

## CONSTRAINTS OF SMALL TEA GROWERS IN NAGALAND, INDIA

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### ABSTRACT

A study was conducted in the year 2022-2023 with an attempt to know about the constraints of small tea growers in Nagaland. For the present study Tuli block under mokokchung was purposively selected covering four villages namely Merangkong, Anaki, Kangtsungyimsen, and Wamaken and each village was represented by 30 respondents making it to a total of 120 respondents. Small tea growers whose plantation is more than 3 years of age was selected because the *Camellia sinensis* takes 3 years to produce tea leaves which will fetch a good price in the market. In accordance to the constraints faced, the majority of respondents identified financial constraints due to high labor cost, high initial investment, lack of Govt. subsidies, farm credits and difficulty in availing bank loans as their biggest problem. Other problems included high cost of seedlings, lack of knowledge about new and improved varieties and application of fertilizers. It is to be noted that the high cost of fertilizers was a major constraint to all. 100 per cent of the respondents stated that hand weeding was too costly and time-consuming and lack of labors during weeding was another major constraint. There was lack of information on pest and disease management and in record keeping.

(Key words: Small tea farmers, constraints, tea, Nagaland, Mokokchung, Tuli)

### INTRODUCTION

Tea or *Camellia sinensis* which is often referred to as the 'Queen of beverage' (Biswas, 2016) is the world's second most popular non-alcoholic beverage after water. Tea has been an integral part of the daily diet for the people from time in memorial. Tea was first discovered in China, the history of tea dates back to around 2737 BC when Emperor Shen Nung who is popularly known as the Father of Chinese medicine stirred a few leaves of the *Camellia sinensis* plant into a pot of boiling water thereby producing the first cup of tea (Anonymous, 2024).

A huge portion of the tea produced in India is contributed by the small tea growers. Of the total tea production annually in India small tea growers are responsible for producing more than half i.e. 51% (Anonymous, 2022). India enjoys an ace position in the production of black tea. The growth and production of tea have been reported higher than other plantation crops in the country. Over the past decades, production and consumption of tea have increased steadily and its production became one of the economic pillars of the countries like China, India, Sri Lanka, and Kenya, (Kumar, 2021).

Nagaland is organic by default, the climate and soil are ideal for growing tea, and since more people are turning towards the consumption organic foods, there is a growing

demand for Nagaland tea on the domestic and global markets. The area under tea stands at 7600 ha and total production accounts for 33900 metric tons (Anonymous, 2017). Nagaland has a huge scope for tea cultivation as it can be grown on different altitudes on commercial basis both in the hills and the foothills areas of the state. Although the tea plantation in the state are small and scattered due to the fragmented nature of land holdings, the quality of tea produced in the state is of high quality which are mostly organic, and given the right impetus, tea plantation in the State could develop into a major economic sector (Anonymous, 2020). Small tea growers face a wide range of issues. One of the key reasons is the price fluctuation wherein, the low price of green tea leaf and minimum income from tea production were reported to be the two main problems faced by the small tea growers as per Kakati (2011), Dutta (2022), Borah and Das (2015).

The problems of pests and diseases is of major concern in management of tea farms. Debash and Chandra (2013) reported attack from leaf rollers, various sucking pests etc. which were faced by 100% of the respondents, market related problems, transportation problems and financial problems like the high initial investment required for setting up the plantation. Problems faced by small tea growers also included lack of training in tea culture and practices, financial difficulties, land issues, and the sale of green leaves (Goowalla, 2015). Lack of sufficient training, technical knowhow, inadequate experience and market opportunities

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posed some serious problems in the production of organic tea (Deka and Goswami, 2022).

## MATERIALS AND METHODS

A study was conducted in the year 2023 with an attempt to know about the constraints of small tea growers in Nagaland. For the present study Tuli block under mokokchung was purposively selected covering four villages namely Merangkong, Anaki, Kangtsungyimsen, and Wamaken and each village was represented by 30 respondents making it to a total of 120 respondents. Small tea growers whose plantation is more than 3 years of age was selected because the *Camellia sinensis* takes 3 years to produce tea leaves which will fetch a good price in the market. From each of the four villages 30 small tea growers were selected thereby making a sample size of 120. The statistical tool used to get the conclusion is frequency, percentage and mean. The list of constraints was measured in various headings, including financial, seedling, fertilizer application, weeding, pest and disease, marketing issues, and record-keeping.

### Frequency

The frequency is how frequently a specific value for a variable (data item) has been seen to occur over a given period of time.

### Percentage

A number or quantity can be expressed as a percentage by dividing it by 100. The frequency of each cell was divided by the total respondents to arrive at the percentage.

### Arithmetic mean

The average value of a group of numbers is represented by a measure of central tendency known as the arithmetic mean. It is calculated by adding up all of the set's values, then by dividing the result by the total number of values.

## RESULTS AND DISCUSSION

### Constraints of small tea growers

In this study, 'constraints' refers to the various limiting factors that a small tea grower face during the cultivation and the management of tea enterprise. Small tea growers face a wide range of issues, which have been examined in various headings, including financial, seedling, fertilizer application, weeding, pest and disease, marketing issues, and record-keeping. Table 1 contains the data that was collected.

The data regarding constraints that the respondents encountered when cultivating tea are shown in the Table 1. When compiling the data, consideration was given to the data and responses offered by the respondents. As seen in the given table, the information was collected and analysed using frequency and percentage in order to rank the respondents' challenges from greatest to least.

Under financial constraints, the majority of respondents identified financial constraints such as high labor cost, high initial investment, lack of Govt. subsidies, farm credits and difficulty in availing bank loans as their biggest and most pressing problem. This finding is in line with the research results of Debash and Chandra (2013), who reported that, 100% of the respondents faced issues on market related problems, transportation problems and financial problems like the high initial investment required for setting up the plantation.

The respondents faced constraints regarding the tea seedlings where 85.83 per cent of the respondents stated problems regarding to the high cost of seedlings and 62.50 per cent of the respondents stated problems like the lack of knowledge about new and improved varieties. Deka and Goswami (2022) has reported similar results. They stated that the small tea growers lacked in technical knowhow, inadequate experience etc.

The respondents believed that the problems regarding fertilizer application was yet another significant issue the small tea growers were dealing where 100 per cent of the respondents expressed concerns about the high cost of fertilizers, and 85 per cent of the respondents did not know the dosage of fertilizers. In line with this, Laldampui *et al.* (2023) concluded that, there was a vast technology gap in adoption of key practices such as fertilizer application and organic manure application. Odyuo *et al.* (2023) also reported lack of knowledge about the importance of applying manures.

According to the respondents', difficulties with weeding were identified as a major problem, where 88.3 per cent of the respondents expressed concerns regarding expensive and ineffective weedicides, 100 per cent of the respondents stated that hand weeding was too costly and time-consuming and 79.16 per cent of the respondents faced lack of labors during weeding. Bulow and Sorensen (1993) also concluded similar findings with lack of labor as key constraint in tea smallholdings.

The problems relating to pest and disease was also a major drawback for the respondents. Debash and Chandra (2013) also reported similar results with attack from leaf rollers, various sucking pests etc. This was attributed to issues like difficulty in differentiating various pests and diseases where 69.16 per cent of the respondents faced this problem, 85.83 per cent of the respondents lacked the information regarding various insect and disease management strategies and high chemical costs.

This problems regarding marketing was brought on by the lack of adequate road connectivity between village and town regions. It was also noted that market price variation has been dropping sharply over the past few years, and that low price or absence of remunerative pricing has been remarkably steady. Without the assistance of commission agents, the respondents stated that selling the harvested tea in the market was a very tough task. The reasons for the frequent price fluctuations is because of the reason that the small tea growers do not have their own

processing units so they have to depend on the different bought leaf factories for the selling of their leaves. The findings from this research are in line with the findings of Biswas (2016), who reported lack of finance, low price realization of green leaf.

Majority of the respondents (80 %) faced problems regarding record keeping. For effective tea farm management, record keeping is a crucial component however due to lack in knowledge of the importance of keeping records for future references and due to illiteracy, the farmers were not found to be maintaining records. Therefore, farmers relied on their memory when making decisions about their farming practices because of lack of written records.

In accordance to the constraints faced, the majority of respondents identified financial constraints due to high labour cost, high initial investment, lack of Govt. subsidies, farm credits and difficulty in availing bank loans as their biggest problem. Other problems included high cost of seedlings, lack of knowledge about new and improved varieties and application of fertilizers. It is to be noted that the high cost of fertilizers was a major constraint to all. 100 per cent of the respondents stated that hand weeding was too costly and time-consuming and lack of labors during weeding was another major constraint. There was lack of information on pest and disease management and in record keeping.

**Table 1. Distribution of the respondents based on the constraints faced** **n=120**

Sl. No.	Constraints	yes		No	
		F (Number)	%	F(Number)	%
<b>1</b>	<b>Financial</b>				
i	High labor cost	120	100.00	0	0.00
ii	High initial investment	99	82.50	21	17.50
iii	Lack of Govt. subsidies and farm credits	108	90.00	12	10.00
iv	Difficulty in availing bank loans	120	100.00	0	0.00
<b>2</b>	<b>Seedlings</b>				
i	Lack of knowledge about new and improved varieties	75	62.50	45	37.50
ii	High cost of seedlings	103	85.83	17	14.16
<b>3</b>	<b>Fertilizer application</b>				
i	High cost of fertilizers	120	100.00	0	0.00
ii	Lack of knowledge of fertilizer doses	102	85.00	18	15.00
<b>4</b>	<b>Weeding</b>				
i	Costly and ineffective weedicides	106	88.33	14	11.67
ii	Hand weeding is time consuming and expensive	120	100.00	0	0.00
iii	Unavailability of labors during weeding	95	79.16	25	20.83
<b>5</b>	<b>Pests and diseases</b>				
i	Difficulty in identifying different pests and diseases	83	69.16	37	30.83
ii	Lack of knowledge about the control measures of various pests and diseases	103	85.83	17	14.16
iii	High cost of pesticides	120	100.00	0	0.00
<b>6</b>	<b>Marketing problem</b>				
i	Price fluctuations	120	100.00	0	0.00
ii	High charges from commission agents	120	100.00	0	0.00
iii	Poor road connectivity	90	75.00	30	25.00
iv	Non availability of market information	12	10.00	108	90.00
<b>7</b>	<b>Record keeping</b>				
i	No knowledge about record keeping	96	80.00	24	20.00

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