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Trade and Export Promotion Centre

Ginger Trade Routes to SAARC countries

A Study on the Cost Effective Routes for Exports of Nepalese Ginger and Ginger Products in the Gulf countries through Different Ports available for Nepal.



2076

Disclaimer

Trade and Export Promotion Centre (TEPC) endeavor, using its best efforts to provide a thorough research on supply chain and export process **of Nepalese Ginger products in the Gulf countries through different ports that are available for Nepal** and provide recommendation of exporting process that TEPC and other stakeholders initiate.

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Acknowledgement

This logistics Study on **Analysis of Logistic Procedure for Export Promotion of Ginger Product of Nepal to the Gulf Countries through Sea Ports that are available for Nepal** is the outcome of the thorough work of the staffs of Trade and Export Promotion Centre (TEPC) who have rendered their hard work in accomplishing this final report.

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Mr. Sarad Bickram Rana
Executive Director

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LIST OF ABBREVIATION

ANSAB	Asian Network For Sustainable Agriculture Bio-resources	KII	Key Informant Interview
C&F	Cost and Freight	L/C	Letter of Credit
CA		MoAD	Ministry of Agriculture Development
CFL	Central Food Laboratory	MoC	Ministry of Commerce
CIF	Cost Insured Freight	MoICS	Ministry of Industry Commerce and Supplies
CNI	Confederation of Nepalese Industries	MT	Metric Ton
CO	Certificate of Origin	NARC	Nepal Agriculture Research Council
CPT		NBSM	Nepal Bureau of Standards and Metrology
CPT		NEHHPA	Nepal Herbs and Herbal Products Association
CTS	Customs Transit Declaration	NGPTA	Nepal Ginger Producers and Traders Associations
DFTQC	Department of Food Technology and Quality Control	NRB	Nepal Rastra Bank
EO	Export Obligation	NTIP	Nepal Trade Information Portal
FAO	Food and Agriculture Organisation	NTIS	Nepal Trade Integration Strategy
FGD	Focused Group Discussion	NTMs	Non-Tariff Measures
FHAN	Federation of Handicraft Associations of Nepal	OTL	
FNCCI	Federation of Nepalese Chambers of Commerce and Industry	PO	Purchase Order
FOB	Free on Board	SMARTH-NMDP	SMARTHA-Nepal Market Development Project
FTTEN	Federation of Truck Transport Entrepreneurs Nepal	SNV	Netherland Development Organisation
FYM	Farm Yard Manure	SPS	Sanitary and Phytosanitary Standard
GAP	Good Agriculture Practice	SPS	Sanitary and Phytosanitary Measures
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit	TBT	Technical Barriers to Trade
GoN	Government of Nepal	TBT	Technical Barriers to Trade
GSP	Generalized System of Preferences	TEPC	Trade and Export Promotion Centre

HEAN	Herbal Entrepreneur Association of Nepal	TTA	Transit Transport Agreement
IFAD	International Federation of Agriculture Development	UAE	United Arab Emirates
IRD	Inland Revenue Department	UK	United Kingdom
ITC	International Trade Centers	USA	United States of America
JABAN	Jadibuti Association of Nepal	WTO	World Trade Organisation

EXECUTIVE SUMMARY

This report provides brief information on logistic procedure for export promotion of ginger product of Nepal to the gulf countries via available sea ports. The study has conducted to suggest cost effective export procedure, calculation of per unit cost of production, cost of processing, per unit cost of transportation and suggest most effective and efficient multimodal transportation procedure to export Nepali ginger in the Gulf countries. It has provided detail analytical information on tentative per unit cost of production, per unit multimodal cost of transportation, cost of processing, value addition and most efficient logistic procedure to export ginger in the gulf countries. Methods of analysis for primary information include consultation meeting with farmers, road head traders, exporters, associations, government agencies, custom offices, agents, intellectuals and for secondary information absorbed from published research books, factsheet, newspaper articles and journals.

Nepal holds fourth largest ginger producing capacity in the world with 9% (2,80,000 MT) shares of the annual total world production after India, China and Nigeria. However, the sector has high export potential if government and private sector would collaborate to enhance production capacity, increase productivity (12 ton/hect), focus on quality production, develop high quality planting seeds, proper use of fertilizers, pesticides, post-harvest handling, sanitary, phytosanitary and plant quarantine issues.

Nepal traded fresh ginger (raw ginger) which is more than 90% of the total export. Efforts from small scale cooperatives, private companies and individual for product processing such as ginger powder, dry ginger (sutho), ginger candy and ginger oil are insufficient with nominal volume of the total export. Dry ginger and ginger powder have high demand in international market, though efforts to produce dry and ginger powder from private sector are not sufficient to harvest result to promote export in the global ginger market. Therefore, the presence of the Nepali ginger is poor compared with other countries. If stakeholders workout to establish big scale ginger processing plants including drying, grading, sorting, packaging, labelling, branding, processing and product diversification, ginger would be one of the most potential and recognized export sector of Nepal. Traders are less proactive to explore growing ginger market due to lack of sufficient processed ginger product. Direct and indirect obstacles and procedural compliance inside and outside the country, Nepali traders scared to bear a risk of the return of their investment due to various export obstacles by exporting processed ginger in the UAE and Gulf countries. Small scale processed

item has sent to the Europe and Gulf through personal contact and or individual connection. Complex geographical location, difficult to access sea routes, difficult to get referral container, long road transportation hampered to maintain supply chain regulation and hence traders are choose to be safe of their investment just being a middleman by exporting fresh ginger to the India. Nepal is yet to be connected in the global export market due to huge dependency with India and China. Therefore, it is urgent to explore global ginger market with the support of the Government of Nepal via various trade facilitation, bilateral treaty, agreement and business link ups.

More than 98% of the total export volume goes to the Indian market and nominal processed amount goes to the Europe and Gulf. While exporting to the third countries, Nepali traders are using their personnel channel due to lack of export trade relation with the destination countries. Those efforts of individual traders could not been sustainable due to various obstacles of tariffs and non-tariff barriers, custom procedural compliance, seen and unseen factors, interest of the custom agent and officials, improper supply chain and so on. Every step from farm land to the consumer markets traders has to suffer from tremendous issues. Furthermore, Nepali traders is yet to establish mutual relation with the international buyers to gain the trust, enhance capacity to maintain regular supply chain, build individual capacity for the product processing, diversification and fully prepared to export in the global market with competitive capacity.

Nepali ginger production has been based on the traditional farming practices with the involvement of numerous farmers in their small piece of fragmented land. Scattered pattern of cultivation and involvement of numerous families with minimum use of modern technology have added to more production cost which are limiting its competitive capacity. Lack of quality planting seeds, Improper cultivation, harvesting and post harvesting handling practices, improper use of chemical fertilizers are the major affecting factors for producing high quality ginger, increase productivity and minimize the cost of production. Government efforts are not sufficient enough to explore global ginger market and bridge the gap between traders and global ginger market through agreements on tariff free export of the ginger product, buy back contract and contract on transport facilitation. Export procedure are difficult due to official and unofficial obligations, cash interest of the unauthorized agents, regulations of transit countries, weeklong shipping procedure, custom regulations, plant quarantine and warehousing issues.

Stakeholders should address the major export issues such as quality of production, increase productivity, reduce the production cost, high scale commercial farming, product processing,

diversification, value addition, shorting, grading, packaging, labeling, branding, warehousing, transport facilitation, custom facilitation, marketing and supply chain management to uplift the ginger sector by enhancing competitive capacity of the product in the global export market including UAE and Gulf countries. Therefore, relevant stakeholders and concerned authorities should deeply work out to enhance processing and export capacity of the traders, promote large scale commercial farming, reduce the production, processing, transportation and warehousing cost, trade facilitation between two countries and zero tariff entry in the transit countries include Bangladesh, UAE, Gulf, Japan, Europe and America to achieve the expected export volume in the global markets.

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CHAPTER 1: INTRODUCTION AND BACKGROUND

1.1 Project Background

The Government of Nepal has established "Trade and Export Promotion Centre", a national trade promotion organization of the country in November 2006, as a focal point with the objective of promoting foreign trade in general and export trade in particular of the country. The main objective of the TEPC is to advise the Government of Nepal in formulating policies for the development and expansion of trade and export. Contribute to strengthening the national economy by developing and expanding trade and export of the country. Support in achieving the goal of poverty alleviation through the development of rural economy by enhancing internal and external market for agro-based and other products. Launch programs by establishing coordination among different agencies for increasing the production of exportable products. Assist to diversify trade by identifying potential market for exportable products. Cooperate in opening institutions for export promotion and to diversify trade and extend support to such institutions. Plead for technical assistance with national and international organizations for improving quality/standard of exportable products. Implement appropriate programs so as to attract investment at the national and international level for export-oriented and import management project. Act as information pool by collecting, disseminating and publishing useful trade-related information. Study and identify the problems of foreign trade and advise the Government of Nepal with appropriate measures to solve such problems. Assist in market test of exportable products. Organize buyers/seller meet and conduct training seminar and workshops. Simplify the procedures relating quality control, insurance and transport and enhance support services for export transaction.

1.2 Introduction

Ginger (*Zingiber officinale* Rosc.) is an important commercial crop grown for its aromatic rhizomes which is used both as a spice and a medicine. It is marketed in different forms such as raw ginger, dry ginger, bleached dry ginger, ginger powder, ginger oil, ginger oleoresin, gingerale, ginger candy, ginger beer, brined ginger, ginger wine, ginger squash, ginger flakes etc. Ginger is the rhizome of *Zingiber officinale* Rosc. a herbaceous perennial belonging to Zingiberaceae, and is believed to be native of south-eastern Asia.

Ginger is grown on more than 23,000 hectares across the country. As per the data of FAO, Nepal produced 2,84,000 tons of ginger in 2018, and 98.4% percent of the total export was exported to India only. Globally, Nepal is the fourth largest ginger producer after China, India and Nigeria. India is the main export market for Nepali ginger. Over 95 percent of the export is into India. There is a high export potential of dried ginger in a number of foreign markets such as Dubai, Europe, South Korea and Japan.

The major ginger producing countries are India, China, Nigeria, Nepal, Indonesia, Thailand, Cameroon and Bangladesh. It is also grown in Japan, Mali, Philippines, Taiwan, Sri Lanka and Malaysia however the amount of production is very nominal compared with the volume of the world Ginger production. Every year United Kingdom, United States, Japan and Saudi Arabia imports large quantities of ginger for their domestic consumption. Nigeria ranks first with respect

to area under ginger farming cultivation covering about 56.23 % of the total global area followed by India (23.6%), China (4.47%), Indonesia (3.37%) and Bangladesh (2.32%). India ranks first with respect to ginger production contributing about 32.75% of the world's production followed by China (21.41%), Nigeria (12.54%) and Bangladesh (10.80%). Asian countries lead in the supply of ginger in the world market. Japan and USA are the major importers. China has the major export shares.¹

Nepali hilly region has high potential for ginger production due to ginger friendly weather and soil fertility. Various studies show that the geographical range is appropriate for high quality ginger production with good aromatic flavor. The ginger sector is one of the 12 priority export potential products of the Nepal Trade Integration Strategy (NTIS)-2016 identified by the Government of Nepal. The potential agriculture sector could support to reduce huge trade deficit of the country through export in the international market. Ginger can be exported in the raw and fresh form, extracted oil as a species and other processed items such as ginger powder, dry ginger (*sutho*), ginger oil, ginger candy and other product. Despite of the high demand in the Gulf, Europe and other Asian countries Nepal has not exported ginger other than India. There is growing demand of the processed and dry ginger in the global market. The price of the processed ginger is higher than the fresh ginger, hence Nepal could be benefitted from exporting processed and dry ginger in the global market. However, Nepali traders including government and farmers are unable to export sufficient volume of the processed ginger in the high value ginger market to be benefitted. Currently, more than 98% Nepal's ginger is exported to the southern neighbor, India. Traders have been repeatedly encountering non-tariff barriers such as unofficial payments to the custom agents and customs officials and delay in custom clearance in the borders of both sides Nepal and India added transportation cost of the ginger have been reduced the competitive capacity of the ginger to compete in the international market. Gradually, Nepali ginger reached up to the saturation point by various tariff and non-tariff issues of both countries and are realized to look beyond the border for an alternative market with good prices.

In these context Trade And Export Promotion Centre decided to conduct research on value chain analysis on cost of ginger production and to explore the different sea-route of trade of ginger to Gulf countries market to make it more competitive of Nepali ginger other than India. Therefore, the research has focused UAE and Gulf countries targeting to the growing spice market of the world. This is to identify potential export market specially UAE and Gulf, calculation of multimodal transportation value chain, production value chain and marketing value chain of the Nepali ginger.

1.3 Rational of Research

Being a pioneer ginger producing country, as shown by the government statistics ginger export of Nepal has been heavily relied up on the Indian market with more than 99% of the total exported value in the year 2019. Except nominal amount as a processed from ginger powder, dry ginger (*sutho*) and herbal product, entire export goes to the Indian vegetable market as a raw/fresh form

¹ <http://agritech.tnau.ac.in/banking/PDF/Ginger.pdf>

directly from farm gate to exporters warehouse to the India. Previously Nepali ginger was soil laden, however due to Indian government regulation and implementation of the WHO standard ginger have been washed in the border side and exporting directly via lorry truck to the Indian market. Due to heavy dependency, Nepali ginger is under-valued by the Indian trader in the name of various quality and export issues.

Ginger have been known as an essential spice component of restaurants delicious menu, every household kitchen component, herbal product, medicinal value, aromatic flavor, juice, candy, bakery product and essential factor for specie powders. The increasing consumption trend and growing international market demand the ginger has high export prospective. Due to high valued agriculture crop it has huge income potential if country could manage the product quality, product diversification, product processing, branding, labeling including exploration of sustainable international ginger market from the private and public sector. Ginger would be viable income sources of the farmers for poverty alleviation and income generation, traders and exporter for profit making and government of Nepal for minimize international trade deficit to some extent which is around Rs. 1,321.42 billion over the last fiscal year 2018/19².

Nepal ranks the fourth largest producer of ginger in the world among the ginger producing countries. Quality issues, Non-Tariff Measures (NTM), soil and disease contamination component are the major issues of Nepali ginger to export in India. The existing washing plants are not utilized well because the farmers and traders have less access to it due to unawareness to this facility and the quality of washing and maintenance of plants, hence the facility is still at low demand. Lack of international accredited testing laboratory ginger shipments are required to undergo strict testing at the Central Food Laboratory (CFL) in Calcutta, which takes longer time up to 15 days.

Frequently, Nepali ginger faces numerous sanitary and phytosanitary and other custom regulatory issues, interest of the custom agents and other so many practical difficulties those are unseen while exporting. Therefore, it is urgent to explore international export market of the Nepali ginger to revive the export potential of the ginger. If ginger will still rely on the Indian market, gradually Nepali ginger production and export will be sharply reduced. Every year, the production volume and cultivation areas have been decreasing, frustration among the farmers with the hassle to bear forever rising cost of production in ginger farming and poor profit margin received from the ginger. Therefore, the study has to explore potential ginger (processed, dry and raw) export market (UAE and Gulf) through the use of international export facility of the Nepal through India or most appropriate sea routes. This study will explore and identify total multimodal transport cost per unit (per container - 20 and 40 ft. and per k.g) ginger export to the gulf countries from Nepal through sea route. This study will be completely focused on to identify ginger production value chain, ginger processing value chain and ginger export value chain. Similarly, production, processing and

2

<http://therisingnepal.org.np/news/33719#:~:text=Nepal's%20trade%20deficit%20has%20reached,previous%20fiscal%20year%202017%2F18.>

transportation (export cost) cost calculation has been done to explore most potential ginger market in the gulf countries via sea routes.

1.4 Objective of research

The main objective of this project is to find out the cost effective measures for export of ginger from Nepal to the Gulf countries by using available sea routes and provide feedback and recommendations for facilitation for Ginger export from Nepal to the gulf countries.

Specific objectives of the research project are as following;

- To know about ginger cost of production value chain through the use of agriculture technology in Nepal.
- To know the ginger cost of processing value chain.
- To know the transportation cost of each container/trucks per k.g to export ginger in major consumer markets of Gulf counties from Nepal.
- To know about the Per Unit Multimodal Transportation cost value chain to export ginger in Major Sea ports of Gulf countries form Nepal.
- To know the options and ideas for facilitation for enabling environment of ginger exports to the Gulf countries from Nepal.

1.5 The scope of research

The future of the Nepali ginger is mainly depend on the Indian traders, importers and retailers which is interconnected with the demand of India domestic consumption and the volume of their own production. Demand of the Nepali ginger and the price is truly depend on the production volume and demand of the Indian market which is always fluctuating. Nepali ginger was highly privileged during the past decade due to high consumption and low domestic production of the India. Since last decade, following the government policies to promote the ginger production in India now they have become one of the giant ginger producers in the world. Therefore, in the recent years Nepali ginger could not get good prices and high demand in India.

Similarly, various tariff and non-tariff barriers, sanitary and phytosanitary issues and quality production issues, Nepali ginger did not seem to be attractive internationally. Therefore, the demand of the Nepali ginger in the international market is comparatively less attractive than other ginger producing countries. Nepali traders and exporters could not access international market and establish contract with importers to export their product in the third country beyond the neighboring border, India. Despite of good aromatic flavor Nepali exporters could not explore the huge market potential of the ginger in Gulf and Middle East including Dubai and Bangladesh.

In this context, the study has mainly concentrated to explore export potential of the Nepali ginger in the UAE and Gulf countries. Research has based on to identify the potential export market of Nepali ginger in the competitive price in the international market targeting to the Gulf countries. It has analyzed tentative cost of ginger export from Nepal to the Gulf countries via sea ports of India and Bangladesh in 20ft and 40ft container. The study has analyzed the logistic procedure for export of ginger product of Nepal to the Gulf Countries via sea ports. Analysis has been done on

the basis of calculation on cost of production, local transportation, shipment up to the end destination. The aim of this project is to unfold stepwise all complexities involved in the export right from receiving and export order to final realization of export proceeds. It gives a detail idea of how different departments of Nepal Government and private sector in a ginger (raw and processed) export works so that export order is processed. The project would be helpful to fulfill many loopholes of production, processing and exporting to the alternative market beyond Indian border.

In this regard, this study has been carried out by the Government of Nepal, Ministry of Industry Commerce and Supplies (MoICS), Trade and Export Promotion Center (TEPC), with interest to find out the cost effective sea-routes in order to find the potential export market of the Nepali ginger except India targeting to the Dubai and Gulf countries. This study tries to explore the tentative cost of the production value chain, processing value chain and transportation value chain. This is to identify the potential alternative destination of the ginger (raw and processed) and tentative cost calculation for ginger export via container and cost for ginger production, processing and export per kilogram. It is to know whether the ginger export is possible to deliver in a competitive price by maintaining international standard quality of the raw and processed ginger while shipping to targeted destination.

1.6 Limitation of the study

Nepal's ginger export market dependency is about more than 99% to the neighboring country India. Due to the quality and other shipment related issues, tariff related barriers Nepali ginger has been limiting to the Indian market. Despite of the huge potential of export in Asian countries, UAE and Gulf, Nepal could not export the product in the global market. Due to the reason and the dependency in the Indian market and traders, Nepali farmers are not getting more per unit value and hence less profit margin. The reason behind is fluctuating market price in India and uncertain demand for the product which is solely depended on the Indian production and Indian market demand. Therefore the direct impact of the unpredictable and uncertain ginger market Nepali farmer could not be benefitted. In this context, these days various formal and informal discussion taking place in the policy level, bureaucratic level and among the business community to explore the sustainable market for the ginger of Nepal to reduce the heavy dependency in the Indian market.

1. Due to resource limitation, study has carried out consultation visit to the eastern region considering as a main trading hub of Nepali ginger to the India. Jhapa (Dhulabari and Birtamod) and Ilam were the sampled district and destination which has identified and visited to collect first-hand information from the farmer, traders, exporters, retailers and associations.
2. The study has primarily based on the secondary information absorbed from the various studies, government records and statistics, publication and research conducted from various international and national development organizations. Due to the limitation this study has confined within Jhapa, Ilama and Kathmandu and limited sample to collect

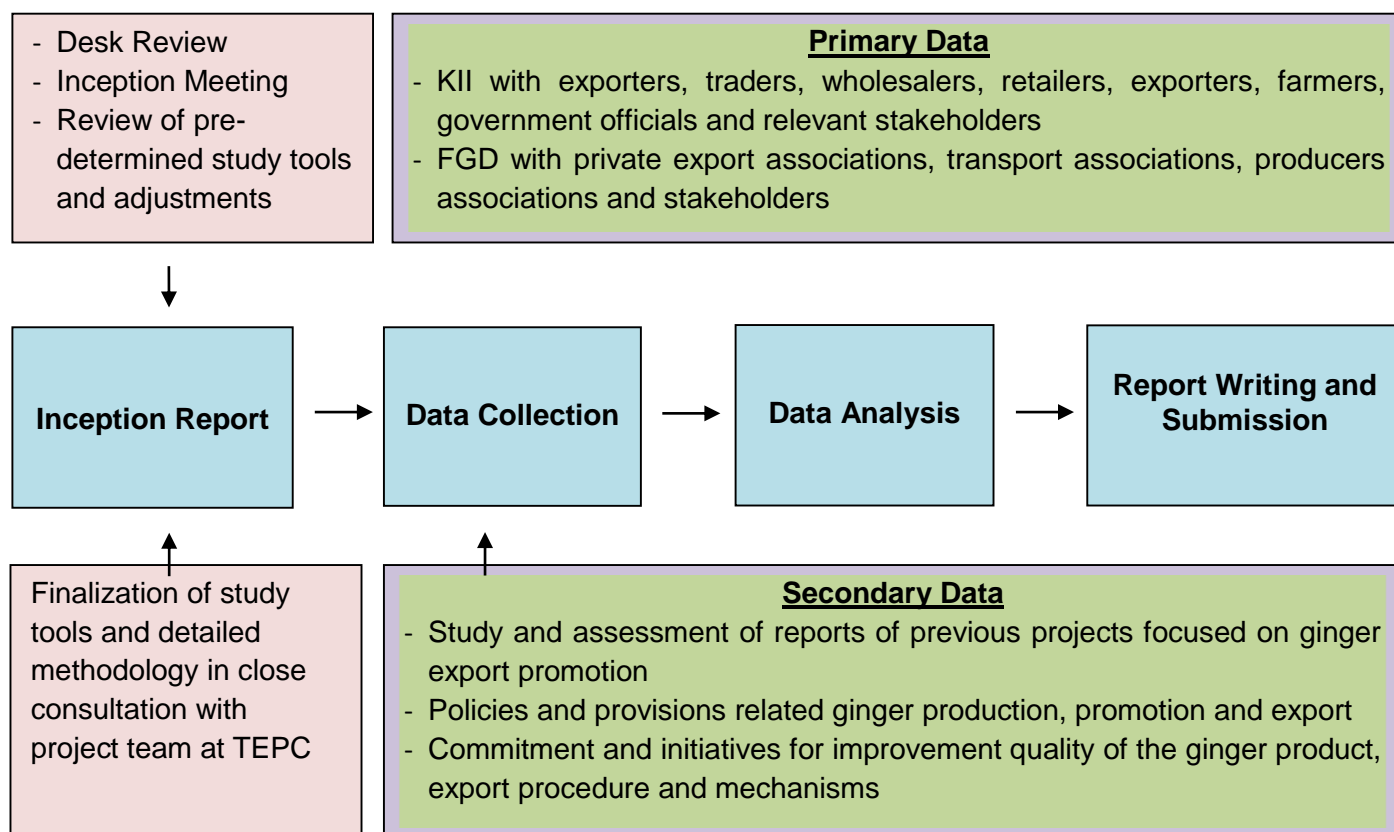
primary information. If there were sufficient resources study coverage area and field visit would expand up to Salyana (Kapurkot), Palpa, Gulmi, Banke (Nepalgunj) and so on.

3. The study could explore more export destination if travel restriction would not imposed in Nepal and abroad due to impact of the COVID-19 pandemic. Thus, information gathered is mostly based on Nepal and focused on secondary information through desk study.
4. If health pandemic would not happen study visit would have been carried out up to Calcutta, Bisakhapatnam, Bangladesh and Chinese border. Therefore this study has tried to explore diversified information from the various stakeholders those who are directly and indirectly associated with the ginger export from Nepal to the global market with optimizing the available resources.

1.7 Approach and Methodology

The proposed research has used elements of descriptive and exploratory research designs and a mixed methods approach, utilizing both quantitative and qualitative research tools to collect necessary information. The study has based on the consultation meeting, interaction, group discussion based on the pre-identified checklist and questionnaire. It has used rapid market assessment technique to assess the markets of Nepali ginger targeting to the UAE and Gulf Countries. The study is based on the data and information from primary and secondary sources. The methodology applied during the study is presented below. Approach and methodology are summarized in the figure below and elaborated in the following sections.

Figure-1: Approach and Methodology



Inception Phase	Data Collection	Data Analysis	Reporting
<ul style="list-style-type: none"> - Review of project documents - Finalization of study tools - Detailed methodology 	<ul style="list-style-type: none"> - Field deployment plan - Field deployment for data - Quality control 	<ul style="list-style-type: none"> - Data cleaning and processing - Quantitative analysis using Excel - Preparation of charts, tables and info graphics - Analysis of qualitative data 	<ul style="list-style-type: none"> - Draft report - Final report incorporating comments and feedback

1.7.1 Inception Meeting

This research has conducted inception meeting with the Government of Nepal, Ministry of Industry, Commerce and Supply, Trade and Export Promotion Centre (TEPC) Office Pulchowk, Lalitpur to receive detail information on secondary source of data, study related documents and existing knowledge product. Furthermore inception meeting was conducted as a part of research activities to finalise research methodology, study tools, and find out the project stakeholders to be consulted during the study. Therefore, the project team and TEPC has built common understanding regarding the scope of the assignments.

Participants of the inception meeting are as following;

1. Sarad Bikram Rana (Executive Director of TEPC)

2. Suyash Khanal (Deputy Executive Director of TEPC)
3. Rajendra Singh (Deputy Director of TEPC)
4. Rajan Sharma (Freight Expert)
5. Surya Nepal (Research Expert)

1.7.2 Literature Review

Study has conducted preliminary desk review from the available resource materials such as publication of TEPC, GIZ, FAO, IFAD, Mercy Crops and SMARTH project research materials on ginger production and export procedure and promotion. Further it has consulted available research and publication such as Value Chain/ Market Analysis of the Ginger Sub-Sector in Nepal-USAID research project, ANSAB research and publication, SNV, NARC, ADB, World Bank publication, international journal, and university researches. A study on ginger export procedure highlighted the steps and methods of ginger export from Nepal conducted by TEPC and GIZ Nepal.³ Another study highlighted the fact sheet of ginger export statistics and major export destination conducted by TEPC and GIZ Nepal.

Some of the useful research material review has been done through the online portal and published books, booklets and newspapers, interviews and analysis of the export specialist. Project has reviewed relevant project documents, TEPC reports, GoN reports, donor reports and other documents which is given in the reference at the end of the project. Research and published documents review helped to develop a detailed understanding of the programme and develop clear understanding about the production, processing, marketing, export procedure and export promotion of the ginger product of Nepal.

1.7.3 Study Area Selection

The study has carried out KII with the traders, exporters, farmers, value chain experts and government officials relevant to the ginger trade. However, due to limitations of the time and budget, at this time we have participated the Conference on interaction between agricultural stakeholders and Farmers organised by the Nepal Cardamom Producers Association in Province No 1. In the programme government stakeholders such as State Minister of Agriculture Development, President of FNCCI Province No-1, representatives of local government, representatives of ginger produces association and other farmers associations were the participants of the programme. In-depth consultation were carried out with few selected exporters and traders of Kathmandu valley which gave us a substantial information on export situation, export procedure, export cost, custom duties, shipping procedure, transit procedure and information related to export from Nepal to the gulf countries. Further consultation has helped to identify major export constraints, policy constraints, production constraints and so on.

To verify the information received from the traders, exporters, farmers and government officials were visited, visited export gateway nearest transit of the ginger to the third countries from Kathmandu valley. Mechi Custom Office, Dhulabari, Birtamod the border were visited to absorb detail information on ginger export. The received information has analysed and triangulated with

³ TEPC/2017_Export%20Procedures.pdf

information received from other consultation, group discussion and available secondary source of information.

1.7.4 Study Tools

Developed checklist was one of the major tools to conduct KII and for consultation meeting with the relevant project stakeholders to conduct research. Key Informant Interview were conducted with the exporters, traders, suppliers, producers, specialists, experts and Government Officials with relevant to the ginger export. Similarly, group discussions were conducted with the Nepal Ginger Producers & Traders Association (NGPTA) at Birtamod Jhapa. Informal discussions were carried out with the relevant to transporters, NGPTA and exporters of Nepal based on Jhapa, Ilam and Kathmandu district.

The list of respondents includes exporters, traders, farmers, government officials and experts of ginger product for KII are as following;

1.7.4.1 Key Informant Interview (KII)

Key informant interviews are qualitative in-depth interviews with people who know about the relevant information on ginger export. The purpose of key informant interviews is to collect information from a wide range of people including transport leaders, export stakeholders, professionals who have first-hand knowledge about the subject matter. List of stakeholders for KII respondents are as following;

List of the stakeholder were interviewed as a Key Informant Interview (KII) are as following; (see annex for name list)

1. Ginger exporters
2. Ginger traders
3. Ginger suppliers
4. Ginger producers
5. Experts on transportation
6. Government officials related with ginger export and promotion
7. Ministry of Physical Infrastructure and Transport
8. Representative of NGPTA
9. Custom Agent
10. Representative of Federation of Nepalese Chambers of Commerce and Industry (FNCCI)

1.7.4.2 Desk Study

Due to mix nature of the study, desk study has applied as a major source of information to carry out the findings of the research. Therefore all the relevant document available in the internet, publications, research articles, newspapers articles, publication of the donor agencies, government of Nepal and international publications were referred as a study materials. Moreover the study has referred all the available secondary source of information such as government policy, international trade provision, trade barriers and so on. Some secondary source of study material are as following; (see annex for reference)

1. UAE Import and Export Guide
2. Background on Nepal Trade Integration Strategy

3. Ginger And Ginger Products From Nepal Market Analysis And Market Entry Strategy In Four Selected Markets
4. Ginger Sector In Nepal
5. Development and Implementation of Nepal Trade Information Portal (NTIP)
6. Export Management Guide Step-by-step procedures to export carpets from Nepal to China
7. Treaty of Trade, Treaty of Transit and Trade Related Agreements Between Government of Nepal and Neighbouring Countries (India, People's Republic of China & Bangladesh)
8. Nepal's Export Potential In Services (Health, Education And High-End Retail Services)
9. Transit facilities related documents
10. Transit barriers/issues documents
11. Non-tariff barriers documents
12. Technical barriers documents
13. Procedural compliance document
14. Doing business ranking documents
15. Government Act, Policies, Regulations
16. Logistics related documents
17. Transportation related documents
18. Websites

1.7.5 Field Mobilization

Study team were conducted field visit to the transit point of Nepal bordering to the India (Dhulabari, Birtamod and Mechinagar Custom Office Jhapa) to know the first-hand information about the custom procedure,



transport procedure and total investment cost for export to the Gulf from easiest sea ports for Nepal. To receive qualitative and quantitative information about the export statistics, procedure and policy hurdles to the Gulf from

Nepal a short study visit were carried out at Ilam and adjoining locations of the country. During the visit formal and informal meetings were conducted with the government officials, transport professionals, businessman, traders, exporters, wholesalers, retailers and farmers.

1.7.6 Data Processing and Analysis

After the completion of each interview collected data has been processed, analysed and cross triangulated. Quantitative data has entered into the excel format and qualitative data has organised, ordered and grouping to synthesize received information from the study and presented in the chart and graphs. Descriptive analysis has been done with frequency and percentage tables and cross

tabulation while Microsoft Excel has used for generating tables, charts and info graphs. Qualitative data has transcribed and translated followed by a detailed analysis to triangulate the findings obtained from the quantitative data and for drawing conclusions.

1.7.7 Reporting and Presentation

Based on the findings of the interview, discussion and desk study, a draft report including all relevant analysis has been prepared highlighting the major trade barriers, obstacles of export promotion, transport cost calculation, ideas and method to increase productivity, major export constrains, challenges and best practices. After incorporating the comments and feedback received from the project team final report will be submitted and made a presentation to all relevant stakeholders.

CHAPTER 2: GINGER PRODUCTION AND EXPORT POTENTIAL IN GLOBAL GINGER MARKET

2.1 Ginger Production Status

Nepal holds top fourth position among ginger producing countries in the world. According to FAO statistic the production capacity of Nepal for the year 2016 is 2,71,863 tons and the quite higher number in 2017 is 2,79,504 tons which is 3% higher than previous year and in the year 2018 is 287,337 tons which is 3% higher than the previous year.

According to the FAO statistics 2017 Nepal covers 9% of the total world production. Of the total domestic production Nepal exports more than 60% of the own production and more than 98% of the total export volume goes to the Indian market. India covers 35% of the total world production however export shares of the India is very nominal compared with China. China with 19% of the total world production capacity is the leading exporter and second largest ginger producer in the world and Nigeria holds 12% of the total production capacity established as a second largest ginger exporter in the world. Therefore rest of the world except the largest ginger producers have been completely depending with the Chinese export market of ginger for their domestic consumption. Reviewing the statistics, Nepal has huge export potential in the international market if Nepali ginger producer and exporter could maintain supply chain of the ginger with good quality, healthy and nice looks of the product including long storage capacity and product diversity.

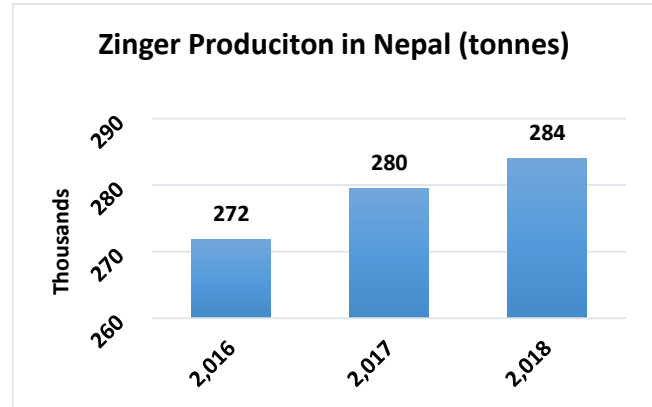


Figure 1: Source: FAO Statistics

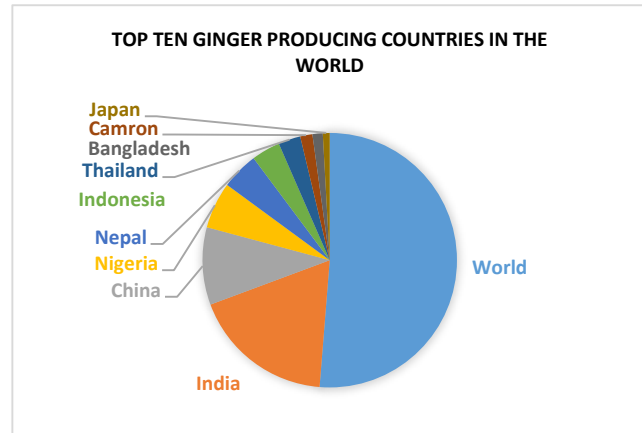


Figure 2: Source FAO-STAT- 2017

2.2 Ginger Productivity Status

As shown in the figure average productivity of the ginger in Nepal is around 12.35 Ton/hectare which is quite average number with the world average

Year	Volume (ton)	Area (ha)	Productivity
2016	271863	21869	12.43
2017	279504	22649	12.34
2018	284000	23000	12.35

Table-1: Ginger Productivity Status (Source-FAO-STAT)

productivity. However due to the various innovative technologies the average productivity of the USA is comparatively higher than other ginger producing countries in the world.

2.3 Production Chain

It is cultivated in tropical, sub-tropical and humid climate. It can be grown up at an altitude of 1500 meters with well distributed rainfall. In dry weather, a temperature ranging from 28-30 degree Celsius for about a month before harvesting is ideal. It requires high humidity throughout the growth. Soil should be rich in humus, light, loose, friable, well drained and at least 30 cm deep. Rhizome grows well in slightly acidic soil.

Land preparation depends upon the soil and climate.

Usually beds of 1 meter width, 15 cm height, and 6-7 meter in length with 30 cm wide channels between beds are made.

Ginger should be propagated before plantation to breed the bits.

Bits should be 3-5cm in the length, 15- 20gm in weight and at least should have one sound bud. The plantation is done on the onset of monsoon. A

seed rate of 15-20 quintals per hectare is considered to be optimum for planting. The spacing for planting of the ginger should be kept 25-45 cm

between rows and 15-20 cm between plants. At the time of plantation, well rotten Farm Yard Manure (FYM) or compost manure is applied at the rate of 25-30 tons/hectare. Weeding is done twice. Initially, it is done just before second mulching. It is repeated at an interval of 45-60 days according to intensity of weed growth. Rhizomes should not be disturbed, injured or exposed during weed.

Usually harvesting is done from the fifth months after plantation of fresh ginger. The crop should be harvested before attaining the full maturity, means when rhizomes are still tender, low in pungency and fiber content. The fibrous roots attached to the rhizome should be trimmed off. The soil should be removed by washing. Rhizomes should be kept under water overnight and then cleaned. The skin can be removed by scrapping.

2.4 Value Chain of Nepali Ginger

The value chains of Nepali ginger is based on scattered farmers and their fragmented small land plots and sell it to the traditionally established business relation with each other. Ginger production in a very fragmented land, involvement of thousands for their livelihood generation. Chain is based on the farm gate to local traders to the National level exporter/traders to the International traders (India and other country). Middleman can earn money to get small quantities of the ginger transported from small villages to trading centers at the Indian border in Naxalbari as well as in trading centres in Bhairahawa, Mechi, Birgunj, Nepalgunj etc. in Nepal,.

This value chain involves many different actors. Farmers mostly take their fresh ginger up to local collectors or road-head traders. If demand from India is high, local collectors or Indian collectors go to the villages to buy directly from the farmers. There is little trust between actors with traders who are either blaming the farmers for their indifference about cleaning, quality or storage.

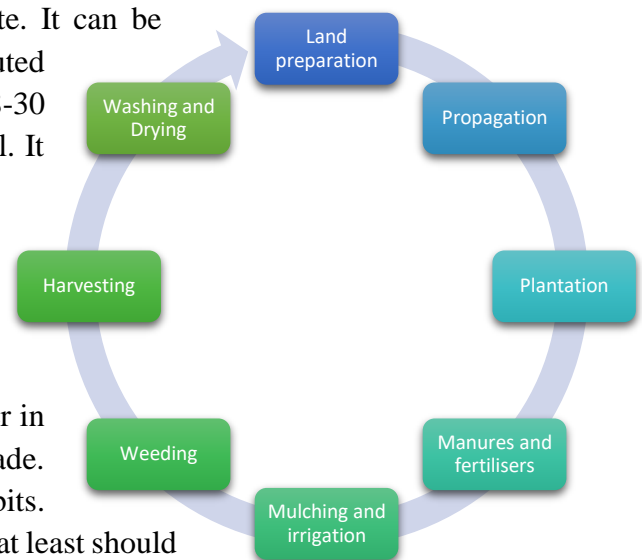


Figure 4: Production Chain

Whereas farmers are blaming the (Indian) traders/collectors for pressuring them to offer the lowest price (SNV, ANSAB, 2011).

The value chain of ginger involves different actors:

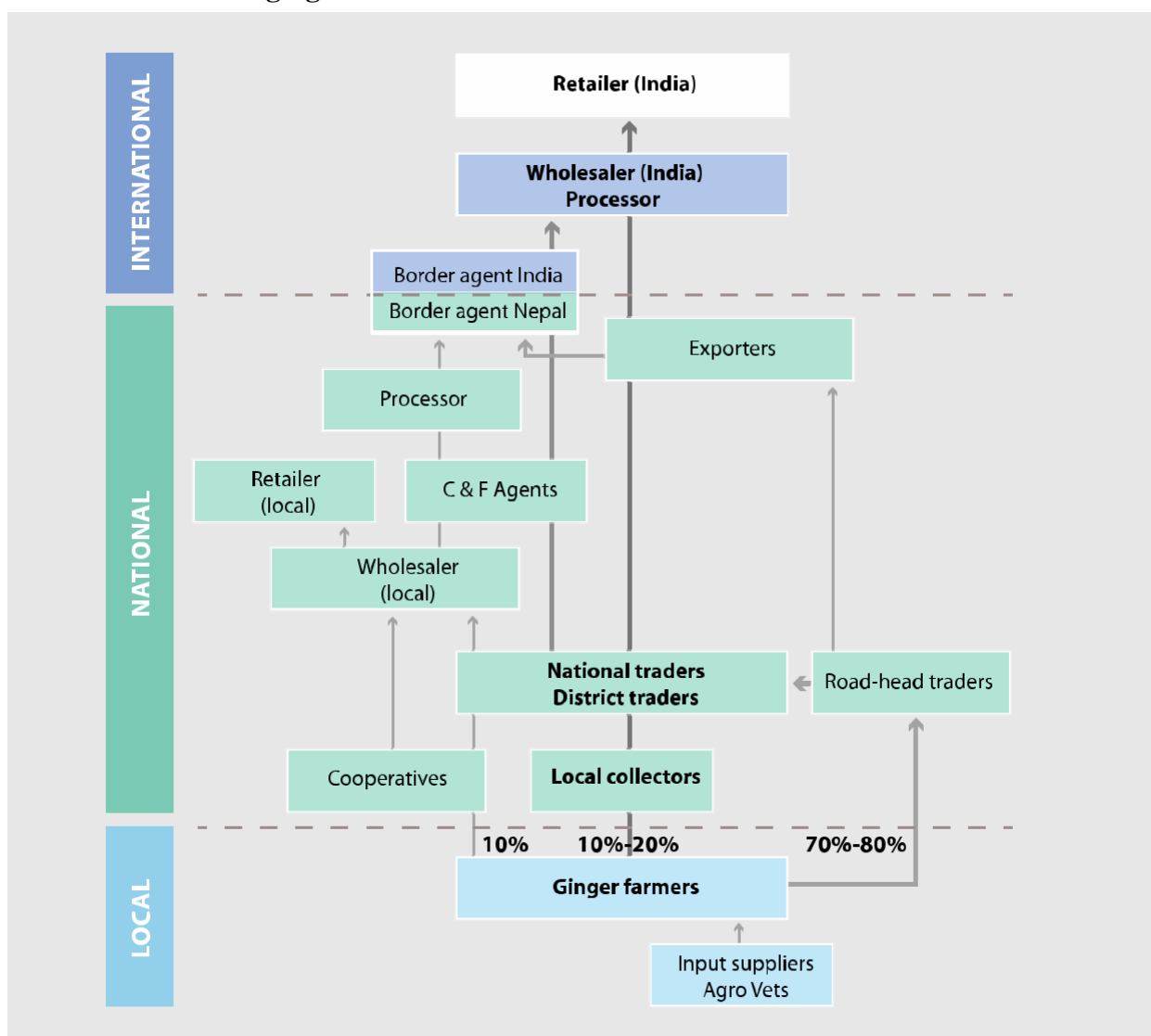


Figure 5: Source: MOAD/ANSAB/SNV (2012-2017)

Input suppliers: Input suppliers from Nepal supply the seeds, seed rhizomes, fertilizers and pesticides. Input suppliers are local traders, wholesalers, agrovets they supply necessary goods for ginger farming.

Farmers: Majority of the farmers are small scale farmers. They farm ginger in their small fragmented land and sell it to the local traders. Though there are large number of small scale farmers involved in the farming for their livelihood, they are depriving from good price of their product. Due to the less bargaining power of the farmer local traders and collectors gets more profit margin from the trading of the ginger.

Road-head traders: Road-head traders collect the ginger with the farmer and sometimes directly purchase ginger from farmland and sell to the national traders and exporters. Road-head-traders remove the moldy and damaged ginger before supplying to the national level traders. However, most of the gingers go to the national traders or to some extent directly to exporters.

Cooperatives: Cooperatives purchase small amount of ginger from the farmer and sells fresh ginger, dried ginger, pickles and other processed items in a limited quantity locally. Some of the cooperatives sell their processed dried, sliced ginger to exporters in Kathmandu as well.

National Traders/Exporter: They buy ginger from road-head traders, local collectors or cooperatives and directly through the farmers. National level traders and exporter sells ginger to the Indian exporter, traders, processors, manufacturers and exporters with certain margin.

Food Processors: Nominal amount of ginger consumed by processors in Nepal such as Dabur Nepal, Gorkha Ayurved, Singh Durbar Vaidyakhana and some Nepalese spice producers. Ginger is also one of the main ingredients in pickle industries and ingredient for the production of Ayurvedic medicines.

District traders: District traders purchase ginger from farmers and sell to National traders as well as Indian traders directly. Indian traders supply fresh ginger in the Indian vegetable market directly purchasing from the Nepali exporter.

Agents: Most of the ginger exported to India first goes to Indian commission agents. They are not related with ginger trade however they deal with every export product of Nepal while exporting to the Indian market. They act as a distribution center for the Indian market and take certain amount of margin as a commission.

Wholesalers: Wholesalers sell ginger to retailers, hotels, industries and institutional users. Wholesalers have their shops or stall at the market center and sell. They purchase ginger from other wholesalers or from agents or with the farmers and keep small margin and sell to the retailers.

Exporters: Almost all fresh and dry ginger is destined for the Indian market. Some of the exporters do some basic processing such as washing, cleaning and sorting. Exporters and traders usually transport the ginger by truck to the border from where they transfer the ginger bags to another Indian truck to deliver in the Indian vegetable markets.

Retailers: They buy ginger (fresh and processed) from the exporter of Nepal and India and sell to the end consumers. In each city, ginger is sold at vegetable shops, groceries and street market vendors and grocery shops.

2.5 Production Cost

Based on the small scale commercial farmer, the cost of production for ginger is high. For farmers to harvest, profit from out of total investment (time, money, labour) is very less attractive. Due to the high cost of production, uncertainty of market and price it is discouraging farmers to leave the ginger farming gradually.

S. N	Description	Quantity	Unit	Rate	Total NPR
A	Inputs				
1	Rhizome	200	k.g	100	20000
2	Fertilizer (manure)	200	Doko	40	8000
3	Pesticides	1/2	k.g	2500	1250
	Total Input Cost				29250
B	Labor				
1	Land and Seed Preparation	4	Man	400	1600
2	Ploughing	1	Pair Bullocks	2000	2000
3	Plantation	4	Man	400	1600
4	Weeding	9	Man	400	3600
5	Harvesting (old+new)	6+4=10	Man	400	4000
6	Local transportation cost	15	Man (600 k.g)	100	1500
7	Packaging cost	15	Sacks	20	300
8	Snacks and refreshment cost	35	Man	100	3500
	Total Labor Cost				18100
C	Grand Total Cost				47350
D	Per k.g production cost	1	k.g	47350/800	59
E	Profit Per k.g	1	k.g	70-59	11
F	Income				
1	Old planted seed (Mother Rhizome)	200	k.g	100	20000
2	New produced ginger	600	k.g	70	42000
G	Profit	1	Ropani		14650

Table 2: Source: Interview with the ginger farmer-Fickal, Ilam

CHAPTER 3: GINGER PROCESSING AND MARKETING FOR EXPORT

3.1 Ginger Processing

Despite of proven benefit that could be yielded good result through processing, stakeholders could not exchange the profit as expected. In the bordering area of the eastern ginger trading centers (Birtamod and Dhulabari) few processing plant for washing and packaging are yet to function well. This has limited the bargaining power of the Nepali farmers and traders to their counterpart in the global ginger market across the border. Nepal has very limited ginger processing capacity and those processing plant have minimum capacity of oil extraction, ginger slice, powder and pest. According to the study of ANSAB in 2014 (A Market Study of Nepalese Ginger and Its Derivative Products in India and Bangladesh) some processing plants established in Nepal are as following;

Table: Ginger processing capacities and types of products in various districts of Nepal

Place	Processing Capacity/Day	Description
Surkhet	8.2 MT	Process Organic Ginger
Kailali	3 MT	Washing Plant Run By Cooperative
Kapilvastu	3-5 MT	Washing Plant, Slice, Powder, Paste Run By Annapurna Organic
Godavari Aroma	2 MT	Washing Plant and Ginger Oil
Jhapa (GCP)	72 MT	Washing Plant
Jhapa	Very Small Amount	Washing Ginger (Closed)
Phikkal, Ilam	Approx. 1 MT	Ginger Slice and Powder Currently Not Operated

Table-3: Source: SAMARTH, 2014 and ANSAB Nepal Field Study, 2014

In this context access and presence of Nepali ginger in the global market has been poor and less visible. The huge dependency obligation with the neighboring trade is due to limited processing capacity which is pressing constraints for the strong and competitive presence across the border.

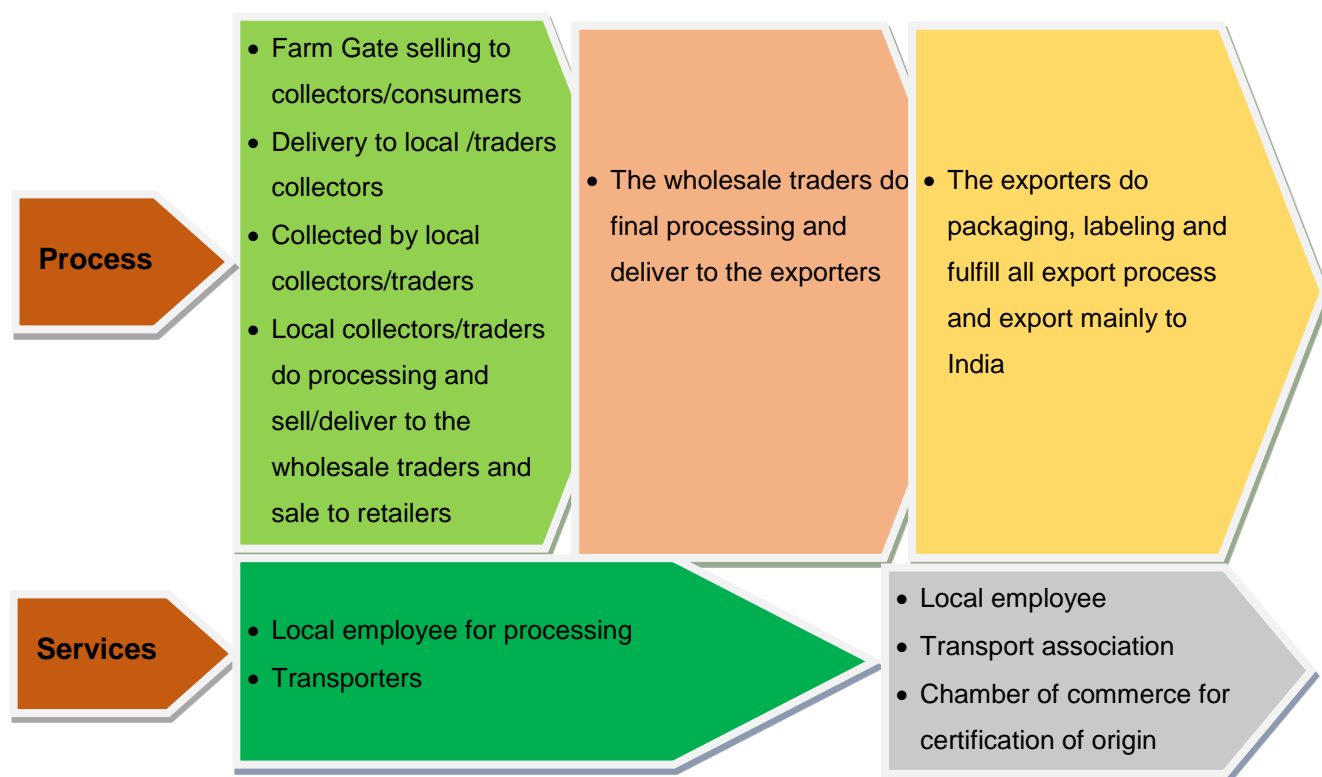
3.2 Marketing of Nepali Ginger and Global Market

3.2.1 Marketing of Nepali Ginger

Ginger demand in the major markets like Gulf and EU is growing however Nepal is yet to export chunk of ginger products beyond the Indian border.

Few ginger traders have successfully begun exporting small amounts of dried ginger to competitive markets in Bangladesh, Europe, Japan and Gulf countries. However, Nepal could not extend export potential through marketing of the product due to lack of competitive capacity of the exporter to established linkage with the international buyers. Lack of sufficient innovative farming knowledge of the farmer resulted poor quality of the production, lack of processing capacity of the traders are main constraints of marketing to extend export potential in the global ginger market. Similarly, Nepal is yet to develop collective trademark for branding to penetrate international spice market. To support marketing Nepali traders should focus on strengthening distribution channel (supply chain), facilitation and participation in the international business meeting, trade fairs and exhibitions.

Figure-6: Marketing Chain



3.2.2 Major export destination and export volume

According to the government official record TEPC in 2018, Nepal exported 2,11,08,659 k.g ginger to 11 major export destination across the world. Among them India is the major destination with total exported volume 2, 07, 69,411 k.g (98.39%). Major ginger importing countries are India, Ukraine, France, China P.R. Germany, U.S.A., Chile, Switzerland, Bangladesh, U.A.E. and Japan. Following India Bangladesh holds second position with very nominal volume 21,200 k.g (1%) of the total export, Germany third largest with 96,760 k.g (0.5%) and UAE is the fourth largest importer of Nepali ginger importing with 26,000 k.g (0.1%) of the total export in 2018.

Figure shows the entire export volume goes to India however Nepal shall give an effort to explore the international trade markets. The close neighboring market Bangladesh, Gulf and Germany could be possible alternative market to expand. Multi layers efforts should be carried out from the government and private sector to establish mutual relation with the international buyers which would help to reduce the market dependency with India which has established from history due to mutual tie up, understanding, trust and traditional trade relations. Furthermore, Nepali traders are skeptical to invest much effort to establish mutual business relation with the Gulf countries and Bangladeshi traders due to various Tariffs and Non-Tariff trade barriers, custom and transportation issues. Gulf and European market demanded high quality and processed ginger such as ginger powder, dry ginger, oil and ginger paste to import in their specie market. However lack of high

quality processed ginger, Nepali traders could not explore Gulf and European market except some small amount of the processed product exported from Individual efforts.

3.2.3 Role of Nepali ginger stakeholder for export promotion

i) Traders and Exporter Community: Since a decade stakeholder (Government, traders and exporter) are looking for an alternative market of Nepali ginger other than India. Several attempts have been made and succeeded to send few container loads of ginger to the markets of Gulf countries, Europe and Bangladesh. However the trade did not sustain for a longer as a regular basis. According to the ginger exporters from Birtamod, Nepali traders are yet to establish mutual relation with global buyers. Trade relation with Indian buyers is based on goodwill and trust which is the main lacking point of the Nepali trader to trade with the traders from the Gulf countries, Europe and Bangladesh. Similarly, Indian market required fresh ginger rather than processed however other market required high quality processed ginger in the form of powder or any other species. Nepali ginger traders and exporter are not prepared to process ginger and export to the global market. Lack of capacity of storage, product processing and diversification the product could not supply immediately when demanded.

Government of Nepal is supporting domestic industries to grow through processing capacity to the traders with some subsidized financial packages however the available funds are underutilized. This capacity development need to include expanding processing facilities, strengthening quality control systems and developing the international business skills of traders and exporters.

ii) Local Retailers and wholesalers: Local retailers, collector, wholesalers focus on quick profit rather delivery the quality product to the national level traders. Nature of business is just a middleman to bridge the gap between the farmer and exporter. Therefore no local traders bear much stress to focus on quality of the ginger product. It proved that the role of local retailer and wholesaler are profit margin taker rather supporter of the ginger export promotion. They are purchasing fresh ginger from the farmer in as much as the cheapest price and sell it to the exporter with good margin profit. Therefore farmers are poorly capable achieve good profit of the product rather local businessmen, traders and exporters are benefitting from the ginger trade. In this regard, due to lack of constant follow up for the quality assurance of the product from the government, stakeholder and easily available technical support, ginger farmers are about to conclude the farming is less attractive gradually. Local retailers and wholesalers are not interested to invest time and money for product processing, sanitation, hygiene maintenance and quality production. Focus on use of hi-breed seed production, support to use of new and innovative technology and fertilizer.

iii) Farmers: The next challenge to be tackled was the low quality of ginger being exported, leading to lower prices for Nepali ginger on the world market. Ginger crops generate important cash income for farmers in the ginger farming districts. However, many farmers are not aware of the best ginger varieties and best way to harvest and store their crops, to ensure they get maximum price for their harvest. Some farmers are growing lower yielding varieties, which are more susceptible to diseases, such as rhizome rot, and pests, such as rhizome fly and stem borer. Many have no capacity to store their crop until they can sell at the best market price, and most Nepalese

ginger is washed, graded and packaged in India, rather than domestically. By improving the varieties grown, and introducing new production techniques and post-harvest cleaning and grading, Nepalese farmers can produce larger crops of quality ginger and attract higher prices in export markets in India, and elsewhere.

iv) Traders and Exporters: Traders and exporter have limited capacity to export in the global market due to business links and connection. Nepali traders are exporting ginger in the Indian market after washing loaded in the lorry trucks. Indian buyers are importing fresh ginger from Nepali traders in the mutual understanding. Usually they never raise any quality issues, product processing, washing, grading and shorting. Nepali traders in Birtamod, Jhapa express Indian market is easy and reliable to sell their product compared with other countries. Therefore they are always trading with the India and rarely thought about exporting goods in the third country. To meet various quality standard (cleaned and processed) Nepali exporter are seems less interested to look beyond the neighboring country. Therefore exporters are unwilling to bear more burden to process ginger to maintain high quality and to meet the international export requirement. Trader's job is to collect ginger from farmer simply wash near the border and export fresh ginger to the Indian vegetable market rather than to the sustainable spice market of the Gulf and Europe.

To export ginger in the global market a very clear mechanisms and transportation channel procedure has to be established. In absence of such kind of proper export channel traders have been reluctant to export goods due to in access transportation and various trade barriers. Despite of these obstacles, recent years traders have succeeded to export few trucks of ginger in the Bangladesh, Gulf and Europe however the export volume is very nominal. Exporter from Dhulabari, Jhapa shared his experience of the past that misunderstanding happened between Pakistani buyers and received loss from the export and thus he was scared to export other countries than India.

v) Government: Government mechanisms have established aiming to support ginger farmers, traders and exporter to enhance export promotion through production, processing and export to the international market. However, the agricultural mechanisms and offices did not seem to have effective to implement the Government policies and plans. Central and local level agriculture development office are said to be less proactive to implement government priorities for export. Government Officials from ministries and custom offices are claimed for their supportive role in export facilitation through easing the trade (tariff and non-tariff) barriers however it has less visible impact among the traders. Traders do not express their satisfaction with the role of government agencies for trade facilitation and custom clearance. Therefore, due to the hassle of the various documentation process exporter has to depend on the custom agent for export procedure. The large amount of profit goes to the official and unofficial means to the various barriers during custom clearance and export to the international ginger market.

iv) Associations: Association such as Nepal Ginger Producers and Traders Association (NGPTA), NEHHPA, HEAN, Transport Associations established to overlook the rights of the traders and exporters. However, associations did not much found to focus on to work on export promotion,

expansion of relation with international buyers, linkage establishment and other promotion related activities. Members of the association work individually to establish relation with international buyers from their personnel effort. Associations were established to create a common platform for a meeting and discussion however they did not much concentrated on export promotion, quality assurance and so many marketing and export related issues of the ginger.

CHAPTER-4 INTERNATIONAL EXPORT PROCEDURE AND LOGISTIC ARRANGEMENT

4.1 Export Volume and Value

According to the TEPC statistics, Nepal exported 20,415,666 k.g ginger in F/Y 013/14, quite higher number 24,548,657 k.g exported in F/Y 014/15, and little higher number 28,351,823 k.g in F/Y 015/16. The export volume has increased slightly higher than previous year which is 4,499,956 k.g in F/Y 016/17 and exported volume has slightly decreased 23,122,593 k.g in the F/Y 017/18 and the volume has decreased by 14,919,195 k.g in F/Y 018/19. The export trend fluctuation of ginger export is due to various quality issues, increased domestic production volume of India, tariff and non-tariff issues, sanitary and phytosanitary issues and huge dependency in the Indian market. Comparative chart shows that the value of

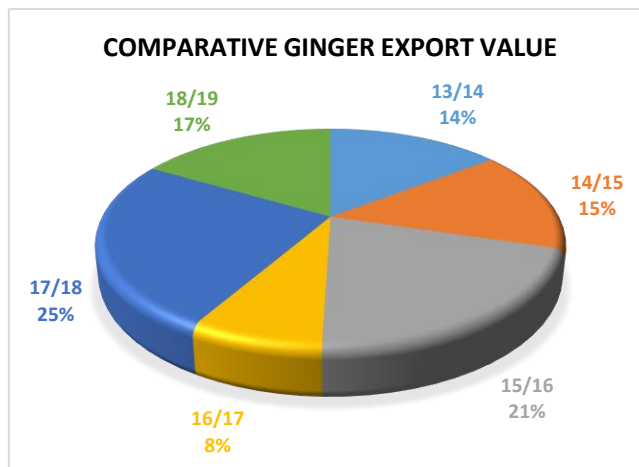


Figure 7: Source-TEPC Statistics

the ginger export is inconsistent which ranges up to 8% to 25% compared with six fiscal years of 013/14 to 018/19. In F/Y 013/14 Nepal exported ginger value is NPR 449,901,000, in F/Y 014/15 export value is NPR 464,921,000, in F/Y 015/16 export value is NPR 643,086,000, in F/Y 016/17 export value is NPR 243,388,000, in F/Y 017/18 export value is NPR 772,465,000 and in the F/Y 018/19 export value is 512,296,000. The statistics show that the value of the ginger is inconsistent and the price affects the demand of the Indian market and Indian production volume.

4.2 Transportation Routes and Procedure

4.2.1 Shipping Routes

Nepal, a landlocked country, relies on transit access from neighboring countries to participate in international trade. For Nepal, the nearest sea-port is Visakhapatnam and Haldiya Port Kolkata in India and the transit arrangements between the two countries are governed by India-Nepal Treaty of Trade and Transit. However, there are a large number of inadequacies in the prevailing India-Nepal transit treaty encompassing issues with regard to documentation requirements, transshipment procedures, sensitive items, arbitrary bank guarantees, and poor infrastructure.

Indian Sea Ports: Nepal is a landlocked country bordering India on the southern, eastern and western sides, and China on the northern side. Hence, access to transit facilities through these contiguous nations is of utmost importance to Nepal for participating in international trade conducted via land or sea routes. For Nepal, the nearest sea-port is that of Visakhapatnam and Haldiya Port Kolkata in India. India and Nepal signed a 'Treaty of Trade and Transit' in the year in 1960 for the purpose of providing transit facility to Nepal. This treaty has been renewed periodically and was last renewed on January 5, 2013 for a period of 7 years. Currently,

Visakhapatnam Port in Andhra Pradesh and Haldia Port in Kolkata are the two seaports from where Nepal brings in or sends goods to third countries. Through the treaty of Transit between Nepal and India Kolkata is a major designated port out of total sea ports in India. Total 26 border crossing points with India among them Raxaul, Jogbani and Sunauli are the major import and border points of Nepal. For ginger export Kakadbhitta is the major gateway to export ginger product from Nepal. The nearest Indian sea port is around 1500 Kilometers from Kathmandu.

Bangladesh Ports: A trilateral transit understanding between Bangladesh, India, and Nepal is in place in order to facilitate the overland trade between Nepal and Bangladesh through India. The Treaty of Transit and the Operational Modalities for Additional Transit Route between Nepal and Bangladesh govern transit through the Phulbari-Banglabandh point and Radhikapur-Birol point. The Kakadbhitta (Nepal Border)-Panitanki (India Border with Nepal)-Phulbari (India Border with Bangladesh) route provides a shortest access of only 44 km to Banglabandh border for Nepal's trade with and through Bangladesh. As the short route was very congested, a new route of about 55-km passing through Bagdogra and Ghose Pukur by-pass is made open for truck transportation all days of the week. Chittagong could prove cheaper than other sea ports for exporting Nepali goods because of easy availability of empty containers.

Chinese Sea Ports: China agreed to provide seven transit points-four sea ports -Tianjin, Shenzhen, Lianyungang, Zhanjiang and three land ports Lanzhou, Lhasa, Xigatse to Nepal for trade with third countries. As per the Transit Transport Agreement (TTA) 7 September 2018, China will provide permits to trucks and containers ferrying cargo to Xigatse in Tibet. It will also allow Nepal to carry out exports and imports through six dedicated transit points along the Nepal-China border: Rasuwagadhi, Kodari, Yari, Kimathanka, Olangchungola and Nechung. Nepali traders will be allowed to use any mode of transport rail or road to access the sea ports as well as dry ports. However, according to exporter, export through China is almost expensive due to long distance which is around 3950 kilometers nearest sea point from Kathmandu. Other sea routes are difficult to transport to the third country due to same geographical location which are far with poor road infrastructures in Nepali ⁴

4.2.2 Road Transportation

Ginger transported from the farmland of small farmers are harvested to the individual home using labor from the field. After normal processing at home farmer again transports his product up the local traders through local transportation or labor in the small sacks. Local traders collect small amount of ginger and again supplies to the national level or district level exporter/traders. National level exporters after some processing such as washing and grading to some extent export via Indian border such as Naxalbari, Silguri, Raxaul and other nearest Indian markets. Indian lorry load ginger sack and transports up to Indian vegetable market and wholesaler. Consumer may directly purchase the goods from the wholesaler or through the vegetable market. Local retailers again purchase the goods from the wholesaler and sell ginger for the household consumption. Road head

⁴ <https://www.spotlightnepal.com/2018/10/03/nepal-china-transit-agreement-depth-analysis/>

transportation engulfs huge amount of money added additional cost of the ginger. Big chunk of cost has added from the farmland to end consumer for the margin of the traders, exporter, custom agent, wholesaler and retailer, therefore the end price of the product become expensive.

Certain proportion of the total ginger produced in Nepal is consumed locally, but a majority of domestic product is exported. Most commonly, local collectors visit the farmers to collect the ginger or alternatively, farmers take their product up to road-head traders. The road-head traders are mostly located at places where transportation is available, and where the traders act as consolidation points. They supply the goods to district traders, who in turn supply to the exporters or national traders. The exporters mostly sell their goods in India via commission agents, who take 6-7 per cent commission of the sales. Some exporters also sell directly to importers.

4.3 Documents and Procedural Compliance for Ginger Export

4.3.1 Export Procedural Compliance of Nepal

For a landlocked least developed country like Nepal, trading costs are high. Accessing international markets is a challenge. Long transit times, insufficient supply capacity and inadequate domestic infrastructure hinder export development efforts. The rise of non-tariff measures (NTMs) in recent decades adds a new level of complexity. Almost all the Nepalese exporters face difficulties with various regulations applied either by Nepal or partner countries. Despite of various export obstacles, Nepali traders exports few amount of goods such as Garment, Textile, Spice, Agriculture and food items. According to report published by TEPC/GIZ, there are nine steps of export procedure which are as following;⁵

1. Registration of the Company

Only registered companies can export their products. The exporter has to obtain a business registration certificate for a single proprietorship firm or a partnership firm from the Department of Commerce, within the Ministry of Commerce. If the exporter is a private or public limited company the exporter addresses the Company Registrar Office to obtain the registration certificate.

2. Income Tax Registration

A registered company is required to be enrolled with a local tax office. The tax office issues an income tax registration certificate. This certificate must be renewed annually within the first three months of every fiscal year. The Inland Revenue Office or Department of Inland Revenue needs to be contacted to receive the Registration Certificate from Permanent Account Number.

3. Opening Current Bank Account

The exporter has to open a current bank account in a commercial bank in the name of exporting company for conducting financial transactions related to export. The exporter can open a separate account for foreign currency. As a result, the exporter will be able to receive earnings directly in convertible currency.

⁵ TEPC/2017_Export%20Procedures.pdf

4. VAT Registration

VAT registration is necessary if the exporter wants a duty draw back facility on the import or purchase of raw materials and intermediate goods imported/purchased for the production of export goods. This duty draw back facility will reduce the cost of the export goods and thereby increases competitiveness.

5. Establishing the Contract

The exporter can get assistance from TEPC or FNCCI to arrange meetings and appointments with potential buyers. After successful negotiations, the importer sends a purchase order which details products, quantity, price, terms of payment, packaging, mode of delivery and scheduled date of the shipment. Once an agreement between exporter and buyer is reached, an export contract can be signed between both parties.

6. Pro-forma Invoice

A Pro-forma invoice indicates the price (specifying FOB, C&F, CIF etc.) and other details allowing the buyer to open a Letter of Credit (L/C) in favor of the exporter or an advance payment. A L/C is produced by a bank and ensures that the exporter will get full payment from buyer after the shipment of products. Under the Nepal Foreign Exchange Act (1962) and Rules (1963), exports are permitted only against advance payment or Letter of credit (L/C) to ensure that the payment for the goods is received in Nepal. Therefore, at the time of export, the exporter, in the foreign exchange control form (BBN 1) of Nepal Rastra Bank, is required to declare that the export earnings will be repatriated to Nepal within six months in the case of a transaction under a L/C. There is no limit on advance payment but the buyer has to remit the foreign exchange through a bank or has to exchange foreign currency with a bank in Nepal. The bank issues a certificate of advance payment to the exporter, which needs to be produced at the customs at the time of export. At this stage Incoterms may be used. Incoterms is a trade rule of the International Chamber of Commerce regarding responsibilities of the exporter and importer/buyer on shipping, insurance, producing and submitting documents. Using Incoterms will decrease misunderstandings, conflicts and insecurity.

7. Documentation and Customs Clearance

The exporter has to prepare the following documents for custom clearance:

- Copy of firm/company registration certificate
- Registration Income Tax Certificate from Inland Revenue Department (IRD)
- Registration Certificate from Inland Revenue Department (IRD) Registration Certificate Permanent Account Number from Inland Revenue Department (IRD)
- If applicable: Certificate of Origin (CO) or Generalized System of Preferences Form A (GSP) obtained from TEPC
- Nepal Customs Declaration
- If required assistance of Authority of Customs Agent
- Commercial Invoice
- Packaging list

- Foreign exchange declaration form No.1 of NRB (optional)
- L/C or certificate of advance payment
- Recommendation letter from the Inland Revenue Office (IRD), if product is subject to excise duties
- Bill of lading
- SPS/TBT/quarantine certificates
- Customs Transit Declaration (CTD)
- Other product specific document/export license if applicable

The CO can be obtained from the Federation of Nepalese Chambers of Commerce and Industry (FNCCI) and Confederation of Nepalese Industries (CNI). The GSP Form A needs to be filled out by the exporter. The form has to be stamped and certified by the Nepalese Customs at the time of export provided the product is eligible for the tariff preference under the GSP scheme of the destined preference giving country. The Trade and Export Promotion Centre (TEPC) issues the GSP Form A for exporters.

Relevant product specific documents are for example: a) Separate certificates for specified handicraft products like forest based, agricultural, handicrafts items of no archaeological value (Museum Pass Certificate), readymade garments, bone & horn products; b) No objection letter from Federation of Handicraft Associations of Nepal (FHAN) for products made from the parts of domestic animals; c) Recommendation letter from Department of Mines for some mineral products; d) Recommendation letter from Department of Forestry for some forestry based products; and e) Value certification from the Handicrafts Association of Nepal for handicrafts and silver products. The exporter may hire a custom agent who will take over the entire custom clearance process

8. Shipment

When goods are consigned by air, booking with a reliable air carrier or agent is required. By this means of transport, an airway bill is issued. For Sea Cargo, goods are transported through transit routes to the ports in India or Bangladesh. Procedures of transit agreements are observed for smooth and unhindered transportation of the consignment for export. Special documents are prepared and endorsed at customs exit/entry points. Goods are normally transported by closed rail wagons or container trucks. On arrival at the dispatch port, dock customs undertakes clearances before shipment. Shipping agent books cargo space and arrange shipment. After loading of the cargo aboard a vessel (ship), a Bill of Lading is issued.

Export to Tibet and India normally takes place through the land route by truck. When this transport is chosen, the transport company issues a consignment note. Internal destinations in India are normally served via rail route and a railway's receipt is issued after goods are booked on Indian rail.

Examples of incoterms rules for transport via sea and inland waterways for freight charges are: For FOB contract the charges are not payable by the exporter while for CPT and CIF contracts they are payable by the exporter. Additionally, CIF contracts also require a suitable insurance policy.

9. Payment

The buyer needs all the export documents from the exporter for clearance and delivery at the entry point of the importing country. These export documents are also the evidence from the exporter that products had been shipped to buyer legally. If shipment is in L/C terms, the bank credits the account of exporter with the amount of export earnings after L/C negotiation between exporter and the bank. Advance Payment terms require dispatch of documents to the buyer directly.

4.3.2 Transit Procedural Compliance of India

According to the Government of Nepal, Trade and Export Promotion Center (TEPC), the 1999 Treaty of Transit it has been stated that no additional documents other than invoice, packing list and certified copy of L/C will be asked for by the Indian Customs except when considered necessary for the clearance of any specific goods. The exporter or CA approaches the corresponding Indian Border Customs with the cargo and submits the following documents:

- CTD duly endorsed by the Nepal Customs,
- Invoice-original,
- Packing list-original,
- Certified copy of L/C or Certificate of advance payment,
- Certificate of origin-original,
- Duty insurance or legally binding undertaking in the name of the concerned Commissioner of Customs,
- Authority letter of CA.

Further, the Indian Border Customs check OTL of containerized cargo and, if found intact, allow onward transportation without physical examination of cargo unless there are valid reasons to do otherwise. If OTL is found broken or defective, the goods are checked to see that they are in accordance with CTD. Then a fresh OTL is put on the container with its serial number endorsed on CTD before allowing onward transportation to the seaport of exit. The Indian Border Customs make a selective examination of non-containerized goods to check that they are as per the CTD. As with imports, specified sensitive goods must be transported in closed railway wagons or pilfer-proof containers, which can be securely locked. Containers or wagons are locked and duly sealed after examination by the Customs.

After examining the cargo, documents and seals, the Indian Border Customs endorses all four copies of CTD and hands the original to the CA, and retains the fourth copy for its record. The duplicate and triplicate copies are to be sent by post to the Calcutta Customs, but to avoid delay in postal transmission, they are handed to the CA in a sealed envelope. However, this facility will not be allowed for any exporter who defaults in the timely production of these documents Duty Insurance. As with import cargo, duty insurance for export cargo is required only for

specified sensitive goods, and a legally binding undertaking is required for other goods. Normally it takes two to four days for containers to reach Calcutta port.

When documents reach Calcutta, CA files documents at the Customs House. The Customs House compares the original CTD with the duplicate and triplicate copies received separately in a sealed envelope from CA. Documents are cleared permitting exports by Calcutta Customs normally within 24 hours of filing. After documents are cleared by the Calcutta Customs, CPT approval is obtained for taking the cargo inside the port. At the same time booking of container with a shipping line is also confirmed. The export cargo is then taken inside the port where the Customs Export Obligation (EO) or Purchase Order (PO) checks seals and locks on the wagons or containers and packages, and compares with the declaration made on CTD.

If seals and locks are found intact, EO endorses all copies of CTD. In cases where seals and locks are not intact or there is otherwise suspicion, the goods are checked on percentage basis to ensure that they correspond with the information on CTD before endorsing all copies. Then the cargo is loaded onto a vessel or handed over to the ship's agent inside the port. After necessary endorsements, EO gives back the original, duplicate and triplicate copies of CTD to CA who takes them again to the Calcutta Customs. After the Calcutta Customs makes necessary entries on all copies, the original is handed back to CA for submission to the Border Customs, the triplicate copy is sent to the Border Customs and the duplicate copy retained for records.⁶

4.4 Sea Import Procedural Compliance of UAE

The exporter supplies the importer with the following original documents, irrespective of the sales agreement and agreed payment method between the two parties;

- a. Original bill of lading copies
- b. Commercial invoice
- c. Packing list
- d. Certificate of origin

Based on the vessel arrival date, the importer submits the original bill of lading to its shipping agent, which in turn issues a delivery order to the importer. This should be done few days before vessel arrival. The importer should also conduct all cargo clearance formalities as described below before the delivery order expiry date. Once the delivery order has expired, the port will not release cargo to the importer. In this case the shipping agent would need to extend the delivery order, incurring an additional fee for the importer. The importer submits the Import Declaration application for UAE Customs clearance online through online payment for customs duties and other fees can be made using the CDR account, or e-payment by credit card or direct debit. On successful payment by either of these methods, the importer can print the Customs Import Declaration.⁷

⁶ <https://www.tepc.gov.np/pages/exports-transit-procedure>

⁷ <https://www.economy.gov.ae/Publications/UAE%20Imports%20and%20Exports%20Guide.pdf>

Import processes are as following;

- Receive performa invoice from exporter
- Pay LC opening charges to the bank
- Advice LC opening to exporters bank
- Submit import declaration and pay customs charges
- Issue delivery order
- Surrender bill of lading (BoL) and pay charges
- Pay bank and receive documents
- Approve and issue import declaration (Bill of Entry)
- Pay DP world charges
- Arrange Hauler
- Nominate Hauler
- Discharge container from vessel
- Generate e-token (full container cut)
- Receive full container from DP World
- Inspect container
- Transport container to importers warehouse and receive container

4.5 Custom and Duties

Nepali exporter complaint on non-tariff barriers however there is no any custom and export duties in the Nepali border except nominal amount Rs.113 per consignment. India also permit the entry of fresh Nepali ginger into its territory, without being subjected to any tax under the new Goods and Services Tax (GST) scheme. India has agreed to prohibit the 5 percent tax previously levied as per the GST on import of fresh ginger from Nepal, thereby permitting local farmers and traders to export tax-free produce to India. However, if Nepali ginger goes to Bangladesh at least 5% custom duties should have to be paid from exporter to the Bangladesh. However, Bhutanese ginger are allowed in Bangladesh territory without any custom duties. Therefore, the presence of Nepali ginger is less in Bangladesh compared to the Indian market.

4.6 Export Duration

According to the information of freight forward association and exporters, it'd take around 20-25 days to reach Nepali Cargo to the UAE and Gulf countries through the Indian Port. Bangladesh, Mangla Port would be easier than the Indian gateway, however due to the various tariff and non-tariff issues Nepali exporter did not choose to ship through Bangladesh. According to them export to the third countries through Chinese gateway is almost impossible due to transportation cost, time and distance which is far higher than India and Bangladesh. If shipment is done through Bangladesh port days could be reduced to reach Nepali cargo to the Gulf countries. If Nepali government could facilitate with the Bangladesh government to exempt 5% tariff and other non-tariff barriers, the route would be cheapest and time duration would be short to export Nepali cargo to the Gulf countries.

1.) *Export cost comparison source to Gulf Countries by Road and via the port of Calcutta*

Activity	Time/Day	Remarks
Transport from source to Mechi custom Kakadbhitta	1	depends on the farm gate or traders
Custom clearance of Mechinagar custom and panitanki India	1	Custom yard
Two way transportation (referral container and loaded container) from Calcutta to Kakadbhitta & Kakadbhitta to Calcutta	2	Road
Shipping clearance at Calcutta which is known as THC (Terminal Handling Charge)	7-9	Onboard
Ocean Freight	Colombo=7-9 Singapore=10-12	Kakadbhitta to Gulf countries

Table-4: Source-Nepal Freight Forward Association

2. Export duration to reach cargo from Kakadbhitta to Karachi Pakistan through Calcutta

Activity	Time/Day	Remarks
Transport from source to Mechi Custom Kakadbhitta	1	depends on the farm gate or traders
Custom clearance of Mechinagar custom and Panitanki India including miscellaneous charges, agent fee and custom clearance fees.	1	
Two way transportation cost (referral container and loaded container) from Calcutta to Kakadbhitta & Kakadbhitta to Calcutta	2	
The cost of Shipping clearance at Calcutta which is known as THC (Terminal Handling Charge)	7-9	Clearing and onboard
Ocean Charge	Colombo= 7-9 Singapore= 10-12	Kakadbhitta to Karachi Pakistan

Table-5: Source-Nepal Freight Forward Association

3. Export process and time duration through Air (TIA to Gulf Countries)

S.N.	Process	Days/Duration
1	Inform the buyer on the readiness of the order	1
2	Buyer sends the packing and delivery details	2
3	Quality Inspection	1
4	The goods are packed	2
5	Letter of credit is demanded based on the value and quantity to ship as per purchase order	4
6	LC receive notice provided by the bank	1
7	Freight forwarders are informed to collect the documents on behalf of the exporter	1
8	Pick up a schedule and onboard details worked by freight companies	1

9	Goods picked up from factory to airport	1
10	Document preparation as follows	0
11	Appraisal	0
12	Warehouse	1
13	Air Way Bill Booking	0
14	loading at aircraft	1
15	Onboard the flight	0
16	Preparation of document	1
17	Hand over customs documents for bank negotiation	1
18	Present bills to the exporter by the freight forwarder	0
19	Follow up shipment	0
20	Bank releases payment	2
21	Couriered to consignee	0
22	Arrange distribution to respective stores at destination	5
23	Pick up unused packing material for disposal	1

Table-6: Source-Nepal Freight Forward Association

3.) Export process from Kakadbhitta to Gulf countries by road and sea

S.N	Business processes
1	Inform the buyer on the readiness of the order
2	Buyer sends the packing and delivery details
3	Quality Inspection
4	The goods are packed
5	Letter of credit is demanded based on the value and quantity to ship as per purchase order
	LC receive notice provided by the bank
7	Freight forwarders are informed to collect the documents on behalf of the exporter
8	Document preparation and good pick up from the factory to Birtamod
9	Goods picked up from the factory to Birtamod
10	Customs Appraisal Birtamod
11	Warehouse Terminal handling at ICP or ICD and Mechinagar clearance
12	Goods now move to Kolkata or VIZAG
13	Kolkata and Vizag procedures
14	Onboard the vessel
15	Hand over customs documents for to shipping line for B/L
16	CHA sends documents to its agent or importer in Nepal
17	Exporter document preparation to get payment
18	Present bills to the exporter by the freight forwarder
19	Follow up shipment
20	Bank releases payment

21	Couriered to consignee
22	Follow on shipment
23	Reach the destination and deliver to consignee
24	Pick up unused packing material for disposal

Table-7: Source-Nepal Freight Forward Association

4.7 Export Cost

According to exporter and trader, transportation cost through Indian sea routes is higher than the cost through Bangladesh due to the long shipping procedure. Due to easily available referral container and less cargo traffic in Though India Calcutta, Haldiya Port total export cost is around 601 thousand per 40 ft. container and 383 thousand for 20 ft. container however through Bangladesh, Mangla Port cost and export time would be minimized due to availability of referral container and less traffic of the container compared with Indian port.

7a. Tentative Export Cost via Calcutta Sea Port to the Gulf Countries

S.N	Description	Quantity	Unit	Rate	Via Kalakatta
A	Export Cost in 20 ft. Container to Gulf				
1	Local Transportation	2	Lorry Truck	12000	24000
2	Washing	26000	k.g	1	26000
3	Loading	26000	k.g	1	26000
4	Custom Agent Cost	1	20 ft. Container	35000	35000
5	Two way transportation cost (Calcutta to Kakadbhitta to Calcutta)	1	20 ft. Container	75000	75000
6	Terminal Handling charge (THC) at Calcutta	1	20 ft. Container	40000	40000
7	Ocean Freight Charge for Gulf Countries	1	20 ft. Container	145200	145200
8	Container fumigation charge	1	20 ft. Container	12100	12100
a	Grand Total Transportation Cost	1	20 ft. Container		383300
b	Transportation Cost	1	k.g	383300/26000	15
c	Total Purchasing Cost	1	Container	70*26000	1820000
d	Total Ginger Production & Export cost	1	Container	350000+1820000	2203300
e	Per k.g export cost to the gulf countries	1	k.g	70+15	85
S.N	Description	Quantity	Unit	Rate	Total NPR
A	Export Cost in 40 ft. Container to Gulf				
1	Local Transportation	4	Lorry Truck	12000	48000
2	Washing	52000	k.g	1	52000

3	Loading	52000	k.g	1	52000
4	Custom Agent Cost	1	40 ft. Container	49000	49000
5	Two way transportation cost (Calcutta to Kakadhbhitta to Calcutta)	1	40 ft. Container	105000	105000
6	Terminal Handling charge (THC) at Calcutta	1	40 ft. Container	80000	80000
7	Ocean Freight Charge for Gulf Countries	1	40 ft. Container	203280	203280
8	Container fumigation charge	1	40 ft. Container	12100	12100
a	Grand Total Transportation Cost	1	40 ft. Container		601380
b	Transportation Cost	1	k.g	601380/52000	12
c	Total Purchasing Cost	1	Container	70*52000	3640000
d	Total Ginger Production & Export cost	1	Container	601380+3640000	4241380
e	Per k.g export cost to the gulf countries	1	k.g	70+12	82

Table 8: Source: Interview with the ginger exporter, Birtamod, Jhapa and freight forward association (price might be vary depending up on the situation)

7b. Tentative Export Cost via Mangla Sea Port, Bangladesh to the Gulf Countries

S.N	Description	Quantity	Unit	Rate	Via Manglaport
A	Export Cost in 20 ft. Container to Gulf				
1	Local Transportation	2	Lorry Truck	12000	24000
2	Washing	26000	k.g	1	26000
3	Loading	26000	k.g	1	26000
4	Custom Agent Cost	1	20 ft. Container	35000	35000
5	Transportation cost from Kakadhbhitta to Fulbari-Bangladesh	1	20 ft. Container	12000	12000
6	Transportation cost from Fulbari-Bangladesh to Mangala Port Khulana	1	20 ft. Container	90000	90000
7	Terminal Handling charge (THC) at Calcutta	1	20 ft. Container	40000	40000
8	Ocean Freight Charge for Gulf Countries	1	20 ft. Container	145200	145200
9	Container fumigation charge	1	20 ft. Container	12100	12100
a	Grand Total Transportation Cost	1	20 ft. Container		410300
b	Transportation Cost	1	k.g	410000/26000	16

c	Total Purchasing Cost	1	Container	70*26000	1820000
d	Total Ginger Production & Export cost	1	Container	410000+1820000	2230300
e	Per k.g export cost to the gulf countries	1	k.g	70+16	86
S.N	Description	Quantity	Unit	Rate	Total NPR
A	Export Cost in 40 ft. Container to Gulf				
1	Local Transportation	4	Lorry Truck	12000	48000
2	Washing	52000	k.g	1	52000
3	Loading	52000	k.g	1	52000
4	Custom Agent Cost	1	40 ft. Container	49000	49000
5	Transportation cost from Kakadhbhatta to Fulbari-Bangladesh	1	40 ft. Container	17000	17000
6	Transportation cost from Fulbari-Bangladesh to Mangala Port Khulana	1	40 ft. Container	126000	126000
7	Terminal Handling charge (THC) at Calcutta	1	40 ft. Container	80000	80000
8	Ocean Freight Charge for Gulf Countries	1	40 ft. Container	203280	203280
9	Container fumigation charge	1	40 ft. Container	12100	12100
a	Grand Total Transportation Cost	1	40 ft. Container		639380
b	Transportation Cost	1	k.g	693380/52000	12
c	Total Purchasing Cost	1	Container	70*52000	3640000
d	Total Ginger Production & Export cost	1	Container	639380+3640000	4279380
e	Per k.g export cost to the gulf countries	1	k.g	70+12	82

Table 9: Source: Interview with the ginger exporter, Birtamod, Jhapa and freight forward association (price might be vary depending up on the situation)

7c. Tentative Export Cost to Pakistan from Calcutta Port, India

S.N	Description	Quantity	Unit	Rate	Via Kalakatta
A	Export Cost in 20 ft. Container to Gulf				
1	Local Transportation	2	Lorry Truck	12000	24000
2	Washing	26000	k.g	1	26000
3	Loading	26000	k.g	1	26000

4	Custom Agent Cost	1	20 ft. Container	35000	35000
5	Two way transportation cost (Calcutta to Kakadbhitta to Calcutta)	1	20 ft. Container	75000	75000
6	Terminal Handling charge (THC) at Calcutta	1	20 ft. Container	40000	40000
7	Ocean Freight Charge for Gulf Countries	1	20 ft. Container	108900	108900
8	Container fumigation charge	1	20 ft. Container	12100	12100
a	Grand Total Transportation Cost	1	20 ft. Container		347000
b	Transportation Cost	1	k.g	347000/26000	13
c	Total Purchasing Cost	1	Container	70*26000	1820000
d	Total Ginger Production & Export cost	1	Container	347000+1820000	2167000
e	Per k.g export cost to the gulf countries	1	k.g	70+13	83
S.N	Description	Quantity	Unit	Rate	Total NPR
A	Export Cost in 40 ft. Container to Gulf				
1	Local Transportation	4	Lorry Truck	12000	48000
2	Washing	52000	k.g	1	52000
3	Loading	52000	k.g	1	52000
4	Custom Agent Cost	1	40 ft. Container	49000	49000
5	Two way transportation cost (Calcutta to Kakadbhitta to Calcutta)	1	40 ft. Container	105000	105000
6	Terminal Handling charge (THC) at Calcutta	1	40 ft. Container	80000	80000
7	Ocean Freight Charge for Gulf Countries	1	40 ft. Container	152460	152460
8	Container fumigation charge	1	40 ft. Container	12100	12100
a	Grand Total Transportation Cost	1	40 ft. Container		550560
b	Transportation Cost	1	k.g	550560/52000	11
c	Total Purchasing Cost	1	Container	70*52000	3640000
d	Total Ginger Production & Export cost	1	Container	550560+3640000	4190560
e	Per k.g export cost to the gulf countries	1	k.g	70+11	81

Table 10: Source: Interview with the ginger exporter, Birtamod, Jhapa and freight forward association (price might be vary depending up on the situation)

7d. Tentative Export Cost to Pakistan from Mangla Port, Bangladesh

S.N	Description	Quantity	Unit	Rate	Via Manglaport
A	Export Cost in 20 ft. Container to Gulf				
1	Local Transportation	2	Lorry Truck	12000	24000
2	Washing	26000	k.g	1	26000
3	Loading	26000	k.g	1	26000
4	Custom Agent Cost	1	20 ft. Container	35000	35000
5	Transportation cost from Kakadbhitta to Fulbari-Bangladesh	1	20 ft. Container	12000	12000
6	Transportation cost from Fulbari-Bangladesh to Mangala Port Khulana	1	20 ft. Container	90000	90000
7	Terminal Handling charge (THC) at Calcutta	1	20 ft. Container	40000	40000
8	Ocean Freight Charge for Gulf Countries	1	20 ft. Container	108900	108900
9	Container fumigation charge	1	20 ft. Container	12100	12100
a	Grand Total Transportation Cost	1	20 ft. Container		374000
b	Transportation Cost	1	k.g	347000/26000	14
c	Total Purchasing Cost	1	Container	70*26000	1820000
d	Total Ginger Production & Export cost	1	Container	347000+1820000	2194000
e	Per k.g export cost to the gulf countries	1	k.g	70+14	84
S.N	Description	Quantity	Unit	Rate	Total NPR
A	Export Cost in 40 ft. Container to Gulf				
1	Local Transportation	4	Lorry Truck	12000	48000
2	Washing	52000	k.g	1	52000
3	Loading	52000	k.g	1	52000
4	Custom Agent Cost	1	40 ft. Container	49000	49000
5	Transportation cost from Kakadbhitta to Fulbari-Bangladesh	1	40 ft. Container	17000	17000
6	Transportation cost from Fulbari-Bangladesh to Mangala Port Khulana	1	40 ft. Container	126000	126000

7	Terminal Handling charge (THC) at Calcutta	1	40 ft. Container	80000	80000
8	Ocean Freight Charge for Gulf Countries	1	40 ft. Container	152460	152460
9	Container fumigation charge	1	40 ft. Container	12100	12100
a	Grand Total Transportation Cost	1	40 ft. Container		588560
b	Transportation Cost	1	k.g	588560/52000	11
c	Total Purchasing Cost	1	Container	70*52000	3640000
d	Total Ginger Production & Export cost	1	Container	588560+3640000	4228560
e	Per k.g export cost to the gulf countries	1	k.g	70+11	81

Table 11: Source: Interview with the ginger exporter, Birtamod, Jhapa and freight forward association (price might be vary depending up on the situation)

7e. Tentative Export Cost of Pakistan by road via China

S.N	Description	Quantity	Unit	Rate	Via China
A	Export Cost in 20 ft. Container to Gulf				
1	Local Transportation	1	20 ft. Container	12000	12000
2	Washing	13000	k.g	1	13000
3	Loading	13000	k.g	1	13000
4	Transport from source or Birtamod to Rasuwagadi or Khasa	1	20 ft. Container	120000	120000
5	Custom Agent Cost	1	20 ft. Container	35000	35000
6	Transportation by Chines containers from Kerung or Gyirong to Kaskar	1	20 ft. Container	99315	99315
7	Kaskar to Karamkurum -Islamabad	1	20 ft. Container	58500	58500
8	Islambad to via Indu's Ultha haiway - Karanchi	1	20 ft. Container	160000	160000
9	Container fumigation charge	1	20 ft. Container	12100	12100
a	Grand Total Transportation Cost	1	20 ft. Container		522915
b	Transportation Cost	1	k.g	522915/13000	40
c	Total Purchasing Cost	1	Container	70*26000	1820000
d	Total Ginger Production & Export cost	1	Container	522915+1820000	2342915
e	Per k.g export cost to the gulf countries	1	k.g	70+40	110

Table 12: Source: Interview with the ginger exporter, Birtamod, Jhapa and freight forward association (price might be vary depending up on the situation)

7f. Tentative Export Cost of Bangladesh from Kakadhbhitta

S.N	Description	Quantity	Unit	Rate	Kakadhbhitta
A	Export Cost in 20 ft. Container to Gulf				
1	Local Transportation	2	Lorry Truck	12000	24000
2	Washing	26000	k.g	1	26000
3	Loading	26000	k.g	1	26000
4	Custom Agent Cost	1	20 ft. Container	35000	35000
5	Transportation cost from Kakarbitta to Fulbari-Bangladesh	1	20 ft. Container	12000	12000
6	Transportation cost from Fulbari to Bangladesh Market	1	20 ft. Container	50000	50000

a	Grand Total Transportation Cost	1	20 ft. Container		173000
b	Transportation Cost	1	k.g	173000/26000	7
c	Total Purchasing Cost	1	Container	70*26000	1820000
d	Total Ginger Production & Export cost	1	Container	173000+1820000	1993000
e	Per k.g export cost to the gulf countries	1	k.g	70+7	77
S.N	Description	Quantity	Unit	Rate	Total NPR
A	Export Cost in 40 ft. Container to Gulf				
1	Local Transportation	4	Lorry Truck	12000	48000
2	Washing	52000	k.g	1	52000
3	Loading	52000	k.g	1	52000
4	Custom Agent Cost	1	40 ft. Container	49000	49000
5	Transportation cost from Kakadbhitta to Fulbari-Bangladesh	1	40 ft. Container	17000	17000
6	Transportation cost from Fulbari-Bangladesh Market	1	40 ft. Container	70000	70000
a	Grand Total Transportation Cost	1	40 ft. Container		288000
b	Transportation Cost	1	k.g	288000/52000	6
c	Total Purchasing Cost	1	Container	70*52000	3640000
d	Total Ginger Production & Export cost	1	Container	288000+3640000	3928000
e	Per k.g export cost to the gulf countries	1	k.g	70+6	76

Table 13: Source: Interview with the ginger exporter, Birtamod, Jhapa and freight forward association (price might be vary depending up on the situation)

7g. Tentative Export Cost to Naxalbari, India

S.N	Description	Quantity	Unit	Rate	Total NPR
A	Export Cost in 20 ft. container				
1	Local Transportation	2	20 ft. Container	24000	24000
2	Washing	26000	k.g	1	26000
3	Loading	26000	k.g	1	26000
4	Custom Agent Cost	1	20 ft. Container	35000	35000
5	Transportation to Naxalbari India	1	20 ft. Container	24000	24000
	Grand Total Transportation Cost	1	20 ft. Container		135000
	Transportation Cost	1	k.g	135000/26000	5
	Total Purchasing Cost	1	Container	70*26000	1820000
	Total Ginger Production & Export cost	1	Container	135000+1820000	1955000
	Per k.g export cost to India	1	k.g	70+5	75
S.N	Description	Quantity	Unit	Rate	Total NPR
A	Export Cost in Lorry Truck				
1	Local Transportation	1	Lorry Truck	12000	12000
2	Washing	13000	k.g	1	13000
3	Loading	13000	k.g	1	13000
4	Custom Agent Cost	1	Lorry Truck	25000	25000
5	Transportation to Naxalbari India	1	Lorry Truck	12000	12000
	Grand Total Transportation Cost	1	Lorry Truck		75000
	Transportation Cost	1	k.g	75000/13000	5.77
	Total Purchasing Cost	1	Lorry Truck	70*13000	910000
	Total Ginger Production & Export cost	1	Lorry Truck	75000+910000	985000
	Per k.g export cost to Naxalbari, India	1	k.g	70+6	76

Table 14: Source: Interview with the ginger exporter, Birtamod, Jhapa and freight forward association (price might be vary depending up on the situation)

Note:

1. The data is based on the interaction and interview with the exporter and members of NGPTA and the cost and price of the ginger might vary depending the price fluctuation in the national and international market. Ginger price might vary depending up on the geography, farmer and the market demand and local transportation cost might vary depending up on the geography. This finding is mainly based on Ilam, Birtamod, Dhulabari and Kakadbhitta, eastern region of Nepal.
2. The price will almost be the same if transportation will be done from different port of India such as Visakhapatnam and Haldiya, however the consignment delivery duration would be different.
3. If transport through Bangladesh, Mangla port, the transportation cost will be slightly lower than Indian route however due to 5% custom duty the cost of transportation would be higher than India.
4. For the conversion of the US currency 1 USD = 121 was the calculated value.
5. Purchasing price of the ginger with farmer was determined with the value of 1 k.g = NPR 70

7h. Comparative average export cost analysis between India, Bangladesh and Gulf

Expenditures	Export to India	Export to UAE and Gulf via Bangladesh	Export to UAE and Gulf via India
Transportation cost from Birtamod/Dhulabari/Kakadbhitta to export destination per 40 ft. container	1,35,000	6,93,380	5,87,380
Transportation cost from Birtamod/Dhulabari/ Kakadbhitta to export destination per 20 ft. container	75,000	4,10,000	3,83,300
Per k.g export cost via 40 ft. container	5	12	12
Per k.g export cost via 20 ft. container	6	16	15
Per k.g total export cost via 40 ft. container	75	82	82
Per k.g total export cost via 20 ft. container	76	86	85
Per MT export cost via 40 ft. container	75,000	82,000	82,000
Per MT export cost via 20 ft. container	76,000	86,000	85,000
Total export cost per 40 ft. container	19,55,000	42,79,380	42,41,380
Total export cost per 20 ft. container	9,85,000	22,30,300	22,03,300

Table 15: Source: Interview with the ginger exporter, Birtamod, Jhapa and freight forward association (price might be vary depending up on the situation)

7i. Comparative transportation cost analysis chart

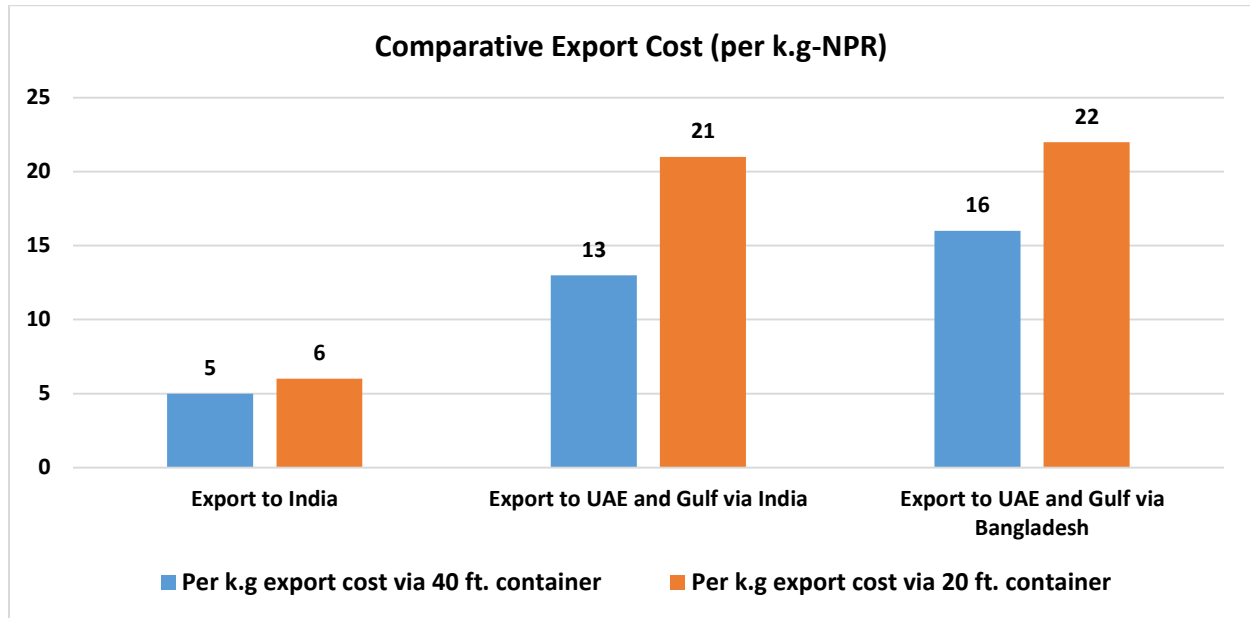


Figure-8: Comparative Cost Analysis Chart

7j. Comparative total export (transportation and purchasing cost) cost analysis chart

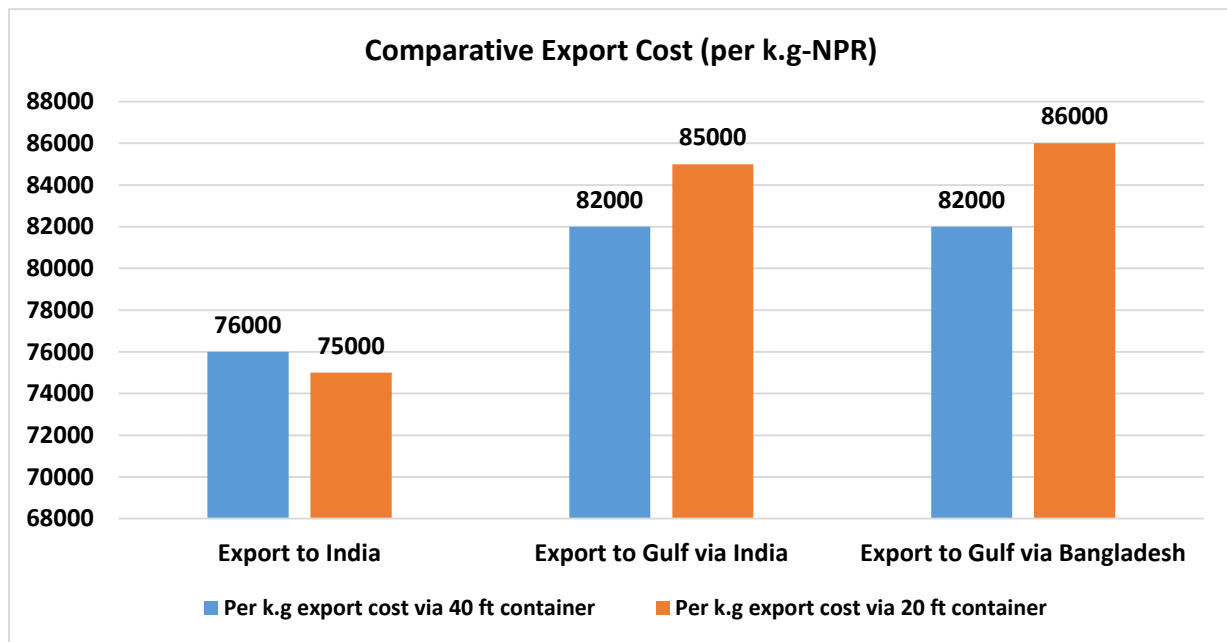


Figure -9: Comparative total export cost

7k. Comparative total export (transportation and purchasing cost) cost analysis chart

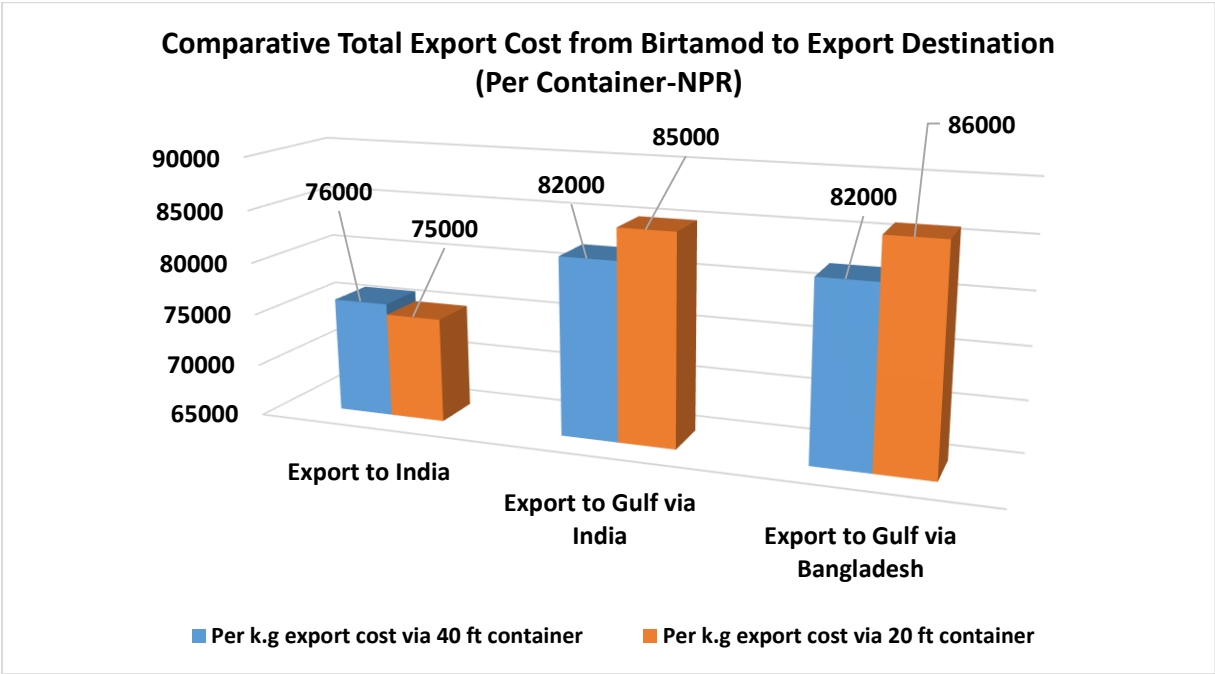


Figure -10: Comparative total export cost including transportation and purchasing

7l. Comparative per metric ton export (transportation and purchasing cost) cost analysis chart

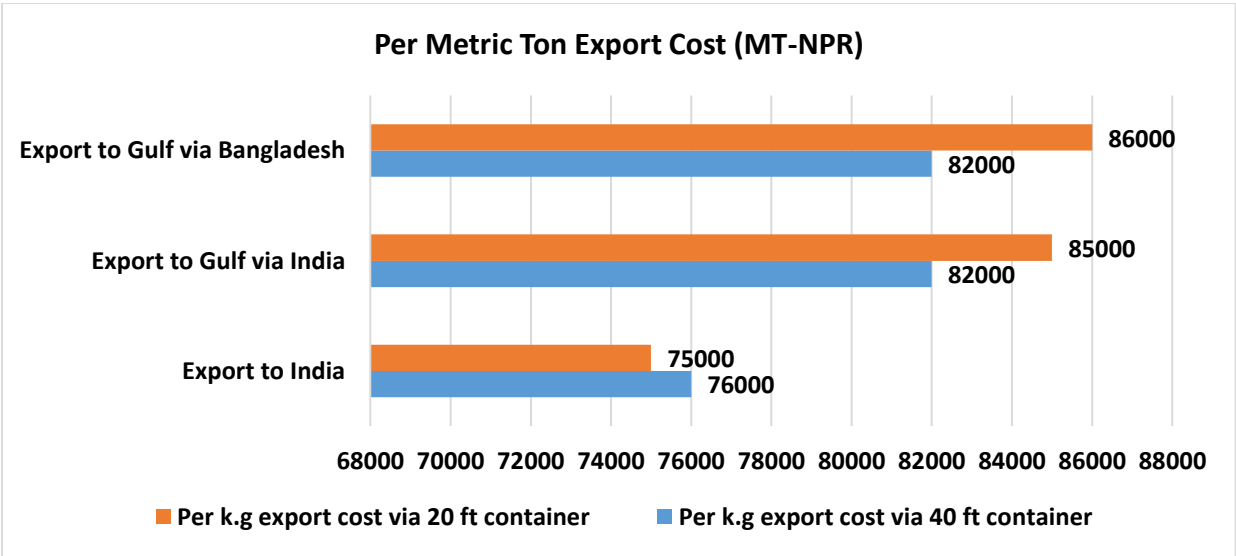


Figure - 11: Per MT Export Cost

7m. Comparative total export (transportation and purchasing cost) cost analysis chart

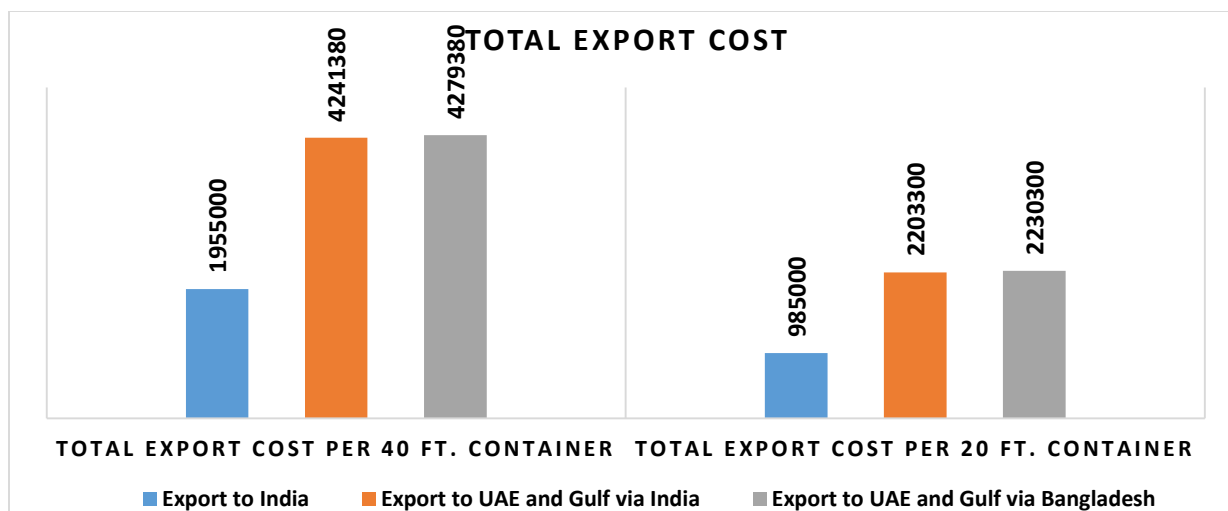


Figure - 12: Comparative Total Export Cost (Transportation and Purchasing)

Note:

1. The export tax from Nepal is "0" with document processing cost NRs 113 per consignment.
2. Besides of more gross income, the exporters will be benefited with 5% cash return from GON if it is exported to third countries
3. The above supply chain is drawn based on the mixed delivery system and basic maximum price NRs 70 for per kg ginger at farm gate. But the different mode of collection effects price to the farmers. At the same time the export prices to India is also a major factor of internal price determination. It is also observed that shorter supply chain is more profit margin yield to farmers.
4. No exporters have been found exporting ginger other than India and Bangladesh. Therefore, the entire cost calculated is based on the information of the farmer, trader, exporter and custom agent.
5. For the conversion of the US currency 1 USD = 121 was the calculated value.

CHAPTER 5: BARRIERS OF GINGER EXPORT PROMOTION IN THE GULF COUNTRIES

5.1 Quality Production

Nepali ginger was good in quality during initial phase of production 1998, however the quality have been gradually degraded due to traditional way of farming and seed management practice. Now the size has been small and looks quite dirty compare with ginger of China and India. It is because of lack of sufficient knowledge of the farmer for the use of technology, fertilizer, access to high quality seed and other technical knowledge of farming.

The ginger cultivation in Nepal is done mostly in traditional ways with very few external inputs and increased use of labour. Farmyard manure and compost are mostly used rather than fertilizers. Farmers typically use locally available seed materials. Mostly, seeds are produced by farmers themselves, and kept for the next season's plantation. New growers purchase seeds from neighboring farmers or local markets. Lower productivity has been reported from out of farm purchased seeds and that grown by new cultivators. Ginger farmers



Figure- 13: Ginger Picture

in the mountains mostly preserved ginger seed from their last season crop, and rarely used pesticides on ginger. It is becoming more common for seeds to be treated with fungicides (and in some places with bio-pesticides). The sequence of agricultural activities usually includes: land preparation, plantation, compost application, mulch collection and placement, timely weeding and harvesting. Mostly local materials and household laborers are used for all of these activities. Land is generally ploughed with bullocks or dug by laborers. Post-harvest activities are limited to separation of rhizomes from stem and soil removal from the rhizome. There is no practice of washing, sorting and grading of rhizomes. The ginger is sent to markets ungraded and packaged in gunny bags.

Quality seeds: Seed is the major input component in ginger cultivation, as it incurs around half of the production cost. Most of the farmers are cultivating local varieties by using traditionally grown rhizomes. There is no regular supply chain of the quality seed and government agencies are not said to have paid much attention about the quality seed supply chain.

Plant protection measures: Although there is high infestation of rhizome rot disease in most of the production pockets, farmers do not equip with appropriate knowledge and pesticides on plant protection measures to manage it. Pesticides found at the local level are ineffective. Though government agencies are an important stakeholders, are not seemed to be paid active initiation to help farmers on plant protection measures and post-harvest handling.

Rhizome rot disease: This disease is found in almost all ginger growing areas of Nepal. However, the problems need to be addressed from the government level as a mission through providing quality and healthy seeds to farmer.

Cultivation practices: Since the beginning, Nepali farmers have been cultivating ginger in a very conventional way which is rain fed and cultivated in marginal, sloped land. There is lack use of modern technology, use of high fertilizers and hybrid seeds which results in high per unit cost of production and low returns.

Post-harvest handling: Post harvest handling like cleaning, sorting, grading, and packaging are regarded as prerequisites for export equality. All the producers do not even think about those practices because of the traditional selling practices of the product from farmland to the traders directly. Even if farmers think about to grading, shorting the price range would not be higher than the non-graded ginger. Therefore, not even from the traders level the post-harvest handling have been managed well rather traders and exporter would like to directly sell the product whatever he has received from the farmer. Therefore, Nepali ginger is not competitive in the international market eventhough it is not exported much other than India in the fresh form.

5.2 Product Processing

Ginger from Nepal is traded in three forms fresh, dry and processed. However the majority of the quantity (i.e., more than 85%) is traded fresh in the Indian market via historical relation with the Indian traders. Most of the product are consumed in the Indian vegetable market. Despite proven potential for increased income through semi and fully processed ginger (even simple washing and packaging) is yet to be institutionalized. Therefore, the export potential of Nepali ginger has been limited to India due to raw or crude form mostly uncleaned with the soil content.

The ginger market in Gulf and Europe has been increasing due to growing demand of ginger and species. However, Nepali exporter and trader could not look beyond Indian market due to lack of processing capacity of ginger. Nepali exporters are mainly middle man where they just focus on immediate profit rather than long term sustainable business relation and sustainable trade relation with third country. Therefore, the country could not achieve huge profit from exploring sustainable trade relation with global buyers of Gulf and Europe.

Cleaning and Washing: The quality of Nepali ginger is considered poor compared with Indian and other ginger producing countries due to its high fiber contents and dirty appearance. Due to the lack of easily available washing facilities and unwillingness of the Nepali exporter Nepali ginger is not cleaned properly and is unattractive, resulting less competitive in the international market. Therefore Nepali ginger is bound to sell in the Indian market in very low prices as determined by the Indian traders. In Nepal, the cost of labour charge is very high compared with India. Therefore, Nepali traders also have processing plant (washing and cleaning) in Indian border at Naxalbari.

Packaging and labeling and branding: Except few amount of processed ginger such as ginger powder and dry ginger (sutho), there is no any proper ginger processing and packaging facilities

in Nepal. Nepali ginger is yet to be recognized through collective trademark of their own brand and labeling to sell in the international market.

5.3 Sanitary and Phytosanitary Factor

To ensure Nepali ginger compliance with even basic SPS requirements is weak throughout the ginger value chain from production to export. Nepali ginger production and trading of ginger is handled by small farmers and small, family-owned businesses with limited supply chain. Furthermore, ginger, which is often grown on degraded, poor quality land, contributes towards reducing soil erosion in the mid-hills. Fresh ginger rhizomes are the main product traded. Most Nepalese ginger is exported "dirty" for subsequent washing, grading and packaging in India. Indian traders buy most of the ginger produced and collected in Eastern districts of Nepal, which is taken to Naxalbari, West Bengal, India for washing. Nepalese farmers are price-takers and unable to verify feedback from Indian brokers on price, levels of post-harvest rotting and other quality issues. For high quality ginger export it should be allowed to phytosanitary certification and be free from weeds, seeds and soil.

5.4 Supply Chain Regulation

Nepali agricultural sector has been suffering from poor infrastructure such as lack of proper washing, grading, shorting, processing and storage facilities. Therefore as a seasonal crop Nepalese exporter could only supply ginger during the production season which occur only 3 months in a year. Therefore the international exporter and trader are always looking for regular supply to deliver their customer to maintain the supply chain. However, due to lack of proper processing and storage facilities Nepali ginger traders are unable to supply in a regular basis to the international buyers. Therefore international traders are not interested to purchase Nepali ginger due to poor supply capacity. Chinese exporter are said to be more competent and capable to supply high quality ginger are recognized as a leading international exporter maintained regular supply chain in very competitive prices.

In this regard, if government could facilitate through active initiation to establish big warehouses in the targeted export destination the export potential of Nepali ginger would be strengthened. If ginger could warehouse supply chain could be maintained on demand. Therefore, the value and volume of Nepali ginger export could be increase if government and exporter strengthen collaboration to establish mega warehouses inside and outside the country for the mass storage which would help to raise demand and competitive price in the international market of Gulf and Europe.

5.5 Marketing Access

As of now, Nepali exporters have traditional business relation with Indian exporter. Mutual trusts have been established due to working and friendly relationship with each other. Exporters from Nepal feel comfortable with Indian exporter to communicate in Hindi language which is familiar in Nepal. Export could be done in mutual understanding in credit and Indian exporter send money when they collect money from the market. According to the Nepali exporter, Indian traders do not much focus on quality of the ginger rather they buy fresh and sell in the vegetable market quickly.

Therefore, Nepali exporters do not want to bear extra burden to expand their traditional relation with Indian Exporter. Lack of technical capacity to community, lack of wider international network and linkage, Nepali exporter could not expand their business relation with the international exporter. Though, they have frequently tried to establish relation with the buyers from Japan, Italy, Pakistan, Bangladesh and other middle east countries, the business volume was so small and business relation did not last long.

Demand of Gulf and Europe is processed and high quality ginger with zero sanitary issues. They accept ginger powder, dried ginger and ginger oil to consume in the spice market which should be tested and certified. Lack of proper processing, packaging facilities, Nepal is yet to discover international market including Gulf and Europe to export the ginger product in good prices.

5.6 Custom Regulations

Nepali exporters said that the custom agent have internal setting with Indian Custom Officials. Though Nepali exporter would like to proceed for custom clearance for export consignment they have to encounter so many obstacles from Indian custom agents and offices. Therefore, Nepali exporters are compelled to pay big amount of charge to the custom agent in Nepal and India. If there is no setting with Indian Custom Officials, Nepali trucks would hold for so many days in the border in the name of custom clearance and plant quarantine issues. Due to the reason Nepali exporters have to pay for delay charge, lorry charge and fresh ginger might lose some weight with high chances of product damage during the holding period.

Though Nepali traders wish, they are unable to proceed for documentation for custom clearance without custom agent due to difficult procedure. Therefore exporters are bound for extra payment to the custom agent for custom clearance. Large amount of unofficial payment should be to avoid so many hurdles for the custom clearance procedure in Nepal and India.

5.7 Plant Quarantine

Food safety requirements of India require ginger imports to undergo pesticide residue tests at border points. Ginger samples are sent to Calcutta from Nepal for analysis, during which time consignments wait at the border. Results are normally available in approximately 10-15 days. India does not permit Nepalese vehicles into the country so all movement of ginger from the farm gate in Nepal is done by Indian transporters. If long duration would take for plant quarantine, there is high chance of product damage, quality degradation resulting high transportation cost and ginger become incompetent in the Indian market as well.

5.8 Export via Bangladesh

Bangladesh, Mangla Port could be alternative and most economic gateway for Nepali ginger to export in Gulf and Europe. Bangladesh border is 26 k.m far from Nepal border Mechinagar, Jhapa and Nepali trucks have to cross around 600 k.m to reach Mangla port to export Nepali ginger in the international Market. Despite of the good potential to use most appropriate gateway to export Nepali ginger, government lobby to reduce tariff of the Bangladesh which is 15% more than the

India is yet to be in place. Recently there are so many discussions ongoing, but concrete action could not be taken from the Bangladesh government to reduce the tariff in the Ginger of Nepal. Though market is small compared with Nepali ginger production volume, vegetable market of the Bangladesh and growing demand would be the alternative market for Nepali ginger to export. Government should have mutual agreement with Government of Bangladesh for trade facilitation, export promotion and easy visa processing.

5.9 Timely Delivery

Due to unorganized supply and transportation chain Nepali ginger has to cross long journey to reach up to end consumers. The export process is so lengthy to cross the long journey from farm house to local traders to national level exporters from road transportation and shipment and up to end consumers. Though, Nepali exporters make good synergy to collect ginger and ready to supply with-in short span of time various custom, warehousing and shipping time and procedure takes more than 25 days to reach end destination. Therefore Nepali exporter could not supply the product on time when international importer demand.

5.10 Ginger Export Procedure in the UAE and Gulf

Trade practice of UAE and Gulf is quite different than Nepal. Almost all Indian traders supply ginger product to UAE and Gulf with their mutual understanding. Traders in UAE are requesting Nepali exporters to deliver ginger first then receive cash in hand. They do not want to bear extra burden of opening L/C in the bank and other banking procedures rather they prefer on cash in hand basis. However, Nepali law did not allow trade in the cash basis. Therefore, though they are interested to import Nepali ginger, Nepali traders are not being able to deliver without opening of L/C and banking procedure. Therefore the professional business relation could not be started yet.

CHAPTER 5: CONCLUSION AND RECOMMENDATION

5.1 Conclusion

Nepali ginger faces numerous problems while exporting to the international ginger market including India. Lack of quality consistency, lack of commercial approach in farming, lack of grading, sorting, labeling, branding, marketing, improper transportation and supply chain, unofficial payment during transportation and custom clearance, difficulties in meeting sanitary and phytosanitary standards, and transit issues are the major constraints to export Nepali ginger in the third country including UAE and Gulf countries.

A) Production

Nepal holds fourth largest ginger producing country in the world after India, China and Nigeria with the approximate production capacity is around 2,80,000 MT annually. Following are some conclusions drawn from the research findings;

- Ginger have been producing from small farmers in their fragmented farmland without much technical and innovative knowledge on farming in the eastern districts of Nepal mostly and western districts in hilly region to some extent. However, large scale commercial farming and involvement of big farmers are yet to be promoted. Therefore, due to lack of large scale commercial farming, the cost of production is high and productivity is low compared with other ginger farming countries such as USA and China.
- Large numbers of farmers have been following traditional pattern of the farming, in their small farm land with the use of own pair bullock and available seed in the own farm land mostly involving household family member from seed plantation to harvesting. Therefore ginger farming is limiting within limited capacity of the small scale farmers without proper farming and harvesting and handling knowledge.
- To minimize cost of production, almost farmers did not seem to care about the quality of production and hence planting seed breaking into small pieces and right after germination of the seed they have been extracting (*budhi jhikne*) to sell into the market immediately to return the money invested for seed plantation. Due to the reason the germinated plant could not breed well and produce high quality ginger due to infection of various fungus and diseases.
- Lack of awareness of the use of fertilizers, pesticides, availability of the high fertility seeds in the market farmers are not being able to harvest good product minimizing cost of production and increase productivity.
- Due to fluctuating and uncertainty of the market demand and prices, the numbers of ginger farmers have been gradually decreasing and diverting towards other profession or change the crop production pattern.
- Government stakeholder (DAO) including other relevant government agencies did not much seem to have supportive and carefree to provide necessary support to grow and expand the ginger production.

B) Processing

Ginger of Nepal is mainly traded in fresh forms and exported to the India directly and very nominal amount traded in dried forms (dry ginger/*sutho*). Dry ginger is mostly processed by farmers themselves by using traditional methods and exported to India and other Gulf, Europe and American countries. Ginger candy, pickles, squash and other processed products are processed by local cooperatives in very little quantity. Though there is good scope of value addition in Nepal, value addition (especially processing) is not in a commercial practice. Following are some conclusions drawn from the research findings;

- Some small efforts from cooperatives and individual level for product processing such as ginger powder (*sutho*), ginger spice and ginger candy however the volume has less commercial value to export in the international market.
- Though there is huge demand and high export potential of dried ginger (ginger powder and pest), except few formal and informal discussion from the government and private sectors, no such initiative have been taking place in the bigger scale for product processing and diversification for export in the third countries.
- Lack of product processing capacity and facilities in Nepal, entire ginger has to export in the neighboring country in the fresh or raw form in low price of the product as Indian market Government and private sector did not seem to have serious to promote ginger product processing through establishment of mega scale product processing factories.
- Fresh ginger have been washed in the established washing plants in Nepal, however there no grading, shorting, packaging, labeling, branding and internationally accredited quality testing facilities in Nepal.

C) Marketing

Globally ginger market have been growing by eight percent annually between the years 2015-2019, however Nepali ginger export could not grow significantly due to heavy dependency with Indian spice market. Nepali ginger is rich in oil and oleoresin content and high potential in value addition, however it is still lacking in adequate exploration into international potential ginger market through business linkup, trade facilitation, bilateral trade agreement, product processing, branding, labeling and quality assurance. Following are some conclusions drawn from the research findings;

- Nepali exporters could not explore international ginger market except exporting nominal amount of processed ginger in European market. It is due to lack of reliable business linkup and lack of processing capacity to meet the international quality standard as well as due to long and difficult export procedure.
- Importers in the International market is requires quality of the product, mutual trust, regular and reliable supply chain, credible brand and competitive prices of the product. However, Nepali ginger exporters could not identify the sustainable international ginger market through marketing, business link-up, branding and labeling of the product according to the international standard.

- Nepali exporters are participating frequently in the international trade fairs, trying to explore business link-up, partnership with the European, Japanese, Korean, Gulf and Bangladeshi traders, however major success could not be achieved due to lack of processing capacity, poor ginger quality, plant quarantine, custom regulatory issues, various unseen custom and transportation issues, lack of warehousing capacity for supply chain regulation.

D) Transportation and Export

Though, high export volume (more than 99%) exported to India, in the recent years domestic consumption trend has also been increasing annually. The fresh and wet ginger goes to the Indian vegetable market (*subjee mandi*) directly in the lorry truck packaging with the 40 k.g small jute sacks. Beyond the neighboring Indian border, Nepali traders could not export subsequent volume. In the recent years, UAE and Gulf countries ginger and spice market have tremendous growth annually however Nepalese traders could not establish export linkage and supply chain management in these potential markets. Several attempts have been made from private sector, however due to various tariffs, unofficial custom clearance hurdles, complicated shipping procedure, improper and irregular transportation and ginger supply chain they could not reach out to the Gulf destinations. Following are some conclusions drawn from the research findings;

- It has huge potential exporting in India as well as gulf, Europe, Japan and Republic of Korea, if government and private sector would work together collaborating with the farmers considering the quality upgradation, seed development, quality assurance, cultivation area expansion and motivation to the farmers for cultivation.
- Despite huge export potential Nepali ginger have been heavily relied up on Indian vegetable market, therefore Nepali farmers and traders could not be benefitted from exporting in the international market with good prices.
- Government and private sector did not seem to collaborate to take active initiatives to explore international growing market of ginger including UAE and Gulf.
- Except few efforts from the private and government sector, no single efforts and initiatives have made for product diversification and product processing an essential requirement for export in the international market including UAE and Gulf.
- As shown interest from International buyers, Nepali suppliers could not supply goods on time due to huge lack of proper supply chain management, warehousing, proper transportation mechanism which is the major constraints of the Nepali exporter.

5.2 Recommendation

Government of Nepal and private sector need to work together to explore alternative high valued ginger market beyond the neighboring countries to achieve better output in the ginger sector. Ginger would be one of the sustainable high demanded agricultural crops to reduce the international trade deficit as well as income generation of the poor farmer and ultimately it would contribute in poverty alleviation. Multipronged issues such as quality of production, increase productivity, reduce the production cost, high scale commercial farming, product processing, diversification, value addition, shorting, grading, packaging, labeling, branding, warehousing,

transport facilitation, custom facilitation, marketing and supply chain management should be addressed to uplift the ginger sector for competitive capacity to export in the international market including UAE and Gulf countries. Some recommendations are drawn from the research findings are as following;

A) Production

- Government should concentrate entirely in collaborating with private companies, exporters, traders, associations and farmers to breed high quality and high fertility seed production and distribution to the farmers so that the quality of the ginger would enhance and productivity would increase significantly. Therefore, Nepali ginger's competitive capacity will be strengthened and farmers will be benefitted from good prices of the product. Due to reason the high potentiality for export, the sector will be alive and market would be expanded up to the international major export destinations.
- Government and private sector should join hands together to farm ginger in a high commercial volume incorporating huge cultivation areas instead of the small fragmented land with the involvement of the small farmers to be benefitted in the larger scale so that it would be easier to maintain quality, reduce the cost of production, increase productivity and competitive capacity to compete in the international market with China, India, Nigeria and Thailand.
- Government and Private Sector Associations should orient farmers on Good Agriculture Practice (GAP) to control root diseases, use of pesticides, chemical fertilizer, and Post-Harvest Handling, Seed management, use of advance technology to create awareness among the small farmers on ginger quality. Due to the reason the ginger quality will be gradually improved and competitive quality of the Nepali ginger will be strengthened in the future.
- Government should set a minimum floor price or some kind of market assurance of the product ensuring sustainable market linking with the exporters and private sectors sell their product and should bring effective and proactive subsidized schemes and technology support to the farmers to motivate large number of farmers to involve in the ginger farming.
- Government stakeholders (municipal, district, provincial and federal level) should be very effective and active to support farmers to provide overall farming support including seed support, awareness raising, good agriculture practice, post-harvest handling, buy back guarantee, price determination to address multifaceted problem of the farmer.

B) Processing

- Government should design a project strategy to support private sector to establish high scale automated ginger processing factory targeting to the most trading ginger hub to process, drying and grinding. The dried ginger (*sutho*) and power has high export potential in the international market with good prices. Due to this result the dependency with Indian market will be minimized, bargaining capacity of the Nepali Traders will be high and profit margin will be high.

- The Gulf and European market are the growing destination which have high demand of diversified and value added product, therefore government and private sector has to work extensively for product diversification, grading, sorting, packaging, labeling, branding, storage and internationally accredited quality testing facilities in Nepal to be prepared for export in the international market.
- Except some small scale cooperatives and private companies, traders are not found to be involved in product processing and diversification instead they preferred to buy fresh ginger from farm gate and export directly as a middleman. Traders are not willing to bear extra burden for processing, exploration of market in the Gulf and Europe due to various obstacles and risk of investment. Government should guarantee of the investment, and promote them through trade facilitation, solve transit tariff and transit export procedure from the government level and market linkup to unlock the export potential in the Gulf destination.

C)Marketing

- Government, traders and associations has to make serious efforts for branding, labeling, packaging for brand promotion to gain trust internationally. Entire value added product could be sold in one brand where stakeholders should be careful and monitor closely to protect brand identity to avoid the potential misuses.
- Government has to create a conducive environment to the Nepali traders through business promotional activities, facilitation for trade fair participation, business link-up, bilateral agreement, trade treaties and organize business meet to access potential international ginger markets.
- Nepali traders have to expand their trade relation beyond the traditional business partners of India. They should develop their overall capacity for the international trade including international import and export presence, storage capacity, processing capacity, quality control, supply chain regulation and expansion of business linkup and networking.
- Traders should have long-term business plan and vision including ginger farming, processing in a wider scale collaborating with the government instead of just being a middleman to supply ginger in India collecting from the small farmers.

D)Transportation and Export

- Exporters are suffering with extra-legal payment to the agent at custom clearance office for documentation procedure of Nepal and Indian border. To reduce the burden of exporter, government should create hassle free custom clearance environment to the exporter in Nepal, India and Bangladesh custom offices to reduce the unofficial transportation cost.
- To reduce the transportation cost, government has to build a proper transportation channel (proper supply chain) and network directly from farm house to the exporter warehouse and then export to the end destinations. Involvement of the various layer of middleman and individual level transportation have been added extra cost of export.
- Transportation to the Gulf and Europe through Indian sea ports is cheaper than Mangla Port of Bangladesh. It is due to bilateral agreement between Nepal and India to allow

Nepali ginger without any custom duties in India, however if government could facilitate with Bangladesh government for duty free entry in Bangladesh, the cost of transportation via Bangladesh would be far cheaper than India.

- Nepali government should facilitate with the government of Bangladesh to create a trade environment to export Nepali ginger via Bangladesh for the easy availability of referral container, short and quick distance which will reduce the transportation cost, transportation duration and easy for documentation procedure.
- Nepal has to establish a big storage house in Bangladesh or UAE to maintain quick supply chain for immediate delivery of the product on the demand basis which will bridge the gap of irregular and long procedural supply chain and develop a trust among the traders.

ANNEXES

Annex-I: Reference

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Annex-II: Check List

- Current status of ginger export (value and volume) of Nepal to the international market
- Major obstacle to export ginger from Nepal to the India and Gulf countries and beyond
- Main issues, challenges and opportunities related with ginger export promotion in the major destination of Gulf countries through the use of available sea ports of India and China
- Current export practice of ginger in the Gulf countries from Nepal
- Most appropriate and easy sea port to export ginger from Nepal
- How ginger export could be increased to the gulf countries by reducing cost and increasing competitiveness in the international market through using available sea ports
- Cost of production, collection, processing, packaging, labeling, customs and transportation up to major destination of gulf countries.
- How to reduce cost of production, collection, processing, packaging, labeling and transportation of the ginger to supply in the major export destinations of the gulf countries.
- How could reduce transportation time and maintain quality standard of the ginger product while supplying up the end destination market
- What are the major options, ideas and alternatives to be adopted for facilitation ginger export process
- What would be the main roles and responsibilities of the government, TEPC, exporters, traders and farmers for quality production, increase productivity and cost effective transportation methods for ginger products.

ANNEX-III: Organization And Individual Visited

S.N	Name	Organization	Position	Address	Phone
1	Sarad Bikram Rana	TEPC	Executive Director	Pulchok, Lallitpur, Nepal	
2	Suyash Khanal	TEPC	Deputy Executive Director	Pulchok, Lallitpur, Nepal	
3	Rajendra Singh	TEPC	Deputy Director	Pulchok, Lallitpur, Nepal	
4	Yogendra Pd. Pandey	MoICS	Under secretary,	Singhadurbar, Kathmandu	9841802993
5	Rajan Prasad Sharma	Nepal Freight Forward Association	Immediate Chairperson	Dillibazar, Kathmandu, Nepal	
6	Dharmanda Bhandari	FLCE	Wholesale Trader	Jorpati, Kathmandu	9851054429
7	Pappu Bindal	Private Company	Exporter	Birtamod, Jhapa	9852672976
8	Khagendra Kunwar	Private Company	Collector/trader	Birtamod 5, Jhapa	9852677804
9	Barat Raj Adhikari	Mechi Custom Office	Communication Officer	Kakadbhitta	9852662234
10	Roshan Agrawal	Sunaina Matching Trade Centre	Custom clearing & Forwarding Agent	Mechinagar Municipality Kakadbhitta	9852672193 9814020393 +917602600730
11	Rajendra Ghimire		Founder Chairperson	Birtamod Jhapa	9862671150
12	Mr. Sudip	Radhe Radhe	Exporter	Birtamod Jhapa	98001440081
13	Hemanta Raj Bohara	NGPTA	Secretary	Birtamod, Jhapa	
14	Narendra Kumar Khadka	NGPTA	Former Chairperson	Birtamod, Jhapa	9851069351
15	Tom Rajbansi	Private Company	Exporter	Birtamod, Jhapa	9804953910
16	Dr. Yogendra Man Shrestha	University	Asst. Professor	Ilam	9842635893
17	Manorath Adhikari	Trader	Trader	Fikkal Ilam	9851673672
18	Narad Dhital	Trader	Trader	Fikkal Ilama	98426232215
19	Santosh Rai	Farmer	Farmer	Ilam	9815917121
20	Matrika Ghimire	Trader	Trader	Birtamod, Jhapa	
21	Padam Paudel	Processor/Trader	Processor/Trader	Dhulabari, Jhapa	
22	Bishnu Pandey	Farmer	Farmer	Maichock, Rural Municipality 01, Ilam	



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