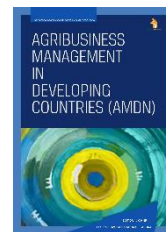


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REVIEW ARTICLE

UNLEASHING THE POTENTIAL OF LARGE CARDAMOM: AN IN-DEPTH ANALYSIS OF NEPAL'S PRODUCTION, MARKETING, AND FUTURE PROSPECTS

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ABSTRACT

Large Cardamom stands as a cornerstone of Nepal's agricultural sector, presenting a significant opportunity for economic growth and export potential. The country's unique topography, climate, and soil conditions foster the cultivation of cardamom with distinctive flavor and aroma, positioning it as a valuable commodity in the international market. This review paper delves into the production dynamics, marketing practices, and future prospects of cardamom in Nepal. Utilizing secondary data from diverse sources including governmental reports, trade journals, and academic literature, the study offers a comprehensive analysis of production trends, trade dynamics, and commercialization challenges. The findings reveal a steady increase in cardamom production, highlighting its substantial contribution to the local economy. Despite this growth, the commercialization of Nepali cardamom remains nascent, hindered by issues such as inadequate scientific research, limited adoption of advanced agricultural technologies, insufficient investment, quality inconsistencies, price volatility, and inefficient marketing channels. To address these barriers, the study proposes several strategies: enhancing productivity through mechanization, adopting improved agricultural technologies, stabilizing prices, boosting market recognition, and investing in storage and processing infrastructure. Additionally, fostering diplomatic relations is essential for expanding global marketing and trade opportunities. This review aims to provide policymakers, stakeholders, and researchers with a nuanced understanding of the cardamom industry in Nepal, advocating for a strategic approach to overcome existing challenges and capitalize on the sector's growth potential. By addressing the interlinked aspects of production, marketing, and future development, the study aspires to promote a more sustainable and profitable cardamom industry in Nepal.

KEYWORDS

Cardamom, Nepal, Production, Market, future prospects

1. INTRODUCTION

Large cardamom (*Amomum subulatum* Roxb.) is a valuable spice crop in the Zingiberaceae family, that is mostly grown in eastern Nepal, north-eastern India, and Bhutan. It differs from green cardamom (*Elettaria cardamomum*), which is grown in tropical countries such as India, Guatemala, Indonesia, Sri Lanka, and others, white cardamom (*A. Kervanh*), which is grown in Vietnam, Cambodia, Laos, and Southern China, red cardamom (*A. tsaoko*), which is grown in Southern China, and *Aframomum* cardamom, which is grown in the islands of South Africa and Guinea. (ICIMOD 2019a; Timsina and Paudel, 2016). The crop's history in Nepal dates back to 1865 when the Nepalese laborers introduced it in the Ilam district, though commercial cultivation dates back to 1953, catalyzed by the formation of the Cardamom Development Centre at Fikkal, Ilam in 1975 (ITC, 2017). The cardamom industry in Nepal today spans approximately 15,975 hectares, with the involvement of some 65,000 to 70,000 families across its 56 districts. Major producing areas include Taplejung, Panchthar, Sankhuwasabha, and Ilam (MoALD, 2023). Despite its significance, the sector faces challenges such as inadequate scientific research, limited technological adoption, and inefficient marketing channels. The majority of Nepal's cardamom, around 99%, is exported in raw form to India, where a lack of local processing facilities forces farmers to accept lower prices (MoICS 2019a). Furthermore, the absence of a Geographic Indicator exacerbates competition with other cardamom

varieties, impacting Nepal's market position (ICIMOD 2019a).

Globally, large cardamom is one of the world's most popular spices, enjoyed due to its unique flavor and aroma, worldwide its production sums to about 138,888 tonnes with India, Guatemala, Indonesia, and Nepal as major producers (MoALD, 2023). Nepal, being the world's largest producer of this crop, contributes about 68% (*Large Cardamom Could Be Nepal's Trade Booster*, n.d.) of global supplies. The sector has, however, faced several challenges relating to price volatility, high production cost, and poor storage infrastructure. These recent drops in the market price from NPR 2,000-2,400 per kilogram to about NPR 625 per kilogram among other factors have placed the sector under threat due to rising production and labor costs (*Low Price Threatens Future of Large Cardamom Farming*, n.d.). The challenges pointed out herein call for improved practices, better infrastructure, and enhanced marketing strategies. This review provides an in-depth analysis of the production trend, marketing strategies, and future prospects of Nepal's large cardamom industry. It aims to project actionable insight for the stakeholders and policymakers to unlock its full potential.

2. METHODOLOGY

This review utilized secondary data to examine large cardamom production and marketing strategies. A variety of sources, including both published and unpublished documents, were used to gather the data.

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Important sources included books, publications, conference papers, and articles from both domestic and foreign organizations, including the Food and Agriculture Organization of the United Nations (FAO), the International Trade Centre (ITC), and the Ministry of Agriculture and Livestock Development (MoALD). Extra information was obtained from peer-reviewed journals and publications issued by the Government of Nepal (GoN), particularly from the Agribusiness Promotion and Statistics Division and the Monitoring Evaluation and Statistics Division of the Ministry of Agriculture and Development (MoAD). To capture the most current developments in cardamom production and marketing, the assessment also incorporated information from print media, such as

national newspapers.

The collected data were rigorously processed to ensure accuracy and reliability. This includes categorizing, editing, tabulating, and recombining them. The data were analyzed using Microsoft Office Excel 2021, where simple statistical tools were used to estimate the results. This approach was systematic and helped in deriving useful insights, further used to draw a conclusion that gives a base for cardamom production and marketing strategies. Credibility and traceability of information were guaranteed by proper citing of all sources.

3. RESULTS AND DISCUSSION

3.1 Cardamom Production

3.1.1 National Scenario of Cardamom Production

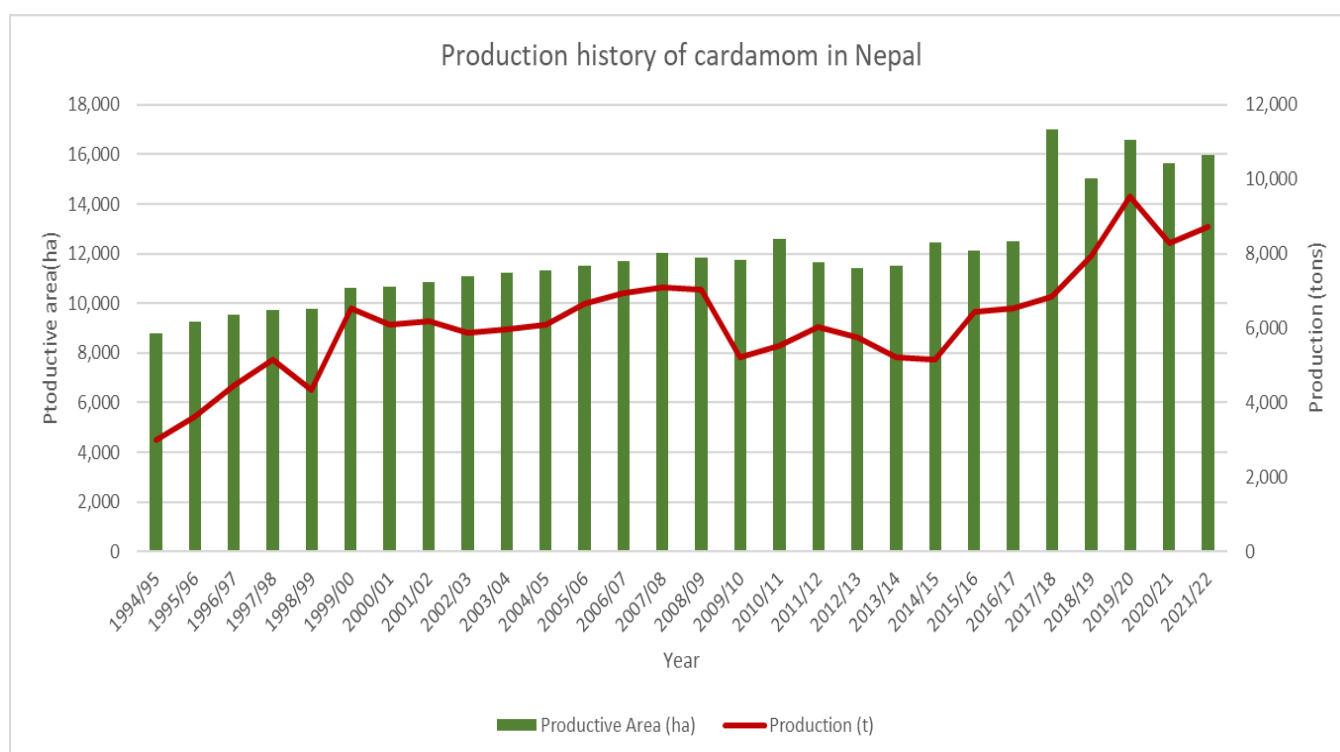


Figure 1: Productive area and productivity of Large Cardamom in Nepal (Source: MoALD, 2023)

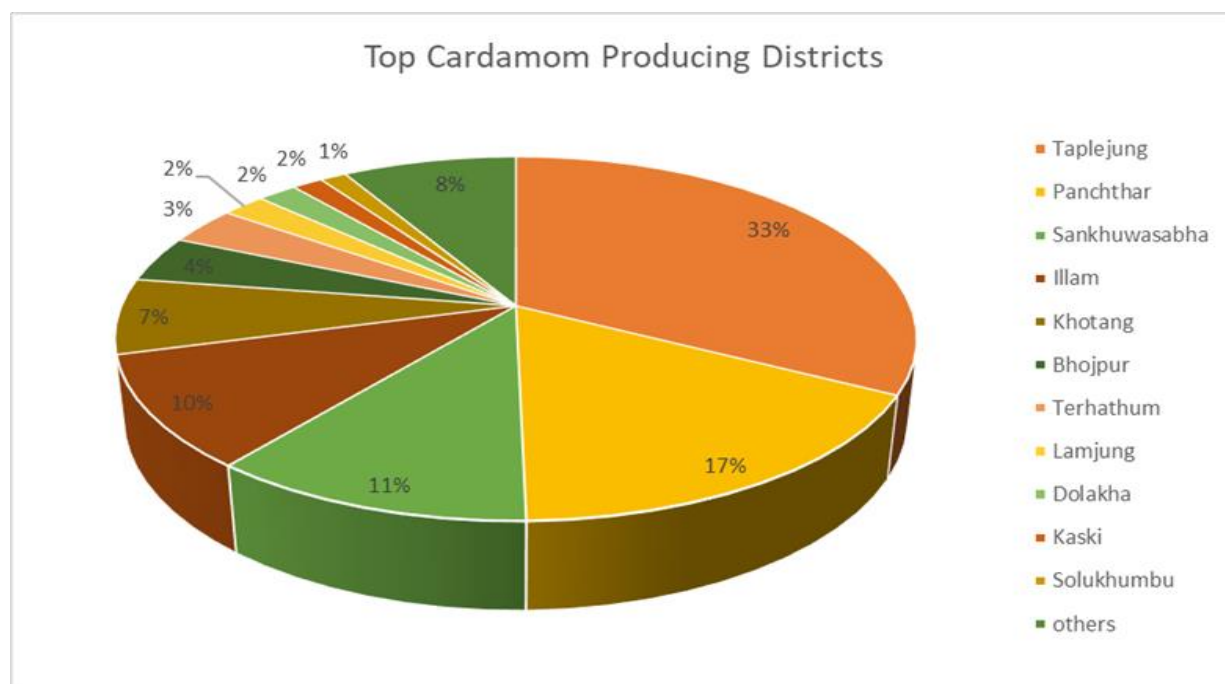


Figure 2: Total Productive District of Large Cardamom in Nepal (Source: MoALD, 2023)

Cardamom production in Nepal has been dynamic and tremendous over the last decades, portraying the strategic advancement of agricultural practices that increase the country's prominence in the global spice market. The Nepalese laborers returning from Sikkim, India, brought cardamom seedlings and began its cultivation, making Sikkim the believed origin. (Adhikari, 2015). At first cultivated in a few villages of Ilam like Fikkal and Pashupatinagar, the high market value of cardamom soon spread its cultivation to other districts. Its government-level development began in 1975 with the Cardamom Development Centre in Fikkal, Ilam (Timsina and Poudel, 2016).

Figure 1 shows the national scenario of cardamom from 1994 to 2022 where in 1994/95, a productive area of 8,782 hectares yielded 3,010 tonnes of cardamom. This served as the foundation for an industry that would grow. By the late 1990s, the productive area had increased to 9,770 hectares with production going up to 5,146 tonnes, thus marking the initial success of the farmers' efforts and the favorable agro climatic conditions of Nepal. With the entry of the new millennium, the growth had assumed remarkable momentum as shown in figure 1. During 2000/01, the productive area touched 10,668 hectares, whereas the production soared up to 6,080 tonnes. This was the period for the crop's first big jump in area and output, reflecting the growing global demand for Nepalese cardamom.

The next round of steady growth set in by mid-2000, with productivity peaking at 578 kg/ha in 2005/06, reflecting improved techniques of cultivation and better resource management. In 2010/11, production reached 7,517 tonnes, with the cultivated area remaining relatively constant, thus showcasing the Nepalese farmers' ability to adjust production in relation to market demand. The latest years have been quite spectacular regarding this crop for Nepal. By 2017/18, the productive area increased drastically to 17,004 hectares, although productivity has gone up and down as shown in figure 1, showing the difficulties and adjustments within farming practices. Despite this ups and downs graph, production reached a notable 6,849 tonnes.

The latest data from 2021/22 reflects a productive area of 15,975 hectares and an impressive production of 8,714 tons, where Taplejung is the major district which contributes 33%, followed by Panchthar, Sankhuwasabha, Ilam, Khotang contributing 17%, 11%, 10%, 7% of total production respectively as shown in figure 2. The compelling rise in trajectory underlines not just increasing global appetite for cardamom but strategic developments in agricultural practices and export capabilities by Nepal.

Large Cardamom occupies first place among the agricultural goods being exported from Nepal. "Increase in cardamom production and in its price are the main reasons behind improvement in cardamom exports in the last fiscal year," said Karki, who is also executive member of Federation of Nepalese Chambers of Commerce and Industry.

The share of Nepal in large cardamom products stood at 52%, India at 37% and Bhutan 11% in the world. (*Cardamom Exports Hit Record of Rs. 8.27 billion in FY 2022/23*, n.d.). Nepal is on course to produce more of this fragrant spice and become much less dependent on imports, with more export potential, in fulfilling the rising global demand placing it at the center of the spice market globally and important to the agriculture economy of the country.

3.1.2 Global Scenario of Cardamom Production

Cardamom is one of the world's most expensive spices, surpassed only by saffron and vanilla. It is mainly used in ethnic cuisine (Indian and Middle Eastern) and health products. There are two primary forms of cardamom: small cardamom, mainly produced in Guatemala; and large cardamom, which is mainly produced in Nepal. While Guatemala holds a near-monopoly in small cardamom, India is the main producer of both (*The European Market Potential for Cardamom* / CBI, n.d.). Looking at the past in mid-1970s, yearly worldwide Production was predicted to be between 13,000 and 14,000 MT, with the two largest producers being India (3,500–5,000 MT) and Guatemala (6,000–8,000 MT). Papua New Guinea and Honduras (350–400 MT) were two other producers (Aragon et al., n.d.).

But currently in the year 2022/2023 as shown in the figure number 3, the world largest producer is India with productivity 41 million kilogram and is followed by Indonesia 40,600 million kilogram (FAOSTAT, n.d.). This highlights how the demand of the cardamom has risen rapidly and to meet the demand huge production is done by the various countries from different part of the world. The top producers along with their productivity is shown in the figure 3 where the data in the horizontal bar graph is represented in million kilograms. The production of Guatemala is 36,400 tons which has decreased from the previous year. The total production of cardamom is 138,888 tons (FAOSTAT, n.d.). The cardamom market is growing day by day and due to the increase in huge demand of the cardamom, the market size is projected to increase by USD 187.3 million and is estimated to grow at a CAGR of 3.06% between 2023 and 2028. (<https://www.technavio.com>, n.d.).

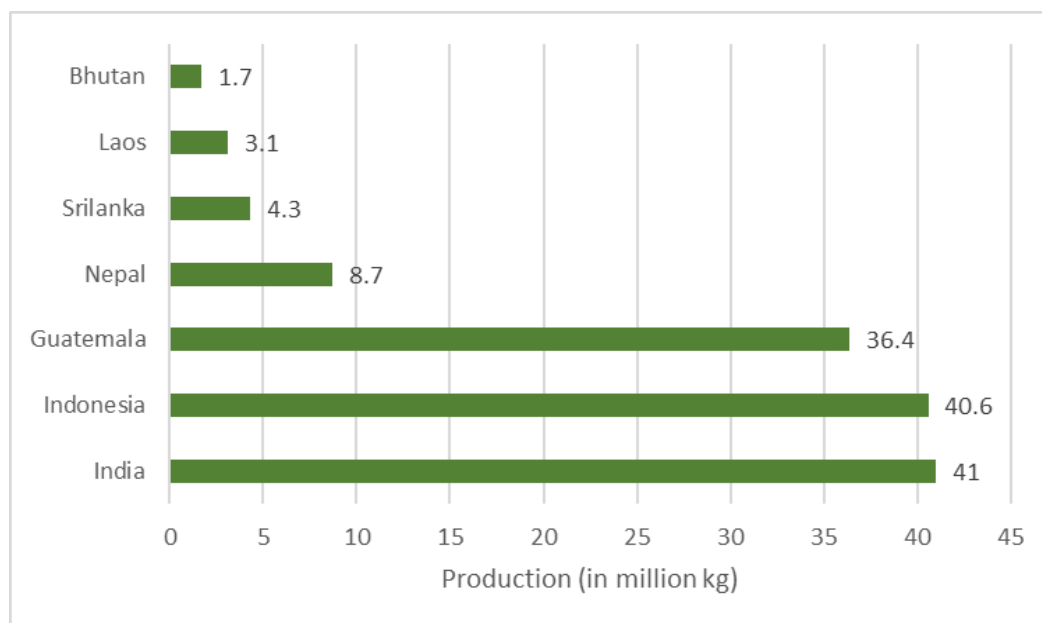


Figure 3: Major Cardamom Producing Countries in the World (Source: FAOSTAT, 2022)

3.2 Marketing

3.2.1 National Market

Large cardamom marketing in Nepal comprises all the transactions involved from the point of its production to its final distribution to the consumer (Kattel et al., 2020). The marketing system constitutes producer farmers, traders, transporter, wholesalers, exporters and consumers as the main actors to carry out different activities (MDD, 1999). Indeed, a well-established marketing system is the stepping stone to large cardamom production and the economy and infrastructural growth of the

cardamom sector (Paudel and Malla, 2020). The Indian market dominates the marketing landscape of cardamom in Nepal. Statistics show that nearly 99% of Nepal's large cardamom production is absorbed by the Indian market, a fact reflecting a deeply ingrained trade relationship rooted in its established presence in Indian cuisine (Acharya et al., 2021).

Despite all the potential to extend the market to the Middle East and South Asia, there exist tough challenges to Nepali traders by way of perceptions of market size and the complexity of export procedures to Europe and the USA (Acharya et al., 2021). The situation is further confounded by informal trade practices, wherein most of the large cardamom is exported

unofficially to India. Traders declare reduced volumes to evade taxes, thereby distorting production and export data. In Nepal, this marketing infrastructure is not well developed in terms of accredited laboratories, auction platforms, and warehousing facilities, thus constraining export capacity and competitiveness (Ahsan and Chapman, 2003).

In addition, high tariff and complicated customs procedures in the export markets other than India serve as huge barriers to access, and there are definitely food safety regulatory requirements to be maintained. Despite such strategies, that is, 'Nepal National Sector Export Strategy: Large Cardamom 2017–2021' adopted and implemented by the Nepali government, export diversification has yet to make a spectacular shift (ITC, 2017a). Though there is some optimism over the Middle East markets, many still remain fairly pessimistic about the breaking into the more developed markets. This underlines the need for further infrastructure, regulatory, and market strategy improvements if the true potential of Nepal's cardamom sector is to be explored.

3.2.1.1 National Imports and Exports

Nepal does not import large cardamom. Instead, Nepal is the world's largest producer and exporter of large cardamom, accounting for 68% of global production (*Large Cardamom Could Be Nepal's Trade Booster*, n.d.). For the past decade, the export values of Nepal's cardamom have been in

a rather dynamic trend, influenced by many economic, climatic, and market factors. There were significant fluctuations that underline periods of growth and decline, according to data sourced from the Nepal Rastra Bank as shown in figure 4. There is a highly volatility trend in the period from 2013/14 to 2016/17 that swings from 3.83 billion to 4.63 billion rupees. This went down in 2014/15 to 3.83 billion rupees before peaking in the following year, 2015/16, at 4.63 billion rupees and dipping again in 2016/17 to 3.9 billion rupees.

The years 2017/18 through 2019/20 reflected comparative stability, always above 4 billion rupees, peaking at 4.84 billion in 2017/18 before slightly dipping to 4 billion in 2019/20. 2020/21 was an extraordinary bumper increase to 6.93 billion rupees, likely driven by increased global demand, favorable climatic conditions, and strategic market interventions. Although it dropped back to 4.77 billion rupees in 2021/22, the bourse bounced back in fine style during the first nine months of 2022/23 to 6.36 billion rupees, a sure sign of new highs by the fiscal year-end. The necessity for strategic policies targeted at stabilizing and expanding Nepal's cardamom export market is highlighted by this trend, which heightens the industry's resilience and capacity to recover from climatic and market obstacles. The graph's dynamic tendencies emphasize how important it is to monitor the cardamom sector in Nepal continuously and to implement adaptable strategies in order to sustain and increase its potential.

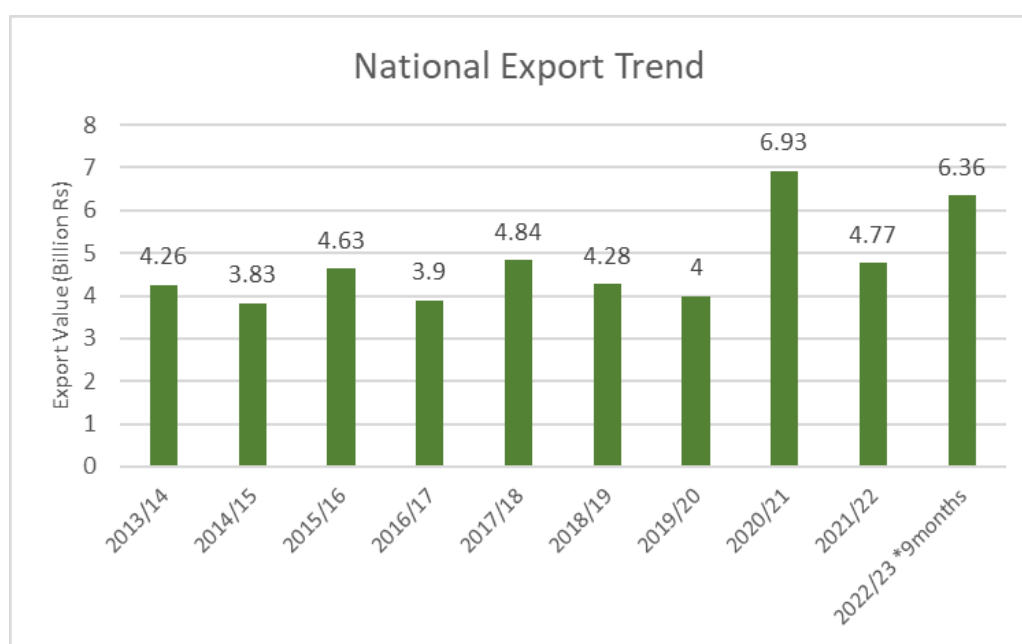


Figure 4: Large Cardamom Export Trend of Nepal (Source: NRB, 2023)

3.2.2 Marketing channels

The marketing channels of large cardamom in Nepal involve several steps and intermediaries. It begins on the field with growers sending cardamom directly to the district buyers. There are different marketing channels, which vary according to the distance between producing location and the final location. On the basis of several literature reviews, the following were identified as the main marketing channels of the cardamom:

1. Producer → Village Vendor → Intermediate Trader → District Trader → Wholesale Trader → Exporter
2. Producer → Intermediate Trader → District Trader → Wholesale Trader → Exporter
3. Producer → Intermediate Trader → Wholesale Trader → Exporter
4. Producer → Intermediate Trader → Exporter
5. Producer → District Trader → Wholesale Trader → Exporter
6. Producer → District Trader → Exporter
7. Producer → Wholesale Trader → Exporter
8. Producer → Exporter

In the trade of large cardamom, the role of middlemen or agents is very important, and they capture most of the consumer price, leaving to

farmers only 20-25 percent of the retail value. Quite often, cardamom growers sell out their produce at low prices to local traders, who in turn export it to India at considerably higher rates. The prime suppliers of large cardamom in the world market are Nepal, Bhutan, and India, while Singapore acts as the central international trade hub (Khatriwada, 2007). Birtamod is the main cardamom trading centre in Nepal, with sub-centres at Dharan and Fikkal. Large cardamom reaches Birtamod from the main producing areas like Ilam, Sankhuwasabha, Terhathum, Taplejung, and Pachthar. Hile is a major commercial hub supplying Sankhuwasabha, Terhathum, Bhojpur, and Dhankuta. Marketing channels of large cardamom follow primary markets: Barhabise, Siddhakali, Rambeni, and Khandabari; secondary markets: Basantapur and Hile; and terminal markets: Kakadbhitta Siligurhi or via Rani-Jogbani check-posts (Khatriwada, 2007).

3.2.3 Global Market

3.2.3.1 Global Import

There is a dynamic interplay between key producing and consuming nations in the worldwide market for cardamom, a spice that is loved for its fragrant flavour and therapeutic benefits. The bar diagram, in figure 5 illustrates the import values of cardamom, which provide a clear picture of patterns of worldwide demand where the UAE is the largest importer in the global cardamom market. Its impressive import value, at USD 130.4 million, underlines huge demand and its strategic position as a re-export hub. Next comes Saudi Arabia, with USD 128.9 million, which explains the deep-rooted cultural and culinary importance of this spice in the region.

Although China is one of the major producers, it imports USD 85.6 million worth of cardamom to meet its growing domestic demand, again reflecting the dynamic nature of spice trade. Another major producer and importer in India with USD 56.3 million of imports, mostly driven by quality demand and consumption. Cardamom, in huge domestic consumption, is imported by Bangladesh worth USD 44.6 million. Other key importers included

Egypt, the United States, Jordan, Pakistan and Kuwait each replicating the diversified, broad demand for this sweet-scented spice. Cardamom imports across the world attest to this universal appeal and the sophisticated trade networks that get the product from the farm to the table.

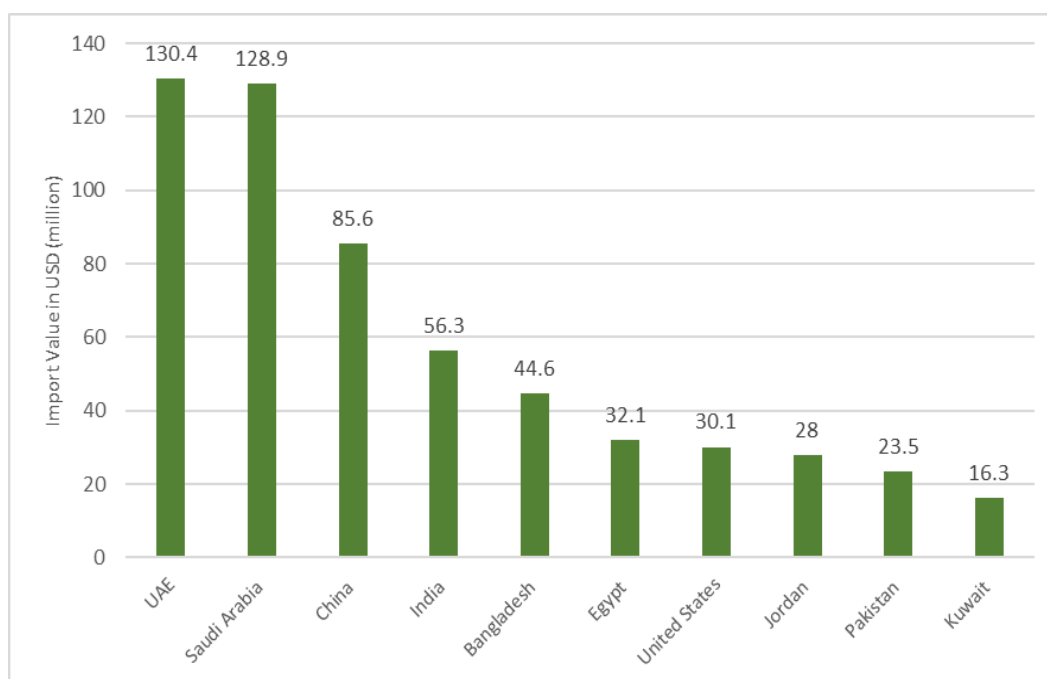


Figure 5: Global Import of Cardamom (Source: FAOSTAT, 2022)

3.2.3.2 Global Export

Similar to the import, the world export market for cardamom is defined by a complex network of trade flows, with major producers and consumers dispersed over many continents, each of whom makes a distinct contribution and shapes the market. As shown in figure 6, Guatemala lords over the cardamom export market with an outstanding export value of USD 418.5 million, enjoying a variety of climatic conditions perfect for producing premium quality spice. Next in line is India, exporting cardamom worth USD 155.1 million, particularly the aromatic varieties sourced from Kerala. Indonesia also contributes substantially to the amount of USD 70.1 million through its exports, again because of the country's favorable tropical conditions for its cultivation. Nepal exports

USD 46.6 million of cardamom, taking an advantage of its unique hill terrain to produce distinctive spice varieties. The Netherlands acts as an important hub in Europe with USD 18.4 million of exports, making its way around the world. Singapore assumes an important position with USD 8.8 million in exports, considering its size. These include, but are not limited to, USD 6.9 million from Germany, USD 4.9 million from Vietnam, USD 4.2 million from Honduras, and USD 3.6 million from the United Kingdom, thus underlining the global stretch and importance of cardamom trade. The illustrated export data in figure 6 highlights the varied geographic origins and critical positions of nations in the global cardamom supply chain, contributing to the enhancement of culinary customs and economic environments across the globe.

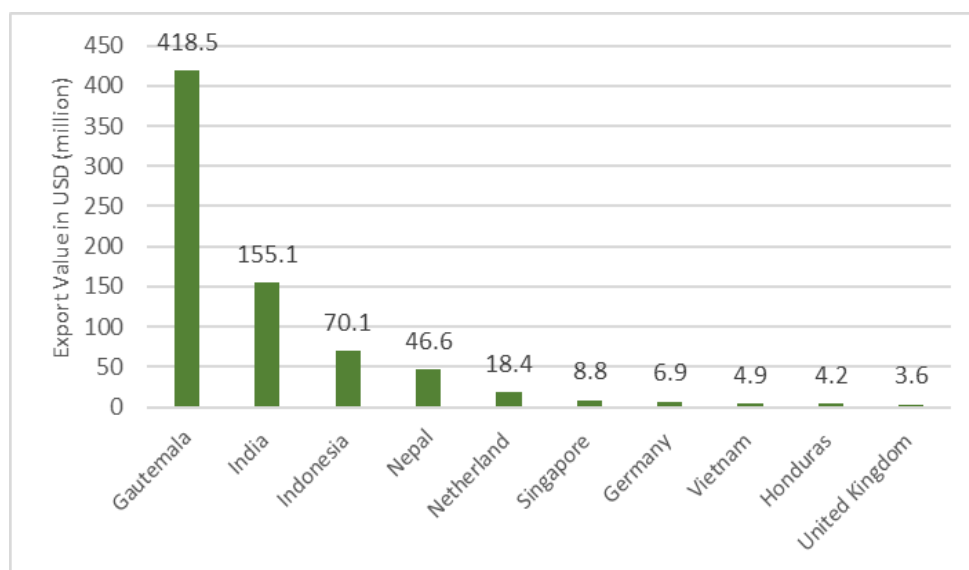


Figure 6: Global Export of Cardamom (Source: FAOSTAT, 2022)

3.3 Future Prospects

The future prospects for large cardamom farming in Nepal are characterized by both substantial opportunities and significant challenges. Being the largest producer in the world by supplying about 68% to the

global market, the cardamom sector of Nepal is equally important to national and international markets. On the other hand, the sector is blighted by serious problems in regard to the sharp fall in market price, coupled with an increase in production cost. The price of cardamom has slid down from about NPR 2,000-2,400 per kilogram to roughly NPR 625

per kilogram within the recent past, lessening the economic viability of its cultivation (Low Price Threatens Future of Large Cardamom Farming, n.d.). Rising production costs, pegged at about NPR 656 per kilogram, have more sharply reduced profit margins, as farmers get a thin profit margin of NPR 344 per kilogram. In addition, there wasn't enough labour available during the harvest season due to a scarcity of workers and the lower financial returns from cardamom growing. Moreover, it results in further loss from spoiling and fungal infections, as well as a decline in quality owing to inadequate storage facilities.

Despite the odds, there are bright prospects to revive the industry for large cardamom. The spice has seen a substantial increase in export by 126.99 % over the past decade with rise from NPR 3.63 billion in the fiscal year 2012-13 to NPR 6.36 billion in 2022-23 in export value with estimation suggesting that the market could reach NPR 15 billion in the coming years (Large Cardamom Could Be Nepal's Trade Booster, n.d.). The growing global demand for cardamom brings an opportunity to build market prices if the production constraints are mitigated. The eastern part of Nepal shares suitable climatic conditions—temperatures ranging from 10°C to 30°C, annual rainfall of 1500 to 3000 mm, and well-drained soils at a pH range from 4.5 to 6.5—which puts forward a strong base for quality cultivation (Dhungana et al., 2024).

Improvements in viral treatment methods, development of disease-resistant varieties such as Bebo and Ramla, and many other technological developments will further boost productivity and quality (Paudel et al., 2018). Safe production practices are assured through a strong SPS system, comprising an effective network of 2000 plant protection experts backed by state-of-the-art laboratory facilities (Sharma, n.d.). In such cases, strategic interventions in the form of better marketing strategies, storage facilities, and export capabilities can help farmers get better market access and higher prices. Government support to infrastructure development may be wholly warranted, as this could make the agricultural institutions more coordinated and hence help in stabilizing the prices of products and creating job opportunities. Market development, labor management, and technological improvements are the three main areas of focus if Nepal is to address the current challenges and usher in a sustainable and profitable future for its cardamom sector.

3.4 Strategies

3.4.1 Production Strategies

The production strategies of cardamom in Nepal emphasize improvement in cultivation practices, increasing the yield, and solving various problems faced by the farmers.

- Selecting appropriate cardamom varieties from the eight cultivars; Ramsai, Golsai, Saune, Chibesai, Dambersai, Salakpure, Varlangae, and Jirmale that are most suited for growing in Nepal between 700 and 2000 meters above sea level.
- Use of tissue culture techniques to produce saplings free of disease. Every year, the Agricultural Research Station in Pakhribas tissue culture facility generates about 10,000 large, disease-free cardamom saplings that are then distributed to farmers. (Shrestha et al., 2018)
- Improving productivity requires farmers to have easy access to the

supplies they need, including high-quality seeds, fertilizers, and irrigation systems. Local bodies, various national and international organizations should facilitate the farmers.

- Implementation of improved post-harvest and harvesting technology, among other advanced production approaches. For example, the quality of dried cardamom can be increased by creating customized drying bhattis.
- Improving the marketing and distribution of cardamom and construction of infrastructure at important trade hubs like Birtamod, southern Terai including collecting sheds, auction markets, and warehouses. (Shrestha et al., 2018)
- Development of strategies for the management of diseases and pests, such as rhizome rot, furke, and chirke. Involvement and regular research and monitoring by organizations like NARC to provide suitable high-yielding cultivars and strategies to tackle these problems. (Shrestha et al., 2018)
- Government should emphasize Insurance and Financial Support for farmers that can reduce production risks by learning about insurance plans pertaining to huge cardamom and by receiving specific incentive packages.

3.4.2 Marketing Strategies

The importance of marketing has increased manifold over the last few decades due to rapid economic growth, globalization, technological advancement, ever-increasing consumer needs and wants, and enhanced purchasing power. If a producer wants to face the competition of today's marketplace, the path of customer orientation cannot be overlooked. The 7 Ps of the marketing mix, illustrated in Figure 8, encapsulate the most effective marketing strategies for commercial products (Nurdiana et al., 2023). Notably, the marketing mix refers to the set of actions or strategies producers adopt with the aim of promoting their products in the marketplace ("What is Marketing Mix?" n.d.). The first P refers to the Product, which, in this case, is the cardamom being marketed. The quality, taste, freshness, and overall goodness of cardamom will effectively capture the market. All these attributes are related to attaining profitability and customer satisfaction.

The second P refers to Price, which would mean the price based on the quality and other attributes of the product. It has to be very tactically set to be competitive but at the same time, affordable. If too high, then it may push people to spices from alternative regions, and if too low, then it may become an unsatisfactory deal for the seller. Therefore, the optimal price point is very critical in this regard. Place, the third P, denotes the distribution and location of cardamom markets. For effective marketing, the markets should be accessible to large consumer segments, well infrastructurally developed, with efficient marketing channels, and wholesaling and retailing processes that are well organized. The fourth P, Promotion, refers to the activities that bring information about the availability and usefulness of the product to the consumers and traders. This can be seen to include the blending of various promotional techniques like advertising, personal selling, and sales promotion to mount a product awareness campaign.

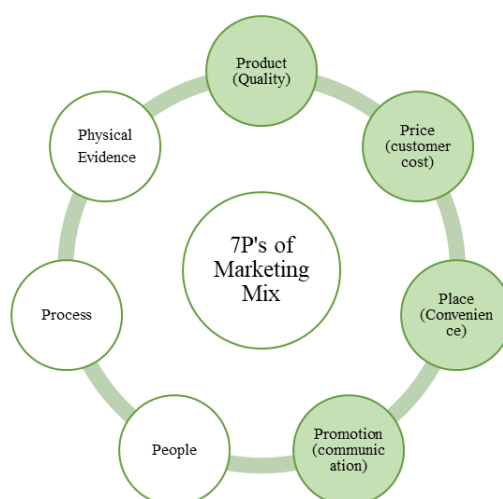


Figure 7: Marketing strategies showing 7 P's variables.

Apart from the four P's, three more P's have been added by the current scenario in marketing: People, Process, and Physical Evidence. People include all those associated with the marketing process who should exhibit ethical behavior on their part and influence consumer perception in a positive way. Process refers to the procedures starting from cardamom cultivation to its delivery at the market, which need to be efficiently managed for high consumer satisfaction. Physical Evidence refers to the environment in which the marketing interactions take place including the conditions of the market spaces and the way products are displayed. Each element of the marketing mix interacts with the others to form, collectively, the marketing strategy for cardamom. The proper management of these elements can go a long way in enhancing the success of cardamom growers, traders, and marketers in Nepal. Thus, the marketing mix acts as one comprehensive strategy toward optimizing the cardamom market.

3.4.2 SWOT Analysis

STRENGTHS	WEAKNESSES
Distinctive flavor and higher quality, giving it great popularity in the international market.	Limited access to modern farming techniques and inputs limits improved productivity and quality levels.
Generational experience and knowledge in growing cardamom are present amongst farmers.	Lack of transportation and storage facilities leads to the losses of the post-harvest.
One of the major export items in Nepal, serving as a source of foreign exchange earnings.	Prices can be very volatile; this can affect the farmers' income stability.
A huge number of rural populations get employment by cardamom farming, thus alleviating poverty.	Tedious paper works to access credit for farmers to enable the purchase of inputs for betterment of farm.
The eastern parts of Nepal, in particular the hilly areas, offer the best climate for growing cardamom.	Cardamom production as a monoculture crop carries a huge risk if market demand fluctuates or disease occurrence.

OPPORTUNITIES	THREAT
New export markets are open for increased supplies.	Cardamom crops are prone to various pests and diseases, which can substantially reduce yield.
Oil extraction from cardamom or processing it may enhance profitability.	Changes in the weather pattern can bring down cardamom production.
Conversion into organic cardamom cultivation can attract premium prices with the emerging global demand for organic products.	Tough competition from other cardamom-producing countries like India and Guatemala.
Government initiatives for promotion of agriculture may be utilized to the betterment of cardamom producers.	Over-reliance of export to Indian market can be risky if the demand falls.
Long-term investments in R&D will induce development of improved varieties that are more vigorous, more disease-resistant, and have higher yields.	Trade policy or tariff changes in destination countries can have negative impacts on exports.

4. CONCLUSION

Large cardamom is considered one of the important agricultural commodities of Nepal, offering huge economic potential in both the domestic and international markets. This paper reviews the production, marketing, and prospects pertaining to cardamom in Nepal and indicates that due to favorable topography and climate, production increased up to 8,714 tons from 15,975 hectares in the 2022/23 fiscal year. Taplejung district has been found to be the leading producer. Commercialization is still at its infant stage and is hindered by various factors such as a lack of scientific research, low adoption of technology, and ineffective marketing

channels. Therefore, if this industry has to be taken to the next level, increasing productivity through mechanization and appropriate technologies, introducing price stabilization methods, and better storage and processing facilities for preserving prices and quality assume prime importance. It is also important to strengthen diplomatic relations in order to diversify market beyond India, which absorbs nearly 99% of Nepal's exports. The global demand for cardamom presents considerable opportunities; however, the sector is constrained by low prices and increased costs of production. Strategic improvements in marketing, infrastructure, and international trade relations, including better post-harvest technologies and quality control measures, are needed to boost Nepal's position in the global market. This review highlights the needs of strategic interventions and closer stakeholder collaboration to ensure more socio-economically sustainable growth and profitability in the cardamom sector.

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