

## **The Himachal Pradesh Horticultural Produce Marketing and Processing Corporation Limited (HPMC)**

### *Organizational Structure*

The IDA agreement envisaged the formation of a marketing institution in the public sector to take up the implementation of the commercial components of the Himachal Pradesh Apple Processing and Marketing Project. Accordingly, HPMC was incorporated in 1974 under the Companies Act, 1956. The Corporation is governed by a panel of 14 Directors, giving due representation to the fruit growers of the State by nominating them to the Board. The Managing Director of the Corporation is also one of the Directors on the Board. All policy decisions having financial implications are approved by the Board of Directors. In order to conduct day to day administration of the company's business, the Board has delegated power to the Managing Director

With a view to initiating effective steps for the implementation of the Project components, the Corporation was equipped with qualified and competent manpower as per the recommendations of the World Bank. There are five functional divisions viz, Marketing, Finance, Research and Planning, Engineering, and Personnel and Company Affairs. Each division is looked after by a Divisional Head reporting to the Managing Director. The divisional heads are responsible for the efficient functioning of their respective divisions.

### *Physical Infrastructure*

The Corporation set up the following facilities

- o six packing houses, each with a capacity to grade and pack 5,000 tons of apple, per season;
- o four grading houses, each with a capacity to grade and pack 1,500 tons of apple, per season;
- o five cold stores in the apple producing areas, each with a capacity to store 1,000 tons of fruit;

- o one apple processing plant with a capacity to process 18,000 tons of apples and 400 tons of peaches per season; and
- o one transit warehouse.

Apart from the facilities created under the Project, the Corporation operates various other units transferred to it by the State Government, at the time of its incorporation or developed subsequently. These include one apple processing unit with a capacity to process 2,000 tons of apples per season, two cold stores in terminal markets, two transit warehouses located at strategic locations, and two grading houses set up in the tribal areas. A network of sales' offices has been developed, within the State as well as in the major markets of the country, to undertake the marketing of fresh and processed fruit products. With a view to making apple juice the common man's drink, over 400 juice vending machines have been installed at inter-State bus terminals, railway stations, airports, busy shopping complexes, and other important institutions. Chilled, reconstituted, ready to serve apple juice is available at these kiosks at a nominal price.

#### *Activities and Functions*

During the period from 1974-82, the Corporation devoted itself primarily to the development of essential infrastructure for the post-harvest handling of fruit. However, with the limited facilities available, some of the marketing activities were taken up right from the beginning. A brief description of each activity is given in the following paragraphs.

**Grading and Packing.** With a view to introducing a system of centralised grading and packing, twelve packing sheds have been set up. These packing sheds are equipped with mechanical graders. Rather primitive schemes have been introduced and at some places even facilities for washing and brushing have been provided. This system rids the fruit of possible fungus and chemical residues, besides improving its shine.

The Corporation extends the facilities for grading and packing to fruit growers on a fee basis. However, special concessions are admissible to those growers who patronize the marketing channels of HPMC. The packing shed staff visit the fruit growers well before the harvesting season to book their produce, and open plastic field boxes are delivered to the growers to bring their produce to the packing sheds. Each packing shed is also provided with a truck or tractor to facilitate the timely transportation of fruit from the orchards. The fruit so received is graded as per the grades and standards developed by the Corporation in consultation with the State Horticultural Department and the Government of India.

Grading and packing being a highly seasonal activity, steps have been taken to diversify the activities of the packing sheds. Now the packing sheds also undertake the procurement and sale of various inputs such as fertilizers, insecticides, pesticides, fungicides, tools and implements, and sale of processed products. Another important activity is the popularisation and sale of Corrugated Fibre Board (CFB) cartons in place of the conventional timber-based boxes. The State Government has now entrusted the Corporation with the procurement of fruit at support prices. The packing sheds play an important role in the procurement of fruit. Payments to fruit growers against the purchase of fruit or the sale of fruit through the HPMC network is also made from these centres.

**Cold Stores.** A cold storage facility close to the fruit production areas is an integral component in the post-harvest handling of fruit. Five cold stores have been established in the apple producing areas. Each cold store consists of four chambers of equal capacity, operated with ammonia

refrigerant to maintain the desired level of temperature and humidity. These cold stores are also equipped with modern methods of handling fruit such as palletization and fork-lifts. The facility for the cold storage of fruit is extended to growers on a monthly fee basis. Besides, the Corporation also stores good quality fruit, sorted from fruit purchased at support prices.

**Transit Warehouses.** With a view to protecting the fruit from sun and rain during transit, three transit warehouses have been set up at strategic locations from where the fruit is sent to various distant markets. These warehouses are scientifically constructed for unloading and reloading, and provide suitable shelter/storage to fruit arriving from the producing areas. A nominal fee is charged from the consignor which is realised after the sale of the fruits.

**Sale of Fruits on a Consignment Basis.** To ensure competitive prices, the Corporation has made arrangements for the sale of fruit in the major markets of the country by introducing healthy competition with private trade.

**Fruit Processing.** Another important activity undertaken by the Corporation is the manufacture of a wide range of processed fruit products. The Corporation has two modern and highly sophisticated fruit processing plants, the first of their kind in the country. The total crushing capacity of these plants is over 20,000 tons per annum. Earlier, there was no use of the processing grade apples other than to sell them at throw-away prices, to use them as cattle feed, or to destroy them as it was uneconomical to sell. With the development of processing facilities, sizeable quantities of these apples are being processed annually, ensuring remunerative prices to the fruit growers on the one hand and converting them into value-added and health giving nutritious products on the other. Apart from apples, other fruits grown in the State are also utilized for processing. Apple Juice Concentrate is the major product manufactured at these plants, accounting for over 80 per cent of the total value of products manufactured. Other products are natural apple juice, mixed fruit jam, apple jam, canned potatoes, orange and lemon squashes, ginger appetiser, canned peaches, pears in syrup, canned mushrooms, fruit punch, ginger drink, fruit sauce, and pickles.

**Sale of Processed Products.** The sale of processed products is organized through sales' offices of the Corporation located all over the country. The efforts of these branches have been further intensified by appointing distributors/sub-distributors and retailers in various cities.

At present, the most important channel for the sale of apple juice concentrate is the HPMC's juice-vending machines, numbering over 400, where other fruit products manufactured by the Corporation are also available for sale. Through these vending machines, known as 'dispensers', reconstituted apple juice is made available in a chilled condition. This system of dispensing the juice has enabled HPMC to transport apple juice concentrates in bulk barrels thus avoiding excess expenditure.

**CFB Cartons.** The Corporation has developed Corrugated Fibre Board (CFB) cartons for the packing of apples and other fruits as a substitute for conventional wooden boxes. The procurement and sale of such CFB cartons has also been assigned to HPMC by the State Government. The complete switch over to CFB cartons will help to save over 200,000 cubic metres of forest wealth annually.

**Purchase and Marketing of Fruit Government Support Prices.** The HPMC is the organisation appointed by the Government for the purchase and marketing of various fruits at support prices. Prior to implementation of this scheme, the marketing of fruits was faced with the problem of frequent price crashes and government intervention was considered necessary to protect growers from price uncertainties. However, the timely announcement of support prices had a very



positive effect on the market prices of fruits and has helped fruit growers to improve their returns and to solve the problems of marketing their produce.

### *Achievements to Date*

**Physical.** The most notable achievement of the Corporation has been the experience gained in the post-harvest management of fruit. The performance details of HPMC's main activities, marketing, forwarding, grading and packing, cold storage of fruits, fruit processing, and sale of processed products are given in Annex II. The Table reveals that there has been a gradual increase in HPMC's activities, reflecting overall growth. The activity-wise review indicates that the capacity utilisation of grading and packing houses is abnormally low. Even after a lapse of five years only 300,000 boxes could be graded and packed against a rated capacity of 1,800,000 boxes. The various reasons for the low capacity utilisation have been discussed under the heading *Deficiencies Experienced and Lessons Learned*. Similarly, the achievements of cold storage facilities are low. However, the processing plants achieved over 70 per cent of their installed capacity.

**Financial.** The sales and income of the Corporation have shown significant improvement, particularly during the last three years. The major source of Corporation income is from the sale proceeds of processed products, commission from forwarding and sale on a consignment basis, rentals from cold stores, grading/packing charges, and sale of packing material and other items such as fertilizers, fungicides, tools, implements, etc.. The income of the Corporation was expected to increase substantially after the completion of the project facilities, but this could not be achieved to the extent expected, mainly due to low capacity-utilisation, particularly in the initial years. During the past two or three years, a significant improvement has been observed and the turnover has risen to Rs 94.2 million against a turnover of Rs 28.1 million in previous years. This is likely to increase further as more and more fruit growers come into the fold of the marketing organisation introduced by the Corporation.

The profit and loss position reveals that the Corporation has been incurring losses continuously right from the beginning, except for one year. The total accumulated losses as of March 1987 were Rs 106,800,000 against a paid-up capital of Rs 35,800,000. As the losses have exceeded the equity and reserves, the net worth of the Corporation has been negative.

An analysis of accumulated losses revealed that depreciation and interest alone accounted for over 80 per cent of the total losses. The losses started increasing steeply from 1981-82 when the project facilities were put into operation, and the trend continued until 1983-84. Thereafter, a declining trend has been observed. The losses have been reduced to Rs 13,100,000 in 1986-87, against Rs 24,300,000 annual loss in 1983-84. The operating losses (before depreciation and interest) also declined from Rs 3,789,000 in 1982-83 to Rs 1,500,000 only in 1984-85. During 1985-86, the Corporation generated profits of Rs 2,400,000 before depreciation and interest and, in 1986-87, the operating profits further increased to Rs 7,700,000 indicating a continuous improvement in the financial performance of the Corporation.

The financial position of the Corporation did not enable the Corporation to discharge the due debt-service liability which was to commence in 1985-86. The NABARD has appointed a 'Task Force' to suggest ways and means for the rehabilitation of the Corporation so as to make it financially viable.

## *Benefits to Producers*

Although the performance under this project was not very encouraging in the beginning, the outstanding results now being achieved will give this project a new impetus for trade and the development of horticulture, encompassing a successful approach in all the hilly areas. HPMC has now become a leading industrial institution at the national level. It is known at national and international levels for the production of quality fruit products and for helping growers to organise the marketing of their produce in a scientific manner. The benefits accruing to fruit growers are briefly enumerated in the following passages.

- o The immediate benefits to fruit growers have been in the form of remunerative prices ensured to their low grade fruit which otherwise had no alternative use/value. The Corporation directly purchases fruit from the growers to meet the requirements of its processing plants. For the last two years, the Corporation has been purchasing sizeable quantities of various fruits at support prices from the growers.
- o The fruit purchased by the HPMC at support prices is properly sorted/graded and good quality fruit is cold-stored in open plastic field boxes. The balance, unsuitable for storage, is utilised by the fruit processing plants and excess quantities are diverted to various non-traditional markets. This avoids any adverse effect on the prices of fruit in the traditional markets where over 80 per cent of the fruit is normally sold. Thus, fruit growers benefit not only from the sale of their horticultural produce to HPMC, but also by the regulation of the flow of produce in an orderly manner resulting in the creation of favourable market situations.
- o The presence of HPMC in the terminal markets, providing improved services for the sale of farm produce, has not only provided an alternative to the unregulated marketing system, but has also helped to curb the profiteering tendencies of private traders, ensuring competitive prices to the growers. This is evident from the fact that the compound growth rate of the wholesale price of apples was 7.30 per cent per annum for the period from 1974-85 against 0.90 per cent per annum before the formation of HPMCs.

Another significant benefit accruing to fruit growers is through the construction of roads in the project areas. This has increased commercial activities as well as savings in time and transportation costs.

- o The introduction of Corrugated Fibre Board (CFB) cartons as a substitute to traditional wooden boxes for the packaging of fruits is yet another significant contribution to the conservation of the fast depleting natural forest wealth of the State. Table 2 given below indicates the number of cartons used by growers and their percentage in the total export of apples from the State in all types of containers.

The complete switch over to the use of CFB cartons for the packaging of fruits in a phased manner would save over 200,000 cubic metres of wood per annum. Besides the ecological improvement, fruit packed in cartons commands a premium in the market as the bruising of and the quality deterioration in fruit is insignificant. The comparative analysis of prices for comparable varieties and grades is given in Table 3 below. The prices are based on the sales through HPMC in the Delhi market in 1986-87.



**Table 2: Cartons Supplied to Growers and the Export of Apples from the State**

	1986	1987
1. Total no. of boxes of apples exported from the State (in 100,000s)	158	105
2. Fruit exported in cartons	14.34	8.48
3. Percentage of cartons to total exports	9	8

Source: HPMC

**Table 3: Prices Realised from the Sale of Different Categories of Boxes of Apples  
(Rs per carton/box)**

Month	Carton	Wooden
July	112	109
August	75	68
September	46	42
October	50	48
Average	71	67

o The Corporation has also been instrumental in introducing plastics to horticulture. Earlier, fruit was brought to grading and packing sheds in wooden field boxes which were cumbersome and unsafe. This has now been completely substituted by light weight, smooth surfaced, hygienic plastic field boxes. At present, the Corporation has already introduced fifty thousand plastic field boxes which are utilised as returnable containers thus saving wood.

o Another contribution to the reduction in the amount of wood used for packing has been the purchase of sizeable quantities of fruit at support prices and utilising the same either for processing or for marketing in gunny bags/plastic field boxes. The Corporation procured over 25,000 tons of fruit in 1986 and 22,000 tons in 1987; equivalent to 1,375,000 and 1,210,000 standard boxes respectively. These figures clearly indicate that

the Corporation has played an important role in minimizing the use of wood for the packaging of fruits. More importantly the Corporation has saved Rs 46.5 million on account of the subsidy that would have been paid had this fruit been sold in cartons by the growers.

- o Another intangible benefit accruing to society is the improvement in calorie intake by providing nutritious juice at reasonable prices, manufactured from fruit which used to remain unutilized in the absence of processing facilities in the State.
- o Unemployment is a serious problem in developing countries. This project has contributed immensely towards the generation of employment opportunities. There are about 415 personnel employed on a regular basis by the Corporation, generating 72,000 man-days annually for seasonal employment at fruit processing plants, grading/packing sheds, and transit warehouses, etc. The expenditure of the Corporation on salaries and wages is about Rs 9,000,000 per annum.

The outstanding contribution made by the Corporation towards the farming economy in the State has been recognized both at national and international levels. This is evident from the tally of awards won by the Corporation. The International Asia Award, 1983, 1984, 1985, the International Food Award, the *Udhyog Rattan Award*, 1985, and the Marketing Man of the Year Award, 1988 were won by the Corporation. Besides, the Corporation has also won the first prize for apple juice concentrate in the 'All India Apple Show' organized by the Government of India in 1975 and 1981.

#### *Deficiencies Experienced and Lessons Learned*

In the beginning HPMC could not achieve the anticipated targets because of the volatile nature of the apple industry, dictated primarily by the climatic conditions and poor responses of growers towards alien technology. Apart from this, there have been certain inherent deficiencies in project preparation as well as project implementation. This being the first project of its kind both for IDA and India, it was, therefore, obvious that certain deficiencies would exist and the same are discussed in the following.

**Project Formulation Appraisal.** One of the major drawbacks inherent at the time of project appraisal was the classification of grading/packing sheds, fruit processing plants, cold storage, etc. as 'commercial components'. Consequently, the HPMC had to pay 12.5 per cent as cost of capital, and this proved detrimental to its financial status.

The over-estimation of capacity utilisation assumed at the time of project appraisal to be 85 and 100 per cent in the first and second year respectively, was yet another unrealistic and over optimistic assumption. It had not been taken into account that such a project requires a considerable gestation period for growers to become accustomed to alternative methods and innovations.

Centralised grading and packing similar, to that adopted in Europe, the USA, Australia, and other horticulturally advanced countries, is unsuitable for this hill State where the conditions are altogether different in respect of terrain, size of holdings, accessibility, etc. In developed countries, large orchards are situated close to the road and the collection of fruit is not a problem. However, under 'Indian conditions this is a great constraint. Unfortunately, neither were collection centres provided nor proper arrangements made for haulage of crops from orchards to packing sheds. Alternatively, there should have been a network of ropeways connecting the

packing sheds from all sides. However, there being paucity of technology, know-how, and financial resources, this work was not attended to and consequently it has reflected adversely on the working of those packing sheds and cold stores established in the producing areas.

The project envisaged the installation of sizing machines (mechanical graders) only. Essential equipment for washing, brushing, and waxing were not provided for in the project. The installation of additional equipment could have encouraged more fruit growers to utilise mechanical grading and packing as these improve the presentation of the fruit along with its quality and the fruit then commands a premium in the market.

The project had no provision for a publicity campaign for apple juice concentrate, a non-traditional item for consumers in India. As a result, the demand for apple juice concentrate did not match the production, resulting in the carrying over of stocks.

Technical. Technical deficiencies have also been observed in various components of the project. These are described in the following passages.

- o The installed capacities of grading and packing sheds are not feasible. This is evident from the fact that only two workers have access to the grading section for first quality apples and they are unable to pack these apples as quickly as they come from the graders. As a consequence, first grade apples have to be bulked and thus causes bruising and quality loss. The lay-out of existing facilities does not permit even the addition of a conveyor belt so that more packers could be put to work. Another factor affecting capacity is the frequent discontinuity of fruit for grading and packing. It was overlooked at the time of appraisal that a large number of growers would bring their produce in small lots and that the system would have to be discontinued after the grading of one lot so that it could be properly packed. Apart from this, the installed capacity is based on the assumption that the fruit will be available for a period of 60 days in a season, whereas, in practice, the fruit is not available for more than 30 to 40 days in a particular belt/location, thus reducing the working period of the packing houses. It appears that these aspects were not critically examined at the time of project formulation/technical appraisal. These limitations reduced the financial viability of these units considerably. The per hour capacity of machines should have been of a much higher order.
- o The capacity of the fruit processing plant at Parwanu is based on 180 working days per year. This is not realistic as the fruit is available for a period of 90-120 days a season only. The storage of apples is not economically feasible, hence it is not possible to achieve the installed capacity. This disturbs the financial viability of the plant considerably. Had the capacity of machinery been of a higher order, the targets would have been achieved in a shorter period.

#### Financial.

- o The highly unbalanced debt-equity ratio of the Corporation is one of the major reasons for its accumulated losses. The Corporation even achieved a debt-equity ratio of 73:27 against a recommended norm of 40:60 for agro-based projects. Had the Corporation maintained at least a 50:50 debt-equity ratio, losses could have been reduced by over Rs 30 million and its viability would have improved.
- o Lack of working capital from the very beginning has, however, been another financial snag faced in operating at the desired level. Although the project envisaged a provision of Rs 20,000,000 lakhs towards the working capital, the Corporation faced severe resource



constraints on the completion of the Project facilities. As a result, it had to depend heavily upon the commercial banks to meet its day to day financial requirements. This situation forced the Corporation to pay Rs 2,500,000 - 3,500,000 annually as interest to banks. This could have been saved had there been adequate provision/availability of working capital with the Corporation. The Corporation has so far paid Rs 1,300,000 to the banks as interest on working capital alone. The working capital required would have been even more than envisaged in the Project had the Corporation resorted to outright purchase of fruit as per the Project concept. Lack of resources, therefore, not only adversely affected capacity utilization, but also failed to realize the Project concept. Adequate working capital support has recently been extended by the State Government under a rehabilitation package.

### Managerial.

- o The composition of the Board of Directors also needs to be examined closely as all important decisions are taken at Board level. Since the State is the sole owner and shareholder of the Company, the Board is predominantly made up of government officials. There is a near absence of professionally/commercially competent personnel on the Board. As a consequence, the decision making process lacks the basic element of profit-oriented business ethics which one would expect from private business.
- o Autonomy is another aspect which requires attention. The basic reason for public sector undertakings was to release them from the rigid rules and regulations prevalent in Government and allow them enough initiative and autonomy. It has, however, been observed that all crucial decisions regarding employment, promotions, and transfer are taken at the Government level.
- o The Corporation inherited a government style of working rather than one suited to the business environment. This is mainly attributed to the fact that at the time of inception most of the Corporation staff was on deputation from the government.
- o The Corporation could not introduce modern management concepts, such as management by objectives, performance appraisal, participative culture, career planning, reward, and succession planning and promotions are based on seniority cum merit.

Training. Training is an important input which contributes to the efficiency of the total productivity exercise. It has two important components: (a) building up new skills, and (b) updating or upgrading existing skills. Since the Corporation introduced an alien technology, it was imperative to impart training to build up new skills to operate the plant and machinery efficiently. This aspect was given due importance in the Project by providing training for senior and middle level managers in the horticulturally advanced countries of the world where such facilities exist; but the most important aspect, which did not receive attention, was the 'on the job training' of lower functionaries who primarily operate the plants. Similarly, there are no in-house arrangements for conducting training regularly to up-date and up-grade existing skills so as to meet the ever growing techno-managerial requirements.

### Other Problems.

- o An inadequate number of field boxes inhibited the uninterrupted flow of fruit to the packing/grading sheds. This adversely affected the capacity-utilisation of these units. The procurement of field boxes should have been matched with installed capacity.

- o The high cost of setting up packing/grading sheds cold stores, and processing plants makes them financially non-viable. The cost of a packing house with cold storage facilities is as high as Rs 6,000,000 and these are almost entirely financed by a commercial bank loan.