

CONSTRAINTS OF COFFEE GROWERS IN ZUNHEBOTO DISTRICT OF NAGALAND, INDIA

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ABSTRACT

Botanically, coffee belongs to the genus *coffea* of the family *Rubiaceae*. The two most important species of coffee grown in India are arabica (*Coffea arabica*) and Robusta (*Coffea canephora*). The present investigation was conducted during the year 2022 with the objective to identify constraints faced by coffee growers in Zunheboto district of Nagaland, India. Zunheboto district was purposively selected for the study because maximum number of coffee growers is present there. A sample of 120 respondents was selected from 8 selected villages in Zunheboto district using a proportionate random sampling method. The findings of the study revealed that majority of the respondents (73.33%) belonged to middle aged category with high school level of formal education (55.00%). Majority of respondents (41.67%) belonged to Semi-medium (2-4 ha) size of operational land holdings category with 84.17% had medium level of overall annual income of 84.17%. A large number of the respondents (67.50%) were found to be engaged in agriculture in occupation with medium level of family size (51.67%). Majority of the respondents (74.17%) had 2 - 5 years of experience in coffee cultivation followed by 18.33 per cent respondents with less than 2 years of experience in coffee cultivation. Most of the respondents (67.57%) had medium level of exposure to mass media on coffee cultivation. Majority of the respondents expressed their problems related to lack of credit facilities, lack of knowledge about pest and diseases, harvesting, marketing problems, lack of proper inputs and transportation problems. To tackle these constraints the concern departments and agencies should help in providing linkage to loans and subsidy and take proper initiative in providing training, demonstration programmes related to coffee cultivation activities.

(Key words: Coffee cultivation, coffee growers, constraints, Nagaland)

INTRODUCTION

Coffee is one of the most important commercial plantation crops globally and is often regarded as the second most traded commodity after petroleum (Anonymous, 2021; Anonymous, 2022). Botanically, coffee belongs to the genus *Coffea* of the family *Rubiaceae* and is typically cultivated under shade as a silvi-horticultural system and performs well in tropical regions with moderate temperature, well-distributed rainfall, and soils rich in organic matter.

Globally, Brazil, Vietnam, Colombia and Indonesia together account for nearly 59 per cent of total coffee production (Anonymous, 2021; Anonymous, 2022). India ranks seventh among coffee-producing countries and is

internationally known for its high-quality shade-grown mild coffees, with more than 60 per cent of its production exported (Anonymous, 2022). Coffee cultivation in India is broadly grouped into the traditional southern region, non-traditional eastern region, and the North Eastern region comprising the Seven Sister States, including Nagaland (Bharath, 2022).

Nagaland offers favourable agro-climatic conditions for high-altitude, shade-grown coffee, and cultivation is mainly concentrated in districts such as Zunheboto, Mokokchung, Wokha, Mon and Kohima (Anonymous, 2022). Coffee was introduced in the state during the 1970s with support from the Coffee Board of India and the Nagaland Plantation Crops Development Corporation, primarily to promote plantation agriculture and

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reduce shifting cultivation. However, inadequate financial support, weak market linkage and limited technical guidance led to the abandonment of many plantations in the early 1990s. Recent revival efforts under the Special Area Programme have focused on supplying planting materials, subsidies and training support.

Despite these initiatives, the sustainability of coffee cultivation depends largely on addressing field-level constraints faced by growers. Studies on smallholder plantation crops in Nagaland have reported persistent production, financial and marketing constraints due to limited institutional support (Tiasoba and Odyuo, 2024). Identifying such constraints is therefore essential for effective extension planning and policy intervention. Hence, the present study was undertaken to analyse the major constraints faced by coffee growers in Zunheboto district of Nagaland, India.

MATERIALS AND METHODS

The present study was conducted during the year 2022 in the state of Nagaland, located in the North Eastern region of India, having a total geographical area of 16,579 sq. km. Among the 16 districts of Nagaland, Zunheboto district was selected purposively for the study since it is also a pioneer in coffee cultivation in the State.

Zunheboto district comprises eight sub-divisional blocks. Out of these, four blocks namely Atoizu, Akuluto, Akuhaito and Pughoboto were selected purposively, as a maximum number of farmers in these blocks were engaged in coffee cultivation. From each selected block, two villages were selected, resulting in a total of eight villages for the study. The villages selected were Khrintomi and Roto from Atoizu block; Litta and Phiushimi from Akuluto block; Yesheluto and Philimi from Akuhaito block; and Iphonumi and Tsaphimi from Pughoboto block.

From the selected villages, a total sample of 120 coffee growers was drawn using the proportionate random sampling technique, ensuring adequate representation of respondents from each village.

Primary data for the study were collected through personal interview method using a well-structured and pre-tested interview schedule. The data collection was carried out during the period from February 2022 to June 2022. The interview schedule covered information related to the socio-economic characteristics of the respondents, coffee cultivation practices, marketing aspects and constraints faced by the coffee growers in the study area.

The collected data were coded, tabulated and analyzed using simple statistical techniques in accordance with the nature of the data and objectives of the study. The following statistical tools were employed:

Frequency refers to the number of times a particular response or observation occurred.

Frequency (f) = Number of respondents falling in a particular category

Percentage was calculated to express the frequency of responses in relation to the total number of respondents.

$$\text{Percentage (\%)} = \frac{\text{Frequency of a particular response}}{\text{Total number of respondents}} \times 100$$

The ranking method was used to prioritize the constraints faced by coffee growers. Constraints were ranked based on the descending order of frequency of responses, where the constraint reported by the highest number of respondents was assigned the first rank.

RESULTS AND DISCUSSION

Findings revealed that majority of the respondents (73.33%) were in the middle-aged group followed by 14.17 per cent of respondents in old group and 12.50 per cent of the respondents in young group. A similar type of observation was also reported by Thakuria *et al.* (2024) and Laldampui *et al.* (2023) where 43.74 per cent and 51.00 per cent of the respondents were in the middle-aged group respectively. Majority of the respondents (97.50%) were male and only 2.50 per cent were female in coffee cultivation. Most of the respondents (55.00%) had high school level of education. Majority of the respondents (90.00%) were married. Majority of the respondents (67.50%) had agriculture as primary occupation. This finding is in line with the finding of Ananthnag (2014), who also reported that agriculture was the primary occupation of a majority of the respondents. Majority of the respondents (41.67%) belonged to the semi-medium land holding category. Most of the respondents (84.17%) had medium annual net farm income ranging from Rs.43,455- Rs.1,47,247. In case of sources of information, majority of the respondents (74.17%) had medium level of exposure to informal sources of information. Majority of the respondents (61.77%) were found to be involved in social participation and 74.17 per cent had 2-5 years of experience in coffee cultivation. Majority of the respondents (65.83%) had not undergone or participated in any training related to coffee cultivation. Almost half of the respondents (43.33%) sold their produce to middleman.

Coffee growers in Zunheboto reported significant constraints due to inadequate infrastructural support, labor shortages and resource limitations. Various problems faced by the farmers in coffee cultivation and measures suggested by them to solve the problems are presented in Table 2. Financial problem was the 1st major problem reported by respondents. Majority of the respondents (61.67%) faced problem related to Lack of credit facilities and subsidy in the study area. Plant protection was the 2nd major problem reported by respondents in study area, that 58.33 per cent of the respondents faced problem regarding lack of knowledge on pest and diseases. It was observed that major loss on production was caused by insect and pest such as white stem borer coffee berry borer. Similarly, Momin *et al.* (2018) reported that insect pests are one of the major constraints in the cultivation of ginger in Meghalaya.

Findings revealed that harvesting was the 3rd major problem with 54.17 per cent of the respondents reported to have faced problems during harvesting of coffee; it was observed that there was shortage/lack of skilled labour during harvesting of coffee as the cherries are handpicked selectively one by one.

Marketing was the 4th major constraint faced by the respondents. It showed that 52.5 per cent had reported this problem, this was mainly due to lack of proper marketing channels and most of the respondents had little information on the price and quality of the goods. Similarly, Michael (2011) reported that marketing was the most important constraint in ginger cultivation. In the present study, Dhenge and Ovhar (2014) reported that the majority of turmeric growers (50.56%) faced with constraints like inadequate availability of improved seed. Thakuria (2023) reported that majority of litchi growers faced problem of high cost of good quality inputs.

Inputs was the 5th major constraint faced by the respondents. Findings revealed that 47.5 per cent of the respondents in the study area had difficulty in procuring good quality planting materials. This was mainly due to lack of contact with concerned department and extension agencies. Odyuo *et al.* (2017) reported that in Nagaland, communications and transportation facilities was inadequate as reported by functionaries of NGOs.

Transportation was ranked the 6th constraint and

45.83 per cent of the respondents reported that the road connectivity between farm, village and town haven't been repaired for more than a decade.

The study revealed prevalence of diverse profile characteristics among the respondents of Zunheboto District of Nagaland, emphasizing several key insights. The majority of the respondents belonged to middle age group, mostly male and more than two-third of the respondents were married and had medium size family. Most of the farmers in the study area practices coffee cultivation in a small and medium scale. Therefore, initiative may be taken to motivate the farmers to start large scale of coffee cultivation. Majority of the respondents (65.83%) had not undergone or participated in any training related to coffee cultivation. The concerned department should initiate action to conduct more numbers of massive training or capacity building programmes for respondents so that they are motivated to adopt the recommended scientific practices of coffee. Findings revealed that majority of the respondents (61.67%) struggled with financial constraints during initial period of cultivation i.e., 1st to 3rd year of coffee farming as it has high initial cost of cultivation and is labour-intensive. Therefore, the government or concerned department should provide financial subsidy to the farmers or facilitate access to loans from sources like NABARD, KCC as well as co-operative banks through linkage provided by the concerned agencies and personnel during the initial period.

Table 1. Socio-economic profile of the respondents

N= 120

Sl. No.	Variables	Categories	Score range	Frequency	Percentage
1.	Age	Middle	44-63 years	88	73.33
2.	Sex	Male	1	117	97.50
3.	Education level	High school	2	66	55.00
4.	Marital Status	Married	1	108	90.00
5.	Occupation	Farmer	1	81	67.50
7.	Land holdings size	Semi-medium	2-4 ha	50	41.67
8.	Sources of income	Coffee	Rs 41,862	120	100
9.	Total Annual income	Medium	Rs 43,455-Rs 1,47,247	101	84.17
10.	Informal source of Information	Medium	5- 8	116	74.17
11.	Social participation	Involved	1	80	66.67
12.	Coffee farming experience	Medium	2-5 years	89	74.17
13.	Training exposure	Not undergone training	0	79	65.83
14.	Market accessibility	Middleman	1	52	43.33

Table 2. Prioritization of constraints faced by the growers**N=120**

Sl.No.	Category	Nature of constraints	F	%	Rank	Suggestions
1	Financial problem	Lack of credit facilities and subsidy	74	61.67	I	Credit and financial subsidy assistance from the government
2	Plant protection	Lack of knowledge on pest and diseases	70	58.33	II	Training and demonstration for pest and disease by the concern department
3	Harvesting	Lack of skilled labour during harvesting	65	54.17	III	Provide training related to harvesting techniques by the concerned department
4	Marketing	Lack of proper market facilities	63	52.5	IV	Establishment of proper marketing channels
5	Inputs	Difficulty in procuring good quality planting materials	57	47.5	V	Department should supply good quality planting materials
6	Transportation	Poor road connectivity between farm, village and town	55	45.83	VI	Proper maintenance of the road

REFERENCES

- Ananthnag, K., A.K.M. Mahatab and K.H.M. Vinaya, 2014. A study on socio-economic status of farmers practicing organic farming in Eastern Dry Zone of Karnataka. *J. Biosci. Informatics*, **1** (2): 23202930.
- Anonymous, 2021. FAOSTAT statistical database. Food and Agriculture Organization of the United Nations, Rome. <https://www.fao.org/faostat/>
- Anonymous, 2022. Coffee statistics and market information. Coffee Board of India, Ministry of Commerce and Industry, Government of India, Bengaluru. <https://coffeeboard.gov.in/>
- Anonymous, 2022. Agricultural practices and policy guidelines. State Land Resource Department, Government of Nagaland, India. <https://landresources.nagaland.gov.in/>
- Bharath, H. L. 2022. Entrepreneurial behaviour of coffee growers. Unpublished M. Sc (Agri.) Thesis, University of Agricultural and Horticultural Sciences, Shivamogga.
- Dhenge, A. and N.D.S. Ovhar, 2014. Constraints faced by turmeric growers about improved cultivation practices. *Trends Biosci.* **7** (19): 29993000.
- Laldampuii, J., J. Longkumer, T. Longchar, M.N. Odyuo and Sashilila, Ao., 2023. Status of grape production practices in Champhai district, Mizoram, India. *J. Soils and Crops*, **33** (2): 253257.
- Michael, A.A. 2011. Evaluation of farmers response to extension services on ginger production in Kagarko local Government area of Kaduna state. *Sci. Res. Essays*, **6** (6): 11661171.
- Momin, G.C., D.M. Firake, G.T. Behere and P. Balswar, 2018. Pest complex, biology and population dynamics of insect pests of ginger in northeast India. *Indian J. Entomol.* **80** (2): 244250.
- Odyuo, M.N., N.K. Patra and A.K. Makar, 2017. Management problems in implementing development works as perceived by NGOs: A case study in Nagaland, India. *Indian J. Extn. Edu.* **53** (1): 2127.
- Tiasoba and M.N. Odyuo. 2024. Constraints of small tea growers in Nagaland, India. *J. Soils and Crops*, **34** (1): 223226.
- Thakuria, S., 2023. A study on managerial ability of the members of Agnigarh Producer Company Limited in Sonitpur district of Assam with reference to commercial litchi production. Unpublished M.Sc. Thesis, Assam Agricultural University, Jorhat.
- Thakuria, S., P.K. Das, N. Talukdar, S. Seyie, I. Hussain and D. Thakuria, 2024. Managerial ability of the members of Agnigarh Producer Company Limited in Sonitpur district of Assam with reference to commercial litchi production. *J. Sci. Res. Rep.* **30** (11): 792800.

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