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MANAGEMENT STRATEGIES FOR SMALL AND MEDIUM ENTERPRISES

A Case of
Indian Fruit & Vegetable Processing Industry

By

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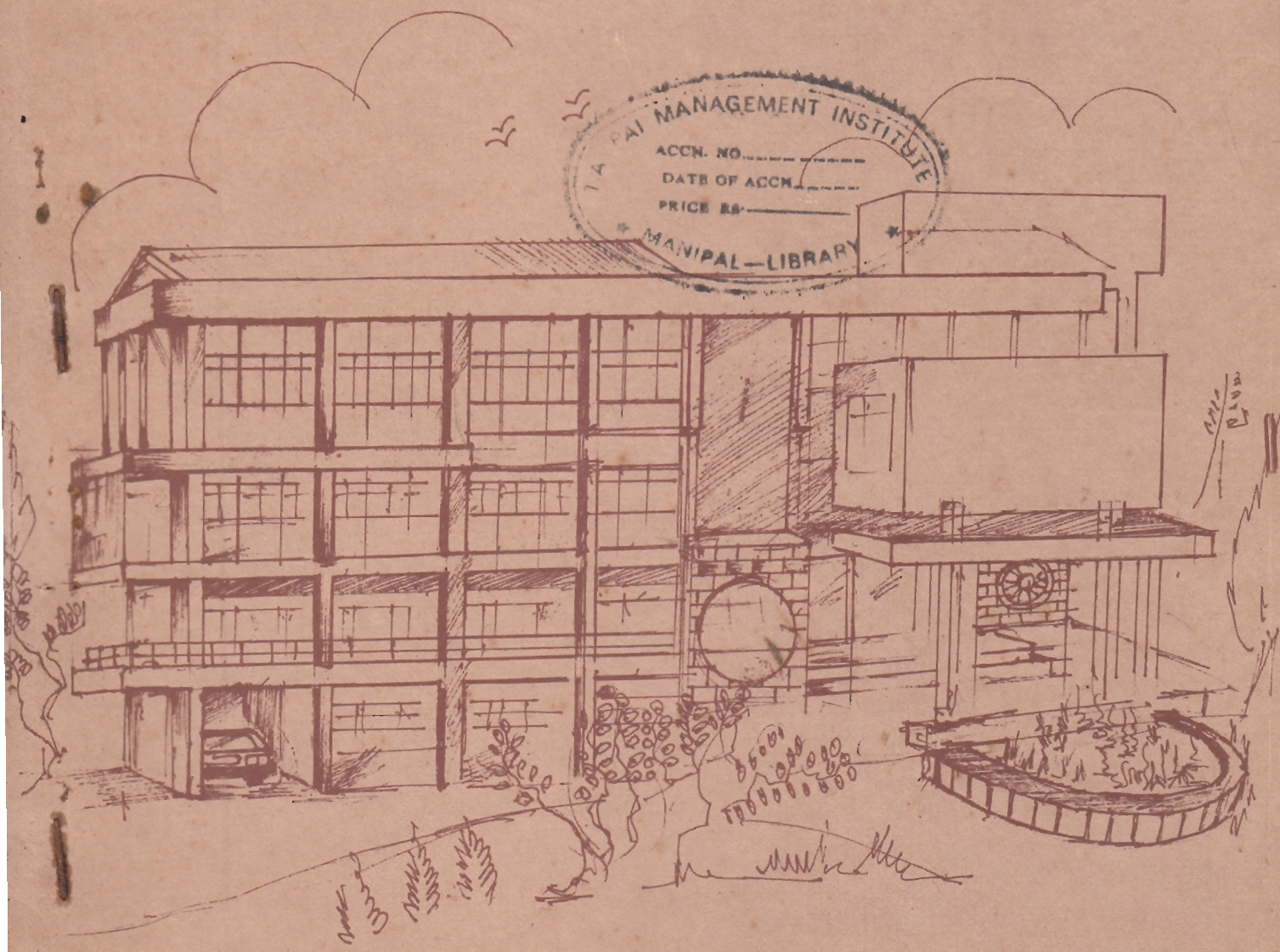
Faculty Member



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(SHIVAPRAKASH A R)

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MANAGEMENT STRATEGIES FOR SMALL & MEDIUM ENTERPRISES
A Case of Indian Fruit & Vegetable Processing Industry

Fruit processing industry in India is not very well organized. The industry consists of a number of small firms which largely vary from one another. The industry is constrained by agro-climatic variations, seasonal production of fruits and to an extent by all other problems of Indian agriculture.

Indian government is promoting the industry as it involves a large section of the countries population in value generation activity and at the same time provides comparative advantage in its international trade. The industry is considered as a thrust sector for exports purpose.

Despite the potential for development of the industry, the processing of fruit and vegetable processing is low compared to other countries. The issue of unexploited potential could be analyzed from the macro economic view point. The macro economic approach prescribes policies that foster the industry whereas the micro economic micro economic approach prescribes firm level solutions to manage the problem ridden processing environment. The present paper takes the latter approach and is proposed to provide a theoretical frame work for the management practices that are considered as superior from the firm view point. The presentation is made in three parts viz., problems, strategies and conclusions.

Problems

Fruits are available for processing depending upon the relative demand for fresh and processed forms. A majority of firms are processing fruits which are available in excess of fresh consumption while some firms are generating extra demand for fruits through processing and marketing activities. The firms operating in latter situation are generally large and financially sound. A large number of growers with small land holdings, middle men like commission agents and preharvest contractors, poor transportation infrastructure are some problems on supply side.

Process Technology is a key factor in fruit and vegetable processing. Equipments are often imported from out side the country. However, imported equipments are of high production capacity and are generally designed to manufacture products of western taste. They are not suited to the domestic supply and demand situations.

The seasonal hiring and high labour turnover is a source of labour inefficiency in fruit and vegetable processing. However, the loss in labour efficiency is often valued against the need for keeping the firm flexible and adaptable to face the extreme conditions.

The industry lacks specialized managerial skills. The attention of the management is often diluted due to several subsidiary activities. The industry has failed to attract qualified people due to its locational and seasonal disadvantages.

A majority of the firms work for about 90 days a year. Seasonal operation is a source of problem for the management as well as for the workers. However, some firms have successfully minimized seasonal effects by processing a range of fruits. Some other firms transform the perishable fruits into a semi-processed form during the season and then manufacture the finished product round the year.

The capacity utilization is some where between 30% and 40%. This is mainly due to seasonal fruit supply and constraints in selling. Idling of equipments during a large part of the year has resulted in high overheads.

Quality of output in many cases is less than desired. On line quality control measures are generally inadequate. This type of attitude towards quality control is often due to inadequate reward for superior products in terms of premium prices. The government regulates the industry through separate legislations called "Fruit Product Order" and "Food and Drug Administration". While all over the world the industry is concerned about food safety and nutritional composition, the Indian firms are struggling to adhere to the prescribed hygiene norms.

Inventory levels are generally high due to non synchronized procurement, production and sales patterns. This has resulted in abnormal interest cost and huge gaps in cash flow.

Fruits and its products are still a luxury item for an average Indian. A variety of fresh fruits are available in the market at the low prices round the year. And to a large extent the traditional Indians are not used to the items processed elsewhere. The negative image of the "third world brands" is a hurdle in the export sector. Thus the growth in demand for processed fruits is constrained both in domestic as well as export sectors.

Strategies

Modern technology in fruit and vegetable processing, which is investment intensive operates satisfactorily under a given set of conditions. It requires fruits and vegetables of uniform quality, steady supply of fruits and vegetables and stable demand for standardized products. Figure 1 gives details on the Manufacturing process of fruit and vegetable products. All organizations, especially those with huge investments like fruit and vegetable processing are highly motivated to get enough stability in their operation and minimize risk/uncertainty in the purchase of raw materials and the sales of the final product. Therefore these organizations adopt one or the other strategies to defend their primary function against fluctuations in prices, availability of raw materials and the demand for the products. In order to add clarity the strategies are grouped as type one and type two strategies. While the former provides a buffer to the core internal functions from external disturbances, the latter builds bridges in such a way that the internal core experiences very little disturbance from outside.

A Type one Strategy

Stragic initiatives falling under this category facilitate the process of building internal strength of the processing firms. Firm with low internal strength can be transformed into a firm with high internal strength by adopting superior management practices. However, the relative importance of these practices depend upon problems and constraints that are local to individual firms.

Effective Quality Control

Quality control functions in fruit and vegetable processing firms assume importance in view of the following facts.

i) Large variations in the qualities of fruits and vegetables produced from different locations and different sources.

ii) The need for maximizing the production efficiency by confirming to the quality which is suitable for the processing equipment.

iii) To build customer's confidence by producing standard products.

Qualities of fruits vary across the locations due to differences in agro-climatic conditions. Fruit qualities also differ between different sources depending upon the cultivation practices followed prior to harvesting, the timing of harvesting and the time lag between harvesting and subsequent processing. The time lag is determined by the distance, mode of transportation and the number of intermediates in procurement. Entrepreneurs indicated that the quality of the procured fruits improved with the amount of efforts out in for searching superior quality fruits and vegetables. The fact that the efforts towards searching for better quality fruits and vegetables is paying itself shows the prevalence of the variations in the quality of fruits and vegetables.

Variations in the quality and productivity of fruits and vegetables is a determinant of technical efficiency. Pineapple canning provides a glaring example wherein the variations in the fruit size leads to wastage and thereby to the technical inefficiency. The above observations are in agreement with Talukdar and Singh (1989) who have confirmed seasonal and varietal effects on the profitability in pineapple processing.

Some firms have found that their permanent customers stuck to them due to the superior quality of the products. This only justifies the need for a better quality consciousness among processing firms.

The firms can reduce variations in the quality in three stages viz., cultivation and harvest stage, procurement stage and processing stage. As could be seen from the Figure 2 there were many channels of fruits and vegetable supply to the processing firms. Processing firms have complete control on farm management decisions in channels II and III, processing firms could partially control the preharvest decisions by issuing preharvest instructions. Apart from the choice of

procurement channel employed, firms can screen fruits and vegetables while purchasing. The number and type of parameters employed to screen fruits and vegetables are not uniform across the industry. Standardized and strict screening of fruits is useful in controlling wastage and avoiding subsequent quality problems.

At the processing stage on line quality control functions are, by and large, not uniform. Absence of full time quality control persons and inadequate laboratory facilities are some other observed deficiencies. All these involve additional cost to the processor. Therefore, a proper balance has to be maintained between quality of the product and its price. The processing firms have failed to maintain a delicate balance between quality and the price for the finished goods APO (1978). The second schedule of the Fruit Product Order gives a detailed account of quality and hygiene management measures to be conformed to by the licensee who is a processor in this case. However, these practices can be better institutionalized when viewed as a positive strategy in conducting the business rather than when enforced by the regulator.

Finished goods market provided little incentive for better quality products. Processors feel that better quality products do not fetch premium in the market. There is a need for system to communicate quality of a product, other than FPO certificate.

Inventory Management Practices

Every thing else can wait in fruit and vegetable processing firm but not the fresh fruits and vegetables. Because fruits and vegetables are perishable by nature. Any delay in processing leads to wastage. Non-availability of cans leads to wastage of fruits and even the loss of a major part of production season at times. Considering the serious consequences of running out of can stocks companies hold huge stocks of cans by purchasing less frequently as indicated earlier.

There are financial implications of maintaining huge inventory. Cans being the major material in terms of the cost, many entrepreneurs expressed their concerns over increase in financial costs. Similarly, inventory levels of finished goods have contributed to the increase in financial costs. There exists a delicate balance between ensuring the steady supply and minimizing financial costs of holding inventory.

Developing Stable Relationship with Principal Suppliers and Customers

Besides preparation of purchase plan, processing firms have to take steps towards smooth implementation of the purchase plan. Processing firms may decide to pay better prices to their suppliers and ensure market for the farmer's produce. Personal rapport with major fruit growers, according to some entrepreneurs, has helped in ensuring steady supply of fruits and vegetables. Providing extension services and supplying seeds and plant protection chemicals are other practices which are employed in order to motivate farmers to sell their produce to the processing firm. However, the practice of providing seeds leads to the problems in

monitoring sale of the farm produce. Whenever the prices of fruit/vegetable in the local market rises the supply will be diverted to other buyers leaving the seed supplier cum processor with out any benefit from the scheme.

On the marketing side firms can maintain informal and long standing relationships with their customers. The advertisement intensity is very low among firms. There is scope for stimulating the demand for fruit and vegetable processed products through advertisement and promotional activities. Such activities can be done through associations on line with efforts made by poultry industry in promoting consumption of eggs in the domestic market.

Forecasting and Business Planning

Processing firms can adapt to the environment up to a possible extent through anticipation of changes in the supply and demand conditions. A majority of the firms do not prepare annual business plan. Forecasting of the raw material is not a common practice. The above observation coupled with unstable farm production sufficiently justifies the need for a formal forecasting practices in the processing firms. Compiling information on flowering, pests and diseases, timing of harvest and yield situations helps in preparing formal business plan.

On the marketing side, demand forecasting for processed products particularly in the international markets provides firm ground for the preparation of annual production and procurement plans. The role of processors as representatives of the farming community in the marketing of farm products demands application of sophisticated practices like forecasting and business planning.

Business Expansion

Implication of large scale production on the factor use efficiency is well established. As a particular example of fruit and vegetable processing, the procurement, sales and export operation in large group companies are clubbed with other business enterprises. Thus common procurement and sales department is an advantage as long as the firms are dealing with the seasonal products in terms of efficient utilization of firm's human resources as well as installed capacity.

Small firms can plan for expansion of business by enlarging their scale of operation. This means more risk from the entrepreneur's point of view. Johnson (1986) observed that new firms remained in the small category for substantial part of their lives: Lack of capital, short sighted business strategy, unwillingness to expand on apprehending the loss of control were the reasons for such behavior of new firms. Banks and other financial institutions and also institutions like KVIC can play an important role in bringing the firms out of their initial inhibition towards expanding their scale of operation.

B Type two Strategy

Strategies of this type bridge relationship with interest groups and thus form the process of minimizing disturbances on the firms primary function. Firms can choose any one or a combination of the following strategies in order to meet a given situation.

Enhancing Bargaining Ability

One of the prime concerns of fruit and vegetable processing firms is to ensure the steady supply of fruit and vegetable raw materials. Conditions in the supply of and the demand for the fresh fruits and vegetables lead to large price fluctuations in the local market. These fluctuations often turn to be disadvantageous to the processors. Processing firms may enhance their bargaining ability under stiff competitive conditions in following ways.

i) Finding alternate suppliers

Processing firms can enhance their bargaining ability by finding alternate sources of supply viz., development of command area, development of own garden and procurement through growers' marketing cooperatives.

Processing firms usually plan for the development command area of a size which can produce far more quantity than the actual requirement for processing. Thus by creating excess supply situation, processors can ensure that the farmers sell their produce to the processing company. Firms that were sourcing fruits and vegetable from their own farm are in a better position to manage their fruit and vegetable supplies. However this option is restricted by the land ceiling limit imposed by the respective state government.

One of the firms processing orange was facing difficulties in displacing traditional preharvest contractors. This firm shifted its dependency from the preharvest contractors to the growers' cooperatives in order to enhance its bargaining strength. As could be seen from the Figure 3(a) processing firm is dependent on the preharvest contractor for its requirements of fruits and vegetables. But preharvest contractor supplies fruit to the fruit commission agent on a priority basis as he borrows capital from him. Thus the processing firm faces difficulty in meeting its raw material requirements. In figure 3(b), the intervention of growers' marketing cooperative has made the processing firm comfortable by channelizing the fruits to the processing firm.

ii) Inducing specialization

Inducing specialization was another form of imposing supplier's loyalty to the processing firm. For example a large processing company dealing with a number of products and located in rural areas is manufacturing corn soup. This company influenced farmers to grow white corn which carry little value outside the processing firm. Thus the supply of corn was ensured by making farmers dependent on the processing firm for the sale of their produce.

iii) Role Differentiation

Processing firms face stiff competition from the growers' marketing cooperative societies in procuring fruits and vegetables. This is termed as a situation of competitive interdependence as against symbiotic interdependence wherein two organizations complement each other in fulfilling respective organizational goals. Competitive dependence is often solved by differentiating roles performed by the competitors and thus transforming it into a symbiotic relationship (Scott, 1987). Thus processing firm in such a case can come to an agreement with growers' cooperatives for the supply of raw materials. There can be another type of cooperative relationship wherein growers' cooperatives can avail the processing and storage services from the processing firm. Figure 4 indicates role differentiation between growers' cooperative and the processing firm. The competition between processors and growers' marketing cooperative (Fig. 4(a)) can be transformed into cooperative relationship (Fig. 4(b))

Similar behavior is observed in case of exporters who face stiff competition. Among the marketing problems experienced by the small firms are the difficulties in competing with large ones in the export market. As a result small firms resorted to export through merchant export firms and thus they are able to differentiate the roles to their benefit. This can be seen from the Figure 5. Here too, the competitive relationship between merchant exporters firms (Fig 5(a)) can be transformed in to cooperative relationship (Fig 5(b))

Contract Farming

Writing contract for the fruit and vegetable supply is popularly called "contract farming". Among various contractual arrangements between the processors, suppliers and farmers, preharvest contract is the most common contractual arrangement. Contract farming is defined as "a system for the production and supply of agricultural and horticulture produce under forward contract, the essence of such arrangement being a commitment to provide an agricultural commodity of a type, at a time and in quantity required by a known buyer" (Malcolm, 1983).

Processors can enter into a contract with farmers for the supply of fruits and vegetables. Both farmers and processors would be benefited from the contract farming. From the farmer's view point a predetermined contract price relieves him from the financial risk involved in production. It can allow him to specialize in a narrow range of products and this in turn can enable him to reduce production costs. For the processor, the assurance of the supplies well in advance can reduce procurement costs and ensure the most efficient use of the plant capacity. According to malcolm (1983), contract farming helps in reducing uncertainty and risk in case of farmers as well as processors and thus leads to a more consistent level of profit for both.

Contract farming in its traditional form is prevalent in India. However, these practices are limited to specific fruits and locations. In a matured agriculture marketing system the quality, weight and timing of supply are well defined. In India, as of now, attempts to develop contract farming in a modern way have failed due to the problem of non fulfillment of commitment by the farmers as well as processors and unstandardized grading system for farm products. However, several contract forms were observed in United Kingdom and the same are discussed here below (Malcolm, 1983).

i) Marketing contracts which specify only the conditions of sale of farm output.

ii) Full management transfer in which buyer also supplies the major inputs and specifies how the production process is to take place and usually retains the ownership of the commodity. Here the role of the farmer is a little more than that of a supplier of land, labour and possibly the equipments.

iii) Partial management transfer in which the buyer supplies some inputs and thus have share in making the production decision but does not acquire the ownership of the produce until it reaches the farm gate.

The relative importance of different types of contracts differ from one product to another. Possibilities of such arrangements in India need to be explored.

Processing firms enter into a contract with individuals for the supply of labourers. Large scale processing firms require large number of labourers. Often these firms are not able to hire all their labour requirements from the locality. As a result processing firms depend on contractors for the labour supply in order to reduce uncertainty in labour availability. Based on the experience of the entrepreneur, the contract labourers are regular in attending to work unlike local labourers. This is due to the fact that they have no other employment opportunity in the locality than working for the firm.

Some of the processing firms subcontract production to smaller units. In such cases, one processing firm enters into a contractual agreement with the other for manufacturing a predetermined quantity of the processed products of specified quality. These arrangements help in reducing transportation cost as processing firms requiring raw materials from a distant location find that the transportation of semi processed products is cheaper than that of unprocessed ones.

Co-opting Interest Groups

Incorporating influential persons belonging to grower and marketing cooperatives in to the advisory board of the processing firms helps in forging ties with the farmers. In absence of a formal growers' cooperative society, processing firms can associate prominent farmers in the business planning of the firm.

An orange processing firm owned by Orange Growers' Cooperative Society enjoyed specific advantages in due to the involvement of the growers' cooperative society in its business activities. Associating government extension agency and financing institutions in the development of the command area for the cultivation of fruits and vegetables is another form of co-opting. For instance, association of extension agency and financial institution while sourcing tobacco and sunflower has been found successful. Such an arrangement is depicted in the Figure 6. As could be seen from the figure the government extension agency, banks and the processing firms make a combined effort to help the farmers.

Joint Business Action

A common form of joint venture allows growers and processors to share the risk of producing, processing and storage. Processors, in that case, agree to purchase a specified amount of produce with payment being delayed until the processed products are sold in the market. The receipts from the sales are shared according to the cost of producing and processing. Such joint ventures demand a great deal of mutual confidence as costing of different services are subjective by nature.

As a variation of the previous arrangement, growers can form joint marketing firms along with the processing firms (Malcolm,1983). This jointly owned firm can buy the produce, pay the fees for processing services and engage in marketing of the processed products. Such joint ventures too require mutual confidence as contribution by different groups are priced on a subjective basis.

Merchant export firms can enter into joint ventures with small processing firms. Raw material, packaging material and the quality control expertise and also the working capital at times are provided by the exporting firm. The processing firm provides labour, equipments, infrastructure facilities. However, the processing firm is paid according to the terms of contract agreed upon during the negotiations.

Acting through Associations

Association is in a better position to influence government decisions to the common benefit of all the processors. A majority of the firms have membership of All India Food Preservers' Associations.

Conclusion

Strategies mentioned herein before have implication on the function and organization of the processing firms. Adopting various strategies means changes in the existing organizational structure involving hiring of new staff and creation of support departments at the managerial level. Wherever structural changes are difficult to enforce, like in a small firm, the strategies provide proper perspectives on the business priorities. Entrepreneurs can translate these perspective into action by being dynamic and proactive.

Some times the advantages of maintaining a lean organization with temporary structure, part time employees and contingency approach in management out weigh the benefits derived from the large, permanent and specialized organizations. Therefore, even in large scale firms, there exists a delicate balance between flexibility and effectiveness. This is more so in case of the processing firms due to their seasonal nature of business.

As far as Indian fruit and vegetable processing industry is concerned, there exists a wide gap between what is desirable/feasible at one hand and what is being practiced at the field level on the other. Here again there is no single firm that can be considered as the best. Therefore learning from the best of each other automatically facilitates the process of development.

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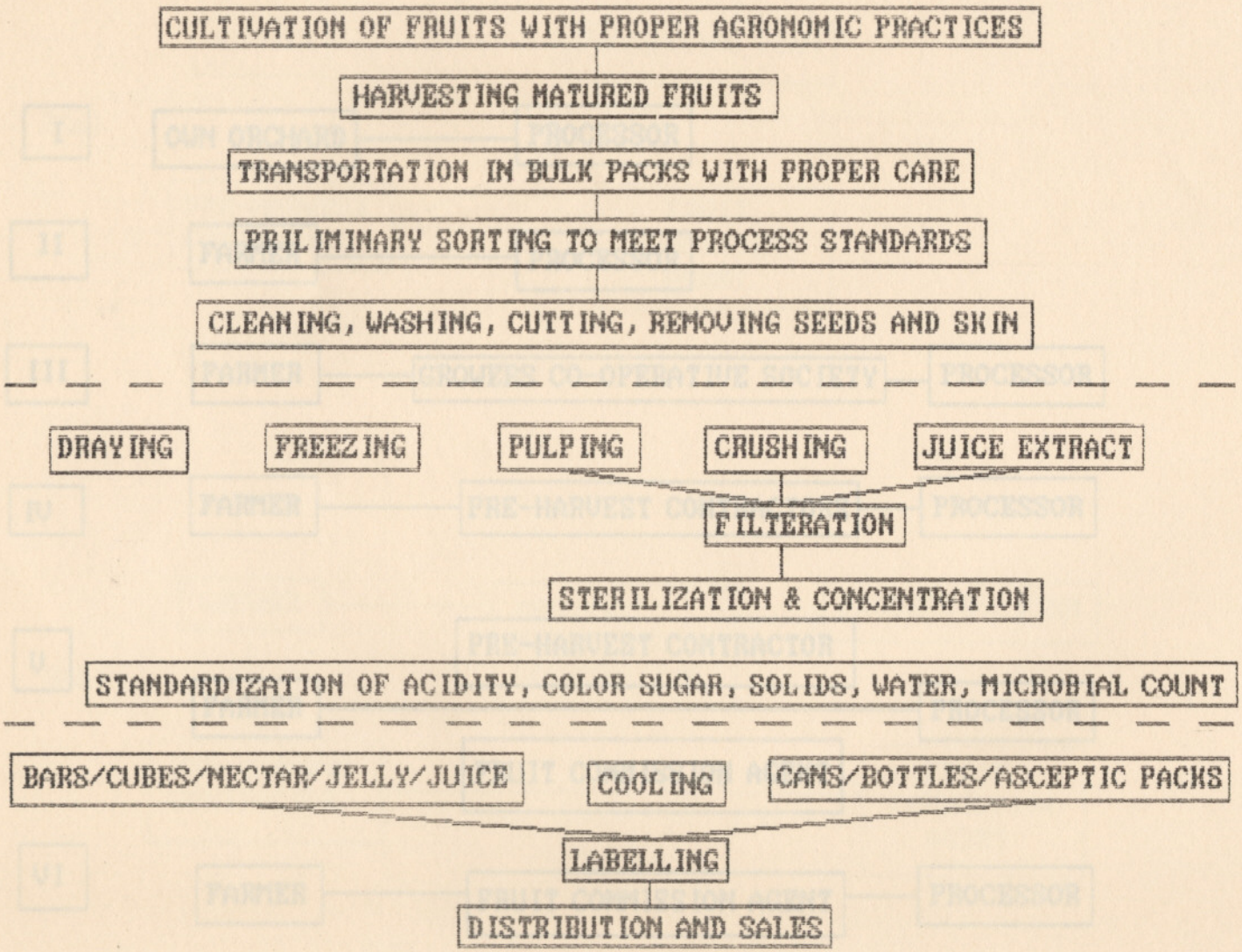
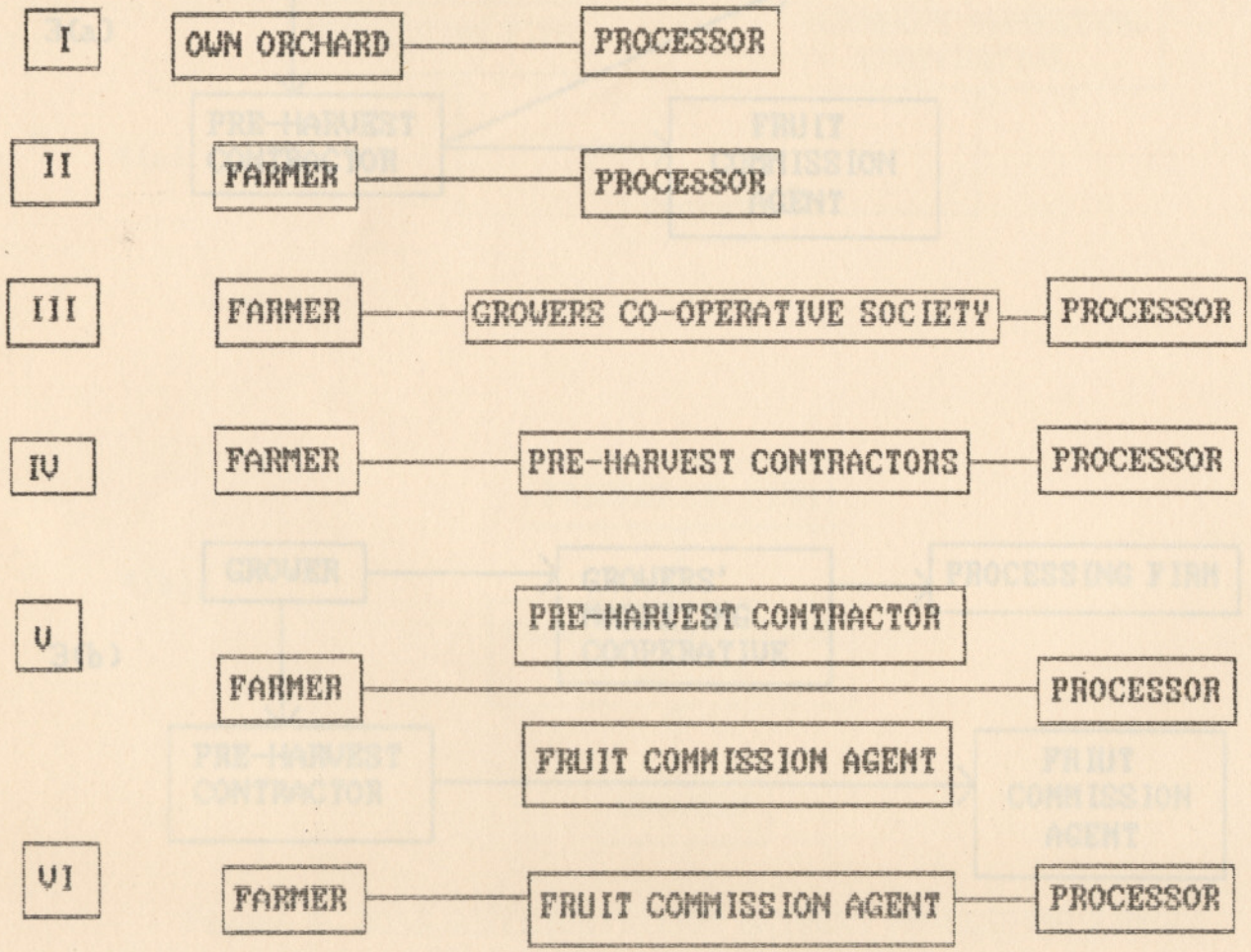
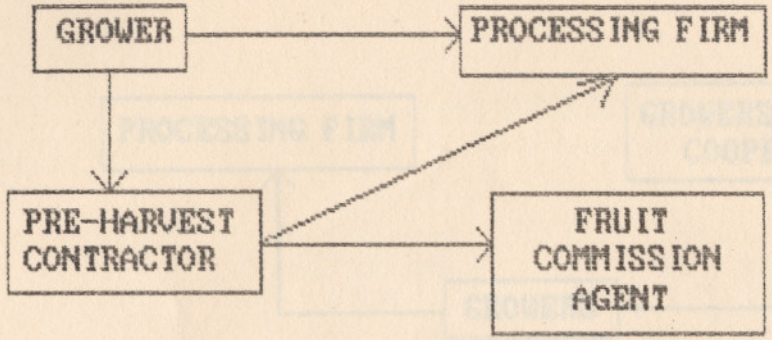


Figure 1. MANUFACTURING OF FRUIT AND VEGETABLE PRODUCTS



Fifure 2. CHANNELS OF FRUIT & VEGETABLE SUPPLY TO THE PROCESSING FIRM

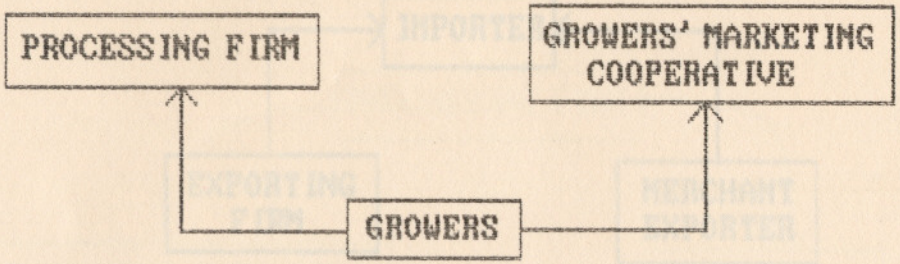
3(a)



3(b)

Figure 3. GROWERS' MARKETING COOPERATIVE AS ALTERNATE SOURCE FOR FRUIT AND VEGETABLE

4(a)



4(b)

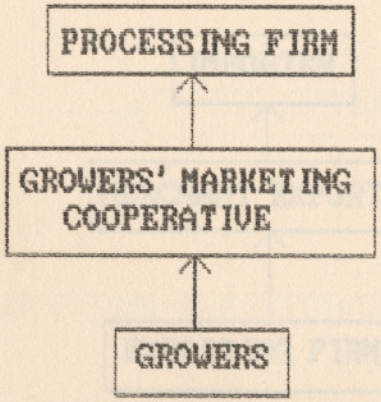
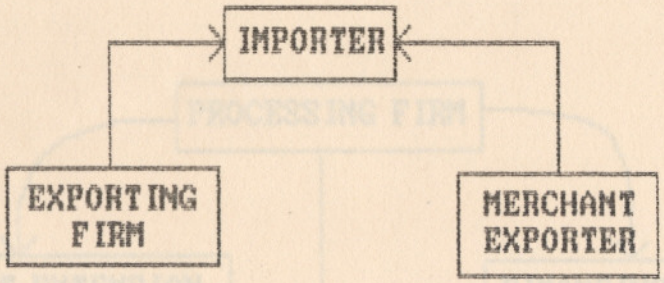


Figure 4. ROLE DIFFERENTIATION BETWEEN PROCESSING FIRMS AND GROWERS' MARKETING COOPERATIVES

5(a)



5(b)

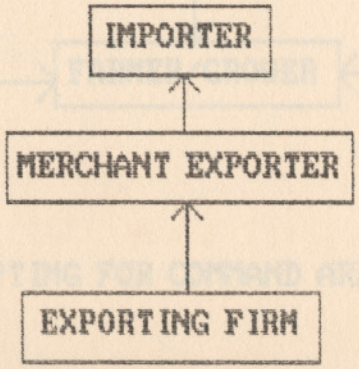


Figure 5. ROLE DIFFERENTIATION BETWEEN EXPORTING FIRMS AND MERCHANT EXPORTERS

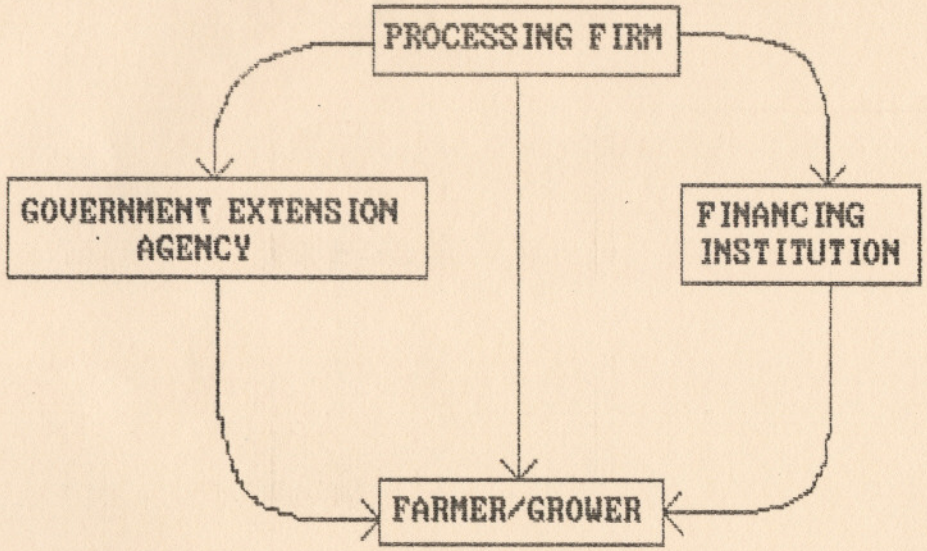


Figure 6. CO-OPTING FOR COMMAND AREA DEVELOPMENT