From Fields to Futures: Examining the Socioeconomic Shifts from Cardamom Cultivation in Eastern Nepal

Drona Budhathoki

*Author affiliations can be found in the back matter of this article

**CORRESPONDING AUTHOR**
Drona Budhathoki
Makawanpur Multiple Campus, Hetauda
dronammc202@gmail.com

**ABSTRACT**

Large-scale cardamom cultivation in Eastern Nepal is primarily concentrated in six districts, namely Dhankuta, Taplejung, Panchthar, Ilam, Terathum and Sankhuwasabha, contributing over 80% of the national production and engaging approximately 60,000–70,000 families. The study aims to investigate how cardamom farming has impacted farmers' livelihoods compared to traditional farming methods and how the volatility of cardamom prices underscores the complex dynamics of capitalist market structures. This study focused on Ward No. 2 of Mahalaxmi Municipality in Dhankuta District and spans a five-year period from February 18, 2019 to February 18, 2024. Through census-based data collection from 27 households using interviews and observations, the research examined the impact of cardamom production on local livelihoods. The analysis incorporates insights from Marx's Mode of Production, along with perspectives from Jagannath Adhikari, Mark Liechty, and Ian Carlos Fitzpatrick. The findings reveal that earnings from cardamom cultivation did not only elevate living standards but also encouraged self-sufficiency and reduced reliance on foreign employment through borrowing, highlighting changing economic opportunities, self-esteem, and job prospects within the community. The study reveals that cardamom farming has the potential to significantly influence farmers' economic stability and highlights the need for better market strategies and government policies to address price volatility and enhance cardamom productivity.

**KEYWORDS**
Cardamom production
Livelihood transformation
Economic empowerment
Self-reliance
Employment opportunities

1. INTRODUCTION

Cardamom, scientifically known as Elettaria cardamom, is a perennial herbaceous plant belonging to the ginger family, Zingiberaceae. Known as the “Queen of Spices,” cardamom is famous for its distinct aroma, diverse culinary applications, and numerous health benefits. Originating from the Indian subcontinent, this spice has gained global popularity, captivating people's senses worldwide. With a rich history dating back to ancient times,
cardamom is prominently featured in historical texts such as Ayurvedic and traditional Chinese medicine writings, highlighting its cultural significance. Traded extensively along ancient spice routes, cardamom emerged as a prized commodity, contributing significantly to the prosperity of the spice trade. One of cardamom's most notable attributes is its versatility in culinary applications. It serves as a vital ingredient in both savory and sweet dishes, adding a unique and warm flavor profile. Across various cultures, cardamom is an essential element in spice blends and masalas, enriching the complexity of culinary creations. Whether incorporated into curries, desserts, or beverages, cardamom elevates the culinary experience with its delightful and aromatic essence (Chaudhary & Subedi, 2014).

Beyond its culinary allure, cardamom boasts a myriad of health benefits. Rich in antioxidants, it aids in neutralizing free radicals, contributing to overall well-being. Traditionally used to alleviate digestive issues such as indigestion and bloating, cardamom is also believed to possess anti-inflammatory properties. Additionally, it is known to promote oral health and freshen breath, making it a popular choice in natural remedies. Cardamom holds cultural significance in various societies, often symbolizing warmth, hospitality, and celebration. It is a common ingredient in festive and ceremonial dishes, signifying its role in bringing people together. In some cultures, cardamom-infused beverages are served as a gesture of hospitality, creating a sense of connection and community. With its rich history, diverse applications, and health benefits, cardamom stands as an integral spice that has transcended cultural and geographical boundaries. As the "Queen of Spices," it continues to reign supreme in kitchens worldwide, captivating the senses and enriching the culinary experience. Embracing sustainable practices ensures that future generations can continue to savor the delights of this extraordinary spice, preserving its legacy for years to come (Chaudhary & Subedi, 2014).

When cardamom was brought to Nepal several centuries ago, it was discovered that the country's hilly regions offered an ideal climate for its growth. The plant thrives in the cool, damp climate of higher elevations, making Nepal's hills a perfect location for cultivation. In Nepal, the main regions for cardamom cultivation are the eastern and central regions, including the districts of Dhankuta, Terhathum, Sankhuwasabha, Ilam, Panchthar, and Tappleung. These areas contribute significantly to the production of premium cardamom due to their unique climatic conditions and elevations. Cardamom farming plays an important role in the livelihoods of many Nepalese farmers, serving as a significant cash crop that supports numerous families. It is one of Nepal's main export commodities, contributing to the nation's foreign exchange earnings. Besides its economic benefits, cardamom also holds cultural significance, imparting a distinctive flavor to Nepalese cuisine and being used in various traditional dishes, teas, and sweets. Additionally, cardamom is a common ingredient in religious ceremonies and rituals.

While cardamom cultivation has helped many farmers sustain their livelihoods, there are challenges associated with this industry, such as fluctuating market prices, susceptibility to diseases, and the need for sustainable farming practices. Efforts have been made to improve the quality of Nepalese cardamom by promoting organic farming and enhancing post-harvest processing. The Nepalese government has implemented laws and programs to support farmers, providing training, facilitating access to loans, and promoting the adoption of improved farming techniques. Nepalese cardamom is exported to many countries, contributing to the global spice market. The exceptional quality and distinctive flavor profile of Nepalese cardamom have gained
international recognition (Bhandari & Bhandari, 2018).

In contemporary societal dynamics, the convergence of migration patterns and property ownership plays a significant role within the capitalist framework. Historically rooted in the pursuit of basic needs, the present narrative highlights a noticeable shift wherein property acquisition goes beyond residential necessities, becoming a tangible expression of economic agency. In this context, property functions as a capital asset representing the fundamental tenets of capitalism—specifically, the idea of private ownership, strategic investment, and the accumulation of wealth. The purposeful extension of property holdings into areas marked by elevated living standards indicates a calculated capitalist strategy, where individuals strategically navigate economic environments to capitalize on opportunities for financial advancement and an improved quality of life. Thus, the contemporary interplay between migration, property ownership, and capitalism unfolds as a nuanced scenario, revealing the intricate relationship between individual aspirations and the broader economic system. Future research endeavors may delve into the impact of emerging technologies, global events, socio-cultural factors, and interdisciplinary methodologies on the dynamic interplay of migration, property ownership, and capitalism, offering a nuanced exploration of their evolving dynamics.

1.1 LITERATURE REVIEW

1.1.1 THEORETICAL REVIEW

The mode of production is a central concept in Marxism and is defined as the way a society is organized to produce goods and services. It consists of two major aspects: the forces of production and the relations of production. The forces of production include all elements brought together in production, from land, raw materials, and fuel to human skill and labor, as well as machinery, tools, and factories. The relations of production encompass relationships among people and people's relationships to the forces of production through which decisions are made about what to do with the results.

In Marxist theory, the mode of production concept was used to illustrate the historical differences between different societies' economies. Marx and fellow German philosopher Friedrich Engels classified several historical modes of production including Neolithic, Asiatic, slavery/ancient, feudalism, and capitalism. They viewed hunter-gatherers as the first form of what they called "primitive communism," where possessions were generally held by the tribe until the advent of agriculture and other technological advances. The next stage was the Asiatic mode of production, which represented the first form of a class society where forced labor was extracted by a smaller group. Technical advances such as writing, standardized weights, irrigation, and mathematics made this mode possible.

The slavery or ancient mode of production developed next, often typified in the Greek and Roman city-states. Coinage, affordable iron tools, and an alphabet helped bring about this division of labor. An aristocratic class enslaved workers to manage their businesses while they lived lives of leisure. As the feudal mode of production developed next, the old Roman Empire had fallen, and authority became more localized. A merchant class developed during this period, though serfs, who were tied to a piece of property through servitude, were essentially enslaved as they had no incomes and no ability for upward mobility. Capitalism developed next. Marx saw man as now demanding a wage for the labor for which he had previously been providing for free. Still, according to Marx's Das Kapital, in the eyes of capital, things and people exist only as they are profitable (Marx and Engels, Vol. V, p. 32).

1.1.2 EMPIRICAL REVIEW

There is no denying the fact that cardamom is one of the most important cash crops in eastern Nepal today. But downplaying, even at the village level, the
role of horticultural crops that contributed 14 percent to the GDP of Nepal in 1996-97 and economic remittances, which contributed more than 10 percent of the GDP of Nepal in the 1990s, is perhaps not fair. Nor is it perhaps correct to expect, as one does from the title of the book, that ‘classes' have emerged, or have begun to emerge, due to the wealth generated from cardamom cultivation. In fact, in his ‘Conclusions,' Fitzpatrick (2011) mentions that ‘distinct classes with distinct roles in production have yet to emerge' (p. 276). I also find it a little difficult to accept the author's proposal to equate ‘economic differentiation' with ‘class formation,' as he does on page 14, whether we turn to Marx or Weber for conceptual closure. I would be happier if he had instead argued that ‘economic differentiation', hastened due to cardamom, could lead to class formation in the village. However, this book clearly shows that this was postponed due to the migration of the wealthy villagers from the ‘core' village to the ‘dispersed' village in Jhapa. In fact, if cardamom is such an important driver of economic differentiation, such a process may actually be halted if this crop fails in Maramkhe, as it did in many villages of North Sikkim during the last two decades.

The major producers of large cardamom, Nepal (68%) India (22%) and Bhutan (9%) of total world production per annum whereas Nepal is the top producer (ICIMOD, 2016). Large cardamom was introduced into Nepal in 1865 AD, from Sikkim India although, commercial cultivation started much later in 1953 AD and further development of this crop began after the establishment of Cardamom Development Centre at Fikkal of Illam district in 1975. Currently, its commercial cultivation spreads over 37 districts of Nepal.

Cardamom cultivation plays a crucial role in the economy of many Nepalese farmers. It is a major cash crop for the region, providing livelihoods for numerous families. The spice is one of the essential export commodities from Nepal, contributing to the country's foreign exchange earnings. Cardamom is not only valued for its economic benefits but also holds cultural significance. It is used in various traditional Nepalese dishes, teas, and sweets, adding a unique flavor to the cuisine. Additionally, cardamom is often included in religious rituals and ceremonies. While cardamom cultivation has been a source of income for many farmers, it also faces challenges such as fluctuating market prices, susceptibility to diseases, and the need for sustainable farming practices. Efforts have been made to promote organic farming and improve post-harvest processing to enhance the quality of Nepalese cardamom. The government of Nepal has recognized the importance of cardamom cultivation and has implemented various policies and initiatives to support farmers. These include providing training, access to credit, and assistance in adopting improved cultivation practices. Nepalese cardamom is exported to various countries, contributing to the global spice market. The quality and unique flavor profile of Nepalese cardamom have gained recognition internationally (Kalauni & Joshi, 2019).

Tarangpurians exchange their way out of isolation through economic and cultural ties from Tibet to India. Surplus as an essential to the complex networks of exchange carried out outside the village. Two essential trade circuits prevail: the grain-salt-rice circuit and increasingly preferred commodities circuit: good-cash-good circuit. Tarangpurians engage in impression management; they have adopted themselves as cultural chameleons. This is the reason why their culture has been influenced by Hinduism and Buddhism. Within the village, social status is calculated by an ideology of equality, the practices of equalizing, unbalanced reciprocity and a disguised hierarchy. Most recently, politics fed by cash wealth has increasingly motivated Tarangpurians towards innovation and progress. Tarangpur maintains ties and networks of exchange over a huge geographic area, building its world view out
of complex transactional activity (Fisher, 1986).

1.2 RESEARCH GAP

A research gap is a question or problem that has not been addressed by existing studies or research within a specific field. Sometimes, a research gap occurs when a concept or new idea has not been studied at all. While there is accounting for the income of houses bought with capital from cardamom production, children's education expenses, and yearly production, there is no social study about changes in the standard of living. This research will focus on determining the changed livelihood before conducting the research.

1.3 RESEARCH OBJECTIVE

In this study, Dhankuta District Mahalaxmi Municipality Ward no. two has been selected. The research objective of this study is to study the changes brought about by cardamom production in the livelihood of the local community.

2. RESEARCH METHODS AND MATERIALS

The Dhankuta District Mahalaxmi Municipality Ward No. two was used in this study. In this study, a descriptive structure framework was employed for data collection and analysis to examine how cardamom production and its sale contributed to the varying livelihoods of local communities. The research incorporated both qualitative and quantitative data, as relying on just one type would not suffice for completing the study. There are just 27 households in the MulKharka's mid-toll as of right now. Since the study's households were tiny, primary data were gathered using the census method from each of the 27 Households. This study was based on a period of five years from 2019 to February 18, 2024.

3. DATA ANALYSIS

3.1 GEOGRAPHY AND CLIMATE

Dhankuta District is one of 14 districts of Koshi Province of eastern Nepal. Dhankuta is the district headquarters of Dhankuta District. Dhankuta district is a mid-hill district of eastern hill region of Nepal. It is situated between 26°53' to 27°19' north latitude and 87°8' to 88°33' east longitude. The vegetation zones in the district range from sub-tropical Sal forest along the Tamor and Arun rivers, and cooler temperate forests on some of the high ridges that mark the watershed between the two catchments. The altitude ranges from around 300m to 2500m. The vegetation zones in the district range from sub-tropical Sal forest along the Tamor and Arun rivers, and cooler temperate forests on some of the high ridges that mark the watershed between the two catchments. The altitude ranges from around 300 m. to 2500 m. The majority of the population is involved in agriculture & crops include maize, rice and millet. Important cash crops include citrus fruits, cauliflower, cabbage, ginger, and in recent years, tea. Mahalaxmi is a Municipality in Dhankuta District of Koshi Province in Nepal. It is a Municipality out of three Urban Municipalities in Dhankuta District. Total area of the Municipality is 126.3 km. and according to 2021 census of Nepal, the population of this Municipality is 22,182. The Municipality is divided into nine wards. The headquarter of the Municipality is in Jitpur Bazar.

3.2 SOCIO-CULTURAL STATUS

This part examines the socio-economic characteristics of the respondents, such as age, ethnic composition, education; marital status, family structure and occupation are presented in the following paragraphs and tables. Caste/ethnicity, age, gender composition, household, literacy and economic status have been included in the analysis of the socio-economic characteristics of the respondents. People who live in a certain geographic area are called a population. Demography is thus the study of population size, spatial distribution and composition, change and the components of that change, such as age,
mortality, regional mobility or migration, and change in social mobility or status. According to the social status survey of the population, there are very different conditions such as caste, age, sex, education, language, marital status, etc., which are given in the table below with analysis.

**Table 1: Social Conditions of Respondents**

<table>
<thead>
<tr>
<th>Social characters</th>
<th>Distribution</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caste/ethnicity</td>
<td>Chhetry</td>
<td>15</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>Ethnic Group</td>
<td>8</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Dalits</td>
<td>4</td>
<td>15</td>
</tr>
<tr>
<td>Sex</td>
<td>Female</td>
<td>10</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>17</td>
<td>63</td>
</tr>
<tr>
<td>Age Group</td>
<td>30–40 Age Group</td>
<td>8</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>41–50 Age Group</td>
<td>7</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>51–60 Age Group</td>
<td>12</td>
<td>44</td>
</tr>
<tr>
<td>Marital Status</td>
<td>Married</td>
<td>25</td>
<td>93</td>
</tr>
<tr>
<td></td>
<td>Unmarried</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Religion</td>
<td>Hindu</td>
<td>27</td>
<td>100</td>
</tr>
<tr>
<td>Family Structure</td>
<td>Nuclear Family</td>
<td>25</td>
<td>93</td>
</tr>
<tr>
<td></td>
<td>Joint Family</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Educational Status</td>
<td>Literate (Under S.L.C)</td>
<td>7</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>S.L. C.</td>
<td>12</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>University</td>
<td>8</td>
<td>30</td>
</tr>
</tbody>
</table>

**Source: Field Survey, 2024**

According to the analysis of the social situation of the respondents of the 27 households included in this study, the study area had a majority of Chhetry communities, which were 55 percent of all 27 households. By gender, 63 percent were males and 28 percent were women. According to the age structure, it was found to be the highest in the 30-40 age groups at 30 percent, in the 41-50 age group at 26 percent. In the age group 51-60, there were 44 percent of respondents. It turned out that 100 percent of the families participating in the survey were Hindus, 93 percent lived in single families and 7 percent lived in joint families. Examining the educational status of the respondents, the S.L.C. Below 26 percent, that is, Literacy only, S. L. C. It turned out to be 44 percent. It turned out that 30 percent studied at the university level.

**Figure 1: Analysis of Cardamom Production, Sales, and Total Revenue**

![Cardamom Sales Graph](image-url)
3.3 CARDAMOM AGRO-ECONOMIC METRICS

The production capacity of cardamom is subject to various dynamic factors, and it requires a combination of favorable conditions, effective management practices, and technological innovations to maximize yields and meet market demand. The status of cardamom production in 27 households from 2019 to 2023 in the study area is presented in Figure 1. It is evident from Figure 1 that between 2019 and 2021, both total cardamom production and the selling price increased, leading to a rise in annual revenue. However, in 2022, despite higher production compared to 2023, revenue was significantly lower due to a decrease in the price imposed by wholesale traders. Farmers, interviewed on this matter, attributed the decline in prices to traders, primarily from India, citing concerns about the quality of cardamom that year. This contributed to a drop in cardamom rates. Nevertheless, the overall trend indicates an upward trajectory in annual revenue, positively impacting the community's livelihood.

3.4 FACTORS OF CHANGING LIVELIHOOD OF LOCAL COMMUNITY

People often switch jobs or sources of income due to various reasons such as seeking better financial prospects, pursuing personal interests, or adapting to new circumstances. This transition can involve learning new skills, exploring different job opportunities, and sometimes taking risks. These changes can lead to significant shifts in their lives.

Increase of Infrastructure and Technology:

Better infrastructure like roads and access to technology are important for improving livelihoods. In the study area, most households now have modern TVs, with 24 out of 27 homes owning one. This has helped them stay informed and entertained, and it has also improved their social status. Four households have bought cars, and seven have bought motorcycles. Some families have built new rental houses, and local clubs have been established, making it easier to organize social events like weddings and religious ceremonies.

Social Capital:

Strong social networks and community support are crucial for livelihood opportunities. The income from cardamom production has allowed locals to travel more, build relationships with outsiders, and connect with development agencies. They have also been able to invest in community projects when needed.

Economic Opportunities:

Access to jobs and income from cardamom cultivation is vital. It provides employment in planting, harvesting, processing, and trading cardamom. The money earned has made it easier for locals to buy daily necessities and pay for their children's education without taking loans. Those who wish to travel can do so more easily now.

Complacency:

In the past, farmers were worried about crop failures due to natural disasters affecting traditional crops like rice, corn, wheat, mustard, and vegetables. Cardamom cultivation, however, is less prone to natural damage except for some diseases. The income from cardamom has made it easier for them to meet daily needs, leading to higher satisfaction levels. They also have better access to education, healthcare, business opportunities, and travel.

4. DISCUSSION AND RESULT ANALYSIS

Changing livelihood" describes the process of moving or modifying one's source of income. This might entail changing careers or vocations, launching a new company, learning new skills, or adjusting to changes in the labor market or financial circumstances. Various causes, including personal interests, economic possibilities, technology breakthroughs, or external conditions like job loss or migration, might motivate people to change their livelihoods. It frequently
necessitates that people reevaluate their goals, talents, and capacities and take proactive measures to change course or seize new chances. From the Marxist point of view, a class is defined as a large group of different people who historically occupy a regular system of commodity production. Weberian analysis considers class as life chances determined by economic relations. According to both Marx and Weber the ownership of financial assets used in market exchange affects life chances. This work does not focus on the classification of classes, but on the process of class formation. It can be seen that the standard of living of cardamom farmers has changed after they stopped producing traditional food crops and started producing cardamom. After starting to produce cardamom, the goods produced by them have been included in the monetary value. By selling cardamom at a good price, they have succeeded in bringing about a change in the standard of living by buying and selling the goods of their choice.

Adhikari (2011) highlighted that throughout history, people have migrated to meet their needs and desires. With technological and industrial advancements, especially in Europe, migration became common, known as "guest workers." Today, people from poorer regions move to industrial areas, similar to how workers from Asia and Africa once went to Europe. Now, many go to Malaysia, Singapore, South Korea, and Gulf countries. In our study area, cardamom farmers’ children have also gone abroad for work.

However, cardamom farming has greatly improved farmers' lives, enabling them to stay home with their families, avoid the need to work abroad, and invest their earnings wisely. Unlike the risks and uncertainties of foreign employment, cardamom cultivation has provided a stable income and has led to overall community development.

Litche (2008) contrasts Weber's and Marx's theories. Weber sees middle-class people as both producers and consumers, unlike Marx's focus on capitalists and workers. The middle class faces economic instability and must succeed in a competitive market to maintain their social status. Failure affects their cultural life, leading to struggles for recognition and prestige.

Cardamom farmers in our study area have used their earnings to gain knowledge and improve their children's education. Their self-esteem and living standards have risen. By selling cardamom at good prices, they are able to afford desired goods, significantly enhancing their lives.

5. CONCLUSION

This study thoroughly explores the dynamics of cardamom production in Eastern Nepal, with a specific focus on its implications for local livelihoods. The cultivation of cardamom has significantly enhanced the socio-economic landscape of communities within Mahalaxmi Municipality Ward No. 2, Mulikharka, Dhankuta district, leading to a marked transformation in livelihoods. This agricultural endeavor has not only generated employment opportunities but has also become a cornerstone in augmenting household incomes and fostering poverty alleviation efforts. Nevertheless, the sector faces multifaceted challenges, including variable cardamom production due to factors like soil quality, climatic shifts, and pest-related concerns. To mitigate these challenges and bolster cardamom output, the implementation of targeted measures such as robust disease/pest control protocols, innovative soil management strategies, and the adoption of climate-resilient agricultural practices is imperative.

The volatility of the cardamom rate further highlights the complex dynamics of the capitalist market structures, where profit incentives and power asymmetries lead to price volatility and the possibility of exploitation of the producers/farmers. This is similar to Karl Marx's mode of production, where the nuances of capitalist profit motivations, and the commodification of agricultural goods, are highlighted. These challenges are still present, but it is equally important to consider the broader effects of
climate change on cardamom cultivation and local livelihoods. Climate-related shocks, such as changes in production models, and market uncertainty, necessitate proactive interventions and long term adaptation measures. While cardamom cultivation has certainly brought benefits to the local communities, addressing the sector's vulnerabilities and long-term resilience require a holistic approach. Sustainable farming practices, improved market stability, and equitable economic relations can guarantee the sustainability and prosperity of cardamom-based livelihoods in eastern Nepal, thus enhancing the wellbeing of the region's population.

6. RECOMMENDATION FOR FURTHER STUDY

Cardamom farming has several strengths and challenges. Its primary strength lies in the utilization of marginal lands. However, it faces numerous issues, including high price fluctuations, lack of disease-free saplings, dependency on the Indian market, declining productivity, drying water resources, adulteration, insufficient research and extension support, lack of favorable government policies, and poor coordination among value chain actors.

To address these challenges, it is crucial to improve vertical and horizontal integration among value chain actors to enhance the efficiency of the cardamom value chain. Increasing farmer training and maintaining regular programs such as plant clinics are essential steps. Additionally, government policies and subsidies should be enhanced to encourage farmers to engage in cardamom farming.

Further studies could focus on the following areas: cardamom diseases, factors affecting farmers' decisions to engage in cardamom farming, and the insurance status of cardamom farms. These studies could provide valuable insights and help develop strategies to support and sustain the cardamom farming industry.

AUTHOR AFFILIATIONS
Drona Budathoki
Lecturer of Sociology
Makawanpur Multiple Campus, Hetauda, Nepal

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