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Problems and Prospects of Mango Marketing in Krishnagiri District

Dr.V.Silambarasan, Dr. Uttamkumar Y V, Dr. Jyothi.P, Prof.Shivaraj Kumar S

Professor, Department of Commerce and Management, Global Institute of Management Sciences, Bangalore, India

Professor & HOD, Department of Commerce and Management, Global Institute of Management Sciences,
Bangalore, India

Professor, Department of Commerce and Management, Global Institute of Management Sciences, Bangalore, India
Research Scholar, BCU School of Management Studies, Bangalore, India

ABSTRACT: India is a country of peasants and agriculture provides sustenance to more than two-third of the Indian population. Agriculture is the backbone of the Indian economy and no planning for economic growth can be fruitful without the development of agriculture sector. The mango cultivation is one of the important segments in the horticultural operation of our country. In general, the mango growers are economically and socially weaker people and faced by various problems such as under employment, lack of financial resources and involvement of intermediaries. Since, the mango cultivation is a seasonal one; it is obvious that they have been unemployed for about six month in a year. The mango growers are exploiting from marketing intermediaries like moneylenders and pawnbrokers. Most of the farmers are illiterate and therefore they are not aware of marketing strategies to market their produce. Moreover, they are not aware of the prevailing price trend in different centers. Therefore, there is a necessity to study the marketing prospects and problems of the mango growers in Krishnagiri district. Adopting convenient sampling, 50 farmers from Krishnagiri taluk were selected for this study. The ANOVA test used to study the relationship between the demographic variables of the farmers and their satisfaction on the mango marketing in Krishnagiri district. Price fluctuation, lack of market information, inadequate market finance, lack of transport facility, inadequate storage facility and malpractices of the middlemen were the problems of the sample farmers in marketing their mangoes in Krishnagiri district. The researcher has suggested suitable measures for the prospects of mango marketing in Krishnagiri district.

KEYWORDS: Mango cultivation, agricultural marketing, marketing of fruits, mango marketing, etc.

I. INTRODUCTION

India is a country of peasants and agriculture provides sustenance to more than two-third of the Indian population. Agriculture is the backbone of the Indian economy and no planning for economic growth can be fruitful without the development of agriculture sector. The diverse agro-climatic conditions of soil and temperature allow India to cultivate a wide range of fruits and vegetables under natural climatic conditions as against artificial condition needed in the most developed countries, for instance in Europe, electrical cables are installed in farms to heat the soil for cultivation of some horticultural products. In India's horticultural crops, production of mango is about 60 per cent. Mango is one of the highly eatable fruits in the country. It contains various neutering namely B, carotene, carbohydrates, Vitamin 'C' fibre and energy. Mango is one of the cheapest fruits in India, which can be even bought by the poorest of the poor. Mango cultivation is seasonal and therefore during the off-season, the growers have to search for alternative employment.

II. SOME ASPECTS OF MANGO

The botanical name for the mango is 'Mangifera indica'. Manfigera is derived from the combination of two words, mango and fero. In Latin, they mean bare mangoes from Indica, meaning pertaining to India. Common names in different languages are mango, mangga, mangot, mangue, mangou, Aam, Amb and Amba. Mango a member of Anacharsdiacease family is an erect, broad specimen that can reach 100 feet high and 125 feet wide. A tree of this size develops a deep taproot and extensive root system. However, pruning or containerizing can control the size. There are

several varieties of this fruit and each variety is known by a special name. Summer in India comes with a tang and smell of the mango. The mango is widely cultivated throughout the tropics but especially in India.

III. VALUES OF MANGO

The medical property of mango has been known since long throughout the world. Almost all the parts of the plant are used as medicine in one way or other. A fully ripe mango is especially high in Vitamin A, which is considered a cancer-fighting agent. It is also high in Vitamin C and is a good source fibre too. Green mangoes have more Vitamin C than Vitamin A, but as the mango ripen its Vitamin A increases. Mangoes are good for the kidney, aid digestion, relieve clogged skin pores and reduce cysts, excess body heat and favor. All part of the mango has medicinal uses. The roots and bark are astringent, acrid, refrigerant, styptic, antisiphilitic, vulnerary, antiemetic, anti-inflammatory and constipating. They are used in vitiated conditions of pitta, metrorrhagia, colonorrhagia, pneumorrhagia, leucorrhoea, syphilis, wounds, ulcers, vomiting, uteritis, darrhoea, dysentery, diphtheria and rheumatism. The leaves are astringent, refrigerant, styptic, vulnerary and constipating. They are useful in vitiated conditions of kapha and pitta hiccup, hyperdispsia, burning sensation, haemorrhages, haemoptysis, haemoorrhoids, wounds, ulcers, diarrhea, dysentery, pharyngopath and stomatopathy. The ash of the burnt leaves is useful in burn and scalds. The flowers are astringent, refrigerant, styptic, vulnerary, constipating and haematinic. They are useful in vitiated conditions of pitta, haemorrhages, haemopptysis, wounds, ulcers, anorexia and dyspepsia. Mangoes are unctuous, energizing and satisfying. A hybrid mango that has no fibre is heavy to digest, although it tastes better than one with fibre.

Natural mangoes are smaller and juicier than hybrids but both are a combination of sweet and sour. As its acid content increases stomach acids, one should never eat mangoes on an empty stomach nor take plain water with them. The sweeter the mango the more easily it is digested and the more energy it provides. A sour mango should never be eaten except in the form of amchur, or dried mango slices. Mangoes are good for excess wind and mucus. A sweet, juicy, ripe mango helps the body generate blood. If a glass of lukewarm milk is taken after eating a mango, it balances bile and energizes the entire system, specially the intestine. During the hot season, cold water can be added to the milk to reduce the effect of the heat and give strength, vigor and vitality to the system. The fruit is beneficial in liver disorders, loss of weight and some other physical disturbances. It stimulates and energizes the nervous system and is weight producing. It is believed that this fruit helps one stay youthful for a long time, checks premature aging and holds back decay. Mangoes soaked in sugar syrup give energy, remove constipation and serve as a tonic for the brain, stomach, lungs and blood. In terms of nutrition, fruits are very good source of several vitamins, mineral salts and dietary fibre, all of which are essential for good health. Mango fruits contain amino acids, carbohydrates, fatty acids, minerals organic acids, proteins and vitamins. During the ripening process the fruits are initially acidic, astringent and rich in ascorbic acid.

IV. STATEMENT OF THE PROBLEM

Agriculture employs about 70 per cent of the Indian population. The success of agriculture is highly influenced by the strategies adopted by the agriculturists. It is quite obvious that the farmers have been facing a variety of problems during the time of cultivation. The major problem included production, finance and maintenance of field. The problems faced by the mango growers are entirely different from other agriculturists. The increase of agricultural production and the development of agri-processing industries are mainly depending on agricultural operations. The mango cultivation is one of the important segments in the horticultural operation of our country. In general, the mango growers are economically and socially weaker people and faced by various problems such as under employment, lack of financial resources and involvement of intermediaries. Since, the mango cultivation is a seasonal one; it is obvious that they have been unemployed for six month in a year. The mango growers are exploiting from marketing intermediaries like moneylenders and pawnbrokers. Most of the farmers are illiterate and therefore they are not aware of the prevailing price trend in different centers. There is no well-organized marketing system and co-operation among the growers. Commission agents and middlemen are exploiting the illiterate farmers by fixing the prices below the cost of production. Generally mango prices are fixed by the middlemen, not by the growers with the result that they have lost their share in the mango business. Though the mango cultivation is not a profitable one, many people are continually doing the cultivation due to the non-availability of alternative occupation. Therefore, there is a necessity to study the marketing prospects and problems of the mango growers in Krishnagiri district.

V. OBJECTIVES OF THE STUDY

The following are the objectives of the present study.

1. To Analyze the Current Mango Marketing System in Krishnagiri District
2. To Identify the Problems Faced by Mango Farmers in the Marketing Process
3. To Assess the Socio-Economic Impact of Mango Marketing on Farmers
4. To Explore the Prospects for Improving Mango Marketing in Krishnagiri District
5. To Evaluate the Role of Government Policies and Support in Mango Marketing

VI. RESEARCH DESIGN

This is a descriptive study based on survey method. The study aims at finding out the attitude of the farmers towards mango marketing in Krishnagiri district. This study was based mainly on primary sources. On account of low level of education and poor comprehension towards marketing activities, schedule method has been employed to collect primary data from farmers. The secondary data have been collected from the books, records and journals. Adopting convenient sampling, 50 farmers from Krishnagiri taluk were selected for this study. A pilot study was conducted with 15 farmers. The adequate information contained in the schedule has been tested and the necessary changes were incorporated in the revised schedule in the light of the experience gained from the pilot study. In order to study the attitude of the farmers, statistical tools such as ANOVA.

VII. DATA ANALYSIS AND INTERPRETATION

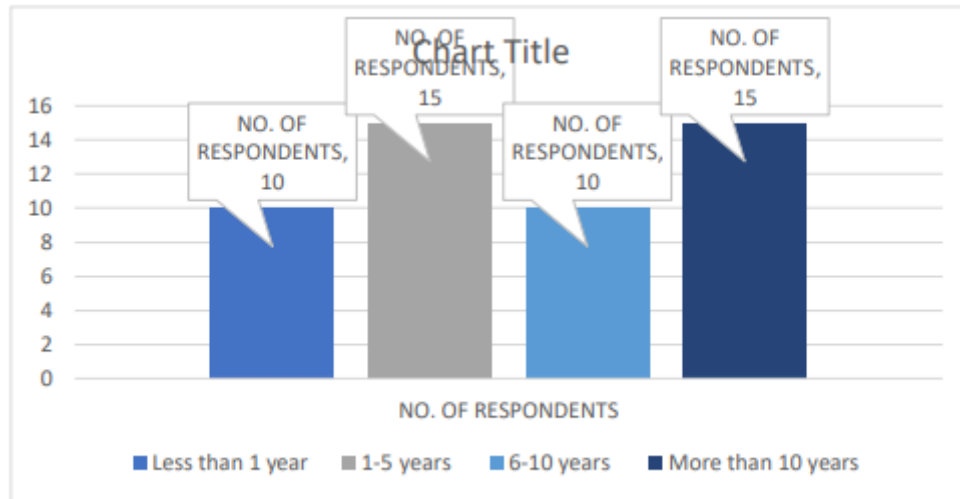
1. How long have you been involved in mango cultivation/marketing?

Particular	No. of respondents	Percentage
Less than 1 year	10	20%
1-5 years	15	30%
6-10 years	10	20%
More than 10 years	15	30%
Total	50	100%

Source: primary data

Analysis: The table highlights respondents' experience levels: 20% have less than 1 year, 30% have 1-5 years, 20% have 6-10 years, and 30% have over 10 years of experience.

Graph showing



Interpretation: The graph shows respondents' experience distribution: 20% have less than 1 year, 30% have 1-5 years, 20% have 6-10 years, and 30% have over 10 years of experience.

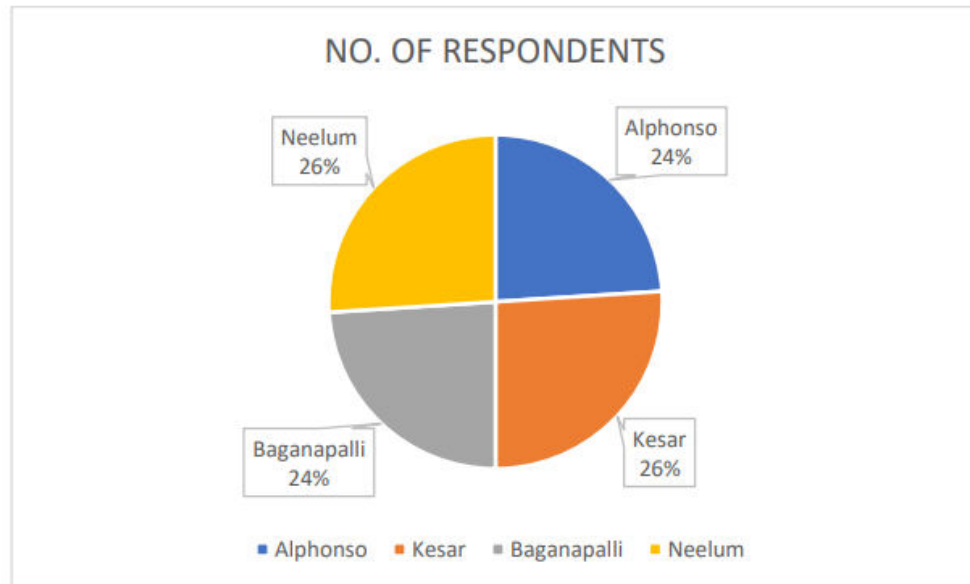
2. What variety of mango do you cultivate?

Particular	No. of respondents	Percentage
Alphonso	12	24%
Kesar	13	26%
Baganapalli	12	24%
Neelum	13	26%
Total	50	100%

Source: primary data

Analysis: The table showcases respondents' preferences for mango varieties: Alphonso and Baganapalli each received 12 responses (24%), while Kesar and Neelum are slightly more popular, with 13 responses each (26%).

Chart showing



Interpretation: The graph reflects respondents' preferences for mango varieties: Alphonso and Baganapalli each garner 24%, while Kesar and Neelum lead slightly with 26%, indicating nearly balanced popularity among choices.

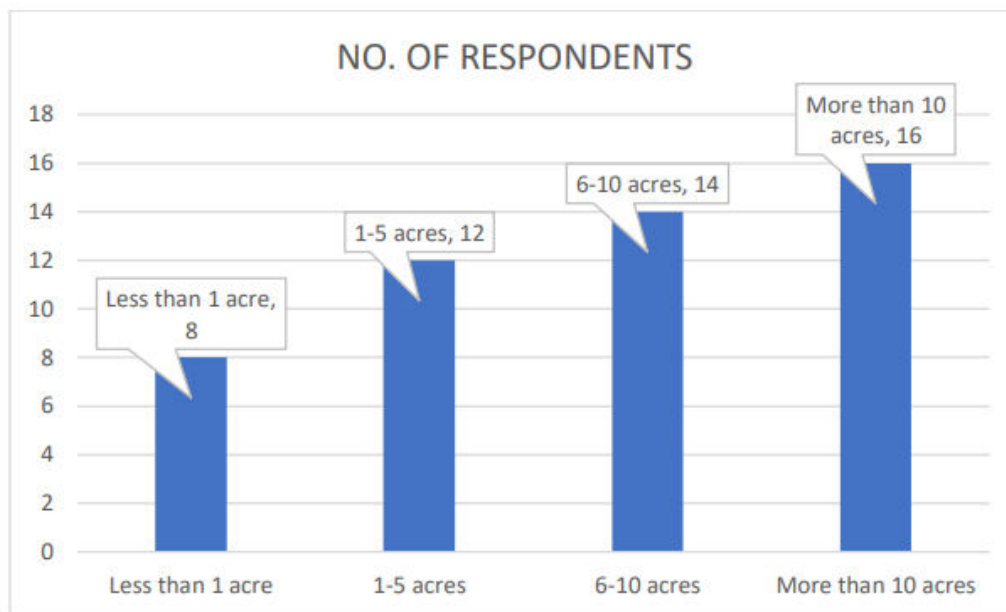
3. How much land do you allocate for mango cultivation?

Particular	No. of respondents	Percentage
Less than 1 acre	8	16%
1-5 acres	12	24%
6-10 acres	14	28%
More than 10 acres	16	32%
Total	50	100%

Source: primary data

Analysis: The table indicates landholding sizes among respondents: 16% own less than 1 acre, 24% own 1-5 acres, 28% own 6-10 acres, and 32% own more than 10 acres.

Chart showing



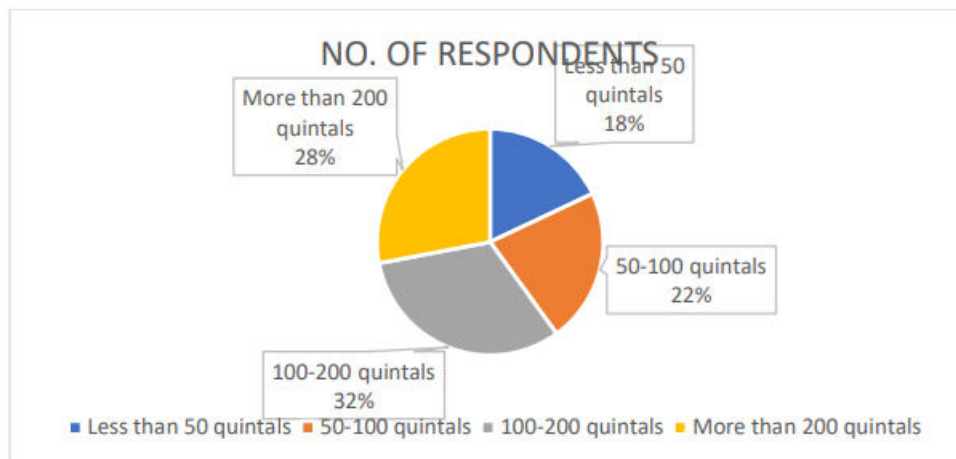
Interpretation: The graph highlights respondents' landholding sizes: 16% own less than 1 acre, 24% own 1-5 acres, 28% own 6-10 acres, and 32% own more than 10 acres, showing varied distributions.

4. How much mango do you harvest annually (in quintals)?

Particular	No. of respondents	Percentage
Less than 50 quintals	9	18%
50-100 quintals	11	22%
100-200 quintals	16	32%
More than 200 quintals	14	28%
Total	50	100%

Source: primary data

Analysis: The table presents production levels among respondents: 18% produce less than 50 quintals, 22% produce 50-100 quintals, 32% produce 100-200 quintals, and 28% produce over 200 quintals.



Interpretation: The graph showcases production levels: 18% produce less than 50 quintals, 22% produce 50-100 quintals, 32% produce 100-200 quintals, and 28% produce more than 200 quintals, indicating varied outputs.

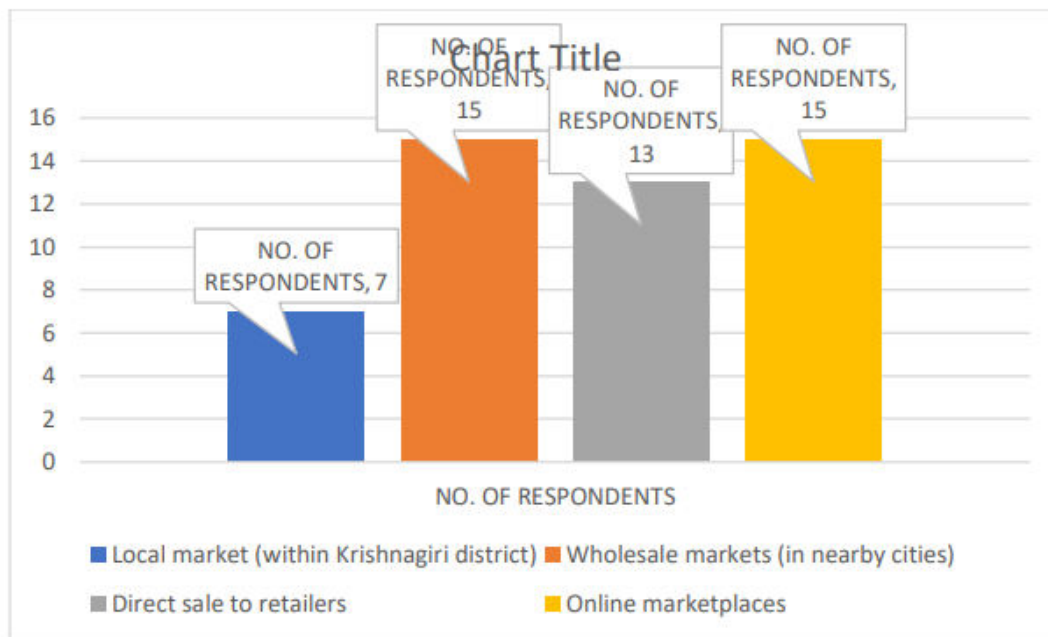
5. What are the primary markets you sell your mangoes in?

Particular	No. of respondents	Percentage
Local market (within Krishnagiri district)	7	14%
Wholesale markets (in nearby cities)	15	30%
Direct sale to retailers	13	26%
Online marketplaces	15	30%
Total	50	100%

Source: primary data

Analysis: The table reveals respondents' selling channels: 7 sell in the local market, 15 use wholesale markets, 13 sell directly to retailers, and 15 utilize online marketplaces, highlighting diverse distribution methods.

Chart Showing



Interpretation: The graph depicts respondents' selling channels: 14% sell in local markets, 30% use wholesale markets, 26% sell directly to retailers, and 30% leverage online marketplaces, showing diverse distribution preferences.

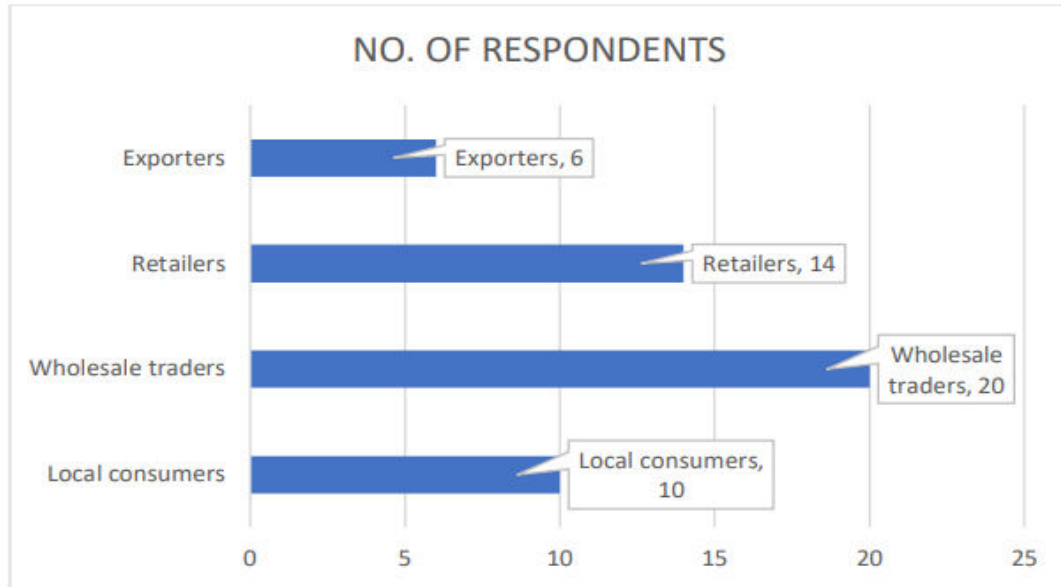
6. Who are the primary buyers of your mangoes?

Particular	No. of respondents	Percentage
Local consumers	10	20%
Wholesale traders	20	40%
Retailers	14	28%
Exporters	6	12%
Total	50	100%

Source: primary data

Analysis: The table shows respondent distribution by customer type: 10 serve local consumers, 20 engage with wholesale traders, 14 with retailers, and 6 with exporters, indicating varied customer base involvement.

Chart showing



Interpretation: The graph highlights customer distribution: 20% of respondents serve local consumers, 40% engage with wholesale traders, 28% with retailers, and 12% with exporters, indicating a primary focus on wholesale traders.

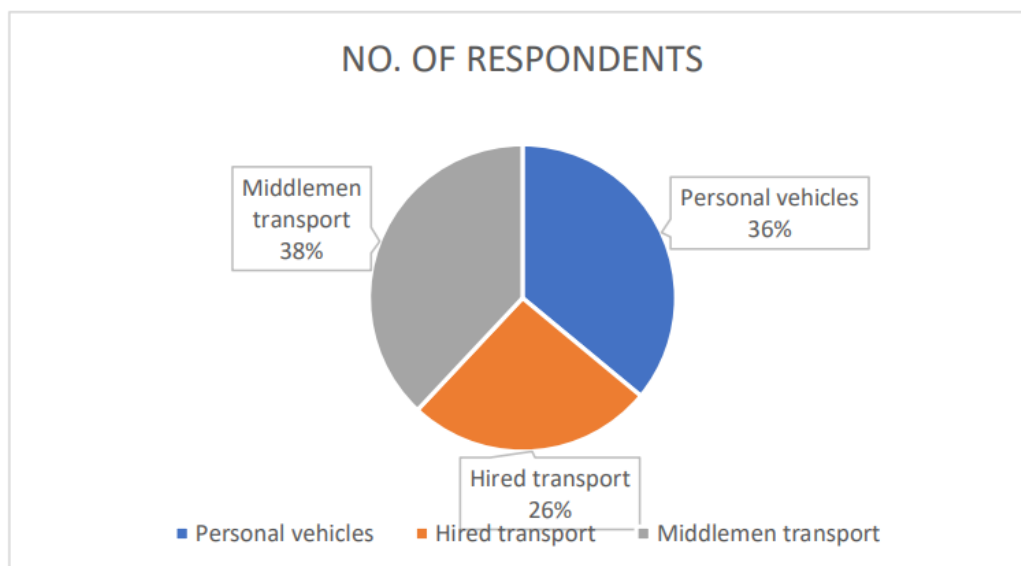
7. How do you transport your mangoes to the market?

Particular	No. of respondents	Percentage
Personal vehicles	18	36%
Hired transport	13	26%
Middlemen transport	13	38%
Retail transport	6	12%
Total	50	100%

Source: primary data

Analysis: The table highlights transportation modes among respondents: 18 use personal vehicles, 13 rely on hired transport, and 19 utilize middlemen transport, indicating a preference for middlemen transport services.

Chart Showing



Interpretation: The graph illustrates transportation preferences: 36% of respondents use personal vehicles, 26% rely on hired transport, and 38% depend on middlemen transport, indicating a slight preference for middlemen transport options.

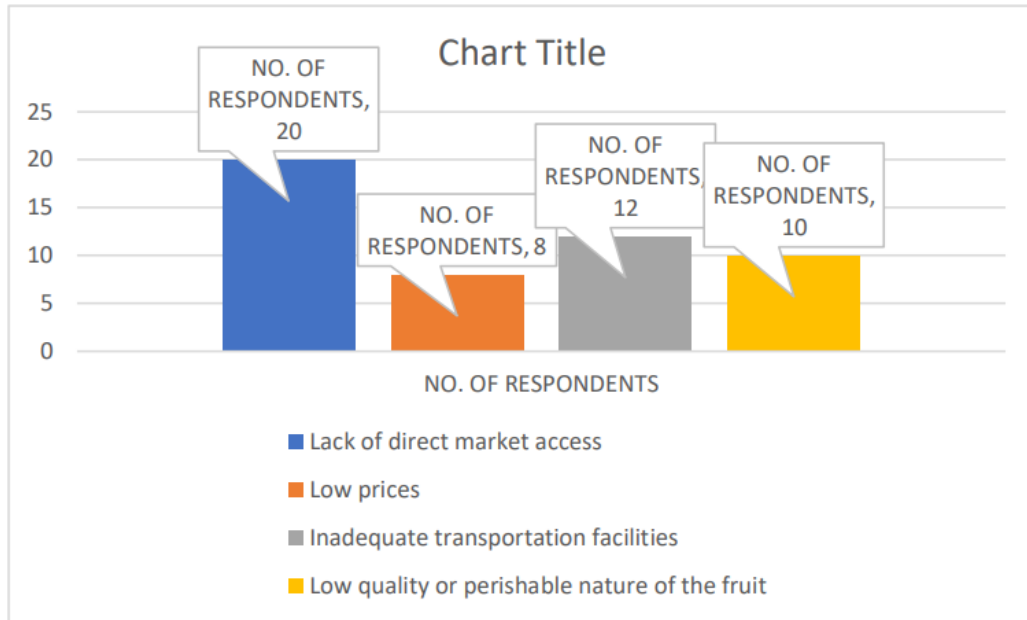
8. What are the main challenges you face in marketing your mangoes? (Select all that apply)

Particular	No. of respondents	Percentage
Lack of direct market access	20	40%
Low prices	8	16%
Inadequate transportation facilities	12	24%
Low quality or perishable nature of the fruit	10	20%
Total	50	100%

Source: primary data

Analysis: The table outlines challenges faced by respondents: 40% cite lack of direct market access, 16% low prices, 24% inadequate transportation, and 20% perishable fruit quality, highlighting diverse operational issues.

Chart showing



Interpretation: The graph highlights respondents' challenges: 40% face lack of direct market access, 16% struggle with low prices, 24% report inadequate transportation, and 20% cite perishable fruit quality, reflecting diverse issues.

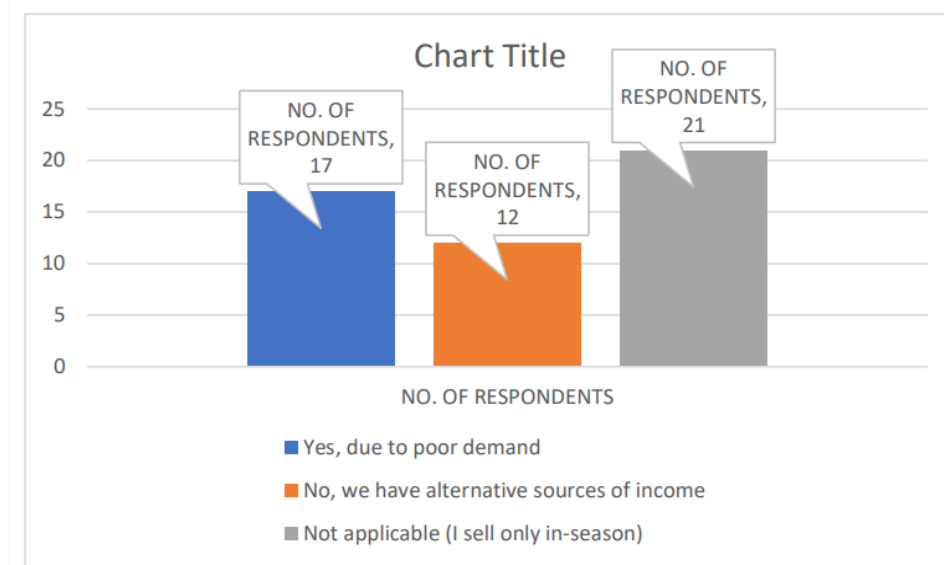
9. Do you face issues with marketing in the off-season?

Particular	No. of respondents	Percentage
Yes, due to poor demand	17	34%
No, we have alternative sources of income	12	24%
Not applicable (I sell only in-season)	15	42%
Not applicable (I sell in all times)	6	12%
Total	50	100%

Source: primary data

Analysis: The table reveals seasonal income challenges: 17 respondents (34%) report poor demand, 12 (24%) have alternative income sources, and 21 (42%) sell only in-season, indicating varied coping strategies.

Chart showing



Interpretation: The graph highlights seasonal income dynamics: 34% face poor demand, 24% rely on alternative income sources, and 42% sell only in-season, indicating diverse approaches to managing income variability.

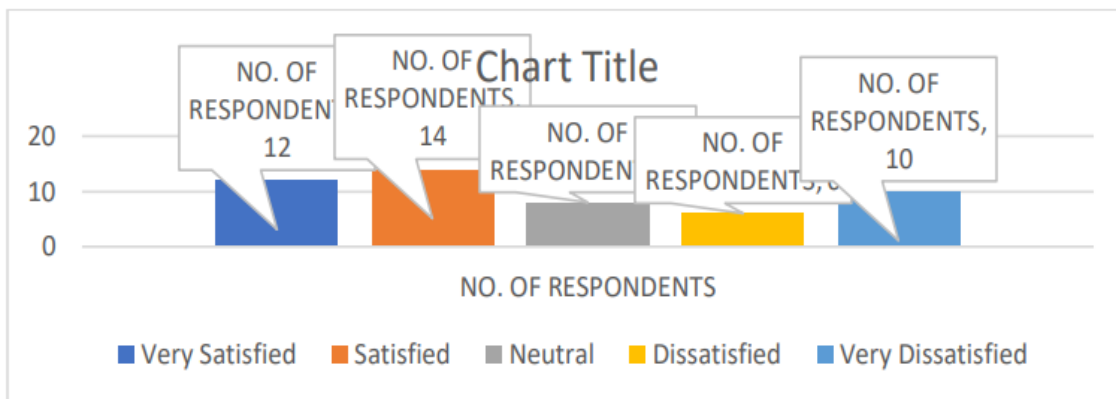
10. How satisfied are you with the prices you receive for your mangoes in the market?

Particular	No. of respondents	Percentage
Very Satisfied	12	24%
Satisfied	14	28%
Neutral	8	16%
Dissatisfied	6	12%
Very Dissatisfied	10	20%
Total	50	100%

Source: primary data

Analysis: The above table indicates that the majority of respondents are either satisfied (14) or very satisfied (12), while a significant portion expresses dissatisfaction, with 10 being very dissatisfied and 6 dissatisfied.

Chart showing



Interpretation: The above graph reveals that 52% of respondents are satisfied or very satisfied, while 32% express dissatisfaction. A notable 16% remain neutral, highlighting diverse opinions among respondents.

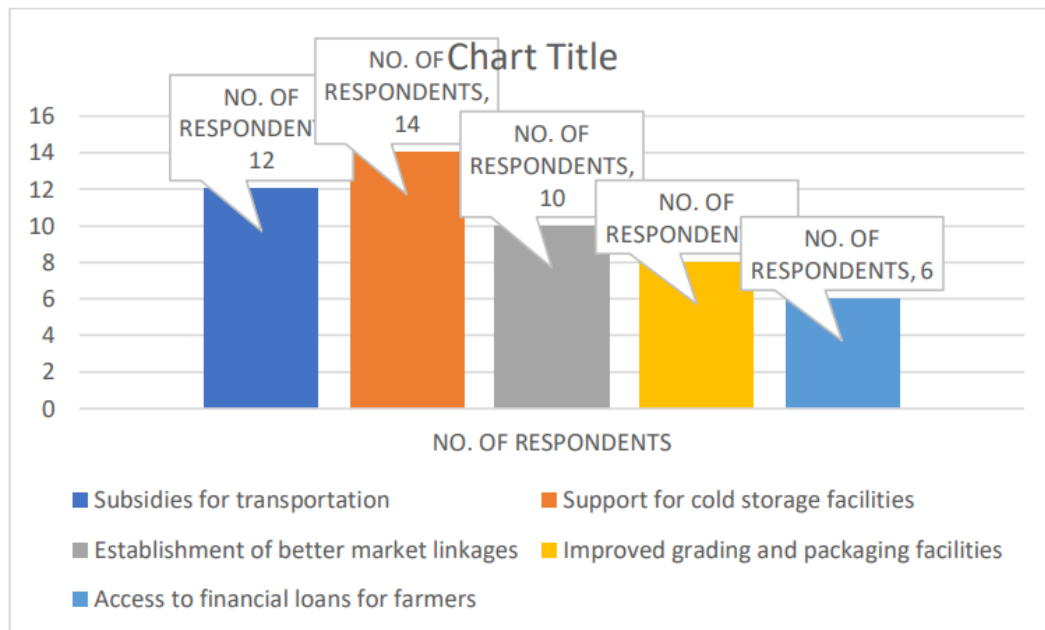
11. What kind of government assistance do you think would help improve mango marketing?

Particular	No. of respondents	Percentage
Subsidies for transportation	12	24%
Support for cold storage facilities	14	28%
Establishment of better market linkages	10	20%
Improved grading and packaging facilities	8	16%
Access to financial loans for farmers	6	12%
Total	50	100%

Source: primary data

Analysis: The above table shows that support for cold storage facilities (14) and subsidies for transportation (12) are prioritized by respondents, while access to financial loans (6) is the least favored option.

Chart showing



Interpretation: The above graph indicates that support for cold storage facilities (28%) and subsidies for transportation (24%) are the most preferred, while access to financial loans (12%) is the least prioritized.

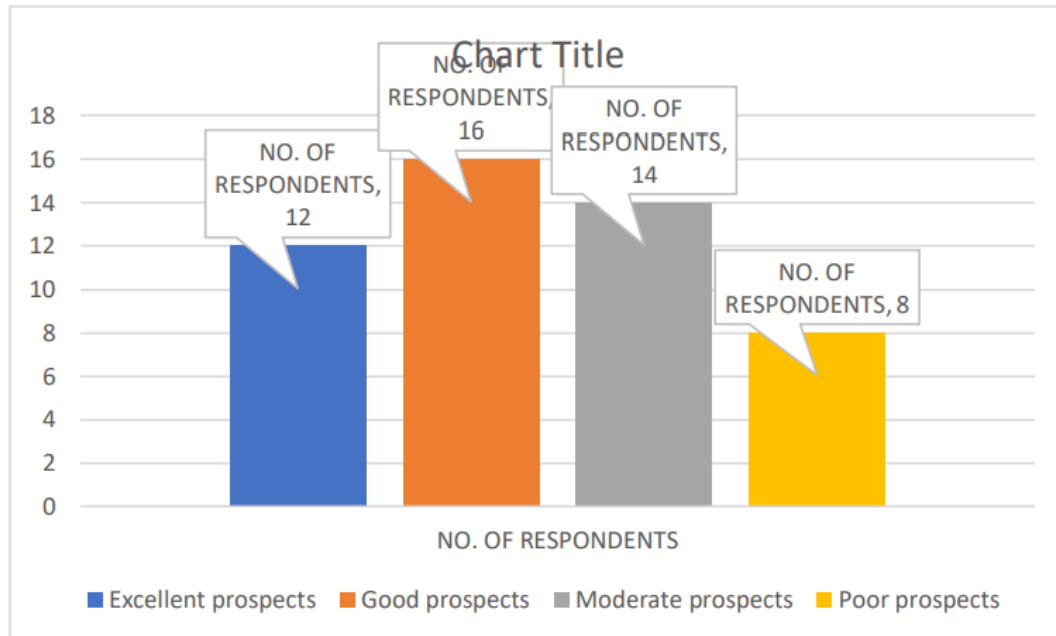
12. What do you think are the prospects for mango marketing in Krishnagiri?

Particular	No. of respondents	Percentage
Excellent prospects	12	24%
Good prospects	16	32%
Moderate prospects	14	28%
Poor prospects	8	16%
Total	50	100%

Source: primary data

Analysis: The above table shows that most respondents believe there are good (16) or excellent (12) prospects, while a smaller group views the prospects as moderate (14) or poor (8), indicating optimism overall.

Chart showing



Interpretation: The above graph shows that 56% of respondents view prospects positively, with 32% believing in good prospects and 24% in excellent ones. Only 16% perceive poor prospects, indicating general optimism.

TOTAL	1	2	3	4	5	6	7	8	9	10	11	12	600	T^2
A	10	12	8	9	7	10	18	20	17	12	12	12	147	21609
B	15	13	12	11	15	20	13	8	12	14	14	16	163	26569
C	10	12	14	16	13	14	13	12	15	13	13	14	159	25281
D	15	13	16	14	15	6	6	10	6	11	11	8	131	17161
TOTAL													600	

Calculation of ANOVA table

$$\sum \sum X_{ij}^2 - CF$$

$$= 90620 - 7500$$

$$TSS = 83120$$

$$CF = \frac{T^2}{N} = \frac{600^2}{48} = 7500$$

When we apply the satisfied values of the responses & applying ANOVA test we get the following results

CF- Correction Factor

TSS- Total Sum of The Squares = T^2 - CF

SST-Sum of the Squares between variables

SSE-TSS

MST- Mean square of total

MSE- Mean square errors

Setting hypothesis

Ho: There is no significance difference between variables

$T_2=90620$

$CF=7500$ ($CF=T_2/N$)

$TSS=T_2-CF$

$= 63120$

$SST=51.66$

$SSE=TSS-SST$

$= 83120-51.66$

$= 83068.34$

$MST=27689.44$

$MSE =1887.9168$

$F_{ratio} =MST/MSE$

$= 14.66$

$F_{3,44}$ from F- distribution table 2.84

$F_{ratio}>F_{table}$

Hypothesis rejected

There is a significance difference between variables

Suggestions

- Establish modern cold storage and packaging units to prevent post-harvest losses and ensure better shelf-life, especially for long-distance transport.
- Conduct training programs for farmers on post-harvest management techniques such as proper harvesting methods, handling, grading, and packaging to maintain the quality of mangoes.
- Facilitate the formation of FPOs to help farmers directly access markets, cutting out middlemen and improving profitability.
- Develop digital platforms and e-commerce solutions where local farmers can directly sell their produce to national or international consumers. This would expand the reach of mangoes from Krishnagiri to global markets.
- The development of a robust cold chain infrastructure will be critical for the transport of mangoes, especially when exporting to distant markets.
- Invest in road infrastructure and transport facilities for quicker and more cost-efficient delivery of mangoes to both domestic and international markets.
- Research and promote growing exotic mango varieties in the region that cater to niche markets. For example, expanding production of specific varieties like Alphonso or Kesar could appeal to premium markets.

- Promote value-added mango products such as mango juice, pulp, chutney, and dried mango to help farmers create new revenue streams and reduce reliance on fresh mango sales alone.
- Implement a system that offers real-time information on mango prices, demand trends, and market conditions. This would help farmers make informed decisions about when and where to sell their produce.
- Establish better linkages to wholesale markets both within the state and in neighboring states, ensuring that farmers get the best possible prices for their mangoes.
- Encourage the government to provide financial support to farmers in the form of subsidies for infrastructure development or low-interest loans to invest in improved farming techniques.
- Support and fund research on mango cultivation methods, pest management, and improved varieties. Local agricultural universities and research bodies should collaborate on this front.

VIII. CONCLUSIONS

The mango industry in Krishnagiri District holds significant potential due to the region's favorable climatic conditions, rich soil, and established history of mango production. However, various challenges such as poor post-harvest management, limited market access, underdeveloped infrastructure, and climatic uncertainties affect the overall growth and profitability of mango marketing in the region.

By focusing on improving post-harvest handling, strengthening market linkages, upgrading infrastructure, and introducing value-added products, Krishnagiri can significantly enhance the marketing of mangoes. The district's mango farmers could benefit from financial support, training programs, and access to global markets, enabling them to increase their income and expand their business.

REFERENCES

1. Surveys or interviews conducted with local farmers, traders, and stakeholders in Krishnagiri about mango marketing practices and challenges can provide first-hand data.
2. *Agriculture Department of Tamil Nadu* reports: These documents often provide valuable insights into the state of mango cultivation and marketing in specific regions like Krishnagiri.
3. *Krishnagiri District Administration Reports*: Local government reports on agriculture, mango production, and marketing in Krishnagiri can be valuable for understanding both the problems and opportunities in the area.
4. *Agricultural Marketing in India* by S. S. Acharya and N. L. Agarwal: This book offers a comprehensive understanding of agricultural marketing in India, including issues faced by farmers in regions like Krishnagiri.
5. *Agricultural Marketing and Trade* by M. L. Jhingran: This could be helpful for understanding the broader framework of agricultural marketing systems, which will give insights into mango marketing practices.
6. Academic theses or dissertations from universities like *Tamil Nadu Agricultural University* or *University of Agricultural Sciences (UAS)*, where students often explore region-specific problems in agricultural marketing.



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