

Prospects Of Coffee Cultivation In The State Of Nagaland, India

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How to cite this article: Mary N. Odyuo, Khrielanuo Khezhie, Khan Chand and Saurabh Sharma (2024) Prospects Of Coffee Cultivation In The State Of Nagaland, India. *Library Progress International*, 44(2s), 2240-2247

Abstract:

The investigations were carried out on the coffee cultivation which is a recent practice in Nagaland. Due to its high demand and potentialities in increasing the economic status of the poor it was re-introduced recently (2015) by Land Resource Department, Govt. of Nagaland, and is gaining popularity, therefore, a study was conducted on the prospects of coffee cultivation in Nagaland, India in 2023. The study was conducted in 6 different blocks located in 4 selected districts, namely Wokha, Niuland, Kohima and Mokokchung. A structured interview schedule was prepared to collect primary data from a total of 120 respondents, which comprised of farmers and coffee entrepreneurs considered as stakeholders of promoting coffee in the state. The t- tabulated value of the study concluded that, coffee cultivation had significant impact on the respondents' assets creation and with the improvement in quality of life the respondents had positive attitude towards coffee cultivation. The study further concluded that, stakeholders play a major role in coffee production and there is huge prospect on coffee cultivation in the state owing to its expanding popularity and growing demand. Stakeholders had direct contact with farmers for buying the coffee beans which helps in revolving money within local people thus stabilizing the economy of coffee farmers and also helped the farmers in finding markets; provided training/seminar/demonstration/campaign for coffee, while 20 per cent of the respondents had expanded their business by opening branches of their café and one of the café owner had even started a school on coffee, all of which directly leads to promoting coffee production in the state. Coffee café business was found to be a good source of income providing high employment opportunities for the people in the state.

Keywords: Coffee, stakeholders, farmers, prospects, potential, demand and supply

Introduction

Coffee is an aromatic beverage that is enjoyed and savored by many across the globe. Coffee is derived from the genus of plants known as *Coffea*. The species of *Coffea Arabica* and *C. Canephora* carry major economic importance in the production of coffee, which, collectively, make up for, pretty much, the world's gross coffee demand. "Some of the leading and major coffee producers are Latin America, Asia, East Africa and Arabia. The Robusta seeds, which are round and convex in shape, are relatively more firm and they are commonly grown in low altitudes. The Robusta coffee seeds are comparatively cheaper than the others and it is also found that these seeds contain double the amount caffeine than the Arabica coffee seeds. This explains the tendency of commercial coffee producers' and brands' first choice of Robusta coffee seeds over the other varieties. The Robusta seeds are majorly produced in and sourced from Central and Western Africa, Southeast Asia and Brazil" (anonymous, 2023).

At the state level, the government of Nagaland in its "Nagaland vision 2030" stresses on the need to revive coffee plantations as well as expand coffee cultivation using a cluster approach, with an added objective of helping to reduce the outflow of labour from various rural areas in the State. As of the production in Nagaland, it produces twice as much Arabica as Robusta, yet the rate of production is still very low at only 100kgs per hectare, as indicated over the course of interaction with Land Resources Department officials. Nevertheless, entrepreneurs

in Nagaland have been falling in the limelight in the recent years when it comes to cultivating and sourcing coffee seeds for commercialization since moving from a traditional competitive view of corporate-stakeholder relationships to a stakeholder theory view based on a logic of cooperative partnerships reinforces the idea that stakeholder engagement and empowerment are both entangled with the value creation process and Chiara *et. al* (2018) in their study shed light on “how organizations can design empowerment strategies leading to more effective stakeholder engagement and how empowerment actions can contribute to turn low power stakeholders into active business partners”. Adane and Bewket (2022) in their study revealed that, “stakeholders possessed different degrees of power and interest in quality coffee production. While government agencies were more powerful in decisions and actions related to quality coffee production, coffee farmers (key actors) were less powerful”. Rahman (2022) in his study showed that, “important stakeholders include customers, employees, suppliers, competitors, local communities, investors, activist groups, and government”.

A number of locally grown and brewed coffee shops can also be found today, which indicate and signify the development of coffee in Nagaland in general. Kiho (2020) revealed that various businesses have emerged as a result of coffee plantation in Nagaland established in 2016, ‘Ete Coffee’ is the first Coffee Roasting Company in Nagaland, the business helps to elevate the private sector in Nagaland agro- based business by making use of resources found locally and adding value to local sector. They also provide job opportunity simultaneously encouraging the coffee farmers to cultivate coffee. The farmers are also paid higher price than international market for their coffee and EML (Educate, Motivate and Lead) network is established for safety against any exploitation. Nagaland exports coffee to international market at the prevailing international market rate at the time of purchase whereby, Moa *et. al* (2020) revealed in their study that “for the marketing of coffee produced in the state, international coffee company from South Africa known by Company's name ‘Noble Cause Private Limited’ and invited the company's representatives to Nagaland to Explore possible market tie-up for coffee”. Kiho (2020) in her study showed that ‘The Naga Coffee Pvt Ltd’ is a company jointly managed by Dr. Pieter Vermeulen from Cape Town, South Africa (Vivito Yephtho and Kajikho Archiiko). The company sells and exports roasted as well as green coffee under the name ‘Nagaland Coffee’ which is trademarked.

There has been an increase in the demand of Coffee in the state and people are starting to acknowledge and understand the potential in coffee cultivation. To develop and encourage the practice of coffee cultivation the Land Resource Department, Government of Nagaland (LRD, GON) offers ‘The Coffee Development Scheme’ under which there are various activities which are performed periodically throughout the state and Moa *et. al* (2020) indicated in their study that the convergence of ‘Coffee Board of India’ and ‘Land Resources Department of Nagaland’ has been beneficial in Promoting and encouraging the cultivation of coffee in the state. Nienu, 2022 reported that, Coffee is sold outside the state as ‘Nagaland Coffee’ and is known to be a good high quality coffee and under its brand name ‘Nagaland Coffee’, it has been awarded with the ‘Silver Plaque’ at the 3rd annual Aurora International Taste Challenge 2021 held at South Africa. Coffee is rated on a scale of 1-100 and rating above 80 can be exported and above 85 is known as ‘very-very good’ coffee. As per LRD, GON, the suitable area for coffee in Nagaland is 10,40,100 Ha through the GIS and it set the target for 2030 at 30,000 Ha.

Research methodology

Coffee cultivation is a recent practice in Nagaland. Due to its high demand and potentialities in increasing the economic status of the poor it was re-introduced recently (2015) by Land Resource Department, Govt. of Nagaland, and is gaining popularity, therefore, a study was conducted on the prospect of coffee cultivation in Nagaland, India. The study was conducted in 6 different blocks as per the availability of requisite respondents (Kohima RD block, Mangkolemba RD block and Ongpangkong (South) RD block, Sanis RD block, Wokha RD block and Niuland RD Block) located in 4 selected districts, namely Kohima, Mokokchung, Wokha and Niuland. A structured interview schedule was prepared to collect primary data from a total of 120 coffee cultivators from 8 villages (Touphema, Nerhema, Khar, Khensa, Lakhuti, Wokha, Hovishe, Ghotovi). The prospects of coffee cultivation was measured in terms of attitude of farmers and stakeholders towards coffee cultivation, the role of stakeholders towards coffee production and the production trend of coffee in the study area. In this study, the individuals or group who has an interest in coffee business and can either affect or be affected by the business were considered as the stakeholders. Attitude was referred to the way a person perceives and evaluates something or someone.

In this study, the attitude of the stakeholders and farmers were measured by devising two separate set of questions. For the farmers, questions were categorized into two sub- groups such as attitude of farmers towards the quality of life improved through coffee cultivation and assets creation through coffee cultivation. A score of 1 was given to every answer which was agreed by the respondents, score 2 for the responses which was neutral or partially agreed and score 3 was given to the answers which were disagreed by the respondents. Mean and frequency was calculated respectively.

Results and analysis

The 'prospects of coffee cultivation' was measured in terms of 'attitude of farmers and stakeholders towards coffee cultivation', 'the role of stakeholders towards coffee production' and 'the production trend of coffee in the study area'.

1. Attitude of the coffee farmers towards the prospects of coffee cultivation

In this study, 'attitude' was referred to the respondents' favourable or unfavourable opinions about the prospects of coffee cultivation in the state. The attitude of coffee cultivation was measured under two aspects:

- i. Qualitative response based on improvement in quality of life.
- ii. Quantitative response based on their assets creation viz., financial assets and physical assets, through coffee cultivation.

Table 1.1: Improvement in quality of life through coffee cultivation (N=110)

From table 1.1 it was revealed that 54.54 per cent agreed that coffee cultivation impacted on their personality

Sl. no	Statement	Response					
		Agree		Undecided		Disagree	
		f	%	f	%	f	%
1.	Personality development after coffee cultivation?	60	54.54	30	27.27	10	9.09
2.	Purchasing power of food improved?	55	50	49	44.54	6	5.45
3.	Purchasing power of medicine and health care facilities improved?	59	53.63	47	42.72	4	3.36
4.	Purchasing power of household items increased?	57	51.81	48	43.63	5	4.54
5.	Education facilities for children improved?	63	57.27	31	28.18	18	16.36
6.	Able to purchase 2/4 wheeler	55	50	50	45.45	5	4.54

development, while 27.27 per cent was neutral on personality development after coffee. With self-sufficiency, their outlook on life and perspective on many affairs changed positively influencing a positive change in their personality.

From the table above it is clearly evident that 50 per cent of the respondents agreed that their purchasing power of food improved after coffee cultivation. 44.54 per cent of the respondents were neutral about the purchasing power. It was concluded that with the increase in income sufficient amount of food could be procured by the respondents.

It is seen that majority (53.63%) of the respondents agreed that from coffee cultivation their purchasing power for medicines and health care facilities improved. The respondents could avail better health care facilities from towns and cities which were not present in their villages.

The table reveals that 51.81 per cent of the respondents agreed that their purchasing power for household items increased from coffee cultivation, followed by 43.63 per cent of the respondents were neutral about the increase in the purchasing power for household items.

From the table above, it was revealed that majority (57.2%) of the respondents agreed that they were able to increase their income from coffee cultivation, which allowed them to give better educational opportunities and enabled them to transfer their children from govt. to private schools as well as send them to other towns and cities for higher education. 28.18 per cent of the respondents were neutral about the statement. Table 1.1 further showed that, majority (50%, 45.45%) of the respondents could purchase 2/4 wheeler as a result of coffee cultivation.

Thus, it was construed that, based on quality of life, the respondents had positive attitude towards coffee cultivation. The result is in line with the findings of (Achumi, 2022) regarding the attitude of the coffee farmers in Zunheboto district.

2. Assets creation through coffee cultivation

In this study, asset refers to anything valuable or useful owned by the respondents. The assets could be money, savings accounts, bonds, life insurance, land, house, jewellery and collectibles.

Table 1.2: Distribution of respondents based on the assets creation through coffee (N=110)

Sl. no	Assets created	Quantity	
		Before	After
1.	Creation of Financial Assets		
i	Savings account (in numbers)	1	2
ii	Access to loan (number of sources)	2	3
iii	Annual income (Rs.)	Rs. 5580.91	Rs. 15703.64

iv	Amount of savings (Rs.)	Rs. 7081.82	Rs. 9710.00
2.	Creation of Tangible Assets		
i	Possession of house (approx. worth in Rs.)	Rs. 65136.36	Rs. 162590.91
ii	Possession of land (in numbers)	2	3
iii	Source of income(in numbers)	2	3

The table 1.2 shown above provides the data regarding the assets created through coffee cultivation. In the case of savings accounts owned by the respondents, it was found that, on average, 1 saving account was owned by the respondents before coffee cultivation which then increased to 2, after coffee cultivation. The average of the respondents' access to loans was 2, it increased to 3 after coffee cultivation. The average annual income of the respondents was Rs 5,580.91 before, and it increased to Rs 15,703.64 after coffee cultivation. Before coffee cultivation, the average of savings was Rs 7,081.82 which increased to Rs 9,710, after. It was found that the house owned by the respondents was on average, valued at Rs 65136.36 which increased to Rs 162590.91 later. In regard to possession of land by the respondents, on average it increased from 2 to 3 after coffee cultivation. Lastly, it was found that the average, sources of income of the respondents was 2 before coffee cultivation which increased to 3 after coffee cultivation. From the table above it can be concluded that after coffee cultivation the respondents had an increase in their assets which shows that coffee cultivation has a positive prospect in the state.

Table 1.3: Paired t-test for assets creation of the respondents (N=110)

Paired	Mean	Df	t-calculated	Sig(1-tailed)
Annual income Before	5580.909	109	-8.888	<0.010
Annual income After	15703.636			
Savings before	7081.818	109	-6.707	<0.010
Savings after	9710.000			
Possession of house Before	65136.364	109	-14.003	<0.010
Possession of house After	162590.909			
Savings ac(no) before	1.336	109	-21.705	<0.010
Savings ac(no) after	2.327			
Access to loan before	1.618	109	-19.391	<0.010
Access to loan after	2.545			
Possession of land (in no)before	1.709	109	-18.213	<0.010
Possession of land (in no)after	2.600			
Source of income before	1.636	109	-31.560	<0.010
Source of income after	2.573			
Number of financial institution before	1.645	109	-24.454	<0.010
Number of financial institution after	2.509			

Table 1.3 reveals that coffee cultivation had significant difference in respondents' assets created using paired t-test. From the table 1.3 it is clear that there is significant increase in annual income, savings, possession of house, access to loan, possession of land, source of income and number of financial institutions of the farmers after coffee cultivation at 1% level of significance. Based on the t- tabulated value analyzed at 1% level of significance, being found less than the respective calculated values, it was concluded that coffee cultivation had significant effects on the respondents' assets creation.

Table 1.4: Overall attitude of coffee farmers on the status of prospects of coffee cultivation (N=110)

Sl.no	Range	Category	Frequency	Per centage	Mean	S.D
1	<27	Least favourable	10	9.09	29.8	2.7

2	27-32	Favourable	82	74.54		
3	>32	Highly favourable	18	16.4		
		TOTAL	110	100		

From the table 1.4, it was found that, majority (82%) of the respondents had favourable attitude towards the status of prospects on coffee cultivation followed by 18 per cent of the respondents with highly favourable attitude and 10 per cent of the respondents with least favourable attitude towards the status of prospects on coffee cultivation in Nagaland. From the table above it was clear that the respondents overall attitude about the prospects of coffee in the state was satisfactory.

3. Role of Stakeholders in coffee production

In this study, stakeholders are the individuals or group who has an interest in coffee business and can either affect or be affected by the business.

Table 2.1: Attitude of stakeholders towards coffee business (N=10)

Sl. no	Items	Response	f	%
1.	You have contact with how many coffee farmers of Nagaland	29 at an average		
2.	Is coffee a seasonal or viable business in Nagaland?	Seasonal business	3	30.00
		Viable business	7	70.00
3.	Kindly share your opinion on coffee café business in Nagaland based on your experience?	Good source of income	10	100.00
		Employment opportunities	10	100.00
		Scope for different business ventures	10	100.00
4.	What are the factors that drive you to start coffee business?	Passion	3	30.00
		Skills	2	20.00
		Availability of resources	1	10.00
		Growing consumer market	3	30.00
		Trend	1	10.00
5.	Please share your views on the supply and demand of coffee in the state as per your experience.	Growing demand	4	40.00
		Expanding popularity	6	60.00

The table 2.1 clearly shows the attitude of the stakeholders towards coffee business in the state.

The study revealed that the stakeholders selected for the study had direct contact with the coffee farmers of Nagaland at an average of 29, which is clear that every stakeholder had at least more than 10 farmers with whom they were in direct contact with for buying the coffee beans and also to provide various economic benefits.

With regard to the viability of coffee business in the state, majority (70%) of the respondents shared that it was viable business and 30 per cent shared that it was seasonal the reason being that in hot places coffee is not the choice of beverage for the people unless the people are coffee connoisseurs.

Based on the experience of the coffee entrepreneurs, 100 per cent of the respondents stated that coffee café business was a good source of income, provided high employment opportunities for the people and had scope for starting different business ventures.

From the study it was revealed that majority (30%) of the respondents started coffee business because of their passion to start a café and also another 30 per cent of the respondents stated that the growing consumer market for coffee cafes was what made them start the business. 10% stated that they started the business because of the trend of owning a café and another 10 per cent stated that they started the café due to the availability of resources.

With regard to the supply and demand of coffee in the state 60 per cent of the respondents state that it has an expanding popularity and 40 per cent state that it has a growing demand.

Table 2.2: Procurement of Coffee beans by stakeholders (N=10)

Source of procurement				Approx. Amount spent in procurement	
Nagaland		Outsourced		Nagaland	Outsourced
f	%	f	%	Av. Amount	Av. Amount
7	70	3	30	21800	8500

Table 2.2 mentioned above reveals that, majority (70%) of the respondents were procuring coffee beans from Nagaland as they preferred the coffee grown in Nagaland more than the beans outsourced (30%). Nagaland coffee is known for its unique aroma and taste which was the reason why the entrepreneurs preferred it more and also to help our people develop and contribute to employment opportunities. The average amount spent in procurement of coffee beans from Nagaland was Rs 21800 and the average amount outsource was Rs 8500, it is clear from the

table that majority of the respondents were spending more money on its people and that the money were circulating among the Naga people thus showing a positive impact on the financial status of the state.

Table 2.3: Linking coffee farmers to a market/ wholesaler/retailer during last five years (N=10)

Sl. no	Year	Average number of coffee farmers benefitted
1.	2021	95
2.	2020	87
3.	2019	82
4.	2018	70
5.	2017	64

From the table 2.3 it is clearly shown that on average, maximum 95 coffee farmers were linked to a market/ wholesalers or retailers by the respondents personally or in collaboration with the Govt./private sector/ NGOs in the year 2021. Many studies have proven that market linkage is one of the major problems for the farmers in rural areas and Government and Non-Government agencies are always trying their best to link them up with buyers. Through this study, it was found that stakeholders were giving huge support to the farmers by linking direct market to them which directly promotes coffee cultivation.

Table 2.4: Stakeholders innovation towards promotion of coffee in the state. (N=10)

Sl. no	Most remarkable achievement	f	%
1.	Started a school	1	10
2.	Provided training/seminar/demonstration/campaign for coffee	3	30
3.	Started his own cafe	7	70
4.	Started more café in different location	2	20

Table 2.4 reveals that majority (70%) of the respondents started their own café, 30 per cent provided training/seminar/demonstration/campaign for coffee, while 20 per cent of the respondents opened branches of their café in different location and 10 per cent of the respondents started a school for coffee.

4. Production trend of coffee in the study area

In this study, production trend was used to analyze and predict production variance using data from the year 2018- 2022. From Table 2 it indicates significant linear trend of production under coffee over the study period. 99 per cent of the variation under coffee was captured by the considered trend model. From the regression coefficient and figure-1 the area under coffee was expected to increase in the coming years. It was clearly revealed that the area under coffee cultivation had been increasing significantly from 2018 (45 kgs) to 2022 (66 kgs), the reason for the growth of production of coffee is the distribution of coffee seeds and saplings across many villages for free of cost, which was undertaken and executed by the Department of Land Resources, Government of Nagaland, also, because the distribution was done directly by the concerned department (LRD), to the respective villages without relying on middle/third parties. Another important measure taken by the Government which influenced the growth of production even during the nationwide lockdown in the year 2020 was the initiative of the department distributing free saplings following the Covid-19 protocols as there was an exemption for agriculture by the Government of India, this findings were in line with the findings of (Achumi, 2022) regarding the production trend in Zunheboto district from 2016-2020.

Therefore, with the increasing trend in coffee production over the years, it is promising for the coffee farmers for livelihood sustainability through coffee cultivation.

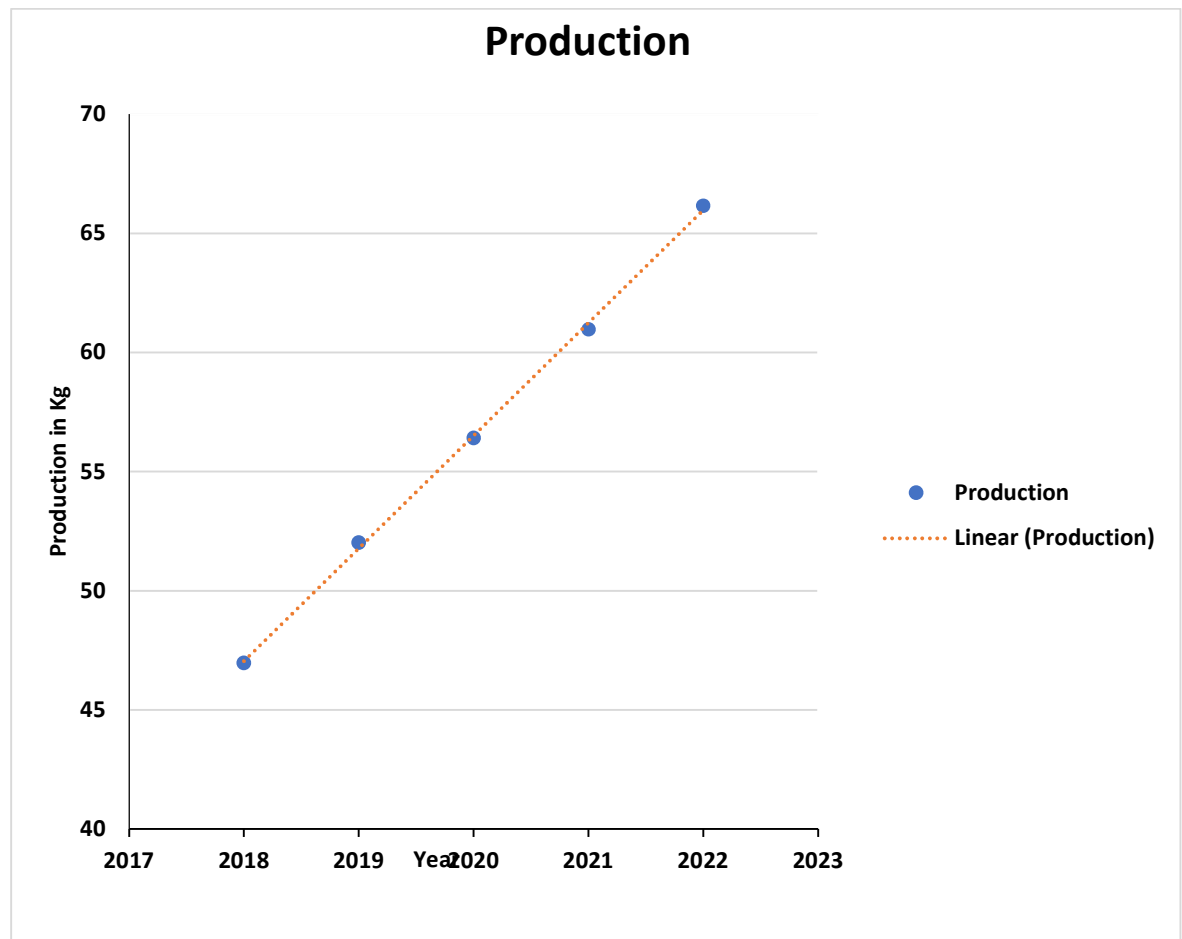


Fig: 1 Trend of coffee production in the study area

Conclusion

The t- tabulated value of the study concluded that coffee cultivation had significant impact on the respondents' assets creation and with the improvement in quality of life the respondents had positive attitude towards coffee cultivation. The study further concluded that, stakeholders play a major role in coffee production and there is huge prospect on coffee cultivation in the state owing to many reasons such as, 60 per cent of the respondents stated that it has an expanding popularity and growing demand. Stakeholders had direct contact with farmers for buying the coffee beans which helps in revolving money within local people thus stabilizing the economy of coffee farmers and also helped the farmers in finding markets; provided training/seminar/demonstration/campaign for coffee, while 20 per cent of the respondents had expanded their business by opening branches of their café in different location and one of the café owner had even started a school on coffee, all of which directly leads to promoting coffee production in the state. Coffee café business was a good source of income providing high employment opportunities for the people in the state. From the regression coefficient and figure-1 the area under coffee was expected to increase in the coming years. It was clearly revealed that the area under coffee cultivation had been increasing significantly from 2018 (45 kgs) to 2022(66 kgs).

Acknowledgement:

I would like to thank to the Dean and Head of the Department of RDP, SAS, Nagaland University, Medziphema for providing necessary facilities for conduction research work

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