

Health-Care Consumption amongst Tea Garden Workers in India

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ABSTRACT: Assam tea is a black tea named after the Indian state of Assam, where it is grown. It's made from *Camellia sinensis* var. *assamica*, a kind of tea plant. The Assam tea plant is native to Assam; attempts to establish Chinese cultivars in Assam soil were unsuccessful. Assam tea is recognized for its robustness, endowed, malty flavor, and robust, vivid color, and is currently largely cultivated at or around sea level. In this research, we used This same inquiry used a mixed methodology and an analytical descriptive strategy., which looked at how tea garden workers used healthcare services and what variables influenced their use in an Indian environment. In a northeastern Indian state, a survey was done first, followed by in-depth interviews (Assam). The variables impacting healthcare use were investigated using the health behavior model. The survey and in-depth interviews each had a sample size of 200 respectively and were conducted using multistage random and purposive sampling approaches. The research provides data to support the Indian Plantation Labour Act of 1951, which protects tea garden workers' welfare and calls for a shift from colonial-era rules to modern-day industrial realities to enhance their living, employment, nutritional, and health situations.

Keywords: Assam, Healthcare, Income, Tea, Workers.

1. INTRODUCTION

Accessibility to healthcare is a critical component in utilizing healthcare support to ensure universal health insurance. The medical access and improved classrooms for 195 nations were calculated as part of an international burden of disease research. According to this, the highest score was given to Iceland (97.1 out of 100), although the lowest was given to the Central African Republic (CAR). 18.6 is the lowest score. India had a score of 41 and was placed 145th out of 195 nations. Assam is a state in India. The lowest score (34.0) was given to the state of North Carolina, suggesting a larger amount of difference across the states, the states of India. Assam is well-known for its tea plantations, which account for almost one of California state's gross domestic product Assam's tea fields employ thousands aspect and replete workers from many other Indian states. However, for a variety of reasons, these employees' health is considered to be much poorer than the overall national median. Basic facilities such as schools, toilet facilities, clean drinking water, health, and nourishment are often unavailable to these laborers. Those that have a higher abortion rate (404 per 100,000 live births) than the broad sense population in the area, as well as an increased risk of gestation complications, hypertension (60 percent), poor nutrient condition, birthweight (43 percent), and then a higher incidence of Tuberculosis (TB) (30–40 percent) [1], [2].

Furthermore to the penalty rates and required duty hour provisions, the Indian Plantation Labour Act of 1951 requires tea house police to provide basic facilities such as health insurance, training, potable water, housing, childcare, prenatal care, and occurrence coverage to all of their workers. However, there are major gaps in the deployment of the System throughout the state, particularly in terms of basic facilities. There are also reports of tuberculosis-related deaths, high blood pressure, a lack of alternative treatments, and reduced use of medical facilities among tea estate laborers. These findings point to disparities in affordable healthcare and use among tea house employees in Assam [3], [4].

While most studies on tea shop workmen have focused on their well-being status, emergency contraceptive pills use, living, training and education, economic and administrative recognition, and use of waste management services, published studies on health services utilization are rare, with the exception socioeconomic factors among tea estate workers [5]–[7].

The Andersen health behavior model examines the factors of healthcare use and assesses healthcare access disparities across racial minorities, urban, and remote communities. As predictors of health care utilization, it identifies predisposed, permitting, and need variables. According to this model, population features such as a particular tendency to utilize services, resources that facilitate or hinder usage, and the demand for care may all be anticipated or explained by demography. Potentially leading variables, as with demographics, the structure of society, and health views, demonstrate a user's inclination to use pre-existing health care. Resources that enable care more affordable are known as enabling factors. It is indeed a situation that may be improved via the efforts of both the patient and the population, such as medical coverage, health care, and increased education. Of one's general health, and so on, and indeed the necessary factors represent potential health requirements, such as identity health, serious illnesses, and restricted activity. In light of this, we investigated the tea garden worker' use of health services and the variables that influence their use in one of Assam's districts of the country. Figure 1 discloses the Factors Impacting Tea Garden Workers' Use of Healthcare Services [8], [9].

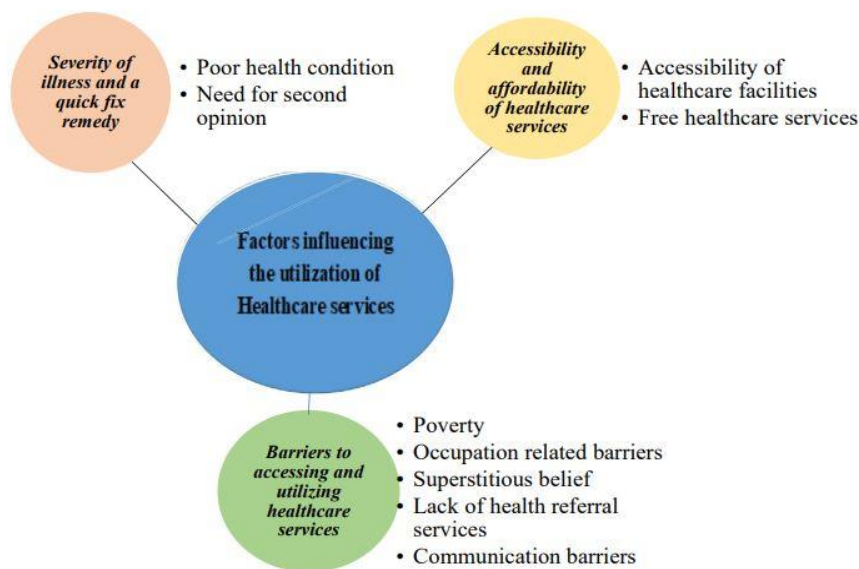


Figure 1: Instantiate the Factors Impacting Tea Garden Workers' Use of Healthcare Services [10].

2. LITERATURE REVIEW

Pane et al. in their study instantiate that Compost tea (CT) is gaining popularity as a tool for organic farming. CTs are oxygenated compost extracts that have beneficial effects on crops due to the presence of bioactive chemicals and germs that promote plant development and health. The purpose of this research was to see how CTs administered as foliar spray plus immersing affected kohlrabi and lettuce development. The CT used in this study was created by extracting two asparagus plus fennel green manure with aerated water. CT treatments increased agricultural yields significantly. Pane et al. used a novel approach that included CT-improved technologies, and the results reveal that professional spinach and butternut squash yields increased by 24% and 32%, respectively. In conclusion, the functional and biochemical health of the plants improved as a result of CT, as shown by foliar leaf chlorophyll measurements taken throughout crops. The findings suggested that CT might be used in a horticulture organic agricultural system realistically [11].

De Corato et al. in their study embellished that Waste generation, and left over harshness The prominence of the vegetable supply network in intensively agricultural systems has grown as attitudes toward microbes and humans, plant breeding initiatives, biodiversity, and contribute to personal wellness have all grown. The most promising approaches for converting in-situ cellulose into increased property materials for soil remediation (compost) and plant care are critically discussed and compared in this study. In the agricultural portion, the author used a top-down strategy, in which a complete investigation of the individuals is conducted with the least amount of inaccuracy possible. The search for ecologically friendly alternatives to plant pesticides, soil defoliant, and fertilizers has ignited as a result of the findings. The scope of purpose of this study is to get a better understanding of waste materials repurposing. Of decomposition findings and horticultural soil tea benefits for soil health. It had to be a viable option considering recycled it increases soil expansion and biomass production also while reusing it. underutilized feedstock [12].

G K Medhi et al. studied about to the health problems and dietary needs of Assamese tea garden dwellers. We recorded the sociodemographic and behavioral characteristics of the participants. Health conditions and nutritional status were

assessed using physical exams, records checks, anthropometry, and lab testing. 1,863 males and 2,153 women out of the 4,016 participants were male. Of the 2,264 individuals, 1,197 (14.9%) were manual workers in the garden and the majority were illiterate. Alcohol and oral tobacco use were both common. Adults were thin on average by 69.9% (1,213 out of 1,735) whereas children were underweight by an average of 59.9% (357 out of 596) on average. Anemia was prevalent. Additionally considerably common were skin conditions, respiratory ailments such as TB, and filariasis (worm infection: 65.3%; 217 of 332). Children suffered more from illness-related misery. Better hygienic practices, a cleaner environment, increasing public awareness of health concerns, nutritional treatments, and general changes in socioeconomic conditions may all help to enhance the health of the people [13].

Research Questions

- How Household Income Affecting The Farming?
- How Diseases Are Playing a Major Role in Farming?
- How Medical Insurance Utilization Working in The System?

3. METHODOLOGY

3.1. Design:

The design of this research is based on different methods such as, we employed a sequentially moderate method, in which we performed a quantitative phase first, followed by a pilot test. This methodology was chosen because empirical information contributed to selecting participants for follow-up discussions in the qualitative approach, which looked at the deciding variables impacting utilization in more depth.

3.2. Sample And Instrument:

The research was carried out in Assam's Golaghat district, in Radhabari, Bokakhat, and Borjuri are three botanical garden estates. The district was considered but it has a low overall wellness rating (less than 50%) and is a high-priority region in Assam and throughout the country. In addition, there are 74 tea farms in this neighborhood, as well as the maximum mortality rate (is 414 per 150,000 live births).). The research included tea garden employees between the ages of 18 and 60 who had used any form of medical care in the previous six months. Respondents in conversations were chosen from survey respondents who fulfilled the inclusion criteria. Table 1 discloses the different basic details of the farmers who are working in the tea garden.

Table 1: Illustrates the Different Basic Details of the Farmers Who Are Working in the Tea Garden.

Variables	Categories	Frequency
Religion	Hindu	60
	Muslim	80
	Christian	60
Education	<5 Years of Schooling	100
	No Schooling	50
	>5 Years Of Schooling	50
Sex	Female	140
	Male	60
Marital Status	Others (Divorced and Separated, Widowed)	90
	Married	110
Number of Family Members	<6	80
	>6	120
The Number Of Families That Work In The Tea Garden	1	70
	>1	130
Nature of Occupation	Causal	140
	Permanent	60

3.3. Data Collection:

In the quantitative phase, data were collected using a modified LASI has sent out questionnaire (Longitudinal Ageing Study in India). And once food's legitimacy was validated, the "health coverage and activities usage" part of the paperwork was employed in this research to achieve the study's objectives. While the whole LASI program is geared at those 45 and over, this part never was restricted to anybody in that age group, allowing the researcher to obtain from tea garden employees of any age. Furthermore, the tea plantation workers' socio-demographics information, such as their

employment, income, and health condition, was gathered. Occupation, sex, religion, parental status, schooling, area of residence, family type, and the number of families were among the socio-demographic characteristics collected. The employees' occupational and expenditure information included their monthly family income, kind of job, and the number of close families employed in the tea garden. The researchers looked at the subjects' self-reported ailments by asking if they had any of the trying to follow: blood-borne infections, unhealthy behaviors, or disabilities. The prevalence of quality healthcare use in terms of the categories of healthcare services was studied in the prior six months. Facilities utilized, medical professionals visited, medical treatments received, and medical insurance utilized. In the qualitative research process, a moderate interview protocol was used to conduct in-depth interviews. The Andersen and Newman framework of quality healthcare use was used to create this interview guide, which took into account the need, exacerbating, and permitting variables. The interviews were carried out with an intentionally chosen group of tea garden employees using a translation interview schedule in traditional (Assamese) language.

3.4. Data Analysis:

The data is collected from the people and the Newman framework is taken to find the accurate results of this research, Figure 2 illustrates the Different Kind Of Age Group Categories in the System. Figure 3 Discloses the Monthly House Income of the Different Age Op People in the System. Table 2 illustrates the Different Types of Dieses That Is Caused By Tea Farming Figure 4 Illustrates The Different Type Of Disease That Is Happening On People Due To Tea Farming Figure 5 Embellishes the Age Group of People and Different Medical Insurance Utilization.

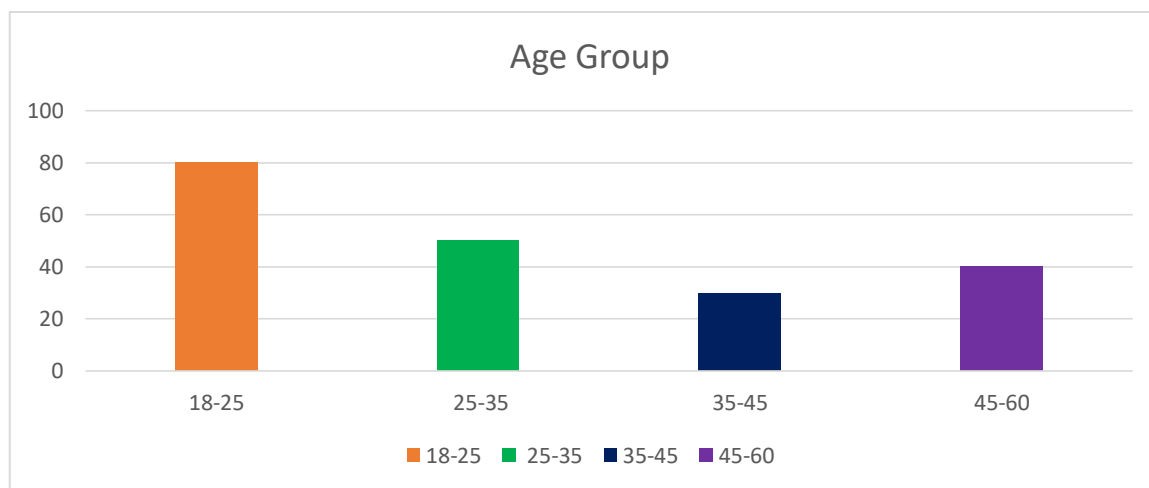


Figure 2: Illustrates The Different Kind Of Age Group Categories In The System.

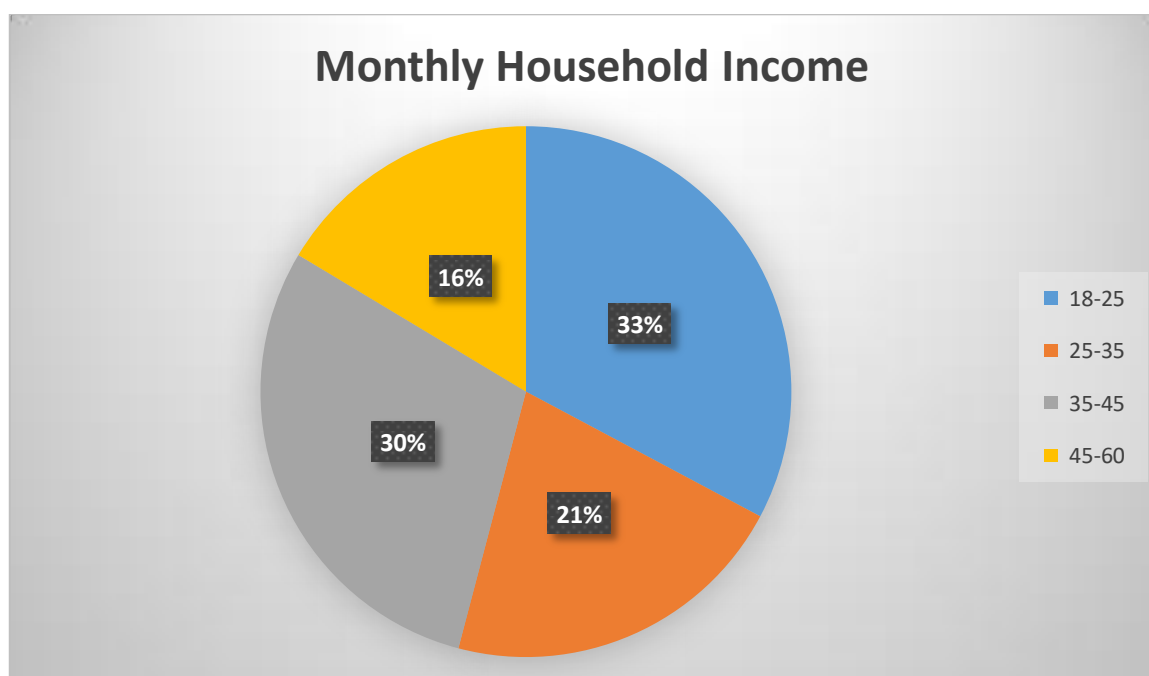


Figure 3: Discloses The Monthly House Income Of The Different Age Op People In The System [14].

Table 2: Illustrates the Different Types of Dieses That Is Caused By Tea Farming

Disease	Number of people
Anxiety	30
Headaches	90
Digestive Issues	60
Disrupted Sleep Patterns	20

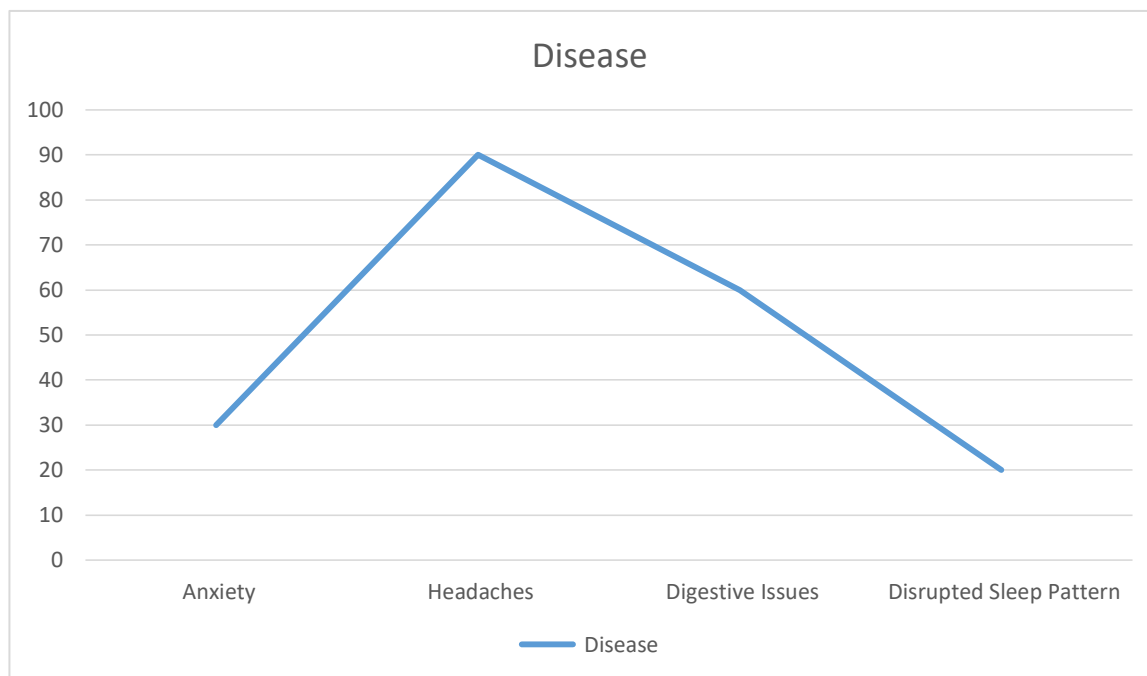


Figure 4: Illustrates The Different Type Of Disease That Happening On People Due To Tea Farming.

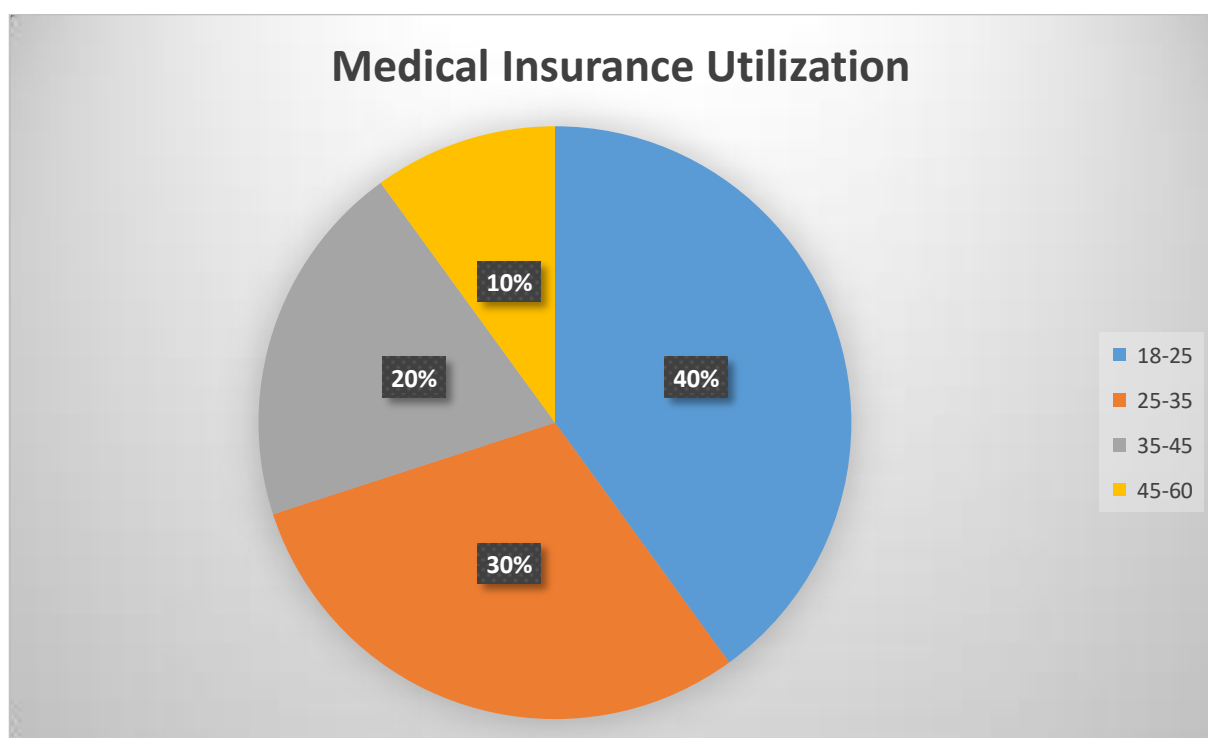


Figure 5: Embellishes the Age Group of People and Different Medical Insurance Utilization.

4. RESULTS AND DISCUSSION

This research demonstrates the various age groups in which individuals work in Assam. The data were collected from 200 persons in Assam from a specific place. Around 80 persons are between the ages of 18 and 25, 50 are between the ages of 25 and 35, 30 are between the ages of 35 and 45, and roughly 40 are between the ages of 45 and 60. Monthly family income varies by age group, with almost 33 percent earning around 20000 rupees per month, 30 percent earning around 18000 rupees per month, roughly 21 percent earning around 13000 rupees per month, and 16 percent earning around 10000 rupees per month. People suffering from various diseases, such as anxiety in about 30 people, headaches in 90 people, stomach issues in 60 people, and sleep disturbances in roughly 20 people who work on the tea plantation. Medical insurance plays an important part in the lives of persons between the ages of 18 and 25. Nearly 40% of individuals use their medical insurance, with 30% of those in the age category of 25-30 using it, and 35% of those in the age group of 35-45 using it. Nearly 20% of individuals have health insurance, and 10% of persons between the ages of 45 and 60 have medical use [15], [16].

Pharmaceutical supplies both are accessible and affordable. Medical treatments that are both economical & reachable, according to the workforce, seem greater like to be used. Almost all of the individuals seek evaluations and first therapy first from tea plantations, according to the reports. Facilities were chosen because they were freely reachable, provided free drugs, and met critical health requirements workers' requirements. Obstacles to obtaining and using healthcare. Inequality, economic constraints, a lack of medical education, poor case management, false ideas, and communication barriers with patients and health professionals were discovered to be the main causative factors inhibiting healthcare utilization. Due to poverty, even using quality health was not given special consideration [17]–[20].

5. CONCLUSION

This research looks at how tea garden workers in Assam deal with sickness and health services, as well as their knowledge of and use of health insurance. It also looked at the elements that make healthcare services more accessible as well as the obstacles that prevent people from using them. The research also provides evidence for strengthening the Indian Plantation Labour Act of 1951 in terms of daily living standards, minimum pay consistency, and healthcare supply. Tea estate hospitals with enough resources, the consolidation of services and health programs, and intersect oral coordination across national, central, medical organizations, and beverage boards may all aid in achieving these objectives. In enhancing the living, employment, and health conditions of tea house employees in India, officials must shift away from colonial-era norms and toward current industrial realities.

REFERENCES

- [1] F. Mwaura, O. Muku, and K. W. Nyabundi, 'Using research findings to formulate extension tools that incorporate stakeholders' aspirations: The case of tea farming in poverty reduction strategies among smallholders in Kenya', *Outlook Agric.*, 2010, doi: 10.5367/oa.2010.0006.
- [2] L. Karki, R. Schleenbecker, and U. Hamm, 'Factors influencing a conversion to organic farming in Nepalese tea farms', *J. Agric. Rural Dev. Trop. Subtrop.*, 2011.
- [3] N. B. Hong, Y. Takahashi, and M. Yabe, 'Environmental efficiency and economic losses of Vietnamese tea production: Implications for cost savings and environmental protection', *J. Fac. Agric. Kyushu Univ.*, 2016, doi: 10.5109/1686503.
- [4] *et al.*, 'Response of Soil Microbial Community to Organic and Conventional Taiwanese Tea Farming', *Ecol. Sustain. Dev.*, 2018, doi: 10.22606/esd.2018.11003.
- [5] A. Khaokhrueamuang, 'International exchange in tea tourism: Reconceptualizing Japanese green tourism for sustainable farming communities', in *Tourism Development in Japan: Themes, Issues and Challenges*, 2020, doi: 10.4324/9780429273513-8.
- [6] S. Hamidah and S. Widodo, 'Dualisme Di Lingkungan Perusahaan Inti Rakyat(Pir) Lokal Teh Di Jawa', *Agro Ekon.*, 1978, doi: 10.22146/agroekonomi.16783.
- [7] R. A. P. I. S. Dharmadasa, R. G. P. De Silva, H. V. P. Wijewardhana, and S. S. Vithanage, 'Impact of organic farming on annual average income and cost of production of tea smallholders in Sri Lanka', 2019.
- [8] P. Nguyen-Van, C. Poiraud, and N. To-The, 'Modeling farmers' decisions on tea varieties in Vietnam: a multinomial logit analysis', *Agric. Econ. (United Kingdom)*, 2017, doi: 10.1111/agec.12334.
- [9] E. Olatunbosun Benjamin, 'Smallholder agricultural investment and productivity under contract farming and customary tenure system: A malawian perspective', *Land*, 2020, doi: 10.3390/LAND9080277.
- [10] K. B. Sapkota, 'Impact of World Trade Organization on Demand Pattern and Opportunities to Tea Farmers in Nepal', *Tribhuvan Univ. J.*, 2016, doi: 10.3126/tuj.v30i2.25549.

- [11] C. Pane, A. M. Palese, G. Celano, and M. Zaccardelli, 'Effects of compost tea treatments on productivity of lettuce and kohlrabi systems under organic cropping management', *Ital. J. Agron.*, 2014, doi: 10.4081/ija.2014.596.
- [12] U. De Corato, 'Agricultural waste recycling in horticultural intensive farming systems by on-farm composting and compost-based tea application improves soil quality and plant health: A review under the perspective of a circular economy', *Science of the Total Environment*. 2020. doi: 10.1016/j.scitotenv.2020.139840.
- [13] J. Mahanta, G. Medhi, N. Hazarika, and B. Shah, 'Study of health problems and nutritional status of tea garden population of Assam', *Indian J. Med. Sci.*, vol. 60, no. 12, p. 496, 2006, doi: 10.4103/0019-5359.28979.
- [14] B. Johansen, R. E. Duval, and J. C. Sergere, 'Antimicrobial spectrum of titroleaneTM: A new potent anti-infective agent', *Antibiotics*, 2020, doi: 10.3390/antibiotics9070391.
- [15] A. E. Ozcelik and R. Nisanci, 'Land use patterns for driving environmental management of tea agricultural croplands', *Comput. Electron. Agric.*, 2016, doi: 10.1016/j.compag.2016.01.013.
- [16] Y. Qiao, N. Halberg, S. Vaheesan, and S. Scott, 'Assessing the social and economic benefits of organic and fair trade tea production for small-scale farmers in Asia: A comparative case study of China and Sri Lanka', *Renew. Agric. Food Syst.*, 2016, doi: 10.1017/S1742170515000162.
- [17] M. Haque, S. K. Acharya, and K. Mondal, 'Transforming Agriculture and Tea Garden: The Impact on Farm Women Engagement', *Curr. J. Appl. Sci. Technol.*, 2020, doi: 10.9734/cjast/2020/v39i2630908.
- [18] S. FUNAKOSSHI and M. MANO, 'Studies on the Development Process of Tea Farming', *Chagyo Kenkyu Hokoku (Tea Res. Journal)*, 1979, doi: 10.5979/cha.1979.50_74.
- [19] M. R. Morales-Corts, R. Pérez-Sánchez, and M. Á. Gómez-Sánchez, 'Efficiency of garden waste compost teas on tomato growth and its suppressiveness against soilborne pathogens', *Sci. Agric.*, 2018, doi: 10.1590/1678-992x-2016-0439.
- [20] M. J. Kim *et al.*, 'Effect of aerated compost tea on the growth promotion of lettuce, soybean, and sweet corn in organic cultivation', *Plant Pathol. J.*, 2015, doi: 10.5423/PPJ.OA.02.2015.0024.
- [21] Keerthi, R. S., Dhabliya, D., Elangovan, P., Borodin, K., Parmar, J., & Patel, S. K. (2021). Tunable high-gain and multiband microstrip antenna based on liquid/copper split-ring resonator superstrates for C/X band communication. *Physica B: Condensed Matter*, 618
- [22] Dhabliya, D. (2021). Delay-tolerant sensor network (DTN) implementation in cloud computing. Paper presented at the Journal of Physics: Conference Series, , 1979(1) doi:10.1088/1742-6596/1979/1/012031 Retrieved from www.scopus.com