ROLE OF PRODUCERS' ASSOCIATIONS IN THE MARKETING OF BANANAS AND GRAPES IN MAHARASHTRA STATE

BY

Vitthal B. Arote

B. Sc. (Agri.) First Class with Distinction

A Thesis submitted to the

MAHATMA PHULE AGRICULTURAL UNIVERSITY

RAHURI (Dist. Ahmednagar.)

(MAHARASHTRA STATE)

T-1212

in partial fulfilment of the requirements for the degree

of

Master of Science (Agriculture)

in

Agricultural Economics

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DEPARTMENT OF AGRIL ECONOMICS

Post-Graduate Agricultural Institute, Rahuri.

May, 1982.

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May, 1982

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C E R T I F I C A T E

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Dated : May, 1982.

(V.B. Arote)

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Chapter 1

INTRODUCTION

Chapter 1

I N T R O D U C T I O N

1.1. Marketing of Agricultural Products in General and Fruits in Particular :

India has a tremendous potential for increasing agricultural production. However, it is equally important that, merely increased production will not fulfil the requirements of the people unless it is associated with an efficient marketing system. Rod Motley has rightly pointed out that "Nothing happens until somebody sells something". In the developing countries, however, the biggest misfortune is that the marketing is misunderstood and looked down with disdain and contempt due to the fraudulent trade practices of traditional middlemen and business agencies. In technical sense, marketing is a management function responsible for identifying, anticipating and satisfying consumer requirements profitably (Tekade, 1979). The rapid advancement in agricultural research has enabled the country in becoming self-sufficient. However, such a type of technological advancement in agriculture usually requires development of appropriate marketing institutions along with others, for sustained growth of the economy.

It must be stated at the very outset that, marketing is not just selling or distribution. It embraces all the activities that begin with ascertaining the needs of the consumer and the market opportunity setting-up production

to meet this anticipated demand, pricing, distribution, advertising and culminating in the sale of product hopefully at a profit (Ilane, 1979). The modern concept of market is thus one which starts from production stage with interpretation of consumers' needs qualitatively, quantitatively and pricewise and ends up in providing the needed goods and services with necessary after-sale service wherever essential. But looking to the present situation it is clearly observed that marketing of farm produce has remained to be one of the greatest obstacles in the process of development of agriculture in India, as a result of which not only the interests of producers and consumers have gone in vain but also, it has affected the process of capital formation in agriculture and distribution of gains among the masses (Ilane, 1979). Moreover, agricultural marketing problems relate to the physical, financial and technological deficiencies. In fact, agricultural marketing is one of the manifold problems having a direct bearing upon the prosperity of the cultivators in the country. From the farmers' view point, an efficient marketing system is one which maximizes his total returns from the given transaction, in addition to the fact that the product-market should keep on expanding.

The types of products sold by the farmers are mainly of two; one is perishable and the other is non-perishable. Foodgrains, including cereals, pulses and oilseeds, come under the category of non-perishables. The problems in

marketing these non-perishable products are not much complicated because of their nature, while the perishables like vegetables, flowers, fruits and products of animal origin do pose several problems during their marketing. Hence, marketing of perishable products has attracted the attention of many economists.

1.2. Production of Fruits in Maharashtra With Special Reference to Bananas and Grapes :

Cultivation of fruit crops for market is marked by commercilization of agriculture. Successful fruit growing requires unusual knowledge and skill, accuracy and thoroughness in production and marketing. It appeals to more progressive and commercial minded cultivators because it is highly profitable as well as the problems connected with their production and marketing pose a challenge to their abilities. The cultivators who have mastered the technique of crop production and rational use of various production inputs, do undertake cultivation of fruit crops. This fact is prominantly noticed in Maharashtra where a variety of fruit crops are grown in different agro-climatic zones of the State. The important fruit crops grown in Maharashtra are oranges, mangoes, bananas, grapes, coconut, cashewnut, pineapple, chikoo, etc. Among these fruit crops, bananas and grapes occupy a place of pride in the agricultural economy of Maharashtra in general and western Maharashtra in particular.

These days banana crop has acquired a commercial

importance on account of increase in the acreages under the crop in response to increased demand all over the country. Rapid pace of industrialization and economic development of urban centres have contributed to the increased demand for bananas. The technology of production has been almost standardized and which, if followed, assures the cultivator, on an average, high level of production. In India, major banana growing States are Kerala, Gujrath, Tamilnadu, Karnataka and Maharashtra. The acreage under banana in Maharashtra is increasing every year. In the year 1977-78, the area under banana cultivation was 45,000 hectares with the production of 1,03,200 tonnes. Maharashtra, thus, accounts for 22.3 per cent of the total production of banana and nearly 15 per cent of the total area under banana in India.

Among the commercial crops grown in India, grapes have given the highest output-input ratio. Inspite of this, its introduction in various climatically favourable regions of India has been very low. It is because of the fact that, the cultivation of this crop requires the use of most sophisticated inputs as well as appropriate cultivation practices to secure high yields. In India, Maharashtra, Karnataka and Tamilnadu are the main states which produce grapes. Probably, Maharashtra has more acreage under grape cultivation in India. As a result of extensive research work, new effective methods of prevention as well as control of diseases and pests and new techniques for

pruning and training of vines, the area under grape has been increasing in the state. The area under grapes in Maharashtra is recorded at 4000 hectares and the production of grapes is 1,00,000 tonnes.

1.3. Problems of Marketing of Bananas and Grapes

Since bananas and grapes are perishable in nature, there are many complexities in the marketing of these fruits. The marketing of these fruits needs quick transportation and proper storage facilities. Besides this, localised consumption of these fruits in towns and cities and relatively less inclination of the consumers towards consumption of processed products involve a large number of intermediaries for performing different marketing activities. The factors like seasonality in production, scattered production on small scale and high marketable surplus in relation to the total production, necessitate introduction of modern methods of harvesting, ripening, grading,packaging and faster means of transport. Proper storage and processing industries have to be created so as to absorb peak supplies and assure off-season supplies to the markets.

It is commonly observed that, the marketing of banams and grapes involves a large number of intermediaries for performing different activities like transport, storage, packaging, grading and sale of fruits in distant markets.

These intermediaries, in turn, take away high margins from the price paid by consumers and to that extent producers are deprived of their legitimate share in consumer's price. Though the price movements in different markets are determined more or less by demand-supply forces, the market margins of different intermediaries are not, in any way, controlled by any restrictions. In fact, the aim of orderly marketing is to ensure that the producer gets reasonable price for his produce by eliminating waste and reducing the cost of distribution. The existing fruit trade is characterised by malpractices by way of multiplicity of market charges, unauthorised deductions, superfluous middlemen and lack of storage facilities. In order to overcome these problems, the marketing system needs to be improved either by bringing about complete regulation on fruit trade or by resorting to an efficient alternative marketing system.

1.4. Producers' Association as an Alternative Marketing Agency

Recognizing the need for improving marketing system for agricultural produce, our country has advocated establishment of co-operative marketing agencies since long. Some attempts seem to have been made by the producers of bananas and grapes in Maharashtra to form producers' associations to take up marketing activities. It has also been reported that, such associations are doing well in safeguarding the

interests of fruit producers. These associations are established with the following objectives.

1. To find out new markets for the banana and grape produce which will fetch higher prices for the same;

2. To provide inputs at right time and at reasonable price;

3. To construct storage houses;

4. To perform multi-business activities for enhancing production of respective fruits; and

5. To provide incentives to producers for increasing acreages under the fruit crops.

Besides these, the grape growers' associations supply packaging material to the producers and supervise the marketing activities. They also provide technical assistance to their members.

1.5. Topic of the Study :

Now a days, producers' associations have been looked upon as alternative marketing agencies in the fruit trade. The members of these associations derive certain advantages from marketing of their produce through these associations. It is, however, noticed that, the entire trade in the case of bananas and grapes has not yet been taken over by such associations. On the contrary, these associations are

working parallel to the traditional private agencies in marketing of bananas and grapes. It is, therefore, thought better to study, in detail, the role of producers' associations in marketing of these fruits. The topic viz., "Role of Producers' Associations in the Marketing of Bananas and Grapes in Maharashtra" has been, therefore, selected for the present study.

The present study is one of such efforts for having a bird's eye view of fruit trade. From several past studies it is seen that for both of these fruits there is more exploitation of fruit growers by the intermediaries. There is, therefore, a need for giving more emphasis on finding out the effective methods of marketing of these fruits to assure increased share of consumer's rupee to producers of these fruits.

It is expected that this study will throw light on the effectiveness of producers' associations in fruit trade vis-a-vis traditional private agencies.

1.6. Objectives of the Study :

The study is undertaken with the following objectives :

1. To identify marketing channels in the marketing of bananas and grapes through producers' associations and traditional traders.

2. To study marketing costs of bananas and grapes through producers' associations vis-a-vis traditional traders.

3. To estimate price spread in the marketing of bananas and grapes through producers' associations vis-a-vis traditional traders.

4. To study, in detail, the working of producers' associations of bananas and grapes.

1.7. Hypotheses of the Study .

The goal of any efficient marketing system is to maximize producer's share in consumer's rupee without affecting interests of consumers. Since producers' association is looked upon as an alternative marketing agency to traditional private agencies in fruit trade, the following hypotheses are proposed to be tested to fulfil requirements of the objectives of the study.

1. The producers' associations are safeguarding the interests of the fruit growers.

2. The individual sellers are being cheated in the traditional system of fruit marketing.

3. Due to a large number of intermediaries, producer's share in consumer's rupee has always remained to be less.

1.8. Scope and Utility of the Study :

The present study is expected to throw light on the comparative advantages of producers' associations vis-a-vis

traditional traders in the marketing of bananas and grapes. After going through available literature, it is seen that such an attempt has not been made so far, eventhough quite a large number of producers' associations are working in this field. It can, however, be said that the promotion of producers' associations on the basis of their comparative advantages will certainly enhance returns to the fruit growers and thereby provide incentives to them to increase area under the production of these fruits. The findings of the study relating to marketing charges, marketing problems and relative efficiency of alternative marketing agencies will benefit the fruit growers in decision making in the areas like choice of market, choice of marketing agency, distribution of total produce among different markets, etc. The study will also be of immense use to the planners, government and producers' associations in formulating appropriate marketing strategies for the fruit trade.

Chapter Opener Page

Chapter 2

REVIEW OF LITERATURE

Chapter 2

REVIEW OF LITERATURE

The strategic role of marketing in contributing towards economic development of a country has been widely accepted. Drucker (1958) has gone so far as to say, "If we want economic development with freedom and responsibility, we have to build it on the development of marketing". Of the three pillars of agricultural economy viz., production processing and marketing, the last one is the most important and supports several other agricultural activities. An attempt is made in this chapter to bring together the findings of some of the studies closely related to the topic of the study so as to get guidelines for completion of the present study on scientific basis. The reviews have been divided into the following groups :

1. Marketing of fruits in general
2. Marketing problems
3. Marketing functions
4. Marketing agencies/channels
5. Production costs
6. Marketing costs, price spread and marketing margins
7. Regulation of markets
8. Co-operative societies/associations.

2.1. Marketing of Fruits in General :

Marketing of fruits is one of the most important tasks before the farmers. Marketing involves transfer of goods

from producers to consumers. The various surveys conducted at the national level and academic exercises contemplated by a large number of research workers at the regional and farm levels have served a source of information about the general market situation. In case of marketing of fruits, however, the studies are very limited.

Kahlon and Randhawa (1956) studied the marketing of horticultural products and concluded that the solution of marketing problems starts at production stage. Moreover, seasonal fluctuations in the prices of horticultural products were not only due to over production but more due to bad distribution. They suggested that the cultivation of early or late varieties, processing of horticultural products, development of cold storage and freezing industry could play a tremendous role in the orderly marketing and distribution of fruits.

Jansen and Neuray (1968) analysed the main effects of the common market on those sectors directly concerned with the production, trade and consumption of fruits and suggested that there is a need for improving the marketing system such that it will not only increase the production but also enhance the trade and consumption of fruits.

An efficient marketing of fruits, thus, forms the basis for increased profitability to the producer.

2.2. Marketing Problems :

In case of fruit crops, the marketing problems are relatively more serious. Moreover, agricultural marketing problems relate to the physical, financial and technological deficiencies.

Schoor (1965) made an analysis of the marketing problems of agriculture with special reference to the effect of supply pressure and concluded that no marketing scheme can operate successfully without some degree of control over supply. Inter-co-operative limitation of supply is also possible.

Laskar (1976) found that one of the major marketing problems the small farmers faced was that they received considerably lower prices for their produce as compared to medium and bigger ones. They sold their produce at the distress sale to the village traders and money lenders due to the necessity of urgent cash.

Shirazi (1979) revealed from his study that there are considerable difficulties in marketing agricultural products. There are complex channels and variety of marketing margins which ultimately reduce the share of producer.

The above studies indicate that there are many problems associated with marketing of fruits. In order to overcome these problems, there must be well established market functions.

2.3. Marketing Functions :

The marketing functions which are the bases for sound market system of fruits are studied by some of the research scholars.

Cannon and Witchert (1953) studied the improvements to be made in packaging. It was concluded that the package should protect the product, carry it in convenient quantities, keep marketing cost down, advertise and stimulate its purchase and provide necessary information to the buyer.

Pannu and Sidhu (1963) studied the economics of grading of sweet oranges and found that the graded fruits fetched a premium of 12.9 per cent over the ungraded fruits.

Abbott (1967) suggested measures those could be taken to strengthen farmers' bargaining power and competitive pricing as by public provision of market information and advice, credit institutions and local warehousing facilities or by reducing barriers to the entry of new trading enterprises.

Siddappa (1967) explained the scope for development of preservation of fruits and vegetables in India. He suggested an integrated approach for the industry as a whole and explored the possibilities of export promotion by which India could earn a lot of foreign exchange and thus help the economic development of the country.

Thakur (1971) concluded that storage and transportation facilities are not adequate in apples. Storage is done in the

ordinary storage structures and the residential buildings are being used for grading and packaging of the fruits.

Srivastava (1971) stressed the need of quicker and properly arranged transport facility. He further explained that the fruits like grapes which are highly perishable in nature should be stored in such a way that they will not loose their quality even for a distant markets.

Raghubanshi and Sharma (1977) stated in their paper that grading is a common 'yardstick' to measure the quality variation. It helps in creating mutual confidence between buyers and sellers, the consumer gets the quality he wants and the producer a better return.

Important considerations while selecting packaging material were mentioned in detail by Ojha (1981). These were such as; economy, protection to inner contents, comfort and convenience, refilling and reuse containers, reuse of containers for other purposes, hygienic, attractiveness, consistancy in packaging, packaging in varying sizes, educative value and statutory requirement.

2.4. Marketing Agencies/Channels :

From the above, it can be seen that there are many marketing functions. In order to perform these functions efficiently, there is a need for many marketing agencies and channels. In return of performing different marketing functions, these agencies claim different charges alongwith

their profit margins. Some of the researchers have tried to understand marketing agencies/channels in case of marketing of fruits.

Bush (1965) found that marketing in North Germany was done mainly by wholesalers. Co-operative marketing predominated in a few regions and owners of scattered orchards outside the main fruit growing area preferred to sell direct to consumers.

Thakur (1971) found that marketing system for apple is purely a private one. Most of the small growers market their produce through contracts at the farm. Sales in the market through agents, middlemen, co-operatives and retailers to consumers are the other channels used.

Karansingh and Gurtej Singh (1971) studied the following three different channels of marketing.

i) Producer _____ consumer

ii) Producer __ Wholesaler ___ Retailer ___ Consumer

iii) Producer ___ Retailer ___ Consumer

Patil and Dhongade (1978) found out the following two channels in the marketing of pomegranates.

i) Producer __ Commission agent __ Retailer __ Consumer

ii) Producer __ Pre-harvest dealer __ Commission agent __ Retailer __ Consumer.

2.5. Production Costs :

The profitability of fruit production could be

determined only after deducting production and marketing costs from the gross returns. There is, therefore, a need for estimating in detail the production and marketing costs.

Nayer (1962) worked out the cost of cultivation of banana in two regions in Kerala and found that the cost of banana cultivation differs from region to region and variety to variety.

Sharma and Bednhop (1964) concluded that the total expenditure incurred by a grower to establish a vineyard averaged to Rs. 7,936 per acre. Of these costs, 87 per cent or Rs. 6,904 are required during the first year.

Borey (1965) worked out the cost of cultivation of banana on different sized holdings in Jalgaon district. His estimates of cost of cultivation per hectare at different cost concepts viz., Cost A, Cost B and Cost C were Rs. 5,017.86, Rs. 6,133.27 and Rs. 6,701.08 respectively.

Mogre (1973) revealed that the total cost required for banana cultivation in Parbhani district was Rs.2,423.64 per acre at Cost C level.

Punde (1973) concluded that the grape requires a very high initial cost of establishment and cost differs from one variety to the other. The net cost of establishment of vineyard was very low in case of Selection-7 due to higher yields at the first harvest than that of Thompson Seedless and Anabeshahi.

2.6. Marketing Costs, Price Spread and Marketing Margins

Cheema (1932) published a bulletin on marketing of fruits and vegetables in Bombay. He reported that the commission charges were as high as 20 to 25 per cent of the value realised and they caused a heavy burden on the consumer. He suggested that it should not exceed 4 to 5 per cent of the value of the product.

Sayanna (1948) reported that cost of marketing in India was 73.60 per cent, 57.72 per cent and 43.87 per cent of the consumer's price in case of grapes, oranges and potatoes, respectively. High cost of marketing indicates that large part of consumer's rupee is consigned towards charges of the intervening agencies between the producer and the consumer.

Agarwal (1949) reported that in Uttar Pradesh the producer received only 57.2 per cent of the consumer's price in case of potato. Wholesaler's and retailer's margins were 6 per cent and 8 per cent, respectively; whereas handling and marketing charges accounted for 20 per cent and 8.8 per cent respectively.

Karansingh (1967) found that the grading and packing together formed 72.60 per cent of the total marketing costs in the primary markets and 64.13 per cent in the terminal market. Transportation accounted for another 10.96 per cent and 34.24 per cent of the total marketing costs for sale in

these markets, respectively. He also worked out the relative share of producer and other functionaries for the important marketing channels. The break-down of the consumer's rupee by different marketing channels showed that the producer got the maximum share of the consumer's rupee (71.48 per cent) by selling his produce to retailer through commission agent in the primary market. The retailer's margin was also the highest in this channel, being 15.19 per cent of the consumer's rupee. The producer's share in the consumer's rupee was minimum, being 53.70 per cent only by selling to the pre-harvest contractor. The retailer's margin increased from 5.72 per cent to 15.91 per cent by purchasing from producers through commission agents.

The results of analysis attempted by Thakur (1971) about marketing margins and price spread showed that the producer gets less than 50 per cent of the consumer's price of apple. More than 40 per cent of the marketing margin goes for commission and profit of the middlemen in the market.

Karansingh and Gurtej Singh (1971) examined that larger the number of intermediaries; the lesser was the producer's share in the consumer's rupee. Also different intermediaries had different effects on the distribution of shares of the producers and consumers. When the pre-harvest contractor was eliminated, the producer was benefitted. When the

wholesaler was also eliminated, cost of the benefits percolated on the retailer.

Patil and Pawar (1976) found that a major share of the consumer's price has gone to the intermediaries. The fruit production activity being scattered and away from the consuming area, one can understand the need for different marketing services for efficient movement of fruits from producing areas to consumers and the expenses thereon. However, the retailers for their limited efforts are undertaking advantages from the fruit trade and to that extent, the producers are deprived off from getting due shares for their instantaneous efforts and huge investment in the production of fruits on one side and on the other, the consumers are forced to pay higher prices for the fruits. It was observed that the retailer's share in consumer's price remained very high i.e., ranging from 35.15 to 52.30 per cent.

Patil and Dhongade (1978) found that the producer's share in consumer's rupee in Bombay and Rahuri markets was 44.55 and 64.96 per cent respectively in case of pomegranates.

Shirazi (1979) revealed that there are many channels of marketing which absorb variety of marketing margins between producer and consumer. These margins are very high for fruits, vegetables and livestock.

Tayade and Patil (1981) concluded from their study

that during the peak period of arrivals of the vegetables, the wholesale and retail prices were much lower. There was wide difference between wholesale and retail prices. The margin of retailer was extra ordinarily high in all the vegetables under study. In case of onions, the producer's share in consumer's rupee worked out to 57.73 per cent while the retailer's margin was 33.98 per cent. In case of potato, producer's net share and retailer's margin in consumer's rupee were approximately on par i.e., 49.32 and 45.96 per cent, respectively. In green chillies, producer's share in the consumer's rupee was to the extent of 56.73 per cent, while margin of the retailer was 32.93 per cent. In case of brinjal, these shares were 32.77 per cent and 61.35 per cent, respectively. It could be revealed from the above studies that the share of producer in consumer's rupee is relatively very low in case of the fruits. The marketing agencies have, thus, succeeded in deriving higher margins from fruit trade by resorting to various malpractices.

2.7. Regulation of Markets :

In order to check the malpractices of the middlemen, some of the researchers have advocated the policy of regulating the markets. While giving stress on regulated markets, they have demanded statutory control on marketing activities of middlemen.

Vaswani (1948) concluded from his study that regulation

of markets avoids most of the evils of disorderly or dishonest marketing. It provides facilities for inducing orderly marketing thereby making things simple for the innocent and unsophisticated producer by way of laying down fixed and scheduled charges so that no unfair advantage is or can be taken at the ignorance of the illiterate producer.

Mirchandani and Hiramandani (1966) concluded that the regulated markets had exercised a very wholesome influence on the marketing structure and have generally raised the marketing efficiency at the primary level i.e., at assembling point.

Laskar (1976) concluded that charging of unwanted fees and commissions by unscrupulous middlemen could be checked by statutorily regulating the agricultural markets, particularly the fruit markets. The market committee would arrange for direct sale of small farmers' produce without engaging the services of commission agents.

Sivarama Prasad (1980) had put good thought on the role of the regulated markets in the development of orderly marketing system. He concluded that the regulation of marketing is the most important institution in the field of agricultural marketing. It will eliminate malpractices and motivate more farmers to utilize the regulated markets where competition is greater and produce prices are higher. Produce losses could be reduced to the extent of 33 to 66 per cent and unauthorised deduction completely eliminated.

2.8. Co-operative Societies/Associations :

Some of the research scholars have hold a view to encourage formation of producers' associations on co-operative lines to take up to the activities of fruit marketing. The Agricultural Marketing Association of India (1950) recommended that in order to increase the share of the growers in the price paid by the consumer, the growers should organise associations which would arrange for the sale of fruits either directly or through commission agent.

Kahlon and Randhawa (1956) suggested to eliminate too many intermediaries and retailers employed in marketing and to form growers' co-operatives which in turn can help to a great extent in reducing marketing cost through scale economies.

Shriniwasan (1960) suggested to form co-operative processing societies in order to ensure higher returns to the producer.

Jakhade (1965) indicated that cultivators have been by and large, benefitted from co-operative marketing. Price received by selling produce through co-operatives is higher than that from private traders. Market charges are also low in case of the co-operatives.

Karansingh (1967) found that the costs could be decreased by 10.27 per cent and gross returns increased by

21.21 per cent through co-operative marketing. There was a net gain of 22.33 per cent through co-operative marketing.

Laskar (1976) suggested that the problems of early and distress sales of small sized lots could be allevisted through organisation of co-operative ventures. Co-operative credit and marketing societies linked together would multidimentionally assist small farmers. Co-operative marketing societies would arrange for pooling their produce to confer on small farmers the benefits of bulk sale and economies of scale in the cost of marketing. Pooling of produce would also enable the co-operatives to grade the farmers' produce for a better market.

Balwinder Singh and Sidhu (1978) suggested that mango growers should come forward to form their own co-operative society for marketing and processing of their mango fruits. In one way it would give a hard competition to their counterpart commission agents and wholesalers and in the other, it would increase their profit margins.

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METHODOLOGY

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Chapter 3

M E T H O D O L O G Y

A scientific study of any problem requires the investigator to adopt appropriate methods and procedures in order to arrive at meaningful conclusions.

The present chapter, therefore, deals with the plan of investigation, sources of data used in the study and analytical procedures adopted for arriving at the results useful for accomplishing the objectives of the study.

3.1. Data Requirement :

The data required to study the role of producers' associations in the marketing of bananas and grapes were obtained from the sample cultivators as well as from the sample of producers' associations. The data were also required on the general economy of the area selected for the study in order to make the readers aware about the agro-economic base where particular findings of the study are relevant. The data requirement of the study was, therefore, in respect of the following aspects :-

1. Information on agro-economic features of the study area.

2. General information of the sample farms regarding cultivated area, fixed capital investment, other property assets, land use pattern, irrigation facilities and cropping pattern.

3. A detailed information about the cost of cultivation, returns and net returns in respect of the crops under study.

4. Information on packaging, mode of transport, market places and market agencies.

5. Information on marketing costs and net returns.

6. Information on detailed working of the associations/societies.

7. Information on different problems of the sample farmers.

3.2. Selection of Area

It was planned to study the role of producers' associations in the marketing of bananas and grapes in those areas in Maharashtra where producers' associations are available and are actively engaged in the marketing of bananas and grapes. With this view in mind, Jalgaon and Sangli districts were selected for the bananas and grapes, respectively.

3.3. Sampling Design :

The study is based on the factual information at the farm level obtained from the sample farms selected for the study.

The basic data were to be collected from the two sets of producers of bananas and grapes. The first set comprised

of the producers who are members of the producers associations and also who market their produce through such associations. The second set necessarily constituted the producers who depend on traditional traders for marketing of their produce. Accordingly, it was decided to select samples of 40 banana producing cultivators and 40 grape producing cultivators under each of these two sets by adopting three-stage-stratified random sampling design with tehsil having relatively high acreage under the respective crops as a primary unit, village as a secondary unit and producer of bananas and grapes as an ultimate unit of sampling. Similarly, the details of working of producers' associations were studied on the basis of information obtained from a sample of such associations. The procedure adopted for drawing samples of producers of bananas and grapes is outlined below.

i) Selection of Tehsils

From each of the two districts, two tehsils were selected to represent respective fruit growing regions of the districts. Accordingly, Raver and Yawal tehsils of Jalgaon and Tasgaon and Miraj tehsils of Sangli district were selected to represent the banana and grape growing regions, respectively.

ii) Selection of Sample Villages :

In order to select sample villages, the lists of all

the villages in the respective tehsils along with acreages under the fruit crops were obtained from the revenue records. Three villages having relatively more acreages under the respective fruit crops were selected from each of the four tehsils.

iii) Selection of Sample Farms :

The consolidated lists of the cultivators growing grapes and bananas in the selected villages were prepared separately for the members and non-members of producers' associations. The cultivators of both grapes and bananas were arranged in the ascending order of the acreages under the respective crops. From each of these four lists, 40 cultivators were selected at random to constitute the samples of the study. Thus, fourty units from total cultivators who used to sell their produce through traditional traders were selected for each of the two fruit crops. Similarly, forty units from the producers who were members of the producers' associations and who used to sell their produce through such associations were selected for each fruit crop. Besides this, four producers' associations of banana and two producers' associations of grape were selected to study in detail working of the producers' associations.

3.4. Collection of Data :

The data were collected by survey method through personal interview of the samples of fruit producers and

producers' associations with the help of comprehensive questionnaire specially designed for the purpose. A speciman of the questionnaire used for the purpose is given in Appendix-I. The data for the reference year 1979-80 were collected during January and February, 1981.

3.5. Analysis of Data :

The data thus collected were further compiled and analysed. The analysis of data was contemplated to estimate costs of production and marketing of the fruit crops as well as returns thereof for the different sets of producers.

The data were analysed on the following lines.

a) Cost of Cultivation of the Crops Under Study : For studying the role of producers' associations in the marketing of bananas and grapes in Maharashtra, it was necessary to work out the cost of cultivation of these crops to facilitate estimation of net returns to the farmer. While calculating the cost of cultivation of these crops, the various cost concepts standardized at the Seminar on Agricultural Price Policies organised by the FAO/ECAFE in New Delhi in March-April, 1958, with the co-operation of the Government of India, were followed. The procedure of evaluation and allocation of different costs is given in Appendix-II. The cost concepts used are as under.

Cost A :

This is a paid out cost consisting of hired human labour, bullock labour, seed material, manures and fertilizers, plant protection measures, water charges, land revenue and other taxes, depreciation and cost of repairs to implements and interest on working capital. The aggregate of costs on these items is described as 'Cost A and it represents the actual out of pocket expenditure on cultivation.

Cost B :

The imputed cost representing rental value of owned land and the hypothetical interest on the capital invested in farm business, that would have earned if invested alternatively, is added to Cost A to arrive at Cost B.

Cost C :

It is the sum of Cost B and imputed value of owned human labour.

The various costs defined above provide different measures of returns to the cultivator. The difference between the gross return and Cost A represents the total return to the cultivator for his labour, investment and enterpreneur's profit. The surplus over Cost B provides an estimate of return which corresponds to the holding's own labour and profit and any surplus on the basis of Cost C provides an estimate purely of profit for the concerned enterprise.

ii) Cost of Marketing : In order to work out the net profit accruing to the cultivator, it was necessary to consider the cost of marketing as one of the major cost components. While calculating the marketing cost, the following items were considered.

i) Packaging cost
ii) Transportation cost
iii) Loading and unloading cost
iv) Different market charges, and
v) Share of the different agencies involved in marketing of the produce.

Finally, the averages and percentages estimated from the data corresponding to the two sets of producers of the individual fruit crops were compared in order to understand the role of producers' associations in the marketing of bananas and grapes. Lastly, the costs and returns of the producers' associations were also studied in detail to work out the economics of the fruit trade handled by them.

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Chapter 4

AGRO-ECONOMIC FEATURES OF THE STUDY AREA

Chapter 4

AGRO-ECONOMIC FEATURES OF THE STUDY AREA

India being a vast country with a great variability in climatic factors, geographic conditions and natural resource endowments, the findings of any field research study in agriculture at the micro-level cannot be generalized at the national level. However, the findings of such studies can be taken for granted as relevant for those areas having similar conditions with regard to above factors. The findings of any field research study, therefore, must follow a clear mention about the agro-economic features of the study-area to facilitate better understanding of the observations and also to apply the same in other areas with similar features.

The present chapter is, therefore, devoted to discuss, in brief, some of the agro-economic features of the study-area, namely Jalgaon and Sangli districts. Wherever necessary, the information about the selected tehsils is also given just to facilitate comparison and to get better idea of the economy of the tehsils and their place in the district.

4.1. Physical Features of the Study Areas

4.1.1. Physical Features of Jalgaon District

4.1.1.1. Location and Boundaries

Jalgaon district, located in the north of Maharashtra state, lies between 20°.0' and 21°.0' north latitudes and

.1.

AP OF JALGAON DISTRICT SHOWING SAMPLE TAHSILS AND VILLAGES SELECTED FOR STUDY

74°.55' and 76°.28' east longitudes. Stretching nearly 128 km along the Tapi river and varying in breadth from 112 km to 144 km, Jalgaon district forms an upland basin, one of the most northern sections of the Deccan table land. Along the whole northern frontier, the district is bounded by the Satpuda ranges, a mountain tract from 48 to 64 km wide. On the north-eastern side, the district is bounded by the territories of Madhya Pradesh State. Quite a major portion of the northern boundary is marked by Aner river separating Jalgaon district from Dhule district till it joins Tapi river. On the east and south-east, a range of low and detatched hills and some major streams, without any marked natural boundary, separate Jalgaon district from the districts of Vidarbha region. To the South, the Ajanta, Satmala and Chandor hill ranges may roughly be said to mark the line between Jalgaon district and Marathwada region. On the West, Jalgaon district shares its boundary with Nasik district over a stretch of about 40 km and then with Dhule district for about 80 km. The Panzara river is the only natural feature demarcating this boundary over a major stretch. The total geographical area of the district is 11771 sq km divided into 13 tehsils.

4.1.1.2. <u>Topography</u>

Although Jalgaon district belongs to the Deccan uplands of the Maharashtra State, it is distinguished from the rest of the upland districts by its westward gradient.

While rest of the upland region is drained by the major rivers to the east, the Tapi and its tributaries drain the Jalgaon region to the West towards Arabian sea. The landscape is typically that of the Deccan lavas with residual hill ranges and broad valleys with trap dykes introducing a sharp local contrast as small chains of hillocks. Thus, Jalgaon district includes varied topographical features and landscapes consisting of hills and wild forests, rich gardens and grooves, stretches of barren plain, low rolling rocky hills and tensely gullied topography near major river banks. Regionally from east to west, paralleled with the Tapi, are three well-marked belts of country, in the centre the rich Tapi Valley, in the north the high and wild Satpuda and in the South and South-West bare ridges and rich well-watered valleys flanked by the Ajanta range.

4.1.1.3. Soils :

The soils of the district are essentially derived from the underlying basalt, which can be broadly classified in the categories of deep black soil, medium black soil, forest loam and sandy. The central belt of the wide Tapi valley, about half of the whole area, consists either of black alluvial clay highly retentive of moisture or of a loam overlying a stratum of yellowish clay of good depth. On the northern border, the Satpuda hill region is under forest cover. Towards the South of main Satpuda range, the soils are rich and alluvial. The soils are medium black and light in the hilly areas of the southern zones.

4.1.1.4. Climate and Rainfall :

The climate of this district is generally dry except in the monsoon. The year may be divided into four seasons. The cold season from December to February is followed by the hot season from March to May. June to September is the monsoon season and October and November from the post monsoon season. December is the coldest month, while May is the hottest month. As the district is far away from the coastal track, large variation is noticed in the day and night temperatures.

The average annual rainfall in the district is 827 mm and about 75 per cent of the same is received during the monsoons. The rainfall is not uniform in all the parts of the district. The central part of the district receives comparatively high rainfall followed by the eastern and western parts of this central division. The district receives rainfall almost entirely from the south-west monsoon, which is relatively very high during June-September.

4.1.1.5. Rivers .

Tapi and Girna are the important rivers in the district. The other rivers are Bhokar, Suki, Mora, Harki, Manki, Guli, Purna, Bhagavati, Vaghur and Bori.

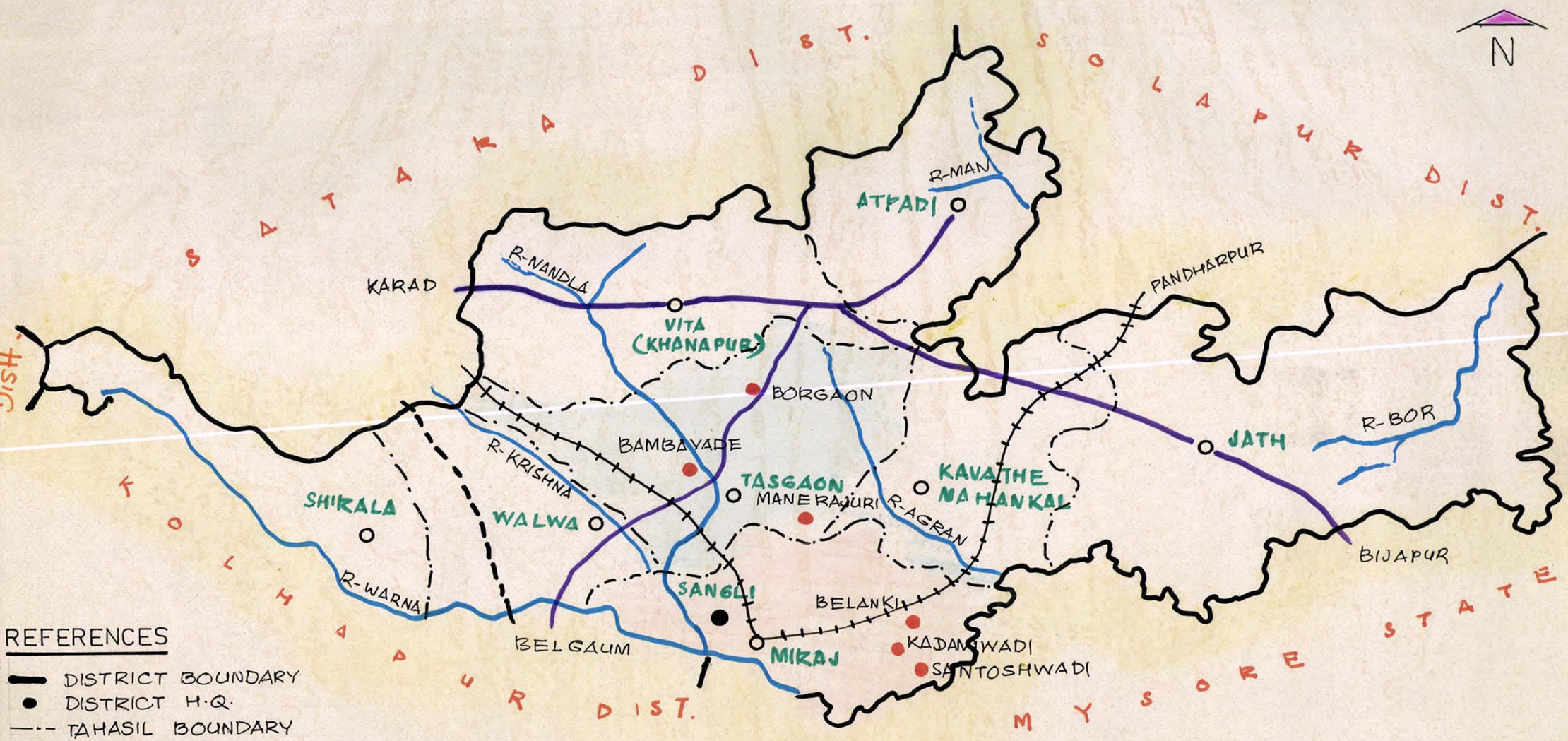
4.1.2. Physical Features of the Sangli District :

4.1.2.1. Location and Boundaries :

The district is a part of Deccan Plateau and lies

2.

P OF SANGLI DISTRICT SHOWING SAMPLE TAHSILS AND VILLAGES SELECTED FOR STUDY



REFERENCES

- DISTRICT BOUNDARY
- DISTRICT H.Q.
- TAHASIL BOUNDARY
- TAHSIL H.Q.
- NATIONAL HIGHWAY
- STATE HIGHWAY
- RAILWAY
- RIVER
- SELECTED VILLAGES
- SAMPLE TAHSILS
- SAMPLE TAHSILS

between 16°.45' and 17°.33' North latitudes and 73°.42' and 75°.40' East longitudes and is to the extreme south-east corner of the Maharashtra State, close to the border of Karnataka State. The district is surrounded by Bijapur district of Karnataka State in the east, Kolhapur and Belgaum districts in the South. Ratnagiri district in the West, Satara district in the north and Solapur district towards the north-east.

The maximum east-west length of the district measures about 200 km and north-south about 88 km. The total geographical area of the district is 5307.36 sq km divided into 8 tehsils.

4.1.2.2. Topography :

The central portion of the district, i.e., Walwa, western part of Tasgaon and Miraj tehsils, is formed by plains. The western portion of the district consists of high hills which form the branches of Sahyadri running towards east from the northern side of the district. These hills are covered by tall trees and ample greenery and vegetation. Another range of hills starting from Mahadeo hills runs towards south and covers northern portion of the eastern part of the district. Naturally, the district is sloping from north to south. The hills in eastern sides of Tasgaon and Miraj tehsils are barren and devoid of vegetation. It forms the separate watershed between the valley of Yerla, a tributory of river Krishna on the right.

4.1.2.3. Soils :

The soils are of varied texture and structure. They vary from deep black in the river valleys of Krishna, Warna and Yerla to shallow murmad red or grey in the hilly areas of eastern parts of Tasgaon and Miraj tehsils. In Walwa tehsil, the soils are heavy deep black. The eastern zone consisting of Jath, Atpadi and Khanapur tehsils is having hilly tract with poor grey laterite soils.

4.1.2.4. Climate and Rainfall :

The climate of this district is very dry and vigorous, good for health throughout the year. The three seasons show a considerable uniformity. They are not subjected to abrupt changes or too extremes of heat and cold. They have local variations in the district. In the western region, the climate is cool and healthy in hot weather but becomes chilly in rainy season. The plains of Walwa and Miraj tehsils have temperate climate throughout the year. Warmth increases as one proceeds from west to east. In the central region, there is a considerable amount of heat during hot months and during the cold weather, days are warm and nights are cool. The eastern region of Khanapur and Jath tehsils has hotter climate than the central and western regions.

The normal rainfall of Sangli district is 625 mm. There are wide variations in the average rainfall and number of rainy days within the different tehsils of the district.

The major rainfall is received in rainy season, particularly in the months of July, August and September, in all the tehsils of the district.

4.1.2.5. Rivers :

In all, eight rivers namely, Krishna, Warna, Yerla, Agran, Man, Morna, Nandla and Bor flow through the district. The biggest river is Krishna followed by Warna.

4.2. Population :

The details of population in Jalgaon and Sangli districts are presented in Table 4.1.

Table 4.1 : Population of Jalgaon and Sangli Districts According to 1971 Census

(Figures in ooo')

District	Total	Male	Female	Density of population per sq km
Jalgaon	2123 (100.00)	1090 (51.34)	1033 (48.66)	180
Sangli	1540 (100.00)	790 (51.30)	750 (48.70)	180

(Figures in parentheses indicate percentages to the total).

Source : Socio-Economic Review and District Statistical Abstracts of Jalgaon and Sangli Districts-1977-78.

The total population of Jalgaon district as per 1971 census is 2123000, which is 4.21 per cent of the total population of Maharashtra State. Out of the total population, 1090,000 are males (51.34 per cent) and 1033,000 are females

(48.66 per cent). The sex ratio per 1000 males is 948. The density of population of this district is 180 persons per sq km.

The population of Sangli district according to 1971 census is 1540,000 persons, composed of 790,000 males (51.30 per cent) and 750,000 females (48.70 per cent). The sex ratio per 1000 males is 943. The density of population works out to 180 persons per sq km.

4.3. Land Use Pattern

4.3.1. Land Use Pattern of Jalgaon District

Table 4.2 gives an idea about the land utilization of Raver and Yawal tehsils in comparison with that of Jalgaon district as a whole. From the table it will be seen that the percentage of net area sown is about 69.03 per cent in Jalgaon district. This percentage is, however, relatively low in both the tehsils mainly due to the fact that a considerably large area in these tehsils is under forest. The percentage of cultivable waste is more in Raver tehsil than that in Yawal tehsil and district as a whole. The proportion of area under pastures and other grazing land is low in both the tehsils as compared to the district as a whole. The intensity of cropping was 106.49 per cent in Raver tehsil and 106.06 per cent in Yawal tehsil as against 107.76 per cent for the district as a whole.

Table 4.2 : Land Use Pattern in Raver and Yawal tehsils and Jalgaon District for the year 1977-78

(Area in 00' ha.)

Items	Raver tehsil	Yawal tehsil	Jalgaon district
1. Total geographical area	936 (100.00)	948 (100.00)	11641 (100.00)
2. Forest	288 (30.77)	307 (32.38)	1752 (15.05)
3. Barren land	29 (2.46)	54 (5.69)	772 (6.69)
4. Non-agricultural land	1 (0.11)	1 (0.11)	14 (0.12)
5. Cultivable waste	14 (1.50)	7 (0.75)	82 (0.70)
6. Permanent pasture and other grazing	12 (1.28)	14 (1.48)	609 (5.23)
7. Land under misc. trees and crops	-	3 (0.32)	34 (0.29)
8. Current fallows	22 (2.35)	11 (1.16)	225 (1.93)
9. Other fallows	6 (0.64)	7 (0.74)	117 (1.01)
10. Net area sown	570 (60.89)	544 (57.38)	8036 (69.03)
11. Double cropped area	37 (3.95)	33 (3.48)	624 (5.36)
12. Total cropped area	607 (64.84)	577 (60.86)	8660 (74.39)
13. Intensity of cropping (percentage)	106.49	106.06	107.76

(Figures in parentheses indicate percentages to the total geographical area).

Source : Socio-Economic Review and District Statistical Abstract 1978-79.

4.3.2. Land Use Pattern of Sangli District :

Table 4.3 gives an idea about the land utilization pattern of Tasgaon and Miraj tehsils in comparison with that of Sangli district as a whole. From the table it will be observed that, the percentage of net sown area is higher in the case of Miraj tehsil as compared to Tasgaon tehsil and district as a whole. The low percentage of net sown area is due to the fact that a considerably large area in Tasgaon tehsil and district as a whole is under forest. The percentage of cultivable waste is higher in Miraj tehsil as compared to the district as a whole. The intensity of cropping was 102.79 and 102.06 per cent in Tasgaon and Miraj tehsils and for the district as a whole it was 103.01 per cent.

4.4. Irrigation

Much of the changes in cropping pattern are brought about with the development of irrigation facilities in both the districts.

Table 4.4 indicates the percentages of net irrigated area to net sown area for all the four tehsils of both the districts under study.

It will be observed from the table that, the proportion of net irrigated area in the net cropped area increased from 4.5 per cent to 12.28 per cent in Jalgaon district and from 6.73 per cent to 9.29 per cent in Sangli

Table 4.3 : Land Use Pattern in Miraj and Tasgaon Tehsils and Sangli District for the Year 1977-78

(Area in 00' ha.)

Items	Miraj tehsil	Tasgaon tehsil	Sangli district
1. Total geographical area	927 (100.00)	1112 (100.00)	8381 (100.00)
2. Forest	10 (1.08)	50 (4.50)	472 (5.69)
3. Barren land	23 (2.48)	68 (6.12)	403 (4.81)
4. Non-agricultural land	36 (3.88)	22 (1.98)	258 (3.08)
5. Cultivable waste	56 (6.05)	-	95 (1.13)
6. Permanent pastures and other grazing lands	26 (2.81)	27 (2.43)	187 (2.23)
7. Land under misc. trees and crops	4 (0.43)	12 (1.08)	133 (1.59)
8. Current fallows	27 (2.91)	65 (5.84)	296 (3.53)
9. Other fallows	16 (1.73)	79 (7.10)	462 (5.51)
10 Net area sown	729 (87.64)	789 (70.95)	6075 (72.49)
11. Double cropped area	15 (1.61)	22 (1.98)	183 (2.18)
12. Total cropped area	744 (80.35)	811 (72.93)	6258 (74.66)
13. Intensity of cropping (percentages)	102.06	102.79	103.01

(Figures in parentheses indicate percentages to the geographical area).

Source : Socio-Economic Review and District Statistical Abstract 1978-79.

district during the period of 18 years since 1960-61. Looking to the proportions of irrigated area in the individual tehsils, it is seen that all the four tehsils selected for study made a tremendous progress in developing irrigation facilities.

Table 4.4 : Percentage of Net Area Irrigated to Net Area Sown in Jalgaon and Sangli Districts

Sr. No.	Name of tehsil/ district	Percentage of net irrigated area to net cropped area		
		1960-61	1970-71	1977-78
	Jalgaon			
1.	Raver tehsil	11.09	24.69	26.08
2.	Yawal tehsil	3.36	12.50	19.07
3.	Jalgaon district	4.5	8.27	12.28
	Sangli			
1.	Tasgaon tehsil	6.91	13.43	13.27
2.	Miraj tehsil	6.98	14.19	14.63
3.	Sangli district	6.73	9.41	9.29

Source : Socio-Economic Review and District Statistical Abstracts of Jalgaon and Sangli district-1978-79.

Wells and canals are the major sources of irrigation in both the districts. Lifts installed on rivers have been found to be the third source of irrigation in Sangli district.

4.5. Cropping Pattern

4.5.1. Cropping Pattern in Jalgaon District

Cropping pattern of Jalgaon district and the two selected tehsils is presented in Table 4.5.

Table 4.5 : Cropping Pattern of Raver and Yawal Tehsils and Jalgaon District for the Year 1977-78

(Hectares)

Crops	Raver tehsil	Yawal tehsil	Jalgaon district
Rice	1627 (2.68)	848 (1.47)	10477 (1.21)
Wheat	4359 (7.18)	3683 (6.38)	30999 (3.58)
Jowar	16823 (27.71)	16855 (29.20)	248946 (28.75)
Bajara	510 (0.84)	485 (0.84)	85204 (9.84)
Total cereals	23586 (38.85)	21987 (33.09)	377012 (43.54)
Gram	449 (0.74)	282 (0.49)	5715 (0.66)
Total pulses	15828 (26.07)	16497 (28.58)	239248 (27.63)
Total foodgrains	39414 (64.92)	38484 (66.67)	616260 (71.17)
Sugarcane	1548 (2.55)	1426 (2.47)	8919 (1.03)
Fruits and Vegetables	14850 (24.46)	8566 (14.84)	43035 (4.97)
Total non-food crops	21297 (35.08)	19239 (33.33)	249639 (28.83)
Gross cropped area	60711 (100.00)	57723 (100.00)	865899 (100.00)

(Figures in parentheses indicate percentages to the gross cropped area).

Source : Socio-Economic Review and District Statistical Abstract of Jalgaon District - 1978-79.

It will be observed from the Table 4.5 that more than 71 per cent of the gross cropped area in Jalgaon district was under foodgrain crops. The proportion of gross cropped area under foodgrain crops was around 66 per cent in Raver and Yawal tehsils. Moreover, the factors like availability of increased irrigation facility and fertile soil have enabled the cultivators in these tehsils to divert relatively more acreages towards cultivation of non-foodgrain crops. Especially, the area allocated to fruits and vegetables was quite high in these tehsils as compared to that of the district as a whole. The cropping pattern reveals that Jowar, Wheat, Bajara and fruits and vegetables are the important crops in the area.

4.5.2. Cropping Pattern in Sangli District :

Cropping pattern of Tasgaon and Miraj tehsils is presented in Table 4.6 alongwith cropping pattern of Sangli district as a whole.

The cropping patterns of Tasgaon and Miraj tehsils and Sangli district as a whole will indicate that Jowar, Bajara, Wheat, Gram, Sugarcane and Groundnut are the important crops grown in the area. The proportion of area allocated to foodgrain crops was around 77 per cent in Sangli district as a whole, as well as in Miraj tehsil. In Tasgaon tehsil, however, the area allocated to foodgrain crops was relatively higher (i.e., 81.94 per cent of the

Table 4.6 : Cropping Pattern of Miraj and Tasgaon Tehsil and Sangli District for the Year 1977-78

(Hectares)

Crops	Miraj tehsil	Tasgaon tehsil	Sangli district
Rice	1815 (2.44)	1687 (2.08)	17522 (2.80)
Wheat	5936 (7.98)	7731 (9.53)	37673 (6.02)
Jowar	29250 (39.32)	39692 (48.93)	236238 (37.75)
Bajara	9217 (12.39)	2150 (2.65)	97249 (15.54)
Total cereals	47156 (63.39)	51836 (63.90)	394628 (63.06)
Gram	1875 (2.52)	5451 (6.72)	16208 (2.59)
Total pulses	10481 (24.09)	14309 (17.64)	86422 (13.81)
Total foodgrains	57637 (77.48)	66145 (81.54)	481050 (76.87)
Sugarcane	7513 (10.10)	6546 (8.07)	27410 (4.38)
Fruits and Vegetable	930 (1.25)	527 (0.65)	2753 (0.44)
Total non-food crops	16753 (22.52)	14975 (18.46)	144747 (23.13)
Gross cropped area	74390 (100.00)	81120 (100.00)	625797 (100.00)

(Figures in parentheses indicate percentages to the gross cropped area).

Source : Socio-Economic Review and District Statistical Abstracts of Sangli District - 1978-79.

gross cropped area). So far as the proportion of area allocated to fruits and vegetables is concerned, the same was relatively higher in Tasgaon and Miraj tehsils as compared to the district as a whole.

4.6. Development of Infra-Structure Facilities :

4.6.1. Development Infra-Structure Facilities in Jalgaon District .

Monsoon determines the sources of agriculture in Jalgaon district. Uncertainties of rainfall in this region is one of the obstacles in deciding the crops to be grown. Because of Government canals and extensive use of well irrigation, this district has made a tremendous development in agriculture. Jalgaon district takes a place of pride as being served by railway from 1861-65. The present coverage of railways in this district is about 350 kilometers, of which 296 kilometers are broad gauge and 54 kilometers are narrow gauge. Road transportation has also occupied better position in the district. The length of national highway is 3905.97 kilometers and of the State and district roads is 3287.04 kilometers.

Co-operative institutions in the district have come forward to meet the credit need of farmers. As a result of this, cultivators have been able to get required agricultural inputs. This has accelerated the process of agricultural development in the district. The efforts towards exploitation of natural resources have yielded desirable

results. It has not only increased the capital formation in agriculture, but also increased the productivity of all resources. All the villages are covered by co-operative societies. In 1975-76, there were about 2165 co-operative societies in the district and the number for agricultural marketing societies was 46. The regulatory marketing, establishment of other co-operative undertakings, increase in electricity supply and progress of processing industries are the distinct features of the district.

4.6.2. Development of Infra-Structure Facilities in Sangli District

Till 1958, this district was considered to be agriculturally backward as the agriculture in the district was mainly dependent on rainfall and there was absence of commercial outlook among the farming communities. Agriculture was, moreover, of subsistence nature. But since the establishment of co-operative sugar factories at Sangli and Walwa, the agriculture in the district has undergone a tremendous change. There has been a shift in the cropping pattern mostly from foodgrain crops to commercial crops. Sugarcane being an irrigated crop fetching considerable net returns to growers, it has motivated many of the cultivators to exploit and use the irrigation resource. The district is well connected with the adjoining districts by roads. The total road length in the district is 2116 kilometers and the total railway kilometerage is 1536.

The co-operative institutions in the district have come forward to meet the needs of the farmers. As a result, cultivators have been able to get required amount of agricultural inputs, including credit. There were about 1488 co-operative societies in the year 1977 and the number of co-operative marketing societies was 15.

Development of other agro-industries also took place simultaneously. The factors like well developed transport facilities, regulated marketing, establishment of other co-operatives, increase in electricity supply and progress of processing industries are the distinct features of the district. These factors together have helped in changing the face of the district. All these developments, in turn, have increased the productivity of agriculture and also the income of the agriculturists. The increased income of the agriculture have brought about many more changes in the socio-economic aspects of the people in general and agriculturists in particular.

4.7. Background Information of the Sample Villages :

Economy of a village can be better judged by studying its location, availability of natural resources, extent of their utilization, transport and communication facilities, etc. The salient features of the sample villages are, therefore, described below.

4.7.1. Sample Villages in Jalgaon District

1) Khirdi Kh.

This village is located in Raver tehsil of Jalgaon district and is situated at a distance of 1.62 km from Nimbhora railway station. Savada-Anipur road passes through this village. It is 12.8 km away from the tehsil head-quarter Raver. The post office for this village is Khirdi Bd. The population of the village is 3254 with 686 households. There is a well established co-operative credit society, gram-panchayat and a primary and secondary school in the village.

2) Nimbhora :

This village is located in Raver tehsil of Jalgaon district on Bombay-Delhi railway line. It is situated 6.4 km away from the tehsil head-quarter. The village has a post and telegraph office. The population of this village is 6887 with 1507 households. There is one co-operative credit society, one fruit sale society, a gram-panchayat, one primary school and one high school in the village.

3) Chinnval :

This village is located in Raver tehsil of Jalgaon district. It is 18 km away from Raver on the eastern side. The village has a post office, a telegraph office, a co-operative credit society and a fruit sale society. The population of this village is 8677 with 1607 households. The village is

connected to Savada and Kumbhar Kheda by road. There are two primary schools, one secondary school and a gram-panchayat in the village.

4) Khavi :

The village is located in Yawal tehsil and is 25 km away from tehsil head-quarter towards east. The village is connected to Faizpur by road and is rather in the interior from the Yawal-Raver road. The nearest railway station is Savada. The total population of the village is 5437 with 2118 households. The village has a co-operative credit society, fruit sale society, post office, separate gram-panchayat, primary school and one secondary school.

5) Amode :

This village is also located in Yawal tehsil of Jalgaon district, 21 km away from Yawal on the Yawal-Burhanpur road. The nearest railway station is Savada. The total population of the village is 4982 with 690 households. The village has a well established co-operative credit society, a fruit sale society, a gram-panchayat, one primary school and one secondary school.

6) Kanod

This village is located in Yawal tehsil on the Bhusaval-Raver road. Its distance from tehsil head-quarter is about 23 km. The nearest railway station is Savada. The total population of the village is 3246 with 570 households.

The village possesses a gram-panchayat, a primary school and a co-operative credit society.

4.7.2. Sample Villages in Sangli District :

1) Borgaon :

This village is located in Tasgaon tehsil of Sangli district at about 22 km away towards north of Tasgaon. It is situated on the bank of Yerla river. Tasgaon-Vita road is 3.2 km away from this village. The population of this village is 3059 and the total households are 523. Some of the farmers are growing grapes. The village has a gram-panchayat, two primary schools, a secondary school and a co-operative credit society.

2) Dambevade :

This village is located in Tasgaon tehsil of Sangli district and is situated 16 km away from Tasgaon town towards north-western side. The village is rather in the interior from the Tasgaon-Karad road. Palus and Tasgaon are the two nearby markets. The nearest railway station Bhilwadi is about 5 km on its south. The total population of the village as per 1971 census is 4751 with 670 households. The village has a well established co-operative credit society, a gram-panchayat, two primary schools and one secondary school. The village is also served by a sub-post office.

3) Mansrajuri :

This village is located in Tasgaon tehsil of Sangli district about 24 km away from tehsil head-quarter on the south-east side. It is on the Tasgaon-Kavate Mahankal road. The population of the village is 9421 with 2578 households. The village has a co-operative credit society which provides fertilizers and crop loans to cultivators. The village has a gram-panchayat, a primary school, a post office and one secondary school.

4) Belanki :

This village is located in Miraj tehsil of Sangli district and is on the eastern side of Miraj town. The village is connected to tehsil place by a Kaccha road. The nearest railway station is Miraj. The total population of the village is 6891 with 1469 households. The village has a seperate gram-panchayat, one primary school, one secondary school and one co-operative credit society.

5) Kadamwadi :

This village is located in Miraj tehsil of Sangli district and is situated 5 km away from Belanki on north-west side. The nearest market is Miraj. The population of the village is 438 and the total households are 70. There is one primary school and a gram-panchayat in the village.

6) Santoshwadi :

This village is also located in Miraj tehsil of Sangli district and is 3 km away from Belanki on south-east side. The population of the village is 1059 with 130 houholds. There is one primary school, an independent gram-panchayat and a co-operative society in the village.

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Chapter 5

GENERAL ECONOMY OF THE SAMPLE FARMS AND COST OF CULTIVATION AND OUTPUT OF BANANAS AND GRAPES

Chapter 5

GENERAL ECONOMY OF THE SAMPLE FARMS AND COST OF CULTIVATION AND OUTPUT OF BANANAS AND GRAPES

The present chapter deals mainly with some of the socio-economic aspects of the sample farm families as well as cost of cultivation and output of bananas and grapes grown on the sample farms. The socio-economic aspects are, in fact, directly or indirectly responsible for farm economy of the sample farms. Social aspects like composition of family provides information regarding the work-force available with the families. Besides social aspects, the economic aspects such as particulars of land holding, land use and crop patterns and farm assets are also important aspects determining general economy of farms. The important aspects considered are as under .

i) Farm family and its composition
ii) Land use pattern
iii) Cropping pattern
iv) Capital investment on selected farms

In addition to the socio-economic aspects of the farm families, the chapter also presents a brief account of cost of cultivation and output of bananas and grapes grown on the sample farms.

5.1. Farm Family and its Composition :

The details about the average size of farm family and

its break-up into males, females and children for both the sets of sample farms in the two regions are given in Table 5.1.

Table 5.1 : Average Size of Sample Farm Families and Their Composition

Family members	Banana cultivators		Grape cultivators	
	Member	Non-member	Member	Non-member
Male	2.11 (28.28)	1.58 (23.65)	1.83 (23.52)	1.83 (24.86)
Female	2.15 (28.82)	1.55 (23.20)	1.80 (23.14)	2.13 (28.94)
Children	3.20 (42.90)	3.55 (53.15)	4.15 (53.34)	3.40 (46.20)
Total	7.46 (100.00)	6.68 (100.00)	7.78 (100.00)	7.36 (100.00)

(Figures in the parentheses indicate percentages to the total).

Among the banana cultivators, the average family size of the members of producers' association was 7.46 persons consisting of 2.11 males, 2.15 females and 3.20 children, while that of non-members it was 6.68 persons consisting of 1.58 males, 1.55 females and 3.55 children. In the case of the grape cultivators, the average size of family was 7.78 persons consisting of 1.83 males, 1.80 females and 4.15 children for the members of producers' associations and it was 7.36 persons consisting of 1.85 males, 2.13 females and 3.40 children for the non-members. The proportion of children in the family was more in both the regions.

5.2. Farm Size and Land Use Pattern :

The size of farm has a direct bearing on the pattern of farm income. Table 5.2 presents information in respect of average size of farm and land use pattern for the selected cultivators.

Table 5.2. Average Farm Size and Land Use Pattern of the Sample Farms (Hectares)

Particulars	Banana cultivators		Grape cultivators	
	Member	Non-member	Member	Non-member
Total land holding	3.51 (100.00)	2.57 (100.00)	3.84 (100.00)	2.99 (100.00)
Fallow land	0.07 (2.00)	0.02 (0.78)	0.17 (4.43)	0.15 (5.02)
Cultivated land	3.44 (98.00)	2.55 (99.22)	3.67 (95.57)	2.84 (94.18)
a) Irrigated	2.19 (62.39)	1.75 (68.09)	3.07 (79.95)	2.28 (76.25)
b) Unirrigated	1.25 (35.61)	0.80 (31.13)	0.60 (15.62)	0.56 (18.73)
Double cropped area	0.82 (19.25)	0.89 (25.87)	0.60 (15.62)	0.56 (18.73)
Gross cropped area	4.26	3.44	3.94	3.05
Intensity of cropping (percentage)	123.77	134.90	107.36	107.39

(Figures in the parenthesis indicate percentages to the total).

It is noted that the average size of holding of sample farms was 3.51 hectares and 2.57 hectares for the member and non-member banana cultivators, respectively. It was 3.84

hectares for member and 2.99 hectares for non-member grape growers.

Out of the total land holding, more than 98 per cent area was under cultivation in case of the banana cultivators, whereas this proportion was around 95 per cent for the grape growers. Almost all the sample cultivators had sufficient irrigation resource. Nearly two-third area of the banana cultivators received irrigation, while grape growers were able to irrigate three-fourth of their land holding. Though there was sufficient irrigation resource on all the farms, the use of the same for multiple cropping showed a vast difference in the two regions. The intensity of cropping was 123.83 per cent and 134.90 per cent on the farms of member and non-member banana cultivators, respectively. In case of the grape growers, however, the intensity of cropping was a little over 107 per cent for both the sets of farms.

5.3. Cropping pattern :

It is commonly observed that the banana and grape growers are generally progressive farmers having commercial outlook in agriculture. The cropping pattern of the sample cultivators as presented in Table 5.3. makes this point more clear. It will be observed from the table that, nearly half of the gross cropped area was allocated to commercial crops in case of the sample farms belonging to both the categories. Among the various cash crops, banana alone shared around 39 per cent of the gross cropped area of the farms of banana

Table 5.3 : Average Cropping Pattern of the Sample Farms

(Hectares)

Crops	Banana cultivators		Grape cultivators	
	Member	Non-member	Member	Non-member
Jowar	1.02 (23.94)	0.80 (23.25)	0.93 (23.60)	0.68 (22.29)
Wheat	0.44 (10.32)	0.30 (8.72)	0.38 (9.65)	0.13 (4.26)
Gram	0.14 (3.28)	0.10 (2.91)	0.24 (6.10)	0.21 (6.89)
Groundnut	0.20 (4.69)	0.12 (3.49)	0.16 (4.06)	0.13 (4.26)
Sugarcane	0.22 (6.39)	0.12 (3.49)	0.55 (13.96)	0.65 (21.31)
Vegetables	0.06 (1.41)	0.01 (0.29)	0.13 (3.30)	0.20 (6.56)
Bananas	1.68 (39.43)	1.34 (38.95)	- -	- -
Grapes	-	-	0.68 (17.25)	0.39 (12.79)
Others	0.50 (11.74)	0.65 (18.90)	0.87 (22.08)	0.66 (21.64)
Gross cropped area	4.26 (100.00)	3.44 (100.00)	3.94 (100.00)	3.05 (100.00)

(Figures in the parentheses indicate percentages to the gross cropped area).

growers. On the other hand, grapes had a share of 17.25 per cent and 12.79 per cent in the gross cropped area of the member and non-member grape growers, respectively. Among non-cash crops, Jowar, Wheat and Gram occupied a pre-dominant place in the cropping patterns of the sample cultivators in both the regions.

5.4. Capital Assets :

The information regarding fixed capital assets viz., buildings, livestock, implements, machinery and irrigation structures owned by the samples of banana and grape farms is presented in Table 5.4 on per farm and per cultivated hectare basis.

From the table it will be observed that, the per farm capital investment in the fixed assets was Rs. 20906.89 and Rs. 19512.59 on the farms of the member and non-member banana cultivators, respectively. The per farm capital investment was Rs. 27107.39 for the member and Rs. 23304.94 for the non-member grape growing farms. When compared on per cultivated hectare basis it was observed that the farms of members of the respective producers' associations had relatively more investment in different capital assets. The proportions of investment in different capital assets showed, more or less a similar pattern on all the types of farms.

5.5. Input Use Structure, Cost of Cultivation and Output of Bananas and Grapes :

In the remaining part of this chapter an attempt is made

Table 5.4 : Per Farm and Per Cultivated Hectare Investment in Different Capital Assets of the Sample Farms

(Rupees)

Assets	Banana cultivators		Grape cultivators	
	Member	Non-member	Member	Non-member
Buildings				
Per farm	5363.22	4821.94	8485.22	6830.31
Per cultivated hectare	1559.08 (25.65)	1890.96 (24.71)	2312.05 (31.30)	2405.03 (29.32)
Livestock				
Per farm	5052.55	5900.00	5070.62	4727.12
Per cultivated hectare	1468.76 (24.17)	2313.73 (30.24)	1599.47 (21.66)	1664.48 (20.28)
Implements and machinery				
Per farm	7400.72	6018.57	9400.72	8549.43
Per cultivated hectare	2151.37 (35.40)	2360.22 (30.84)	2561.50 (34.68)	3045.57 (37.11)
Irrigation structures				
Per farm	3090.40	2772.08	3350.83	3098.08
Per cultivated hectare	898.00 (14.78)	1087.09 (14.21)	913.03 (12.36)	1090.87 (13.29)
Total per farm	20906.39	19512.59	27107.39	23304.94
Per cultivated hectare	6077.58 (100.00)	7651.99 (100.00)	7386.21 (100.00)	8205.96 (100.00)

(Figures in the parentheses indicate percentages to the total).

to present, in brief, the resource use structure, cost of cultivation and output in respect of bananas and grapes produced by the two sets of sample farmers in the respective regions.

5.5.1. Cost of Establishment of Grape Gardens :

The two fruit crops studied are quite different from each other in the sense that banana gives yield only once in its life period, whereas grape, being perennial crop, gives yield annually over a period of time. It is also true that the cost on account of establishing grape garden is quite high since grape vines require permanent supports for vigorous growth. The activity of cultivation of grapes, therefore, involves heavy financial outlays. This is not the case with banana crop, as it completes its life cycle within 18 months and it does not need any support for its growth. From the economics point of view, the cost of establishing grape garden needs to be capitalised and allocated over its productive life period so as to get appropriate annual cost estimates for the crop. Accordingly, the per hectare establishment cost of grape vine yards has been estimated and the same is presented in Table 5.5 for the members and non-members of the producers' associations.

The details of itemwise per hectare cost of establishment of grape vine yards are given in Appendix-II and Appendix-III for the member and non-member grape growing farms, respectively.

Table 5.5 : Per Hectare Cost of Establishment of Grape Vine Yards on the Sample Farms

(Rupees)

Items	Grape growers	
	Member	Non-member
Cost A	59075.36	60275.19
Cost B	66280.02	67391.19
Cost C	66764.34	68546.38
Estimated productive life period of vine yard	10 years	10 years
Annualized cost of establishment	6676.43	6854.64

The total cost of establishment (i.e. cost C) of grape vine yard worked out to Rs. 66764.34 and Rs. 68546.38 per hectare on the farms of member and non-member grape growers, respectively. Generally, these vine yards yield economic returns over a period of 10 years. Accordingly, if we consider 10 years as the productive life period of vine yards, the annualized per hectare cost of establishment of vine yard comes to Rs. 6676.43 for the member and Rs. 6854.64 for the non-member grape growing farms. Looking to the itemwise cost of establishment of grape vine yards it is observed that the cost on account of supporting material (i.e., iron angles, wire, cement, etc.) was the major item of total cost sharing nearly 36 per cent of the total cost on both the types of farms. Among other items of cost; human

labour, manures and fertilizers, plant protection measures, seed material, interest on working capital and rental value of land were the important items and their individual shares ranged between 6 and 12 per cent of the total cost of establishment of vine yards.

5.5.2. Resource Use Structures for Bananas and Grapes :

The resource use structure for both the crops is presented in Table 5.6 on per hectare basis, separately for the member and non-member cultivators.

It could be revealed from the table that the resource use structures for both the crops were quite different from each other mainly because of physiological, technological and economical factors. In fact, grapes require heavy doses of plant nutrients, timely operations and timely plant protection measures. As a result, the per hectare requirements of different resources for grapes were higher than those for bananas. Particularly, the grape cultivation technology in respect of different operations has been well developed resulting into higher resource requirements.

Though the resource requirements for both the crops were different from each other, there were no significant variations in the use levels of different resources on the farms of member and non-member cultivators of the individual fruit crops. The comparison of the resource use structures, therefore, revealed that membership of producers' association

Table 5.6 : Per Hectare Resource Use Structure for Bananas and Grapes on the Sample Farms

Items	Banana cultivators		Grape cultivators	
	Member	Non-member	Member	Non-member
Total human labour				
Male days	280.12	298.14	943.77	967.31
Female days	78.19	72.23	1257.22	1129.54
a) Family human labour				
Male days	135.27	138.27	162.35	186.40
Female days	25.06	24.16	302.79	248.08
b) Hired human labour				
Male days	144.85	159.87	681.42	780.91
Female days	53.13	48.07	1054.43	881.46
Bullock labour pair days	36.18	38.13	7.78	8.01
Seed rizomes/crafts	4440.00	4440.00	4300.00	4288.00
Farm yard manure	39.40	41.23	150.22	172.77
Fertilisers				
N kg	600.28	600.13	1012.80	1020.00
P_2O_5 kg	300.14	305.58	520.10	518.12
K_2O kg	400.06	400.00	448.33	452.80
Number of irrigations	33.89	33.13	41.43	42.30
Crop protection No.of sprayings	-	-	43.80	42.30

did not in any way influence the technological adoption in respect of cultivation of individual fruit crops. Some of the economical factors, however, might have caused slight variations in the use levels of different resources on the farms of the member and non-member cultivators of the individual fruit crops.

5.5.3. Comparative Cost of Cultivation of Bananas and Grapes :

As pointed out earlier, the physiological, technological and economical factors resulted into the variations in the resource use levels as between the two fruit crops as well as between the farms of the member and non-member cultivators growing the same crop. These variations have undoubtedly contributed to differences in the cost of cultivation of the two fruit crops on the sample farms.

Table 5.7 : Per Hectare Cost of Cultivation of Bananas and Grapes on the Sample Farms (Rupees)

Cost level	Banana cultivators		Grape cultivators	
	Member	Non-member	Member	Non-member
Cost A	9678.33 (68.13)	10057.07 (68.54)	35276.96 (79.32)	38094.02 (81.51)
Cost B	13521.70 (95.18)	13977.51 (95.26)	43226.46 (97.20)	45210.01 (96.74)
Cost C	14206.13 (100.00)	14672.39 (100.00)	44472.89 (100.00)	46735.92 (100.00)

(Figures in parentheses indicate percentages to the total cost).

Table 5.7 presents the per hectare cost of cultivation of bananas and grapes at Cost A, Cost B and Cost C levels in

respect of the farms of the member and non-member cultivators. The itemwise per hectare cost of cultivation of bananas and grapes is presented in Appendix-IV through VII for all the sets of sample farms.

As could be seen from Table 5.7, the per hectare cost of cultivation of bananas worked out to Rs. 14206.13 and Rs. 14672.93 at Cost C level on the farms of member and non-member cultivators, respectively. The share of Cost A in the total cost was a little over 68 per cent and that of Cost B a little over 95 per cent on both the types of farms. The cost structure of banana crop, therefore, indicated similar pattern for the farms belonging to the member and non-member banana growers.

The per hectare cost of cultivation of grapes was almost three times of the cost of cultivation of bananas. It worked out to Rs. 44472.89 and Rs. 46735.92 per hectare at Cost C level on the farms of the member and non-member grape growers respectively; the difference being of Rs. 2363.03 only. The per hectare cost of cultivation of grapes was higher on the farms of the non-member cultivators mainly because of higher use levels of fertilizers and plant protection measures for the crop grown on these farms. The share of Cost A in the total cost was 79.32 per cent and 81.51 per cent; while that of Cost B was 97.20 per cent and 96.74 per cent in respect of the farms of the member and non-member grape growers, respectively.

5.5.4. Output and Cost of Production of Bananas and Grapes :

Table 5.8 presents per hectare output and per quintal cost of production of bananas and grapes on the farms of the member and non-member cultivators of the respective crops. The output of bananas was 543.3 and 541.4 quintals pere hectare on the farms of member and non-member banana growers, respectively. In case of the grapes, the output was 219.4 quintals per hectare on the farms of member grape growers, while it was 216.7 quintals per hectare on the farms of the non-member grape growers. The comparison of the output figures of both the crops revealed that the level of adoption of technology in respect of cultivation of both the crops was moreover of the same order on the farms of the member and non-member cultivators.

Table 5.8 : Per Hectare Output and Per quintal cost of Production of Bananas and Grapes on the Sample Farms

Particulars	Banana cultivators		Grape cultivators	
	Member	Non-member	Member	Non-member
Output (Quintals)	543.3	541.4	219.4	216.7
Total cost of cultivation(Rupees)	14206.13	14672.39	44472.89	46735.92
Per quintal cost of production (Rupees)	26.15	27.10	202.70	215.67

Further, the per quintal cost of production of bananas

on the farms of the member and non-member cultivators worked out to Rs. 26.15 and Rs. 27.10 respectively. In the case of grapes, the per quintal cost of production was Rs. 202.70 for member and Rs. 215.67 for non-member grape growing farms. In general, the per quintal cost of production of both the fruit crops was higher on the farms of the non-member cultivators.

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Chapter 6

ROLE OF PRODUCERS' ASSOCIATIONS IN THE MARKETING OF BANANAS AND GRAPES

Chapter 6

ROLE OF PRODUCERS' ASSOCIATIONS IN THE MARKETING OF BANANAS AND GRAPES

Bananas and grapes are delicious and sweet fruits liked by a variety of consumers belonging to different age and income groups. Though increased consumption of these fruits enhance consumer satisfaction and also increased production associated with higher market prices contributes to producer satisfaction, the interests both of consumers as well as producers, many a times, go in vain because of fraudulent marketing practices followed by the intermediaries involved in fruit trade. It has been commonly observed that, because of involvement of a large number of intermediaries in fruit trade and malpractices followed by them, the consumers are required to pay higher prices for these fruits and the producers are deprived of their legitimate share in the consumers price. Realizing such a state of affair in fruit trade, some of the producers of bananas and grapes thought it better to have their own associations for taking up to the various activities relating to marketing of these fruits. Accordingly, a large number of producers' associations were established on co-operative lines during the 'sixties and 'seventies in Western Maharashtra. Moreover, these associations started working on the lines parallel to the traditional private agencies and at present they have proved to be the efficient alternative marketing agencies in fruit trade.

The present chapter attempts to study in brief the

general working of some of the producers' associations and also their efficiency in fruit trade relative to the traditional marketing agencies so as to understand their role in marketing of bananas and grapes.

6.1. General Working of the Producers' Associations :

The role of producers' associations in marketing of bananas and grapes has been studied on the basis of information obtained from 4 associations of banana producers and 2 associations of grape producers. The producers of these fruits have established these associations themselves on co-operative lines in accordance with the provisions made under Co-operative Society's Registration Act of 1947 of the Government of Maharashtra.

The Board of Directors, consisting of 11 members, is responsible for carrying out different activities of the individual associations. The persons on the board of Directors are elected for every three years from amongst the members of the association. The individual associations have appointed a Secretary and a Clerk for looking after day-to-day work and they are paid servants. Generally, these associations are performing the activities like - (i) marketing of fruits in the distant markets and (ii) supply of inputs and other accessaries to the members.

These associations also give incentives to their members to take up to the new plantations as well as to adopt new technology of fruit production. In a way, these

associations perform multiferous activities for the benefit of their members.

6.2. Capital Assets of the Producers' Associations :

Table 6.1 presents the position of capital assets for the average association of the banana and grape producers.

Table 6.1 : The Position of Capital Assets Owned by Associations of the Producers of Bananas and Grapes (Rupees per Association)

Capital Assets	Value of assets owned by the producers' associations of	
	Banana producers	Grape producers
Building	215540.17 (41.37)	47827.00 (14.86)
Furniture	17886.19 (3.43)	5193.60 (1.61)
Members' share	287623.33 (55.20)	268940.00 (83.53)
Total	521049.69 (100.00)	321960.60 (100.00)

(Figures in parentheses indicate percentages to the total).

From the table it is noted that about 55 per cent of the total capital asset is in the form of member shares in case of the association of banana producer, while it is nearly 84 per cent in grape growers' association. Buildings are also one of the important capital assets contributing nearly 41 per cent and 15 per cent of the capital assets of banana and grape growers' associations, respectively.

Furniture and other dead stock articles contribute 3.43 per cent and 1.61 per cent of the capital assets for the associations of banana and grape growers, respectively.

6.3. Fruit Trade and Other Marketing Functions of the Producers' Associations :

On enquiry it was found that the individual associations are performing the following functions in marketing of bananas and grapes.

i) To find out new markets for the produce and to sell the produce in these markets.

ii) To undertake transport of fruits to distant markets.

iii) To provide market intilligence to the producers.

iv) To supervise marketing activities; and

v) To supply packaging material to the grape growers; and

vi) To undertake grading of bananas for marketing.

In addition to the above functions, the associations of grape growers have also taken up the activity of providing technical know-how of grape cultivation to the members. These associations are undertaking various marketing activities more efficiently. Based on their experiences of several years, these associations have tried to send the produce to different markets all over the country. This practice of tapping different markets has helped the producers to a greater extent

in obtaining higher price for their produce by way of managing fruit supply in relation to market demand.

Table 6.2 presents information relating to quantities of fruits sent to different markets both in case of the member and non-member samples of banana and grape producers.

It could be revealed that both member as well as non-member producers of bananas and grapes are sending their produce to different markets instead of concentrating on a single market. However, there existed some difference in the proportions of total fruit produce sent to the individual markets. In case of bananas, a relatively greater proportion of total produce of non-member producers was sent to Delhi market, whereas these proportions were higher in the remaining markets for the member producers. Among the grape producers, the non-member producers seem have concentrated more on Bombay market, the proportion of total produce sent to this market being 30.86 per cent as against 17.51 per cent for the member producers. In fact, producers' associations seem to have been more effective in tapping different markets for grapes produced by the member cultivators. They have sent quite a larger proportion of the total produce to distant markets like Calcutta and Madras, where the non-member producers could not send their produce for marketing.

Table 6.2 : Quantities of Bananas and Grapes Sold in Different Markets for the Members and Non-Members of Producers' Associations

Markets	Banana producers		Grape producers	
	Members	Non-members	Members	Non-members
Delhi	1992.00 (46.28)	1770.00 (57.15)	110.50 (13.46)	47.50 (13.96)
Bombay	481.00 (11.18)	244.00 (7.88)	143.77 (17.51)	105.00 (30.86)
Pune	220.00 (5.12)	100.00 (3.23)	53.00 (6.46)	31.21 (9.7)
Kanpur	820.00 (19.06)	516.00 (16.66)	-	-
Naini	790.00 (18.36)	467.00 (15.08)	-	-
Indore	-	-	89.00 (10.84)	34.00 (9.99)
Banglore	-	-	80.50 (9.81)	43.50 (12.79)
Ahmedabad	-	-	90.12 (10.98)	48.50 (14.26)
Madras	-	-	115.45 (14.06)	-
Calcutta	-	-	110.00 (13.41)	-
Local	-	-	28.50 (3.47)	30.50 (8.97)
Total	4303.00 (100.00)	3097.00 (100.00)	820.84 (100.00)	340.21 (100.00)

(Figures in parentheses indicate percentages to the total).

6.4. Marketing Channels and Marketing System for Bananas and Grapes :

Since bananas and grapes are highly perishable in nature, quick movement of produce from producers to consumers usually pays good dividends both to the producers and consumers as well. In that, the producers are able to get higher price for their produce and consumers derive more satisfaction by way of consuming fresh fruits. The effectiveness of quick movement of the produce, however, largely depends on the type of marketing channel followed for the purpose and its relative efficiency in performing various marketing activities. An attempt was, therefore, made to understand the types of marketing channels involved in marketing of bananas and grapes by the samples of member and non-member producers of these fruits. The following marketing channels have been identified in the fruit trade under consideration.

i) Producers Producers' Associations ___ Wholesalers ___ Retailers Consumers.

ii) Producers Private Traders Wholesalers Retailers Consumers.

iii) Producers Private Traders Retailers Consumers in nearby towns.

iv) Producers Retailers Consumers in nearby towns.

The first and second market channels related to the produce produced by the members and non-members of

producers' associations, respectively and a major proportion of total produce was marketed through these channels. The proportion of total produce marketed through the last two channels was relatively very less and it was marketed in the nearby towns. Further analysis with regard to cost of marketing and price spread contemplated in this study, therefore, relates to that much proportion of total produce of both the fruits which has been sold in the distant markets.

So far as marketing system is concerned, it was reported that the producers were required to transport their produce from their farms to the assembling centres both in case of the fruit trades handled by producers' associations and private traders. These intermediaries performed all further activities relating to transport of produce from assembling centres to wholesale markets and marketing the produce through wholesalers. The producers' associations as well as private traders bear all the expenses on account of loading and unloading, transport, octroi, postage, etc., and in turn, they recovered the same from the producers. They also made decisions with regard to mode of transport, quantum of produce to be sent to individual markets and selection of wholesalers. In some of the wholesale markets, the produce was marketed through open auction, while in the others under-cover system was practised. It is, however, noteworthy to mention here that the producers' associations of grape growers sent the supervisors for supervising fruit

trade in wholesale markets as well as for providing market intelligence to the producers.

6.5. Marketwise Marketing Costs for Bananas and Grapes :

As seen earlier, the produce of bananas and grapes was sent to different markets both in the case of member and non-member producers. Since the distance between the producing area and individual markets and the market structures greatly varied, the costs on account of marketing the produce in different markets ought to have been different as among the markets and for the member and non-member producers as well. It is, therefore, imperative to study in detail the marketwise marketing costs for bananas and grapes.

6.5.1. Marketwise Marketing Costs for Bananas .

Tables 6.5 and 6.6 present the details of marketwise per quintal cost of marketing of bananas produced by the members and non-members of producers' associations, respectively.

It will be revealed from the figures given in both the tables that, for all the markets put together, the average per quintal cost of marketing of bananas worked out to Rs. 25.73 and Rs. 26.70 for the members and non-members of producers' associations, respectively. The per quintal cost of marketing of bananas in different markets ranged between Rs. 24.95 and Rs. 26.94 for the members and between

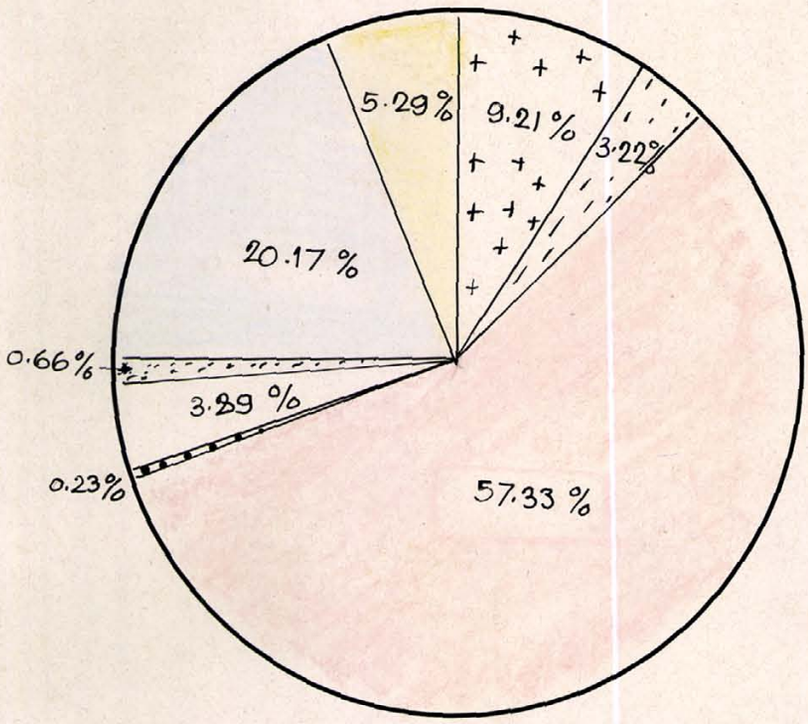
Table 6.3 : Itemwise Per Quintal Cost of Marketing of Bananas in Different Markets for the Members of Producers' Associations

(Rupees)

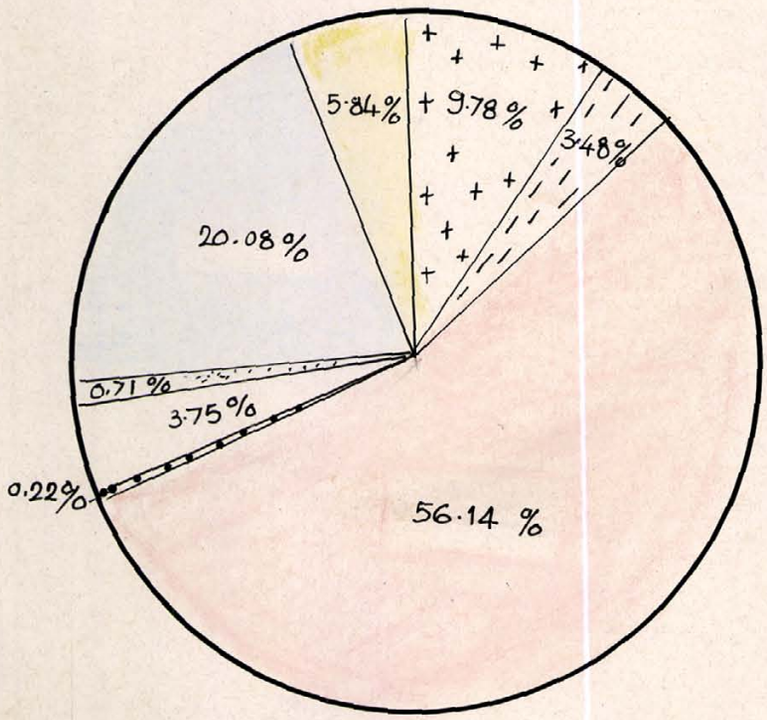
Particulars / Markets	Transport from farm to assembling centre	Loading and unloading	Transport from assembling Centre to wholesale market	Postage	Octroi	Sundry expenses	Commission of the wholesaler	Commission of the association	Total
Delhi	2.52 (10.10)	0.83 (3.32)	13.82 (55.39)	0.06 (0.24)	1.00 (4.00)	0.17 (0.68)	5.20 (20.84)	1.35 (5.41)	24.95 (100.00)
Kanpur	2.53 (10.05)	0.83 (3.30)	13.86 (55.07)	0.06 (0.24)	1.00 (3.97)	0.17 (0.67)	5.20 (20.66)	1.52 (6.04)	25.17 (100.00)
Naini	2.54 (9.71)	0.83 (3.17)	14.97 (57.26)	0.06 (0.23)	1.01 (3.84)	0.17 (0.65)	5.27 (20.15)	1.30 (4.97)	26.15 (100.00)
Bombay	2.12 (7.87)	0.85 (3.15)	16.20 (60.63)	0.05 (0.19)	1.02 (3.79)	0.17 (0.63)	5.13 (19.23)	1.35 (5.01)	26.94 (100.00)
Pune	2.14 (8.42)	0.82 (3.23)	14.90 (58.62)	0.05 (0.19)	1.00 (3.93)	0.17 (0.67)	5.10 (20.06)	1.24 (4.88)	25.42 (100.00)
Overall	2.37 (9.21)	0.83 (3.22)	14.75 (57.33)	0.06 (0.23)	1.00 (3.89)	0.17 (0.67)	5.19 (20.17)	1.36 (9.29)	25.73 (100.00)

(Figures in parentheses indicate percentages to the total).

FIG.3.. COMPOSITION OF MARKETING COSTS OF BANANAS



MEMBER PRODUCERS



NON-MEMBER PRODUCERS

- TRANSPORT FROM FARM TO ASSEMBLING CENTRE
- LOADING & UNLOADING
- TRANSPORT FROM ASSEMBLING CENTRE TO WHOLESALE MARKET
- POSTAGE
- OCTROI
- SUNDRY EXPENSES
- COMMISSION OF THE WHOLESALER
- COMMISSION OF THE ASSOCIATION
- COMMISSION OF THE PRIVATE TRADERS

Table 6.4 : Itemwise Per Quintal Cost of Marketing of Bananas in Different Markets for the non-members of producers' Associations

(Rupees)

Particulars / Markets	Transport from farm to assembling centre	Loading and Unloading	Transport from assembling centre to wholesale market	Postage	Octroi	Sundry expenses	Commission of the wholesaler	Commission of the private trader	Total
Delhi	2.66	0.84	13.82	0.06	1.00	0.19	5.40	1.72	25.69
	(10.35)	(3.27)	(53.80)	(0.23)	(3.95)	(0.74)	(21.02)	(6.70)	(100.00)
Kanpur	2.89	0.94	13.89	0.07	1.00	0.19	5.42	1.65	26.05
	(11.09)	(3.51)	(53.32)	(0.27)	(3.84)	(0.74)	(20.81)	(6.33)	(100.00)
Naini	3.03	0.96	15.20	0.05	1.01	0.18	5.52	1.70	27.65
	(10.96)	(3.47)	(54.98)	(0.13)	(3.65)	(0.65)	(19.96)	(6.15)	(100.00)
Bombay	2.28	0.93	16.88	6.06	1.02	0.19	5.23	1.40	28.04
	(8.13)	(3.32)	(60.20)	(0.21)	(3.64)	(0.68)	(18.83)	(4.99)	(100.00)
Pune	2.18	0.91	15.81	0.05	1.00	0.19	5.20	1.35	26.06
	(8.37)	(3.49)	(58.25)	(0.19)	(3.84)	(0.73)	(19.95)	(5.18)	(100.00)
Overall	2.61	0.93	14.99	0.06	1.00	0.19	5.36	1.56	26.70
	(9.78)	(3.48)	(56.14)	(0.22)	(3.75)	(0.71)	(20.08)	(5.84)	(100.00)

(Figures in parentheses indicate percentages to the total).

Rs. 25.69 and Rs. 28.04 for the non-members of producers' associations, the lowest and the highest being respectively for Delhi and Bombay markets in both the cases. The comparison of per quintal marketing costs thus indicate that the producers' associations succeeded in keeping down the marketing costs of bananas to the extent of 4 to 6 per cent.

Looking to the various components of total marketing cost, it is observed that, the costs on account of transport (incurred both by the producers as well as marketing agencies), commission of wholesalers and commission of marketing agencies (producers' associations and traditional traders) were relatively low in case of the members of producers' associations as compared to those of non-members as a result of marketing of bananas through producers' associations. The proportions of the individual cost components in the total cost of marketing, however, were more or less of the same order, both at overall as well as individual market levels, for both the types of marketing agencies.

6.5.2. Marketwise Marketing Costs for Grapes :

The details of marketwise cost of marketing of grapes produced by the members and non-members of producers' associations are presented in Tables 6.5 and 6.6, respectively. These costs are on per box basis, each box containing 4 kg of grapes.

At the overall level, the cost of marketing of grapes worked out to Rs. 11.27 and Rs. 11.10 per box in the case of

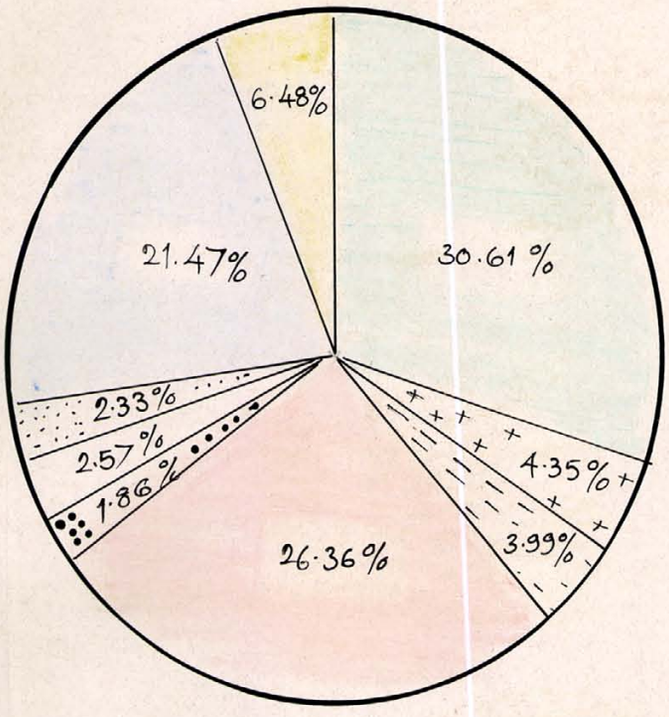
Table 6.5 : Itemwise Per Box (4 kgs) Cost of Marketing of Grapes in Different Markets for the Members of Producers' Associations

(Rupees)

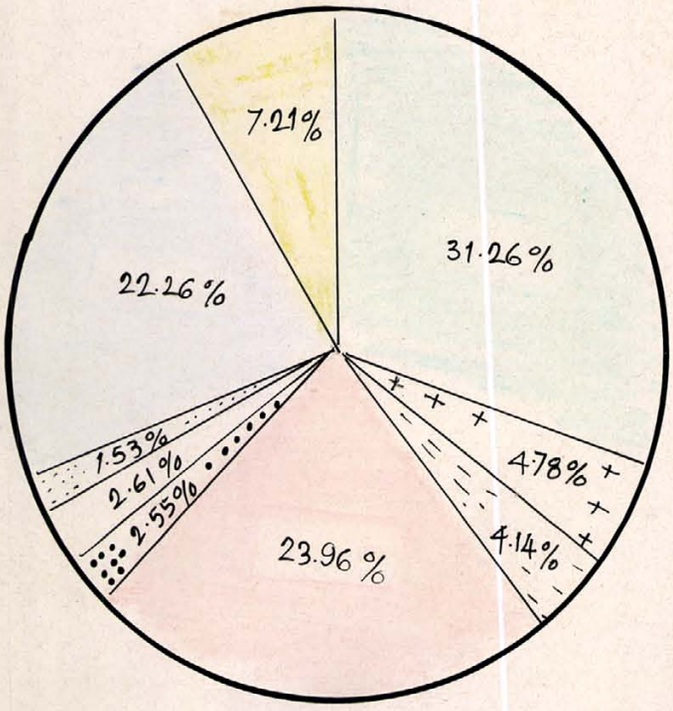
Particulars / Markets	Packaging material	Transport from farm to assembling centre	Loading and Unloading	Transport from assembling centre to wholesale market	Postage	Octroi	Sundry expenses including supervision	Commission of the wholesaler	Commission of the association	Total
1. Delhi	3.49 (26.76)	0.50 (3.83)	0.45 (3.45)	4.19 (32.13)	0.22 (1.69)	0.28 (2.15)	0.28 (2.15)	2.78 (21.32)	0.85 (6.52)	13.04 (100.00)
2. Indore	3.46 (31.40)	0.46 (4.17)	0.45 (4.08)	2.61 (23.69)	0.20 (1.81)	0.24 (2.18)	0.26 (2.36)	2.66 (24.14)	0.68 (6.17)	11.02 (100.00)
3. Banglore	3.48 (32.74)	0.44 (4.14)	0.42 (3.95)	2.56 (24.08)	0.16 (1.51)	0.23 (2.16)	0.24 (2.26)	2.35 (22.10)	0.75 (7.06)	10.63 (100.00)
4. Calcutta	3.53 (25.79)	0.48 (3.50)	0.46 (3.36)	5.14 (37.55)	0.17 (1.24)	0.30 (2.19)	0.26 (1.90)	0.245 (17.90)	0.90 (6.57)	13.69 (100.00)
5. Madras	3.49 (30.53)	0.52 (4.55)	0.45 (3.94)	3.15 (27.56)	0.19 (1.66)	0.29 (2.54)	0.27 (2.36)	2.35 (20.56)	0.72 (6.30)	11.43 (100.00)
6. Ahmedabad	3.48 (32.13)	0.54 (4.99)	0.45 (4.16)	2.67 (24.65)	0.21 (1.94)	0.35 (3.23)	0.26 (2.40)	2.20 (20.31)	0.67 (6.19)	10.83 (100.00)
7. Bombay	3.39 (31.07)	0.53 (4.86)	0.47 (4.31)	2.36 (21.64)	0.25 (2.29)	0.32 (2.95)	0.28 (2.57)	2.62 (24.01)	0.69 (6.32)	10.91 (100.00)
8. Pune	3.38 (32.98)	0.49 (4.73)	0.45 (4.39)	2.27 (22.15)	0.20 (1.95)	0.32 (3.12)	0.27 (2.64)	2.22 (21.65)	0.65 (6.34)	10.25 (100.00)
9. Local	3.34 (34.65)	0.46 (4.77)	0.44 (4.56)	1.79 (18.57)	0.18 (1.87)	0.32 (3.32)	0.27 (2.80)	2.19 (22.72)	0.65 (6.74)	9.64 (100.00)
Overall	3.45 (30.61)	0.49 (4.35)	0.45 (3.99)	2.97 (26.36)	0.21 (1.86)	0.29 (2.57)	0.26 (2.31)	2.42 (21.47)	0.73 (6.38)	11.27 (100.00)

(Figures in parentheses indicate percentages to the total).

FIG. 4. COMPOSITION OF MARKETING COSTS OF GRAPES



MEMBER PRODUCERS



NON-MEMBER PRODUCERS

- PACKING MATERIAL
- TRANSPORT FROM FARM TO ASSEMBLING CENTRE
- LOADING & UNLOADING
- TRANSPORT FROM ASSEMBLING CENTRE TO WHOLESALE MARKET
- POSTAGE
- OCTROI
- SUNDRY EXPENSES
- COMMISSION OF THE WHOLESALER
- COMMISSION OF THE ASSOCIATION
- COMMISSION OF THE PRIVATE TRADER

Table 6.6 : Itemwise Per Box (4 kgs) Cost of Marketing of Grapes in Different Markets for the Non-Members of Producers' Associations

(Rupees)

Particulars / Markets	Packaging material	Transport from farm to assembling centre	Loading and unloading	Transport from assembling centre to wholesale market	Postage	Octroi	Sundry expenses	Commission of the wholesaler	Commission of the private traders	Total
1. Delhi	3.54 (26.64)	0.55 (4.14)	0.48 (3.61)	4.19 (31.53)	0.30 (2.26)	0.28 (2.11)	0.17 (1.28)	2.88 (21.67)	0.90 6.77)	13.29 (100.00)
2. Indore	3.51 (31.48)	0.51 (4.57)	0.46 (4.13)	2.61 (23.42)	0.25 (2.24)	0.24 (2.15)	0.16 (1.43)	2.71 (24.30)	0.70 (6.28)	11.15 (100.00)
3. Bangalore	3.52 (32.59)	0.49 (4.54)	0.44 (4.07)	2.56 (23.70)	0.25 (2.31)	0.23 (2.13)	0.15 (1.40)	2.36 (21.85)	0.80 (7.41)	10.80 (100.00)
4. Ahmedabad	3.52 (31.34)	0.57 (5.08)	0.45 (4.01)	2.69 (23.95)	0.28 (2.49)	0.35 (3.12)	0.17 (1.51)	2.25 (20.04)	0.95 (8.46)	11.23 (100.00)
5. Bombay	3.45 (31.11)	0.58 (5.23)	0.47 (4.24)	2.40 (21.64)	0.25 (2.25)	0.32 (2.89)	0.18 (1.62)	2.66 (23.99)	0.78 (7. 3)	11.09 (100.00)
6. Pune	3.40 (32.69)	0.54 (5.19)	0.46 (4.42)	2.30 (22.12)	0.22 (2.12)	0.32 (3.08)	0.17 (1.63)	2.27 (21.83)	0.72 (6.92)	10.40 (100.00)
7. Local	3.35 (34.36)	0.51 (5.23)	0.44 (4.51)	1.85 (18.97)	0.18 (1.85)	0.32 (3.28)	0.13 (1.35)	2.20 (22.56)	0.72 (7.39)	9.75 (100.00)
Overall	3.47 (31.26)	0.53 (4.78)	0.46 (4.14)	2.66 (23.96)	0.25 (2.25)	0.29 (2.61)	0.17 1.53)	2.47 (22.26)	0.80 (7.21)	11.10 (100.00)

(Figures in parentheses indicate percentages to the total).

the member and non-member grape producers, respectively. The per box cost of marketing of grapes was relatively higher for the members mainly because of the fact that more than 27 per cent of their produce was sent to the distant markets like Calcutta and Madras and the cost on account of transport of produce to these markets was quite higher than that for the other markets.

Looking to the marketwise total cost of marketing, it is revealed that the same was higher for the non-members for markets like Delhi, Indore, Bangalore, Ahmedabad, Bombay and Pune.

Among the various items of marketing cost, the share of transport cost ranged between 22 to 38 per cent for member producers and between 22 to 32 per cent for non-member producers. The commissions of wholesalers and producers' associations/private traders together shared nearly 28 per cent of the total cost in case of the member producers and 30 per cent for the non-member producers. Packaging material alone shared about 31 per cent of the total marketing cost in both the cases.

6.6. Price Spread in the Marketing of Bananas and Grapes .

Normally, prices are determined by the demand and supply conditions. Moreover, the extent to which the price of a commodity changes depends upon the elasticities of demand and supply. The demand for fruits, in general, may

be said to be inelastic but the demand for any one fruit is bound to be elastic on account of possibilities of substitution. In the short run, the supply of fruits is highly inelastic by virtue of their high perishability and time of production. Fruits, after leaving the orchard, pass through several agencies before they reach the final consumer. Every one of the intermediaries, through whom these fruits pass, are bound to charge for the contribution and the services performed by them. Therefore, it is worthwhile to examine as to what share of the rupee price in the wholesale market is received by the producer. The producer's share in wholesale price can be calculated by taking into account the following items.

i) The gross wholesale price of the fruit which the producer gets.

ii) The expenditure incurred by the producer/producers' association/private trader and wholesaler on packaging, loading, transportation, etc.

iii) The profit margins/commissions of individual intermediaries.

iv) Net price received by producer; and

v) The cost of production of the fruits under consideration.

An attempt was, therefore, made to estimate price spread in the marketing of bananas and grapes. In fact, the proportions of costs incurred by the producers,

producers' associations/private traders and commission agents while performing various marketing functions and their respective profit margins in the wholesale price of the fruits under study are estimated and expressed in percentages in order to provide a comparative picture of the efficiency of producers' associations in fruit trade vis-a-vis private traders.

6.6.1. Marketwise Price Spreads in the Marketing of Bananas :

The price spreads in the marketing of bananas in respect of member and non-member producers are presented in Tables 6.7 and 6.8, respectively.

At the overall level, the wholesale per quintal price of bananas marketed through producers' associations and private traders was Rs. 79.23 and Rs. 78.03, respectively. Of the wholesale price, the shares of expenditures incurred on marketing by wholesalers, producers' associations and producers were respectively 1.55, 19.66 and 2.99 per cent for the member producers while those of wholesalers, private traders and producers were 1.59, 20.42 and 3.34 per cent for the non-member producers. The comparison of these proportions thus indicate that the costs incurred by different intermediaries were relatively lower for the banana trade handled by the producers' associations.

As against this, the commissions of wholesalers' and producers' associations were 6.55 and 1.72 per cent of the wholesale price received by the member producers while

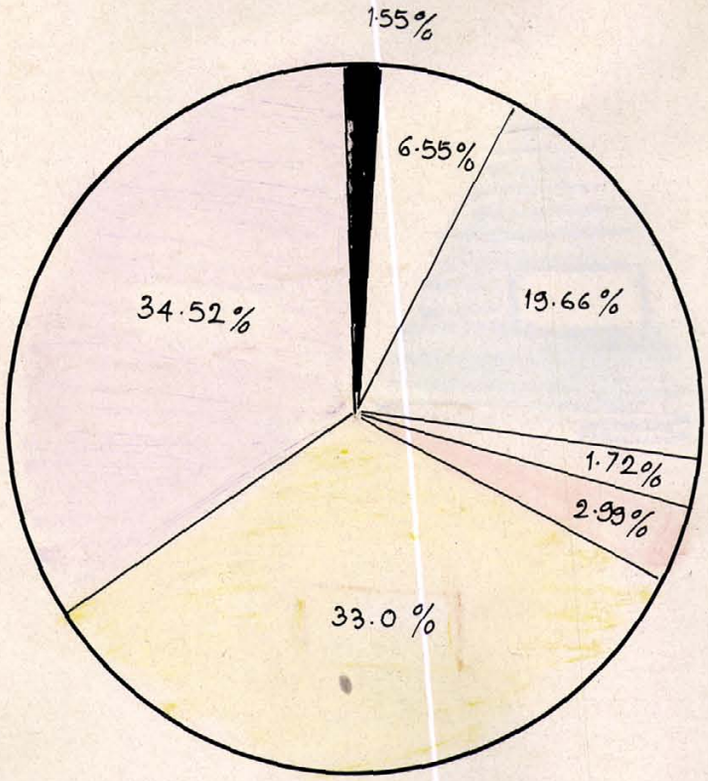
Table 6.7 : Per Quintal Marketwise Price Spread in the Marketing of Bananas for the Members of Producers' Associations

(Rupees)

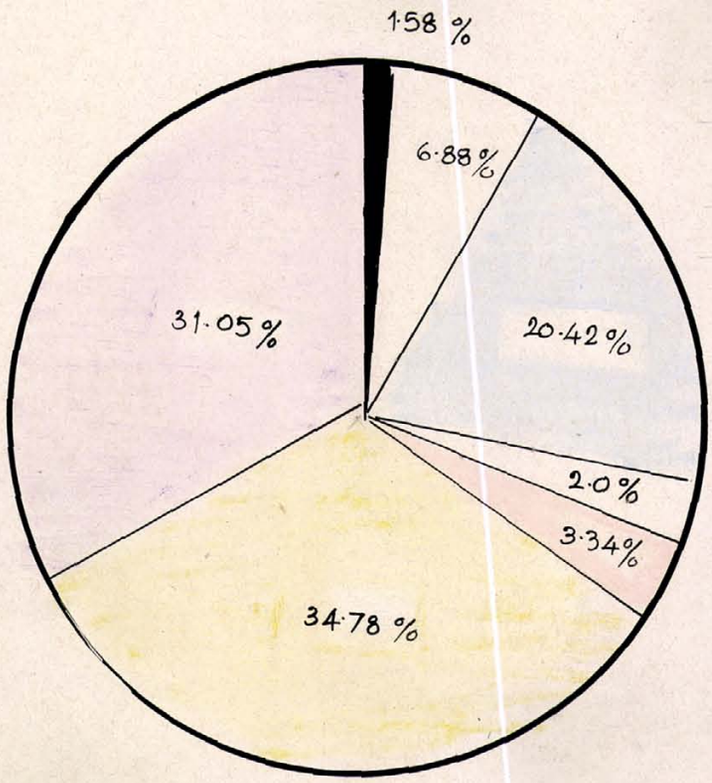
Markets / Particulars	Delhi	Kanpur	Naini	Bombay	Pune	Overall
Wholesale price	79.65 (100.00)	78.41 (100.00)	80.15 (100.00)	79.85 (100.00)	78.10 (100.00)	79.23 (100.00)
Cost incurred in wholesaler	1.23 (1.54)	1.23 (1.57)	1.24 (1.55)	1.24 (1.55)	1.22 (1.56)	1.23 (1.55)
Commission of wholesaler	5.20 (6.54)	5.20 (6.63	5.27 (6.58)	5.13 (6.42)	5.10 (6.53)	5.19 (6.55)
Cost incurred by producers' association	14.65 (18.39)	14.69 (18.73)	15.80 (19.71)	17.05 (21.35)	15.72 (20.13)	15.58 (19.66)
Commission of producers' association	1.35 (1.70)	1.52 (1.94)	1.30 (1.62)	1.35 (1.69)	1.24 (1.59)	1.36 (1.72)
Cost incurred by producer on transport	2.52 (3.16)	2.53 (3.23)	2.54 (3.16)	2.12 (2.66)	2.14 (2.74)	2.37 (2.99)
Cost of production	26.15 (32.83)	26.15 (33.35)	26.15 (32.63)	26.15 (32.75)	26.15 (33.48)	26.15 (33.01)
Producers' profit margin	23.55 (35.84)	27.09 (34.55)	27.85 (34.75)	26.76 (33.51)	26.53 (33.97)	27.35 (34.53)

(Figures in parentheses indicate percentages to the wholesale price).

FIG. 5. PRICE SPREAD IN THE MARKETING OF BANANAS



MEMBER PRODUCERS



NON- MEMBER PRODUCERS

COST INCURRED BY WHOLESALER

COMMISSION OF THE WHOLESALER

COST INCURRED BY THE PRODUCERS ASSOCIATION/ PRIVATE TRADERS

COMMISSION OF THE PRODUCERS ASSOCIATION/PRIVATE TRADERS

COST INCURRED BY THE PRODUCER ON TRANSPORT

COST OF PRODUCTION

PRODUCERS' PROFIT MARGIN

Table 6.8 : Per Quintal Marketwise Price Spread in the Marketing of Bananas for the Non-Members of Producers' Associations

(Rupees)

Markets / Particulars	Delhi	Kanpur	Naini	Bombay	Pune	Overall
Wholesale price	78.10 (100.00)	73.12 (100.00)	79.00 (100.00)	78.75 (100.00)	76.20 (100.00)	78.03 (100.00)
Cost incurred by wholesaler	1.19 (1.52)	1.26 (1.61)	1.19 (1.51)	1.27 (1.61)	1.24 (1.63)	1.23 (1.58)
Commission of wholesaler	5.40 (6.91)	5.42 (6.94)	5.52 (6.99)	5.28 (6.70)	5.20 (6.82)	5.36 (6.88)
Cost incurred by private traders	14.72 (18.85)	14.83 (18.98)	16.21 (20.52)	17.81 (22.62)	16.09 (21.11)	15.93 (20.42)
Commission of private trader	1.72 (2.20)	1.65 (2.12)	1.70 (2.15)	1.40 (1.78)	1.36 (1.78)	1.56 (2.00)
Cost incurred by producer on transport	2.66 (3.41)	2.89 (3.70)	3.03 (3.83	2.28 (2.9)	2.18 (2.85)	2.61 (3.34)
Cost of production	27.10 (34.70)	27.10 (34.69)	27.10 (34.30)	27.10 (34.41)	27.10 (35.56)	27.10 (34.73)
Producers' profit margin	25.31 (32.41)	24.97 (31.96)	24.25 (30.70)	23.61 (29.98)	23.04 (30.24)	24.23 (31.05)

(Figures in parentheses indicate percentages to the wholesale price);

those of wholesalers and private traders were 6.88 and 2.00 per cent of the wholesale price received by the non-member producers. Here again, one could observe that the profit margins of intermediaries were relatively lower in the case of the fruit trade handled by the producers' associations.

It is further evident that, the cost of production of bananas in the case of the member and non-member producers formed 33.01 and 34.73 per cent of the wholesale price received by them. Thus the profit margins of banana producers were 34.52 and 31.05 per cent of the wholesale price in case of the member and non-member producers, respectively.

Looking to the price spreads for individual markets, it will be seen that, the same were, more or less, of the same order as observed at the overall level. On the whole, it may be said that the producers' associations were relatively more efficient in enabling the banana producers receive higher share of the wholesale price.

6.6.2. Marketwise Price Spreads in the Marketing of Grapes :

Tables 6.9 and 6.10 present the details of marketwise price spreads in the marketing of grapes for both the sets of grape producers.

It will be revealed from these tables that the wholesale price was Rs. 25.41 and Rs. 24.78 per box of 4 kg grapes at the overall level for the member and non-member grape

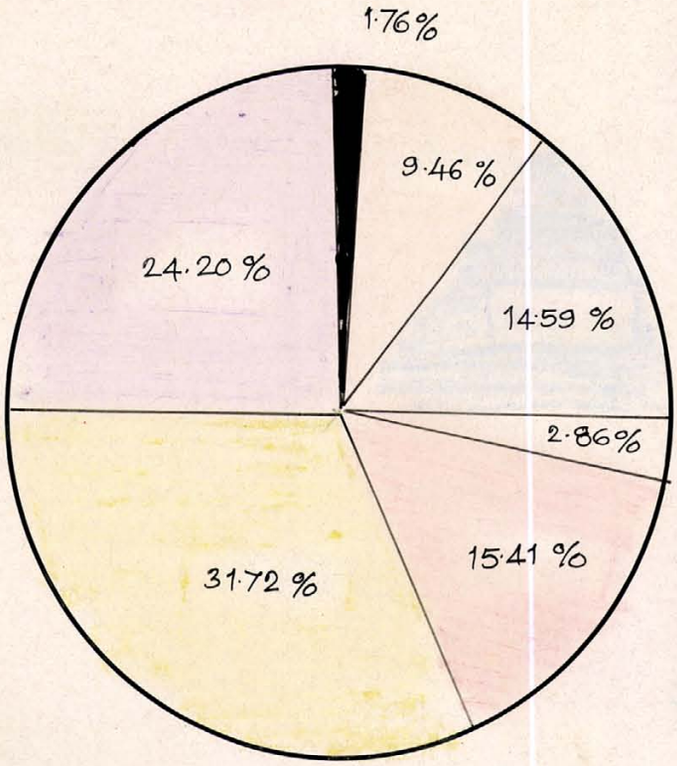
Table 6.9 : Per Box (4 kgs) Marketwise Price Spread in the Marketing of Grapes for the Members of Producers' Associations

(Rupees)

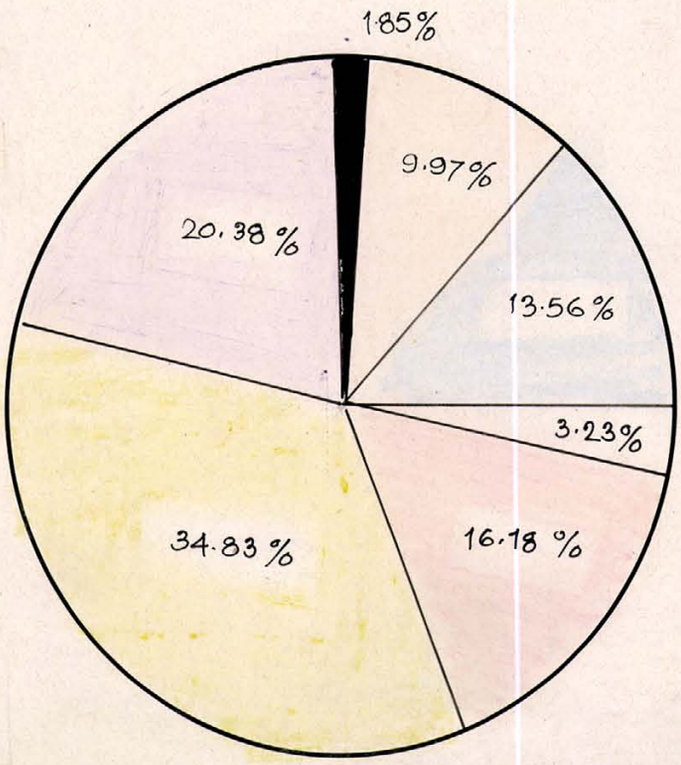
Markets / Particulars	Delhi	Indore	Banglore	Calcutta	Madras	Ahmedabad	Bombay	Pune	Local	Overall
Wholesale price	29.15 (100.00)	27.48 (100.00)	24.72 (100.00)	30.10 (100.00)	24.72 (100.00)	23.64 (100.00)	24.32 (100.00)	22.60 (100.00)	22.00 (100.00)	25.41 (100.00)
Cost incurred by wholesaler	0.44 (1.51)	0.39 (1.41)	0.37 (1.50)	0.45 (1.47)	0.46 (1.83)	0.51 (2.16)	0.50 (2.06)	0.49 (2.15)	0.49 (2.22)	0.45 (1.76)
Commission of the wholesaler	2.78 (9.53)	2.66 (9.61)	2.35 (9.51)	2.45 (8.02)	2.35 (9.35)	2.20 (9.31)	2.62 (10.77)	2.22 (9.75)	2.19 (9.91)	2.42 (9.46)
Cost incurred by producers' association	4.98 (17.05)	3.37 (12.17)	3.24 (13.10)	5.88 (19.22)	3.89 (15.48)	3.43 (14.51)	3.18 (13.08)	3.02 (13.26)	2.51 (11.35)	3.73 (14.59)
Commission of the producers association	0.85 (2.91)	0.68 (2.46)	0.75 (3.03)	0.90 (2.94)	0.72 (2.87)	0.67 (2.83)	0.69 (2.84)	0.65 (2.85)	0.65 (2.94)	0.73 (2.86)
Cost incurred by producer on transport and packaging	3.99 (13.66)	3.92 (14.15)	3.92 (15.86)	4.01 (13.11)	4.01 (15.96)	4.02 (17.00)	3.92 (16.11)	3.87 (16.99)	3.80 (17.20)	3.94 (15.41)
Cost of production	8.11 (27.77)	8.11 (29.30)	8.11 (32.81)	8.11 (26.51)	8.11 (32.27)	8.11 (34.31)	8.11 (33.35)	8.11 (35.60)	8.11 (36.70)	8.11 (31.72)
Producers profit margin	8.00 (27.57)	8.35 (30.90)	5.98 (24.19)	8.30 (28.76)	5.18 (22.24)	4.70 (19.88)	5.30 (21.79)	4.24 (19.40)	4.25 (19.68)	6.03 (24.20)

Figures in parentheses indicate percentages to the wholesale price).

FIG. 6. PRICE SPREAD IN THE MARKETING OF GRAPES



MEMBER PRODUCERS



NON-MEMBER PRODUCERS

- COST INCURRED BY WHOLESALER
- WHOLESALERS' COMMISSION
- COST INCURRED BY ASSOCIATION/PRIVATE TRADE
- COMMISSION OF THE ASSOCIATION/PRIVATE TRADERS
- TRANSPORT AND PACKAGING COST INCURRED BY THE PRODUCER
- COST OF PRODUCTION
- PRODUCER'S PROFIT MARGIN

Table 6.10 : Per Box (4 kgs) Marketwise Price Spread in the Marketing of Grapes for the Non-Members of Producers' Associations

(Rupees)

Markets / Particulars	Delhi	Indore	Banglore	Ahmedabad	Bombay	Pune	Local	Overall
Wholesale price	29.12 (100.00)	27.56 (100.00)	24.53 (100.00)	23.00 (100.00)	24.23 (100.00)	22.50 (100.00)	21.85 (100.00)	24.78 (100.00)
Cost incurred by wholesaler	0.45 (1.55)	0.40 (1.45)	0.38 (1.55)	0.52 (2.20)	0.50 (2.06)	0.49 (2.18)	0.50 (2.29)	0.46 (1.85)
Commission of the wholesaler	2.88 (9.89)	2.71 (9.83)	2.36 (9.60)	2.25 (9.53)	2.66 (10.96)	2.27 (10.08)	2.20 (10.07)	2.47 (9.97)
Cost incurred by private trader	4.97 (17.06)	3.32 (12.05)	3.25 (13.22)	3.42 (14.19)	3.12 (12.85)	2.98 (13.24)	2.47 (11.30)	3.36 (13.56)
Commission of private traders	0.90 (3.09)	0.70 (2.54)	0.80 (3.26)	0.95 (4.03)	0.78 (3.21)	0.72 (3.20)	0.72 (3.30)	0.80 (3.23)
Cost incurred by producer on packaging and transport	4.09 (14.04)	4.02 (14.59)	4.01 (16.31)	4.09 (17.33)	4.03 (16.60)	3.94 (17.51)	3.86 (17.66)	4.01 (16.18)
Cost of production	8.63 (29.64)	8.63 (31.31)	8.63 (35.11)	8.63 (36.57)	8.63 (35.54)	8.63 (33.36)	8.63 (39.50)	8.63 (34.83)
Producers' profit margin	7.20 (24.73)	7.78 (28.23)	5.15 (20.95)	3.74 (15.85)	4.56 (18.78)	3.47 (15.43)	3.47 (15.88)	5.05 (20.38)

(Figures in parentheses indicate percentages to the wholesale price).

producers, respectively. Of the wholesale price, the proportions of costs incurred by the wholesalers and producers on marketing of grapes as well as the proportions of commissions of wholesalers and producers' associations were relatively lower in case of the marketing of grapes produced by the members of the producers' associations. The per unit cost of production of grapes formed 31.72 and 34.83 per cent of the wholesale price for the member and non-member grape producers, respectively. Thus, producer's profit margin was 24.20 per cent of the wholesale price in the case of the trade handled by the producers' associations as against 20.38 per cent for the non-members.

The comparison of the marketwise price spreads indicate that for all the markets the proportions of costs incurred on marketing and commissions of intermediaries in the wholesale price were relatively lower for the grape trade handled by the producers' associations. There had, however, been wide variations in these proportions among the various markets under study. In general, the proportions of producers' profit margin in the wholesale price were relatively higher for Delhi, Indore and Bangalore markets for both the sets of grape producers. The markets at Calcutta and Madras also offered relatively higher profit margins to the producers.

Based on the comparisons of the proportions of producers' profit margins in the wholesale prices, it could be concluded that the same were relatively higher for the distant

markets and the lower for the nearest markets. Perhaps the relative intermarket imbalances between supply and demand conditions might have brought about such variations in the profit margins of the grape producers.

6.7. Profitability of Production of Bananas and Grapes :

The details of per hectare profitability of production of bananas and grapes are presented in Table 6.11 for both the sets of producers.

Table 6.11 : Relative Profitability of Production of Bananas and Grapes by the Members and Non-Members of Producers' Associations.

(Rupees per hectare).

Items	Banana producers		Grape producers	
	Members	Non-members	Members	Non-members
Total returns	43044.50 (100.00)	42245.89 (100.00)	139363.39 (100.00)	134228.55 (100.00)
Cost of cultivation	14206.13 (33.00)	14672.39 (34.73)	44472.89 (31.91)	46735.92 (34.82)
Cost of marketing	13979.11 (32.47)	14455.38 (34.22)	61815.95 (44.35)	60134.25 (44.80)
Total cost	28185.24 (65.48)	29127.77 (68.95)	106288.84 (76.26)	106870.17 (79.62)
Net return	14859.26 (34.52)	13118.12 (31.05)	33074.55 (23.74)	27358.38 (20.38)

(Figures in parentheses indicate percentages to the total returns).

It is evident from the figures given in the table that the per hectare total costs (which included cost of cultivation and cost of marketing as well) were relatively

lower and total returns higher for the members of producers' associations of both the fruits. Thus the members of producers' associations could derive additional net returns of about Rs. 1740 and Rs. 5615 per hectare from production of bananas and grapes, respectively, over and above those of non-members. This clearly indicates that the producers associations benefitted the fruit producers to a greater extent in receiving relatively higher profit margins from the production of bananas and grapes.

6.8. Costs and Returns Structure of the Producers' Association:

Lastly, an attempt was made to study, in brief, the costs and returns structure of the average associations of the producers of bananas and grapes. The details of costs and returns of the average associations of the producers of bananas and grapes are presented in Tables 6.12 and 6.13 respectively. Further, the relative profitability of the average associations of the producers of bananas and grapes has been estimated by deducting total costs from total receipts and the same is indicated in Table 6.14

The total annual cost was estimated at Rs.1,47,253.78 and Rs. 1,19,151.01 for the average associations of bananas and grapes respectively. Among the various items of costs, salary, interests on borrowed funds, depreciation, market supervision charges and honorarium to directors were the major items of the total cost.

The total annual receipts (as indicated in Table 6.13)

Table 6.12 : Details of Cost Structure of the Average Association of Banana and Grape Producers

(Rupees)

Item of cost	Producers' Association of	
	Banana producers	Grape producers
Salary	58166.67 (39.50)	30040.00 (25.21)
Honorarium to Directors and related expenses	9166.67 (6.23)	1000.00 (0.84)
Postage and phone charges	3166.67 (2.15)	9741.96 (8.18)
Office rent	700.45 (0.48)	1550.00 (1.30)
Electricity charges	500.00 (0.34)	500.12 (0.42)
Travelling expenses	2500.00 (1.70)	8127.20 (6.82)
Fees and Taxes	16703.33 (11.34)	12430.00 (10.47)
Interest	18433.33 (12.55)	2914.96 (2.45)
Depreciation	15833.33 (10.75)	1900.00 (1.59)
Market supervision charges and miscellaneous	22033.33 (14.96)	50996.77 (42.72)
Total	147253.78 (100.00)	119151.01 (100.00)

(Figures in parentheses indicate percentages to the total).

Table 6.13 : Details of Receipts Earned by the Associations of Banana and Grape Producers

(Rupees)

Receipts from	Producers' Association of	
	Banana producers	Grape producers
Marketing commission	83666.65 (44.55)	80315.16 (50.88)
Interest on deposits	44402.00 (23.64)	-
Profit from marketing of inputs	34333.33 (18.28)	15808.92 (10.01)
Transport commission, office rent, packaging material, etc.	25402.67 (13.53)	61750.95 (31.11)
Total	187804.65 (100.00)	157875.03 (100.00)

(Figures in parentheses indicate percentages to the total).

Table 6.14 : Relative Profitability of the Average Associations of Banana and Grape Producers

(Rupees)

Item	Producers' Association of	
	Banana producers	Grape producers
Total receipts	1,87,804.65	1,57,875.03
Total costs	1,47,253.78	1,19,151.01
Net profit	40,550.87	38,724.02

were estimated at Rs. 1,37,804.65 and Rs. 1,57,375.03 for the average associations of the producers of bananas and grapes, respectively. Both the type of associations could derive nearly 45 to 51 per cent of the total receipts from the commission on marketing of fruits. Interest on deposits, profit margins from marketing of inputs, profit margins from sale of packaging materials and office rent earned were the other sources of receipts for both the type of associations.

Table 6.14 further reveals that the average associations of the producers of bananas and grapes earned net profit of Rs. 405,50.87 and Rs. 38,724.02, respectively, during the year under reference.

The foregoing analysis thus indicate that the producers' associations benefitted the fruit producers in deriving relatively higher returns from the production of the fruits.

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Chapter 7

SUMMARY AND CONCLUSIONS

Chapter 7

SUMMARY AND CONCLUSIONS

Marketing of bananas and grapes involves a number of intermediaries for performing different activities like transport, storage, packaging, grading and sale of fruits in distant markets. These intermediaries, in turn, take away high margins from the price paid by consumers and to that extent producers are deprived of their legitimate share in consumer's price. Though the price movements in different markets are determined more or less by demand-supply forces, the market margins of different intermediaries are not, in any way, controlled by any restrictions. Moreover, the existing fruit trade is characterized by malpractices by way of multiplicity of market charges, unauthorized deductions, superfluous middlemen and lack of storage facilities. To overcome these problems, the marketing system needs to be improved either by bringing about complete regulation of fruit trade or by resorting to an efficient alternative marketing system.

Some attempts have been made by the producers of bananas and grapes in Maharashtra to form producers' associations on co-operative lines to take up marketing activities. The present study viz., "Role of Producers' Associations in the Marketing of Bananas and Grapes in Maharashtra" was undertaken to examine the impact of producers' associations in safeguarding interests of the producers.

Besides studying in detail the working of producers'

associations, the study contemplated (1) to identify marketing channels, (2) to study marketing costs, and (3) to estimate price spread in the marketing of bananas and grapes through producers' associations vis-a-vis traditional traders.

The study was based on the empirical data obtained from the samples of banana and grape producers of Jalgaon and Sangli districts, respectively. The selection of these districts was purposive for the reason that quite a large proportion of fruit trade is handled by producers' associations in these districts. The samples of fruit producers, however, constituted members as well as non-members of producers' associations. The samples of fruit producers belonging to both the categories were selected by adopting three-stage-stratified random sampling design with tehsils having relatively large acreage under respective fruit crops as a primary unit, village as a secondary unit and producer of bananas and grapes as an ultimate unit of sampling. The details of working of 4 producers' associations of bananas and 2 producers' associations of grapes were also studied.

The data on the various aspects of production and marketing of fruits were collected by survey method through personal interview of the samples of fruit producers and producers' associations with the help of a comprehensive questionnaire specially designed for the purpose.

Summary of the Findings :

The findings of the study are summarized below :

1. The analysis of resource use and cost structures of the respective fruit crops on the farms of member and non-member producers revealed that the same were, more or less of the same order on both the types of farms. The per hectare cost of cultivation of bananas worked out to Rs. 14206.13 and Rs. 14672.92 at Cost C level and the per hectare output was 543.3 and 541.4 quintals on the farms of member and non-member producers, respectively. The per hectare cost of cultivation of grapes was almost three times that of the cost of cultivation of bananas. The output of grapes was 219.4 quintals per hectare on the farms of member producers while it was 216.7 quintals per hectare on the farms of non-member producers. The cost of production was estimated at Rs. 26.15 and Rs. 27.10 per quintal of bananas and Rs. 202.70 and Rs. 215.67 per quintal of grapes on the farms of member and non-member producers, respectively.

2. The member and non-member producers of both the fruits sent their produce to different markets instead of concentrating on a single market. However, a proportion of banana produce sent to Delhi market through traditional traders, was relatively higher in comparison with that of member producers. The producers' associations of grape growers successfully tried in tapping distant markets like Calcutta and Madras where non-members could not send their produce.

3. The following were the major marketing channels in the fruit trade under consideration.

i) Producers Producers' Associations Wholesalers Retailers Consumers.

ii) Producers Private Traders Wholesalers Retailers Consumers.

4. The per quintal cost of marketing of bananas ranged between Rs. 24.95 and Rs. 26.94 for members and between Rs. 25.69 and Rs. 28.04 for the non- members of producers' associations, the lowest and the highest being respectively for Delhi and Bombay markets in both the cases. At the overall level, the cost of marketing of bananas worked out to Rs. 25.73 and Rs. 26.70 per quintal for the members and non-members of producers' associations, respectively. The costs on account of transport, commission of wholesalers and commission of marketing agencies were lower for the member producers as compared to those of non-members.

5. At the overall level, the cost of marketing of grapes was Rs. 11.27 and Rs. 11.40 per box of 4 kg in case of the member and non-member grape producers, respectively. The per box cost of marketing of grapes was relatively higher for members mainly because more than 27 per cent of their produce was sent to distant markets like Calcutta and Madras.

6. From the analysis of price spreads, it was revealed that the proportions of costs incurred by wholesalers and marketing agencies on account of marketing of fruits as well as their commissions in the consumers' price were relatively low for the members of producers associations. The members

of producers' associations could, therefore, derive relatively higher profit margins from fruit trade.

7. The comparison of total costs (which included cost of cultivation and cost of marketing as well) and total returns indicated that the members of producers' associations could derive additional net returns of Rs. 1740 and Rs. 5615 per hectare from production of bananas and grapes, respectively, over and above those of non-members.

Conclusions :

The following conclusions might be drawn on the basis of the findings of the study.

1. The producers' associations helped the producers of bananas and grapes in economizing the process of production of fruits and also in lowering down the cost of marketing.

2. The commissions charged by the intermediaries were significantly lower in case of the fruit trade handled by the producers' associations.

3. The member producers of both the fruits could get relatively higher proportion of wholesale price mainly because of efficient functioning of various activities by the producers' associations.

4. Tapping of distant markets by the producers' associations helped the member producers to receive higher profit margins from fruit production activities.

5. Besides enabling the fruit producers receive higher proportions of wholesale price, the producers' associations derived sufficient profits from fruit trade.

On the whole it might be concluded that, the producers' associations played an important role in the marketing of respective fruits, thereby enabling the member producers to receive relatively higher profits from fruit production activities. There is, however, a great scope for these associations to diversify their activities in the areas of input supply, processing, storage, etc., and also to substitute the existing commission agents in the wholesale markets.

Lastly, looking to the effectiveness of producers' associations in marketing of fruits, it can be recommended that similar type of associations may be established to cover all the fruit producers and efforts may also be made to diversify the activities of all the associations so as to enhance profitability of fruit production in the state.

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BIBLIOGRAPHY

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APPENDICES

APPENDIX-I

Questionnaire for Studying the Role of Producers' Associations In the Marketing of Bananas and Grapes in Maharashtra.

.....

I. General Information :

A. Family size and composition

Farmer's name :

Age	Education
Village	Occupation
Tehsil	a) Main
Dist.	b) Subsidiary

Size and Composition of Family

	Male	Female	Total
Adults			
Children			
Total			

B. Information About Land Holding

Survey No.	Total area (ha.)	Fallow land (ha.)	Net cropped area (ha.) Irri.	Unirri.	Source of irrigation	Land revenue & other taxes (Rs.)	Market value of land (Rs.)	If the land taken on rent details
Total								

1) Owned land

2) Land taken on rent

3) Land given on rent or lease

C. Capital Assets - Inventory

1) Buildings - Residential and Farm

No.	Type of building	Type of construction	Year when constructed	Original value (Rs.)	Estimated remaining life years	Current value (Rs.)
1. House						
2. Byre						
3. Godown						
4. Store						
5. Others						
Total						

ii) Implements - (a) Wooden, (b) Iron

Sr. No.	Item	No.	Original value (Rs.)	Estimated remaining life years	Current value (Rs.)	Repairs (Rs.) Major	Minor	Depreciation (Rs.)
a) Wooden								
1. Wooden plough								
2. Seed drills								
3. Harrow								
4. Hoes								
5. Bullock cart								
b) Iron								
1. Iron plough								
2. Ridger								
3. Duster								
4. Seeder								
5. Sprayer								
6. Hoes								
7. Tools								
8. Others								
Total								

iii) Machinery

Sr. No.	Item	No.	Original value (Rs.)	Estimated remaining life Yrs.	Current value (Rs.)	Repairs (Rs.) Major	Minor	Depreciation (Rs.)
1. Oil engine								
2. Ele. motor								
3. Tractor								
4. Harvester								

D. **Livestock**

Sr.No.	Kind of Animal	No.of Animals	Present value(Rs.)
1.	Milch		
2.	Draught		
3.	Others		
	Total		

E. Information About Cropping Pattern

Sr. No.	Kharif Crop	Kharif Area in ha Irri.	Kharif Area in ha Unirri.	Rabi Crop	Rabi Area in ha. Irri.	Rabi Area in ha. Unirri.	Summer Crop	Summer Area in ha. Irri.	Summer Area in ha. Unirri.	Total
1.	Bajara			Wheat			G.nut			
2.	Jowar			Gram			Vegetable			
3.	G.nut			Others			Others			
4.	Tur									
5.	Chavali									
6.	Mug									
7.	Matki									
8.	Paddy									
9.	Maize									
10.	S. cane									
11.	Others									
	Total									

F. Information About Fruit Crops

Sr. No.	Name of the fruit crop	Area ha.	Year of establishment	Plant population	Spacing	General productivity qtls/ha.	Av.Productivity qtls/ha.
1.	Banana						
2.	Grape						
3.	Lime						
4.	Guva						
5.	Others						
	Total						

II. Production and Cost - Istablishment Cost - Banana Crop

Area : Date of Planting : Variety :

Sr. No.	Operation	No.of family labour days			No.of Hired labour days			Material used		
		Male	Female	Bullock pairs	Male	Female	Bullock pairs	Name	Qty.	Value (Rs.)
1.	Ploughing									
2.	Harrowing									
3.	Clod crushing									
4.	Marking									
5.	Layout-digging the pits									
6.	Manuring									
7.	Filling the pits									
8.	Transporting the suckers									
9.	Planting									
10.	Irrigation									
11.	Others									
	Total									

Cost of Cultivation

Sr. No.	Operation	No.of family labour days			No.of hired labour days			Material used		
		Male	Female	Bullock pairs	Male	Female	Bullock pairs	Name	Qty.	Value (Rs.)
1.	Ploughing									
2.	Harrowing									
3.	Weeding									
4.	Chalni									
5.	Thinning									
6.	Earthing up									
7.	Spraying									
8.	Dusting									
9.	Irrigation									
10.	Top dressing									
11.	Pangara Planting									
12.	Watching									
13.	Harvesting									
14.	Others									
	Total									

III. Mixed Crop and Its Yield

Sr. No.	Name of the crop	Quantity of output	Value (Rs.)
1.			
2.			
3.			
4.			
5.			
Total			

IV. Output According to Quality

Sr. No.	Quality	Quantity of output (quintals)
1.	Good	
2.	Normal	
3.	Below normal	
	Total	

Production and Cost - Grape

I. Establishment Cost

Area : Date of planting . Variety .

Sr. No.	Operation	No. of family labour days			No. of hired labour days			Material used		
		Male	Female	Bullock pairs	Male	Female	Bullock pairs	Name	Qty.	Value (Rs.)
1.	Preparatory tillage									
2.	Levelling of land									
3.	Digging the pits									
4.	Manuring									
5.	Fertilizer application									
6.	Filling the pits									
7.	Planting									
8.	Supporting									
9.	Top dressing									
10.	Spraying									
11.	Intercul-turing									
12.	Irrigation									
13.	Transport-tion of pillars									
14.	Transport of wire									
15.	Cement transport									
16.	Digging the pits									
171	Preparation of bower									
	Others									
	Total									

Cost of Cultivation from April to October

Sr. No.	Operation	No. of family labour days			No. of Hired labour days			Material used		
		Male	Female	Bullock pairs	Male	Female	Bullock pairs	Name	Qty.	Value (Rs.)
	from April to October									
1.	Manuring									
2.	Fertiliser application									
3.	Irrigation									
4.	Pruning									
5.	Chalni									
6.	Bending									
7.	Preparation of sara									
8.	Spraying									
9.	Interculturing (ploughing harrowing, etc.)									
10.	Others									
	Total									
	From October to March									
1.	Manuring									
2.	Fertiliser application									
3.	Interculturing									
4.	Irrigation									
5.	Pruning									
6.	Bending									
7.	Spraying									
8.	Chalni									
9.	Night watching									
10.	Thinning									
11.	Bower repairing									
12.	Watching									
13.	Harvesting									
14.	Packing									
15.	Plant treatments									
	Total									

III. Mixed Crop and its Yield

Sr. No.	Name of the crop	Qty. of output qtls.	Value (Rs.)
	Total		

IV. Output According to Quality

Sr. No.	Quality	Quantity of output (qtls.)
1.	Good	
2.	Normal	
3.	Below ~~[illegible]~~ normal	
	Total	

1. Cost of boxes - Rs.
2. Sticker - Rs.
3. Coloured papers - Rs.
4. Cost of Bhusa & Reddi - Rs.
5. Cost of grading - Rs.

III. Marketing

I. Disposal of output

Sr.No.	Disposal activity	Qty. kg/qtls
1.	Home consumption	
2.	Gift/present	
3.	Market purpose	
	Total	

II. Marketing channels followed and quantity marketed

Channels for traditional trader	T_1	T_2	T_3	T_4
	Producer	Producer	Producer	Producer
	Itinerant merchant	Wholesaler	Retailer	
	Wholesaler	Retailer	Consumer	Consumer
	Retailer	Consumer		
	Consumer			

Channels for producer's Association	A_1	A_2	A_3	A_4	A_5	A_6
	Producer	Producers' Association	P.A.	Producer	Producer	Producer
	P.A.	Retailer		Agent	Agent	Agent
	Wholesaler	Consumer	Consumer	P.A.	Wholesaler	Consumer
	Retailer				Retailer	
	Consumer				Consumer	

Cost of Marketing

Sr. No.	Item	Delhi	Indore	Kanpur	Bang-lore	Ahmed-bad	Bombay	Pune	Local
							Madras,	Calcutta	
								Naini	Other
1.	Transport								
2.	Hamali								
3.	Dalali								
4.	Octroi								
5.	Godown charges								
6.	Toll taxes								
7.	Dharmaday								
8.	Postage								
9.	Tulai								
10.	Others								
11.	Total								
12.	Sale price								
	Net margin								

Details About Transport of Fruits Truck/Rail/Other

Name of the crop	Place	Distance km	Qty.brought qtls.	Transport charges
Total				

Information About Storage

Sr. No.	Name of the crop	Kind of storage	Place of storage	Qty.of stored	Loss in storage	Storage charges
	Total					

Producers' Association and its Working

Name of the Association	Year of establishment	Membership	Size of business	Marketing places

II. Fixed cost and Variable Cost

a) Fixed cost

Sr. No.	Item	Value(Rs.)
1.	Office building	
2.	Godown	
3.	Machinery	
4.	Transport means	
5.	Furniture	
	1. Wooden	
	2. Iron	
6.	Share capital	
7.		
8.		

b) Variable cost

Sr. No.	Item	Amount (Rs.)
1.	Labour charges	
2.	Fuel charges	
3.	Staff-salary	
4.	Postage	
5.	Telephone	
6.	Travelling charges	
7.	Repairing of machinery	
8.	Electricity	
9.	Telegram	
10.	Supervisors	
11.	Stationery	

III. System of Working :

Management Details -

IV. Returns - Details

V. Profitability and its distribution among members

1) Total profit -

2) Profit : 1) Fund in producers' Associations
2) Producer.

Experience and Difficulties of Cultivator :

1. Which variety is comparatively more expensive ?
2. Which variety is comparatively more profitable ?
3. Why you preferred this variety ?
4. Which variety will you prefer for new plantation ?
5. Do you use sufficient fertilizers ? If not why ?
6. Which disease occurs more frequently on the variety grown by you ?
7. Can you control this disease ? If not why ?
8. Do you prefer grading of the fruits ? If not why ?
9. What are the difficulties and experience regarding marketing, packing, pruning, training, spraying, availability of labour and others ?
10. What are the means of transportation ?
11. Experiences in marketing through different agencies.

.....

APPENDIX-II

Per Hectare Cost of Establishment of Grape Vine Yards on the Farms of the Members of Producers' Associations

Sr. No.	Items	Units	Price/Unit (Rs.)	Cost (Rs.)	% to the total cost
1.	Total human labour				
	Male days	1177.39	4.55	5357.12	8.02
	Female days	903.18	3.12	2817.92	4.22
				8175.04	12.24
a)	Family human labour				
	Male days	95.15	4.00	380.60	0.57
	Female days	35.89	2.89	103.72	0.16
				484.32	0.73
b)	Hired human labour				
	Male days	1082.24	4.60	4976.52	7.45
	Female days	867.19	3.13	2714.20	4.06
				7690.72	11.51
2.	Bullock labour pair days	17.5	21.12	369.60	0.55
3.	Manure cartloads	143.15	31.25	4473.25	6.70
4.	Fertilisers - N kg	887.23	-	5620.79	8.42
	- P kg	591.48	-		
	- K kg	489.13	-		
5.	Seed-rooted grafts	4300	1.06	4572.70	6.85
6.	Irrigation (turns)	41.3	30.36	1253.67	1.88
7.	Land revenue			3.30	0.012
8.	Plant protection No.of sprayings	43.2	130.92	5655.73	8.47
9.	Depreciation	-	-	1688.06	2.53
10.	Crop supports including miscellaneous	-	-	23877.33	35.76
11.	Interest on working capital	-	-	3864.74	5.79
	Cost A			59075.36	88.48
12.	Rental value of owned land			5810.49	8.70
13.	Interest on fixed capital			1394.17	2.09
	Cost B			66280.02	99.27
14.	Family labour charges			484.32	0.73
	Cost C			66764.34	100.00
	Apportioned establishment cost per year			6676.43	

APPENDIX-III

Per Hectare Cost of Establishment of Grape Vine Yard on the Farms of the Non-Members of Producers' Association

Sr. No.	Items	Units	Cost/Unit (Rs.)	Cost (Rs.)	% to the total cost
1.	Total human labour				
	Male days	868.47	4.68	4064.43	5.93
	Female days	1485.62	3.12	4635.13	6.76
				8699.56	12.69
a)	Family human labour				
	Male days	122.62	4.18	510.87	0.75
	Female days	230.12	2.30	644.33	0.94
				1155.20	1.69
b)	Hired human labour				
	Male days	746.25	4.76	3553.56	5.18
	Female days	1255.50	3.18	3990.80	5.82
				7544.36	11.00
2.	Bullock labour pair days	18.78	21.78	409.02	0.60
3.	Manures cart loads	129.73	31.25	4054.14	5.91
4.	Fertilizers-N kg	882.35	-	5890.00	8.59
	P kg	599.17			
	K kg	488.56			
5.	Seed rooted grafts	4288.00	1.12	4803.44	7.01
6.	Irrigation (turns)	42.3	31.29	1323.29	1.93
7.	Land revenue	-	-	8.30	0.012
8.	Plant protection No.of Sprayings	42.3	137.19	5803.44	8.47
9.	Depreciation	-	-	1504.50	2.31
10.	Crop supports including miscellaneous	-	-	24911.46	36.34
11.	Interest on working capital	-	-	3943.23	5.75
	Cost A			60275.19	87.93
12.	Rental value of owned land	-	-	5810.49	8.48
13.	Interest on fixed capital	-	-	1305.50	1.90
				67391.18	98.31
	Cost B				
14.	Family labour charges			1155.20	1.69
	Cost C			68546.38	100.00
	Apportioned establishment cost per year			6854.63	

APPENDIX-IV

Per Hectare Cost of Cultivation of Banana Crop on the Farms of Member Cultivators

Items	Units	Cost/Unit (Rs.)	Cost (Rs.)	% to the total cost
1. Total human labour				
Male days	280.12	4.89	1369.79	9.64
Female days	73.19	3.36	259.59	1.83
			1629.38	11.47
a) Family human labour				
Male days	135.27	4.45	601.95	4.24
Female days	25.06	3.29	82.40	0.58
			684.35	4.82
b) Hired human labour				
Male days	144.85	5.20	756.11	5.32
Female days	53.13	3.56	188.92	1.33
			945.03	6.65
2. Bullock labour pair days	36.18	18	651.24	4.58
3. Seed rizomes (No.)	4440.00	4/100	444.00	3.11
4. Manure cart loads	39.40	27.63	1088.62	7.74
5. Fertilizers N kg	600.28	-	3932.00	27.67
P kg	300.14			
K kg	400.06			
6. No.of irrigations	33.89	26.14	885.78	6.22
7. Land revenue & taxes	-	-	130.50	0.91
8. Depreciation	-	-	968.00	6.80
9. Interest on working capital	-	-	633.16	4.45
Cost A			9678.33	68.13
10. Rental value of owned land	-	-	3410.25	24.00
11. Interest on fixed capital	-	-	433.20	3.05
Cost B			13521.78	95.13
12. Family labour charges	-	-	684.35	4.82
Cost C			14206.13	100.00

APPENDIX-V

Per Hectare Cost of Cultivation of Banana Crop on the Farms of Non-Member Cultivators

Items	Units	Cost/unit (Rs.)	Cost (Rs.)	% to the total cost
1. Total human labour-Male days	298.14	4.90	1460.88	9.96
Female days	72.23	3.31	239.08	1.63
			6199.96	11.59
a) Family human labour				
Male days	138.27	4.45	615.39	4.19
Female days	24.16	3.29	79.49	0.54
			694.88	4.73
b) Hired human labour				
Male days	159.87	5.20	831.32	5.67
Female days	43.07	3.61	173.76	1.18
			1005.08	6.85
2. Bullock labour pair days	33.13	18.05	688.25	4.69
3. Seed rizomes (No.)	4440.00	100/4	444.00	3.03
4. Manure cart loads	41.23	27/60	1137.95	7.76
5. Fertilizers N kg	600.13	-	4164.00	28.37
P kg	305.58			
K kg	400.00			
6. No.of irrigations	33.13	18.74	885.78	6.04
7. Land revenue & taxes	-	-	130.50	0.89
8. Depreciation	-	-	899.12	6.13
9. Interest on working capital	-	-	703.39	4.79
Cost A			10057.07	68.55
10. Rental value of owned land	-	-	3410.25	23.24
11. Interest on fixed capital	-	-	510.19	3.48
Cost B			13977.51	95.27
12. Family labour charges	-	-	694.88	4.73
Cost C			14672.39	100.00

APPENDIX-VI

Per Hectare Cost of Cultivation of Grape Vine Yard on the Farms of the Member Cultivators

Items	Units	Price/Unit (Rs.)	Cost (Rs.)	% to the total cost
1. Total human labour				
Male days	843.77	4.68	3948.83	8.88
Female days	1257.22	3.12	3922.52	8.82
			7871.35	17.70
a) Family human labour-Male days	162.35	4.18	678.62	1.53
Female days	202.79	2.80	567.81	1.28
			1246.45	2.81
b) Hired human labour				
Male days	681.42	4.80	3270.21	7.35
Female days	1074.43	3.13	3354.71	7.54
			6624.92	14.89
2. Bullock labour pair days	7.78	21.78	169.44	0.38
3. Manure cart loads	150.22	31.25	4694.51	10.56
4. Fertilisers - N kg	1012.80	-	5266.57	11.84
P kg	520.10			
K kg	448.33			
5. No.of irrigations	41.43	30.26	1253.67	2.82
6. No.of sprayings	43.8	131.20	5746.42	12.92
7. Land revenue	-	-	8.30	0.01
8. Depreciation	-	-	1688.06	3.80
9. Apportioned establishment cost	-	-	6673.43	15.01
10. Miscellaneous	-	-	902.66	2.03
11. Interest on working capital	-	-	2248.98	5.05
Cost A			35276.96	79.32
12. Rental value of owned land	-	-	5810.49	13.07
13. Interest on fixed capital	-	-	2139.01	4.81
Cost B			43226.46	97.20
14. Family labour charges	-	-	1246.43	2.80
Cost C			44472.89	100.00

APPENDIX-VII

Per Hectare Cost of Cultivation of Grape Vine Yard on the Farms of the Non-Member Cultivators

Items	Units	Cost/Unit (Rs.)	Cost (Rs.)	% to the total cost
1. Total human labour				
Male days	967.31	4.80	4643.09	9.93
Female days	1129.54	3.30	3727.48	7.97
			8370.57	7.90
a) Family human labour				
Male days	186.40	4.30	801.52	1.73
Female days	248.08	2.92	724.39	1.55
			1525.91	3.26
b) Hired human labour				
Male days	780.91	4.91	3341.56	8.22
Female days	881.46	3.40	3003.10	6.42
			6344.65	14.64
2. Bullock labour pair days	8.01	21.88	175.25	0.37
3. Manure cart loads	172.77	32.75	5658.40	12.11
4. Fertilisers - N kg	1020.00	-	6044.77	12.93
P kg	518.12			
K kg	452.8			
5. No.of irrigations	42.3	31.29	1323.80	2.83
6. No.of sprayings	42.3	145.01	6134.32	13.12
7. Land revenue	-	-	8.30	0.02
8. Depreciation	-	-	1584.50	3.39
9. Apportioned establishment cost	-	-	6854.63	14.67
10. Miscellaneous	-	-	981.20	2.10
11. Interest on working capital	-	-	2484.20	5.33
Cost A			38094.02	81.51
12. Rental value of owned land	-	-	5810.49	12.43
13. Interest on fixed capital	-	-	1305.50	2.79
Cost B			45210.01	96.73
14. Family labour charges	-	-	1525.91	3.27
Cost C	-	-	46735.92	100.00

ABSTRACT

Name of the Student	:	Shri Vitthal Baban Arote
Degree for which thesis is submitted	:	M.Sc.(Agri.)
Discipline	:	Agricultural Economics
Name of the Research Guide	:	Dr. Jagannathrao R. Pawar Professor of Agril. Economics
Title of the Thesis	:	Role of the Producers' Associations in the Marketing of Bananas and Grapes in Maharashtra State.

The Investigation was undertaken with the objective of studying marketing channels, marketing costs and price spread in the marketing of Bananas and grapes through producers' associations vis-a-vis traditional traders. The study was based on the data obtained from the samples of 40 member and 40 non-member producers of Bananas and Grapes selected from Jalgaon and Sangli Districts respectively. The study indicated that resource use and cost structures of the respective fruit crops were of the same order on the farms of member and non-member producers. The member and non-member producers of the both the fruits sent their produce to different markets instead of concentrating on a single market. The per quintal cost of marketing of Bananas ranged between Rs. 24.95 and Rs. 26.94 for members and between Rs. 25.69 and 28.40 for non-members. While per box (4 kgs) cost of marketing of Grapes ranged between Rs$_{9.94}$ and Rs$_{13.89}$ and between Rs$_{9.75}$ and Rs$_{13.29}$ for member and non-member grape producers, respectively in different markets. On the whole, the average cost of marketing was relatively higher for the non-members of producers' associations. It was revealed from the price spread analysis that the members of producers' associations of both the fruits derived relatively higher shares of wholesale price.

The study, therefore, conducted that the producers' associations play an important role in the marketing of respective fruits, thereby enabling the member producers to receive relatively higher profits from fruit production activities. Based on the findings of the study, it is recommended that similar type of associations may be established to cover all the fruit producers.

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