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PRODUCTION AND DISTRIBUTION OF SELECTIVE AGRICULTURAL GOODS IN MAHARASHTRA WITH SPECIAL REFERENCE TO PALGHAR DISTRICT

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ABSTRACT :

The economic growth of any nation relies on the comprehensive development across all societal sectors. Achieving this goal necessitates a focus on both production and distribution. This research paper examines the characteristics of traditional farmers in Palghar district. Its objective is to uncover the agricultural practices concerning three main commodities: Coconut, Banana, and Flowers. While Flowers are perishable and demand efficient distribution due to their short shelf life, Bananas and Coconuts boast medium to long shelf lives. These commodities are directly sold in local markets and through diverse distribution channels across the country. Historically, the emphasis leaned heavily towards production, often sidelining distribution. However, the landscape of agro-product distribution has evolved over time. No longer confined to local regions, these products now traverse not just state borders but also venture into national and international markets. The 2015-16 agricultural census highlights that over 86 percent of farmers fall into the small and marginal categories, owning an average of 0.38 hectares. This indicates their limited surplus for independent sale, making it uneconomical to approach Agricultural Produce Market Committee (AMPC) mandis individually due to a lack of economies of scale. Aggregators step in to aid small growers, albeit often offering reduced prices to producers. The study's outcomes reveal significant patterns among the farmers. A majority consider cultivation their primary occupation, possess 'marginal' land holdings, maintain a 'fair' cropping pattern, and possess 'medium' farming experience. These farmers, however, grapple with several challenges: pest attacks, diminished agricultural productivity, labour shortages, increased labour costs, untimely fertilizer availability, frequent power outages, and lower market prices for their produce. The results of this study serve as guiding beacons for various stakeholders including farmers, government entities, public representatives, policymakers, and practitioners. These insights facilitate the formulation of strategies aimed at enhancing efficient value chains for agricultural commodities. This encompasses harnessing solar power, establishing Agri-warehousing infrastructure, promoting liberalized agricultural markets, facilitating seamless trading, encouraging private sector investments, advocating for organic farming, alleviating farmers' distress, and ultimately achieving self-sufficiency.



KEYWORDS : Coconut, Banana, Flowers, Production Distribution.

HISTORICAL PREVIEW-

Palghar district, situated in Maharashtra, India, was established as the 36th district of the state on August 1, 2014. Previously, it was part of the Thane district. The district comprises eight talukas: Vasai-Virar, Palghar, Dahanu, Talasari, Jawhar, Mokhada, Wada, and Vikramgad. According to the 2011 census, the district has a population of 2,990,116. There are more than 460 Gram Panchayats and 1007 villages in Palghar, which has an area of about 4,69,700 hectares. Palghar has a literacy rate of 66.65%, with male literacy at 72.23 % and female literacy at 59.28 %.. Culturally diverse, Palghar district houses various indigenous tribes, including Warli, Thakur, Katkari, Mahadev, Koli, Malhar, Dhodia, and Dubla. These tribes carry unique traditions, cultures, and art forms, notably the renowned Warli paintings. An average temperature of 27.3°C is observed in the district, ranging from 17.1°C to 36.4°C on a daily basis. It averages 2293 millimeters of rain each year, and the relative humidity varies from 26.9% to 97.1%, averaging 70.4%. Agriculture is the primary occupation of the district's population. Rice, fruit, and vegetable farming are all part of farming. The coastal location and favourable climate result in a diverse agricultural landscape. A significant part of Palghar's economic growth and rural livelihoods are derived from its cultivation of bananas, coconuts, and flowers. Also in the district are industrial zones and small-scale industries, such as those involving chemicals, textiles, engineering, and food processing. This industrial presence offers substantial employment opportunities. Given its proximity to urban centres like Mumbai, many individuals from Palghar commute to nearby cities for work, engaging in sectors like services, trade, and construction. This case study aims to analyse the agricultural practices and economic impact of the district's key crops, namely bananas, coconuts, and flowers.

THE OBJECTIVE-

In this case study, the goal is to examine and analyse various aspects related to the production and distribution of coconuts, flowers, and bananas in Palghar district in detail. In addition to providing a detailed understanding of agricultural practices, economic significance, market dynamics, and its impact on local economies, the case study also has the following key objectives: Assess Agricultural Practices: Examine the cultivation techniques used by farmers for coconut, flower, and banana production. Analyse the adoption of sustainable agricultural practices, including organic farming, water management, pest control, and soil conservation methods.

1. Evaluate Economic Significance: Determine the economic contribution of coconut, flower, and banana production to Palghar district. Assess the income generation potential for farmers and the number of employment opportunities created by these agricultural activities.
2. Investigate Market Dynamics: Explore the market trends and demand-supply dynamics for coconuts, flowers, and bananas in Palghar district. Analyse market fluctuations, price variations, and the role of intermediaries in the distribution chain.
3. Examine Distribution Channels: Study the efficiency and effectiveness of distribution channels used for coconut, flower, and banana distribution. Evaluate the accessibility of markets for farmers and the role of wholesalers and retailers in the distribution process.
4. Analyse Economic and Social Impact: Assess the overall economic and social impact of coconut, flower, and banana production on Palghar district. Examine the influence on local businesses, infrastructure development, and improvements in the standard of living for farmers.
5. Identify Challenges and Opportunities: Identify the challenges faced by farmers in coconut, flower, and banana cultivation, such as pest and disease management, water scarcity, and market fluctuations. Highlight potential opportunities for improvement and growth in these agricultural sectors.
6. Study Government Initiatives and Policies: Analyse the role of government initiatives, subsidies, and policies in promoting sustainable agricultural practices and supporting coconut, flower, and banana production in Palghar district.
7. Propose Recommendations: Based on the findings of the case study, provide practical recommendations to stakeholders, policymakers, and farmers to enhance the sustainability and

productivity of coconut, flower, and banana cultivation. Suggest measures to address challenges and capitalize on opportunities.

8. **Contribute to Knowledge Base:** Add to the existing knowledge base on coconut, flower, and banana production and distribution in Palghar district. The case study aims to provide valuable insights that can be used by researchers, policymakers, and agricultural experts in the future.

By achieving these objectives, the case study aims to present a comprehensive and well-rounded analysis of coconut, flower, and banana production and distribution in Palghar district. The study's outcomes can be instrumental in guiding sustainable practices, improving market access, and enhancing the economic and social well-being of farmers and the community at large.

Significance: Indian farmers face multiple challenges lack of knowledge of high-value growth products, limited access to high productivity practices, poor handling of production, improper disposal of agricultural waste, inefficient marketing, and distribution system, and too much dependence on labour-intensive technology which results in a reduction of value of agricultural produce. As far as agriculture is concerned it is necessary to utilize natural resources effectively, to move agricultural products from producer to consumer through proper channels of distribution at the right price and at the right time. The case study of production and distribution of coconut, flowers, and banana in Palghar district holds significant importance for various stakeholders and fields. Its significance can be understood in the following ways:

1. **Agricultural Development:** The case study sheds light on the agricultural practices used for coconut, flower, and banana cultivation. By understanding the challenges faced by farmers and identifying successful techniques, the study can contribute to the development and improvement of agricultural practices in the region.
2. **Sustainable Farming:** As the world moves towards sustainability and environmental consciousness, the case study can provide insights into the adoption of sustainable agricultural practices. This includes organic farming, water management, and integrated pest management, which can promote long-term environmental sustainability.
3. **Economic Impact:** The study explores the economic significance of coconut, flower, and banana production in Palghar district. By analysing the economic contributions of these crops, policymakers can make informed decisions to enhance the region's agricultural sector and stimulate economic growth.
4. **Livelihoods of Farmers:** Understanding the income generation potential and employment opportunities provided by coconut, flower, and banana cultivation can help policymakers and organizations devise strategies to improve the livelihoods of farmers and promote rural development.
5. **Market Dynamics:** The case study delves into the market dynamics of coconut, flower, and banana distribution. Traders, wholesalers, and retailers need this information to efficiently manage supply chains and ensure a steady supply of fresh produce to consumers.
6. **Government Policies:** The case study demonstrates the importance of supporting measures for agriculture by examining the role of government initiatives and policies. By examining the role of government initiatives and policies, the case study can highlight the importance. Policymakers can use the study's findings to design policies that encourage sustainable agriculture and empower farmers.
7. **Regional Development:** The case study contributes to a deeper understanding of the agricultural landscape in Palghar district. The findings can help identify areas for regional development and investment, benefiting both the agricultural sector and the local community.
8. **Knowledge Base:** The study adds to the existing knowledge base on coconut, flower, and banana production and distribution. Researchers, scholars, and academics can use this information for further studies and as a reference for related research.

9. **Future Planning:** The case study's insights can aid in future planning and forecasting for the agricultural sector in Palghar district. It can help stakeholders anticipate challenges and opportunities, leading to more effective decision-making.
10. **Sustainability and Resilience:** By promoting sustainable farming practices and efficient distribution channels, the study contributes to building resilience in the agricultural sector. This resilience can help farmers adapt to changing climatic conditions and market fluctuations. Thus, the case study of coconut, flower, and banana production and distribution in Palghar district has broad significance. It not only helps in changing agricultural practices but also helps for economic development. By understanding the difficulties of agricultural production and distribution, stakeholders can work together to create a more productive, and sustainable agricultural sector in the region.

Null Hypothesis: There is no significant impact of production and distribution practices on coconut, flowers, and banana in Palghar district.

Alternative Hypothesis: There is a significant impact of production and distribution practices on coconut, flowers, and banana in Palghar district.

METHODOLOGY

The methodology of the case study on the production and distribution of coconut, flowers, and banana in Palghar district involves a systematic approach to gather relevant data, analyse information, and draw meaningful conclusions. Below is an outline of the methodology for the case study:

1. **Research Design:** a. **Descriptive Case Study:** Adopt a descriptive case study design to provide a detailed and comprehensive analysis of coconut, flower, and banana production and distribution in Palghar district.
2. **Data Collection:** a. **Primary Data:** Surveys and Questionnaires: Conduct surveys and questionnaires with farmers, wholesalers, retailers, and other stakeholders to gather information on agricultural practices, market dynamics, and distribution channels. Interviews: Conduct semi-structured interviews with experts, government officials, and agricultural researchers to gain insights into policy initiatives and support measures. Field Observations-Make field observations to understand on-ground agricultural practices and identify challenges faced by farmers.

b. Secondary Data:

1. **Government Reports:** Gather data from relevant government reports, agricultural statistics, and policy documents to understand the overall agricultural landscape in Palghar district.
2. **Research Papers:** Review academic papers, studies, and articles related to coconut, flower, and banana cultivation to gain a broader perspective on the subject.
3. **Sampling:** a. Select representative samples of farmers, wholesalers, and retailers from different areas within Palghar district to ensure diverse perspectives and experiences.
4. **Data Analysis:** a. **Qualitative Analysis:** Analyze interview transcripts and qualitative data from open-ended questions to identify themes, patterns, and insights related to agricultural practices and distribution channels.
5. By employing a robust methodology that combines both qualitative and quantitative data, the case study can provide a comprehensive and well-founded analysis of coconut, flower, and banana production and distribution in Palghar district. The findings and recommendations derived from this study can guide stakeholders in the agricultural sector, policymakers, and researchers towards sustainable and efficient practices.

INTRODUCTION:

The first-largest populated country, India, accounts for 18% of the total world population. With an increase in population, the demand for various agricultural products has surged. Over 50% of India's population depends on agricultural products, further propelling market growth. The agriculture

sector's contribution to the country's gdp is around 14%. It plays a pivotal role in employment generation and income creation, employing both rural and non-rural laborers. Agro-industries facilitate the transformation of raw agricultural produce into final products with minimal processing. In palghar district, numerous small and marginal farmers possess modest landholdings. As economic development surpasses basic food needs and with small landholdings, farmers face market risks. This situation encourages diversification from grains to higher value commodities. Palghar district's favourable agro-ecology and small landholdings are prompting stakeholders to shift towards high-value commodities like horticultural products, catering to sophisticated domestic and international consumers. Commercial cultivation of bananas, coconuts, and flowers thrives in the thane district of konkan, primarily concentrated in vasai and palghar tehsils across 911 hectares. However, a substantial gap exists between producers and widely scattered consumers. An effective distribution system becomes crucial to ensure reasonable prices for consumers and fair returns for producers. Consequently, a comprehensive study was conducted to analyse the production and distribution patterns of year-round agro-products such as bananas, coconuts, and various flowers in palghar district.

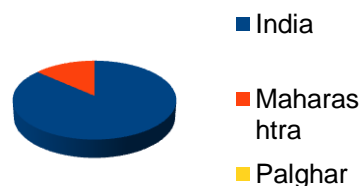
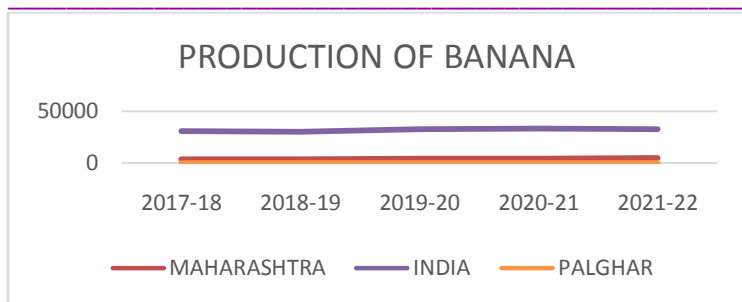
Banana

Banana, one of India's most important fruit crops, ranks second only to mango. It holds the top position in production and is third in terms of cultivation area among all fruit crops. In fact, it occupies 13% of the total area and contributes to 33% of the overall fruit production. The arrival of bananas typically surges from April, peaking between August and October. This tropical crop thrives in temperatures between 15 to 35 degrees Celsius and humidity levels around 80%. The cultivation of bananas in India spans an area of approximately 3.4-4 lakh hectares, with Maharashtra leading the way by producing over 30 lakh metric tons, contributing more than 40% of the country's banana production. Within Maharashtra, the district of Jalgaon has the most extensive area dedicated to banana cultivation. In the Konkan region, Palghar district, particularly in Vasai and Palghar tehsils, witnesses significant commercial banana cultivation. Bananas are ready for harvest 12-15 months after planting, usually during September to October. They are cultivated by planting suckers. Availability, affordability, taste, and nutritional value of this fruit make it popular with all demographics. With 20% of global banana exports coming from India, the country has a strong banana export market. Major export destinations include West Asia, England, France, Saudi Arabia, United Arab Emirates, Kuwait, and Qatar. Rich in carbohydrates, vitamins (especially B vitamins), potassium, phosphorus, calcium, and magnesium, bananas are both easy to digest and cholesterol-free. They hold various health benefits, including reducing the risk of heart disease and aiding conditions like high blood pressure, arthritis, and stomach ailments. Bananas also serve as baby food, often in the form of banana powder. In Maharashtra, a variety of banana cultivars thrive, including Dwarf Cavendish, Basrai, Robusta, Lal Velchi, Safed Velchi, Rajeli Nendran, Grand Naine, Shreemanti, and Red Banana. The banana season persists throughout the year, with arrivals seeing an upswing from April and peaking between August and October. With an annual output of around 14 million tonnes, India proudly claims the top spot in global banana production, establishing the fruit as one of the most consumed worldwide due to its affordability and nutritional value.

TABLE 1

District wise Area and Production of BANANA Crops for Maharashtra

DISTRICT	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		2022-2023	
	ARE A	PRODUCT ION	ARE A	PRODUCT ION	ARE A	PRODUCT ION	ARE A	PRODUCT ION	ARE A	PRODUCT ION	ARE A	PRODUCT ION
AHMEDNAGAR	0.680	17.000	0.680	17.000	0.680	17.000	0.680	17.000	0.680	17.000	0.680	17.000
AKOLA	2.610	95.265	2.610	95.265	2.680	97.820	2.784	101.600	2.700	98.534	2.570	93.790
AMRAVATI	0.117	0.209	0.871	7.757	1.079	41.095	1.086	43.448	1.229	46.702	1.229	46.702
AURANGABAD	0.670	22.110	0.620	20.460	0.579	19.107	0.579	19.107	0.412	13.596	0.412	13.596
BEED	0.230	7.500	0.148	5.700	0.155	5.969	0.250	8.766	0.353	10.590	0.353	10.590
BHANDARA	0.033	0.938	0.030	0.926	0.021	0.841	0.024	0.422	0.023	0.240	0.023	0.240
BULDHANA	0.508	15.228	0.538	16.152	0.538	16.152	0.391	12.733	0.391	12.733	0.384	12.304
CHANDRAPUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DHULE	1.384	73.352	1.384	73.352	1.384	73.352	1.384	73.352	1.384	70.584	1.384	70.584
GADCHIROLI	0.006	0.210	0.006	0.210	0.006	0.210	0.006	0.210	0.006	0.180	0.006	0.180
GONDIA	0.087	7.082	0.078	2.340	0.078	2.340	0.075	2.330	0.067	2.087	0.067	2.087
HINGOLI	0.810	2.150	0.550	1.400	1.625	86.125	1.630	86.150	0.600	2.100	1.600	56.000
JALGAON	39.260	2551.900	40.112	2607.280	40.786	2855.020	44.929	3145.030	52.454	3409.510	58.822	3823.424
JALNA	0.159	5.398	0.140	3.243	0.140	3.243	0.140	3.243	0.254	6.866	0.254	6.866
KOLHAPUR	0.261	1.740	0.265	1.750	0.271	0.990	0.598	13.300	0.343	7.632	0.343	7.632
LATUR	0.025	1.000	0.024	0.960	0.042	1.596	0.075	2.660	0.050	1.790	0.050	1.790
NAGPUR	0.029	0.966	0.029	0.966	0.029	0.966	0.029	0.966	0.029	0.966	0.029	0.966
NANDED	7.510	315.420	7.520	315.670	10.340	434.046	10.000	419.774	10.000	419.774	10.000	419.774
NANDURBAR	3.952	138.320	2.766	96.824	2.766	103.765	5.737	372.905	5.800	365.954	5.800	365.954
NASHIK	0.092	2.700	0.011	0.034	0.006	0.013	0.004	0.008	0.004	0.008	0.034	1.972
OSMANABAD	0.555	14.660	0.530	13.100	0.540	13.200	0.560	13.900	0.570	14.100	0.570	14.100
PALGHAR	0.236	9.205	0.236	9.205	0.236	9.205	0.236	9.205	0.236	9.205	0.236	9.205
PARBHANI	0.179	10.728	0.650	32.500	0.852	46.807	0.715	39.021	0.715	39.021	0.715	39.021
PUNE	2.540	93.980	2.415	89.355	1.805	66.767	1.905	70.485	1.594	66.948	1.562	65.598
RAIGAD	0.070	2.073	0.070	2.073	0.060	1.768	0.060	1.768	0.060	1.768	0.060	1.768
RATNAGIRI	0.121	0.155	0.121	0.150	0.125	1.325	0.130	1.378	0.132	1.378	0.132	1.378
SANGLI	1.255	39.519	1.075	33.852	1.040	28.080	1.030	27.810	0.661	17.848	0.661	17.848
SATARA	0.406	14.219	0.375	13.126	0.300	10.000	0.280	9.000	0.300	10.000	0.296	9.689
SINDHUDURG	0.634	13.314	0.645	13.314	0.660	13.662	0.685	12.425	1.136	16.676	1.136	16.676
SOLAPUR	6.520	162.608	3.389	74.725	7.711	192.766	7.711	192.766	7.710	424.050	7.710	424.084
THANE	0.016	0.481	0.016	0.017	0.016	0.020	0.016	0.020	0.016	0.021	0.016	0.239
WARDHA	0.180	5.400	0.230	6.440	0.240	6.720	0.243	6.804	0.243	6.804	0.243	6.804
WASHIM	0.075	2.450	0.060	1.800	0.060	1.760	0.060	1.650	0.027	0.810	0.026	0.780
YAVATMAL	0.185	5.440	0.186	5.450	0.186	5.450	0.186	5.450	0.186	5.450	0.186	5.450
Total Maharashtra	71.395	3632.720	68.380	3562.396	77.036	4157.180	84.217	4714.684	90.365	5100.925	97.588	5564.091
Total All India		30755.860		30459.790		32596.920		33061.770		32454.110		



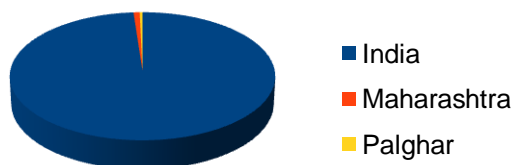
**Production Figures are in Metric Ton
Area under cultivation in Hectors**

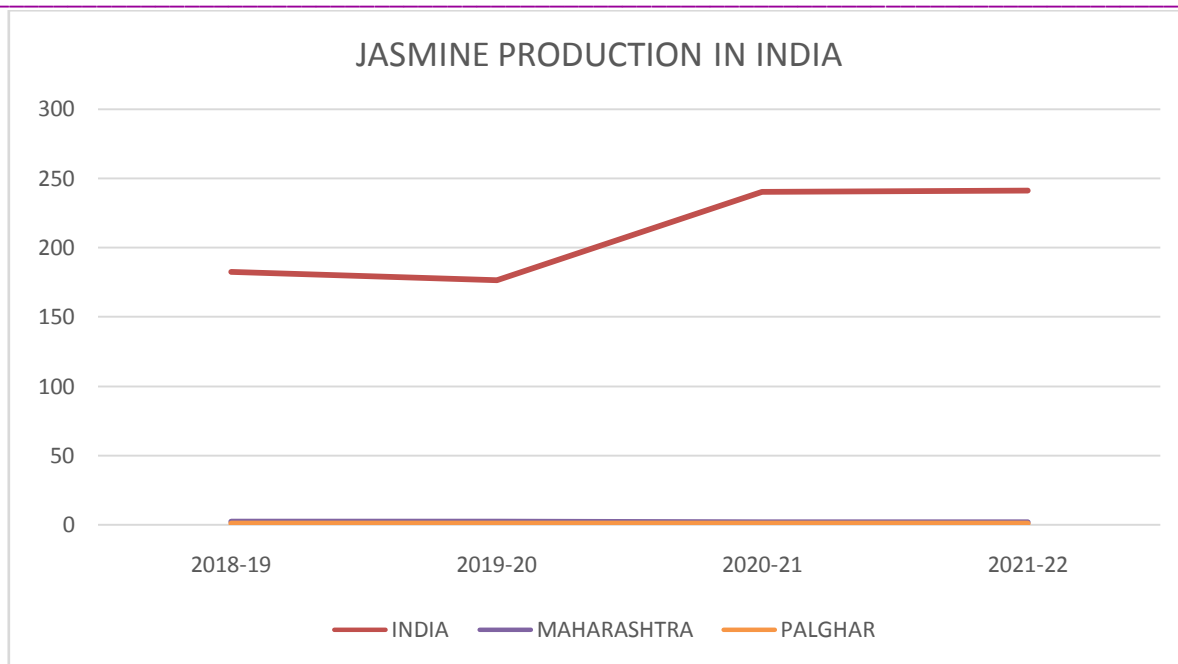
Floriculture- which is also known as the cultivation of flowers or flower farming, involves growing beautiful and decorative plants. While flowers have always been a part of Indian life for their beauty and various uses, the idea of growing flowers as a business is relatively new. The demand for flowers has grown a lot, making flower farming an important part of Indian agriculture. In places like Maharashtra, farmers are changing from growing regular crops to flowers, especially tribal farmers who used to grow fruits. Flower farming has become quite big, even in Palghar district. In Palghar, tribal farmers who used to rely on traditional farming have faced challenges due to changing weather and high costs. So, many of them are now growing flowers instead. They have found that growing flowers can be more profitable. This is especially true during the flowering season when they can make even more money. Over time, people's lives have changed a lot, and this has turned flower growing into a proper business. Flowers are not just for personal gardens anymore; they are a way for a lot of people to make money, like farmers and traders. This flower business is not just about making money locally; it is recognized as an economic activity that can create jobs and even bring in money from other countries. In many parts of the world, flowers from farms are some of the most important things they export. For countries wanting to expand what they sell to other places, flowers can be a really good choice. The demand for fresh flowers is going up all over the world because people need them for different events, like parties, weddings, and even sad occasions like funerals. India is really doing well in the flower business. It is the second-largest flower grower globally, just after China. In recent years, around 2,33,000 hectares of land in India were used for growing flowers. This produced 17,29,000 metric tonnes of loose flowers and a huge number of 76,732 lakh cut flowers. Different states in India are leading in different types of flower production. There are a lot of loose flowers grown in Andhra Pradesh, Karnataka, and Tamil Nadu, whereas cut flowers are a big industry in West Bengal. Besides Maharashtra and Uttar Pradesh, Himachal Pradesh also produces a lot of flowers. Marigolds, jasmine, and roses are some of the popular flowers being grown in Palghar district. A lot of marigold flowers are grown here. They are loved because they are colourful and do not need too much looking after. Marigolds are often used in religious ceremonies and for making garlands during festivals and weddings. Jasmine is another flower that is very popular. People like it because it smells nice. The scent of jasmine is used to make things like essential oils, perfumes, and incense sticks. Roses come in many colours and kinds, and they are grown in Palghar for both inside the country and to send to other places. They are especially wanted on special days like Valentine's Day. People need flowers not only for religious reasons but also for many other events like parties, official ceremonies, weddings, and even sad events like funerals. This need for fresh flowers is increasing all around the world, and India is becoming a powerful player in the flower-growing business.

District wise Area and Production of JASMINE Crops for Maharashtra											
		2018-2019		2019-2020		2020-2021		2021-2022		2022-2023	
NO	DISTRICT	AREA	PRODUCTION	AREA	PRODUCTION	AREA	PRODUCTION	AREA	PRODUCTION	AREA	PRODUCTION
1	AHMEDNAGAR	0.150	0.408	0.150	0.408	0.150	0.410	0.150	0.410	0.150	0.410
2	AKOLA	0.018	0.021	0.018	0.021	0.015	0.018	0.016	0.019	0.014	0.016
3	AMRAVATI	0.018	0.082	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001
5	BEED	0.001	0.003	0.001	0.003	0.012	0.024	0.005	0.009	0.005	0.009
7	BULDHANA	0.010	0.031	0.007	0.025	-	-	0.007	0.025	0.007	0.025
13	JALGAON	0.017	0.063	0.017	0.051	0.000	0.009	0.000	0.009	0.000	0.009
14	JALNA	0.020	0.048	0.018	0.060	0.015	-	0.002	0.026	0.002	0.026
15	KOLHAPUR	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
16	NAGPUR	0.005	0.008	0.005	0.008	0.005	0.008	0.005	0.008	0.005	0.008
17	NANDED	0.004	0.015	0.004	0.016	0.004	0.016	0.004	0.016	0.004	0.016
21	PALGHAR	0.199	0.895	0.199	0.895	0.199	0.895	0.199	0.895	0.199	0.895
22	PARBHANI	0.006	0.012	0.006	0.012	0.006	0.012	0.006	0.012	0.006	0.012
23	PUNE	0.038	0.213	0.038	0.213	0.020	0.040	0.025	0.050	0.013	0.025
24	SANGLI	0.035	0.223	0.035	0.223	0.035	0.211	0.035	0.211	0.035	0.211
25	SATARA	0.030	0.122	0.023	0.092	0.025	0.098	0.019	0.196	0.000	0.022
26	SINDHUDURG	0.014	0.021	0.016	0.021	0.016	0.023	0.016	0.023	0.016	0.023
28	THANE	0.016	0.050	0.016	0.052	0.016	0.053	0.016	0.056	0.016	0.056
29	WARDHA	0.010	0.032	0.010	0.032	0.005	0.016	0.005	0.016	0.005	0.016
30	WASHIM	-	-	0	0	-	-	0.001	0.001	0.001	0.001
	Total Maharashtra	0.592	2.249	0.563	2.134	0.524	1.834	0.511	1.983	0.478	1.782
	Total India All		182.820		176.680		240.240		241.130		
	Total Palghar District	0.199	0.895	0.199	0.895	0.199	0.895	0.199	0.895	0.199	0.895

Production Figures are in Metric Ton

Area under cultivaion in Hectors





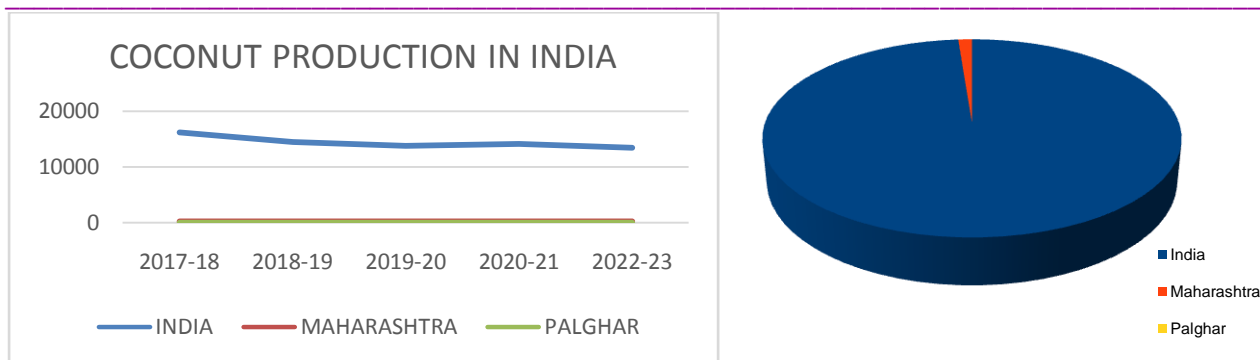
Source: Department of Horticulture Government of Maharashtra

Coconut, also known as Kalpavriksha or the tree of heaven, originated in Southeastern Asia. It is a tall palm plant, reaching 80-100 feet, and has many uses like food, cosmetics, and utilities. Because of this, India is a particularly popular country for coconut farming. One of the world's top producers of coconuts is India. This tasty fruit adds a big amount, Rs. 307,498, to India's economy. India is ranked third in the world for coconut production. In 2020-21, India contributed 34% to the world's coconut production. Agriculture benefits from the significant output of coconuts in states like Karnataka, Tamil Nadu, and Andhra Pradesh. India produced 9,687 coconuts per hectare in 2020-21, one of the highest rates in the world. One of India's top states for coconut production is Maharashtra. Cities like Raigad, Ratnagiri, and Sindhudurg are known for their coconut farming. Every year, Maharashtra produces about 187.47 million coconuts. In 2020-21, it produced 153.44 tonnes of coconuts. Since 1990, Maharashtra's government introduced programs to guarantee work for many crops, including coconuts. The area for coconut farming increased from 8,300 hectares in 1990 to 43,320 hectares in 2018-19. This fruit helps around 15,000 coir-based industries and supports food security and livelihoods for 12 million people in India. Coconut farming can be profitable with good materials, care, and investment. It also helps with global food security, jobs, and rural livelihoods. The top 10 Indian states for coconut production show how important this type of farming is for the country's growth. Coconut trees can vary in the number of coconuts they produce depending on the region and growth conditions. On average, a tree gives 70-150 coconuts per year. Coconuts come in two varieties: tall coconuts, which reach heights of 50 to 90 feet and bear fruit in 7 to 10 years, and dwarf coconuts, which reach heights of 20 to 60 feet and bear fruit in 4 to 5 years. They require sunlight, water, and the appropriate humidity to thrive healthily. They also need lots of water and well-moist soil, not soggy. A coconut tree can live for 60-80 years, but it slows down in producing fruit after 6-8 years. Hybrid coconut palms are best for farming as they give the most nuts. They are chosen for commercial farming. One tall palm tree can give 75 coconuts. Hybrid coconut farming makes high-quality copra. May, the rainy season, is the best time to plant coconut saplings. Organic coconut farming uses co-cultivation, recycling palm residue, proper water management, and organic fertilizers. Drip irrigation with the right amount of water helps. Coconut farming in the Palghar district is done on a small scale. The only way coconuts are distributed is through dealers called Moblya, who set the price per coconut tree each year. From its origins in Southeastern Asia to its widespread cultivation in India, the coconut tree's journey is one of economic significance and versatility. The impact of coconut farming on India's GDP, food security, employment

opportunities, and rural livelihoods is undeniable. Maharashtra's success in coconut cultivation, the diversity of coconut tree types, and the application of effective farming practices all contribute to the growth of this sector. As India continues to nurture its coconut farms and adopt sustainable approaches, the coconut tree's potential will play a pivotal role in shaping the nation's agricultural landscape and economic prosperity.

Table 3.

District wise Area and Production of COCONUT Crops for Maharashtra													
NO	DISTRICT	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		2022-2023	
		AREA	PRODUCTION	AREA	PRODUCTION	AREA	PRODUCTION	AREA	PRODUCTION	AREA	PRODUCTION	AREA	PRODUCTION
1	AURANGABAD	0.060	0.482	0.050	0.413	0.050	0.413	0.050	0.413	0.050	0.413	0.050	0.413
2	BEED	0.008	0.058	0.007	0.069	0.004	0.550	0.003	0.003	0.003	0.024	0.003	0.344
3	BHANDARA	0.001	-	0.001	-	0.001	-	0.001	0.000	0.001	0.000	0.001	0
4	KOLHAPUR	0.600	2.477	0.625	2.752	0.625	2.752	1.270	5.918	0.411	2.615	0.411	2.615
5	LATUR					0.003	-	0.005	0.010	0.005	0.035	0.005	0.550
6	NANDURBAR	0.023	15.896	0.016	0.069								
7	NASHIK							0.040	0.069	0.040	0.069	0.040	0.069
8	PALGHAR	1.493	10.391	1.555	10.391	1.627	10.391	1.630	1.445	1.630	1.445	1.630	1.445
9	PUNE									0.469	0.069	0.349	0.069
10	RAIGAD	2.248	15.896	2.248	15.896	1.968	13.921	1.970	1.927	2.337	13.625	2.337	13.625
11	RATNAGIRI	4.700	35.782	4.700	36.333	4.812	37.251	5.030	40.943	5.030	40.943	5.030	40.943
12	SANGLI	0.260	1.101	0.260	1.101								
13	SATARA	0.379	1.720	0.352	1.514			0.264	1.170	0.264	1.170	0.289	1.239
14	SINDHURDURG	17.026	70.394	17.200	74.936	17.320	75.968	19.900	102.323	20.084	104.043	20.084	104.043
15	THANE	0.168	0.550	0.168	0.619								
	Total Maharashtra	26.965	154.747	27.181	144.092	26.410	141.246	30.163	154.221	30.324	164.450	30.229	165.355
	Total All India		16190.67		14461.6		13779.69		14062.2		13411.93		
	Total Palghar District	1.493	10.391	1.555	10.391	1.627	10.391	1.630	1.445	1.630	1.445	1.630	1.445
Production Figures are in Metric Ton													
Area under cultivation in Hectors													



Source: Department of Horticulture Government of Maharashtra

Findings and suggestions to improve flower production in Palghar district.

In Palghar district, the villagers have encountered a significant issue in their jasmine production due to the prevalence of pest attacks. This is a common challenge faced by agricultural communities across different regions. Pest invasions can have a negative effect on plant health and production, resulting in lower yields and financial losses for the farmers. As a result, many farmers in Palghar have started to look at different possibilities for their methods of farming. To combat the decline in jasmine production caused by pest attacks, several villagers in Palghar district have shifted their focus to the cultivation of yellow plumeria, also known as Sonchafa. This variety of plumeria has emerged as a viable solution to the challenges posed by pests and has gained a reputation for its resilience and success. Notably, farmers in the villages of Vasai and Virar, Palghar, have embraced this alternative cultivation approach, which has not only helped them overcome the pest-related issues but has also positively impacted their livelihoods. Sonchafa, the yellow plumeria, stands as a medium-sized climbing shrub, growing to heights of about 8 to 10 feet. Its distinct feature is its greenish flowers that mature to a vibrant yellow color and emit a captivating fragrance. One of the remarkable attributes of Sonchafa is its year-round blooming pattern. Unlike other flowers, Sonchafa blooms consistently throughout the entire year. From March to October, each shrub produces an impressive yield of 150 to 200 flowers. Although there is a slight decrease in flowering during the winter months, Sonchafa's ability to bloom even during this period is noteworthy. The unique growth pattern of Sonchafa is particularly interesting. When young, it grows like a conventional shrub. However, as it reaches a height of 5 to 6 feet, it begins to display climbing tendencies. This adaptable nature allows for horizontal spreading, making the flowers easily accessible for picking. Among the seven different varieties of Sonchafa, the saffron yellow, pale yellow, light yellow, pure white, and dense yellow types are the most cultivated. It is fascinating to note that none of these varieties bloom year-round. The grafted variety starts flowering in its second year and continues for an impressive span of 35 to 40 years. On the other hand, the seedling plant takes longer to flower, around 12 years, yet boasts an extended lifespan. Cultivating Sonchafa proves to be relatively straightforward, as it can adapt to various soil types and requires minimal care. For instance, many gardeners in Vasai-Virar and Palghar choose to grow Sonchafa using drip irrigation and fertilize it with dry cow manure. This approach ensures optimal growth and flowering. To enhance flower cultivation in Palghar district, a range of suggestions have been put forth. Firstly, there is a call for comprehensive training programs that cover various aspects of flower cultivation. Equipping growers with knowledge and techniques related to modern agricultural practices could significantly boost their productivity and consequently enhance their overall satisfaction with the cultivation process. Additionally, it is proposed that the government of Palghar could play a pivotal role in supporting flower growers. The government might facilitate the delivery of necessary inputs like seeds, fertiliser, and pesticides at discounted prices by aiding in the formation of a cooperative society. This action could not only lessen the farmers' financial burden but also guarantee that they have access to the materials they need for productive farming. Moreover, offering marketing support through such cooperatives

could help growers effectively sell their produce. Advanced training programs focusing on modern techniques and the development of innovative research projects could further contribute to increased productivity. It is suggested that collaborative efforts between the agriculture department and the farmers could lead to the identification of new methods to improve labour efficiency and reduce production costs. Enhanced access to technical assistance, credit, transportation, and marketing information is essential for ensuring that flower growers can achieve optimal results. Encouraging growers to interact with agricultural department officials for advice and guidance on their cultivation challenges can be immensely beneficial. Considering the challenges posed by pests and diseases, the agriculture department could step in by providing necessary resources and guidance to protect plants from such issues. Additionally, embracing organic cultivation methods could prove fruitful, given the rising global demand for organic products. Flowers grown without the use of synthetic fertilizers and pesticides often command higher prices in the international market. Acknowledging the labour-intensive nature of flower cultivation, it's recommended that both central and state governments offer incentives to support growers in their development plans. As production costs continue to rise, such support could aid in maintaining the viability of flower cultivation as a livelihood option for the farming community. In conclusion, the issues faced by flower growers in Palghar district have prompted them to explore innovative solutions such as cultivating Sonchafa. By implementing suggested measures like training, cooperative societies, modern techniques, disease control, and organic cultivation, the flower cultivation sector in Palghar has the potential to thrive and contribute positively to the livelihoods of the local farmers.

FINDING AND SUGGESTIONS FOR IMPROVEMENT OF BANANA CULTIVATION.

In the Palghar district, the cultivation of bananas encompasses several varieties, with "Safed Velchi," "Hazari," and "Bhurkel" being the major ones. Among these, the "Bhuri" Banana has emerged as a distinctive specialty of the region due to its unique characteristics and relatively easy cultivation practices. Unlike many other banana varieties that often require artificial ripening agents, the "Bhuri" Banana doesn't rely on such methods. To extend the ripening process, banana hands are attached to the parent loom, allowing for a controlled ripening timeline. However, it's worth noting that the extent of banana cultivation has faced challenges, especially with the depletion of the Vasai green belt. This has led to a more concentrated cultivation in specific areas, such as Nale, Umbargothan, Sagarshet, Satpala, Rajodi, and Devtalav. The cultivation of bananas in Vasai is marked by a distinct natural approach. Farmers in this region have adopted a practice of growing bananas without the use of chemical fertilizers. This unique method has led to a notable demand for Vasai bananas in the market. Additionally, the region has gained recognition for its "Sukeli" or Sun Dried bananas, which are derived from a specific banana type known as "Nendran" or "Rajeli." These Sun Dried bananas carry a distinct flavor and are highly sought after for their unique taste and texture. In terms of distribution, bananas follow three primary channels: 1) from farmer to contractor, 2) from farmer to commission agent, and 3) direct from farmer to customer. Among these, the second channel – from farmer to commission agent – emerges as the dominant choice. This is followed by channel-I (from farmer to contractor) and channel-III (directly from farmer to customer). Interestingly, the potential of a cooperative society often remains untapped by many banana growers. The average per-farm production of bananas in the region is approximately 16.98 tonnes. Among the varieties cultivated, "Safed Velchi" stands out with a significant production share of 76.27%, followed by "Bhurkel" and "Hazari" at 6.54%. The remaining production consists of various local varieties, contributing around 10.48% collectively. When considering the distribution system, the share of the producer's income is found to be higher in the local market and comparatively lower in distant markets. This is primarily due to the increased transportation costs associated with distant markets. However, other marketing charges such as loading, unloading, grading, packing, handling, and commission tend to be quite similar in both local and distant market scenarios. To enhance banana production, the implementation of improved farming techniques is crucial. Striking a balance in providing effective post-harvest facilities plays a vital role in maximizing the benefits of banana cultivation. Various problems, such as subpar post-harvest

procedures, inadequate transportation infrastructure, a lack of suitable storage facilities, and unsustainable practices that impact the quality of the supply, can be blamed for the comparatively low export rate of bananas. A substantial amount of crop residues and garbage are produced by horticulture-based agricultural systems and processing businesses, it is vital to mention. For example, the waste index for crops like bananas is around 65%. Among these wastes, ripe banana peels constitute about 20%, while the banana chips industry contributes to 35-40% of peel waste. Additionally, mishandling during various stages of production results in 25-40% waste, and only a mere 2% is processed into value-added products, leaving the rest in its raw form. Such a disparity in utilization can lead to substantial discrepancies in pricing and costs. In response to this challenge, there is a pressing need to develop cost-effective technologies that can effectively convert these waste materials into valuable products, thereby optimizing costs. This efficient utilization of waste not only helps reduce production costs but also generates additional income and employment opportunities while contributing to capital formation. Developing value-added products is essential to ensure that farmers consistently receive equitable compensation for their produce. In conclusion, the cultivation of bananas in the Palghar district offers a diverse range of varieties, with the unique "Bhuri" Banana standing out. Despite facing challenges in terms of cultivation areas and distribution mechanisms, the potential for growth remains substantial. By prioritizing sustainable farming practices, exploring cooperative models, and maximizing the utilization of waste materials, the banana cultivation sector in the region can thrive and contribute positively to the local economy.

FINDING AND SUGGESTIONS FOR IMPROVEMENT OF COCONUT CULTIVATION-

Coconut growers in Palghar and Maharashtra are facing significant challenges due to pest attacks. Pests like Rugos Spiralli white fly, Rhinoceros Beetle, and Red Palm Weevil are causing damage to coconut trees, leading to reduced yields and productivity. Production of coconuts in the area has decreased. This decline has been attributed to elements including dispersed land holdings, a shortage of skilled staff, and pest infestations. Extended monsoons, increased moisture, and reduced sunshine have negatively impacted coconut production in Maharashtra. Climate change and unpredictable weather patterns are affecting tree health and productivity. The marketing of coconuts is often unorganized, leading to varied pricing and challenges in reaching consumers effectively. Farmers are also facing low prices for their produce. Many coconut growers are not adopting modern and scientific cultivation techniques, resulting in lower yields, and reduced overall productivity. Hence there is a need to implement integrated pest management strategies to address pest attacks. This could involve the use of natural predators, organic pesticides, and regular monitoring of tree health. Adopt climate-resilient practices to counter the effects of extended monsoons and unpredictable weather patterns. This could include improved drainage systems and soil management techniques. Provide training and workshops for coconut growers to enhance their skills in modern cultivation techniques, pest management, and sustainable farming practices. Encourage the formation of cooperative societies among coconut growers. These societies can provide access to resources, input, and marketing support, leading to better prices for their produce. Invest in research and development to develop disease-resistant coconut varieties that are well-suited to the local climate. This could help combat pest attacks and increase overall productivity. Encourage organic farming methods that lessen the need for chemical pesticides and fertilisers. Organic farming improves soil health and lessens pest impact. Collaborate with marketing experts to develop modern and organized marketing strategies. This could involve direct-to-consumer sales, branding, and participation in local markets. Seek government support for subsidies on inputs, equipment, and technology that can improve coconut farming practices. Government intervention can help alleviate some of the financial burdens faced by growers. Conduct awareness campaigns among coconut growers about the importance of adopting sustainable and scientific practices. This can empower them to make informed decisions for their farms. Encourage collaboration among coconut growers, agricultural experts, and research institutions. Sharing knowledge and experiences can lead to innovative solutions for common challenges. By addressing these findings and implementing these suggestions, coconut growers in Palghar and Maharashtra can

potentially overcome the challenges they are facing and improve their coconut cultivation practices, leading to higher yields and better livelihoods.

CONCLUSION

India holds a significant position as one of the largest coconut producers globally. The palghar district's exceptional coconut productivity can be attributed to fertile soil, reliable irrigation, and the benefits of complementary intercropping. This success has led the state to secure a 1.12% market share. Banana follows closely as india's second most important fruit crop after mango. It leads in production and ranks third in terms of cultivation area among fruit crops. The demand for plants and flowers is also rising globally. India has overtaken china to become the world's second-largest flower producer. This surge in 'flower power' underscores the country's potential in horticulture. The research findings highlight the stability of flower, coconut, and banana cultivation areas in the palghar district. However, production levels for these crops demonstrate slight fluctuations over the study period. The most important lesson to be learned from this is the importance of finding a balance between economic development and environmental sustainability in the production and distribution of these agricultural goods. It is crucial to recognise the complex interactions between commercial dynamics, technological breakthroughs, and cultural importance. To this end, policymakers and stakeholders need to collaborate in envisioning a robust agricultural sector that caters to both local communities and global markets. This requires ongoing research and continuous efforts to address emerging challenges and fully unlock the potential of these essential crops. In the current landscape of the agro-industry, it is imperative for it to maintain its comparative allure, ensuring its growth and development as a major player in india's agricultural growth trajectory. While the text discusses the prominence of coconut, banana, and flower cultivation in india, it lacks an exploration of the challenges faced by these industries and the potential solutions to address them. For instance, there is no mention of the specific issues that might lead to fluctuations in production levels for these crops. Additionally, the narrative could benefit from discussing any technological or innovative approaches that could be employed to mitigate these challenges and ensure consistent yields. Identifying and elaborating on such research gaps would enrich the content by providing insights into potential areas where further investigation and innovation are needed.

REFERENCES

- A.Paneerselvan, D. G. (2019). A STUDY ON PRODUCTION AND MARKETING OF BANANA IN KANYAKUMARI DISTRICT. *JETIR*
- MALSHE, K., KHANDEKAR, R., DESAI, B. G., & MAHADIK, R. (2019). STUDIES ON PRODUCTION AND UTILIZATION OF COCONUT IN PALGHAR DISTRICT OF MAHARASHTRA. *Contemporary research in India*.
- P.J.Kshirsagar, & A.P.Chavan. (1998). Marketing of Banana in Thane District of Maharashtra. *India agro*.
- INDIA, G. O. (2015). POST HARVEST PROFILE OF BANANA. NAGPUR: DIRECTORATE OF MARKETING & INSPECTION.
- P, S., B, U., S, C., & C.S, S. (2023). A fully labelled image dataset of banana leaves deficient in nutrients. ScienceDirect.
- Patel, T. (2018). How This Maharashtra District Produces More Bananas Than 6 Countries in the World! The Better India.
- Ratoori, P., Varij, P., & Khandoori, P. (n.d.). Formation of ionic polymer membrane by using banana peel. Science Direct.
- Shankar, U. (2016). Integrated Pest Management in Banana.
- (INDIA, 2015) (Chaudhuri, 2018) (A.Paneerselvan, 2019) (MALSHE, KHANDEKAR, DESAI, & MAHADIK, 2019) (P, B, S, & C.S, 2023) (P.J.Kshirsagar & A.P.Chavan, 1998) (Patel, 2018) (R.SENTHILKUMAR, 2017) (Ratoori, Varij, & Khandoori) (Shankar, 2016)



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