

A STUDY OF SHIMLA MILK SUPPLY SCHEME AN ECONOMIC APPRAISAL, 1977 by J.P. Bhati (Mimeograph)

Abstract

Indian diets are miserably unbalanced in proteins and vital vitamins. Nutritional experts have repeatedly stressed the importance of animal proteins in human diet. Milk and milk products provide protective foods and are the main source of fats and proteins of high biological value. Dairy products are significant in the import list. Such imports may be desirable in the context of improving the diet of Indian people, majority of whom are vegetarian. In order to assure an adequate supply of milk to meet increasing consumption, it's local production must increase. Several factors are necessary for the expansion of milk production – breeding, feeding, disease control and management of livestock, and milk marketing. Efficient marketing is helpful in providing various services both to the producer and the consumer at reasonable cost. Ultimate cost to the consumer consists of the cost of raw product at the producer level plus the cost of several marketing functions- assembly, processing, packaging and distribution. Milk marketing problems are very difficult because of small-scale production, bulkiness and perishability of the product.

In addition to improving the livestock quality, H.P. Directorate of Animal Husbandry took up an onerous task of building up a marketing structure for the procurement and sale of milk and milk products through a net-work of milk plants which serves double purpose: (i) giving inducement (through fair prices of milk) to the farmers in far-flung areas to increase milk production, and (ii) providing pure and hygienic milk at reasonable rates to the consumers in the major cities of Himachal Pradesh. This study provides broad guidelines to the management of the Scheme to improve it's marketing efficiency through more rational functioning. The present research project was undertaken to study the functioning of Shimla milk Supply Scheme and to serve as a Bench Mark Survey.

Objective:

Specific objectives were:

- (a) To examine the economics of Shimla Milk Supply Scheme, and
- (b) to study the broad features of milk supplying and non-supplying households in the Scheme's milkshed area.

Methodology:

The analysis of households is based on the data collected from 50 milk supplying households and 50 non-suppliers of milk for the period November 1973 to October 1974. The data for economic analysis of the Scheme refers to the Calendar year 1974.

Main Finding

Milch Animals & Milk Production & Consumption

During the period 1951 to 1973 there was substantial increase in the number of livestock's of all description in Himachal Pradesh. In the case of cattle the increase was of the order of about 28 per cent and 51 per cent in the case of buffaloes. Total milk production registered an increase of about 46 per cent during a period of 22 years, i.e. milk production in H.P. was 2,25,662 tonnes in 1951 and this increased to 3,28,527 tonnes in the year 1973. The highest increase was in the case of buffalo milk (60%), followed by that of cows (28%) and goats (11%). Although milk production increased substantially in the State but due to correspondingly greater increase in the human population (51% in 22 years), the per capita availability of milk from local resources rather showed a decline (i.e. 259 grammes in 1951 to 251 grammes in 1973).

The Milk Suppliers

A comparative analysis of suppliers and non-suppliers of milk revealed that area under irrigation was nearly twice on farms of non-suppliers (0.24 hectares per farm) as against that of milk suppliers (0.11 hectares per farm). The farms of milk suppliers had more land under grass than that of non-suppliers. The age composition and number of active workers in the family were, by and large, the same on both categories of farms.

But the educational level of the members in the family was higher in the case of households supplying milk. Cropping pattern in general was the same of both categories of farm and no fodder crops were grown in any season.

On the whole, milk suppliers possessed livestock worth Rs.3,078 per farm and non-suppliers worth Rs.1,761 only. Milk supplying farms had 1.5 buffaloes worth Rs.2,398 and non-suppliers 0.9 buffalo worth Rs.921 per farm. Number of sheep and goats were also more on milk supplying farms. The per hectare number/value of animals had inverse relationship with the size of farms of both suppliers and non-suppliers. Composition of total livestock on milk supplying farms revealed that buffaloes accounted for the lion's share (78.68%), followed by bullocks (10.82%), cows (5.55%), young stock (2.48%) and sheep and goats (2.47%). Although, the proportion of buffaloes was comparatively (with milk suppliers) low on the farms of non-suppliers of milk but the order/ranking was the same. During the period November 1973 to October 1974, on the whole, per hectare net addition of livestock was worth Rs.649 on suppliers and Rs.197 on the farms of non-suppliers of milk. Milk suppliers possessed better and high priced animals as compared to their counterpart non-suppliers. Therefore, average milk yields per animal were higher in the case of milk suppliers than those who do not sell milk.

The quantity of milk sold by the milk suppliers was highest during the month of September-October (5.76 litres/day/farm) and lowest during May-June (1.44 litres). The quantity of milk sold was found to have positive relation with the size of farm during all months/periods/seasons. The overall average supply of milk per household worked out to be about 3 litres per day.

Economic Study of Shimla Milk Supply Scheme:

The Shimla Milk Supply Scheme (SMSS) which was started by the Directorate of Animal Husbandry (H.P. Government) in 1972 to provide efficient milk marketing facilities to the farmers, and to supply whole some milk to the Shimla citizens; collects milk from villages around Darlaghat. After collecting milk from village collection

Centres, it is chilled in Darlaghat plant and transported to Shimla where it is further chilled before distribution. Each of the plant has milk chilling capacity of 2000 litres per day.

The economic analysis of SMSS based on the data pertaining to the calender year 1974 revealed that average price margin/returns, i.e. the difference between price charged from the consumer and price paid to the producer by the scheme, was 40 paise per litre. SMSS handled 7,94,918 litres of milk which yielded total returns (TR) worth Rs.3,17,967 during the year 1974. Annual total cost (TC) was Rs.3,92,273 of which Rs.2,35,691 were incurred on fixed inputs and rs.1,56,582 on variable inputs. Average variable cost of milk marketing (collection, chilling and distribution, etc.) was 19.69 paise.

Thus, the Scheme suffered a loss of Rs.74,306 during 1974. The break-even volume i.e. the level of business at which scheme will beat no-loss no-profit point was estimated to be 11,60,468 litres of milk per year. If the scheme handles larger quantity of milk, there will be profits, while a smaller one will yield a loss.

If the Scheme operates both of its chilling plants simultaneously, independently and at full capacity it can handle 14.6 lakh litres of milk per annum, while during 1974 the plants were operated only at 54.45 per cent of their capacity. However, this will be possible only if a horizontal (instead of the present vertical) integration is planned and executed in operating the two plants. At full capacity, Scheme's total returns will be Rs.5,84,000 and the total cost Rs.5,23,165 (i.e. Rs.2,35,691 fixed costs and Rs.2,87,474 variable cost at 14.6 lakhs litres of milk). Thus, the scheme can earn a profit/net return worth Rs.60,835 per year.

Safety margin against risk/uncertainty due to fluctuations in prices and output of the scheme were estimated as 10.43 and 20.52 per cent respectively. If the scheme is operated at full (100% capacity i.e. handling 14.6 lakh litres of milk per year and the

management decides to run it at no-loss no-profit basis, the price margin can be lowered from 40 paise to 35.83 paise per litre.

From cash income point of view, wherein one can neglect the depreciation of assets and consider cash expenditures only, the analysis revealed that the Scheme was still in a cash loss of Rs.27,492 during the year. the new break even volume, considering scheme's cash inflow and outflow only, was computed at 9.29,970 litres per year. When scheme is operated at full capacity, it can earn a cash profit of Rs.1,07,649 per year. The safety margin of prices and output in the short run was 18.42 per cent and 36.30 per cent respectively.