CHAPTER – IV

GRAPE MARKETING

4.1 INTRODUCTION:

For any country trade is an important factor when it comes to assessing of economy. Both imports and exports which are the constituents of trade play vital role in contributing to economy. For a country like India which is agriculture oriented needs to develop a strong export strategy especially for fresh fruits and vegetables. Marketing is an important instrument in the globalized markets which can improve the sales of any product. Export marketing management has a vital role in contributing to the development of export potential of Indian agricultural produces. Keeping this in mind let us understand the concept, theory and importance of marketing and also understanding India’s potential growth of grapes and its export potential.

4.2 Meaning of Market

The term ‘market’ originates from the Latin noun ‘Marcatus’ which means a place where business is conducted’. A layman has somewhat similar connotations of the word ‘market’ which brings to his mind the vista of place where the buyer and sellers personally interact and deal. However, for the students of marketing, it has wider deeper implications. It is not merely place of exchange but an arrangement that provides a n opportunity of exchanging goods and services for money. In this context, Phillip Kotler has defined the term market as “an arena for potential exchanges”.

William J. Stanton has defined marketing as “a total system of interacting business activities designed to plan, price. Promote and distribute want-satisfying products and services to present and potential customers”, not only does marketing deal with goods and services but it also focus on ideas, issues, concepts and principles.

4.2.1 Origin of Marketing

Hundred years ago, most firms were production-oriented, i.e., the manufacturer focused on production of quality products and then looked for people to purchase them with technological transformation, the emphasis shifted to an effective sales force to find customers for their growing output. After 1950, the shift ti marketing was so emphatic that the manufacturer first took into consideration the customers wants and the manufactured their goods accordingly.

Marketing has come a long way from being recognized as a function of an organization in India,. Marketing is such a type of function which is used by all types of organizations. Marketing is used for customer satisfaction and customer services play a vital role in the economy. The following persons contributed to the development of Marketing thought.

1920 - Cherington
1951 - Alderson
1954 - Drucker
1956 - Hensen
1960 - Levitt
1960 - McCathy
1969 - Kotler & Levey
1980 - Porter
1982 - Peters & Waterman

A perusal of literature shows various marketing theories which were used in various organizations: Ford (Model on Distribution System), General Motors (Marketing Segmentation), I.B.M. (Model on training to sales force with high service quality), and Marketing Strategies and their utilities.
4.2.2 Definition of Marketing

1. “Marketing is the delivery of a standard of living to society”. – Paul Mazur
2. “Marketing is the creation and delivery of a standard of living to society”. – Professor McNair
3. “Marketing is the performance of business activities that direct the flow of goods and services from producer to consumer or user”. – American Marketing Association
4. “Marketing involves the design of products acceptable to the consumers and the transfer of ownership between seller and buyer”. Herry Hansen
5. “Marketing is a total system of interacting business activities designed to plan, price, promote and distribute want-satisfying products and services to present and potential customers.” – William Stanton

From the above definitions, it is clear that different thinkers have defined the terms in different context. But all agree that marketing is a business activity which directs the flow of goods and services from producer to the user. Marketing as a function has been viewed from different angles by different thinkers. Different views as expressed above in the five definitions may be summarized in the following few words;

1. **From Society’s Points of View**: Marketing is a creation and distribution of standard of living to the society. Marketing is instrumental in spreading the civilization throughout the world.

2. **As a factual, Descriptive and Operative Thinking**: Marketing is nothing but transfer of goods and services to those, who are prepared to pay for the same.

3. **From Legal Point of View**: Marketing is considered to be the transfer of ownership from producer to user against payment.

4. **As a Combination of Traditional and Modern Concepts**: Marketing is an activity of satisfying the consumer by selling the goods and services to him.
5. From Manager’s Point of view: Marketing is planning, promoting and distributing the goods and services in a manner in which it satisfies ultimate consumer, “Marketing is not any activity, “ opines M.C. Shukla, “nor is it exactly the sum of several, rather, it is the result of the interaction of many activities. “For him marketing is a Managerial function which starts with the product and ends with the complete satisfaction of the consumer’s want.

4.2.3 Modern Concept of Marketing

When a marketer adopts a market-oriented business philosophy the guiding principle becomes “it is more effective to make what customer wants to buy than to sell them what a marketer wants to make or sell”. Thus, planning and co-ordination of all company activities rotate around the primary goal of satisfying customer needs. The marketing concept is defined as a customer-oriented philosophy duly integrated and implemented through the entire organization in order to serve customers better than competitors and thereby ensure sustained growth and prosperity. It was introduced in marketing philosophy and objectives only after 1950. Customer oriented marketing approach points out that the primary task of a business enterprise is to study needs, desires and values of the potential customers, and on the basis of latest and accurate knowledge of market demand the enterprise must produce and offer the products which will give the desired satisfaction and services to the customers (much better than its competitors). The essence of marketing concept is that the customer and not the product shall be the center or the heart of the entire business system. It emphasizes customer-oriented marketing process. All business operations revolve around customer satisfaction and service. Marketing, plans policies and programmes are formulated to serve efficiently customer demand. Marketing research and marketing information service is expected to provide adequate, accurate and latest information marketing managers and on any marketing problems. The entire marketing mix will be formulated on the basis of marketing information and research.
Two radical changes were brought about when the marketing concept was introduced after 1950 in the process of marketing.

1. We have a steady shift from producer-oriented or sales oriented business enterprise to the customer oriented business enterprise. Marketing innovation are now the distinguishing features of a business organization from those of other types of social institutions.

2. We have also a gradual shift from caveat emptor (Buyer beware) to caveat (seller beware). This has clearly emphasized the social responsibility of business toward consumer and the need for consumer protection in the market place. Marketing concept as a customer –oriented marketing philosophy of the entire business organization has four premises.

1. Customer orientation: The essence of modern marketing concept is “the firm must take its marching orders from the market and it must produce what the market needs”. All elements of business should be geared towards the customer satisfaction. Corporate plans, programmes and operations must be focused around customer needs and desires.

2. Marketing Information System: The marketing concept also emphasizes the role of information as the key to both customer satisfaction and profitability. Customer demand can never be satisfied without integrated marketing programmes based upon adequate and accurate information about customer, customer needs and competition. Information is a vital resource in planning- action-control process of management.

3. Integrated Marketing Activities: Systems approach adopts a unified view of the study of marketing. All marketing activities must be properly integrated and coordinated to accomplish a set of objectives.
4. Dual Objectives: Marketing concept advocates serving the consumers and maximizing profits at the same time. These objectives, though conflicting, can be reconciled. Guaranteed route to profits is through customer satisfaction. Profit is a by-product of supplying what the customer wants. Marketing concept is a mere lip service for those firms who have not yet resolved this conflict.

The marketing concept is not working even in the industrialized countries as per our expectations. Management thought is not geared toward creating customer satisfaction through modern marketing. Growing consumerism is the shame of marketing. Maybe consumerism should be considered the promise of marketing. If marketers, become really market oriented in their actions and pronouncements, the confusion between twin motives.

A company adopting the marketing concept has three distinguishing features:

1. It has market or customer-oriented approach in business planning.
2. Corporate goals are given top priority.
3. It has a systems approach in planning, organizing, controlling and coordinating its entire business as one system to achieve the overall corporate objectives.

We have corporate strategic plan as well as corporate operating plan. Then there are departmental plans such as production plans, marketing plan, financial and other plans. All these functional plans are integrated and coordinated. When these plans are implemented, they are expected to fulfill market needs as well as attain the corporate goals as per corporate strategic plan. In this way, under the marketing concept, we have planning, market offerings are made to satisfy wants and values of target market and hence customers are bound to respond favourably even though we have normal promotion mix in our marketing mix.
4.2.4 Benefits of Marketing Concept

A business enterprise adopting the market-oriented business approach can enjoy the following advantages:

1. Long-term success is assured to an enterprise only if it recognizes to capitalize on market are paramount.
2. It enables the firm to move more quick to capitalize on market opportunities. Marketing risks can be reduced only by knowing and understanding the market.
3. Customer needs, wants and desires receive top consideration in all business activities.
4. Greater attention is given to the product planning and development so that merchandising can become more effective.
5. Demand side of the equation of exchange is honoured more and supply is adjusted to changing demand. Hence more emphasis is given to research and innovation.
6. Marketing system based on the marketing concept assures integrated view of business operations and indicates interdependence of different departments of a business operation.
7. Interests of the enterprise and society can be harmonized as profit through service is emphasized.
8. Marketing information and research is now an integral part of the marketing process and it is a managerial tool in decision-making in the field of marketing.

4.2.5 Consequences of the Marketing Concept

Company makes what it can sell. The focus is now on customer needs and market opportunities. Product line becomes broad. Pricing is based on perceived benefits provided. Market research enables company to focus on opportunities and applying new technology to satisfy customer needs, packaging becomes a customer service and a tool to attract customers. Promotion now emphasized product benefits
and aims to solve customer problems. The adoption of marketing concept sincerely can easily act as the best response of business to consumerism.

4.2.6 Importance of Marketing

The process of marketing is concerned with relating the needs and desires of people with the goods and services offered by the producer. Where there can be no marketing without production, similarly there can be no production without effective and efficient marketing.

Importance of marketing is bought out by the following:

1. **Increase in National Incomes:** Efficient marketing of goods and services results in substantial reduction in the cost of distribution, thus leading to lower prices for the consumers. In turn, this results in an increase in national income.

2. **Production of Society Useful Products:** Marketing involves a regular interaction with the present and potential users and consumers of goods and services with a view to ascertaining their needs and desires. This facilitates production of useful goods and services.

3. **Improvement in Living Standards:** The marketing process aims at making available to the consumers goods and services which have been perfected after years of intensive research and experimentation. This has the effect of raising living standards and improving quality of life in general.

4. **Educational Value:** Through competent advertising and salesmanship, marketing serves to educate the people about the availability of goods and services which would best fulfill their needs and desires. It is only due to marketing that goods and services which were till recently considered as a luxury, have become necessaries today.
5. **Employment Opportunities**: Marketing has created substantial employment opportunities. In India, around 40 million people are engaged in wholesale and retail business alone. Add to it those engaged in transportation of goods, warehousing, advertising and salesmanship, and one can have an idea about the huge employment potential that marketing has.

In the USA, about one-third of people employed are engaged in the field of marketing.

### 4.2.7 Objectives of Marketing

The main objectives of marketing may be stated as follows:

1. To secure consumer satisfaction.
2. To achieve organizational integration.
3. To attain profitability of operations.
4. To serve the society.

### 4.2.8 Marketing Process

Marketing has been viewed as an ongoing or dynamic process involving a set of interacting activities dealing with a market offering by producers to consumers on basis of reliable marketing anticipation (sales or demand forecasts). Marketing is matching process by which a producer provides a marketing mix (product, price, promotion and physical distribution) that meets consumer demand of a target market within the limits of society. The process is based on corporate goals and corporate capabilities. Marketing process brings together producers and consumers – the two participants in exchange. Each producer or seller has certain goals and capabilities in making and marketing his products. He uses marketing research as a tool to anticipate market demand. Then he provides a marketing mix (product, services, promotion, advertising, pricing, distribution, etc.) in order to capitalize marketing opportunity. An exchange or a transaction takes place when market offering is acceptable to the
customer who is prepared to give something of value (money) in return against the product so bought.

In the process of exchange both give up something and both gain something in return. The producer gets the surplus value in the form of profit which is a reward for delivering customer satisfaction. The consumer gets the surplus value in the form of utility or individual satisfaction. Market mechanism brings together a willing seller and willing and informed buyer for mutual gain. The marketing process is influenced by competition, government rules and policies, mass-media of communication, consumer advocates. Etc. Marketing environments affects both producer and consumer. The business enterprise engaged in the marketing process itself is influenced by social environment. It consists of political, economic, social, cultural and technological forces.

Marketers have to adapt with these ever-changing environmental forces and fulfill the needs and desires of the society or ‘community’. Thus, marketing is an economic as well as social activity. In the long run, society must approve the marketing process. It must monitor marketing process and control its effectiveness. Please note that the modern business enterprise is called upon to demonstrate simultaneously higher level of economic performance and fulfillment of social responsibility, i.e., high level of consumer/citizen welfare and satisfaction. Marketing process must reflect social awareness and social responsiveness, and we must have judicial combination of productivity and social responsibility in all business enterprises. Then only we shall have assured survival, growth and prosperity of our units. In essence, marketing is the business function charged with responsibility for directing the firm’s response to an ever-changing market environment and orienting all parts of the business towards the sole purpose of the business, viz., the creation of satisfied customers at a profit.

The marketing process involves three major activities:

1. Concentration
2. Dispersion
3. Equalization.

The first aspect is concentration. The second aspect is dispersion toward the consumer or user of those products, which have been concentrated at the central markets. Between these two flows of products, which have the activity of equalization. The process of equalization involves proper adjustment of supply at all centers of distribution in the light of current market conditions. Supply of goods has to be adjusted to demand on the basis of time, quantity and quality. Transport equalizes supply place-wise and warehousing equalizes it time-wise. The assembled stock of goods is subdivided or broken into smaller lots required to meet the needs of retailers and consumers. Concentration, equalization and dispersion constitute the heart of marketing.
Marketing management is directly in charge of formulating the marketing mix and conducting the marketing process. Marketing management is in charge of planning, organizing, directing and controlling the marketing of goods and accomplishes the overall marketing objective, viz., profitable sales with satisfaction of consumer demand.

Marketing research is the starting point in the marketing process to ascertain and identify customer needs and desires through market analysis and investigation. Resources of men, money, materials and management are employed in the marketing system to perform marketing functions and thereby achieve the satisfaction of customer demand (the purpose or mission of marketing). Marketing process covers marketing functions as well as marketing agencies or channels of distribution. Marketing management operates through marketing agencies or institutions for distribution of goods in the market.

4.3 International Marketing

International marketing deals essentially with the trade patterns export and import patterns among the various countries in the world. It also considers the trade policies and trade practices of the various countries as these govern the buyer–seller relationship in the international markets. The trade policies and trade practices are different in different countries and they do la down certain peculiar restrictions and limitations or constraints on international trade. Hence, there is need for trained and expert or professional personnel in the field of international marketing to solve the problems arising in international markets to solve problems arising out of varying trade policies and practices in the world trade. Businesses operating in international markets must have a planned approach and must develop precise objectives and strategies in export as well as import trade. Then only can we secure optimum marketing benefits in the world trade.
4.3.1 Export in the world markets

Before using available resources for entering the international markets, an enterprise must secure up-to-date information on international customer needs and desires, as well as on the opportunities and threats in the world markets. The data should be collected through market surveys involving product-oriented and market-oriented studies. Product-oriented studies will identify the products that may be sold in a particular foreign market. The successful international marketing of product depends on:

1. The target customers of market
2. The system of distribution and
3. The degree of competition in the market.

Target customers will provide characteristics of the customer who ultimately determines the product marketability. We must have accurate and adequate knowledge of customer demand in all respects. Customers are classified according to sex, age, income, education, family etc. This is called market segmentation approach to target market. On the basis of customer demand, exporters can introduce modifications or can have new product formulation. Physical distribution is also an important branch of marketing mix. The nature and extent of competition will influence the marketability of a product in a particular market and we can determine our marketing strategies to meet competition successfully. Market survey will be the basis for setting objectives, evolving strategic and operational marketing plan. Marketing decisions based on market survey will provide a sound marketing mix covering product, price, distribution and promotion.

Due to the policy of import substitution for the last 35 years, the structure of Indian import has changed radically. At the time of independence almost the entire requirement of capital equipment components (even nuts and bolts) had to be imported from abroad. Today we have a sound base of engineering and steel industries and India is now in a position to produce more than 75% of the capital or producers goods,
i.e., machinery, components and spare parts. We have now well established basic and key industries such as iron and steel, heavy machinery, heavy electrical machinery, industrial machinery, machine tools, transport equipment, scientific instruments, defence equipment, drugs and pharmaceutical, electrical, engineering industries, electronics, etc. We have already started exporting items like teleprinters, transmission towers, power generation equipment, machinery tools, petro-chemicals and many other items for which there is a vast and expanding world market.

### 4.3.2 Procedure of Export

In India and many other countries the following stages are generally involved in the procedure of exports:

1. Export offer and Receipt of Indent from abroad.
2. Shipping and Credit Enquiry.
3. Preparations for export-collection, packing, marking, forwarding etc.
5. Placing the goods on boards the ship.
6. Securing of Mate’s Receipt.
7. Effecting Marine Insurance.
8. Securing Bill of Lading
10. Securing Payment.
11. Obtaining various export incentives.

### 4.3.2 a. Quotation and Indent

An exporter gives a quotation or an offer for sale to the foreign buyer or importer. It may be in the form of a Proforma Invoice – an offer to sell but given in the form of an invoice.
Proforma invoice or quotation gives:

1. Name and address of the buyer or consignee,
2. Description of goods to be sold
3. Price
4. Conditions of sale and
5. Other provisions such as delivery schedules, payment terms, escalation clause due to rising prices/costs, etc.

We should like to mention the two most common types of quotations – the f.o.b.o. and c.i.f.

1. Free on Board (f.o.b.) Quotation
2. Cost, Insurance and Freight (c.i.f.) Quotation

4.3.2.a. Shipping and Credit Enquiry

The exporter may have to arrange for booking of shipping space in advance of actual sending of goods. Usually the exporter hands over this responsibility to a shipping and freight broker who is specialized in this work. He possesses full knowledge of the various shipping lines and gives expert advice as to which line is cheaper.

Shipping company issues a shipping order to the exporter when it agrees to carry the exporter’s goods. The shipping order is a document containing instructions to the captain of the ship to accept goods on board the ship from the exporter or his agent.

4.3.2.c Preparations for Export

(a) Collection or Production of Goods: In case an export commission house is acting as an agent of the importer, it will be in charge of collection of goods as per indent, from exporters, i.e., local producers and manufacturers. The indent house will act as a
principal in placing orders and securing the supplies as per instructions of the foreign buyers. Once the goods for exports are collected or manufactured, the export commission house will have to look after making up, packing and marking of goods as per usage or as per special instructions of importer.

If exporter is also a manufacturer, the indent or order is sent to the factory with all specifications and the deadlines for delivery.

(b) Arrangement for Shipment: The manufacturer exporter or merchant exporter can get exemption from the sales tax and refund of excise duty and customs duty. Certain legal formalities have to be performed before the goods are released for shipment. ‘From 14’ is required for sales tax exemption and ‘AR-4’ form is needed for exemption of refund of excise duty.

(c) Pre-shipment Inspection: We have compulsory quality control for export goods. Export Inspection Council (EIC) does the pre-shipment inspection. Emphasis is on quality control and not on inspection for export. EIC gives an Inspection Certificate in triplicate to the exporter.

(d) Forwarding Agent: In order to look after all shipping and customs of formalities and the actual loading of goods on board the ship, as specialist called forwarding agent may be appointed by the exporter. These forwarding agents are experts in their line of business and on nominal commission offer valuable services to the exporter. In particular, they perform the following functions:

1. Negotiation of shipping contract
2. Customs formalities
3. Marine Insurance Policy
4. Loading of goods and securing of Bill of Lading.
They may also be entrusted with the work of packing, marking, etc., of the goods to be exported.

(e) Packing: Packing may be done by the manufacturer himself or may be entrusted to the packing agents. Packing for export is a highly specialized work. Firstly, packing must not only provide adequate protection for the goods, but must also be in accordance with the requirements of the shipping company and of the customs authorities. Secondly, the goods clearly marked, must be packed strictly as per contract, otherwise the buyer may perhaps refuse to take delivery. The forwarding agents are experienced in the general routine of export and know the special requirements of the importing country with reference to packing, etc.

(f) Marking: Each package should be stamped with a distinct mark pointing out the name of the importers and destination port. The gross weight, the tare, i.e., the weight of the package itself, and the net weight along with measurements should be marked on the package.

Notes : Documents to be passed on to the Forwarding agent:
1. AR-4 form in original and duplicate
2. Two copies of performa invoice
3. Packing list
4. G.R.1 form in triplicate,
5. Letter of credit with export order or contract
6. Certificate of Inspection
7. Form of Declaration (triplicate)
8. Shipping Bills (five copies)
4.3.2.d Customs and Exchange Formalities

The essential steps in customs and exchange formalities are outlined below in brief.

1. Shipping Bills: The shipping bill or customs challan contains detailed description of the goods, viz., quantity, quality, value, numbers, marks, measurement, the port of destination, the name of the ship carrying the goods, etc. The exporter is required to fill in three copies of shipping bills.
2. Export Permission Form
3. Customs House
4. Export licence
5. Exchange Control

4.3.2.e. Placing the Goods on Board the Ship

After having received back the two copies of Shipping Bill and one copy of the Application to Export, the Shipper makes arrangements to place the goods on board the steamer. He has to hand over one copy of the Shipping Bill at the dock while the goods are taken in.

4.4 EXPORT INCENTIVES

An exporter gets export incentives under the export promotion such as cash compensatory allowance, import replenishment licence, duty drawback or refund and excise duty refund. We have simplified procedure for quick payment of the claims under the scheme as well as issue of import repleshment licence against export.
4.4.1 The Export Credit Guarantee Corporation (E.C.G.C)

It is a government owned corporation working on ‘no profit no loss’ basis. It ensures against all major risks of export trade.

Export Risks Insured:
1. The risk of non-payment by the foreign buyer.
2. The risk that the buyer may be prevented to pay due to exchange controls imposed by his government.
3. The political risk, that import licences may be revoked.
4. The risk of revolution, etc., in the buyer’s country.

4.4.2 Export Promotion Measures in India
1. Supply of raw materials –indigenous or imported.
2. Exemption from Customs duty.
3. Cash compensatory assistance.
4. Excise exemption
5. Marketing development allowances/fund
6. Pre-shipment and post-shipment credit
7. Export training
8. Bilateral trade agreement

Basic Obstacles in Export Promotion:
1. Continuous rise in internal price level due to inflation, rising thereby cost of production per unit of production and marketing both. Result: Indian goods costly abroad and they are priced out of International Trade by our Rivals. Exports uncompetitive and unprofitable in foreign markets.
2. Low business morality and honesty of Indian exporters
3. Inefficiency of Indian exporters –multiplication of complaints and grievances. However, on account of intense competition business behaviour and ethics are now much better.
Federation of Indian Export Organization: It is the apex organization for promoting, developing of export trade and coordinating export promotion. It sends study teams, trade delegations abroad and invites foreign trade delegations to visit India. It takes up market survey and collection and distribution of market information. It looks after foreign publicity, trade fairs and exhibitions abroad. It also runs showrooms, wholly Indian trade exhibitions of trade centers abroad.

Government Trade Commissioners: We have our trade commissioners and consular officers as eyes and ears of the Government in preparing its economic and trade policy. They keep the Government in close contact with all problems and changes in trade conditions and trade relations of the countries where they operate.

Indian Joint Ventures: These, when started abroad, can be regarded as export promotion devices. Since 1970, Government has been encouraging overseas industrial and technology in textiles, sugar, cement, engineering projects, certain chemical items, etc. India can take up turnkey projects for execution. Such joint ventures can produce valuable for foreign exchange to us.

Export Promotion Councils: There are 23 EPCs having regional offices in India and abroad. They perform both advisory and executive functions. They act as clearing house of information on exports. They help the exporters in expanding overseas market of their products. They participate in Trade Fairs and Exhibitions. They sponsor trade delegations study teams and sales teams to markets abroad. They coordinate with Export Inspection Councils on Quality Control and pre-shipment Inspection of goods. They undertake publicity and advise exporters on export finance, banking, insurance and joint ventures. They act as arbitrates or nominate arbitrators or valuers in settlement of disputes. They accelerate and diversify the Indian exports by enforcing and ensuring better business behaviour and ethics.
4.5 GRAPE CULTIVATION IN INDIA

4.5.1 Introduction

Grape cultivation is one of the most remunerative farming enterprises in India. Famous Indian medicine scholars, Sasruta and Charaka in their medical treatises entitled ‘Sasruta Samhita’ and ‘Charaka Samhita’, respectively, written during 1356-1220 BC, mentioned the medicinal properties of grapes. Kautilya in his ‘Arthashastra’ written in the fourth century BC mentioned the type of land suitable for grape cultivation. Native spp. resembling Vitis lanata and Vitis palmata grow wild in the northwestern Himalayan foothills. Indigenous varieties known as ‘Rangspay’, ‘Shonltu White’ and ‘Shonltu Red’ are grown in Himachal Pradesh even today.

Cultivated grapes are believed to have been introduced into the north of India by the Persian invaders in 1300 AD, from where they were introduced into the south (Daulatabad in Aurangabad district of Maharashtra) during the historic event of changing the capital from Delhi to Daulatabad by King Mohammed-bin-Tughlak. Ibn Batuta, a Moorish traveller who visited Daulatabad in 1430 AD, reported to have seen flourishing vineyards in south India. Grape was also introduced in the south into Salem and Madurai districts of Tamil Nadu by the Christian missionaries around 1832 AD, and into Hyderabad province by HEH, the Nizam of Hyderabad in the early part of the 20th century. From Delhi, Daulatabad, Madurai, Salem and Hyderabad, grape cultivation spread to different parts of the country.

4.5.2 Present status of grape cultivation in the country

Grape is grown under a variety of soil and climatic conditions in three distinct agro-climatic zones, namely, sub-tropical, hot tropical and mild tropical climatic regions in India.

Sub-tropical Region: This region covers the northwestern plains corresponding to 28° and 32° N latitude including Delhi; Meerut district of Uttar Pradesh; Hissar and Jind districts of Haryana; and Bhatinda, Ferozpur, Gurdaspur and Ludhiana districts of Punjab. Vines undergo dormancy and bud break starts in the first
week of March while the rains arrive in the first week of June, and therefore, only 90-95 days are available from the initiation of growth to harvest. Consequently, ‘Perlette’ is the only early ripening variety grown in this region. Rain damage is a problem with Thompson Seedless in this region. Single pruning and a single harvest is the accepted practice here.

**Hot Tropical Region:** This region covers Nasik, Sangli, Solapur, Pune, Satara, Latur and Osmanabad districts of Maharashtra; Hyderabad, Ranga Reddy, Mahbubnagar, Anantapur and Medak districts of Andhra Pradesh; and Bijapur, Bagalkot, Belgaum, Gulberga districts of northern Karnataka lying between 15° and 20° N latitude. This is the major viticulture region accounting for 70 percent of the area under grapes in the country. Vines do not undergo dormancy and double pruning and a single harvest is the general practice in this region. Maximum and minimum temperature is 42°C and 8°C, respectively. The major problems in this region are soil and water salinity and drought. Berry growth is impaired and in certain locations pink blush sometimes develops on green berries due to temperatures that drop to a low of 8°C. Thompson Seedless and its clones (Tas-A-Ganesh, Sonaka), Anab-e-Shahi, Sharad Seedless and Flame Seedless are the varieties grown in this region.

**Mild Tropical Region:** An area covered by 10° and 15° N latitude including Bangalore and Kolar districts of Karnataka; Chittoor district of Andhra Pradesh and Coimbatore; and Madurai and Theni districts of Tamil Nadu fall in this region. Maximum temperatures in a year seldom exceed 36°C, while the minimum is about 12°C. Principal varieties are Bangalore Blue (Syn. Isabella), Anab-e-Shahi, Gulabi (Syn. Muscat Hamburg), and Bhokri. Thompson Seedless is grown only with limited success. Except for Thompson Seedless, two crops are harvested in a year.

**4.5.3 Geographical distribution**

In India, grape is grown under two distinct climatic conditions: (i) the subtropical climatic conditions of north where the winter temperatures rarely reach the freezing point but vines undergo dormancy in winter, and (ii) the tropical climatic
conditions of the peninsular India where the winter are mild and the vines do not undergo dormancy and remain evergreen throughout. Based on the viticultural practices and the incidence of rainfall, the grape-growing regions are classified into three.

Region - I  The mid temperate to subtropical region comprising Punjab, Haryana, Uttar Pradesh, Rajasthan and Delhi

Region - II  Entire Telangana and Rayalseema areas of Andhra Pradesh, excepting the districts of Chittoor and Prakasam, north interior Karnataka and the rain shadow area of the Western Ghats in Maharashtra.

Region - III  All grape growing areas of Tamil Nadu, and the districts of Bangalore, Kolar and Mysore of Karnataka.

Table 4.1: Area and production of different varieties of grapes in India is as follows:

<table>
<thead>
<tr>
<th>Variety</th>
<th>Area (ha)</th>
<th>Production (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anab-e-Shahi (white, seeded)</td>
<td>3,000</td>
<td>135,000</td>
</tr>
<tr>
<td>Bangalore Blue Syn. Isabella (black, seeded)</td>
<td>4,500</td>
<td>180,000</td>
</tr>
<tr>
<td>Bhokri (white, seeded)</td>
<td>500</td>
<td>15,000</td>
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<tr>
<td>Flame Seedless (red, seedless)</td>
<td>500</td>
<td>10,000</td>
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<tr>
<td>Gulabi Syn. Muscat Hamburg (purple, seeded)</td>
<td>1,000</td>
<td>30,000</td>
</tr>
<tr>
<td>Perlette (white, seedless)</td>
<td>1,500</td>
<td>60,000</td>
</tr>
<tr>
<td>Sharad Seedless - A mutant of Kishmish Chorni (black, seedless)</td>
<td>1,000</td>
<td>20,000</td>
</tr>
<tr>
<td>Thomson Seedless and its mutants (white, seedless)</td>
<td>22,000</td>
<td>550,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>34,000</strong></td>
<td><strong>1,000,000</strong></td>
</tr>
</tbody>
</table>

*Source: ICAR Report 2008-2009*
Figure 4.1

Grape growing regions of India

Source: ICAR Report 2008-2009
Vinifera varieties susceptible to mildew suffer losses due to unprecedented rains during flowering and fruit set in both hot and mild tropical regions.

Approximately 85 percent of the total production, irrespective of the variety, is consumed fresh. About 120,000 tonnes of Thompson Seedless and its mutants, namely, Tas-A-Ganesh, Sonaka and Manik Chaman are dried for raisins. Some 20,000 tonnes of Bangalore Blue are crushed to make juice, and 10,000 tonnes of Bangalore Blue, Cabernet Sauvignon, Chenin Blanc, Chardonnay, Merlot, Pinot Noir and Uni Blanc are crushed to process into wine.

4.5.4 World scenario

According to FAO data (2006), the leading grape producing countries in the world in terms of production are Italy (8,554 thousand tons), USA (7,088 thousand tons) and France (6,790 thousand tons). India’s high productivity in grape has made it to reach 12th position in the world as far as production (total world production 67,696 thousand tons) is concerned.
Table 4.2
Area, Production, Productivity and Percentage share of Production of various countries

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>AREA ('000ha)</th>
<th>PRODUCTION ('000 tons)</th>
<th>PRODUCTIVITY (tons/ha)</th>
<th>% SHARE OF WORLD PRODUCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy</td>
<td>755</td>
<td>8,554</td>
<td>11.3</td>
<td>12.6</td>
</tr>
<tr>
<td>U.S.A</td>
<td>378</td>
<td>7,088</td>
<td>18.7</td>
<td>10.5</td>
</tr>
<tr>
<td>France</td>
<td>855</td>
<td>6,790</td>
<td>7.9</td>
<td>10.0</td>
</tr>
<tr>
<td>China</td>
<td>453</td>
<td>6,592</td>
<td>14.5</td>
<td>9.7</td>
</tr>
<tr>
<td>Spain</td>
<td>1,161</td>
<td>6,054</td>
<td>5.2</td>
<td>8.9</td>
</tr>
<tr>
<td>Turkey</td>
<td>530</td>
<td>3,850</td>
<td>7.3</td>
<td>5.7</td>
</tr>
<tr>
<td>Iran, Islamic rep of</td>
<td>315</td>
<td>2,964</td>
<td>9.4</td>
<td>4.4</td>
</tr>
<tr>
<td>Argentina</td>
<td>212</td>
<td>2,830</td>
<td>13.4</td>
<td>4.2</td>
</tr>
<tr>
<td>Chile</td>
<td>178</td>
<td>2,250</td>
<td>12.6</td>
<td>3.3</td>
</tr>
<tr>
<td>India</td>
<td>64</td>
<td>1,683</td>
<td>25.4</td>
<td>2.4</td>
</tr>
<tr>
<td>Australia</td>
<td>153</td>
<td>2,027</td>
<td>13.2</td>
<td>3.0</td>
</tr>
<tr>
<td>Others</td>
<td>2,222</td>
<td>15,468</td>
<td>7.0</td>
<td>2.3</td>
</tr>
<tr>
<td>World</td>
<td>7,385</td>
<td>67,696</td>
<td>9.1</td>
<td></td>
</tr>
</tbody>
</table>

Source: ICAR Report 2008-2009

4.5.5 Indian scenario

There is sizeable increase in acreage and production of grapes in India. In acreage, there is an increase from 47.5 thousand ha in 2001-02 to 64.3 thousand ha in 2005-06. Similarly the production has increased from 1,184.2 thousand tons in 2001-02 to 1,630.7 thousand tons in 2005-06. The details are given in table 4.3
### Table 4.3: Area, production, and productivity of grapes in India

<table>
<thead>
<tr>
<th>Year</th>
<th>Area (000’ha)</th>
<th>Production (000’ tons)</th>
<th>Productivity (tons/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001-02</td>
<td>47.5</td>
<td>1,184.2</td>
<td>24.9</td>
</tr>
<tr>
<td>2002-03</td>
<td>52.1</td>
<td>1,247.8</td>
<td>24.0</td>
</tr>
<tr>
<td>2003-04</td>
<td>57.8</td>
<td>1,474.8</td>
<td>25.5</td>
</tr>
<tr>
<td>2004-05</td>
<td>60.5</td>
<td>1,564.7</td>
<td>25.9</td>
</tr>
<tr>
<td>2005-06</td>
<td>64.3</td>
<td>1,630.7</td>
<td>25.4</td>
</tr>
<tr>
<td>2006-07</td>
<td>66.2</td>
<td>1,925.6</td>
<td>24.9</td>
</tr>
<tr>
<td>2007-08</td>
<td>68.3</td>
<td>2,019.5</td>
<td>25.1</td>
</tr>
<tr>
<td>2008-09</td>
<td>69.7</td>
<td>2,123.4</td>
<td>25.6</td>
</tr>
</tbody>
</table>

Source: Indian Horticulture Database, 2008

4.5.6 Major producing states with production of last 3 years

Maximum grape production takes place in Maharashtra (1,275 thousand tons) state followed by southern states like Karnataka (193.2 thousand tons), Tamil Nadu (84.8 thousand tons) and Andhra Pradesh (40.3 thousand tons). In Punjab and Haryana it is grown to some extent i.e. 30.2 and 3.3 thousand tons respectively. The details are given below in table 4.4
Table 4.4: Area, production and productivity of leading grapes growing states in India

<table>
<thead>
<tr>
<th>State</th>
<th>Area (000’ ha)</th>
<th>Production (000’ tons)</th>
<th>Productivity (tons/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maharashtra</td>
<td>41.4</td>
<td>43.8</td>
<td>45.1</td>
</tr>
<tr>
<td>Karnataka</td>
<td>9.1</td>
<td>10.1</td>
<td>10.4</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>2.5</td>
<td>2.5</td>
<td>2.6</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>1.8</td>
<td>1.9</td>
<td>1.9</td>
</tr>
<tr>
<td>Punjab</td>
<td>1.2</td>
<td>1.2</td>
<td>1.1</td>
</tr>
<tr>
<td>Haryana</td>
<td>0.9</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Others</td>
<td>0.8</td>
<td>0.9</td>
<td>2.9</td>
</tr>
<tr>
<td>Total</td>
<td>57.8</td>
<td>60.5</td>
<td>64.3</td>
</tr>
</tbody>
</table>

Source: Indian Horticulture Database, 2008
4.5.7 Description of commercially grown varieties

Table 4.5: Varietal characteristics of commercially grown grapes

<table>
<thead>
<tr>
<th>Name of the variety</th>
<th>Description</th>
<th>Berry diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thompson Seedless</td>
<td>Berries are oval to oblong in shape with T.S.S. 18-22° Brix, acidity 0.5% to 0.7%</td>
<td>16 mm to 18 mm</td>
</tr>
<tr>
<td>Sonaka</td>
<td>Berries are elongated, cylindrical and amber coloured, T.S.S. around 22° Brix, acidity 0.4% to 0.7%</td>
<td>16 mm to 19 mm</td>
</tr>
<tr>
<td>Sharad Seedless</td>
<td>Berries are oblong to elliptical in shape and bluish black in colour with T.S.S. 18-21° Brix and acidity 0.5% to 0.7%</td>
<td>18 mm to 22 mm</td>
</tr>
<tr>
<td>Tas-e-Ganesh</td>
<td>Berries are ovoid shaped and green to amber in colour with T.S.S. 20-22° Brix and acidity 0.5% to 0.65%</td>
<td>15 mm to 20 mm</td>
</tr>
</tbody>
</table>

Source: Indian Horticulture Database, 2008

4.5.8 Good Agricultural Practices (GAP)

- Selection of improved varieties for cultivation
- Identification of exact nature of problems in difficult soils and providing solutions.
- Adoption of suitable training system and high planting density and canopy management
- Integrated nutrient and water management of vineyards
- Treatment with chemical growth regulants for quality improvement
• Weed management
• Integrated pest and disease management practices

4.5.9. Arrival pattern in the market

Grapes start coming to the market in middle of January and peak time of availability is during February-March. Availability season is extended further to April – May by keeping the produce in cold stores. The details are given below in table 4.6

Table 4.6: Details of arrival pattern of grapes in leading states

<table>
<thead>
<tr>
<th>S.no</th>
<th>States</th>
<th>Period of availability</th>
<th>Peak season</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Maharashtra, Karnataka, Andhra Pradesh</td>
<td>Middle of December-May</td>
<td>February-March</td>
</tr>
<tr>
<td>2</td>
<td>Tamil Nadu</td>
<td>Mid of Dec - Mid of April</td>
<td>February-March</td>
</tr>
<tr>
<td>3</td>
<td>Punjab &amp; Haryana</td>
<td>1st week of June to 3rd week of June</td>
<td></td>
</tr>
</tbody>
</table>

Source: Indian Horticulture Export Database, 2009

Grapes are also available in Tamil Nadu during May to July and September to November months.

4.5.10 Concentrated pockets

The details of concentrated pockets of grapes in different states are given below in table 4.7
The above table shows various centers of each state where the grape availability is pocketed. In Maharashtra the concentrated pockets are Nasik, Sangli, Solapur, Pune, Ahmednagar, Satara and Osmanabad. Nasik is the major pocket of India. In Karnataka, Belgaum, Bijapur, Bagalkot, Kolar, Bangalore districts are the major pockets. In Tamil Nadu majority of grapes are grown in Coimbatore and Dharampuri districts. In Punjab, the districts where the grapes are grown are Bhatinda, Ferozpur and Sangrur districts. In Andhra Pradesh, Rangareddy and Mehaboobnagar districts are the major grape pockets. Haryana has Fatehbad, Sirsa and Hisar districts as major grape pockets.
### 4.5.11 Catchment areas of market

**Table 4.8: Details of catchment areas of market of grapes in leading states**

<table>
<thead>
<tr>
<th>States</th>
<th>Districts (Markets)</th>
<th>Blocks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maharashtra</td>
<td>Solapur</td>
<td>Karmala, Barsi, Madha, Mohol, Mangalwedha, Sangole, Malsiras, Pandharpur, Akkalkot</td>
</tr>
<tr>
<td></td>
<td>Nasik</td>
<td>Kalwan, Peint, Igatpuri, Sinner, Niphad, Yeola, Nandgaon, Satana, Furguna, Dindori, Melgaon</td>
</tr>
<tr>
<td></td>
<td>Sangli</td>
<td>Atpadi, Khanapur, Islampur, Shirala, Valva, Tasgaon, Kavathe, Mahankal, Jath, Miraj</td>
</tr>
<tr>
<td></td>
<td>Ahmednagar</td>
<td>Shrirampur, Sangmner, Akola, Rahuri, Nevasa, Parner, Pathardi, Srigonda, Karjat</td>
</tr>
<tr>
<td></td>
<td>Pune</td>
<td>Junnar, Ambegaon, Ghod, Rajgurunagar, Wadgaon sirur, Mulsi, Welhe, Purandhar, Bhor, Baramati, Indapur, Daund, Saswad</td>
</tr>
<tr>
<td></td>
<td>Satara</td>
<td>Mahabaleshwar, Khandala, Wai, Phaltan, Koregaon, KHata, Patan, Karad, Wadug</td>
</tr>
<tr>
<td>Karnataka</td>
<td>Bijapur</td>
<td>Indi, Sindagi, Basavan Bagewadi, Muddebihal, Tikota</td>
</tr>
<tr>
<td></td>
<td>Belgaum</td>
<td>Athani, Arkoli, Chikodi, Muker, Bailhongal, ramdurg, Khanapur</td>
</tr>
<tr>
<td></td>
<td>Bagalkot</td>
<td>Jamkhandi, Mudhol, Hungund, Badami</td>
</tr>
<tr>
<td></td>
<td>Kolar</td>
<td>Bagepalli, Gudibande, Gouribidanur, Chikkaballaper, Mulbaglal, Malur, Bangarpeth</td>
</tr>
<tr>
<td></td>
<td>Bangalore</td>
<td>Anekal, Sonnenahalli, Konnur, Baglur, Naglur, Maragondanhalli, Harlur, Mantap, Solarur, Chandapur</td>
</tr>
<tr>
<td></td>
<td>Andhra</td>
<td>Rangareddy, Marpali, Vikarabad, Tandur, Pargi, Ibrahimpatan,</td>
</tr>
<tr>
<td>Pradesh</td>
<td>Cities</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Mahaboobnagar</td>
<td>Kollur, Keshmpat, Mughlgidda, Karnul, Wanprti, Atmakur, Gadwal Alampur, Achampet, Kollapur, Kodangal</td>
<td></td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>Theni Periyakulam, Andipatti, Uttammapalayam, Bandimaykkkanur, Kamban, Megamali, Vadugapatti</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Coimbatore Mutupalaiyam, Avinashi, Tiruppur, Pelladam, Udamellaipettai Pellachi, Vallaparai</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dindigul Pallani, Kodaikanal, OaddanChattran, Vedasandur, Naltam, Nilakkotai, Palaiyan</td>
<td></td>
</tr>
<tr>
<td>Punjab</td>
<td>Bhatinda Rampura Phul, Talwani, Sabo, Bangra, Jalal, Nathana, Bandi, Jaisinghwal, Shergarh, Sangat, Malkhana, Lahri, Teona</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ferozpur Zira, Fazilla, Abhor, Jalalabad, Fatehgarh, Panjeke, Ladhuka, Lakhawll, Ramsara, Wahabwala</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Muktasar Khanianwali, Malout,Baruwali, Sotha, Doda, Bhadal, Abulkharana, Bhagu, Waring Khera</td>
<td></td>
</tr>
<tr>
<td>Haryana</td>
<td>Fatehbad Ratiya, Tohana, Badalgarh, Bhatu, Sampla, Pirthala, Samiyana, Kharihajan, Bhattukhalan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sirsa Fatehpur, Debwali, Ellenabad, Banwala, Salam Khera, Nathohar, Mangla, Jamal, Gushalyana,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hissa Bithmara, Adampur, Narmound, Hansi, Budak, Mangal, Umra, Sultanpur, Babal, Baria, Agroha, Kanoh, Khedar</td>
<td></td>
</tr>
</tbody>
</table>

Source: Indian Horticulture Database, 2008
4.5.12 Criteria and description of grades

According to Agmark standards grapes are classified into following classes:

**Table 4.9 : Criteria for grade designation as per AGMARK standards**

<table>
<thead>
<tr>
<th>Grade Designation</th>
<th>Grade Requirements</th>
<th>Provision Concerning Sizing</th>
<th>Grade tolerances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extra class</td>
<td>Grapes must be of superior quality. Bunches must be typical of variety in shape, development and coloring &amp; have no defects. Berries must be firm, firmly attached to the stalk, evenly placed along the stalk &amp; have their bloom virtually intact</td>
<td>As per Table ‘A’</td>
<td>5% by weight of bunches not satisfying the requirements of the grade, but meeting those of class I grade or exceptionally coming within the tolerances of that grade</td>
</tr>
<tr>
<td>Class I</td>
<td>Grapes must be of superior quality. Bunches must be typical of variety in shape, development and coloring &amp; have no defects. Berries must be firm, firmly attached to the stalk, evenly placed along the stalk &amp; have their bloom virtually intact They may however</td>
<td>As per Table ‘A’</td>
<td>10% by weight of bunches not satisfying the requirement of the grade, but meeting those of class II grade or exceptionally coming within the tolerances of that grade</td>
</tr>
</tbody>
</table>
be less evenly spaced along the stalk than in extra class. Following slight defects may be there, providing these do not affect the general appearance of the produce and keeping quality of the package.

1. A slight defect in shape
2. Slight defect in coloring

<table>
<thead>
<tr>
<th>Class II</th>
<th>Bunches must show defects in shape, development, coloring provided these do not impair the essential characteristics of the variety. The berries must be sufficiently firm and sufficiently attached. They may be less evenly spaced along the stalk than class I grade. Following defects may be there, provided these do not affect the general appearance of the produce and keeping quality of the package.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Defects in shape</td>
</tr>
<tr>
<td></td>
<td>As per Table ‘A’</td>
</tr>
<tr>
<td></td>
<td>10% by weight of bunches not satisfying the requirement of the grade, but meeting the minimum requirements.</td>
</tr>
<tr>
<td>Grade</td>
<td>Large berries</td>
</tr>
<tr>
<td>----------</td>
<td>---------------</td>
</tr>
<tr>
<td>Extra Class</td>
<td>200</td>
</tr>
<tr>
<td>Class I</td>
<td>150</td>
</tr>
<tr>
<td>Class II</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Indian Horticulture Database, 2008

4.5.13 Provision Concerning Size

Size is determined by the weight of bunches (in Gms). The following minimum (in Gms) requirements per bunch are laid down for large and small berries grapes.

Table 4.10: Provision concerning size

Size tolerance:
Extra Class, Class I, Class II: 10% by weight of bunches not satisfying the size requirements for the grade, but meeting the size requirements for the grade immediately below.
4.5.14 Packaging and its details

(A) For exports:

Packaging is normally done in Corrugated or Solid Fibre board cartons. A layer of double pad or protective liner is placed at the bottom of the carton to protect the grapes from bruising and a polyethylene lining is placed over it. The detailed specifications are given below in table 4.11 and table 4.12.

Table 4.11: Specification details for Corrugated Fiber Board (CFB) Boxes for packing (2Kg box) {Dimension: 270X150X100 mm}

<table>
<thead>
<tr>
<th>S.no.</th>
<th>Specification</th>
<th>Slide Type</th>
<th>Ring +Flap</th>
<th>Tuck –in-Type</th>
<th>RSC (regular Sloted Container)</th>
<th>Tray with LID</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Material for construction</td>
<td>3-ply CFB</td>
<td>3-ply CFB</td>
<td>3-ply CFB</td>
<td>3-ply CFB</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Grammage (g/m sq.)(outer to inner)</td>
<td>+230<em>140</em>140</td>
<td>+230<em>140</em>140</td>
<td>+230<em>140</em>140</td>
<td>+230<em>140</em>140</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Bursting strength kg/cm sq.</td>
<td>Min 6.00</td>
<td>Min 6.00</td>
<td>Min 6.00</td>
<td>Min 6.00</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Puncture resistance inches/teat inch</td>
<td>Min 10.00</td>
<td>Min 10.00</td>
<td>Min 10.00</td>
<td>Min 10.00</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Compression strength kg.</td>
<td>Min. 225</td>
<td>Min. 225</td>
<td>Min. 225</td>
<td>Min. 225</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Cobb (30 Min.g/m.sq.)</td>
<td>Min 130</td>
<td>Min 130</td>
<td>Min 130</td>
<td>Min 130</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.12: Specification details for Corrugated Fiber Board (CFB) Boxes for packing. (5 Kg Box) (Dimension: 480X300X100 mm)

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Specification</th>
<th>Slide Type</th>
<th>Ring *Flap Tuck-In-Type</th>
<th>RSC(REGULAR SLOTTED CONTAINER)</th>
<th>Tray with LID</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Material for construction</td>
<td>5-ply CFB</td>
<td>5-ply CFB</td>
<td>5-ply CFB</td>
<td>5-ply CFB</td>
</tr>
<tr>
<td>2.</td>
<td>Grammage (g/m sq.)(outer to inner)</td>
<td>*230X140 X140X140</td>
<td>*230X140 X140X140</td>
<td>*230X140 X140X140</td>
<td>*230X140 X140X140</td>
</tr>
<tr>
<td>3.</td>
<td>Bursting strength kg/cm sq.</td>
<td>Min. 10.00</td>
<td>Min. 10.00</td>
<td>Min. 10.00</td>
<td>Min. 10.00</td>
</tr>
<tr>
<td>4.</td>
<td>Puncture resistance inches/teat inch</td>
<td>Min..250</td>
<td>Min..250</td>
<td>Min..250</td>
<td>Min..250</td>
</tr>
<tr>
<td>5.</td>
<td>Compression strength Kg.</td>
<td>Min.350</td>
<td>Min.350</td>
<td>Min.350</td>
<td>Min.350</td>
</tr>
<tr>
<td>6.</td>
<td>Cobb (30 minutes g/m sq.)</td>
<td>Max.130</td>
<td>Max.130</td>
<td>Max.130</td>
<td>Max.130</td>
</tr>
</tbody>
</table>

+Outer ply of white duplex board


(B) For domestic markets:

For domestic markets also, grapes are packed in Corrugated Fibre Board boxes.

4.5.15 Distribution of produce from primary to terminal market

- Grapes grown in different parts of country are transported to the big cities for marketing.
- The fruits produced in Maharashtra, Karnataka, Andhra Pradesh and Tamil Nadu find market in Mumbai, Nagpur and Kolkata.
- The important whole sale markets of grapes in India are Kolkata, Delhi, Mumbai, Chennai, Bangalore, Nagpur, Pune and Ahmedabad. Grapes for these big markets are usually collected at the central places in all grapes growing areas.
- From Mumbai port grapes are exported to the destination markets.
Figure 4.1
Graph shows Prices of grapes in metros (2008-2009)

![Price Graph of Grapes in Metros](image)

Source: Grape marketing report of pune grape research center, 2009

*The above graph showing the price (in Rs./Qtl.) of grapes in major cities*

From the above graph we see that in the month of January, in New Delhi the prices of grapes are Rs. 4500 per Quintal. In Pune it is Rs. 1500/Qtl, while in kolkata the prices are Rs. 1500, in Chennai Rs. 1800, where as in Bangalore the prices are Rs. 1200 Per quintal. In New Delhi grapes are usually available at higher rates in the months of December, January, February, March, April and May. Average prices of grapes in New Delhi are Rs. 2500/Qtl. In Pune the average prices of grapes are Rs. 1800-2000/Qtl. In Pune we observe the consumption of grapes is highest in June and July. In Kolkatta the average price of grapes is Rs. 1200/Qtl. In Chennai the average
prices are Rs.1800/Qtl. In Banglore the average price of grapes is around Rs.2000 per quintal nad the consumption is high in the month of May.

4.6 Export and export potential of grapes

4.6.1 Domestic strengths for exports of grapes

Domestic strengths for exporting grapes are enumerated in following paragraphs:-

- Grapes in India are mainly cultivated in tropical region of the country where vines are pruned twice. Fruit pruning can be adjusted to harvest the crop as per the demand of the importing country.
- Technology for production of Extra Class or Class I table grapes is available in the country.
- The grape growers of the country are very innovative and very much receptive to new technologies and have registered with GLOBALGAP certification.
- Yields of grapes in India are highest in the world.
- Farmers of different regions have organized themselves by forming association/cooperatives and thus transfer of technology is easy.
- Agri Export Zones for enhancing exports of grapes have been established.
- Farmers of Maharashtra state in cooperation with MSAMB have branded their product as MAHA GRAPE.
- The grape cultivators have research support from NRC for grapes, Pune, IIHR, Bangalore and State Agricultural Universities.
- Grape growers in cooperation with MSAMB and APEDA have set up modern packhouses for handling and packing of grapes for exports.
• APEDA has already set up a residue analysis laboratory at Pune for grape growing area of Maharashtra in order to cater to phytosanitary requirements of importing countries.

• Geographically India is at an advantageous position as compared to Chile, South Africa and Israel for exporting grapes to South East Asian countries like Hong Kong, Singapore etc.

4.6.2 Exports

There is a phenomenal rise in export of grapes from India, as only 25,567 tons were exported during 2002-2003 which has increased to 85,562 tons in 2006-2007.(APEDA database). Increase has been observed mainly in the last 2-3 years, because of the fact that India has met the requirements of EU countries on minimization of pesticide residues (Table 4.13 & Fig.4.1)

Table 4.13: Exports of grapes from India

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantity (tons)</th>
<th>Value (in Rs.Lakhs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999-2000</td>
<td>14463</td>
<td>6464.2</td>
</tr>
<tr>
<td>2000-01</td>
<td>18220</td>
<td>8482.6</td>
</tr>
<tr>
<td>2001-02</td>
<td>22460</td>
<td>10242.1</td>
</tr>
<tr>
<td>2002-03</td>
<td>25567</td>
<td>10867.1</td>
</tr>
<tr>
<td>2003-04</td>
<td>26469</td>
<td>10368.3</td>
</tr>
<tr>
<td>2004-05</td>
<td>38898</td>
<td>12643.7</td>
</tr>
<tr>
<td>2005-06</td>
<td>53908</td>
<td>21382.8</td>
</tr>
<tr>
<td>2006-07</td>
<td>85562</td>
<td>30058.4</td>
</tr>
<tr>
<td>2007-08</td>
<td>89473</td>
<td>54478.6</td>
</tr>
<tr>
<td>2008-09</td>
<td>94633</td>
<td>76662.5</td>
</tr>
</tbody>
</table>

Source: APEDA Database, 2008
4.7 Export potential

There is a tremendous potential of export of grapes from India. The detailed account of potential of exports is given below:

4.7.1 GCC Countries

As per APEDA database, nearly, 9677 tons of grapes were exported to GCC countries. This is negligible compared to imports of 64,170 tons during 2006 (Comtrade database). India exported only 8140 tons to UAE against total import of 21,240 tons (2006). Again to Saudi Arabia, our exports were only 1115 tons compared to imports of 31,853 tons. Similarly our exports to other GCC countries were minimal. Main competition of India is with South Africa and Chile. There is no reason why we cannot penetrate more in GCC countries especially in Saudi Arabia, when we have quality grapes, are meeting stringent quality control requirements of importing countries and are offering grapes at competitive prices. Moreover, India location wise is nearer to GCC countries. Thus, it should not be difficult to accelerate exports of grapes to the tune of 40,000 to 50,000 tons to GCC countries in next 4-5 years.

4.7.2 European Union

Exports of grapes from India are maximum to European Union during 2006-2007. As much as 34,186 tons were exported during the year. Largest importers were Netherlands (19,020 tons) and UK (13,579 tons). It must be noted that India produces grapes mainly during January to April months, where as countries like U.S.A, Argentina, Italy, Spain etc. produce grapes during September to December months. Our competition, therefore, is with countries like South Africa, Chile and Israel who supply grapes in the months when we supply. These countries have exported up to 3, 42,896 tons during 2006 to a select few European countries comprising U.K, Netherlands, France, Belgium, Italy and Spain.
Since India is meeting quality requirements including pesticide residues of all the importing countries in EU and supplying grapes at competitive prices, there is no reason why we cannot penetrate in the markets of Belgium, Germany, Spain and have larger share of imports in Netherlands and UK. Thus, it should not be difficult to meet the targets of export of 20 to 25% of total imports of EU i.e. 3,42,896 tons of grapes in this season in next 4-5 years. Russian Federation imports as much as 3,20,677 tons in addition to imports of Ukraine to the tune of 55,168 tons. Therefore, India must make concentrated efforts to accelerate export of grapes to these countries also.

4.7.3 ASEAN countries

ASEAN countries import grapes to the tune of 1,04,477 tons. The demand for grapes has increased by 50% from the year 2003. The main importers are Indonesia (26,366 tons), Philippines (14,748 tons), Singapore (12,166 tons) and Vietnam (11,025 tons). Main competitors with India for export of grapes to these countries are U.S.A, Australia, China and South Africa. Out of total quantity of 1,04,477 tons, approx 40,000-50,000 tons are supplied by U.S.A, 17,000 to 20,000 tons by Australia and 10,000-11,000 tons by China and South Africa each. However, supplies from U.S.A and China are during September to December months and thus India’s competition is with South Africa, Chile and Australia. India can easily compete with these countries, as India location wise is closer to ASEAN countries compared to South Africa and Chile. Moreover, India is supplying grapes at competitive prices.

At present, India has exported only 196 tons to Malaysia, 93 tons to Singapore, 78 tons to Thailand, 34 tons to Indonesia and 13 tons Vietnam during 2006. These export volumes are negligible compared to the potential that exists. Moreover because of free trade agreements with Thailand and Singapore (likely to be signed very soon), exports of grapes are likely to accelerate, as even otherwise import duties of the order of 5-7% only are imposed by Malaysia, Philippines and Indonesia. Thus, in next 4-5
years time, target of export of 10,000-15,000 is not difficult to meet as India is producing quality grapes and is able to meet quality requirements. India must campaign aggressively and nurture these markets.

4.7.4 Hong Kong

Hong Kong is a trade hub and imported up to 91,517 tons and exported up to 46,868 tons during 2006. However, India exported only 156 tons during 2006. There is excellent potential and also possibility of realizing higher prices in Hong Kong market. India must make aggressive campaign and nurture the market.

4.7.5 Pacific Rim countries and China

Pacific Rim countries comprising South Korea, Japan and Australia are also importing grapes to the extent of 17,921, 9949 and 4759 tons respectively. At present India is not exporting any quantity of grapes to these countries. It is expected that with the signing of Free Trade Agreement with South Korea, export of grapes should initiate. Similarly with China, grape export should be explored as China has imported 46,021 tons of grapes during 2006. India and China are participants in Asia Pacific Trade Agreement.
4.8 Measures for enhancing competitiveness for exporting grapes

Following measures need to be adopted for enhancing competitiveness for exporting grapes.

- Competition of India is with countries like Chile, South Africa and Israel, which produce quality grapes. Therefore, India must maintain superior quality free from pesticide residues etc. for keeping up momentum of exports.
- There is huge demand of grapes in Hong Kong, Singapore, Malaysia etc., India needs to exploit this opportunity, by holding fruit shows, exhibitions and buyer-seller meets frequently.
- India needs to enhance its competitiveness by making grapes available during Ramzan period in Middle East countries and in Malaysia, Indonesia etc, by altering pruning time for fruiting.
- India can further enhance its competitiveness by economizing on logistics by exporting from eastern port to South East Asian countries and by intensifying production in Andhra Pradesh.
- Similarly, grapes can be made available during Christmas period by changing pruning time for fruiting.

4.9 Storage

The storage of grapes is important criteria and parameter when it comes to exports. So, the following conditions of different climatic parameters are maintained for storage.

Temperature : $0 \pm 0.5^\circ C$
Relative Humidity : $93 \pm 2\%$
Storage period : 3-8 weeks
Freezing point : $-1^\circ C$
4.10 Documents required for exports

4.10.a) Documents related to goods: -

a) Invoice b) Packing List c) Certificate of origin

4.10.b) Documents related to shipment: -

a) Mate Receipt b) Shipping Bill c) Bill of handing d) Airway Bill

4.10.c) Documents related to Payment: -

a) Letter of Credit (L/C) b) Bill of Exchange

4.10.d) Documents related to quality of goods: -

a) Phytosanitary Certificate b) GLOBALGAP Certification c) Health Certificate

4.10.e) Organic Certification: -

- Certificate indicating material produce is based on organic farming.

4.10.f) Documents related to Foreign Exchange Regulations: -

GR Form: Documents required by RBI which assures to RBI that the exporter will realize the proceeds of goods within 180 days from the date of Shipment.

4.10.g) Other Document:

Bank Realization Certification (BRC): This is the advice given by Foreign Exchange Bank after the realization of money from Importer.
4.11 Chain of events happen up to shipment

**Process flow chart in pack house**

- Receipt of raw material at pack house
- Weighment and acceptance of produce
- Trimming, sorting and grading
  - Weighment
  - Packing and coding
  - Pre-cooling
  - Sulphur dioxide padding
    - Palletization
    - Storage (cold stores)
    - Container loading
    - Transportation
4.11 Price prevailing in international market

The given below tables shows the annual average price range of grapes in different international markets. The table 4.14 shows the pricing trend in EU markets.

**Table 4.14: Summary of prices for grapes in potential markets for India**

<table>
<thead>
<tr>
<th>Country</th>
<th>Annual Average price Range (2003-08)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Currency</td>
</tr>
<tr>
<td></td>
<td>USD/kg 1.26 to 2.35</td>
</tr>
<tr>
<td></td>
<td>INR/kg 57.0 to 105.76</td>
</tr>
</tbody>
</table>

Source: Com & trade Database

4.12 Cost Calculation from harvest to pack-house to port

The cost involved in exporting grapes is as follows (as per information collected during 2008):

(a) **Procurement price***:

Approx. price (Rs. /kg) : 25-35

*Price of grapes varies according to variety (coloured or white) and month of procurement
(b) Charges for testing, packing, transport, etc. (below in table):

Table 4.15: Charges for testing, packing, transport, etc.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Particulars</th>
<th>Rs./kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Residue testing, harvesting and transport charges (plot to pack house)</td>
<td>2.00</td>
</tr>
<tr>
<td>2.</td>
<td>Pack house charges including labour, packing material, precooling, container loading, Agmark etc.</td>
<td>19.70</td>
</tr>
<tr>
<td>3.</td>
<td>Container Freight* (Junnar up to Mumbai), container forwarding and document charges</td>
<td>1.99</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>23.69</strong></td>
</tr>
</tbody>
</table>

Source: NRC for Grapes, Pune

(c) Sea freight charges*:

Freight rates for **reefer container** are as follows:

**Reefer containers**  
(Rates in US dollars)

<table>
<thead>
<tr>
<th></th>
<th>20'</th>
<th>40'</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Dubai/Doha</td>
<td>1100</td>
<td>1600</td>
</tr>
<tr>
<td>(ii) Kuala Lampur/Singapore</td>
<td>600</td>
<td>900</td>
</tr>
<tr>
<td>(iii) UK/Amsterdam</td>
<td>1700</td>
<td>2700</td>
</tr>
</tbody>
</table>

* It varies from year to year /season to season, capacity of container and distance covered
4.13 CONCLUSIONS

Export marketing management is a vital tool for promoting international business. Indian agricultural produces suffer from technical guidance as well as modern quality standards for their produces because they have less knowledge about export marketing. But it is healthy to see the growth in export of grapes especially from Nasik district of Maharashtra state. In India Grape is cultivated over an area of 34,000 hectares with an annual production of 1,000,000 tonnes. Although, the returns per unit area of land are very high with grape cultivation, the area under grapes is not expanding fast owing to the high initial cost of establishing the vineyards and high recurring cost of production. The risk of losing a crop due to unprecedented changes in weather is also very high. Since the highest productivity in grapes has been achieved, efforts are needed to extend grape cultivation to newer areas. Soil and water salinity and drought are the impediments in this direction, for which suitable rootstocks are to be identified.

There is a need to diversify the uses of grapes. Currently more than 80 percent of the produce is used for table purposes. The major bulk of the produce is harvested in March-April, but as cold storage facilities are currently inadequate there are frequent market gluts. Diversification of uses as wine/juice and export of table grapes can ease the marketing problems. Maintenance of quality of table grapes by crop regulation is the priority consideration to increase exports. For the survival of the grape industry in India, the produce should be quality and cost competitive. Future efforts are to be concentrated in this direction.