

## Conclusions and Recommendations

Regardless of the various drawbacks observed, projects of this type are desirable for State profitability and should not be neglected. The concept of integrated marketing, introduced nearly one and half decades ago in Himachal Pradesh, has proved successful in augmenting the income of thousands of small and marginal fruit growers through the scientific and profitable disposal of their horticultural produce. This has sustained the entire fruit industry in the State on a viable basis. Realizing their benefits, such projects should be replicated elsewhere with suitable modifications in the light of experience gained from this project. Some of the major points which should be considered when formulating an integrated market project are given below.

- o One of the important experiences gained from this Project concerns the response of fruit growers to new technology. It was found that their response was very slow. It took nearly 5-8 years to motivate growers to adopt the new system which, in this case, was responsible for upsetting the entire commercial character of the organisation. The situation deteriorated to the extent that the organisation developed the symptoms of sickness. In order to avoid such situations, it is recommended that these institutions should be classified as "Horticultural Development Corporations": with the primary responsibility of developing suitable infrastructural facilities and operating them until they become commercially viable. If such an enterprise is to be classified as commercial, the well-established financial norms of debt-equity ratio should be strictly followed besides providing adequate financial support for working capital. If these norms are not followed projects are bound to fail.
- o Selection of technology is of vital importance and local conditions should be studied in detail for the successful introduction of technology. From the experience gained so far, it is apparent that a large centralised system of grading and packing does not suit the type of terrain/conditions in the State. It is, therefore, recommended that medium-sized packing sheds at village or *Panchayat* level are more appropriate for the hilly regions.
- o When formulating such projects, each packing shed should be provided with an adequate number of collection centres, so that the desired quantity of fruit can be regulated and procured by the packing sheds for grading and packing.
- o Packing sheds should not be equipped only with mechanical graders, but should have a complete system with chemical washing, brushing, waxing, and packing installed so that growers can enjoy all the benefits of increased value.
- o To operate packing sheds along commercial lines, the investment cost should be kept as low as possible. It has been observed that in hilly areas the cost of civil works is high, thereby making the entire system uneconomical. Therefore, steps should be taken to minimize the cost of civil works by constructing shed rather than concrete buildings.
- o The activities of packing sheds should not be confined only to packing and grading fruit, but efforts should also be made to develop backward linkages by taking up the sale of

fertilizers, fungicides, pesticides, insecticides, power sprayers, and other orchard management-related equipment. This will help to develop a close liaison with the fruit growers, and improve the financial position.

- o The concept of setting up cold storage facilities nearer to the fruit producing areas needs rethinking for places where the majority of fruit growers are small and marginal and cannot afford to store their produce. Therefore, a system of making advance payments against stored boxes is imperative for the success of cold storage. Apart from this, the construction of cold storage is highly capital-intensive. In addition, the factors of seasonal work and low capacity utilisation in the initial periods together inhibit the functioning of cold storage facilities on commercial lines. The viability, however, can be improved if the organisation undertakes the outright purchase of good quality fruit, storing the same in bulk-bins and undertaking the packing/grading in the off-season. The introduction of this concept would require adequate finances for the purchase of sizeable quantities of fruit. This would help to make full use of available cold storage facilities as well as of the benefits of off-season sales.

The construction of small air-cooled stores at farm or village level may also be considered, as these are economical.

- o Cold stores in the producing areas will be of little importance unless refrigerated vans are provided to transport the fruit to terminal markets. It has been observed that the transportation of apples in ordinary trucks causes fruit deterioration, because of high temperatures in the months from March to June in the plains. Therefore, the provision of refrigerated vans is imperative for the success of cold storage in the producing areas.
- o The cold storage of processing grade apples to prolong the processing season is not economically feasible. Therefore, while designing processing plants, the per hour capacity should be more relevant so as to undertake the entire processing of fruits within the season.
- o A detailed market potential survey should be undertaken as well as the designing of suitable marketing strategies at the Project preparation stage. This assumes assigning more importance to items that are non-traditional in nature and appropriate marketing strategies need to be designed to educate the masses regarding the nutritional value of fruit-based processed products. Necessary financial support to undertake publicity and other promotional campaigns should invariably form part of the Project cost.
- o Such institutions should be equipped with a fully-fledged technical division with a multidisciplinary team of experts in the fields of quality control, plant protection, post-harvest management, etc to impart necessary training to fruit growers as well as to the various functionaries of the Corporation.