Title of the paper:

STATUS OF CASHEW INDUSTRY IN DAKSHINA KANNADA DISTRICT

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Abstract

This study details the operating conditions of the cashew processing industries in Dakshina Kannada, Karnataka, India, based on data of 66 units. Dakshina Kannada has of a large number of cashew processing industries with a notable concentration around the towns of Mangalore and Mudabidri. In particular, Mangalore has emerged as a hub for large, labour-intensive cashew processing units. There are around 66 cashew processing units in Dakshina Kannada spreading across 6 taluks say Mangalore, Mudabidri, Puttur, Bantwal, Belthangady and Sullia. These units collectively export around 5,800 tonnes of cashew kernels each year, although the district produces around 245,000 tonnes of raw cashew nuts annually. It has been providing livelihood to 2945 labourers directly and indirectly. Women account for 90-95% of the workforce. The total investment on this sector is about 307050674 crores. Results show that the majority of cashew units were owned by male proprietorship and partnership. The distribution of units among various social groups shows a significant concentration within the 'General' category. A significant majority of these units are micro, accounting for around 60.61% of the total, highlighting the prevalence of very small operations within the sector. The literature review of past study revealed the fact that there has been a tendency among cashew units to move outside Mangalore towards non-problematic zones like rural areas and Districts like Udupi and Uttara Kannada. It has been suggested that there should be proper and timely supply of raw materials, infrastructure and capital flow to retain back cashew processing industries in Mangalore region.

Key Words: Cashew, Distribution, Production, Processing, Export

Introduction

The cashew (Anacardium occidentale L.) is a member of the Anacardiaceae family, a group of about 60 genera and 400 species, including well-known fruits such as the mango (Mangifera indica L.) and the pistachio (Pistacia vera L.). These evergreen trees are fast-growing and can reach a height of 20 metres, although they are usually found between 8 and 12 metres high. It is noteworthy that the cashew is andromonoecious, producing both male and female flowers on the same plant and within the same inflorescence. Tropical environments with annual rainfall of 400-4,000 mm and altitudes of up to 1,000 metres are suitable for cashew cultivation. Cashew trees need plenty of sun and dislike too much shade. They prefer temperatures between 24°C and 28°C, although they can tolerate higher temperatures for short periods. This hardy crop can grow in many types of soil, but not in heavy clay, waterlogged or saline soils. Well-drained red, sandy and laterite soils are best for good cashew growth and yields. Flowering

occurs from December to April in the northern hemisphere and from June to December in the southern hemisphere, with a peak between September and November. Cross-pollination is necessary for cashew propagation.

Literature Review

1. **Sajeev, M.V., P.L. Saroj and R. Lakshmisha, (2014)** investigated the socio-economic factors affecting cashew productivity in Dakshina Kannada, Karnataka, to inform effective extension strategies for improving yields and profitability. The results showed that most cashew farmers had medium to low productivity. 1 Extension contact, participation, education level and main occupation were significantly correlated with cashew production and productivity.

2. **Sajeev, M. V and Saroj, P. L. (2015)** conducted a study details the operating conditions of the cashew processing sector in Dakshina Kannada, Karnataka, India, based on data from 59 units. It found that about 57% of the units were operating at 100-500 tonnes/year, below their installed capacity. Women account for 90-95% of the workforce. Steam boiling is the standard initial conditioning method. Shelling is mainly semi-automatic (by hand), while peeling is manual.

3. **Maruthi Prasad, B. N., et, al., (2015)** showed that Cashew (Anacardium occidentale L.) is an important evergreen cash crop for marginal lands in India. India, a major world exporter (60%), has a national average productivity of 695 kg/ha on 923,000 ha, yielding 613,000 tonnes. Karnataka ranks fifth in area (118,000 ha) and sixth in production (53,000 tonnes) within India, but its productivity of 461 kg/ha is below the national average. Dakshina Kannada has the largest cashew area in Karnataka, followed by several other districts, while Udupi and Uttara Kannada have remarkably high productivity, almost three times the national average.

4. **Akshath, K. V. (2015)** Cashew cultivation is economically vital to coastal Karnataka, second only to the beedi industry. The region's west coast is a major hub for both cashew cultivation and processing, contributing around 70% of Karnataka's total cashew production. Mangalore has emerged as a central processing hub in India, characterised by modern technology and innovative companies. While the industry was once dominated by a few large players, Karnataka now has 266 cashew processing units, mostly in the small-scale sector, with a combined capacity of 3.0 lakh million tonnes.

Objectives

1. To analyze the performance of cashew processing units in India.

2. To understand the state trend in production and processing of cashew

3. To review the status cashew processing units in Dakshina Kannada district processing

Materials and Methods

This descriptive and analytical study used purposive sampling to focus on the Dakshina Kannada district, a major cashew producing region in Karnataka. The present study is based on secondary data collected from the District Industries Centre, Mangalore, covering the six taluks Mangalore, Bantwal, Puttur, Belthangady, Mudabidri and Sullia. Secondary data collected for the period 2021-22 to 2023-24. Proportions and percentages were used for the analysis, which was carried out using Microsoft Excel 2010.

Global Trend

Native to north-eastern Brazil, the cashew nut was introduced to India and Portuguese African colonies such as Mozambique by the Portuguese in the 16th century. Its cultivation then spread from India to all of South East Asia. Cashew is grown mainly in India, Vietnam, Côte d'Ivoire, Guinea-Bissau, Tanzania, Benin, Brazil and other countries in east and west central Africa and south-east Asia, and also in South Africa and Australia.

National Trend

Globally recognized for its exceptional quality, Indian cashew is a major player in the global market. India is the largest producer, processor and exporter of cashew nuts. Within India, cashew cultivation is mainly confined to the peninsular areas comprising the west coast states of Kerala, Karnataka, Goa and Maharashtra and the east coast states of Tamil Nadu, Andhra Pradesh, Orissa and West Bengal. Some cultivation also occurs in Chhattisgarh, the north-eastern states (Assam, Manipur, Tripura, Meghalaya and Nagaland) and the Andaman and Nicobar Islands, although on a smaller scale. Gujarat, Madhyapradesh, Bihar, Chhattisgggarh, Jharrkhand and the north-eastern states are non-traditional states of India actively involved in

cashew cultivation in recent years. The major force behind this trend is government initiative towards extensive cultivation of cashew.

Table No 1: State Wise Area and Production of Cashew in India

State	Area (000 Ha)	Production (000 MT)	Area (000 Ha)	Production (000 MT)	Area (000 Ha)	Production (000 MT)
	2021-22		2022-23		2023-24	
Kerala	106.52	71.76	108.589	71.76	110.258	76.38
Karnataka	138	74.86	138.867	74.86	139.266	79..85
Goa	59.02	24.82	59.444	24.82	59.955	26.07
Maharashtra	191.45	189.71	191.551	189.71	191.616	197.30
Tamil Nadu	173.24	77.3	174.960	77.3	176.01	87.07
Andhra Pradesh	197.92	127.22	198.848	127.22	200.569	133.80
Odissa	223.45	121.28	223.450	121.28	223.45	126.13
West Bengal	14.552	12.768	14.552	12.768	14.552	13.28
Jharkhand	15.58	6.35	15.580	6.35	15.58	6.60
Chhattisgarh	32.4	21.44	32.585	21.44	32.825	22.75
Gujarat	9.8	6.74	11.848	6.74	13.523	7.38
Pondicherry	5	2.24	5.000	2.24	5	2.33
Assam	1.05	1.12	1.050	1.12	1.05	1.15
Tripura	4.25	3.41	4.250	3.41	4.25	3.55
Meghalaya	8.78	9.98	8.780	9.98	8.78	10.38
Manipur	0.9	0.32	0.900	0.32	0.9	0.33
Nagaland	2	0.53	2.000	0.53	1.5	0.55
Total	**1183.912**	**751.848**	**1192.254**	**781.92**	**1199.084**	**794.90**

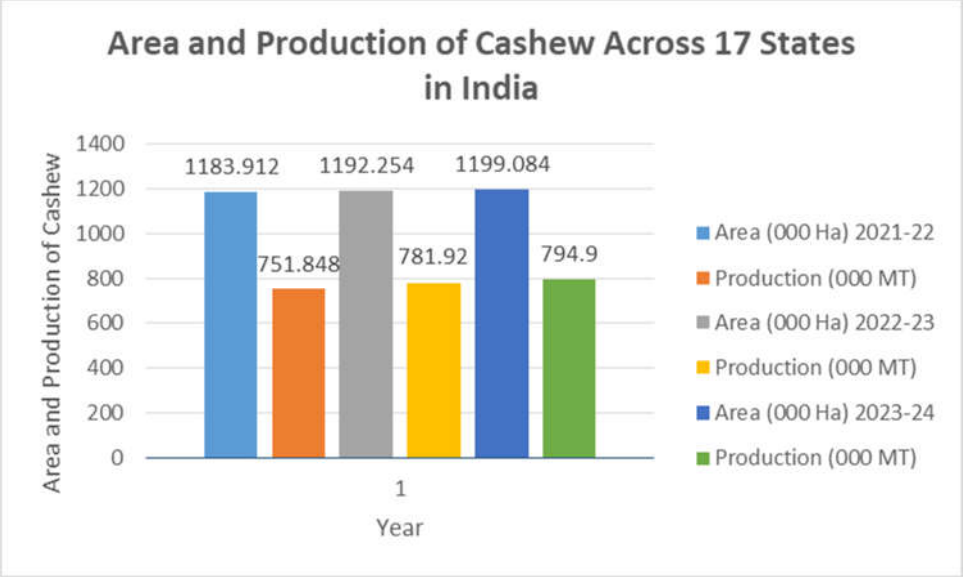
Source: https://dccd.gov.in/area-and-production

India's cashew cultivation is on an upward trajectory, with both area and total production increasing from 2021-22 to 2023-24, signaling a growing focus on this crop. Notably, the percentage increase in production generally outpaces the increase in area, indicating increased

productivity, likely due to improved farming techniques, superior varieties, or better management practices.

Maharashtra, Andhra Pradesh and Odisha consistently have the largest area under cashew and tend to have high production, although their exact ranking may fluctuate. Tamil Nadu, Andhra Pradesh and Maharashtra have shown significant production growth in the last three years, indicating favorable conditions or a strong emphasis on cashew cultivation in these states. In contrast, Kerala, Karnataka and Goa show relatively stable production despite small increases in area, suggesting a potential plateau in productivity or limitations to further expansion in these regions.

The northeastern states and smaller regions such as Pondicherry have much smaller areas and production volumes than the peninsular states. However, some of these regions show percentage increases, indicating potential for growth. Overall, the data show a positive trend in India's cashew cultivation, characterized by increasing area and production, but with significant regional differences in production levels and productivity.



State Trend

Karnataka is a notable cashew producing state in India, ranking 5th in area and 6th in production. The state achieves an average cashew productivity of 653 kg per hectare. Dakshina Kannada district stands out as the leading cashew growing region in Karnataka, followed by Udupi, Belgaum, Chickballapur, Uttara Kannada, Kodagu and Kolar. These districts have

favourable temperature, precipitation and soil conditions for the cultivation of cashew. Some studies showed that cashew cultivation can be extended to mined districts like Tumkur, Koppal, Bellary, Chitradurga and Raichur. The institutions involved in cashew research have suggested to cultivate cashew in Dharwad district due to its conducive climate and contiguity towards Uttara Kannada.

In 2022-2023, Karnataka had 138,867 thousand hectares under cashew cultivation, resulting in a production of 74.86 thousand tonnes. The area under cashew cultivation in the state has grown at a CAGR of 1.9% over the last decade, while production has increased at a CAGR of 2.3%. The presence of cashew processing units, particularly along the west coast, has also contributed to the development of the industry in Karnataka. Despite this growth, the state's average productivity remains lower than the national average. The ICAR Directorate of Cashew Research, located in Puttur, Karnataka, plays a crucial role in improving cashew cultivation through research and training programmes.

District Trend

Coastal Karnataka is a major cashew producing region, contributing 70% of the state's total production. Within this region, Dakshina Kannada leads in cashew area, followed by Udupi, Belgavi, Chitkballapura, Uttara Kannada, Kodagu and Kolar. Dakshina Kannada is crucial to Karnataka's cashew cultivation, providing employment and contributing significantly to the state's agricultural production.

The district has a significant number of cashew processing units, concentrated around Mangalore and Mudbidri, with Mangalore being a hub for large, labor-intensive operations. Dakshina Kannada is home to about 66 cashew processing units spread across six taluks (Mangalore, Mudabidri, Puttur, Bantwal, Belthangady and Sullia). These units collectively export about 5,800 tons of cashew kernels annually, although the district produces about 245,000 tons of raw cashew nuts.

As a major cashew producing area, Dakshina Kannada's processing units are vital to the local economy and employment, and play a critical role in the significant annual cashew kernel exports. The cashew industry is an important source of livelihood for many in the district and contributes significantly to its overall economic development through processes such as roasting, steaming, shelling and hulling. It directly and indirectly employs around 2,945

workers with a total investment of around ₹3,070,506,740 in the sector, producing and exporting cashew under Digit NIC Id 10793 (Processing of edible nuts).

Results and Discussions

An analysis of data from 66 cashew processing units in Dakshina Kannada aims to determine their current status in terms of ownership structure, socio-economic characteristics of their operations, scale of operations, and geographical distribution across the district.

Table No 2: Gender based ownership details of cashew processing units

Gender	Ownership	Percentage
Male	47	71.21%
Female	19	28.79%
Total	**66**	**100**

Source: District Industries Center, Mangalore

There are 66 cashew processing units in Dakshina Kannada district. There are significantly more male ownership (47) than females (19). The analysis shows a clear gender imbalance in the ownership of cashew units. Males make up a much larger proportion of the group (around 71%) than females (around 29%).

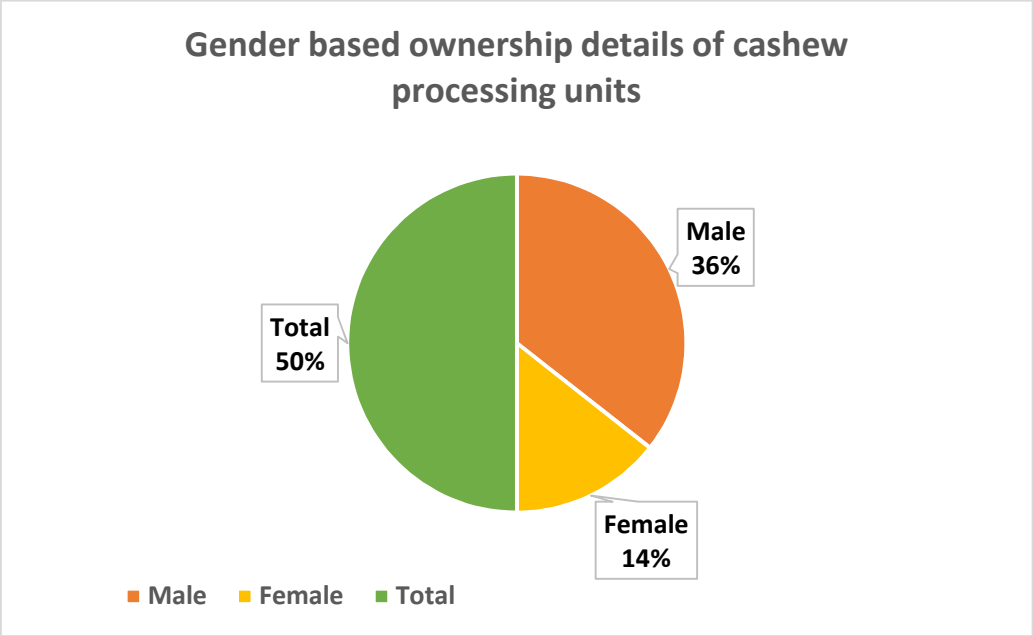


Table No 3: Socio-economic Characteristics of Owners

Social Group	Ownership	Percentage
OBC	16	24.24%
General	49	74.24%
ST	01	1.52%
Total	**66**	**100**

Source: District Industries Center, Mangalore

The data presented outlines the socio-economic background of the unit owners and classifies them into three groups: OBC, General and ST. The distribution shows a significant concentration within the 'General' category, which comprises 49 owners or approximately 74.24% of the total 66 owners. The "OBC" category includes 16 owners, representing approximately 24.24% of the unit owners. On the other hand, the "ST" category has a minimal representation with only 1 owner, representing approximately 1.52% of the total.

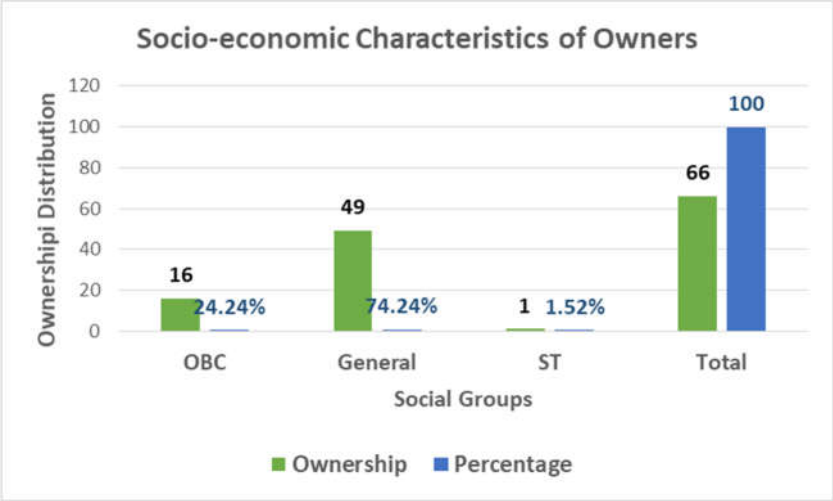


Table No 4: Nature of Ownership

Nature	Ownership	Percentage
Proprietary	34	51.52%
Partnership	26	39.39%
Private Limited Company	05	7.58%
Self Help Group	01	1.52%
Total	**66**	**100**

Source: District Industries Center, Mangalore

The data presented detail the ownership structure of cashew processing units, which are categorized into four different types. The majority of these units operate as either sole proprietorships (34 units) or partnerships (26 units), which together account for approximately 90.91% of the total. This indicates a strong prevalence of individual and joint ownership models within the cashew processing sector. On the other hand, limited liability companies make up a smaller segment with 5 units (about 7.58%), while self-help groups have a minimal presence with only 1 unit (1.52%).

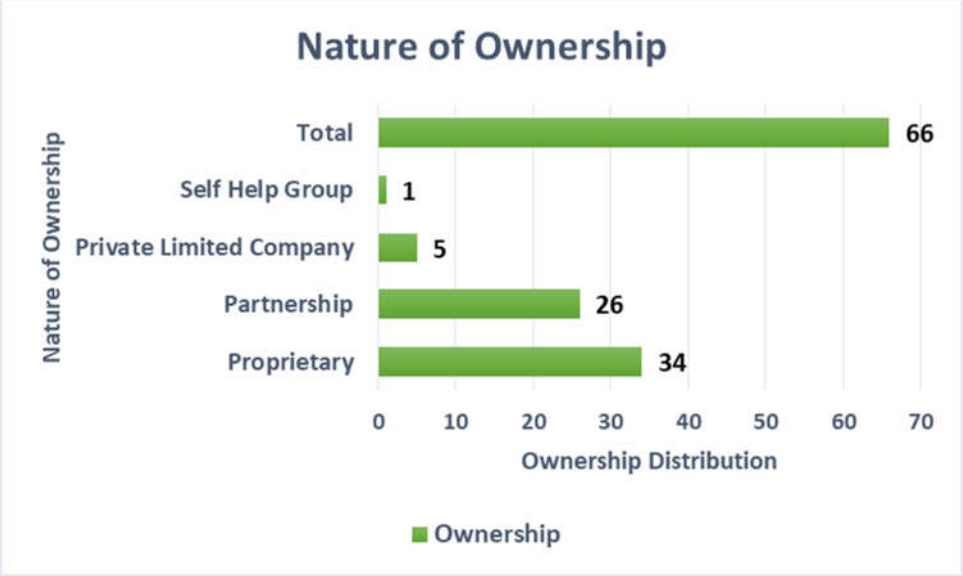


Table No 5: Size of cashew processing units

Size	Units	Percentage
Micro	40	60.61%
Small	21	31.82%
Medium	05	7.58%
Total	**66**	**100**

Source: District Industries Center, Mangalore

The data illustrates the size distribution of cashew processing units, categorized as micro, small and medium. A significant majority of these units are micro, accounting for around 60.61% of the total, highlighting the prevalence of very small operations within the sector. Small units also account for a significant proportion, around 31.82%. Medium-sized units, on the other hand, are a smaller segment, accounting for about 7.58%. This distribution indicates that the cashew processing sector is largely characterized by smaller enterprises.

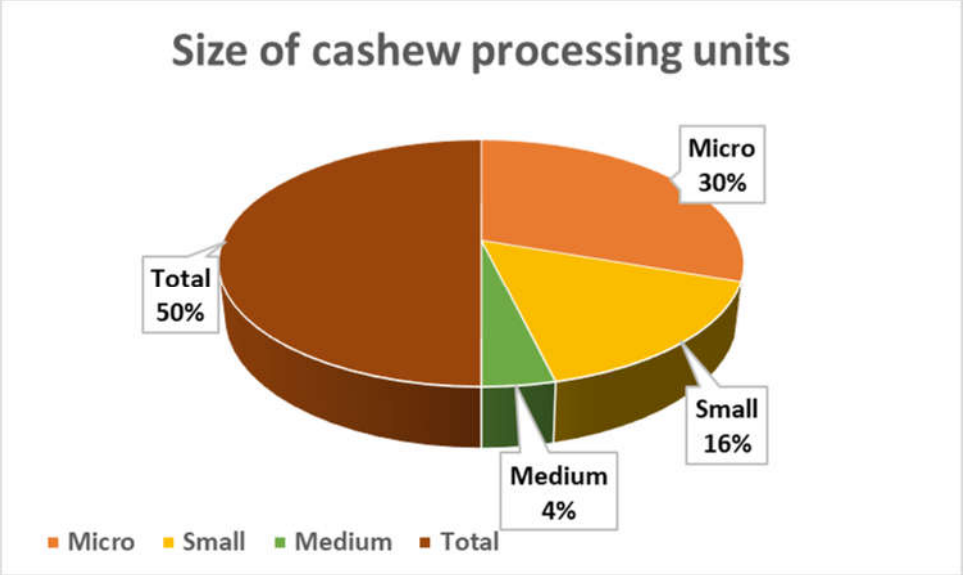


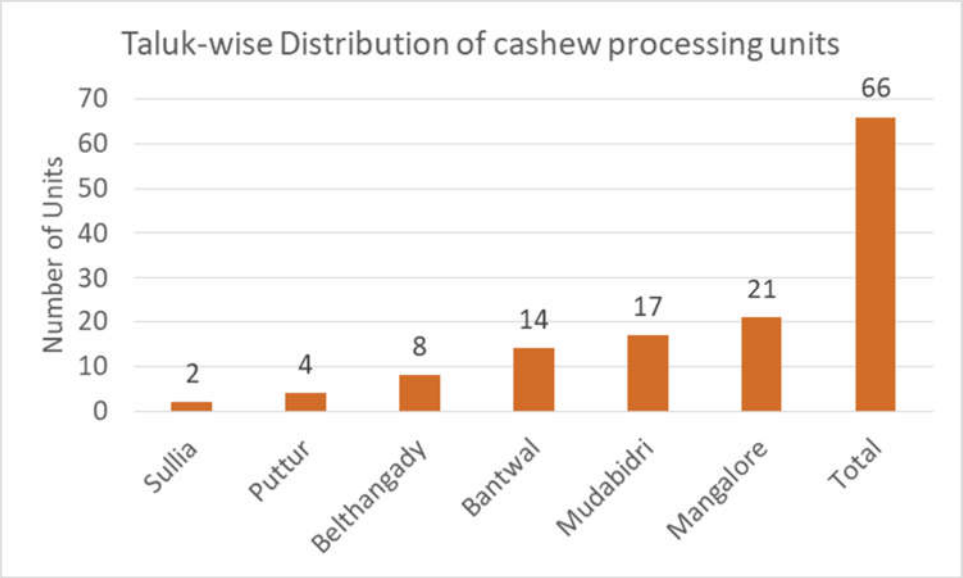
Table No 6: Taluk-wise distribution of cashew processing units

Taluk	Distribution of cashew processing units	Percentage
Sullia	2	3.03%
Puttur	4	6.06%
Belthangady	8	12.12%
Bantwal	14	21.21%

Mudabidri	17	25.76%
Mangalore	21	31.82%
Total	**66**	**100**

Source: District Industries Center, Mangalore

The data presented details the geographical distribution of cashew processing units in different taluks of Dakshina Kannada. Notably, Mangalore has the highest concentration with 21 units, closely followed by Mudabidri with 17 units. Bantwal also has a significant presence with 14 units, while Belthangady has 8 units. Puttur and Sullia have a lower number of units with 4 and 2 respectively. There is a clear trend towards a higher density of processing units in the coastal taluks of Mangalore, Mudabidri and Bantwal. This suggests a possible correlation with better access to raw cashew nuts and well-established trade networks in these coastal areas. Conversely, the inland taluks of Sullia and Puttur show a lower concentration of such units. Furthermore, the data indicate a general increase in the number of cashew processing units as one moves towards the Mangalore region.



Conclusion:

The coastal region of Karnataka is a major cashew producer, contributing 70% of the state's total production. Within this region, the Dakshina Kannada district leads in terms of area devoted to cashew cultivation. Historically, Mangalore has emerged as a hub for large-scale, labor-intensive cashew processing. Notably, women make up the vast majority of the

workforce, about 95%, especially in rural areas where socially and economically disadvantaged communities reside.

However, while cashew processing in Mangalore has stagnated or even declined, the industry is thriving and expanding in neighboring districts such as Udupi and Uttara Kannada, where cashew cultivation is widespread. This shift is partly due to the fact that while the processing units in Mangalore city adhere to statutory benefits and financial compensation for their workers, this is often not the case in the newer processing units in other areas. As a result, more units are moving away from Mangalore to these "non-problematic" locations. Despite working on a piece-rate system, rural units often demand longer working hours. In contrast, any increase in working hours in Mangalore requires additional monetary compensation. This disparity provides an additional incentive to relocate or establish units in rural areas.

Another factor contributing to stagnation in Mangalore is the unreliable availability of raw nuts throughout the season. Rural units, on the other hand, have consistent access to raw nuts. In addition, these rural units benefit from significantly lower inventory handling costs and reduced exposure to price fluctuations. The practice of deferred payment for raw cashews is also common in rural areas, facilitated by established relationships between processors and local growers.

Despite the challenges in processing, Dakshina Kannada is actively exploring organic farming methods to improve soil health and minimize the use of pesticides.

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