Chapter VI

Conclusion and Suggestions
In the proceeding chapters of the present thesis a critical assessment of apple industry was made. However, the analysis has been confined to the objective of studying the apple produce together with its marketing system. This study brought to fore many interesting observations throwing light on some vital aspects of horticulture sector. These have been dealt in elaborately in chapter - I to V.

One of the main conclusions enumerating from the first chapter exhibits that horticulture sector does play an important role in shaping the economic destiny of the people of the State and will continue to do so in more effective way under a scientific programme of horticulture development. It is a matter of satisfaction that the State is endowed with rich horticultural resources and hence offers immense prospectus for exploiting these resources at an extensive and commercial scale. Unfortunately this sector remained neglected till the dawn of independence. There were many reasons
for its inefficient and insignificant growth. Following the independence the whole State along with the rest of the country under-went many economic overhauls through the introduction of various Five Year Plans. Unfortunately no remarkable change was brought even under the impact of first two Five Year Plans. However, it was only in the Third Five Year Plan that horticulture sector started showing the signs of improvement. In fact the importance of this industry was recognised in the correct prospective and subsequently a package of developmental measures were and are being taken to utilise this natural wealth for the over all economic upliftment of the State. As a result of the combined efforts of the Government and the growers, the contribution of horticulture sector to the State economy in terms of income, employment and foreign exchange earnings has drastically increased during the last decade.

Conclusion drawn from the second chapter reinforces the belief that horticulture sector of the State mainly consists of apple industry. Apple cultivation has dominated all
other varieties of fruit both in terms of area and production. With a view of ensuring the better returns to the growers, two prestigious projects viz., Jammu and Kashmir Integrated Horticulture Project (JKIHP) and Indo-Australian Apple Grading Project (IAAGP), were launched. It was expected that these would provide better marketing facilities to the apple producers. This expectation however, did not materialized. Both the projects failed in achieving their goal. They also failed to eliminate the malpractices and defects of the existing apple marketing system. Consequently the returns to the growers from apple cultivation continue to be low.

Six marketing channels are involved in the distribution of apple produce from the point of production to the point of consumption and in this linkage commission agents channel is the dominating one as is revealed from the study of chapter third. This is the channel which enjoys maximum share out of the total apple distribution network forming 65.33 percent of the sample
orchardists. Next to it comes forwarding agents and preharvest contractor's channel which constitute 12 percent and 10.67 percent of the sample orchardists. Reasoning for the selection of the commission agent's channel adopted by the growers are enumerated hereunder:

i. Lack of idea of the integration concept among growers;

ii. Availability of credit facilities by the commission agents to the basic growers on easy methods and procedures.

iii. Age old established relations between the growers and commission agents, and

iv. Lack of outright purchase system among cooperative societies and JKHPMC.

Chapter fourth portrays in detail the fruit returns from different channels available for marketing of apple in the State. The existing marketing system of apple is not quite efficient as it gives a grower a low share in consumer's rupees. However, the cost of marketing of apple is slightly lower and producer's share in consumer's price is slightly higher in the case of JKHPMC and
cooperative fruit marketing societies except zero level channel. In the commission agent's channel, which is most dominating, the producer's share in consumer's rupee is 31.34 percent. This clearly indicates that about 69 percent of the consumer's rupee has been appropriated by the different intermediaries involved in apple marketing.

Chapter Fifth of the thesis is an attempt to identify various problems that have cropped up in the recent past in the marketing of apple produce. Some of the major problems that have been found are: grading, packing, cold storage, transportation, channel selection etc. Added to this are the production problems like scab, improper picking, sorting etc. All these problems have seriously affected the efficient marketing of apple in the State of Jammu and Kashmir.

A broad conclusion emerging out of this study reflects that the modern concept of marketing has not found favour with the growers. The entire system is based on traditional concepts which have
proved detrimental to the very interests of horticulture industry/sector. Even where they know something about the concept of marketing, it is mostly confined to one of the activities of the overall marketing mix—distribution. The analysis reveals, even this function of marketing is not being implemented in that spirit in which it ought to have been. This system is not only defective and unremunerative but also has given rise to many other malpractices. The only beneficiary of this system is the middleman who packets a substantial portion of the consumer's price. Apart from this, the present system of distribution is devoid of modern facilities of physical handling of the produce, as a result of which huge wastages are reported. Even the facilities of warehouses, an essential component of physical distribution, are absent. Inadequate transport facility has further added to the misery of the growers.

An important function of marketing is pricing of the products/services. Pricing has assumed a great importance as it touches the skin
of both the producer as well as the consumer. In the case of apple industry no scientific policy regarding fixing of the price of the produce is to be seen in vogue. Mostly pricing strategy is dependent on thumb and rule system where the producers have no say whatsoever.

On the overall plain the study makes it abundantly clear that the existing marketing of horticulture produce in Jammu and Kashmir State is completely in contravention with the time tested norms of the efficient marketing system. The whole system is unorganised and offered least benefits to the growers as also to the consumers.

SUGGESTIONS:

The operation of present marketing system of apple trade in the State warrants a total restructured. It should be carried on in accordance with the modern marketing concepts in order to be commercially viable and profitable to the grower, besides being useful to the consumer. This calls for immediate plan of action for putting the marketing system on sound footing. For eradicating
the existing ills of the marketing operations of apple, the scholar has suggested some recommendations which are of far reaching consequences. The recommendations are:

1. **Enactment of Grading and Quality Control Act**

   Grading and quality control Act should be executed which should include establishment of grade specification and enforcement of grading programmes, operation of inspection systems and control laboratories. At the same time grading should be carried out in accordance with the best mechanical devices.

2. **Economic Packing System**

   An economic packing system for apple should be developed and be made easily available for marginal growers of the State. The following particulars should also be marked on fruit box so that consumer knows what he buys, how much he buys and so on.
a) Kind and variety of apple;

b) Grading mark;

c) Number of layers and apples in the box; and

d) Net weight when packed.

3. Establishment of Horticulture Marketing Training Institute

A Horticulture Marketing Training Institute should be established for training and education of personnel engaged in various activities of marketing viz., packing, grading, standardisation etc.

4. Improved Marketing Channel

Efforts should be made to ignore the influence of commission and forwarding agents on apple trade and to establish such a distribution system of fruit as would ensure direct sale to the consumer. This type of marketing channel will be remunerative.
5. Gold Storage Facilities:

Cold stores should also be constructed at export marketing centres so as to ensure the grower of the State the facility of cold storage at terminal markets when they feel low returns of their produce as a result of glut at export marketing centres.

6. Improvement in Transport Facility:

If the apple industry is to be properly developed from all angles, the available transport facilities of every mode have to be improved and expanded suitably. In this context the State Government should adopt the following measures:

i) Top priority for the construction of all weather feeder roads in apple producing areas for facilitating the movement of apple produce;

ii) Introduction of the railway transport system within the valley which will reduce the time element from Sopore to Wazigund and thus save deterioration to a greater extent;

iii) Redesigning of load carriers so as to dispense with the existing practice of packing the apple in wooden boxes;
iv) Liberalisation in the issue of licences to cooperative marketing societies; and

v) Advancing loans to marketing societies for purchase of load carriers for transport of apple produce.

7. **Financial Facilities to the poor growers:**

All State financial agencies should provide loans to basic and poor growers on low interest against their produce. This facility will minimise the practice of supplying interest free finance to the growers by the commission agents and then cheating them by charging abnormally high commission.

8. **Outright Purchases**

The concerned State agencies should emerge as a big buyers of the apple produce. This system would shift the marketing risk of the produce from the basic grower to these state agencies. As a consequence growers will prefer to sell their produce to the State agencies, which will be fruitful both for growers and the State.
9. **Establishment of Marketing information and news service**

Market information centres should be established which will provide the apple growers and traders day to day knowledge and information about the happenings and trends prevailing in the various marketing centres in and outside the State. Such a facility will help the growers/traders to decide about future market strategy.

10. **Educating the Growers**

Adequate arrangements should be made for imparting training and education to the growers so as to equip them to face the marketing challenges. Growers should be trained in the art of bargaining, selling, price fixation and so on.

11. **Promotion of Cooperative Marketing**

Cooperative marketing is a unique pattern of marketing where the growers sell their produce to the cooperatives organised with the help of the
Government. Although, there are some cooperative societies in the State, these are totally inadequate and inefficient to meet the requirements and demand of the apple industry. Hence the need of hour is to organise the growers within the fold of cooperatives. All the cooperative societies thus formed should be put under the umbrella of a federation or an appex institution. This system of marketing will increase the price, decrease in marketing cost, remove various malpractices and trade abuses, and increase bargaining power of the growers.

12. Establishment of Marketing Research Centres

The State should set up a large and full fledged marketing research centre which will be capable of conducting extensive market surveys for exploring new markets and developing existing market both within and outside the State. Such a centre should be assigned with the role of undertake the following tasks:

1. Investigate the demand for new market facilities and draw up plans and specifications;
ii) Conduct research in the marketing of important apple products with a view to developing more efficient methods and organisations;

iii) Study grades and standards that might be put into practice under grading and standardisation laws;

iv) Investigate the packing and transport of apple products, recommend improvements and develop container standards;

v) Compile and arrange for the publication of various marketing statistics such as stocks of apples, of produce in cold storage, etc. at regular intervals and issue the latest bulletin regarding demand and other market trends; and

vi) Compile reports of market prices and disseminate the same to the growers through radio, newspapers and other medias.

In addition to this arrangements should be made to ensure that a sufficient number of promising students specialised in marketing at the advanced University level within or outside the State, and to attract them to such work when their training is complete.

13. Efficiency in Processing / Processing Units:

To bring efficiency in the processing of fruit the following measures are suggested:
a) **Washing of fruits:**

It has been observed that majority of apple processing units in the State use plain water for washing fruit. It is suggested that water which has been slightly acidified with hydrochloric acid (about 0.025%) may be used for this purpose. It will help in easy removal of pesticides spray residue etc. At the same time scrubbers may be used to clean fruit properly before crushing.

b) **Steam Supply:**

A good proportion of processing units in the State do not have machinery / equipment for generating steam which are necessary for regulating temperature as well as pressure which are the most important factors for controlling and processing of fruits. Every processing unit must have at least a baby boiler for the said purpose.

c) **Reduction in breakage of bottles:**

The shortage of bottles for packing of processing fruit is further strengthened by the
breakage of bottles. It has been observed that in processing units there is heavy breakage during filling up of bottles. It is the result of temperature gradient between the cold bottle and the sudden addition of hot juice at 180°F to 190°F. It is, therefore, suggested to pack the juice in hot or at least warm bottles. As such gentle steam or water heating of bottles is must just prior to bottling in order to reduce breakage.

d) Arrangement for packing material

There is always shortage of packing material (tin can) for small scale fruit processing units in the State. These units fail to get the packing material at required time even when they pay the amount in advance because the quantity of material required by each unit is less. The small Industries Corporation may share the responsibility of these units in the procurement of packing material as they are doing for other raw materials, as per requirements of the individual units. The Directorate of Industries and Commerce may help the Small Industries Corporation in estimating the required quality
of packing material for the fruit processing units in the State.

e) **Construction of Separate Industrial Shed for Fruit Processing Units:**

State Government should construct a separate industrial shed for fruit processing units as per the specification laid down by Food Product Organisation (F.P.O) especially in Jammu and Kashmir State and the sheds may be allotted to young educated entrepreneurs.

f) **Subsidy for Processing Units:**

It is very difficult for new entrepreneurs to establish their own fruit processing units as these require heavy initial investment for the construction and installation of building and plant and machinery. Government should arrange purchase of these machinery and equipments on installment basis and should provide subsidy on these for processing units. Further it should also arrange finances for such purposes to these units on low interest.
g) **Establishment of Food Product Organisation's Laboratory in the Jammu and Kashmir State**

At present, more time is consumed for processing of the case with Food Product Organisation for the establishment of fruit processing units. Therefore, it is suggested that F. P. O. should establish a small laboratory in the Jammu and Kashmir State for speedy expeditions of issue of licences and testing of products etc.

h) **Exemption in the payment of income tax**: 

To give a fillip for bringing up more fruit processing units in the state, the small scale fruit processing units should be exempted from payment of income tax.

14. **Apple Waste Utilisation**: 

The scholar observed that after extraction of juice from apples a large quantity of apple pomace is thrown as waste by the processing units. Apple pomace has good commercial value as it can be utilised for:
a) Recovery pectin, and
b) Animal feed.

a) A good yield of pectin can be extracted from dried pomace than fresh apple pomace. It is so because dried apple pomace contains about 15 to 20 percent of pectin while 2 to 3 percent in fresh apple pomace.

b) Dried apple pomace mixed with 20 percent of hay can be better utilised as cattle feed.

15. Establishment of Processing Units at large scale:

The apple processing units/centres should be established at large scale in the State so that 30 percent wasted produce may be utilised in better and economical way. At the same time State should make efforts to remove various obstacles coming in the way of these centres/units.

16. Public Commission Agents:

State Government should circulate a list of public commission agents for disposal of produce at the export marketing centres at every
harvest season. The growers should be directed to approach these agents for the sale of their produce.

17. **Intervention of State Trading Corporation**:

The State trading corporation should take responsibility for the marketing of apple produce of the State in a big way. This may prove to be helpful marketing institutions in raising the bargaining power and incomes of grower, reducing marketing costs, and in reducing the influence of commission agents at export marketing centres.

18. **Organised selling System**:

To keep the growers satisfied with fruit returns, Government should declare the present system of auction namely Hatha / Parda system as illegal. Efforts should be made for the elimination of this disorganised system of marketing of apple produce.
19. Organised Producers Organisation

The wholesale buyers at export market centres generally form organised organisation and thus deprive the growers / producers of their due share in the consumer's rupee. Hence it would be fruitful that growers should also form such organisation to increase their bargaining power.

20. Marketing fellowships

State Government should give fellowships to young growers / traders to study marketing methods and administration in the advanced institutions of learning.

21. Marketing meeting and Training

Government may recommend personnel/growers to attend specialised horticulture meetings and training courses arranged to meet the marketing needs of horticulture sector.

22. Provision of Technical Experts

The services of horticulture marketing specialists should be offered from other parts of
the country to work for some time in a particular area, to analyse problems on this subject and make recommendations to the State in the light of current conditions.

25. Advertising and Publicity

Advertising and publicity media should be expanded within and outside the country. It is strongly suggested that there should be an international campaign launched by the various concerned State agencies by creating an agency with foreign market association and organisation. Attracting hoarding should be placed at key centres of the principal cities.

Over and above the suggestions given in the foregoing pages, the scholar feels that attention should also be focussed on removing the production defects by adopting the following measures:

i. Layout

Due consideration should be given to the scientific principles of orchard layout in future plantation. For the development in the
layout of existing orchards, efforts should be made to develop such a system which can make possible the proper layout of them.

ii. Research Laboratories

Horticulture Research laboratories should be established in every Tehsil of the State so that control on pests and diseases may become possible.

iii. Exhibition-cum-Demonstration centres/plots

Classes at mass scale may be conducted by various horticulture departments and institutions in fruit growing areas, where apple growers may be informed about the latest horticulture technology. For this purpose demonstration plots should be set up in fruit producing areas.

iv. Publicity and Advertisement Campaign

A rigorous advertisement campaign should be launched to inform growers about the proper use and relative benefits of fertilisers, so that the habit of use of fertilisers may be
developed in the growers.

v. **Financial Facilities**

The rural financial lending institutions should allow the marginal growers to take loans without any mortgage so that they are able to bear various pre-harvest expenses which includes purchase of medicines, fertilisers, modern implements for fruit cultivation etc.

vi. **Modern Techniques of Irrigation**

To meet the present requirements of irrigation all methods of irrigation i.e., wells, ditches, storage ponds and river canals etc should be developed and extended. Merely by extended application of one particular method of irrigation cannot meet the requirement and demands of irrigation.

vii. **Crop Insurance Scheme**

To save the fruit production from various pre-harvest risks / damages crop insurance scheme may be executed.
These are the secret proposals for the healthy operation of the marketing system and for the economic development of apple industry. Therefore, it becomes obligatory on the part of growers and horticulture agencies as well as on the Government to go for these suggestions to correct deficiencies in the existing marketing system/operation of the apple industry. The suggestions, if implemented properly would prove a gate way to the future prosperity of the industry.