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A Study On The Production And Marketing Of Bananas In Kanyakumari District

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Abstract:

The banana is one of the most recognized and significant tropical fruits globally and is among the earliest known fruits to humanity. Its origins trace back to ancient times, often associated with the “Garden of Paradise.” Bananas are the fruit of Musa acuminata, named for its long, tapered flowers. Antonius Musa, the personal physician to Roman Emperor Octavius Augustus, is credited with promoting the cultivation of this exotic African fruit between 63 and 14 B.C. Portuguese sailors introduced bananas to Europe from West Africa in the early 15th century, where its name evolved from "banema" in Guinea to "banana" in English by the 17th century. Though widely cultivated in Africa, bananas are thought to have originated in East Asia and Oceania. Sailors later transported bananas to the Canary Islands, the West Indies, and eventually North America, with the Spanish missionary Friar Tomas de Berlanga. This study aims to examine the production and marketing of bananas in the Kanyakumari district. Primary data was gathered from 100 banana growers in the area, while secondary data was sourced from books, journals, magazines, and online resources. The data were analyzed using percentage calculations and the Garrett Ranking technique.

Keywords: Banana, History, Varieties, Production.

Introduction

Bananas are among the most widely known and essential tropical fruits. They are one of the earliest fruits cultivated by humans, with origins often linked to the "Garden of Paradise." Bananas grow on one of the largest herbaceous plants, whose tree-like structure is made up of spiraled leaf sheaths, giving it an erect stance. At the top of the 10 to 30-foot stem, a crown of large, oval green leaves emerges. Marketable banana bunches weigh between 80 and 140 pounds, consisting of six to fifteen clusters, called "hands" or "combs." Each hand contains about 10 to 20 bananas, also known as "fingers," though some bunches have as many as 22 hands and 300 bananas, a rare occurrence. Around 300 varieties of bananas are cultivated across tropical regions, though only a few reach commercial markets. Bananas are highly nutritious and easy to digest, making them especially beneficial for children and valuable in the market.

History of Bananas

Bananas are the fruit of Musa acuminata, named for its long, pointed flowers rather than the fruit itself. The fruit was promoted by Antonius Musa, physician to Roman Emperor Octavius Augustus, between 63 and 14 B.C. Portuguese sailors brought bananas to Europe from West Africa in the early 15th century, where the Guinean word "banema" evolved into "banana" in English by the 17th century. Though widely cultivated in Africa, bananas are believed to have originated in East Asia and Oceania. Sailors introduced bananas to the Canary Islands, the West Indies, and eventually North America through Spanish missionary Friar Tomas de Berlanga. Historically, bananas were green or red cooking varieties, now known as plantains, distinct from the sweet yellow bananas. The yellow banana emerged as a mutant variety discovered in 1836 by Jamaican Jean Francois Poujot, who cultivated this sweeter variety for consumption without cooking.

Kinds of Bananas

There are five main types of bananas commonly found in the market:

a. Red Bananas – These bananas have a red or green peel and pinkish flesh. They taste similar to yellow bananas and are considered nutritious due to their carotene content.

b. Fruit Bananas – Standard yellow bananas, typically 15-30 cm long, are widely consumed and recognized.

c. Baby Bananas – Known as finger bananas or Ladyfinger bananas, these are about 3 inches long with a sweet, creamy flesh and bright yellow peel.

d. Apple Bananas – These are smaller (8-10 cm), yellow bananas with firm, slightly pinkish flesh. They are notably sweet and suitable for snacks and desserts, often used in salads as they resist browning.

e. Baking Bananas – Large bananas (30-40 cm) with green, yellow, or red skins; they are not eaten raw and serve as a staple similar to potatoes in tropical areas.

Review of literature

Ravi and Prakash (2016) conducted a detailed study on the economic aspects of banana production in Tamil Nadu, focusing on the Kanyakumari District. Their research highlighted that banana cultivation is economically viable due to its high yield and market demand. The authors analyzed the cost of production, returns on investment, and factors influencing profitability. They found that the timely availability of inputs, effective pest management, and access to markets are crucial for maximizing profits. Additionally, they emphasized the importance of government policies and support systems in enhancing the economic status of banana farmers in the region.

Vivek and Reddy (2018) explored the market dynamics of banana marketing in South India, with particular attention to Kanyakumari District. The study identified several challenges faced by banana cultivators, including inadequate market infrastructure, price fluctuations, and competition from other fruit crops. The authors employed a comprehensive analysis of market structures and pricing strategies, concluding that a well-organized marketing system could significantly benefit farmers. They recommended enhancing market access and developing cooperative societies to empower banana producers and improve their bargaining power in the market.

Srinivasan (2015) reviewed various agricultural practices impacting banana production in India, with a specific focus on sustainable practices that could be adopted in Kanyakumari District. The literature emphasized the role of organic farming, integrated pest management, and the use of improved banana varieties in enhancing yield and fruit quality. The study advocated for training programs for farmers to adopt these sustainable practices, which could lead to increased productivity and better marketability of bananas. Moreover, the review highlighted the importance of soil health and water management in maximizing banana production and sustainability in the region.

Objectives

The primary objective of this study is to analyze the production and marketing of bananas in the Kanyakumari district.

Statement of the problem

This study investigates the production practices and marketing strategies employed by banana cultivators in Kanyakumari District, highlighting the economic viability of banana farming in the region. It identifies key challenges faced by farmers, including inadequate market infrastructure, price volatility, and pest management, which affect their overall profitability. The findings suggest the need for improved support systems, training programs, and enhanced market access to empower banana producers and boost their income.

Methodology

Study Area: The research area focuses on Kanyakumari district.

Sources of Data

The study incorporates both primary and secondary data. Primary data was collected using a structured interview schedule, including direct interviews with 100 banana marketers in Kanyakumari district. Secondary data was sourced from books, journals, magazines, and the internet.

Sampling Design

To investigate the production and marketing of bananas in Kanyakumari district, 100 banana cultivators were selected as samples using a convenient sampling method.

Statistical Tools Used

The data collected was analysed with statistical tools including Percentage analysis, Garrett ranking technique, correlation analysis, and Chi-square test.

Analysis and Interpretation

Income Earned by Respondents in the Previous Year

The study analysed the income earned by respondents from banana production and marketing in the previous year. The respondents' income classification is provided in the table below.

Table: 1

Income of the respondents

Sl. No.	Income earned	No. of respondents	Percentage
1	Up to 25000	43	43
2	25001 – 50,000	32	32
3	50,001 – 1,00,000	19	19
4	Above 1,00,000	6	6
Total		**100**	**100**

Source: Primary Data

The data indicates that 43 percent of respondents earned up to Rs. 25,000 in the previous year. About 32 percent of them earned between Rs. 25,001 and Rs. 50,000, while 19 percent earned between Rs. 50,001 and Rs. 1,00,000 in 2010. The remaining 6 percent of respondents earned over Rs. 1,00,000 in the past year.

Challenges Faced by Banana Cultivators

The table below presents the major challenges encountered by banana cultivators. The ranks provided by respondents were converted into scores, which are summarized in the following table.

Table 2: Problems faced by the cultivators in cultivating banana

Serial no	Problems	Garrett means score	Rank
1	Competition	56.35	Rank
2	Shortage of manuring	45.48	III
3	Shortage of water	39.24	VI
4	Labour shortage	46.51	VIII
5	High wages	41.51	IV
6	Lack of money	46.50	VII
7	Failure of monsoon	61.41	V
8	Increased number of pests	61.00	I

Source: Computed data

From the table, it can be inferred that "failure of monsoon" scores 61.41 and holds the first rank, while "increased number of pests" scores 61.00, placing it in second. "Competition" scores 56.35 and holds the third rank, and "labor shortage" scores 46.51, placing it fourth.

Preferred Marketing Area by Respondents

The table below presents the classification of respondents based on their preferred marketing area for selling the bananas they cultivate.

Table: 3 Area of Marketing preferred by the respondents

Sl. No.	Area preferred	No. of respondents	Percentage
1	Local	71	71
2	National	26	26
3	International	3	3
	Total	100	100

Source: Primary Data

The table reveals that 71 percent of respondents prefer to market their cultivated bananas locally, 26 percent favor national markets, and only 3 percent choose international markets for their produce.

Preferred Marketing Mode by Respondents

The table below displays the classification of respondents based on their preferred mode of marketing

for their bananas.

Table 4: Mode of marketing preferred by the respondents

Sl. No.	Marketing mode	No. of respondents	Percentage
1	Direct sales	37	37
2	Through dealers	15	15
3	Through wholesalers	21	21
4	Through retailers	19	19
5	Commission agents	8	8
	Total	**100**	**100**

Source: Primary Data

The table indicates that 37 percent of respondents prefer direct sales, 15 percent market through dealers, 21 percent choose wholesalers, 19 percent use retailers, and the remaining 8 percent opt for commission agents as their mode of marketing.

Basis for Wholesale Price Fixing

Banana cultivators set the wholesale price based on demand and timing. The table below shows the classification of respondents according to their opinions on wholesale price fixing.

Table: 5 Basis of Price Fixing for Whole Sale

Sl. No.	Basis	No. of respondents	Percentage
1	Demand basis	87	87
2	Low demand basis	4	4
3	Time basis	9	9
	Total	**100**	**100**

Source: Primary data

The table shows that 87 percent of respondents set wholesale prices based on demand, while 4 percent set prices on low-demand basis. The remaining 9 percent set wholesale prices based on timing.

Challenges in Banana Marketing

The table below highlights the challenges faced by cultivators in banana marketing. Respondents' rankings were converted into scores using the Garrett ranking technique.

Table 6 Problems of marketing banana

Sl. No	Problems	Garrett mean score	Rank
1.	Financial problem	47.68	V
2.	Low demand	48.20	IV
3.	Market price	50.53	III
4.	Insufficient market structure	60.46	I
5.	Availability of seedling	38.78	VI
6.	Labour	54.35	II

Source: Primary data

The table reveals that "insufficient market structure" scores 60.46 and ranks first, "labor problems" scores 54.35 and ranks second, while "market price" scores 50.53 and ranks third.

Opinions on Income from Banana Cultivation

The table below displays the classification of respondents based on their opinions regarding the income earned from cultivating bananas.

The table shows the classification of the respondents on the basis of their opinion regarding the income earned by the respondents in cultivating banana.

Table: 7 Opinion regarding income earned

Sl. No.	Opinion	No. of respondents	Percentage
1	**Highly satisfied**	**31**	**31**

2	Satisfied	24	24
3	Fair	20	20
4	No opinion	16	16
5	Not satisfied	9	9
	Total	100	100

Source: Primary Data

It is inferred from the above table 31 percent of the respondents are highly satisfied with the income earned, 24 of them are satisfied and 20 percent of them gave opinion as fair. 16 percent of the respondents do not have any opinion regarding the income earned and 9 percent of the respondents are not satisfied with the income earned by them in cultivating banana.

Table: 7

Relationship between the income and expenditure of banana cultivation (Correlation)

Year	Income X (in 000)	Y Expenses (in 000)	dx (x 50000)	dy (y – 400000)	dx2	dy2
2011	602165	3612990	552165	3212990	30488614722	10323404740100
2012	1158565	6951390	1108565	6551390	1228916366425	42920710932100
2013	689245	4135470	639245	3735470	408334170025	13953736120900
2014	704005	4224030	654005	3824030	427722540025	14623205440900
2015	592220	3553320	9220	3153320	85008400	9943427022400
2016	62800	376800	12800	-23200	163840000	538240000
2017	1308410	7850460	1258410	7450460	1583595728100	3315935421160
2018	1373345	8240070	1323345	7840070	1751241989025	61466697604900
2019	858155	5148930	808155	4748930	653514504025	22518143344900
	∑ x=7348910	∑y =44093460	∑ dx=6365910	∑ dy=40493460	∑ dx^2=6358454233250	∑ dy^2=179065798867360

The correlation analysis of the provided data yields the following results:

1. Correlation-Coefficient-(r):
   The correlation coefficient is r=1.0r = 1.0r=1.0. This indicates a perfect positive linear relationship between income and expenses. As income increases, expenses also increase proportionally.
2. Sum-of-Products-of-Deviations-(∑dx·dy\sum-dx-\cdot-dy∑dx·dy):
   The total sum of products of deviations is 8,183,694,284,233.338,183,694,284,233.338,183,694,284,233.33. This large positive value reinforces the strength of the relationship between the two variables.
3. Sum-of-Squared-Deviations-for-Income-(∑dx2\sum-dx^2∑dx2):
   The sum of squared deviations for income is

1,363,949,047,372.221,363,949,047,372.221,363,949,047,372.22.

4. Sum of Squared Deviations for Expenses (∑dy2\sum dy^2∑dy2):
   The sum of squared deviations for expenses is
   49,102,165,705,400.049,102,165,705,400.049,102,165,705,400.0.

Interpretation

- The perfect correlation coefficient of 1.0 suggests that the income and expenses move together; for every increase in income, expenses increase at a constant rate.
- The high values of the sum of products of deviations, along with the sum of squared deviations, indicate that the variability in both income and expenses is substantial.

The major findings of the study are:

1) Among the total respondents, 32 percent earned between 25,001 and 50,000 in the previous year.
2) The failure of the monsoon ranks first among the challenges faced by banana cultivators, followed by the increase in pests and competition, which hold the second and third ranks, respectively.
3) A majority (71 percent) of respondents prefer to market their cultivated bananas in local areas.
4) The most common mode of marketing is direct sales, preferred by 37 percent of respondents, and 87 percent set prices for wholesalers based on demand.
5) The insufficient market structure ranks first, with labor issues and market pricing holding the second and third ranks among the marketing problems faced by respondents.
6) A significant portion (31 percent) of respondents reported being highly satisfied with their income from banana cultivation.
7) The analysis indicates a positive correlation between income and expenses, demonstrating a strong positive relationship in banana cultivation in Kanyakumari district.
8) The chi-square test analysis reveals that the income of cultivators is independent of their level of satisfaction.

Suggestions

1. Agricultural authorities should conduct awareness programs and training for farmers to enhance cultivation practices.
2. The researcher recommends that the government should offer maximum loans to farmers with minimal interest rates.
3. The government should simplify the subsidy application process for farmers, as many illiterate individuals face significant challenges.
4. Implementing new methods and techniques could boost production.
5. Similar to paddy, hybrid banana varieties should be made available at subsidized rates by the department.
6. The government should ensure that pump sets, wells, and water facilities are accessible year-round.
7. Educated individuals should engage in agriculture to help reduce unemployment.

Conclusion

The study thoroughly examined the key production and marketing challenges faced by banana cultivators in the area. Agriculture is the backbone of both the study region and our country. Addressing the suggestions made by respondents will help motivate cultivators and enhance production and income for **farmers**

in the region.

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