# A STUDY ON MARKETING SYSTEMS OF MANGO IN KRISHNA DISTRICT, ANDHRA PRADESH

काशी हिन्दू विश्वविद्यालय BANARAS HINDU UNIVERSITY

**THESIS**

SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF

**Master of Science (Agriculture)**

**in**

**Agricultural Economics**


**Supervisor**

*Dr. P. K, Singh*

**Submitted by**

*B. Pavani Kalyani*

**DEPARTMENT OF AGRICULTURAL ECONOMICS**

**INSTITUTE OF AGRICULTURAL SCIENCES**

**BANARAS HINDU UNIVERSITY**

**VARANASI- 221005**

**INDIA**



**ID. No. 19412AGE018** **2021** **Enrolment No. 417388**

## *Dedicated to*

*My Beloved Parents*
*who sacrificed their today*
*for my tomorrow*

काशी हिन्दू विश्वविद्यालय BANARAS HINDU UNIVERSITY

कृषि विज्ञान संस्थान INSTITUTE OF AGRICULTURAL SCIENCES

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## CERTIFICATE

**To**
**The Registrar (Academic)**
**Banaras Hindu University**
**Varanasi – 221005 (INDIA).**

**Through:** **The Head,** Department of Agricultural Economics
Institute of Agricultural Sciences, B.H.U., Varanasi.

Dear Sir,

I have great pleasure in forwarding the thesis entitled **"A Study on Marketing Systems of Mango in Krishna District, Andhra Pradesh"** submitted by ***Ms. B. Pavani Kalyani*****, ID. No. 19412AGE018,** in partial fulfillment of the requirements for the degree of **Master of Science** in **Agricultural Economics**, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi and placing on record that she has completed the requisite residential requirements as contained in the statutes of the university.

I certify that the entire scheme of investigation presented herein was planned and carried out solely by the candidate under my guidance and supervision. The data presented in the thesis, to the best of my knowledge and belief, are genuine and original.

Thanking you.

Yours faithfully,

**Forwarded**

**(P. K. Singh)**
Supervisor

**Head**

# A Study on Marketing Systems of Mango in Krishna District, Andhra Pradesh


**By**

*B. Pavani Kalyani*


**Thesis submitted in partial fulfillment of the requirments for the degree**

**Masters of Science (Agriculture)**

**in**

**Agricultural Economics**


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**BANARAS HINDU UNIVERSITY**
**VARANASI - 221005**
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**ID. No. 19412AGE018** **2021** **Enrolment No.** 417388


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***Great thanks to all***

***Date:***
***Place:*** ***(B. Pavani Kalyani)***

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# Chapter I INTRODUCTION

Mango (*Mangifera indica* Linn) is known as the "King of Fruits." Mango is the most widely grown and produced crop in India, accounting for nearly half of total global mango production. Andhra Pradesh, Uttar Pradesh, Karnataka, Bihar, Gujarat, and Maharashtra are the top mango-producing states in India. Mangoes were shipped to England.

Mango is grown in the country on an area of 4,369 thousand ha, yielding 10.99 million tonnes. It accounts for 22.1% of total land area (5.57 million ha) and 22.9 percent of total fruit production (47.94 million tonnes) in the country. Though Uttar Pradesh has the most mango land at 0.25 million hectares, Andhra Pradesh has the highest productivity of about 12 tonnes per hectare. Andhra Pradesh produces 3.07 million tonnes of mango, while Uttar Pradesh, Bihar, and Karnataka produce 2.39, 1.79, and 0.92 million tonnes of mango, respectively.

Today, India is the world's largest mango producer, growing nearly 1000 varieties and accounting for more than 52.63 percent of global mango production of approximately 19 million tonnes. As a result, mango is the most economically significant fruit.

Mango covers an area of 4,369 thousand ha worldwide, with India leading the way among mango-growing countries in terms of global mango production. China and Thailand are the second and third largest mango producing countries, with total outputs of 3,676 and 1,800 tonnes, respectively.

Brazil, Egypt, Pakistan, Mexico, and China have higher productivity per acre than India, which has an average productivity of 6.2 tonnes per acre.

Mangoes account for roughly half of all tropical fruits produced globally. The Food and Agriculture Organization of the United Nations. In 2007 estimates global production at more than 33,000,000 tonnes. The top ten countries' combined output accounts for roughly 80% of total output.

In southern India, Alphonso, Benishaan or Benisha (Banganapalli in Telugu and Tamil), and Kesar mango varieties are considered among the best mangoes, while Dussehri and Langda varieties are the most popular. Mango varieties typically thrive in areas with 75-375cm/year rainfall and a dry season. Mango cultivation requires loamy, alluvial, well-drained, aerated, and deep soils rich in organic matter with a pH range of 5.5 to 7.5.

**Importance in Economic Terms**

The fruit is very popular among the general public because of its high nutritive value, variety, and deliciousness taste and delectable flavour It contains a lot of vitamin A and C. The fruit is eaten either raw or ripe. A good mango variety contains 20% of total soluble sugars. Ripe desert fruit has an acid content ranging from 0.2 to 0.5 percent and a protein content of about 1%.

The wood is used for construction, and the dried twigs are used for religious purposes.

Its starch is used in the food industry. Mango has medicinal properties as well. The ripe fruit is fattening, diuretic, and laxative. It aids in increasing digestive capacity.

**Marketing**

During the summer months of April to July, mango takes over India's markets, streets, roadsides, and homes. After harvest, the fruit must pass through several agencies before reaching the consumer. Because producers do not typically engage in wholesale distribution, it is common practice to lease out orchards to pre-harvest contractors, who are responsible for crop monitoring and warding until harvest. Maturity and then dispose of the produce as they see fit.

The income generated by mango orchards varies greatly. Contractors are typically funded by commission agents or wholesalers.

There are separate commission agents for imported fruits and local produce in major cities such as Mumbai, Kolkata, Lucknow, and Delhi. A study conducted in Delhi's Azadpur Mandi revealed that growers made very little profit, especially when fixed costs were considered. The commission agents charged 8% on the transactions. After accounting for mango losses in transit, which range from 8 to 12.5 percent, wholesalers and retailers made a profit of around 81 percent and 45 percent on their investment, respectively.

Maximum losses were observed during the months of July and August, when both temperature and humidity played a role. When compared to the sale of fruit, the profit margins for various mango processed products ranged from 23 percent to 137 percent. The study clearly demonstrates how various intermediaries exploit the mango market at the expense of the growers. As a result, corrective measures such as cooperative marketing and mango processing are urgently needed. When compared to the sale of fruit, the profit margins for various mango processed products ranged from 23 percent to 137 percent. The study clearly demonstrates how various intermediaries exploit the mango market at the expense of the growers. (Srikanth.H.S.2011 Marketing Channels of Mango :A Study in Srinivaspura Taluk of Kolar Distrcit 32-34).

As a result, corrective measures such as cooperative marketing and mango processing are urgently needed. However, there are only a few co-operative societies in mango-producing areas. There is no such society in Uttar Pradesh, the state that produces the most mangoes. In Andhra Pradesh, Gujarat, and Maharashtra, there are a few societies that buy farmers' produce and transport it to distant markets for commission agents. Mango marketing in Gujarat's Bulsar district is primarily done by cooperatives societies of which all growers and commission agents are a part of these societies advance approximately 5% of the cost to the grower, with the balance due immediately after his produce is sold. Mango sale societies are also active in Vengurla, Malva, and Deogarh in Maharashtra's Ratnagiri district.

They collect their members' produce and send it to commission agents for sale of Mumbai.

Growers, contractors, commission agents and wholesalers, stallholders, shopkeepers, and hawkers all play a role in distribution to varying degrees.

The formation of fruit grower's co-operative sale societies should be encouraged in order to ensure better returns for growers and fruits at lower prices for consumers. Farmers grow agricultural products in remote villages, while consumers live in semi-urban and urban areas. This produce must be delivered to consumers for final use and consumption.

Depending on the type of produce or commodity, there are various distribution channels. Each commodity group has a unique channel.

Mangoes grown in various parts of the country are sold in various major cities. India's major wholesale mango markets are in Kolkata, Delhi, Mumbai, Chennai, Ahmedabad, Pune, and Nagpur.

Mangoes for these large markets are typically collected at central locations throughout all mango-growing areas. Marketing centres in Uttar Pradesh include Lucknow and Varanasi; marketing centres in Gujarat include the talukas of Gandevi, Gadat, and Amalsar in the Bulsar district; and marketing centres in Maharashtra include Ratnagiri and Vengurla. Mango prices vary greatly from year to year, depending on total production and a variety of other factors such as current prices, demand, transportation, and marketing facilities.

Mango wholesale prices also vary significantly, depending on supply and demand for specific varieties, availability periods, weather conditions, transportation facilities, variety, quality, and so on.

Daily arrivals also have a direct impact on prices. As a result, price fluctuations are consistently irregular in pattern. When the number of visitors drops later in the season, they tend to rebound and reach a high level before the season ends. Mango Arrival Patterns in the Major Mango Producing States Mango availability varies from state to state.

In Andhra Pradesh, mango season runs from mid-February to mid-July, with popular cultivars including Banganpalli, Totapuri, Suvarnrekha, and Neelum; in Gujarat, mango season runs from April to July, with popular cultivars including Alphonso, Kesar, and Rajapuri; and in Karnataka, mango season runs from April to July with popular cultivars including Alphonso, Kesar, and Rajapuri in Karnataka. In Maharashtra, mango season is between March and July, and significant cultivars are Alphonso, Kesar, Pairi, and in Uttar Pradesh, mango season is between May and August, and important cultivars are Bombay Green, Dussehri, Langra, Chausa, and Amrapali. States that produce the most mangoes

Chittoor, Warangal, Prakasam, and Kurnool are major market catchment areas in Andhra Pradesh; Ratnagiri, Raigarh, and Sindhudurg are major market catchment areas in Maharashtra; Surat, Valsad, and Navsari are major market catchment areas in Gujarat; Lucknow, Saharanpur, Muzaffarnagar, Meerut and Varanasi are major market catchment areas in uttarpradesh Teni, Dharmapuri, Salem, and Tirunelveli are cities in Tamil Nadu.

**Exports of Mangoes**

Due to pesticide residues and the prevalence of fruit flies, Indian mangoes were formerly prohibited from being exported to major importing countries such as the United States and Japan. Fresh mango exports from India are mostly aimed at NRIs (non-resident Indians) in other nations. Due to the economic slump, India's efforts to build a market in the United States following the lifting of the ban on mangoes have taken a short-term damage.

The Bhabha Atomic Research Centre's (BARC) irradiation plant in Lasalgaon is the country's sole such facility for mango exports.

This facility exported roughly 350 tonnes of mangoes to the United States in 2008. Indian mangoes are mostly consumed by non-resident Indians (NRIs) in the United States. Local Americans, on the other hand, are working hard to develop a taste for the king of Indian fruits. The Alphonso mango is the most popular in the United States. However, this is a sensitive fruit with spongy tissue issues. The high

temperatures in Maharashtra, a key mango exporting state, resulted in a production loss throughout the winter season, with significant flower and fruit drop.

In addition, the APEDA has released new instructions for mango exporters for the current season in order to reduce the number of fruit consignments rejected by the US on quality grounds by taking sufficient precautions to ensure that mangoes sent for irradiation are free of infection or injury.

Last year, the United States made irradiation essential in order to accept Indian fruit, assuring that the quality of the fruit is of a high standard and that there are no complaints of rejections.

Mango is only second to pineapple in terms of quantity and value among tropical fruits traded internationally.

Mangoes are consumed all year in Southeast Asia. India, Pakistan, Indonesia, Thailand, Malaysia, the Philippines, Australia, and, most recently, South Africa provide the majority of their supplies.

Each exporting country has its own own kinds, which vary in shape, colour, and flavour. Fruit from Indonesia and Thailand has very inexpensive prices, while Indian fruit has higher prices. In the United States, prices fluctuate depending on the season, with higher prices in February and March, when mango availability is at its lowest.

The majority of international trade in fresh mangoes occurs over short distances. The majority of North America's imports come from Mexico, Haiti, and Brazil. The main suppliers to the West Asian market are India and Pakistan. The Philippines and Thailand provide the majority of Southeast Asia's commodities. Mangoes are sourced from South America and Asia by European Union importers.

Although Asia accounts for 75 percent of world production, its dominance does not translate into international trade. Annual average price range (2003-08) in European Union is 1.23 to 2.13 USD/kg and 55.7 to 95.9 INR/kg and Australian USD/kg 2.02.. ( Srikanth.H.S.2011 Marketing Channels of Mango :A Study in Srinivaspura Taluk of Kolar Distrcit 32-34)

**The Study's Importance**

The price of mangoes fluctuates from season to season. The causes of these fluctuations can be traced back to a variety of circumstances. The purpose of this study is to determine the causes of changes in arrivals at the APMC yard. The mangos are sold by the farmers through various routes and eventually reach the final consumers. The price realised, the trade practises followed for the purpose of mango buy, and there is a need to research the marketing channels used by farmers to sell the mango in order to shed light on which channel to use.

Keeping in the view the aspects the study entitled **'**A STUDY ON MARKETING SYSTEMS OF MANGO IN KRISHNA DISTRICT, ANDHRA PRADESH**'** was conducted with the following objectives

1. To investigate the respondent's socio-economic profile.
2. To describe the various marketing channels available to mango producers in the study area.
3. To identify the reasons for Pre harvest contracting, APMC'S sale and using specific marketing channels in the study area.
4. To estimate the cost and efficiency of mango marketing in the study area.
5. To identify the constraints of mango marketing in the study area.

**Limitations of the Study**

Due to the present COVID situation there was time limitation imposed by the government of Andhra Pradesh for selling the mango produce so that respondents didn't responded well when questions were asked regarding sufficient data collection. Much effort was made to gather data but because of present covid situation it couldn't be successfully collected.

# Chapter II REVIEW OF LITERATURE

A survey of previous research aids in the identification of key conceptual and methodological difficulties for the thesis. This enables researchers to select the best tools for their research, data gathering, analysis, and accurate interpretation. In this chapter, an attempt was made to look at previous research projects within the following headings.

1. To investigate the respondent's socio-economic profile of the respondents.

2. To describe the various marketing channels available to mango producers in the study area.

3. To identify the reasons for pre harvest contracting, APMC'S sale and using specific marketing channels in the study area.

4. To estimate the cost and efficiency of mango marketing in the study region.

5. To identify the constraints of mango marketing in the study area.

## 2.1 To investigate the respondents socio economic profile

McLeod *et al*. (2009) he conducted a study in which poultry value chain mapping was utilised to build HPAI control methods. They discovered that continuous HPAI outbreaks in Southeast Asia have wreaked havoc on the region's chicken sector and raised severe public health concerns worldwide. The entire poultry value chain is dangerous to both animals and humans.

The United Nations Food and Agriculture Organization launched a series of value chain studies in Asia and Africa in 2007 to gain a better understanding of trade flows, disease transmission processes, and probable interfering points in various value chains.

Norton and Fearne (2009) examined the concepts that underpin sustainable value stream mapping or value chain analysis (SVCM), as well as how the approach

might be implemented, emphasising the necessity of partnerships and knowledge transfers between food merchants and manufacturers. Waste is both physical by-products and wasteful resource utilisation in any industry. Identifying waste reduction methods necessitates a review of present activities and waste generated. Value stream mapping (VSM) is a diagnostic methodology that was developed in lean manufacturing to eliminate production lag time and unproductive operations. SVCM is a recently designed framework that incorporates, in addition to organisational processes, the VSM technique. stages, a collection of environmental measurements used to establish the value stream of a product Order volatility and predictability make it difficult for manufacturers to anticipate material requirements and plan production, limiting efficiency and driving overproduction to maintain availability, characteristics that increase both physical and operational waste, according to case study findings.

Panda and Sreekumar (2012) investigated how profitability affects the selection of appropriate marketing channels in agribusiness. This article investigates the elements that influence vegetable producers' marketing decisions. Farmers of vegetables often have three alternatives for selling their produce In the Nepalese district of Palpa, Singh et al. (2013) attempted to examine the vegetable value chain. Primary data was collected from 75 vegetable growers, 17 input suppliers, 38 traders, and 30 Palpa customers. There were seven different vegetable marketing routes in the district. products: formal, non-market, and market participation. Farmers' decisions to migrate from non-market to informal or formal market participation are influenced by four major characteristics, according to the study. In addition, the article analyses and evaluates four micro-level marketing channels.

Channel VI for tomatoes, channel III for greens, and channel VII for cauliflower have been found to be the most effective marketing channels. With low weighing charges, the local marketing planning committee (MPC) and district apex authorities promoted the interaction between retailers and farmers. Enhancing production infrastructure, marketing system management, expanding networking, and communication between service users and service providers can all help to alleviate

constraints. There are some chances to improve the marketing system that a policymaker or planner might seize in order to establish a vegetable programme strategy.

Chagomoka *et al.*, (2014) he on an intersectional survey of 240 respondents in Malawi and Mozambique employed participatory assessment and market research to identify possible markets and target crops, as well as processes within the value chain, such as market preferences and farmer-buyer relationships mode. The value chain's links were found to be poor, owing to spot market transactions, with the exception of retailers and supermarkets who rely on marketing partnerships.

Mango *et al.,* (2015) As part of his worldwide conservation agriculture study on maize-dependent agricultural systems in Sub-Saharan Africa, examined the effective tomato value chain in Malawi and Mozambique using market survey data given by the International Centre for Tropical Agriculture. Malawi has a little higher competitive advantage in tomato production than Mozambique, according to the findings. The research suggests political implications for increasing tomato productivity and competitiveness, as well as assuring the overall productivity of small-scale corn systems in both countries.

## 2.2 To describe the various marketing channels available to mango producers in the study area.

Panda and Sreekumar (2012) he studied the choosing of appropriate marketing channels in agribusiness is important to profitability, according to research. This article investigates the elements that influence vegetable producers' marketing decisions. Farmers of vegetables often have three alternatives for selling their products: formal, non-market, and market participation. Farmers' decisions to migrate from non-market to informal or formal market participation are influenced by four major characteristics, according to the study. In addition, the article analyses and evaluates four micro-level marketing channels.

Chagomoka *et al.,* (2014) he identified possible markets and target crops, as well as processes within the value chain, such as market choices and farmer-buyer

linkages mode, using participatory assessment and market research on an intersectional survey of 240 respondents in Malawi and Mozambique. The value chain's links were found to be poor, owing to spot market transactions, with the exception of retailers and supermarkets who rely on marketing partnerships.

### 2.3 To identify Reasons for using specific marketing channel in the study area

Singh and Kahlon (1968) In his research on grape marketing in Punjab, Singh and Kahlon (1968) found that commission agents and retailers were major outlets for selling grapes. Commission agents and retailers sold about 41 and 40 percent of the fruit, respectively. According to Singh and Kahlon (1968), the most common method of selling grapes in Punjab was through merchants (41.05%), followed by commission agents (40.60%), wholesalers (11.26%), and pre-harvest contractors (11.26%). (4.53 per cent).

George and Single (1969) In his study of sweet orange marketing in Punjab discovered that 77.39 percent of growers sold their produce to pre-harvest contractors, 20.38 percent to distant markets, and the rest to local wholesalers and merchants, as well as directly to consumers.

Kochhar and Thakur (1971) According to his survey, commission agents were the most popular method of selling apples in Himachal Pradesh, accounting for 85.63 percent of the marketable surplus. Pre-harvest contractors were the next most major mode of sale, accounting for around 14.67 percent of total marketable excess.

Patil and Muralidhran (1975) In his study titled Marketing Margins and Price Spread in the Marketing of Alphonso Mangoes in Rathanagiri District, researchers discovered that selling directly to customers was the most profitable, while selling through pre-harvest contractors was the least profitable.

Dhar *et al*. (1976) According to his study, the most prevalent method of selling apples was through a per-harvest contract system among small and medium orchardists, while sales through a commission agency were more popular among large orchards.

*Subramanyam (1986)* In his case study titled Marketing of fruits: self marketing vs. contract sale — case study of mango marketing in Madurai dist. (Tamil Nadu), Subramanyam (1986) discovered that the gross returns realised through self-marketing were more than two and a half times those realised through pre-harvest contractor sales.

## 2.4 To determine cost and efficiency of mango marketing in research region

Subramanian and Mruthyunjaya (1979) In his survey, tomato marketing costs account for 36% of the total cost.

Marketing costs range from Rs. 1926 per cubicle in Kharif to Rs. 1481 per rabi quintal. The Commission fee was large (37.49 percent), although transportation costs were high during the Rabi season (30.38 percent).

Basavaraji (1980) In his study transportation and commissions accounted for 74 percent of total marketing costs for both hybrid and local tomatoes, while total marketing expenses per hectare for the Rs 6894 Hybrid tomato were Rs 29087, accounting for 44 percent of the total cost of the local tomatoes.

Elenchezhian and Kombairaju (2004) He examined that due to the nature of the crop, a lack of suitable storage and processing facilities, a lack of knowledge, or the existence of numerous middlemen in the vegetable business, there was a wide range of changing prices harming farmers and consumers, according to the study.

The Shepherd Scale is used to estimate the relative influence of various advertising cost components in the Advertising Performance and Marketing Cost analysis. The cost of production and marketing profit for consumer prices were greater, tomato marketing productivity was very low, and Brinjal, small onion, and bhendi were noticed. In terms of quantity and distance from the village to the town, the marketing expenditures for Brinjal and Bhendi were significantly increased. In post-harvest activities, distance and labour expenses have a beneficial impact on tomato marketing costs, whereas marketing costs rise when the quantity of smaller onions sold increases.

Sharma and Dahiy (2013) He studied that through various marketing channels, we looked at the growth and price spread of tomato marketing. The study was conducted in Jaipur's district, with Chomu Tehsil being the most prominent field of selection. A sample of 60 farmers was recruited, probably proportionally to each size group. On consumer rupee, Channel-II had the lowest share (56.79 percent), while Channel-I had the highest (52.5 percent ). Prices were 47.5 percent on Channel-I, 43.21 percent on Channel-II, and 43.65 percent on Channel-III, split throughout numerous marketing channels.

### 2.5 To identify the limitations of mango marketing in study area

Toaha (1974) In his studies many restrictions have been identified as impeding the region's true fruit production and export potential. They looked at patterns in fruit production, consumption, and trading in order to understand the current system of fruit marketing, identify restrictions to fruit marketing systems and boost exports, and offer ways to improve their international competitiveness Producer market data is always skewed and incomplete.

Poor farmers underinvest in agricultural inputs like insecticides and fertilisers, resulting in lower yields and inferior products. Farmers' advance sales are also a source of financial difficulties. Supply drops and price reductions of 25-40% following harvest have been attributed to a lack of storage and transportation capacity. Farmers only get a quarter of the amount paid by clients, while the lion's portion goes to other market traders. Access to financing and market expertise, reduction of production losses, improved market infrastructure, and cheaper access to transportation and packaging material are all needed to minimise consumer middlemen's share.

The fruit industry isn't completely competitive. To stimulate fruit exports, productivity and productivity must be raised. A product-specific market development strategy must be launched with the active participation of the manufacturing and marketing systems.

Issahaku (2012) In his study the issues that different participants in the tomato value chain confront were investigated.

Semi-structured questionnaires were distributed to 64 respondents, including 30 producers, 24 distributors, and 10 wholesalers. Interviews with Northern Star Tomato Company employees were also done (NSTC). The data was collected in Pwalugu, Ghana's Upper East Region, which was the main tomato-growing location in 2011. The tomato chain's key issues were low prices, price volatility, insufficient credit, poor tomato quality, poor storage and warehousing equipment, poor transportation facilities, a dispersed source of supply, excessive interest rates, and a lack of adequate information. While poor tomato quality in Ghana is the most onerous barrier for farmers, it is also their lowest price limit. The NSTC's most serious obstacle in acquiring equipment and raw materials was a lack of finance.

# Chapter III RESEARCH METHODOLOGY

This chapter gives and in outline of research methods that were followed in the study it provides information on the respondents and for the collection of data and analytical tools used to achieve the study's objectives.

1. To investigate the respondent's socio-economic profile of the respondents.

2. To describe the various marketing channels available to mango producers in the study area.

3. To identify the reasons for pre harvest contracting, APMC'S sale and using specific marketing channels in the study area.

4. To estimate the cost and efficiency of mango marketing in the study region.

5. To identify the constraints of mango marketing in the study area.

The current study exercised on Marketing Systems of Mango in Krishna District, Andhra Pradesh.

The special interest of the study was to determine the marketing efficiency and mango farmers' choice of marketing channels and identify the constraints in mango marketing.

The details are discussed under following heads:

1. Selection of the study Area.

2. Sampling Procedure.

3. Nature and Source of data.

4. Analytical tools and techniques.

## 3.1 Selection of Study Area

The study was conducted in the Krishna district of Andhra Pradesh during 2020-21. The Krishna District was purpusively selected for the present study because the district is one of the state's top mango growing district based on area and production.

Nuzvid mandal of Krishna district was purposively selected for present study because it was one of the major mango producing mandal of Krishna district.

The Agricultural Produce Market Committee of Nuzvid Taluk has been chosen for the collection of information about farmers and intermediaries and information was directly collected from mango producing farmers retailers wholesalers around by interviewing systematically.

## 3.2 Sampling Procedure

Descriptive Research Design has been adopted for the study by taking into to the consideration about nature and scope of the study because descriptive research aims to accurately and systematically describe a population situation or phenomenon.

Purposive sampling technique was used to collect the information from respondents and to analyse present study 85 respondents were selected from 6 different villages of nuzvid mandal in Krishna district.

## 3.3 Nature and Source of data

Emphasis was given to collect basic information from various intermediaries of mango marketing channels in the district of krishna.

The data was collected in the month of March-April 2021 period with the reference of previous year 2019-20.

A semi-structured pretested survey was used to gather relevant information from intermediaries based on the memories.

### 3.4 Tools and Techniques

The use and application of quality Tools and techniques within an effective problem solving methodology are essential to understand and facilitate improvement in any process so here the data analysis was conducted using various analytical tools taking into account the objectives of the study.

### 3.5 Marketing Cost

The total cost incurred by the producer seller and the various intermediaries involved in the sale and purchase of the commodity until the commodity reaches the ultimate consumer under this head. ( Acharya and Agarwal, 2006).

$$C = Cf+Cm1+Cm2+Cm3+.....+Cmi$$

Where,

C = Total cost of marketing of the commodity.

Cf = Cost incurred by the producer from the time the product leaves the particular stakeholder and

Cmi = Cost incurred by the $i^{th}$ middlemen in the process of buying and selling the product.

### 3.6 Marketing Margin

According to Acharya and Agarwal the marketing margin is the difference between the $i^{th}$ middleman's receipt (sales price) and total payments( cost +purchase price) the absolute margin of the ith middleman as per the equation below was work out.(Acharya and Agarwal,2006)

$$Ami = PRi-(PPi+Cmi)$$

Where

A*m*i = Absolute margin of the $i^{th}$ middleman

PRi = Total value of receipts per unit (Sale price)

PPi = Purchase value of gooda per unit (Purchase price)

Cmi = Cost incurred in marketing per unit.

### 3.7 Price spread

The price spread for the marketing channels existed in the study area was worked out separately. In general price spread is defined as the difference between the consumers price and the producers tries find equivalent quantity of farm produce.

Price spread using formula is determined

Ps = Absolute margin/consumer price ×100

Where,

Ps = Producers share in consumer rupee

Producer's share in consumer's rupee:

It is the price received by the farmer expressed as a percentage of the retail price. If $P_R$ is the retail price, the producer's share in the consumers rupee may be expressed as follows:

$P_S = (P_F \div P_R) \times 100$

### 3.8 Marketing efficiency

Marketing efficiency is the degree of market performance. It is broad and dynamic term According to Clark marketing efficiency has been defined as the the effectiveness with which a marketing service is performed, the cost at which service is performed and effect of this cost and the method of performing the service on production and consumption.it also indicates about the satisfaction of the consumer at the lowest possible cost must go hand in hand with the maintenance of a high value of farm output (For estimation of marketing efficiency updated approach of Acharya was used).

ME = FP /(MC +MM)

Where

ME = Marketing Efficiency

MC = Total marginal cost

MM = Total Marketing margin.

### 3.9 Garret's Ranking Technique

The method was utilised to rank the constraints of mango marketing channel to discover the most important factors influencing the respondent garrett ranking technique was applied according to this method participants were asked to specify the rank for all factors and the results of such ranking have been converted into score value with the help of following formula.

Percentage score = $100(R_{ij}-0.5)/Nj$

Where

$R_{ij}$ = Rank $i^{th}$ item jth individual

Nj = Number of items ranked by jth individual

The percent place values were translated into garrett values with the aid of garett conversion table. The total scores of each person were then multiplied by garett value for each constraint and opportunity and each score of particular constraint and opportunity were added and the mean score values were determined afterward. The constraint or opportunity with the lowest average value has given the lowest rank and the constraint or opportunity with the highest average value has marked the highest rank.

# Chapter IV DESCRIPTION OF STUDY AREA

This chapter discusses the study area's key agro-economic characteristics, such as location, area, soils, climate, rainfall, land use pattern, demographic characteristics, cropping pattern, and irrigation.

## 4.1 Location and Physiographical Features

Andhra Pradesh is an Indian state on the country's southeast coast. It is the country's fourth-largest state in terms of land and fifth-largest in terms of people. Hyderabad is the country's capital and most populous city. The state has the second-longest coastline in India, with 972 kilometres (604 miles).

Andhra Pradesh is bordered on the north by Maharashtra, Chhattisgarh, and Odisha, on the east by the Bay of Bengal, on the south by Tamil Nadu, and on the west by Karnataka. It is located between 12°41' and 22°North latitude and 77° and 84°40'East longitude.

## 4.2 Area

Andhra Pradesh covers a total area of 275,045 square kilometres. The state of Andhra Pradesh is separated into three distinct regions. The Telangana area occupies the northern half of the plateau, while Rayalaseema occupies the southern half. The Krishna River separates these two regions. Coastal Andhra is the third region. The state has been divided into twenty-three districts for administrative purposes.

## 4.3 Soils

Andhra Pradesh has a diverse range of soils, from low-fertility coastal sands to highly fertile deltaic alluvrums. Over 66 percent of the agricultural area is made up of red soils, which are predominantly found in Rayalaseema areas. The nutrient content of these soils is poor. Red earths, often known as red soils, can be divided into two categories: (a)Dubba soils and (b)Dubba soils (loamy sands to sandy loams) (b) Chalkas (Sandy loam soils) (c) Sandy clay loams (d) Silty loams Sandy loams with

clay subsurface (e) and deep loamy sand (f). Chalkas are usually found in Telangana areas, but red loams mixed with sands can be found in coastal districts' uplands.

Nearly a quarter of the cultivated land is made up of black soils, which are often associated with poor drainage. They're also known as Regurs or Vertisols, and there are two sorts of them. In-situ soils fall into the first group, while transferred soils fall into the second. The first type can be found in coastal districts and sections of Telangana and Rayalaseema, while the second occurs in valley regions of slopes with calcareous concentrations. The in-situ soils are typically coarse in texture and have a high salt content. The Krishna and Godavari deltas have alluvial loamy clay soils that cover 5% of the farmed area. Only 3% of the land is covered by coastal sands, with the remaining 1% covered by laterite soils in several areas of the state.

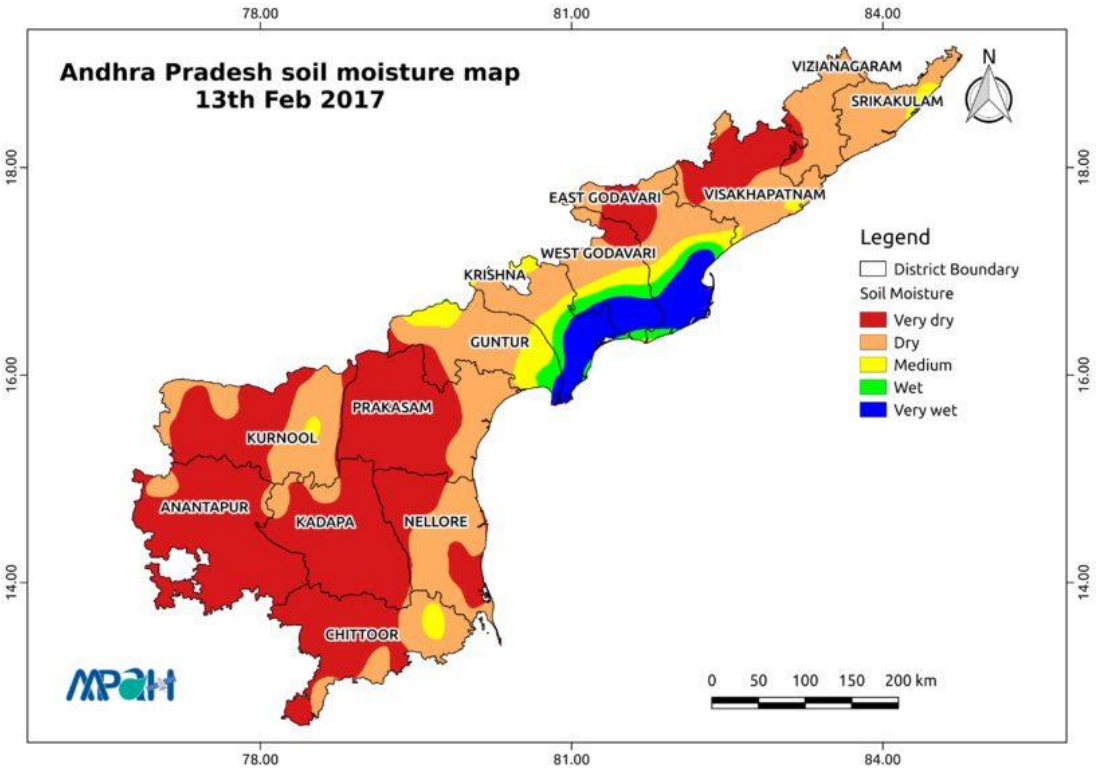


**Figure 1: Andhra Pradesh Soil Moisture Map**

## 4.4 Climate

Andhra Pradesh's climate varies greatly based on the geographical region. The state's climate is heavily influenced by the monsoons.

The summer season runs from March until June. Summer temperatures on the coastal plain are often higher than the rest of the state, with temperatures ranging from 20 to 41 degrees Celsius.

Tropical rains fall in Andhra Pradesh from July through September. During these months, the Southwest Monsoon dumps a lot of rain on the state. The Northeast Monsoon brings around a third of the total rainfall in Andhra Pradesh.

Low-pressure systems and tropical cyclones emerge in the Bay of Bengal between October and November, bringing precipitation to the state's southern and coastal districts along with the Northeast Monsoon. Andhra Pradesh's winter months include November, December, January, and February.

Winters in the state are mild due to the state's extensive coastline belt. Winter temperatures often range from 12 to 30 degrees Celsius.

## 4.5 Rainfall

Andhra Pradesh's agriculture is mostly reliant on rainfall. The seasonal distribution of rainfall has an impact on agricultural production. The South-West and North-East Monsoons are the two major periodic winds in the state, and they are the main producers of rain. The South-West Monsoon (66%) occurs from June to September, whereas the North-East Monsoon (24%) occurs from October to December.

The state's average annual rainfall is 940 mm. The South-West Monsoon (June-September) contributes the most rainfall (66%) followed by the North-East Monsoon (24%). (Oct-Dec). During the winter and summer months, the remaining 10% of the rainfall falls.

The normal rainfall distribution varies by season and Monsoon in the three regions of the state. The South-West Monsoon has the most impact in Telangana (716 m.m. ), followed by Coastal Andhra (620 m.m.) and Rayalaseema (407 m.m. ), while the North-East Monsoon has the most impact in Coastal Andhra (324 m.m. ), Rayalaseema (238 m.m., and Telangana (716 m.m (129 m.m). The normal distribution of rainfall throughout winter and hot weather periods in the three regions shows no notable differences.

## 4.6 Land Utilization

Land use analysis is critical in any area since it provides a comprehensive view of land usage, available fallows, net area sown, and the economics that contribute to the zone's economic growth.

According to the land utilisation statistics for 2009-2010, the Net Area Sown including Fish Culture was 100.85 lakh hectares, accounting for 36.7 percent of the total geographical area of 275.04 lakh hectares in the state, and the area under forest was 62.10 lakh hectares, accounting for 22.6 percent.

## 4.7 Perfomance of Agriculture in Andhra Pradesh

India's agricultural performance has been impressive throughout the years, with food grain production increasing by more than four times following Independence and outpacing population growth. Not only has the country's reliance on imported farm products, particularly food grains, decreased in the decades after the Green Revolution, but exports have also increased.

Drought and famine management capabilities in India have also been praised. Agriculture's expansion has also helped to reduce the frequency of rural poverty (Parthasarathy, 1994). Agriculture's expansion, which became more noticeable after the introduction of Green Revolution technologies, has gradually moved to the less well-endowed rainfed regions and farmers.

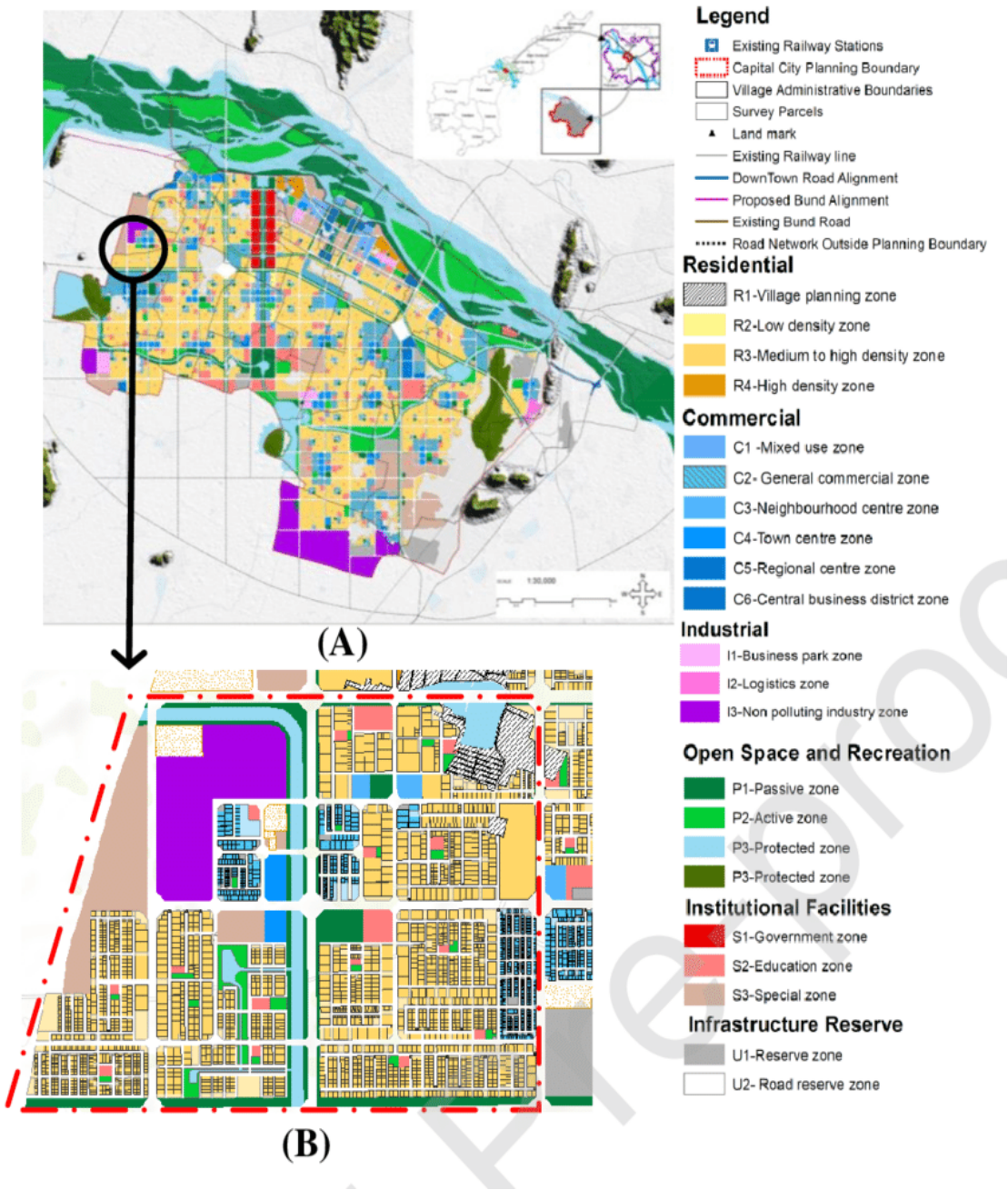


**Figure 2: Land Utilization in Andhra Pradesh**

The current state of agriculture is deserving of renewed attention for two reasons. First, farmers' earnings continue to be negatively impacted by monsoon failures at the local level. At the macro level, the rapidly changing international agricultural trade competitiveness necessitates more efficiency in agriculture.

Agriculture's weak or stagnant growth is seen as a burden on the country's overall economic growth. The agriculture industry is currently predicted to develop at a pace of 4% in order to attain the economy's target growth rate of 9%.

The agriculture industry is currently predicted to develop at a pace of 4% in order to attain the economy's target growth rate of 9%. Andhra Pradesh is an agriculturally important state in India, among the many states. It is the world's third-largest producer of rice and groundnuts, and the second-largest grower of cotton and sunflowers. It has been one of the early adopters of the green revolution's benefits.

Its large dry land tracts, on the other hand, were unable to keep up with the better-endowed regions, resulting in significant inter-regional discrepancies. The State has implemented numerous initiatives from time to time in order to address agricultural difficulties.

Despite this, the state's agriculture sector has been stagnating, necessitating creative policy and technical solutions. Andhra Pradesh also produces a lot of horticulture crops. The state has been selected by the National Horticulture Mission (NHM) as having the potential to increase exports of mango, banana, grapes, papaya, guava, brinjal, and cabbage.

Agriculture diversification has been regarded as one of the viable methods to boost economy and ensure stability.

As a result, this text makes an attempt to critically analyse the performance of agriculture throughout time at the aggregate and district levels in order to develop appropriate policy measures for increasing agricultural production, productivity, and profitability.

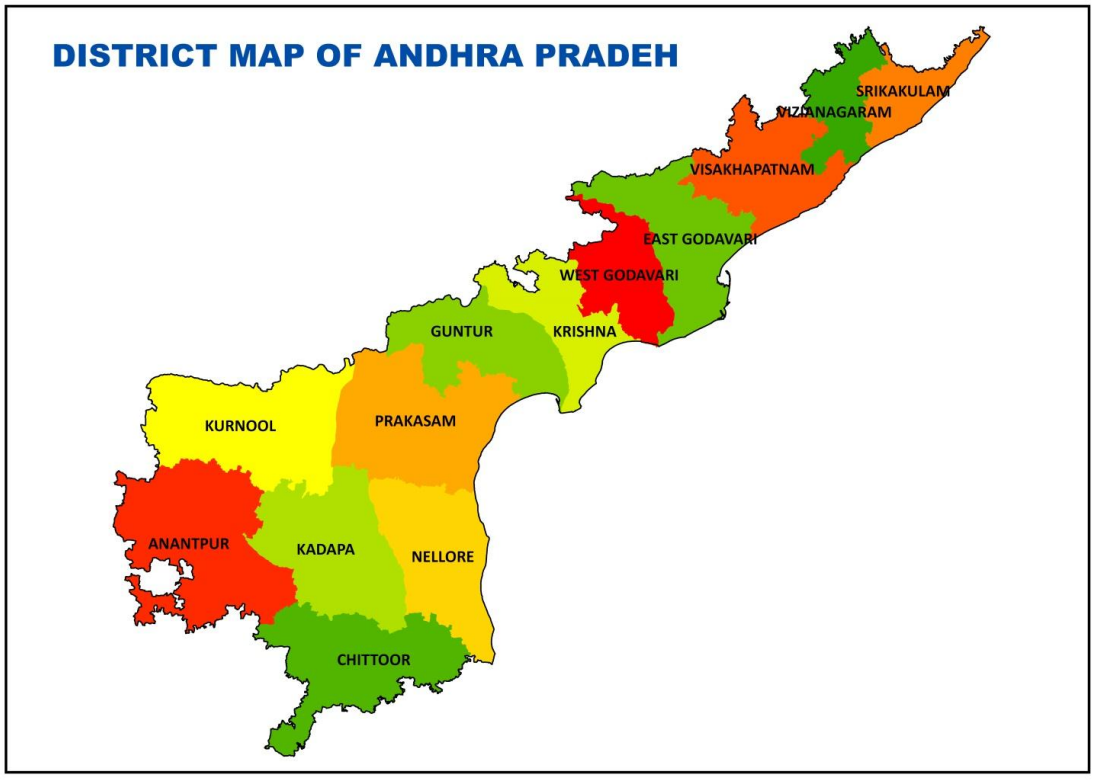


**Figure 3: District Map of Andhra Pradesh**

# Chapter V RESULTS AND DISCUSSION

The data collected on arrivals, marketing aspects such as marketing channels chosen by famers, in the study region has been exposed to various statistical approaches as indicated in the methodology, keeping in mind the specific aims of the study. The findings of this analysis are presented in this chapter under the headings below.

1. To investigate the respondent's socio-economic profile of the respondents.
2. To describe the various marketing channels available to mango producers in the study area.
3. To identify the reasons for pre harvest contracting, APMC'S sale and using specific marketing channels in the study area.
4. To estimate the cost and efficiency of mango marketing in the study region.
5. To identify the constraints of mango marketing in the study area.

## 5.1 Respondent Socio-economic Characteristics (mango growers)

### 5.1.1 Age of the Respondents

It is evident from the table -1, that 13 respondents were under less than 35 years age group and 55 respondents were between 35 to 55 age group and 21 respondents belong to the age group of above 55 years age group.

**Table-1: Age of the respondents**

| S.No. | Age (No. of years) | Number | Percentage |
|---|---|---|---|
| 1 | <35 | 13 | 15.29 |
| 2 | 35-55 | 51 | 60 |
| 3 | >55 | 21 | 24.70 |
| 4 | Total | 85 | 100 |

### 5.1.2 Education level of the respondents

Respondents' literacy levels were divided into five groups. A total of 13(15.29%) respondents were found to be illiterate. Literacy rates in primary, middle, high school, and college education levels were 17(20%),9(10.58%),12(14.11%) and 35 (41.17%) respectively.

**Table-2: Education level of respondents**

| S.No. | Education level | Number | Percentage |
|---|---|---|---|
| 1 | Illiterate | 13 | 15.29 |
| 2 | Primary school(1-4) | 17 | 20 |
| 3 | Middle school(5-7) | 9 | 10.58 |
| 4 | High school(8-10) | 12 | 14.11 |
| 5 | College | 35 | 41.17 |
| 6 | Total | 85 | 100 |

### 5.1.3 The respondents' land holdings

Respondents' land holdings, which show's that 17(20%) of the mango growers are under small farmers category, 23(27.05)% farmers are medium farmers, and 45(52.94)% farmers belong to large category of farmers.

**Table-3: Respondents' land holdings are as follows:**

| S.No. | Size of land holdings (hectare) | Number | Percentage |
|---|---|---|---|
| 1 | Marginal Farmers <1 | 0 | 0 |
| 2 | Small <1-2 | 17 | 20 |
| 3 | Semi –Medium (2-4) | 0 | 0 |
| 4 | Medium 4-10 | 23 | 27.05 |
| 5 | Large >10 | 45 | 52.94 |
| 6 | Total | 85 | 100 |

### 5.1.4 The respondents' family size:

In the study it was found that 21 respondents farmers were having 1-4 family members, i.e. small family, 49 farmers belong to the age group of 5-9 family members, i.e. medium family, and 15 farmers belong to the group of greater than 9 family members, i.e. large family.

**Table-4: Family size of the Respondents**

| S.No. | Category | Number | Percentage |
|---|---|---|---|
| 1 | Small size (1-4) | 21 | 24.70 |
| 2 | Medium(5-9) | 49 | 57.64 |
| 3 | Large(>9) | 15 | 17.64 |
| 4 | Grand total | 85 | 100 |

### 5.1.5 Experience in farming

Years of agricultural experience are a significant factor in determining decision-making skills. 23 mango growers are having experience below 23 years and 51 mango growers were having experience between 23-41 years and 11 mango growers were having experience of above 41 years.

**Table-5: Farming experience of the respondents**

| S.No. | Experience | Number | Percentage |
|---|---|---|---|
| 1 | <23 | 23 | 27.05 |
| 2 | 23-41 | 51 | 60 |
| 3 | >41 | 11 | 12.9 |
| 4 | Total | 85 | 100 |

## 5.2 Various Marketing Channels available for Farmers in research area:

In the study area, the following major marketing channels for mango marketing were found.

Producer – Trader – Consumer (Channel l) (local sale)

Producer – Pre-harvest contractor – retailer – consumer (Channel 2)

Producer – commission agent – retailer-consumer (Channel 3).

Producer –merchant –up-country market (Channel 4)

Producer – pre-harvest contractor – commission agent – retailer-consumer (Channel 5)

Producer- commission agent- secondary wholesaler-retailer-consumer (Channel 6) (up country market or distant market).

Producer- APMC- wholesaler- retailer – consumer ( Channel 7)

### 5.2.1 Trading routes adopted by respondents( Mango Growers)

It is evident from the table -6 that three different forms of trade or sale channels were chosen by different groups of respondents in the research area: 17 small farmers (1-2 hectares), 23 medium farmers ( 4-10 hectares), and 45 large farmers (> 10 hectares).7 small farmers (25.92%) sold their produce to pre-harvest contractors out of a total 17 small farmers.10(18.18%) of them sold in APMC and there were no upcountry sales by small farmers, out of 23(27.05) medium famers 9(33.33%) sold their produce through pre harvest contracting, 13( 23.63%) sold their produce through APMC'S sale and 1 (33.33%) sold their produce through up country sale

This study also revealed that out of 45 large farmers, 11 (40.74 %) farmers sold for pre-harvest contractors, 32 farmers (58.18%) sold the produce in APMC and only 2 (66.66%) farmers sold through up country sale.Farmers chose 27 pre-harvest contractors (31.76%), 55 sold in APMC (64.7%), and just 3(3.52%) farmers sold in the upcountry market out of a total of 85 farmers.

**Table-6 : Types of channels used by different groups of respondents ( Mango Growers)**

| S.No | Type of sales | Small farmers | Medium farmers | Large farmers | Total | Percentage |
|---|---|---|---|---|---|---|
| 1 | Pre harvest sales | 7 (25.92%) | 9 (33.33%) | 11 (40.74%) | 27 | 31.76 |
| 2 | APMC sales | 10 (18.18%) | 13 (23.63%) | 32 (58.18%) | 55 | 64.7 |
| 3 | Upcountry sales | 0 (0%) | 1 (33.33%) | 2 (66.66%) | 3 | 3.52 |
| 4 | Total | 17 | 23 | 45 | 85 | 100 |

### 5.3.1 Pre-harvest sales are used for a variety of reasons.

It is evident from the table-7 that twenty seven members (31.76%) of respondents sold their mango produce to a per-harvest contractor because they were not bearing any marketing cost.

It is evident from the table that 7(25.9%) of small farmers, 5(18.51%) of marginal farmers and 14( 51.85%) of large farmers used this channel because they feel convenient to sell their produce in the village.3 (11.11%) of small farmers and 5(18.51%) of marginal farmers used this channel because they fetch better price for their produce.7 ( 25.92%) of small farmers, 6 ( 22.22%) of marginal farmers and 13 ( 15.29%) of large farmers used this channel because they found that this channel is less risky when compared to other type of sales.

This study also revealed that 6(22.22%) of small farmers, 3(11.11%) of marginal farmers and 9 ( 10.58%) of large farmers used this channel because they found they face less labour problem by using this channel.9( 33.33%) of small farmers, 6(22.22%) of medium farmers and 12(44.44%) of large farmers used this channel because they found that there is no marketing cost in this channel.6 ( 22.22%) of small farmers, 7(25.92%) of medium farmers and 3 (11.11%) of large farmers used this channel because they do not face any transportation problem through this

channel.7(25.92%) of small farmers, 6 (22.22%) of marginal farmers and 12(44.44%) of large farmers used this channel because of their immediate need for money.

Only 1 (3.70%) of medium farmers used this channel because they have inadequate knowledge about market information.

**Table-7: Reasons for pre harvest contracting**

| S.No. | Reasons | Small farmers | Medium farmers | Large farmers | Total |
|---|---|---|---|---|---|
| 1 | Convenient to sell in the village | 7 (25.9%) | 5 (18.51%) | 14 (51.85%) | 26 (96.29%) |
| 2 | Better price for produce | 3 (11.11%) | 5 (18.51%) | 0 (0%) | 8 (29.62%) |
| 3 | Less risky compared to other type of sales | 7 (25.92%) | 6 (22.22%) | 13 (15.29%) | 26 (96.29%) |
| 4 | Labour problem | 6 (22.22%) | 3 (11.11%) | 9 (10.58%) | 18 (66.66%) |
| 5 | No marketing cost | 9 (33.33%) | 6 (22.22%) | 12 (44.44%) | 27 (100%) |
| 6 | Lack of transportation facility | 6 (22.22%) | 7 (25.92%) | 3 (11.11%) | 16 (59.25%) |
| 7 | Immediate need for money | 7 (25.92%) | 6 (22.22%) | 12 (44.44%) | 25 (92.59%) |
| 8 | Inadequate knowledge about marketing information | 0 (0%) | 1 (3.70%) | 0 (0.0%%) | 1 (3.70%) |

### 5.3.2 Reasons for selling in APMC'S (Agriculture Produce Market Committee)

Respondents have choosen APMC'S for different reasons as indicated in the table-8. Study revealed that 9(16.36%) of small category mango growers, 11(12.94%) of medium category mango growers and 35(41.17%) of large category mango

growers have choosed this channel because they were providing better price.10(18.18%) of small category mango growers 11(12.94%) of medium category mango growers and 33(60%) of large category mango growers choosen this channel because their orchards are nearer to APMC yard. 3(5.45%) of small category mango growers, 7(12.72%) of medium category mango growers and 31(56.36%) of large category mango growers choosen this because they have their own or good transportation facility. 7(12.72%) of small category mango growers, 3(5.45%) of medium category mango growers and 3(5.45%) of large category mango growers choosen this because they borrowed money from commission agents or traders.

**Table-8 : Respondents reason for opting APMC'S**

| S.No. | Reasons | Small farmers | Medium farmers | Large farmers | Total |
|---|---|---|---|---|---|
| 1 | Better price | 9 (16.36%) | 11 (12.94%) | 35 (41.17%) | 55 (100%) |
| 2 | Orchard nearer to APMC yard | 10 (18.18%) | 11 (12.94%) | 33 (60%) | 54 (98.18%) |
| 3 | Have own or good transportation facility | 3 (5.45%) | 7 (12.72%) | 31 (56.36%) | 41 (74.54%) |
| 4 | Borrowed money from traders or commission agents | 7 (12.72%) | 3 (5.45%) | 3 (5.45%) | 13 (23.63%) |

## 5.4 Marketing Cost and efficient marketing channel in the study area

It is observed from the table-9 that 27 respondants have choosen pre-harvesting contract and 55 respondants have choosen APMC's and 3 respondants have choosen for upcountry sale,but the data regarding upcountry sale was not collected due to covid situation therefore marketing efficiency for upcountry sale was not calculated. By analyzing the table given below it was conclude that as majority of the respondants have choosen APMC's. Therefore it can be concluded that farmers marketing through APMC's was considered as most efficient marketing channel and

majority of the farmers i.e 64.7 % of the farmers prefer APMC sale. Thus it can be concluded that in the present study APMC sale is better than pre harvest contract.

**Table-9 : Marketing costs and Marketing Efficiency of Different Channels:**

| S.No | Criteria<br>Per tonne | Pre Harvesting Contract | APMC'S Sale |
|---|---|---|---|
| 1 | Transportation Cost | 700 | 700 |
| 2 | Labour Cost | 800 | 800 |
| 3 | Commission | 300 | 900 |
| 4 | Marketing Cost | 1800 | 2400 |
| 5 | Price Spread | 3500 | 5000 |
| 6 | Marketing Efficiency | 21.6% | 22.5% |

### 5.5 Constraints of Mango Marketing

Various constraints faced by the mango growers are explained in the table-10.It was observed that 31.76% of the respondents were facing price fluctuation as the major constraint, 30.58% of the respondents were facing interference of the middlemen as the second major constraint, 16.47% of the respondents were facing adverse climatic conditions as the third major constraint, 11.76% of the respondents were facing lack of the market capital (high interest rates) as their fourth major constraint because though the banking loan facilities for the growers is available but due to their unawareness some of the farmers are not even having bank accounts also and 9.41% of the respondents were facing other constraints such as natural calamities, lack of market intelligence etc.as the major constraints.

**Table 10: Constraints of Mango Farmers**

| S.No | Constraints | Small farmers | Medium farmers | Large farmers | Total | Rank |
|---|---|---|---|---|---|---|
| 1 | Price fluctuations | 6 (7.05%) | 8 (9.41%) | 13 (15.29%) | 27 (31.76%) | 1st |
| 2 | Interference of middlemen | 4 (4.70%) | 7 (8.23%) | 15 (17.64%) | 26 (30.58%) | 2nd |
| 3 | Adverse climatic conditions | 3 (3.52%) | 3 (3.52%) | 8 (9.41%) | 14 (16.47%) | 3rd |
| 4 | Lack of capital | 2 (2.35%) | 3 (3.52%) | 5 (5.88%) | 10 (11.76%) | 4th |
| 5 | Other constraints | 2 (2.35%) | 2 (2.35%) | 4 (4.70%) | 8 (9.41%) | 5th |
| 6 | Total | 17 | 23 | 45 | 85 | 6th |

# Chapter VI SUMMARY AND CONCLUSION

## 6.1 Farmers in the sample had a variety of socioeconomic factors.

### 6.1.1 Age of respondents

The majority of the respondents 51 (60%) are in their mid-fifties 35-55, and only 13 (15.29%) of the growers are under 35. Another 21 (24.70%) of the growers were senior citizens.

### 6.1.2 Respondents' educational levels

The farmer's educational background has a significant impact on his or her positive approach to marketing. The vast majority of growers are literate 72 (84.71%) with only a minority of them being illiterate 13 (15.29%). The reason behind this is that respondents believe that obtaining a decent education will enable them to flourish more in the future.

### 6.1.3 Respondents' land holdings

Mango trees are abundant in the nuzvid mandal. Mango plantations are dominated by large farmer producers. Almost equal number of respondents belonged to the small 20% and medium 27.05%land ownership categories. Large land holdings accounted for 52.94% of respondents.

This was due to respondents with fewer than 1-2 hectare of land being classified as small farmers, those with 4-10 hectares of land being classified as medium farmers, and those with more than 10 hectares of land being classified as large farmers.

### 6.1.4 Respondents' family size

The family composition of responders has changed dramatically.

Rural India is no exception to the rule that nuclear families are favoured over

combined families. As a result 21( 24.70% )of responders are under nuclear family category and they were observed as (1-4). It can be seen that 49( 57.64%) (5-9) of the families are of medium size, followed by larger family size constitutes 15 (17.64%).

### 6.1.5 Respondents' farming experience

According to the findings, 27.05% of the respondents are having experience below 23 years, 60% of respondents had between 23 and 41 years of mango growing experience and 12.9% of the respondents have experience above 42 years. As respondents' experience grows, their knowledge of production and marketing processes grows as well, allowing them to select the ideal marketing channel for their business.

### 6.2.1 Different types of trading channels used by different groups of mango producers

There are different marketing channels available for the mango growers

In the study area, the following major marketing channels for mango marketing were found.

Producer-Trader—Consumer (Channel l) (local sale)

Producer—pre-harvest contractor—retailer—consumer (Channel 2)

Producer - commission agent—retailer-consumer (Channel 3).

Producer — merchant — up-country market (Channel 4)

Producer—pre-harvest contractor—commission agent—retailer-consumer (Channel 5)

Producer- commission agent- secondary wholesaler-retailer-consumer (Channel 6) (up country market or distant market).

Producer- APMC- wholesaler- retailer – consumer ( Channel 7)

But according to the study the respondents were using 3 types of marketing channel. Among them 31.76 % of the respondents (mango growers) were using pre harvest sales because of many reasons 64.7% of the respondents (mango growers) were using APMC'S.

### 6.3 Reasons for choosing specific trade/sale channels

Farmers have the option of selling in a variety of locations, with the location chosen based on a variety of variables such as education, exposure to the outside market, and cosmopolitans. APMC was chosen by the majority of the mango growers for mango sales among the respondents. They have mentioned better price as the first reason and they are having many other reasons also like immediate money need etc.

### 6.4 Efficient Marketing Channel

The majority of the large farmers, and their decision to join APMC may have been influenced by the availability of better price and facilities being provided by APMC'S.

### 6.5 Constraints of Mango Marketing

The study has shown present scenario of the current days. Majority of the mango growers in the study period were facing price fluctuations as the major constraint and it was ranked first because any change related to the production and marketing of produce will directly or indirectly reflects the price and if often fluctuate based on different reasons and they have also mentioned the intervention of middlemem because they increases the price spread and other constraints were also faced by the mango growers such as adverse climatic conditions and lack of capital etc.

# REFERENCES


Chavan, S.P., Kalyankar, S.V., & Wakle, P.K. (2001). A study on marketing of banana in Parbhani market of Maharashtra state. *The Bihar Journal of Agriculture Marketing, 9*(3), 316-319.

Debashis Sarkar., &Kazi Md Rahim. (2001). Trade channels and price movements of fruits and vegetables in West Bengal.*The Bihar Journal of Agriculture Markting, 9*(3), 245-260.

Dhar, M.K., Tiwari, S.C., Bhati, J.P. (1976). "The dilemma of apple marketing in Kashmir". *Indian Journal of Marketing, 8*(2), 13-16.

Diwarkar, G.D.( 1987). A study of prices and arrivals of potato in Farrukhabad (U.P). *journal of Agriculture Marketing, 30*(2), 17-23.

Elenchezhian, T., & Kombairay, S.(2001). Factors determining arrivals of vegetables towards Framers-market. *The Bihar Journal of Agriculture Marketing*, *9*(4), 416-421.

George, N.V., & Single, K.(1969). Marketing of sweet oranges in Punjab: *Journal of research, 6*(2), 134-142.

Godara, C.P.,& Bhonde, S.R.(2006). Market arrivals and price trend of important fruits at Azadpur mandi, Delhi.*Indian Journal of Marketing, 36*(11), 32-35.

Govinda Reddy, D.M., Srinivasa Gowda, M.V., Srinivasa Reddy, M.V.,& Prasanna Kumar, G.T.(1997). Constraints in production and marketing of mangoes: A case study in Srinivasapur region. *The Bihar Journal of Agriculture Marketing, 5*(2), 234-237.

Harsh K. Jain.,& Kaul, Journal.(1980).A Spectral analysis of potato arrivals and price in *Punjab journal Agrilculture Marketing, 22*(4), 5-12.

Joginder Singh, Santhosh.,&Grover, D.K.(1993).Behaviour analysis of market

arrivals and prices of potato in *Punjab Journal of Agriculture Marketing*, *36*(3), 34-42.

Khirsagar, P.J., Rane, A.A.,& Patil, B.P.( 2003).Marketing of mango in South Konkan region. *Indian Journal Agrilculture Marketing*, *33*(7), 28-30.

Kishore Rawale., & Hari Prasad.( 2004). Post harvest handling and marketing of mango in *Gujarat Journal of Agrilculture Marketing*, *47*(1), 36-41.

Kochhar, H.L., &Thakur, D.R.(1971). "Marketing of apples in Himachal Pradesh". *Journal of Agricultural Marketing*, *14*(3), 1-48.

Marothia, D.K., Guptha, S.P., & Chandrakar, M.R.(1996).Vegetable marketing: A case study of two markets in Chhattisgarh region of Madhya Pradesh. *The Bihar Journal of Agriculture Marketing*, *4*(1), 44- 50.

Mipramavar, D.M., & Gummagolmath, K.C.(1998). Seasonal indices of arrivals and price and market concentrations of potato in regulated markets of Northern Karnataka. *The Bihar Journal of Agriculture Marketing, 6*(3), 333-339.

Mohapatra, S.C.(2001).Production and marketing of onion in Bolangir district of Orissa. *The Bihar journal of Agriculture Marketing*, *9*(2), 211-215.

Mukesh K. Wadhwani. , & Bhogal, T.S.(2001).Economic analysis of production, post-harvest management and price behaviour of potato in Western region of U.P. *The Bihar Journal of Agriculture Marketing, 9*(4), 434-447.

Mukesh K. Wadhwani. ,& Pandey, A.P.(1987).Marketing of guava in Allahabad district (U.P). *Journal of Agriculture Marketing*, *30*(3), 10-12.

Naidu, M.C., Balaji, T.,& Jaggaiah, T.(2006). Hurdles of mango marketing in Chittoor district of Andhra Pradesh. *Indian Journal of Marketing*, *38*(9), 19-25.

Naik, A.D., Shankara Murthy., & Kachapur, M.D.(1995).Marketing of onions in

Bijapur district, Karnataka: An economic analysis. *The Bihar Journal of Agriculture Marketing*, *3*(3), 321-324.

Narasimham, N.V.(1998).Farm size and seasonality in market arrivals,*Indian Journal of Marketing*, *28*(5-7), 27-32.

Negi, Y.S.,&Thakur, D.R.(1981). Marketing Channels price spread in marketing of plums in Himachal Pradesh. *Journal Agrilculture Marketing*, *24*(2), 1-4.

Patil, H.N.(1989).“Marketing of Alphanso Mangoes in Maharastra”.*Journal of Maharashtra Agricultural University*, *14*, 244-245.

Patil, H.N., Muralidharan, M.A.,& Kumar, P.(1983). “Marketing margi and price spread in marketing of Alphanso Mango in Rathnagiri district”. *Journal of Maharashtra Agricultural University*, *11*, 85.

Patil, H.N.,& Muralidharan, M.A.(1975). Studied on marketing margins and price spread in the marketing of alphonso mangoes in Rathnagiri district, Maharashtra, *Indian Journal of Marketing*, 21-24.

Rahman, M.,& Sikder, F.S.,( 1983). Marketing of Jack-Fruit in the Mymensingh district of Bangladesh. *Journal of Agriculture Marketing*, *24*(3), 1-4.

Sen, C., & Maurya, R.P.( 1998). Marketing of Vegetables in Sewapuri Block. *Journal of Agrilculture Marketing*, *41*(2), 29-31.

Sindhu, H.S.,& Kohlan, A.S. (1967). Marketing of Apples in Kuluvalley, *Journal of Agriculture Marketing*, *10*(2), 5-8.

Singh, K.,& Kahalon, A.S.(1968). “Marketing margins in grapes in Punjab”.*Journal of Agricultural Marketing*, *11*(4), 1-4.

Sowmya Shankar, B., Devajar, M.,& Satish Chandra Rangaswamy, R.(2008). marketing of graphs in Karnataka: A case study of Bangalore and Bijapur district. *Indian journal of Marketing*, *38*(2), 36-48.

Srivasthava, S.C.,& Mishra, R.R.( 2001).Price spread and marketing channels of mango in Varanasi district of Uttar Pradesh. The Bihar Journal of Agriculture Marketing, *9*(3), 273-280.

Subramanyam, K.V.(1986). Studied on marketing of fruits: self-marketing Vs contract sale — case study of mango in Madurai Dist. *India Journal of Marketing, 3,* 21-24.

Surya Prakesh, S., Venkataratnam, J.V.,& Ramanna, R.(1979). Ananalysis of price and arrivals of potato in Karnataka. *India Journal of Agriculture Marketing, 9*(5), 14-18.

Venkataramanna, M.N.,& Srinivas Gowda, M.V.(1996).Channels and price spread in tomato marketing — A study in Kolar district. *Journal of Agriculture Marketing, 39*(1), 42-45.

# APPENDIX

**A STUDY ON MARKETING SYSTEMS OF MANGO IN KRISHNA DISTRICT, ANDHRA PRADESH**

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**Interview schedule for Mango growers (Data pertains to 2020-21)**

| | |
|---|---|
| Schedule No.: _____ | Date of Interview: _____ |
| Name of the Investigator : _____ Village _____<br>Taluk _____ District _____ | |

**1. Socio- Economic Profile**

| | |
|---|---|
| **Name of the respondent:** | **Contact No.:** |
| **Age:** | **Sex:** _____ Male =M; Female =F |
| **Religion :** Hindu / Muslim / Christian / Others | **Caste:** _____<br>SC=1;ST=2;OBC=3;Others=4 |
| Literacy Rate: | |
| **Sources of income** | **Income / annum (in Rs.)** |
| Agriculture | |
| Agriculture and allied activities | |
| Non-Farm income | |
| Land Holdings (in hectares) | |
| **Family Type :** _____Nuclear=1;Joint =2 | |
| **Total Number of Family Members:** | |
| Adult males (>15 years) _____ Adult females (>15 years) _____ | |
| Children (<15 years) _____<br>Male (children) _____ Female (children) _____ | |
| **Years of Experience in farming _____** | |

**2. Different Mango Channels available for mango farmers in study area**

C1) Farmers/Growers — Retailers — Consumers

C2) Farmers/Growers — Wholesalers — Retailers — Consumers

C3) Farmers/Growers — Commission agents — Traders —Wholesalers Retailers Consumers

C4) Farmers/Growers — Commission agents — Traders — Retailers — Consumers

**3. Channel of selling Mango (Tick against the channel)**

C1) Farmers/Growers — Retailers — Consumers

C2) Farmers/Growers — Wholesalers — Retailers — Consumers

C3) Farmers/Growers — Commission agents — Traders —Wholesalers Retailers Consumers

C4) Farmers/Growers — Commission agents — Traders — Retailers — Consumers.

**3. Reasons for choosing particular channel (Channel: _____)**

| **S.No.** | **Reasons** | **Ranking based on importance (1-10)** |
|---|---|---|
| 1 | Assured sales | |
| 2 | Better price | |
| 3 | Low transportation/selling cost | |
| 4 | Getting credit from buyers in advance | |
| 5 | commission charge | |
| 6 | Reliable market information | |
| 7 | Low cost of marketing | |
| 8 | Easy access to inputs | |
| 9 | Influence by friends/relatives/neighbors | |
| 10 | Less physical loss | |

**4. Type of marketing systems followed by mango farmers**

a. Perfect competition b. Imperfect Competition

**5. Marketing cost involved in selling mango**

| S.No. | Particulars | Cost/Price (Rs/quintal) |
|---|---|---|
| 1 | Loading & Unloading | |
| 2 | Transportation | |
| 3 | Commission | |
| 4 | Miscellaneous cost | |
| 5 | Value-added cost | |
| 6 | Total Marketing cost | |
| 7 | sale price | |
| 8 | Net Price received | |

**6. Type of farming followed by farmers**

a. Contract

b. Individual

c. Combination of both

**7. At what stage pre harvest contract will take place**

a. Seed formation

b. Flowering

c. Ripenning

d. Others

**8. At what stage Post Harvesting Contract Will be Done**

**9. Duration of Contract**

**10. On which basis contractor will be selected**

a. Reasonable payment

b. Previous relation

c. Because of middlemen

**11. On what basis contract price will be decided**

a. Stage of crop

b. Yield of crop

c. Both

d. None of the above

**12. Constraints faced by mango producer**

| **S.No.** | **Constraints** | **Rank** |
|---|---|---|
| 1 | Financial constraint | |
| 2 | Very high input cost | |
| 3 | Transportation | |
| 4 | Realization of low price | |
| 5 | Distant to market so far | |
| 6 | Limited market information | |