

CHALLENGES FACED BY MANGO EXPORTERS

S. P. Padaliya¹ and R. S. Pundir²

¹ Ph. D. Scholar, International AgriBusiness Management Institute, AAU, Anand – 388110

² Professor & Head, Dept. of Agribusiness Economics & Policies, IABMI, AAU, Anand – 388110

Email: savan.padaliya9@gmail.com

ABSTRACT

The mango is one of the most ancient and important Asian fruit. India is the world's largest mango producer, accounting for 45 per cent of global mango production. Despite being the world's largest producer of mangoes, India only exports a very small amount of its produce owing to several constraints. The study revealed major challenges faced by mango exporters in Gujarat state. Major challenges were found to be high international freight charges, difficulties in custom clearance, sanitary and phytosanitary (SPS) measures, unavailability of quality mangoes in sufficient quantity, difficulties in certification, high local transportation charges, lack of standardization on post harvest handling, poor infrastructure facilities like cold storage, pack house, etc., competition from other exporting countries, lack of institutional support with respect to credit, problem finding reliable foreign distributor, Unavailability of market information, Price fluctuation of the commodity supply at home country, Problems in quoting price with fluctuating exchange rates, Labelling and packaging requirement, Confusing foreign import regulations and Unavailability or untimely export incentive.

Keywords: mango, mango exporter, garrett ranking method, sps, exporter challenges

INTRODUCTION

Mango (*Mangifera indica*) is the most important Asian fruit. It is known as the 'king of fruits' because of the delicious quality of fruit and rich in vitamins and minerals. It is very popular due to its wide range of adaptability, high nutritional value, delicious taste, richness in variety and exceptional flavour. The mango is one of the most ancient Indian fruit. Mango originated 4,000 years ago in India and are considered a sacred fruit. There are presently more than 100 mango producing countries with more than thousands of varieties grown in different countries. Asian countries, especially India, China, Bangladesh, Pakistan, Indonesia and Thailand, contributing 67 per cent of the mango production (FAO, 2022). India's diverse geological and geographical conditions make it ideal for growing a wide variety of horticultural crops across the country (Thakor, 2019).

Demand of mango is rising in the world, particularly in temperate countries where mango is gaining popularity. Mango exports were only ₹ 68 crores in 2000-01 but increased to ₹ 400.21 crores (5.88 times) in 2019-20 (APEDA, 2022). Thailand, Mexico, Brazil, Peru, Spain and Netherlands are some of the leading countries in the world mango trade. Thailand exported 20.25 per cent of global mangos in 2020, making it the world's largest mango exporter with 433.32 thousand tonnes. Brazil and Thailand are the countries that export the majority of its mango produced. Despite being the world's largest mango producer with 20.32 million

tonnes, India only exports 0.049 million tonnes of mango, accounting for less than 1 per cent of total production (2019-20) (APEDA, 2022).

India is the world's largest mango producer, accounting for 45 per cent of global mango production in 2020, followed by Indonesia (7%), Mexico (4%) and China (4%) (FAO, 2022). On the other hand, India's mango productivity is 1.5-2 times lower than that of other leading countries like Mexico (11.11 MT/ha), Brazil (22.79 MT/ha) and Israel (17.61 MT/ha). In India, the peak mango season is from April to July whereas harvesting season lasts 8–10 months annually in Brazil, Columbia, Kenya and Venezuela. Burkina Faso, Costa Rica, Indonesia, Jamaica, Mexico, Nicaragua and Puerto Rico all have long seasons compare to India. The major mango importing countries are the United States, European Union and United Arab Emirates. Tommy Atkins, Keitt, Kent, Palmer, Amélie, Maya/Aya, Irwin and Indian varieties Alphonso, Kesar, Totapuri and Chausa are among the most widely traded mango varieties in the world. Mango are exported from India in a variety of forms and types, including ripe, pulp, puree, dices, slices, concentrate, chunks and so on (APEDA, 2022).

Other important states that grow mango commercially include Andhra Pradesh, Uttar Pradesh, Karnataka, Bihar, Telangana, Maharashtra, Gujarat, West Bengal, Tamil Nadu and Madhya Pradesh. Maharashtra is the state that contributes the most to the country's mango exports. States like Karnataka

and Andhra Pradesh are attempting to diversify their export baskets in order to increase their export share. For optimal growth and fruiting, most Indian mango varieties have specific ecogeographical requirements. Commercially grown varieties include Dashehari, Langra, Chausa, Bombay Green and Fazri in north India; Banganapalli, Totapuri, Neelum, Pairi, Suvarnarekha, Mulgoa, Kalapadi and Rumani in south India; Alphonso, Kesar, Rajapuri, Totapuri and Vanraj in western India; and Langra, Fazri, Chausa, Zardalu in North-eastern India. The peak season of mango in different states in India is from April to July month. In India, there are over 480 mango exporting companies. The largest mango exporter in India is Capricorn Food Products India Ltd. (Chennai). Other major mango exporters are Sunrise Naturals Pvt Ltd. (Mumbai), Allanasons Pvt Ltd. (Mumbai), Raian Fresh Produce Pvt Ltd. (Mumbai), Keventer Agro Ltd. (Kolkata), Bombay Fruits & Vegetables Import Export Pvt Ltd. (Mumbai), Vimal Agro Products Pvt Ltd. (Bardoli), Royal Foodstuffs Pvt Ltd. (Mumbai), *etc* (Export Genius, 2017).

The mango is the chief commercial fruit of Gujarat State occupies the highest cultivation area (37.81%) as compared to all other fruits (DoH, 2022). In 2020-21, total mango production from Gujarat was 997.83 thousand MT from 163.78 thousand hectare area. Value of output of mango in Gujarat was ₹ 2810.52 crores at current prices in 2018-19. The varieties suitable for the State are Alphonso, Rajapuri, Kesar, Totapuri, Pairi, Vanraj, Badami, Beganpalli, Banarasi, Langra, Beganpalli, Jamadar, Batli, Dadamio, Gadhemar, Karanjio, Khandeshi Borario, Malgoba, Neelum, Pachhatio and Sardar. Alphonso, Rajapuri and Kesar are three commercial varieties grown in the state's various agro-climatic zones. Kesar is grown in Saurashtra, where rainfall levels are still low (about 70 to 80 cm). The south Gujarat region is called 'Mango Bowl' of Gujarat, especially Valsad and Navsari district, where the famous Alphonso (Hafoos) mango grow abundantly. These two districts contribute 38.56 per cent of total mango production in Gujarat. Other mango producing districts are Kutch (11.75%), Gir Somnath (5.98%), Amreli (5.30%), Tapi (5.13%) and Surat (4.92%) (DoH, 2022).

India currently exports 70 per cent of its commodities and agricultural products to nearby geographies such as the Middle East, Africa and Asia Pacific, while only 30 per cent is exported to Europe and the American countries (United Nations, 2018). Despite the fact that India exports primarily to Asia-Pacific and the Middle East and North Africa (MENA), the United States is India's largest agriculture export geography. Europe has proven to be a difficult market due to its high sanitary and phytosanitary bar, limited agreements and non-tariff barriers. However, it is significant market for India for penetration.

India, China, Bangladesh, Thailand and Mexico are the leading mango producers, accounting for more than 70 per cent of global production. World production of mango has doubled in the past thirty years. Global mango trade in 2010 was 1.27 billion USD which increased to 3.54 billion USD in 2020 with 9.78 per cent CAGR. Asia, the mango's native land, is the world's largest mango producer.

Approximately 60 per cent of India's mango exports are minimally processed mango (pulp, puree, dried, extracts). Secondary processed exports (juices, jams, *etc.*) account for only 5-10 per cent of total exports (Finance Commission India, 2020). Alphonso, Dasherri, Kesar, Banganapalli are the major varieties that are currently demanded in the international markets. Maharashtra is the leading mango exporter in India followed by Tamil Nadu, Gujarat, West Bengal and Karnataka. Export performance of a country depends on the growth in demand for its products in different markets and its ability to supply at competitive prices.

Despite being the world's largest producer of mangoes, India only exports a very small amount of its produce owing to a number of constraints. India became a marginal player in most of the leading markets for the export of mango. Indian players have not succeeded in establishing direct connections with buyers in importing countries, as a result large proportion of exports are being further processed and re-exported by other countries. The issues can be divided into "Supply Chain Issues," which are inherent to the domestic food industry's supply chain, "Market Access Issues," which include a number of variables and considerations influenced by the needs of the target nations, "Multiple Safety Standards," and "Technological Constraints".

The purpose in this paper is to draw on results from a recent study conducted by researcher to illustrate some of these issues and challenges facing by exporters in Gujarat. The majority of India's mango farms are owned by small farmers, with 72 per cent of the farms are less than three hectares. Mango is an important cash crop for most Indian farmers. The country's mango marketing system is very unorganized because of the large number of intermediaries, private individuals, lack of integration of growers and lack of strong and sincere intervention by Government. After banana and pineapple, mango is the country's third most important fruit crop in terms of export volume and value. It has a well-established domestic market as well as promising international prospects in both fresh and processed form. India's full mango export potential has not been achieved because less than 1 per cent of its production is exported. There is potential to increase mango exports to many countries, with strong demand for mango products in the Middle East and Europe So, there is need to know the challenges faced by

exporters in exporting mango.

OBJECTIVES

To know the challenges faced by mango exporter in Gujarat state

METHODOLOGY

Selection of respondents

Twenty exporters who registered for export were selected randomly as concerned with constraints analysis in export of mango. List of exporters in Gujarat state was obtained from APEDA website.

Nature, sources and collection of data

To meet the stipulated objectives of the study, the data were collected from both primary and secondary sources.

Primary data

The primary data were collected by personal interview method, using a pre-tested structured schedule and focus group discussion for enquiry. The information pertaining to general information, the socio-economic profile of respondents, constraints faced by respondents were enumerated. The information furnished by respondents was properly checked through personal checks and cross-checks with the help of APEDA officers, District Horticulture officers *etc.*, were sought for obtaining correct and reliable data.

RESULTS AND DISCUSSION

Table 1 : Constraints faced by exporters in exporting indian mango

(n=20)

Sr. No.	Constraints	Mean Score	Rank
1	High international freight charges	86.00	1
2	Difficulties in custom clearance	75.29	2
3	Sanitary and Phytosanitary (SPS) measures	70.17	3
4	Unavailability of quality mangoes in sufficient quantity	61.11	4
5	Difficulties in certification	58.35	5
6	High local transportation charges	58.35	5
7	Lack of standardization on post harvest handling	51.47	7
8	Poor infrastructure facilities like cold storage, pack house, <i>etc.</i>	49.23	8
9	Competition from other exporting countries	47.17	9
10	Lack of institutional support with respect to credit	43.23	10
11	Problem finding reliable foreign distributor	42.47	11
12	Unavailability of market information	38.73	12
13	Price fluctuation of the commodity supply at home country	36.11	13
14	Problems in quoting price with fluctuating exchange rates	30.35	14
15	Labelling and packaging requirement	28.23	15
16	Confusing foreign import regulations	21.67	16
17	Unavailability or untimely export incentive	19.65	17

Secondary data

The Secondary data were collected from the government agencies like Agricultural Processed Foods and Export Development Authority (APEDA), Food and Agriculture Organization (FAO), and National Horticulture Board (NHB) *etc.* Moreover, other secondary data were obtained from the district and block agriculture and horticulture department, published reports, journals, books *etc.*

Data analysis

Garrett Ranking Technique

$$\text{Percent Position} = \frac{100 (R_{ij} - 0.50)}{N_j}$$

Where,

R_{ij} = the rank given to i^{th} item by j^{th} individual

N_j = the number of items ranked by the j^{th} individual

In order to convert the percent position of each rank into scores, Garrett and Woodworth (1969) tables are used. The scores of individual respondents are then added up for each factor and divided by the total number of respondents whose scores were added. The mean score for each factor is arranged in descending order to determine the rankings.

The findings showed that Gujarati mango exporters faced a number of issues, with high international freight costs ranking first, followed by challenges with customs clearance, sanitary and phytosanitary (SPS) measures, a lack of sufficient supplies of high-quality mangoes, expensive local transportation costs, difficulties in certification, Lack of standardization on post harvest handling, Poor infrastructure facilities like cold storage & pack house, etc.

High international freight charges

During survey, all exporters expressed concern about freight costs. Since the airline's freight rate in 2019 was 90-95 Rs. per kg which increased to 250-260 Rs. per kg in 2022 amid global uncertainties. In just three to four years, freight costs increase 2.78 times which increases the cost to exporters. Transportation by sea is much cheaper compared to air cargo but Sea protocol is not developed for perishables like mango. In the year 2019, MSAMB tried to export mangoes by sea to the US market. While the mangoes took 38 days to reach. By exporting via sea route, the cost of transportation will come down to Rs55 from Rs.60 per kg, said Maharashtra State Agricultural Marketing Board (MSAMB). They had sent 16,560 kg mangoes in 5,520 boxes to JNPT on June 3, 2022 and reached US by the first week of July. Three different organisations including Bhabha Atomic Research Centre (BARC), MSAMB, and Agricultural and Processed Food Products Export Development Authority (APEDA) are working together to make export by sea route successful.

Difficulties in custom clearance

The developed nations frequently use non-tariff barriers to limit imports from developing nations. They could alter the export volumes, prices or both, having an economic impact on the global trade in goods. (UNCTAD, 2016). There are 8 different types of Non-Tariff Measures (i) Packaging and labeling guidelines, (ii) Pesticide residue limit guidelines, (iii) Chemical content restrictions, (iv) Fruit fly related rules, (v) Uniformity requirements, (vi) Labour standards, (vii) Documentation procedures and (viii) Company and product registration. Developed countries like USA, EU and Japan impose regulations on registration, packaging and labelling, pesticide residue and aflatoxin content, fruit fly regulations and labour standards. The problems faced by exporters in Gulf countries are mostly caused by uniformity in size and documentation procedures.

Sanitary and phytosanitary (SPS) measures

SPS Codex brings nations together to assess agricultural, processing, and handling techniques and develop commonly accepted guidelines for the safety of food around

the world. There were 303 instances between the years of 2002 and 2019 where the USA rejected Indian mangoes and mango products, making up 30.1 per cent of all mango export rejections by the USA.

Unavailability of quality mangoes in sufficient quantity

Despite a high mango production in Gujarat, the majority of new exporters reported that they face difficulties in procuring good quality mangoes for exports. The major problems in the supply chain of mango were related with pre- & post-harvest management and other constraints like lack of grading and quality control, inadequate storage facility, transport problems, poor packaging, marketing problems and fluctuations in output due to weather conditions. These findings are also supported by earlier research finding (Mittal, 2007; Kishore et al. 2019). These factors restrict mango export from India and also affect mango growers, who do not get a fair value of their crops. These factors limit the export of mangoes from India and have an impact on income of mango growers.

Difficulties in certification

However, the process in India is said to be more time-consuming and difficult than in many other countries, owing in part to a stringent documentation requirement. For each stage of the shipping process, Indian exporters must prepare many documents. These are the stages of pre-booking, booking, post-booking, and discharge. They must keep in mind that different types of cargo necessitate different types of documentation. Food and pharmaceutical products, for example, must be accompanied by health and safety certificates. It is also critical to plan of time because certification authorities at Indian ports are not available 24 hours a day, seven days a week.

High local transportation charges

The cost of logistics in India is currently around 14% of GDP, which is higher than the cost of logistics in developed countries such as the United States (9.5%). India's massive push to reduce logistics costs to less than 10% will have a significant impact on its agricultural export competitiveness. (Finance Commission India, 2020)

Lack of standardization on post harvest handling

India should focus on cost competitiveness by increasing farm productivity and quantum of trade volumes. Major issues in standardization are Senility of Mango tree, Poorly managed high density orchards, Large degree of rainfed farms and Production from low yielding seedlings.

Poor infrastructure facilities like cold storage, pack house, etc.

Gujarat have very limited packaging facility that has been approved by the Agricultural Processed Food Products Export Development Authority (APEDA). This is also a constraint for mango exports. In 2022, Gujarat Agro Radiation Processing Facility (GARPF), established near Ahmedabad by Gujarat Agro Industries Corporation Ltd, has been approved by the United States Department of Agriculture-Animal and Plant Health Inspection Service (USDA-APHIS) (GAIC). In some cases, improved infrastructure can also help with value addition. For example, limited mango packhouses and grading and sorting infrastructure make it difficult to differentiate between high-quality mangoes required for fresh fruit and mangoes best suited for processed goods (e.g., juices). As a result, processors overpay for mangoes while farmers underpay for mangoes sold as fresh fruits.

Competition from other exporting countries

Major competitor in mango trade are Mexico, Brazil and Thailand. Indian Mangoes are 4 times costlier in US as compared to LATAM mangoes. India has a strong presence in Middle East countries in Totapuri Pulp. Exports to US are at an extremely high price due to irradiation and high logistics cost. (Indian Alphonso \$ 4.1/kg compared to Kent from Brazil and Mexico at \$ 0.9/Kg) (Finance Commission India, 2020).

Lack of institutional support with respect to credit

The availability of export finance, particularly for MSME exporters in India, has been a key impediment to realising their full export potential. Over the years, the government has implemented numerous schemes and incentives to assist exporters in obtaining financing to meet their export obligations. Despite these advantages, exporters in India confront numerous obstacles and challenges in obtaining export finance. Some of the primary concerns include a considerable trade finance gap, compliance costs, large collateral requirements, a lack of knowledge regarding export credit schemes/products, issues with export insurance schemes, and so on. The majority of experts feel that Multilateral Development Banks, Export Credit Agencies, and National Development Financial Institutions can help bridge the trade finance gap.

Problem finding reliable foreign distributor

While India has made significant investments in a variety of export promotion initiatives, India's export incentives have diminished over time. As the government moves toward WTO compliance in export promotion, there

is a chance to increase export incentives and develop a more focused, coordinated investment plan for agricultural export promotion, with a focus on value addition.

Other constraints

Other than mentioned constraints are unavailability of market information, price fluctuation of the commodity supply at home country, problems in quoting price with fluctuating exchange rates, labelling and packaging requirement, Confusing foreign import regulations, Unavailability, or untimely export incentive, etc.

CONCLUSION

Despite being the world's largest producer of mangoes, India only exports a very small amount of its produce owing to several constraints. India became a marginal player in most of the leading markets for the export of mango. The mango is the chief commercial fruit of Gujarat State occupies the highest cultivation area (37.81%) as compared to all other fruits. The study revealed major challenges faced by mango exporters in Gujarat. Major challenges were found to be high international freight charges, difficulties in custom clearance, sanitary and phytosanitary (SPS) measures, unavailability of quality mangoes in sufficient quantity, difficulties in certification, high local transportation charges, lack of standardization on post harvest handling, poor infrastructure facilities like cold storage, pack house, etc., competition from other exporting countries, lack of institutional support with respect to credit, problem finding reliable foreign distributor, etc.

CONFLICT OF INTEREST

No conflict of interest among researchers.

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