruit crops. The location specific analysis indicated better prospects for these non-conventional crops if systematic planning is made through employment guarantee scheme linked horticultural programmes.

Saraswat, S.P. (1997), in his article, ‘Organisation of Production and Marketing of Apple in Himachal Pradesh-A Case Study of Kiari Village’ has examined the process of production and marketing of apples in Kiari village from Shimla District in H.P. In Himachal Pradesh, the Shimla District is the main producing area and contributes about 71 percent of total state production. The study revealed that about 80 to 90 percent of total production of the state is exported out of the state.

Dahiya et al. (2001), in their study, have examined the growth rates of area, production and yield of fruit crops in Haryana for the period 1990-91 to 1997-98. The results indicated that the area and production of guava and ber showed statistically significant increasing trend. In the case of mango, citrus and grapes, the area showed the significant increasing trend but production was found to be statistically non-significant. In the case of yield, all crops showed non-significant declining trend. The annual growth rate for fruit crops under the state registered a positive growth.

Sidhu, M.S. (2004), in his article, ‘Area, Production, Arrival and Prices of Pear, Peach and Plum in Punjab’ examined that the area and production under all the fruits were 29 thousand hectares and 4.31 metric tonnes in the year 1981-82. Both, area and production becomes 93 thousand hectares and 8.41 metric tonne in the year 1998-99. But in the year 2000-01 production of all fruit crops declined, it becomes 4.42 metric tonnes on the other hand area increased, i.e., 97 thousand hectares.

Verma and Singh (2004), in their study, have analyzed the trends in area, production and productivity of banana in India during the period 1991-92 to 2000-01. The study highlighted that area of banana had
increased to 25.76 per cent during the period under reference, while production had registered an increase of 107.54 per cent. This increase in production had been facilitated by improvement in productivity from 20.3 to 33.5 tonnes. However, the percentage decrease in area as percentage of total fruit cultivated area had been observed, while production in terms of percentage of total fruit production had maintained 31 per cent increase.

Shaheen and Shiyani (2004), in their article titled, “Growth and Instability in Area, Production and Yield of Fruit Crops in Jammu & Kashmir-A Disaggregate Analysis” concluded that the temporal change in area under different crops revealed a significant increase in area under apple, cherry and walnut over the time in J & K. Moderate to high significant growth was observed in area, production and yield of all the fruit crops for the period 1974-02 at the state level. The results of instability index indicated moderate to high instability in production and yield for all the fruits, except apple, which showed low instability for all the three parameters (area, production and yield) throughout the period. Higher instability in production in the case of perennial fruit crops was generally the consequent of instability in the productivity of the crop. The authors suggested to conduct an in-depth study in order to identify the factors responsible for higher instability in production and yield of crops like pear, apricot, peach, plum and cherry.

Deka and Sarmah (2004), in their article titled, “Growth Trends in Area, Production and Productivity of Banana in Assam” have attempted to estimate trends in area, production and productivity of banana in the state of Assam for the period 1980-81 to 1999-2000. The fitted trend revealed that area and production of banana in the period under reference had shown an upward trend in the initial year, but decreased area and production had been prominent in the later parts of the period. Moreover, the authors also observed that the production growth of banana had been mostly influenced by the growth of area rather than productivity.

Panwar Sanjeev et al. (2004), in their article, ‘An Analysis of Trends in Area, Production and Productivity of Fruits in Himachal Pradesh’ have studied the trends in area, production and productivity of fruits in Himachal Pradesh. Himachal Pradesh is one of the top fruits and vegetables producing states of India with important fruits like apple, mango, guava, citrus, plums, peach, apricot, and pomegranate. The time series data on the annual
production of fruits in Himachal Pradesh and India from 1985-2000 were collected from various sources. Growth rates have been computed as simple growth rates and compound growth rates. Production of fruit crops showed a negative growth rate, which was mainly contributed by the apple crop whose growth rate in production declined by 16.24 percent per annum. Growth rates of the productivity of major fruit crops was either negative or minimal, while that of other crops were positive and significant at 5.05 percent per annum.

Singh (2004), in his study, has found the district-wise compound growth rates of area, production and yield of kinnow in Punjab for the period 1986-87 to 2001-02. The results showed that except for Ferozepur and Hoshiarpur districts, the growth rates of area had been negative. In Ferozpur district, it was 3.37 per cent and for Hoshiarpur district, it was 0.31 per cent. The production growth rates were highest in Ferozepur district, i.e., 7.90 per cent followed by Hoshiarpur (4.70 per cent), Ropar (3.06 per cent) and Bathinda districts (1.05 per cent). For all other districts, the production growth rate had been positive. The yield growth rate was around 4.40 per cent for all the districts. The study concluded that for the state, as a whole, the production growth rate was 3.28 per cent, whereas the growth rate of area was -1.05 per cent. The contribution of productivity was 4.38 per cent. Hence, the share of yield was more for the increase in kinnow production as compared to the role of area.

Deka and Sarmah (2005), estimated the trends in area, production and productivity of pineapple in the state of Assam for the period 1980-81 to 1999-2000. The study indicated that the area under pineapple in the state had continuously increased during the period under study. But the productivity had showed negative growth. However, the negative effect of productivity was neutralized by higher positive effect of growth in area. The study showed that the growth of production of pineapple is influenced by the growth of area rather than productivity. The study reflects the need to increase the contribution of productivity for increasing the production of pineapple in Assam in near future.

Rane and Bagade (2006), have found that the total area under banana crop in the Sindhugarh district of Maharashtra was about 500 hectares during the year 2003-04 and was increasing year after year. Two tehsils, namely, Dodamarg and Sawantwadi were selected purposely for
this study where banana is grown as a sole crop. The study revealed that the average area per farm under banana crop was 0.82 hectare. The study concluded that the banana cultivation in Sindhugarh district is profitable; therefore area under this crop can be increased wherever irrigation facilities are available.

Khandikar et al. (2009), in their study, examined the performance of banana in Maharashtra. The time series data on area, production and productivity of banana pertaining to years 1995-96 to 2006-07 were collected from various secondary sources. The study provided that in the case of area and production, the regression coefficients for North Maharashtra and Maharashtra had been positive, showing increasing trends in area and production of banana, whereas in the case of productivity, the growth analysis indicated positive growth in overall productivity of banana in North Maharashtra, Maharashtra and India.

Maheshwari Sumit (2009), in her study, indicated that in the case of Punjab state, the C.G.R. of area under fruits had registered a fall at a rate of 2.73 per cent per annum but its production had registered a positive growth of 0.55 per cent per annum, which was mainly due to increase in yield which increased at a rate of 3.83 per cent per annum. In the case of Bathinda district, the increase in production was 1.93 per cent per annum. Due to increase in yield of fruits which registered an increase of 3.15 per cent per annum for the same period, whereas area declined at a rate of 1.16 per cent per annum.

Jeyakumar (2010), in his article titled, “Banana in India-Largest Producer and Exporter in the World” has identified that banana is one of the most important major fruit crops grown in India. The area under banana had increased from 470 (000ha) to 680 (000ha) during the period 2000-05. The production also increased from 14,140 (000 tonnes) to 16820 (000 tonnes) during the same period. India was the largest producer of banana with 21 per cent of world output during the year 2006. Hi-tech cultivation of this crop is observed to be the economically viable enterprise leading to increase in productivity, improvement in produce quality and early crop maturity with the produce commanding premium price.

Pandey Divay et al. (2011), in their study examined that in Uttarakhand, citrus occupies about 14.14 per cent (26410 ha) of total fruit area in the year 2006-07. Kumaon region is one of the major citrus growing
regions of Uttarakhand with 49.90 per cent (13179 ha) of the total citrus area in Uttarakhand in the year 2006-07 and has got the maximum production, which was around 51.37 per cent (64195 metric tonnes) of the total citrus production in the state, in the year 2006-07. Kumaon region comprises of 6 districts and Almora districts marks itself distinctly in production of citrus species, with a production of 59.03 per cent (33022 metric tonnes) of the total citrus production in Kumaon region from an area of 39.34 per cent (4236 ha) of total area under citrus in Kumaon region in the year 2006-07. Sweet orange is the major citrus species of this district comprising of 40 per cent of total citrus species production in the district. So due to its high production in the district, it is necessary to tap the potential which this crop carries so the farmers can earn a high return and in cash their high produce.

Gupta (2012), in her study, has examined the trends in area, production and productivity of fruit crops in Punjab state as well as in Patiala district for the period 1981-82 to 2007-08. The results of the study indicated that in the case of Punjab state, the compound growth rates of area and yield under fruits registered an increase of 0.70 per cent and 3.83 per cent respectively. As a result production has increased at a rate of 4.55 per cent per annum. In the case of Patiala district, the area under fruits has diminished at a rate of 0.28 per cent per annum and yield has increased at a rate of 2.85 per cent per annum. This means that enhancement in yield is solely responsible for production growth performance of fruits both at the state and district level.

All the studies reviewed above have highlighted many important facts concerning the area, production and yield of fruits, but marketing is more important aspect for the present study for increasing fruits production.

Section-II
Marketing Behaviour

Marketing of horticulture crops is as necessary as the farm production. Marketing is, in fact, a part of production itself, the production process is complete only when the product reaches a place in the form and at the time required by the consumers. Marketing adds cost to the product; but, at same time, it adds utilities to the product. Marketing process is complementary to production process. The development of marketing
accelerate the growth of the production. Hence, it is important to judge the market behaviour along with production behaviour of fruits in terms of variables like size and pattern of marketed surplus; its distribution across farm size groups; its temporal flow and relationship with prices; alternative marketing channels; marketing costs and price spreads. Some selected reviews that are relates to these topics are given below.

**Marketed Surplus**

Studies by Gill et al. (1985), Meena et al. (2003), Singh (2004), Kaur and Singh, (2007), Mahesh Maske et al. (2012) reveals that the large categories of farmers have the maximum marketed surplus followed by medium and small farmers. So, far as consumption/retention is concerned it showed opposite trends, the consumption was more in the case of small farmers followed by medium and large famers. The studies presented by Singh et al. (2001), Sekhon et al. (2006), Maheshwari (2009), Anuradha (2010), Gupta (2012), also showed that marketed surplus has a direct relationship with size of the holdings.

Gill et al. (1985), in their study, found that in Punjab, the marketable surplus of the citrus fruits as a percentage of total production of small, medium and large orchards was 95.78, 96.97 and 99.20 per cent respectively, whereas retention as percentage of total production of small, medium and large orchards were 4.22, 3.13 and 0.80 respectively. The study further revealed that marketed surplus increased with increase in farm size holdings.

Singh et al. (2001), in their study, have examined the marketing pattern of three fruit crops (pear, guava and grapes) in Punjab during the year 1997-98. The results showed that the proportion of the total produce marketed was the highest for grapes (98 per cent) followed by pear (95 per cent). However, just 75 per cent of guava crop was available for sale due to perishability and spoilage. In the case of grapes, the spoilage accounted for 2.91 per cent of the total production. Some of the produce was also used as gifts to relatives, etc. In the case of pear, the proportion of spoilage was 4.71 per cent of the total production on all farms, lastly, for guava, the spoilage accounted for about one-fourth of the produce.

Meena et al. (2003), in their study, found that overall quantity of guava marketed by selected farmers in Udaipur district of Rajasthan was 93.65 per cent of the total production. Across farm size groups, small and
medium farmers sold about 93 and 94 per cent, while large farmers sold 94.44 per cent quantity of guava from their total production. Thus, the average quantity of guava sold per seller was 34.45 quintals.

Singh (2004), in his research work, has tried to assess the marketed surplus of kinnow in Punjab as well as for Ferozpur and Hoshiarpur districts for the year 2002–03. The results revealed that at state level, per holding consumption of kinnow was 1.13 per cent of the production and marketed surplus was high to the extent of 98.87 per cent. The large categories of farmers had the maximum marketed surplus (99.46 per cent) followed by medium farmers (98.51 per cent) and small farmers (97.77 per cent) but the total consumption of kinnow was more in the case of small farmers followed by medium and large farmers. The district-wise analysis revealed that the marketed surplus was almost 99 per cent of the production in both the districts. The total consumption of kinnow was comprised of family consumption, gifts to relatives and payment-in kind to labour.

Sekhon et al. (2006), have found the marketed surplus of pear with the selected farmers in Amritsar district for the year 2003-04. The results showed that the overall per holding consumption of pear was 0.53 per cent of the production and marketed surplus was 99.74 per cent, the large categories of farmers had the maximum marketed surplus (99.67 per cent) followed by medium (99.38 per cent) and small farmers (99.25 per cent). So far as consumption is concerned, it showed opposite trends, the consumption was more in the case of small farmers (0.75 per cent) followed by medium (0.62 per cent) and large farmers (0.33 per cent).

Kaur and Singh (2007), have worked out the marketed surplus of kinnow in Sri Ganganagar district of Rajasthan for the year 2002-03. The study observed that on an average small orchardists sold 99.37 per cent of the marketed surplus through pre–harvest contractor and only 0.63 per cent in the local market. The small orchardists did not sell their produce in distant markets. However, medium sized orchardists sold 61.45 per cent of the marketed surplus through pre-harvest contractor, 0.97 per cent in local market and 37.58 per cent in the distant market. The large sized orchardists sold 62.38 per cent of the marketed surplus through pre-harvest contractor, 0.38 per cent local market and 37.24 per cent in the distant markets.

Maheshwari Sumit (2009), in her study, highlighted that the large percentage of the produce of fruits by sampled farmers in Bathinda district
constituted the marketed surplus and a very small part was consumed at home during the year 2007-08. The percentage of the retention and marketed surplus of fruits were 0.64 and 99.36 per cent respectively. The study also found that marketed surplus had a direct correlation with the size of the holdings, i.e., with increase in size of holdings, there was an increase in marketed surplus.

Anuradha (2010), in her study, has found the marketed surplus at the farm level in Amritsar and Patiala districts. The district-wise analysis of marketed surplus of guava during 2008-09 revealed that the marketed surplus was almost 99 per cent of production in both these districts. The total consumption was around 1 per cent of the production. The total consumption of guava comprised of family consumption, gift to relatives and payment in kind to labour. The farm category-wise data related to marketed surplus revealed that except for small farmers of both Amritsar and Patiala districts, the marketed surplus for the medium and large farmers was around 99 per cent. It was about 98 per cent for small farmers for these districts.

Mahesh Maske et al (2012), study showed that the quantity produced at the farms is increasing as the size of holding increased. Out of this quantity, almost all farmers across the categories are retaining about 2.08 per cent quantity for the use of home. The marketable surplus of papaya is observed as 422.67 quintal, 754.12 quintal, 1447.50 quintal per farm which is 99.53 per cent, 99.77 per cent and 99.83 per cent to their total production at small, medium and large farms respectively.

Gupta (2012), in her study, highlighted that the large percentage of the produce of fruit crops by sampled farmers constituted the marketed surplus and a very small part was kept for retention during the year 2008-09. The percentage of the retention and marketed surplus of fruits were 0.88 per cent and 99.12 per cent respectively. The study also found that the share of marketed surplus in the produce has a positive relation with a scale of the production. Further, it has been found that in the case of fruit crops, it was consumption requirement that comprised of 54 per cent of the retained part of the produce.

The important aspect neglected by most of the reviewed studies are the relationship between marketed surplus and production. However, the present study examined this relationship.
**Arrival and Prices: Seasonal Behaviour**

A number of studies have been conducted at the all India level and at the state level regarding seasonal behaviour of fruits. The studies conducted by Singla (1967), Bhikhan (1976), Sidhu, M.S. (2004), Gupta (2012), shows that during the peak period of arrivals farmers received low prices by selling their produce and reverse is true in the case of prices during the lean period of arrivals. But the studies by Palaniappan et al. (2010), Mavi H.K. et al. (2012), revealed that prices did not fall much even when supplies went up. Due to the reason that the prices were also influenced by size of the market, quality and variety of the fruits. The study examined by Nidhi Ashutosh (1992), depicts that no relationship between price and arrival of litchi crop could be developed because it was found to be dependent on production.

Singla (1967), in his study, examined the price behaviour of sweet oranges in Ferozepur district. Mainly two markets, Abidhar and Mukatsar, were selected for the study purpose. The data on arrival and prices were collected for the period 1963-64 to 1966-67 from Abidhar market only. The results revealed that arrivals were the lowest in the beginning of the crop season, i.e., during the month of August and at the end of crop season, i.e., in the month of March. The highest indices of arrivals were obtained from October to January, which ranged from 143.37 (October) to 166.56 (December) but price indices were the lowest during these months. Highest price index was obtained during February (157.78) and March (165.22) when arrival index was only 67.98 and 13.43 respectively.

Bhikhan (1976), in his study, has found the relationship between arrival and prices of malta in Patiala region. The study covered the period 1967-68 to 1975-76. The study remarked that there is an inverse relationship between market arrivals and prices. In the beginning of the fruit season, i.e., in the month of August, the seasonal index started rising in the market and it reached the highest level in November (186.73 per cent), whereas the price indices were the lowest, i.e., 70.66 per cent and 74.67 per cent during October and November respectively. On the other hand, malta arrivals were the lowest in the beginning and in the end of season, i.e., during August and March and price indices reached their peak during February. Thus, the study concluded that the low prices in the post-harvest season were generally the result of heavy arrivals. Market arrivals and prices
did not show a definite relationship as the ‘r’ value was found out to be 0.173, which was not significant.

Nidhi Ashutosh (1992), in her article, “An analytical study of marketing of litchi” concluded that litchi is highly labour intensive crop. No relationship between price and market arrivals of litchi could be developed because it was found to be dependent on production. There is a wide scope of canning industry as the supply is more during the harvesting period. Thus to avoid the glut during peak period, canning industry can successfully give the advantage towards marketing of litchi.

Sidhu, M.S. (2004), in his article, ‘Arrival and Prices of Pear, Peach and Plum in Punjab’ examined that during the year 1998-99 the arrivals of pear, peach, plum were about 36, 17 and 15 thousand qtls respectively in the state. The average price of pear, peach and plum in Punjab was Rs.450, 375, 584 per qtl respectively during the year 1997-98 which increases marginally in 1998-99. The marginal change in price may be attributed to the usual demand and supply forces for these fruits. Due to heavy arrival of the produce in the peak period, the price was found to be low. The study suggested that to get the maximum returns from the fruit crops, the farmers themselves may sell the produce in apni mandis. For sale outside the state, the small, marginal and medium farmers may opt for group marketing. It will reduce their marketing cost per unit of produce and increase their returns. The government may also build up the required market infrastructure to increase the returns of the farmers from these fruit crops.

Palaniappan et al. (2010), in their study, concluded that during the year 2008-09, in India’s peak apple harvest month of October, apple prices are higher than for other competing fruits. Low productivity compared with most other domestic fruits as well as other apple producing countries raises apple prices and limits the growth in domestic consumption.

Gupta, S. (2012), in her study on arrivals and prices brings out that market arrivals are not homogeneously distributed and their nature is such that the bulk of the produce reached in the market soon after the harvest. The study also revealed that due to seasonal behaviour of arrivals and prices, there exists an inverse relationship between market arrivals and prices. The study further, highlighted that like arrivals, prices also exhibit seasonality in Patiala market. The seasonality index depicts the maximum price during lean periods and minimum price during peak periods.
Mavi, H.K. et al. (2012), in their study examined that the arrivals of kinnow crop were low when the harvest season began, peaked in the months of December and January, when bulk of the fruits mature and then arrivals dipped at the end of the maturity season when only left-over fruits were picked and marketed. However, in the case of prices, there were relatively small variations from month to month. Kinnow prices showed inelastic response to arrivals. As the demand remains stable throughout the season due to transportation of kinnow to distant market of the country as well as due to increase in the juice consumption in wake of marriage season, prices did not fall much even when supply is went up. The prices were largely affected by the quality of fruit and size of the market.

The studies reviewed did not pay attention towards the relationship between production, market arrivals and prices. However, the present study is an attempt to fill this gap.

Marketing channels, Margins, Costs and Price Spreads

Garg and Azad (1960), found that the producer’s share in consumer’s rupee in marketing of oranges at Nagpur market during the year 1957-58 came to nearly 28 per cent, where as middlemen like contractors and wholesale dealers earned as high as 19.3 per cent and 11.9 per cent respectively of the price paid by the consumer. The retailers earned a profit of Rs. 91.75 per quintal, i.e., nearly 10.8 per cent of consumer’s price.

Sidhu and Kahlon (1967), examined the existing marketing system for apples in kullu valley, The study concluded that orchard owners suffered losses by giving the orchards on contract. They could earn an additional income of Rs. 3965.33 and Rs. 7666.79 per acre by selling their produce in the market. Lots of graded produce were sold at a premium of 13.84 per cent, 19.31 per cent, 22.85 per cent and 11.37 per cent respectively, over the ungraded produce. Analysis showed that 20 Kg box was more economical and had a net saving of 10 paisa per kg over the 10 kg box. Further, study identified three marketing channels for apple in Kullu valley, namely, a) contract system b) sales in market through agents c) directly to consumers and price spreads in the market were 62.2 percent on contract basis, 34.14 percent on sale through commission agents in the market and only 3.65 percent through direct sales to consumers.

Singla (1967), in his study, concluded that pre-harvest system was predominant method of marketing for sweet orange in Ferozepur district and 78 per cent of total marketable surplus was sold through this system. Producer’s share in consumer’s rupee was only 23.11 per cent when sold through pre-harvest contractors. It came to 47.47 per cent and 57.96 per cent when produce was sold to the wholesalers and retailers respectively. Net margin of the contractor was 27.38 per cent of the consumer’s rupee. Co-operative marketing is suggested for the farmers to increase their share in consumer’s rupee.

Singh and Kahlon (1968), in a study on marketing of grapes in Punjab observed that commission agents and retailers were important channels for selling grapes. About 41 and 40 percent of produce was marketed through commission agents and retailers respectively. Further analysis showed that grading and packing formed 72.6 percent of total marketing costs in the primary markets, transportation cost accounted for 10.96 percent.
Johl and Thakur (1968), in their article titled, “Marketing of Apples in Himachal Pradesh” focused on marketing margins and costs in the chain of distribution of apples in H.P. The study revealed that sale through commission agents (45 per cent of the produce sold) was the most commonly used channel. Sale to wholesalers, sale to contractors, sale direct to consumer, sale through co-operatives and sale to retailers accounted for 32.8 per cent, 14.3 per cent, 6 per cent, 1.5 per cent and 0.4 per cent respectively of the total produce marketed. Net earnings in case of direct sale to consumer were about twice the contractual system and 1.3 times more than sale in the market through other existing methods of apple marketing. The study concluded that the distribution costs due to handling and preparing the produce for the market; assembling, storage and transportation were 29.79 per cent of the consumer’s rupee.

George and Singla (1969), studied marketing of sweet oranges in Punjab and found that 77.39 percent of farmers disposed their produce to the pre-harvest contractors, 20.38 per cent to the distant terminal markets and rest to the local whole salers and retailers and directly to the consumers.

Kochar and Thakur (1971), in their study, investigated the producer’s share in consumer’s rupee in different marketing channels, the costs incurred and margins retained by different agencies in the marketing of apples during the period 1969-70. The study indicated that in the case of apples, irrespective of varieties and grades; the net share of contractor varied from 7.42 to 7.84 per cent of the consumer price in Shimla and Delhi market, while the net share of retailer in the consumer’s price was found to be 23.26 per cent in Shimla and 23.6 per cent in Delhi market. The net share of producer was found to be 37.26 and 32.61 per cent in Shimla and Delhi market when the fruit was sold through contractors. Apple crop is highly seasonal in nature and storage and processing can increase the share of cultivators but the study did not include the economics of processing and storage.

Aulakh and Dhar (1974), reported that the sale of apples by pre-harvest contractors in Kashmir was widespread and the farmers got maximum profits through direct sales. The prices for apples increased over the period 1962-63 to 1972-73. Market imperfections were also widespread.
Singh (1974), identified the agencies involved in the trade of grapes, cost of marketing at different stages of marketing of grapes and share of producer in consumer’s rupee in Hyderabad. The study concluded that the marketing charges were found to be less by Rs. 4.35 for hundred-rupee worth of sale of grapes in a regulated market than in any unregulated market. Marketing cost of retailer was worked out to be 1.97 per cent of consumer’s rupee in both the channels. The commission charges were worked out to be 3.96 per cent of consumer’s rupee in both the channels. The producer had a share of 47.18 per cent and 69.63 per cent in the price paid by the consumer in the channel-I and channel-II respectively. Obviously channel-II was more profitable than the channel-I to the producer.

Singh and Sidhu (1976), in their article titled, “Marketing of Mangoes in Punjab State” studied the operational aspects of mango (fruit) market in Punjab covering marketing margin, price structure and other marketing aspects such as transportation, grading, packing, etc. Overall marketable surplus for mango was 96.40 per cent of the total production. Nearly 70 per cent of the orchard owners sold their orchards to pre-harvest contractors and the share of pre-harvest contractors was nearly 34 per cent of consumer’s rupee. Prices varied according to the varieties and grafted varieties of mango fetched higher prices than desi varieties. The study pointed out the need for better connecting roads for proper transportation, cold storage facilities and better organization by the orchard owners.

Dhar et al. (1976), stated that pre-harvest contract system was most common method of sale of apples, among small and medium orchardists and sales through commission agent was more popular among large orchards. The marketing costs when sold through commission agent at the markets of Jammu, Amritsar and Delhi came to Rs.11.88, Rs.14.58 and Rs.17.37 respectively. The major items of marketing costs were packing, transportation and commission charges. Further analysis showed that commission agents accounted for more than 41 percent of total marketing margins followed by transportation and handling charges.

Patil et al. (1983), studied the marketing margins and price spread in the marketing of Alphanso mangoes in Ratnagiri district. Out of the four identified channels the direct sale to consumer was the most profitable, while selling through pre-harvest contractors was the least profitable.
Swarup, R. et. al. (1985), in their study ‘Price Spread and Marketing Margins for Himachal Apples: Temporal and Spatial Analysis’ examined that the share of the growers is generally higher in years of high prices (1984), and lower in years of low prices. Further, it may be concluded that the rise or fall in the producers share is more than proportional to the rate of rise or fall in the price level. This is so only because several costs remain fixed, i.e., do not change with prices. The scrutiny of data has revealed the fact that the benefits of rise in prices are not fully availed of by the growers and their gains have been intercepted by the middlemen, reflecting the inefficiency of the marketing mechanism. The study suggested that an attempt should be made to strengthen the marketing system by organizing co-operative societies particularly for small growers.

Srivastva and Bisaria (1987), identified the marketing margins of various functionaries for mangoes marketed in Azadpur market of Delhi for the year 1984-85 and found that the growers hardly made any profit especially when fixed costs were taken into account. Commission agents charged 8 per cent on the transactions. The profits reaped by wholesalers were around 81 per cent on their investment and that for retailers were 45 per cent on their investment after taking into account the mango losses in transit which during different periods ranged between 8-12.5 per cent. The study clearly highlighted the exploitation of mango market by various intermediaries at the cost of growers. Hence, the study suggested that there is an immediate need for corrective measures such as co-operative marketing and the processing of mangoes.

Rajagopal (1987), in his study on marketing of apple, Guava and mango fruits reported that the producers share in the final price was highest in apple crop. Followed by mango and guava. The cost of marketing was higher in guava followed by mango and apple. It revealed that apple cultivation was economically viable even to small growers. He recommended that direct sales and sales through cooperatives should be promoted to provide more share to the producers in the final price of fruit crop.

Kulkarni (1989), in his study on economics of production and marketing of grapes in Bijapur district, Karnataka, identified two marketing channels, these were a. Producer – commission Agents cum wholesaler-Retailers-consumers and b. Producer- Pre harvest Contractors- Retailers-
consumers. The study revealed that selling through commission agent in the market was profitable compared to sale through pre-harvest contractors.

Patil (1989), in his study on marketing of Alphanso mangoes in Maharashtra identified four channels viz. producer-consumer (direct sale), producer-cooperative-consumer (cooperative sale), producer-commission agents-wholesalers-retailers-consumer (middlemen sales) and producer-pre-harvest contractor-commission agents-wholesalers-retailers-consumer (pre-harvest contract sale). The study revealed that when the contract was made at the time of flowering stage, the price received by the growers was the lowest (Rs. 28.50/crate) though the crate size was big. The average price of Alphanso mangoes received by the growers was only Rs.29.40 per crate. Finally he concluded that the direct sale to consumer was the most profitable and the one through pre-harvest contractor was the least profitable.

Koujalagi and Kunnal (1991), made an attempt to identify the marketing channels and estimated the marketing costs of pomegranate in Bijapur district. They have identified two channels. Channel-1: producer-pre-harvest contractor-commission agent cum wholesaler-retailer-consumer. Channel –2: producer-commission agent cum wholesaler-retailer-consumer. The total marketing cost incurred by pomegranate producer was Rs.71.94 per quintal. The four items namely commission, transportation, packing material and harvesting together formed 95.88 percent of total marketing cost. The other items namely labour charges and miscellaneous expenditure constituted the remaining part of marketing cost.

Singh (1996), studied price spread of citrus fruit in mid hill of Jammu and Kashmir. An overall view of results revealed that producers share in consumers rupee was 35.71 percent in channel-1 (producer-pre-harvest contractor-retailer-consumer) and 81.25 percent in channel-2 (producer-retailer-consumer).

Singh, P.K. et al. (1996), in their article, ‘Economic Analysis of Banana Marketing in Unorganized Sector in Middle Gujrat’ identified that the prevailing banana marketing system is inefficient. The marketing cost was high particularly the commission of middleman and the value of extra weights which together accounted for about 86 per cent of the marketing expenses. The study suggested that these expenses can be eliminated by
effectively implementing the Agriculture Produce Market Act for banana also.

Tomer, B.S et al. (1997), in their article, ‘Marketing of Grape and Citrus Fruits in Haryana’ have worked out the marketing costs and margins for grapes and citrus (malta and kinnow) fruits. The findings of the study on the cost of marketing and margins for these fruits indicated that producer’s share in consumer’s rupee was around 50 percent when the producer directly sold his produce to the market. However, if the crop is sold through pre harvest contractor, the share of producer in consumer’s rupee declined to about 40 percent for citrus and 29 percent for grapes. The high margin of intermediaries reduces the share of the producer in consumer’s price to the bare minimum. The marketing margins enjoyed by the middlemen were invariably higher. The study suggested that fruit grower’s societies should be formed to improve the bargaining power of the producers and to reduce the other marketing costs incurred on account of large-scale operations.

Dangat, S.P. et al. (1998), in their article, ‘Marketing of Strawberry in Maharashtra’ examined the process of marketing of strawberry in domestic market of Maharashtra state. The study revealed that strawberry growers sold their produce to Mahabaleshwar and Mumbai markets and to the processing units located in Mahabaleshwar. The cost of marketing of strawberry per kg was the highest in the Mumbai market due to more costs involved in packing, transportation and commission charges. The producer’s share in consumer’s rupee was the highest 71.8 percent in case of Mahableswar market as no intermediary was involved. It was 34 percent in case of Mumbai market whereas in case of processing unit the share was only 13.40 percent. The regression coefficient was 0.7364 indicating that if the proportion of produce sold in Mumbai market decreased by 1 percent, per kg net price of strawberry will increase by rupees 0.74. So, the study concluded that efforts should be made to establish processing units on co-operative basis.

Gangwar, L.S. and Shyam Singh (1998), in their study, ‘Price Spread and Marketing Margins for Nagpur Mandarins: A Case Study’ have examined the marketing patterns, marketing margins for various middlemen, identified the distribution channels and worked out the producer’s share in the marketing of Mandarins in Nagpur districts of Maharashtra. The results indicated that producer’s share in consumer’s rupee varied between 30-53
percent in different market channels. The high margins were reaped by Mandarin traders reflect the inefficiency of the existing marketing system. Hence, the study suggested that there is a need for rationalization of middlemen’s profit by the government. To reduce the costs, cheap transportation system, adequate supply of packing material, formation of co-operative societies, improved system of post harvest handling and packaging should be encouraged.

Shah Deepak et al. (1998), in their study, ‘Production and Marketing Patterns of Horticulture Crops: An empirical analysis based on Maharashtra’ analyzed the various components of production and marketing costs, marketing channels adopted by the farmers, producer’s share in consumer’s rupee in domestic and export markets, price spreads etc. in respect of grapes and onions produced in the state. The producer’s share in consumer’s rupee was 59 percent in domestic market and 34 percent in export market. About 67 percent of gross maintenance cost of grape production was spent on various production related operations and remaining 33 percent was accounted by various marketing functions. The per box (4kg) total marketing cost was estimated to be highest when the produce was sold through forwarding agents in wholesale markets compared to the produce sold through other marketing channels.

Devaraja (2000), has attempted to examine the various channels involved in the marketing of fruits and vegetables in Mysore district. The data were collected for the month of January-October 1999. The study showed that amount spent by the producers towards the marketing of horticulture produce like fruit and vegetables was more than 55 per cent of the cost of inputs used for raising the produce. The commission agents played a dominant role in marketing of fruits and vegetables in the district. Direct sales to retailers were less than 10 per cent. The old practice of selling fruit orchards to pre-harvest contractors was dominant. Most of the produce was sold through auction and bargaining. The study suggested that there is a need to control the activities of commission agents for encouraging self-marketing.

Rangi, P.S. and Sidhu, M.S. (2001), in their study, ‘Problems of Small and Marginal Farmers in Marketing of Fruits and Vegetables in Punjab’ found that most of the fruit growers particularly the small and marginal farmers lease out their orchards to the pre-harvest contractors
who provide low returns to the growers. The pre-harvest contractors who did not make any fixed investment on the orchards also got more than producers share. There is, no doubt, they had to incur some expenses on the watch and ward of their orchards, picking, packing, transportation of the produce etc. To enhance the producers share in the consumers rupee, it is suggested that small and marginal farmers may form marketing cooperative or may adopt group marketing. Moreover, the individual grower may also prefer to sell fruits directly to the consumers in the urban areas in the “Apni Mandi” or at a suitable separate space.

Khunt, K.A. et al. (2001), in their article ‘Economics of Production and Marketing of Pomegranate’ has confirmed the economic soundness of investment on Pomegranate orchard. Grading of Pomegranate helped growers in fetching the good prices. Majority of Pomegranate growers sold their produce in Bhavnagar city, which make the market buyers oriented and lead to the problem of low price. The study suggested that fruits co-operative marketing organisation is the need of the day as Bhavnagar district has the largest area under major fruit crops in the Saurashtra region.

Mali, B.K. et al. (2001), in their study ‘Economics of Production and Marketing of Banana in Jalgaon district of Western Maharashtra’ revealed that the per quintal cost of marketing was the highest (Rs. 29.47) in case of local traders, followed by co-operative fruit sale societies selling the produce to the private traders (Rs.27.32). The per quintal cost of marketing was the lowest (Rs. 16.50) in case of co-operative fruit marketing societies selling the produce in Delhi market. The average per quintal cost of marketing of these three marketing agencies was Rs.27.55. The average per quintal net price realised by the banana growers from Jalgaon district was Rs. 341.89.

Gandhi, Vasant P. and Namboodri, N.V. (2002), in their study, ‘Marketing of Fruits and Vegetables in India: A Study Covering the Ahmedabad, Chennai, Kolkata Markets’ tried to examined different aspects of the marketing, focusing particularly, on the wholesale markets for fruits and vegetables which have been established to overcome deficiencies and improve the marketing efficiency. Results indicate that the share of farmer’s in the consumer’s rupee in Ahmedabad was 25.5 to 53.2 percent for fruits. In Chennai the farmer’s share was 40.7 to 67.6 percent for fruits. In Kolkata market the share of farmer’s ranged from 55.8 to 82.3 percent for fruits. The
margin as a percentage of farmer-consumer price difference shows that in Ahmedabad, the margins are very high and range from 69 to 94 percent. In Chennai margins range from 15 to 69 percent and in Kolkata they range from 46 to 73 percent. The high percentage of margin to farmer-consumer price difference is indicative of large inefficiencies and relatively poor marketing efficiency. The study suggested that there is great need to promote open auctions in the markets, bring more buyers and sellers closer to perfect markets and the direct participation of farmers should be increased.

Sharan, S.P et al. (2002), in their study, ‘Marketing of Kinnow in Rajasthan’ concluded that the producer’s share in consumer’s rupee was observed more in direct sale as compared to contract sale, due to elimination of pre-harvest contractor. Marketing cost and margin indicate that producer’s share in consumer’s rupee may be increased by decreasing the number of intermediaries in the existing marketing system. Sri Ganganagar being a large market was found more efficient and more paying to producer as compared to smaller market of Kesari Singhpur. Further, it is suggested to remove all problems faced by the producer’s to make this vital enterprise a more paying venture. This may be made through creating efficient marketing and processing infrastructure.

Shaheen, F.A. and Gupta, S.P. (2002), in their study, ‘Economics of Apple Marketing in Kashmir Province-Problems and Prospects’ identified that maximum produce (57.41 percent) sold by sample growers is in Azadpur Fruit Market, Delhi. The large farmers contributed 64 percent of the total produce sold in different markets. The main components responsible for the variation of marketing cost across the markets are transportation cost and commission charges. Seven marketing channels are prevailing in the apple trade. The producers share in consumer rupee is found to be about 54 percent for Delicious and American varieties.

Ladaniya, M.S. et al. (2003), in their study ‘Marketing pattern of ‘Mosambi’ Sweet Orange in selected districts of Maharshatra’ examined that famers with small Mosambi plantations are more inclined to sell produce to pre-harvest contractors and it was attributed to lack of will to take risks in marketing and lack of finance. Growers with large plantations sold fruit themselves in distant markets. Co-operative society in the area does not market the Mosambi fruit. Market efficiency was higher when farmers
themselves marketed fruit in distant market. As the distance and intermediaries increased in marketing, costs and margins increased and market efficiency and share of farmer in consumer’s price decreased.

Ladaniya, M.S. et al. (2003), in their article, “Price Spread of Pomegranate” have found the price spread and relative efficiency of important marketing channels of some major pomegranate growing areas in Maharashtra. More the number of functionaries in marketing channels, more the costs and margins and lesser the efficiency. Marketing efficiency was maximum in marketing through co-operative society closely followed by private commission agents. The study indicated that if the retailer’s margin is reduced, the commodity prices can be reduced with increased net returns to the producer. Marketing of product at retail level by the producer or through co-operatives in cities can result in higher net returns to the producers and in minimizing exploitation of the consumers.

Shapoo, J.A. et al. (2003), in their study, ‘Economics of Apple Trade in Anantnag district of Jammu and Kashmir’ revealed that with the increase in number of middlemen and distance travelled, the commodity becomes dearer to the consumers. Moreover, the profit reaped by different intermediaries clearly depend on the level of investment. Higher profit earned by traders makes the fruit dearer. Steps should be initiated to regularise the market operations. Apple should be marketed after proper grading and standardizing to protect consumers and retailers.

Rawale Kishor et al. (2004), in their article, ‘Post-Harvest Handling and Marketing of Mango in Gujrat’ have identified that adoption of proper methods and practices right from harvesting to final marketing would help in maintaining quality of fruit desired by consumer which can fetch the grower better prices and high profit. It is in the interest of grower to harvest produce by keeping in view the quality parameters desired by consumer and follow proper practices and thereby maintain quality and reduce losses in harvest and post-harvest phase.

Singh (2004), in his study, has examined the marketing pattern of kinnnow in Punjab particularly in two districts Ferozepur and Hoshiarpur for the period 2002-03. The study brought out that in Ferozepur district, the producer’s share was about 42 per cent of the price paid by the consumers of Delhi market, whereas this share was 40 per cent in Hoshiarpur district. When the produce was sold through contractor in Ludhiana, Amritsar and
Abohar markets, the producer’s share was found to be 56, 57 and 81 per cent respectively of the consumer’s rupee in Ferozepur district; and it was found to be 54, 55 and 76 per cent respectively of the consumer’s rupee in Hoshiarpur district when the produce was sold through same channel in Ludhiana, Amritsar and Abohar markets.

Randev, A.K. (2005), in his study, ‘Marketing of Apple in Shimla district of Himachal Pradesh-India’ highlighted that in Shimla, growers have now started marketing their produce by themselves and analysis has shown that a price higher by 32.19 per cent, was received by the growers who sold their produce by themselves as compared to those who gave their orchards on contract to the pre-harvest contractors. The study revealed that local market (Dhalli) has been found to be more efficient against distant market with additional advantages of time saving and safety. This clearly indicates the need for strengthening of local market. Growers visiting Dhalli market mainly complain of space, police protection and cold storage, whereas, market committee staff members want more staff for further improvement in their working.

Sekhon, N.S. et al. (2006), in their study, ‘Production and Marketing of Pear in Amritsar district of Punjab’ found that about 99 per cent of the Pear was sold in Delhi market by the contractors and farmers. The sale in the local Amritsar market was just about one per cent. It happened mainly on account of the fact that Delhi is the biggest consuming and distribution market in the entire north India. The study suggested that Pear growers may try to sell their produce themselves in larger quantity in Delhi market. The study further suggested that growers may form marketing groups to sell their produce there. The group marketing will reduce various marketing costs. Consequently, both producers as well as consumers will gain.

Saraswat, S.P. et al. (2006), in their article, ‘Production and Marketing of Peach Fruit:A case study of Rajgarh Area of District Simour in Himachal Pradesh’ identified that Rajgarh area in Simour District of the state is the peach bowl. But the area under peach is declined because the marketing system is bogged down by multifarious constraints and due to illegal deduction by the commission agents which adversely affect the producer’s share in consumer’s rupee. The study suggested that production and marketing system needs to be revamped with due emphasis on
infrastructure improvement for the benefit of the peach orchards of the state.

Murthy, D.S. et al. (2007), in their study, 'Marketing Losses and their Impact on Marketing Margins: A Case Study of Banana in Karnataka' examined that in the two major channels of marketing of banana that is wholesale and co-operative, the latter is a more efficient in terms of both operations and price. Both farmers as well as consumers are benefitted, but the extent of benefit is more to the consumers. The study further highlighted that marketing cost has been identified as the major constraint in the wholesale channel and bringing down the costs particularly the commission charges as demonstrated in the co-operative channel, will help in reducing the price spread and increasing the producer’s margin.

Kaur, Harsimran et al. (2007), in their study ‘Price Spreads and Marketing Efficiency of Kinnow in Shriganganagar district of Rajasthan: A Temporal Study’ revealed that one of the important features of Kinnow cultivation in the state of Rajasthan as observed in the study was the practice of pre-harvest contract adopted by considerably a large number of orchardists. However, the practice of pre-harvest contracting definitely reduced the actual profits occurring to the orchardists and, also discouraged them from producing the crop on a large scale. The study further revealed that as matter of fact, the ever growing post harvest losses owing to poor post-harvest processing, handling, lack of cooperative societies, lack of cold chains, high waxing charges and poor transportation with high expenses create marketing problem in distant market sale of Kinnow. The study suggested that cooperative marketing providing market information and guiding the farmers in scientific market operations can help in this direction.

Kaur and Singh (2010), have evaluated the various aspects of marketing of Kinnow in Ganganagar district of Rajasthan. The main focus of the study was to comprehensively compare the economic efficiency of different marketing channels especially in terms of producer’s share in consumer’s rupee in domestic market. The study showed that during the year 2006-07, the Kinnow orchardists were seen to market their produce either through pre-harvest contractor in wholesale markets or through commission agents or directly to the wholesaler or retailer. Regarding producer’s share in consumer’s rupee, it had been found that the average
category of Kinnow orchardists had an overall average of 61.71 per cent share in consumer’s rupee in the domestic market. Channel-III (Producer-Retailer-Consumer) was the best channel for local marketing whereas channel-I (producer-pre-harvest contractor-wholesaler-retailer-consumer) was found to be the best channel from consumer point of view. An improvement in the efficiency of the marketing system encompassing Kinnow is suggested in the study. This will enable the producer to have a better stake in consumer’s rupee involving this commodity.

Kumar and Singh (2010), conducted a research in Lucknow Export Zone to know the status of price spread of mango in Lucknow. In the study area during the period 2008-09, mango was marketed through four channels. The margin of pre-harvest contractor and retailer in consumer’s rupee was the highest at Rs. 131.44 per quintal (7.73 per cent) and Rs. 447.80 per quintal (26.34 per cent) respectively in channel-IV comprising producer-Pre-harvest contractor-Retailer-Consumer. The total expenses incurred by retailers on (transportation, loading and unloading and mandi charges) were Rs. 47.50, 35.00, 22.00 and 32.00 in channels I, II, III and IV respectively. The purchase price of consumer was the highest (Rs. 2029.46) in channel-I. The percentage share of the total marketing margin was also worked out to be the highest in the channel-IV (34 per cent). The profit margin of the functionaries also affected the producer’s share in consumer’s rupee, which was inversely related to each other.

Kurkute et al. (2010), in their study, tried to identify the channels and to estimate marketing costs, margins and price spreads in the marketing of banana in Jhunnar tehsil of Pune district for the year 2006-07. The results revealed that the marketing of banana in the study area was done through two main market agencies, viz. co-operative fruit sale societies and group sale agencies. Out of total produce marketed, 52.11 per cent was sold through channel-II and 47.89 per cent was through channel-I. The maximum per quintal marketing cost was observed in Mumbai market (Rs. 135.80) followed by Pune market (Rs. 122.04). The cost was higher in channel-I (Rs. 117.61) than channel-II (Rs. 109.83). Producer’s share in consumer’s rupee was the highest in Jhunnar market (51.13 per cent) and the lowest in Mumbai market (42.23 per cent). The lowest share of producer’s in consumer’s rupee in Mumbai market was mainly due to higher marketing and commission charges. Channel-II had relatively higher share
of consumer’s rupee (46.50 per cent) than channel-I (45.37 per cent). The study further concluded that in spite of higher marketing costs and low price paid by the consumers in channel-II, the producer’s share in consumer’s rupee was higher in channel-I.

Mavi, H.K et. al. (2012), in their study examined that kinnow fruit reach to the consumers through different market intermediaries who exploit the famers to a great extent. The cost incurred by each intermediary is included in the ultimate price. For the distribution of kinnow crop six marketing channels are prevailing in the study area, i.e., channel-I: producer-pre-harvest contractor-wholesaler-(through commission agent)-retailer-consumer (Delhi market), channel-II: producer--pre-harvest contractor-wholesaler-(through commission agent)-retailer-consumer (Ludhiana market), channel-III: producer-wholesaler-(through commission agent)-retailer-consumer (Delhi market), channel-IV: producer-wholesaler-(through commission agent)-retailer-consumer (Ludhiana market), channel-V: producer-wholesaler-(through commission agent)-retailer-consumer (local market), channel-VI producer-retailer (through commission agent)-consumer (local market). The consumer in the local kinnow producing areas was getting the produce at a lower price as compared to the prices paid by the consumers in Delhi and Ludhiana markets. The pre-harvest contractor did not prefer to sell in the local market, whereas the majority of producer where selling in the local markets. A few innovative farmers had taken their produce to the Delhi market, followed by sales in the local market. Producer received the lowest price when they leased out their orchards to pre-harvest contractors. Their low share in consumer rupee as compared to in other channels was due to the low prices paid by the pre-harvest contractors. Therefore, channels III, V and VI were more remunerative than channels I and II for producers.

It can be observed from the studies mentioned above that as the distance and the number of intermediaries increases in the marketing, the costs and margins increases thus reducing the efficiency and share of the growers in the consumer’s rupee. In the case of small channel (where no intermediary is involved) grower gets the highest share as compared to other channels where intermediaries are involved. Some reviewed studies also reveals that the share of producer in consumers rupee was more when the growers sell their produce themselves in the market rather than leasing out
their orchards to the pre-harvest contractors. Again, these studies differ not only in respect of working out price spreads in different marketing channels but also in respect of different methods used for computing price spreads. In the present study, price spreads are computed at a point of time by using mode method.

**Constraints/problems**

It is necessary to study the various constraints faced by fruit growers after examining the production and marketing aspects of fruits like marketed surplus, market arrivals and prices, marketing channels, margins and costs. The studies examined for this purpose are Singh and Tripathi (1989), Gummagolmath (1995), Singh, R.S. (1996), Reddy et al. (1997), Khunt et al. (2001), Sharan and Singh (2002), Shaheen F.A. and Gupta S.P. (2002), Bondar, U.S. et al. (2003), Kathirvel (2008), Karpagam et al. (2010), Bhardwaj R.K. et al. (2012), Mavi H.K. et al. (2012), Javid Bhat (2012), etc.

Singh and Tripathi (1989), in their study, have identified the problems in the marketing of guava in Allahabad district. The study concluded that the well-organized and strong association of non-guava producers governed the wholesale market and prices were also determined by the middlemen. The problems of packaging, storage, attack of diseases, lack of quick disposal of produce, etc, were also creating hindrance in the expansion of area under guava in Allahabad. The authors suggested that proper facilities may help in solving the aforesaid problems and may give incentive to the guava producers. The preservation department should arrange training programmes in rural area.

Gummagolmath (1995), identified the problems in production and marketing of mango in Dharwad district of Karnataka. The opinion survey revealed that the problem of alternative bearing was expressed by 100 percent orchardists in all categories of farmers. Problem of non-availability of labour was expressed by most of the medium orchardists (66.67%) followed by small orchardists (40%) and large orchardists (33.37%). Among the marketing problems, the problem of price fluctuation was expressed by 44.44 per cent of small, 36.80 percent of medium and 50 per cent of large orchardists and other problems were high commission and existence of under dealing between wholesaler and commission agents.
Singh, R.S. (1996), in his study ‘Marketing of Citrus Fruits in Mid-Hills of Jammu and Kashmir’ revealed that the share of commission agent is on the higher side as compared to the services provided by him in citrus fruit marketing. The study further revealed that the citrus fruits growers have large number of problems in marketing of their produce. All the 60 respondents expressed risk including price fluctuation, cheating and lack of storage facilities, high perishability, seasonality, absence of market intelligence, difficulty in credit facilities and absence of local market. The study suggested that there is a need for co-operative fruit growers association and establishing processing/semi-processing plant in the area to pool the farmer’s produce and sent it to distant market in order to economise the cost of transportation for the famers and facilitate easy movement of produce during the peak season.

Reddy et al. (1997), in their paper titled, “Constraints in the Production and Marketing of Mangoes: A Case Study in Srinivasapur Region” concluded that the major constraints faced by the mango growers at the production level in the Srinivasapur region were lack of knowledge on the application of balanced fertilizer (88 per cent) followed by the lack of drip irrigation (84 per cent), non-availability of credit (80 per cent), non-availability of labour (78 per cent), high cost of inputs (74 per cent), high incidence of insects and diseases (36 per cent), etc. Whereas, the major constraints at the market and export level were found to be exploitation by the middlemen (96 per cent), lack of grading (94 per cent), high cost of transportation (84 per cent), lack of knowledge on market communication (65 per cent), etc. So, the study suggested that there is a need for linking production and export activities in mango in order to achieve the best results in terms of productivity, quality and value addition.

Khunt et al. (2001), studied economics of production and marketing of pomegranate and found that dying of young plant, problem of mite, inadequate irrigation water and its poor quality and short supply of electricity were major problems faced by pomegranate growers of Bahavnagar district.

Sharan and Singh (2002), in their study, highlighted that the selling of kinnow through self-marketing by growers in Rajasthan was found profitable in comparison to contract sale to pre-harvest contractors. Lack of support price and lack of organization were the major problems faced by all
the growers in marketing their produce. The other major problems faced were delay in payment, lack of competition among buyers, lack of marketing infrastructure, lack of cold storage facilities, and lack of better and cheaper packing material. The growers also reported other problems like low prices due to seasonal gluts of arrivals in the market, malpractice in weighing method, etc.

Shaheen, F.A. and Gupta, S.P. (2002), observed that the Problems faced by the apple growers in production, that majority of the farmers (95 per cent) faced the problem of irrigation water due to drought which directly reduced the apple production as well as quality of produce. There is also non-availability of improved cultivars as 63 per cent of the farmers responded to this problem positively. The lack of resources is generally faced by small category farmers, with the result, these farmers are not able to invest for better production technology. At present scenario, the farmers facing with problem of diseases and pests like apple scab, sanjose scale, red mite etc. which are menace to apple industry. Constraints in marketing are lack of regulated market and co-operative marketing societies were responded positively by 96 per cent of the farmers. The market infrastructure for the fruit crop is poor in terms of cold storage, transportation facility and undependable roads. The high state tax for export of apple is further adding to the expenses of grower as 77 per cent of growers responded to this query positively. The state tax was recently increased to Rs. 6.80 per box during the financial year 1999-2000 which was Rs. 4.80 per box earlier. Constraints in financing is also a big problem as most of the apple growers in the state are marginal and small orchardists. The rising cost of inputs for maintenance of orchards have made the cultivation of the crop away from their reach. They have no capacity to invest in better production technology. There access to financial institutions has been beset with innumerable problems.

Bondar, U.S. et al. (2003), in their article ‘Marketing of Grapes in Osmanabad and Latur districts of Maharashtra’ highlighted that the delayed and untimely payment by commission agents was problems-confronted by the fruit growers especially small and medium farmers who required money immediately, for their next crop. Poor market intelligence also barred the farmers from getting better prices for their produce. The study suggested that system should be evolved so that the transporters could be held
responsible for the damage of fruits during transportation. In order to provide the risk cover to the farmers, horticulture activity should be insured. The farmers should also be made aware of the market forces.

Kathirvel (2008), has attempted to study the economic factors limiting to banana production in Kanpur district during a four-month period April-August 2004 and also suggested various methods to improve the economic factors for banana farmers. The findings of study revealed that the economic factors limiting banana production were high fertilizer costs, higher labour cost, non-availability of fertilizers and pesticides, inadequate credit and lack of technical guidance. Amongst these, credit inadequacy was the major problem followed by high fertilizer cost. The other factor considered was the technical guidance. The study further suggested that credit linked marketing should be adopted both to get credit facilities easily through government agencies and to repay the loans in time. Moreover, the government should pay attention by providing transport facilities, maintaining good records and providing subsidies for pesticides and fertilizers, so that small and medium farmers may be benefited.

Karpagam et al. (2010), in their study, found some constraints in grape production in India and discussed government policies and plans for grape development of India. Although grape cultivation is considered as highly remunerative, yet the share of India in world production is very low because of reasons like heavy initial investment for establishing a vineyard, high recurring costs in vineyard management, less exports, high risk of damage to crop because of unexpected changes in weather, marketing problems, etc. Both the central and state governments provide considerable efforts to promote grape sectors like providing soft loans and subsidies for pre-cooling and cold storage. To promote export, GOI has announced Agri Export Zones and Grape Wine Park in grape growing areas of Maharashtra. Besides this, various self-managed Farmer’s Interest Groups (FIGs) like Maharashtra state Grape Growers Association have also been established to promote grape production.

Bhardwaj, R. K. et al. (2012), in their study ‘Problems faced in azadpur fruit and vegetable market Delhi’ found that some farmers do not exercise due care in grading and packing of apples. Practices of mix grading and topping was found to be a common phenomenon with farmers. Farmers were also facing the problem of packaging materials, storage facilities,
transportation and lack of market information. There was problem of malpractices in market and all these are unchecked.

Mavi, H.K. et al. (2012), in their article examined that increase in area and production of kinnow in Punjab has brought in many problems with regard to its marketing. The various marketing facilities, necessary for economic disposal of produce, have, however, not been able to keep pace with the fast expanding kinnow industry. In the absence of any planned marketing programme, the producers are often deprived of getting good returns and face multiple problems like poor market intelligence, inadequate post-harvest infrastructure, inadequate processing facilities, poor marketing infrastructure, price fluctuations and malpractices.

Bhat, Javid (2012), in his study highlighted that due to powerful intermediaries in the marketing system, present marketing has an inherent tendency to give more benefits to these intermediaries at the cost of apple growers. Problems faced by apple grower are follows, less area under fruit orchard (Holding Problem), communication problem, water problem, lack of improved and high yielding varieties, lack of latest technical know-how, lack of resources, shortage of labour, lack of extension services, prevailing uptake fungicide and pesticide problem, lack of equipment and machinery, lack of servicing facilities for equipment and machinery, lack of subsidized inputs, lack of financial availability, timely and insufficient availability of credit, lack of finance at reasonable rate of interest, problem faced by the growers in dealing with banks, highly indebted growers, lack of co-operative agencies, lack of availability and quality of pesticide, non-availability of wooden boxes, problems related with post-harvesting operation, problem associated with apple picking (plucking), grading problem, problem of proxy grading, lack of labeling and registered trade mark:, high financial cost and lack of “apni mandi”.

**Summing-up**

Various aspects and issues of the present study have been understood by the studies undertaken for review. In the reviewed studies the production and marketing problems of farmers have been investigated and have been very useful. The understanding made on the subject through the review of literature forms the basis to do the research further.