

**ECONOMIC IMPORTANCE OF GINGER PRODUCTION
IN RURAL AREA:**

A Case Study of Ilam Municipality-2, Sumbek of Ilam district, Nepal

A Thesis

**Submitted to the Tribhuvan University, Faculty of Humanities and Social
Sciences, Mahendra Ratna Multiple Campus, Ilam, Department of Rural
Development in partial fulfillment of the requirements for the
Degree of the Master of Arts (M.A.) in
Rural Development**

BY

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February, 2021

DECLARATION

I hereby heartily declare that this thesis entitled **Economic Importance of Ginger Production in Rural Area: A Case Study of Ilam Municipality-2, Sumbek of Ilam district, Nepal** submitted to the department of Rural Development Mahendra Ratna Multiple Campus Ilam, is my original and empirical work. I truly want to state that I have borrowed all idea and information from different sources for the preparation of them. I made due acknowledgement to them it is also declared that the results of thesis have not been presented and submitted anywhere else for the award of any degree and for any other proposes. I want to assure that any part of the content of this thesis has not been published in any form before.

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RECOMMENDATION LETTER

This thesis entitled **Economic Importance of Ginger Production in Rural Area: A Case Study of Ilam Municipality-2, Sumbek of Ilam district, Nepal** has been prepared by **Asmita Kadariya** under my guidance supervision. I hereby forward this thesis to the evaluation committee for final evaluation and approval.

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Approval Letter

This thesis entitled **Economic Importance of Ginger Production in Rural Area** by **Asmita Kadariya** in partial fulfillment of the requirements for Master's Degree (M.A.) in Rural Development has been approved by the evaluation committee.

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ABSTRACT

Ginger is cultivated mainly for export and major production areas are Ilam, Panchthar, Morang, Dhankuta districts in eastern part of Nepal. Ginger is more useful cash crops to uplift the economics of condition of rural people especially for the farmer and ginger is useful for local production and consumption for species, as a more paste and different kinds of food. Especially ginger is production in Nepal for exporting in the other country to gain money via market. Mainly ginger is exported in India from Nepal.

Thus, this study was conducted to know the economic importance of ginger production in Ilam municipality ward no. 2 Sumbek. The study aimed to find the find the production status of ginger in study area and economic condition of ginger producer who is produced ginger for exporting in rural area. There are 180 households are engaged in ginger farming which is to be considered as universe of the study. 20% of the total households (36 households) were selected by using random sampling method for study. Because of the uniformity of the sampling, I choose random sampling method. The questionnaires were contained 2 objectives based, one is to know the status of ginger production in ginger producer, second is to know the economic advantageous and gained in ginger producer in study area.

After collection the data and the researcher has concluded, there is positive vibes of production of ginger; mostly farmers are engaged in ginger farming. Ginger producer has produced between 150 kg. to 2500 kg. ginger and cultivated more than 1 ropani in field. This production quantity is positive quantity for ginger production and study concluded that there is more attraction in ginger production.

The market for ginger is near Biplate bazaar, the increasing price in Rs. 5 with last year per kg. price, increasing quantity of ginger, creating employment, changing lifestyle of ginger producer after starting ginger farming and satisfaction of ginger production is the main and positive conclusion of this study.

Thus, the study recommends that the related public institution, local government offices, representative groups should give priority in ginger production, should give positive encourage, subsidies in manure, seed (rhizome), ideas of remedies in different disease, facilities, and should manage the market for ginger production.

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Abbreviations/Acronyms

ANSAB	Asia Network for Sustainable Agriculture and Bio resources
APA	American Psychological Association
CBS	Central Bureau of Statistics
EIF	Enhanced Integrated Framework
FAO	Food and Agriculture Organization
FGD	Focus group discussion
FTEE	full-time employment equivalent
FY	Fiscal Year
GAPs	Good agricultural practices
GDP	Grand Domestic Product
GIZ	Gesellschaft für Internationale Zusammenarbeit
GRP	Ginger Research Program
IOSR	The International Organization of Scientific Research
ITC	International Trade Center
MT	Metric ton
NGO	Non-government office
NGPTA	Nepal Ginger Producers Trade Association
NR	Nepali Rupees
NRB	Nepal Rastra Bank
NTIS	Nepal Trade Integration Strategy
NTNC	National Trust for Nature Conservation
RAP	Rural Access Programme
SAARC	South Asian Association for Regional Cooperation
STDF	Standards Trade Development Facility
US	United States
WTO	World Trade Organization

CHAPTER I

INTRODUCTION

1.1 Background of the Study

Nepal is a small country that is remained as landlocked between India and China. Agriculture sector remains as the backbone of Nepalese economy. Agriculture in Nepal is central to the economy of this country. The central medium of economy of Nepal is agriculture. 60.4% people are engaged in agriculture. (Economic Survey, 2019/020). Most of the populations are depended on agriculture, Which is the backbone of the country, supplies people with the daily needs.

Agriculture is known as permanent and traditional profession of Nepal people. Agriculture with livestock is the major means of the livelihood for the majority of Nepalese people in rural area. However, agriculture in Nepal represents subsistence in nature; most people have been engaged in agriculture for their livelihood mainly. The agriculture sector is still lacking behind modern technologies and tools. 83 percent of the population depends on agriculture and the same population resides in a rural area (CBS, 2011). In this way, rural and agriculture is interrelated to the large extent. The agricultural sector contributes 28 percent to national GDP as per Nepal Rastra Bank (NRB, 2018). Therefore, the development of agriculture and livestock is key for the national economy and, agriculture is the mainstay of the country's rural and national economy. Agriculture sector represents the main source of food, employment and income for the majority and it is still a dominant sector in Nepal. However, the growth rate of the agricultural sector is found 2.8 percent only, which indicates a low rate. The land ratio in relation with agriculture is supposed to be an important factor for agriculture development. Comparatively, Nepal has the lowest land to labor ratio (0.29), compared to Pakistan (0.81) and Sri Lanka (0.51).

There are three major climatic regions in Nepal, with each providing unique crops. The best crop-yielding area is terai, which borders India. This area has a subtropical climate that supports the production of rice, wheat, barley, oil seeds, jute, tobacco, indigo and even opium. This area is a large crop-producing area but is compromised heavily by the changing climate, which is causing crop yield to be erratic.

The hill regions are crucial to agriculture in Nepal with the farmers being able to produce different crops during different seasons. These farmers of the hill regions can

produce rice and maize in the summer wheat, barley, mustard, vegetables and cash crops i.e. ginger, Amliso (broom), cardamom in the winter. This region is also affected by increasing climate change. Farmer produces the cash crops, and sell those production after selling the cash crop product, farmer gain the money. Cash crops help in education, health, sanitation direct and indirect way because cash crop is medium of earning money for daily life. Cash crop promotes the people daily life active.

The mountainous regions of Nepal have always been a harsh environment for the production of agriculture in Nepal. This area is limited to the crops of ginger, potatoes, barley and buckwheat. The harsh conditions cause the farmers to rely on livestock as a key source of income and agriculture in Nepal. Livestock is the main producer of yogurt, cheese, ghee and eggs. These farmers are known to raise Yaks that provide meat, milk and wool as a source of cash.

Now, cash crop is an important agricultural production in Nepal. Many farmers attracts in cash crop production. Cash crop is reliable for money and productive in agriculture profession. The major cash crops are oilseed, potato, tobacco, sugarcane, jute, cotton, and rubber; and the major cereal crops are paddy, maize, millet, wheat, barley, and buckwheat. Cardamom, ginger, garlic, turmeric, silk cocoons, honey and mushroom are also cultivated in copious amounts.

Ginger is an important spice cash crop. It plays a vital role in ayurvedic medicines. 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 C 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. Cash crop is generally cultivated to sell for generating profit. It may be the excess of what a farmer produces and does not need to keep for subsistence. Cash crops are raw materials for the industrial use. For the high yield of cash crops, farmers should carefully plan and skillfully manage the crop production.

Among the many cash crops ginger is the most important cash crop in Nepal. Cash crop is generally cultivated to sell for generating profit. It may be the excess of what a farmer produces and does not need to keep for subsistence. Cash crops are raw materials for the industrial use. For the high yield of cash crops, farmers should carefully plan and skillfully manage the crop production.

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 2018/19.

People exports the ginger and earn the money, ginger is not only earning money but also creating employment and making domestic consuming things i.e. powder, snack cookies, dry sauces, chili sauces. Therefore, the production trends of ginger are regularly increasing day by day. The economic profitability attracts the people production and mass production of ginger make the people's earning capacity high. Ginger provides a unique opportunity because it offers; high poverty reduction capacity, high scalability (> 32,000 farmers), high employment opportunity for women in processing, grading and packaging, increased export earnings and resultant foreign exchange additions, high market demand for processed fibreless ginger in domestic and export markets.

1.2 Statement of the Problem

Ginger farming is one of the main sources of cash income for the small farmers of the mid-hills in Nepal. The net income of farmers involved in ginger cultivation is significantly higher than that of competing crops (paddy, maize, wheat and fresh vegetables). The value of ginger export has been increasing over the years and doubled in the last decade. Nepal is a significant producer of ginger ranks within the

top 15 world exporters. Ginger in Nepal is traded in three forms-fresh, dry and processed.

However, despite opportunities in the sector, there are pressing constraints that needs to be addressed to contribute to the chronic poverty that persists in the region. Farmers and traders in East Nepal are prone to extremely lower margins due to presence of soft decay/stem decay disease (loss up to 30% in the field), lack of domestic facilities for industrial extraction and distillation, traditional drying and processing techniques (loss of oil content by 20%) and dominance of a single trade outlet in Naxalbari, India.

Despite proven potential for increased income through semi and fully processed ginger that has yielded good results in the west, 75% of ginger from Nepal is traded as fresh. In the Eastern region, processing of any form (even simple washing and packaging) is yet to be institutionalized. This has limited the bargaining power of farmers and traders of Nepal in comparison to their counterparts across the border. Under prevailing production and marketing conditions, the poverty reduction impact is high as most of the farmers producing ginger in the East are small farmers, for whom it is their main source of cash income, while the rest of the supply chain creates income for poor agricultural laborers.

The International Trade Centre report highlights the fact that many educated people are entering the ginger trade in Nepal because for potential higher returns. The report also highlights that if appropriate interventions are in place, ginger is expected to bring back people to rural areas (foster reverse migratory trends) to take advantage of the vacuum created in processing technologies. Mercies Corps will ensure appropriate ‘social inclusion measures’ to balance out disparities and dominance of higher castes. Accordingly, poor ethnic minorities and other disadvantaged groups will be targeted for greater participation along the ginger market chain.

The project will create direct economic benefit to marginalized farm families, who will have additional income for investments in children’s education, increased cash crop farming, and diversified economic activity.

The study is about the contribution of ginger in farmer especially their economic importance of their income in study area. Therefore, the study emphasize the producer

of ginger in study area. This study was tried to seek plausible answers to the following questions.

- a) What is production quantity of ginger in study area?
- b) What is the change of income source after cultivating ginger?
- c) What is the importance of ginger production in study area as economic prospects?
- d) How to increase the production of ginger farming in study area?

1.3 Objectives of the Study

The general objective of this study is to clarify economic importance of ginger production in rural area:

- i) to find out the production status of ginger in study area.
- ii) to find out the economic importance of ginger in study area.

1.4 Importance of the Study

Ginger farming is the main source of income for the peasants of mid-hills in Nepal who derive their living from fragmented plots of land. It is being grown in commercial scale due its climacteric suitability across the whole east-west length along the Siwalik and mid-hill ranges extending up to the altitudes of 1500m. Ginger plays an important role in agrarian and industrial development of the country like rural area. As defined by the government of Nepal, ginger is one of the 12 priority export products of Nepal. Nepal is 4th in worldwide ginger production after India, China and Nigeria and contributes about 9.19% to the world's production. Nepal lies in 5th position in terms of total export volume of ginger (Acta Scientific Agriculture, 2019)

The study also provides relevance on how to enter these markets with the best opportunities for the selected ginger products from Nepal, how to find the ginger market in rural area and empower the production of ginger in study area with proper good production. It is expected that the output of the proposed study help the farmer to remove the weaknesses and make effective production and marketing plans of ginger. This will also help the ginger-producing farmer to reap a maximum profit and rise in standard of living. This study will also be useful for policy makers and planner in formulating policies and guidelines regarding production and marketing of ginger.

1.5 Limitation of Study

The study is prepared for an academic paper; hence in this time the study area of ginger production and economic importance of ginger farming is wide and the mass production of ginger is increased day by day and the production of ginger is increasing as prominent. The economic scope of ginger production is in broad way. In the other side, volume of earning capacity is being increased that is the biggest limitations of the research. Researcher was given limited time period. Researcher has to be carried out all required data within a given period; Furthermore, single case taken in the research might be a limitation for multiple generalizations. Some more limitations of this study are stated below.

1. The study about ginger production is merely focused in rural area.
2. The study is based on the exploratory descriptive research design only; due to nature of research's objectives.
3. The result of the study is carried out only focusing on the response of the respondents.
4. The wide range of ginger production and no formal record keeping of income from ginger farming.

1.6 Organization of the Study

The thesis is organized in the following way:

Chapter one, provides the introduction of the study with a brief description of ginger production of Nepal and study area. The problems of the research, research questions, the research objectives, limitations of the research are focused. At the end of this chapter, the structure of the thesis is provided.

Chapter two presents the literature review along with some theoretical aspects related to ginger production and economic importance of ginger farming. Different research paper works related to the matters like ginger production, scope of ginger farming, and economic scope of ginger production. At the conclusion part of the chapter, it has included the research gap.

Chapter three comprises the methodology of the research. It describes about the research design, sources of data, tools and techniques of collecting data, sampling and its size, and data processing and analyzing.

Chapter four is for data presentation and analysis of the collected data. It deals with tabling, graphing and describing collected data. Similarly, the last chapter conclude the whole research along with some recommendations.

CHAPTER II

LITERATURE REVIEW

2.1 Introduction

This chapter deals the existing relevant literature and theories about ginger farming and production in study area. The aim of this chapter is to build up an analytical framework for the study by developing a conceptual and theoretical understanding of ginger production.

2.2 Production of ginger in Nepal

A brief scenario very few formal researches have been carried out on production aspects of species crops however, the relevant research output is cited under three major areas namely production trends of ginger, ginger in mid hill of Nepal and Nepal in WTO.

2.4.1 Ginger in mid hills of Nepal

Ginger (*Zingiber officinale* Rosc), one of the most important spices as well as cash crops particularly in the mid-hill of Nepal, is grown as mono-crop or mixed crop with maize planted in April and harvested in December. Ginger contributes the hill economy in the number of ways. Ginger cultivation can improve the socio-economic situation of rural people by providing high economic return to the farmers. Therefore the cultivation of ginger in the hills is highly remunerative to small as well as large farmers. In addition to the high economic return, it also reduces the environmental degradation, provide food security from income generation provides employment opportunities to women and helps in bringing diversification and commercialization in hill agriculture. The principal ginger-growing district in the Province 1 includes Ilam, Panchthar, Dhankuta Morang Sunari. The highest shares in areas and production is occupied by Ilam district as it occupies about 2,688.7 area ha. area. The area coverage and the amount of production under ginger are increasing in recent years. Despite the fact the ginger production program should be linked with well-organized marketing for the promotion of both production and marketing (CBS, 2011/12)

2.4.2 Ginger production of Nepal in World Trade Organization (WTO)

Alan WM. Wolfe has prepared a paper about indicating the role of WTO in facilitating agri-food chains by denoting the title of the global value chain development Report 2019, where Alan Wolf has submitted an annex with a title Partnerships promote ginger exports and rural incomes in Nepal in the case of ginger. In this annex title has declared as follow:

Beneficiary: Ginger farmers and other value chain stakeholders in Nepal

Led by: FAO with the Ministry of Agricultural Development, Ministry of Commerce and Supply, the Federation of Nepalese Chambers of Commerce and Industry and the NGPTA

Time- frame: June 2012 – September 2015

STDF funding: US\$ 462,144 (total project value US\$ 1,212,629)

The Safe Trade Gap

Ginger is a treasured cash crop for small-scale farmers, many of them women, in remote mountain areas of Nepal with few income-generating opportunities. However, farmers struggled with low yields and pests and diseases, and post-harvest losses as high as 90%. At the same time, demonstrating the safety and quality of production was a challenge. Most fresh ginger was sold unwashed to India at low prices, via informal channels. Farmers and traders had no way to add value to their products. As a result, they were unable to access higher-value markets in Bangladesh, Europe, Japan and the Middle East.

Partnership Approach

The Public and private sector came together to revitalize and add value in the ginger value chain, and address food safety and phytosanitary challenges, with support from the Standards Trade Development Facility (STDF) and the Enhanced Integrated Framework (EIF). Strong partnerships were built with local authorities, ginger producers and traders. Farmer field schools boosted practical knowledge and skills on good agricultural practices (GAPs) and post-harvest handling. Demonstration plots showed how new methods and techniques could be used to improve productivity and manage pests and diseases. Training of trainers scaled up the knowledge shared. Drama, video and visual aids increased uptake of messages in communities with low

literacy levels. Farmers and cooperatives worked with the Nepal Ginger Producers Trade Association (NGPTA) to add value to ginger and increase productivity.

Results

- i. Post-harvest losses dropped by 30%. The farm gate price for fresh ginger increased, profit margins rose and farmers saw their incomes grow by more than 60%.
- ii. Close to 2,000 farmers – most of them women – were trained on GAPs, post-harvest handling and improved techniques to control pests and diseases.
- iii. Promotion of GAPs lowered pesticide use and reduced residues. A new system for farm inventory management, certification and traceability has raised confidence about food safety.
- iv. A new ginger washing facility supports up to 8,000 ginger-producing households, with the creation of 200 seasonal jobs.
- v. Local cooperatives grew stronger and new farmer groups started up. The NGPTA set up new district chapters.
- vi. Government reached out to trading partners to find solutions to SPS challenges affecting ginger exports. Washed ginger is now being exported to Bangladesh and India.

In 2017, the STDF published a results story on its ginger project: Chandra Kala Rai's ginger cooperative in eastern Nepal was among the close to 2,000 small-holder farmers, most of them women -who benefitted from the FAO-led project. The farmers had struggled with low yields, pests and diseases, and post-harvest losses as high as 90%.

Farmer field schools boosted practical knowledge and skills on Good Agricultural Practices and post-harvest handling. Farmers worked with the Nepal Ginger Producers Traders Association (NGPTA) to add value to ginger and increase productivity. Following the project, post-harvest losses dropped by 30% and farmers saw their incomes grow by over 60%. A new ginger washing facility is supporting up to 8,000 ginger-producing households.

In 2017, the NGPTA mobilized matching funds from Denmark for a paved road to the ginger washing facility and increased washing capacity, expanding the impact of the STDF project. In 2017, farmers involved in the project exported their ginger to

Bangladesh and welcomed a visit by European buyers. (In 2018, they started exporting to Europe)

Sustaining impact

Most farmer field schools continue to operate with their own resources. Demonstration plots have become seed resource centres, with higher-quality planting materials available.

Training materials are being used by government extension services and by programmes run by the NGPTA and NGOs, reaching more farmers.

Public and private sector are working together to operate the ginger washing facility. Income generated goes into a trust fund that will benefit local communities.

Options exist to share training materials nationwide and to use the project to leverage investments to promote agribusiness development.

Thus, the report on WTO is the globalization of ginger farming, production and pricing that helps the positive vibe of economic importance of ginger production in rural area of Nepal. That report has conveyed the presence of ginger in the world and the relationship of ginger and Nepal has made highly.

2.3 Empirical Review

ANSAB (2011) has published a report entitled A Report on Value Chain Analysis of Ginger by describing the importance of ginger. Report has said that ginger plays a significant role in the national income as it is one of the major spices exported. According to ITC data, Nepal exported ginger worth of around NRs. 403 million contributing 0.59% of total export in 2008/9. The data also reveals that there has been annual growth of 34% from 2004 to 2008. In the export potential assessment conducted by NTIS 2010, the overall export potential and socio-economic impact of ginger is categorized as medium. FGD at Ilam and Surkhet reported that the ginger has significant contribution in the household income of farmers. According to FGD Ilam, ginger contributes up to 30% of family income for those who have been cultivating ginger for commercial purpose. Traditionally, ginger farming and drying occurs at the farm level, the sector is very labour intensive. By promoting the export of processed products, as well as the infrastructure necessary for processing, this sector could generate large opportunities for employment. The sector currently

requires around 66,600 people for 2 months per year, which is estimated around 11,000 people as a full-time employment equivalent (FTEE) (ITC, 2007). Employment is also generated for post harvest handling, processing and marketing activities. Usually, the local traders employ 2-3 staffs where as the national level trader employs higher number of staffs. Labour is also used extensively for the weighing, packaging, load/unload and storage purposes. For 1 truck of ginger packaging and loading the estimated labour required are 6 people (FGD, Ilam). At Naxalbari, India, nearly 1000 man days employment generated from a single trader during season. Similarly, there is huge demand of laborers for ginger processing and making various products like Sutho, candy, pickles, squash and powder.

Timsina (2011) has prepared a journal entitled economics of ginger production: A case study of Makawanpur district, Nepal. In this journal the researcher has compared the profit of maize, millet and ginger. Journal has concluded that the same land and labor ginger can contribute more profit (Gross margin Rs. 25584.782 per ropani) than other crops like maize (Gross margin Rs. 651.61 per ropani) and millet (Gross margin Rs. 955.87 per ropani) whereas the insufficient credit facility was received the first priority in the production problems followed by lack of organized market. Nevertheless replacement of maize and millet through ginger sub-sector might be best alternative for increment in household income.

It means replacement of maize and millet through ginger might be best alternative for increment of income in the study area. However still majority of the farmers growing maize and millet as of their tradition and need to aware them about the profitability ginger than cereals.

Oladele A. and L.P. (2013) has showed the journal of Forest and Environment Science entitled Economic Analysis of Growing Ginger (*Zingiber officinale*) Under Teak (*Tectona grandis*) Canopy in Southwest Nigeria with describing about ginger. This journal has described about the ginger as ginger (*Zingiber officinale* Roscoe, Family: Zingiberaceae) is largely consumed as spice and also contained volatile oil used as flavour, aromatic stimulant and carminative in pharmaceutical industry (cited: Tyler et al. 1981). Locally in West Africa it is used chiefly for medicinal and veterinary purposes, for catarrhal conditions, pains of rheumatism, toothache, neuralgia, nausea, motion sickness, migraine, dyspepsia, and to reduce flatulence and colic. Young rhizomes that are harvested early are also used in pickles and

confectionery (cited: Valenzuela 2011). Ginger is capable of generating farmer's income, creating employment opportunities and earning foreign exchange. Sabur et al. (1998) observed that Ginger gave high yields when intercropped and is an ideal shade crop under *Paulownia elongata* plantations in China. This work investigates the economics of growing ginger under canopies of *Tectona grandis*. The study revealed that ginger could be used as non-timber component of a multiple forest management in teak plantations based on improved benefits and reduced production costs. Forest plantations safety and maintenance will reduce substantially in association with improved livelihood of peasant rural populations adjoining forest estates through employment and cash income. Further studies are required on the performance of ginger under different teak canopy closure level and different tree species. Also, private tree growers in plantation forestry can explore the economic potentials of compatible forest undergrowth at canopy closure.

Boeckel L.v.S. (2017), has researched entitled *Ginger and Ginger Products from Nepal*, in GIZ and report by production status of ginger, the researched article has said, in Nepal, there are around 40 entrepreneurs engaged in ginger. They are producer; exporter and/or processors and they are mainly operating in the mid-western and eastern regions. Meeting the increasing demand for ginger and its various derivatives would provide more income for them and for Nepalese farmers and generate more foreign currency for Nepal. However, the necessary basics such as proper ginger cultivation, harvesting product quality, proper ginger processing techniques, post harvesting handling and logistics are lacking to produce ginger and ginger products of the required export quality, complying with international market access requirements. Over the years, there has been a rise in total volume, productivity, as well as areas of cultivation of ginger according to the National Spice Crops Development Program. Being among the largest ginger producers, Nepal's share in world's import value was just 3.8% in 2015, while a large volume of unregistered exports went to India overshadowing the whole Nepalese ginger sector.

The value chain of ginger is based on the traditional free-market exchange where larger actors have long established business relations and dominate the market. It still is very fragmented with ginger coming from many small scattered plots. Therefore, middlemen can earn money to get small quantities of the ginger transported from

small villages to Kathmandu or to trading centres at the Indian border in Naxalbari, Bhairahawa, Mechi, Birgunj, Nepalgunj

GIZ and TPP (2017) has released a report entitled Ginger sector in Nepal with indication the status of ginger production in Nepal. Report has said in 2015, the global ginger production was estimated at 2,479 thousand metric tons (MT) with India being the largest producer of ginger with 790 thousand MT. Over the past nine years the global ginger exports have been growing by approximately seven per cent annually. China is the world's biggest ginger exporter with a market share of 72 per cent.

Nepal is the world's fourth largest ginger producer after India, China and Indonesia with a production of approximately 245 thousand metric tons per year. At the same time, Nepal is the world's fourth largest exporter. After an abrupt fall of the Nepalese ginger exports in the fiscal year 2013/14, the sector has been characterized by moderate growth rates in recent years. In values, Nepalese exports were of approximately US\$ six million in the fiscal year 2015/16. Ginger is one of the 12 priority export products of the Nepal Trade Integration Strategy (NTIS) defined by the Government of Nepal. Until 2020, this national strategy aims to increase the export price for Nepalese ginger via value addition in the country from 217 US\$/MT to 815 US\$/MT. In Nepal, ginger is a crucial crop in terms of employment and area of cultivation. The diversification of export markets remains the biggest challenge for the Nepalese ginger sector.

Trade & export promotion centre, Pulchowk, Lalitpur (2017) has presented statistical presentation by showing the following table no. 2.2 statistics data about exports of ginger from Nepal.

Table 2.1 Export of Ginger in Different Fiscal Year

F.Y.	Quantity (in kg)	Exported amount (in '000 Rs.)
2014/15	2,45,48,657	464921
2015/16	2,83,51,823	643086
2016/17	44,99,956	243388

Source: Trade & export promotion centre, Pulchok, Lalitpur

Above table 2.2 shows the export quantity of ginger and amount of different fiscal year. In 2015/16, there is more quantity of ginger has been exported and income has

increased more than other fiscal 2014/15 and 2016/17.

Ihuoma (2018) has published an article entitled impact of Ginger Production on Poverty Alleviation in Kaduna State, Nigeria in Journal of Economics and Finance by presenting the importance of ginger in revenue generation and reduce poverty. The article has expressed that ginger as the subset of agricultural sector has a significant impact on revenue generation and farmer's income hence reduce poverty. It was recommended that, ginger production should be intensifying as part of the root and tuber programme so as to generate more income. There is need for value addition through the development of ginger value chain. Ginger is a high value cash crop that is grown by farmers in many parts of the world. Nigeria is known to be one of the major producers of ginger in the world. Cultivation of ginger began in Nigeria when it was identified as one of the crops that could generate income and promote internal trade. In recent years interest and demand for ginger has increased dramatically worldwide and the crop has assumed great importance in the global market. Ginger production in Kaduna State is one of the basic economic activities that could serve as a source of employment, revenue generation and poverty alleviation.

Over the years, ginger production in Kaduna State has been in the hands rural farmers most of whom cultivated less than one hectare of land each per year. The desire of the household farmers is for their poverty level to be ameliorated through ginger production. They expect this to manifest in higher income level, better houses, access to improved healthcare facilities and better educational facilities to their children. Literature on the impact of ginger production in Kaduna State is very short. This study therefore attempts to fill the observed gap. It is in this context, therefore that the study intends to examine the contribution of ginger production on poverty alleviation in Kaduna State with specific reference to ginger farmers' access to higher income levels, better houses, improved healthcare facilities and access by their children to better educational facilities.

Investment Board Nepal (2018) has prepared a profile named Agriculture Sector Profile by defining the ginger production of farmer. Profile has defined about ginger, in the hill country of Nepal and particularly in the eastern part of the country, a large number of small farmers are involved in ginger farming. Ginger is one of the agriculture products identified by Nepal Trade Integration Strategy (NTIS) 2010 as having export potential. It is a one of the important high-value spice crops of Nepal.

However, the share of ginger in the total agricultural exports of Nepal is currently only about 3 to 4 %. Nepal enjoys free access to India's market for ginger trade. According to Vegetable Development Directorate, 2009/10, the major ginger producing districts are Ilam, Salyan, Nawalparasi, Palpa, Doti, Morong, Kailali, Surkhet, Tanahu, and Kaski. The increased use of contract farming in ginger has had a significant positive impact on unit profits. Contract ginger farmers can count on a profit of approximately \$0.19 per kilogram. Profits for lentil farmers have also increased by 22.5% for different specifications, also due to contract farming. Sutho (dry ginger) is the major processed product made out of fresh ginger. However, Nepalese farmers continue to make Sutho using labor intensive and tedious traditional techniques. In addition, the lack of automated ginger peelers and mechanical dryers continues to pose major post-harvest and export problems. Investing in and establishing modern processing facilities could result in the mass production of ginger for export to international markets.

Trade & export promotion centre, Pulchowk, Lalitpur (2018) has prepared a profile Province no. 1 about the potentialities of goods and services. In that profile, the production of ginger in Nepal is given in table no. 2.1.

Table 2.2 The Production of Ginger in Nepal

Fiscal year	Production area	Production metric ton
2014/15	23826	242547
2015/16	21869	271863
2016/17	22649	279504
2017/18	19649	244296

Source: Ministry of Agriculture and Livestock Development

Above table 2.1 shows the production of ginger has increased in fiscal year 2015/16, 2016/17 gradually but production has decreased in fiscal year 2017/18.

Ghimire et.al (2019) has published an article entitled factors affecting ginger in Sunsari district, Nepal in Acta Scientific Agriculture by indicating the importance of ginger in their study area. Ginger farming is the main source of income for the peasants of mid-hills in Nepal who derive their living from fragmented plots of land. It is being grown in commercial scale due its climacteric suitability across the whole

east-west length along the Siwalik and mid hill ranges extending up to the altitudes of 1500m. Farmers generally cultivate two landraces of ginger, Nase and Bose. Ginger Research Program (GRP), Salyan has released two varieties of ginger,

Kapurkot Aduwa-1 in 2001 and Kapurkot Aduwa-2 in 2016. Ginger plays an important role in agrarian and industrial development of the country like ours. As defined by the government of Nepal, ginger is one of the 12 priority export products of Nepal Trade Integration Strategy. Nepal is 4th in worldwide ginger production after India, China and Nigeria and contributes about 9.19% to the world's production. Nepal lies in 5th position in terms of total export volume of ginger.

Kadam A.S. et al. (2019) have published a journal entitled Economic analysis of production of ginger in Sangli district of Maharashtra of India by indicating the importance of ginger production in Maharashtra of India. Journal has denoted that the study of a sample of 90 Ginger growers drawn from Kadegaon and Khanapur tahsils of Sangli district in order to estimate existing production cost and study resource use of Ginger cultivation. The factors affecting yield of Ginger were estimated by using the Cobb- Douglas type production function. The data pertained to the agricultural year 2017-18. The production was 407 quintal per hectare. The estimated per hectare cost, at overall level was Rs. 662829. The per hectare inputs utilized for Ginger at overall level were 458 human days, 31 tonnes manures, 146 kg N, 248 kg P, 228 kg K. Average per hectare gross income was Rs.16,63, 975. The gross income received in size group small, medium and large was Rs. 1824688, Rs. 1656162 and Rs.1511074, respectively. The benefit-cost ratio was 2.43 at the overall level and it was found higher in small size group (2.48). The results of Cobb-Douglas type production function analysis revealed that the factors viz., human labours, manures, N was found positive and significant thereby influencing the yield of Ginger. The magnitude of coefficient of multiple determinations was 0.91.

Neupane J. et al. (2019) has published a research article entitled Socio-Economic Analysis of Ginger Production in Surkhet District of Nepal by concluding that average family size was larger than the national average. The major occupation of the sampled households in the study site was agriculture and ginger farming was usually preferred by the households of the study area however, income from others crop, livestock also contributes significantly. Ginger has significant contribution to raise the socio-economic status of the rural people, earn foreign currency and decrease

environmental degradation. It can be cultivated in crop field, sloppy land and even in marginalized land. Labour required for the cultivation practices of ginger was relatively higher than that of labour required for another agricultural commodity. Benefit cost ratio indicates that the crop appears profitable in the selected area of Surkhet district. This crop contributes significantly to the household income thus can be better option for uplifting the socio-economic status of the farmers of study site. The export share of the commodity implies that it is highly export oriented cash crop commodity. Most of the farmers practiced family labour and exchanged labour as source of labour for ginger cultivation. Only 8.75% of the respondents sold their product directly to the consumers, 38.75% sold their product to the Organic Mountain Flavour industry. 48.8% respondents got price information from collectors and 42.5% respondents were unsatisfied with price they received for their product, only 16.25% were satisfied with price. The total cost of production was found to be NRs. 3,48,500 per hectare out of which cost of seed and human labour found to contribute major part i.e. NRs.1,69,860 (48.74%) and NRs. 1,25,460 (36.0%) respectively. Benefit cost analysis revealed that the benefit/cost ratio was 1.88 on average. Thus, the ginger farming could be preferable and profitable, that could raise socioeconomic status of farmers of Surkhet district of Nepal.

RAP (2019) has made a case study report about Ginger production a good source of income for farmers in Doti. In that case study report, the researcher has chosen as real character Pavitra Devi Gharti Magar, lives in Badikedar Municipality -2, Asura village Barchain, Doti who is the farmer of ginger production. The cased study report has described; Pavitra used to cultivate small quantities of ginger, process it as ginger sutho and sell it to local traders. She was looking for a local, reliable source of income so she could earn while also taking care of her family. With limited access to market and unreliable prices she lacked the confidence to expand her ginger cultivation.

In 2017, staff from RAP3 Connect's partner Organic Mountain Flavor Private Limited (OMF) visited Pavtira's village and she heard about OMF's contracts with fixed prices and additional support available including organic certification and small loans. Pavitra decided to join the farmer group and sign a contract with OMF.

Last year, Pavitra received a loan in the sum of NPR 24,000. She harvested and sold 924 kg of ginger to OMF at the contracted price, NPR 26/kg.

In 2018, she received a loan of NPR 50,000 and increased her cultivation of ginger, planting 3 ropanis of land and producing approximately 2,840 kg of fresh ginger, including seed rhizomes.

Noticing signs of decay, she quickly harvested a quarter of the crop and immediately sold it to local traders. She later sold 415 kg to OMF at a higher than contracted price, 36/kg, receiving NPR 14,940. She produced sutho from approximately 500 kg of seed rhizomes and sold it to local traders for additional income. She has kept approximately 900 kg as seed for next year and expects to harvest a minimum of 5,400 kg.

With the increased income, Pavitra has plastered and painted her house and constructed a new toilet and kitchen. She intends to use profits from next season's harvest to complete construction of the house. Then, she will rent out one room of her house to earn some more money.

Pavitra has more land and plans to expand her ginger cultivation further in the future. She considers ginger cultivation a good source of income and a job which can engage her and family members while allowing sufficient time to care her family. Before OMF came to her village, her household's primary source of income was goat rearing and her sons' wages. Now, they are making profits from commercial ginger farming, a source of income with lots of future prospects.

- i. Ginger dried by peeling fresh rhizomes using wooden tool is commonly known as Sutho. This local process requires repeated peeling and sun drying. The dry ginger is considered ready when it is hard to break and produces a metallic sound when struck.
- ii. 1 ropani of land is equivalent to approx.. 509 square meters.
- iii. Estimated production based on reported average productivity and quantities planted.
- iv. Creeping rootstalks

Trade and Export Promotion Centre, (2019) has presented a report named Ginger Trade Routes to SAARC countries by indicating the farmers' obstacle, condition and economic status of ginger production of Nepali farmers. The report has said, the next challenge to be tackled was the low quality of ginger being exported, leading to lower prices for Nepali ginger by the farmer 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.

On the other hand, the report has pointed the value chains of Nepali ginger. Value chain of Nepali ginger is based on scattered farmers and their fragmented small land plots and sells 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. Whereas farmers are blaming the (Indian) traders/collectors for pressuring them to offer the lowest price.

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. Similarly, table no. 2.3 is presented for the income and expenditure status of ginger production in study area.

Table no. 2.3 Income and Expenditure Status of Ginger Production in Atudy Area

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	0.5	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.	47350/80	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

Source: Trade and Export Promotion Centre

CHAPTER III

RESEARCH METHODOLOGY

This chapter sums up the methodologies assumed in the study to prove the research objectives and problems in systematic and designed idea. It contains the research design, nature and source of data, data collection methods and tools, sampling size and sampling procedures, and data processing and analysis procedures. This chapter is about the process of research work and is the description of materials, procedures, and theory which were used in the research paper.

3.1 Research Design

The research is descriptive as well as exploratory research design. That indicate the combination of exploratory research and descriptive research. The exploratory research design use to explore and identify the economic importance of ginger production in study area and measure the major issues of economic importance of ginger production of rural people who live in Ilam municipality ward no. 2, Sumbek of and collected the data with asking to fill questionnaire which is prepared Annex i; whereas, the descriptive research design was used to aiming to describe, analyze, and interpret the collected data.

3.2 Rational of the Selection of the Study Area

This study was to be carried out in Ilam Municipality ward no. 2, Sumbek of Ilam district, which is located in the province No 1 in Mechi Zone. The economic status of this district is normal. Agriculture is the main occupation of this ward. This study area has been selected for this study because it is accessible for the researcher and such kind of research has not been done in this area before and most of the farmers are engaged in ginger farming and the main medium of income is ginger production. Therefore, the researcher has selected this area for research.

3.3 Nature and Sources of Data

The study is based on both primary and secondary sources.

A. Primary Data

The study is mainly based on primary data from the population selected from Ilam Municipality ward No 5, of Ilam district. The primary data are both qualitative and quantitative by schedule structured questionnaire including informal interviews and semi-unstructured questionnaire.

B. Secondary Data

All the secondary data are collected from different books, published and unpublished official records, reports of government and non-government organizations.

3.4 Universe and Sampling

Ilam Municipality Ward no. 2, Sumbek of Ilam district was selected for the study. Which have 2563 population among them 1233 are male and 1330 are female with 591 households (CBS, 2019) among them 180 households are engaged in ginger farming which is to be considered as universe of the study. 20% of the total households (36 households) were selected by using random sampling method for study. Because of the uniformity of the sampling, I choose random sampling method.

3.5 Methods, Tools and Techniques of Data Collection

Structured questionnaire, informal interview and observation are used for collecting data from the selected households.

3.5.1 Household Survey

The household surveys are conducted in order to collect qualitative and quantitative facts about economic importance of ginger production that is selected for study area. The researcher was found the economic status to farmer who produced the ginger in their farming area.

3.5.2 Observation

Certain information are collected using observation method. Researcher has observed ginger farming of study area and guessed the situation of economic status. Observation has also helped to check the information provided in the interview.

3.6 Data Presentation and Analysis

The collected primary data are checked and rechecked to minimize and correct errors to maintain consistency in the data. Collected data are output in the form of different charts and tables. Coding and symbol are used appropriately in tabling process. Different computer software programs such as Microsoft Word and Microsoft Excels are used for analysis, tabulation and graphical presentation using pie chart, column chart and bar diagram.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

This chapter deals with analysis and interpretation of the collected data. The objectives of the study were to find out the importance of ginger production in rural people. The rural people of Ilam municipality ward no. 2 Sumbek who produced the ginger were the primary source of data. 36 ginger producer household were the source of data out of 180 ginger producer households. There is mass production of ginger which is near from district headquarters of Ilam district and most people are depended on ginger production and this area is hilly. Thus, the study was focused on the rural people who produced the ginger.

Ilam Municipality Ward no. 2, Sumbek of Ilam district was selected for the study. Which have 2563 population among them 1233 are male and 1330 are female with 591 households (CBS, 2019) among them 180 households are engaged in ginger farming which were considered as universe of the study. 20% of the total households (36 households) have selected by using random sampling method for study.

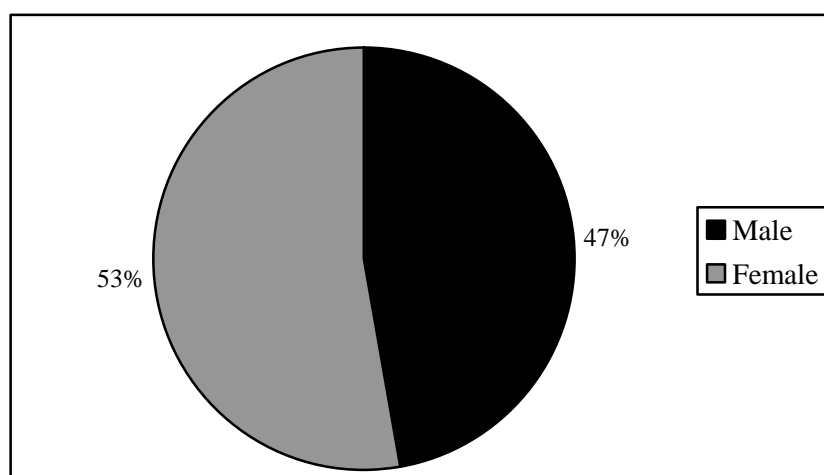
4.1 Socio-Demographic Status of Respondents

This section includes the respondents' number of family member of household. The number of family member of household is the key points for economic condition of household, that plays vital role to find the economic importance of ginger production and economic condition of households. These factors play an important role to know the economic importance of ginger production in study area. Number of family determines the engaged manpower in ginger farming and on the other side determines the medium of expenditure which is earned from ginger production. Thus, socio-demographic questionnaire were set to observe for respondents.

4.1.1 Sex Structure of Respondents

The researcher has chosen the different sex variations to identify the uniformity of the sampling data. Figure 4.1 shows the sex variation while the researcher have collected data out of 36 households.

Figure 4.1 Sex Structures of Respondents



Source: *Field survey, 2020*

The figure 4.1 shows the sex structure of respondents, out of 36 respondents 19 (53%) were female and 17 (47%) were male. The researcher has selected more female than male.

4.1.2 Number of Family Member of Respondents

Sampling the household condition of the study area of the population is total 36 among these the detailed of number of family member are presented this table 4.1.

Table 4.1 Number of Family Member Structure of Respondents

S.N.	Number of family member in respondents	Number of family member group among 36 respondents	Percent in number of family group
1	8	4	11.11%
2	7	8	22.22%
3	6	10	27.78%
4	5	6	16.67%
5	4	8	22.22%
Total		36	100%

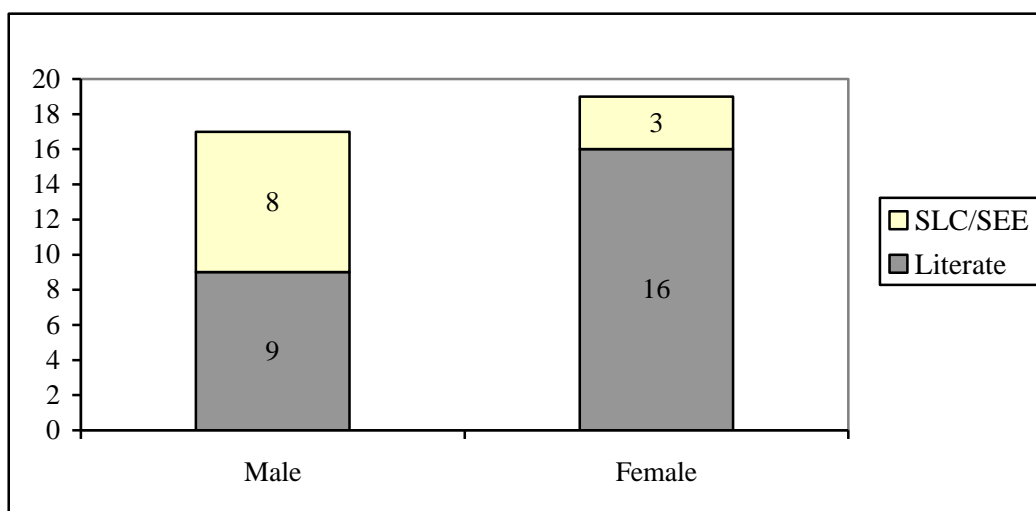
Source: *Field survey, 2020*

The table 4.1 shows 5 categories of number of family member group are divided that are number of family 4, 5, 6, 7 and 8. Among 5 categories 6 family member in households are most that has in 10 (27.78%) respondents. The least categories is 8 member of family which is 4 (11.11%) respondents and number of family member 7 and 4 have same number which is 8 (22.22%) and remaining number of family member is 5 which has in 6 (16.67%) households. Thus, the researcher has found more family number in 6 family among 36 respondents.

4.1.3 Educational Status of Respondents

Education is the most important factors in human life. It is no doubt that the more educated person can more advanced work in farming field too, there is necessary education in farming. Thus, the study has abled to include educational information from questionnaire. Given figure 4.2 shows educational status of respondents.

Figure 4.2 Educational Statuses of Respondents



Source: *Field survey, 2020*

Figure 4.2 shows, among 36 respondents 19 (53%) are female among 19 female respondents 16 (84.21%) respondents are literate and 3 (15.79%) are only SLC/SEE passed respondents. On the other hand 17 (47%) male respondents, 9 (52.94%) male respondents are literate and 8 (47.06%) male respondents are SLC/SEE passed. And the figure shows Out of 36 respondents there are 25 (69.44%) respondents are literate and only 11 (30.56%) respondents are SEE/SLC passed. This figure shows that less educated female has been found in this study area in the case of ginger producer. And

the researcher has found there is no illiterate respondent and no respondents have completed higher education.

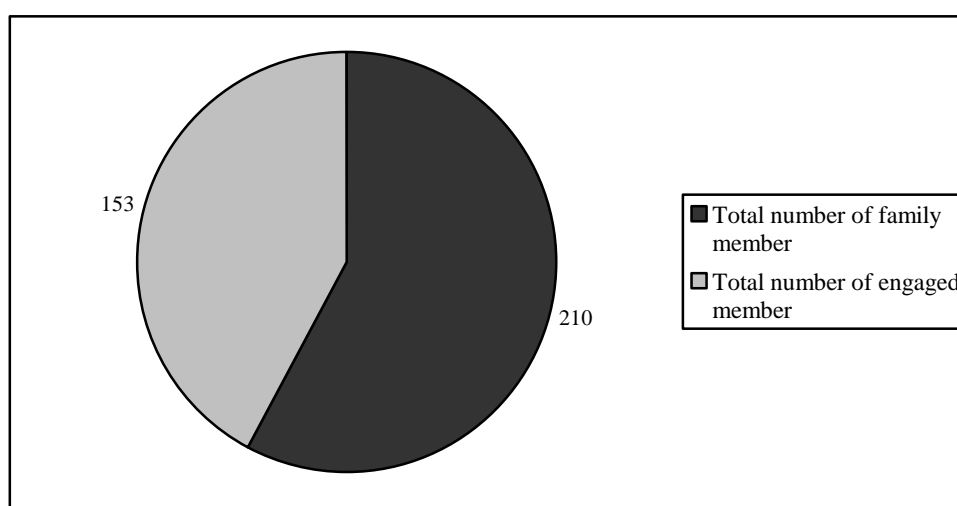
4.2 Production Status of Ginger Production in Respondents

Nepal has comparative advantages in producing ginger crop, which is evident with comparatively lower labor cost, well-adapted local varieties and established marketing network. The trend of impressive growth in ginger production and export indicates that ginger production and trade could be a potential enterprise contributing significantly national economy of Nepal. To find out the status of ginger production, cultivated area of ginger, the manure that is used in ginger production, quantity of ginger production, the market and price of ginger, the problem in ginger production should be analyzed in study area. The study is for to find the status of ginger production in study area.

4.2.1 Involvement of Family Member in Ginger Production

The researcher has tried to find out total number of family in 36 households and total number of engaged member in ginger production in 36 households. That expresses the engagement of people in ginger production in study area. The figure 4.3 has defined the total number of family member and involvement people in ginger production.

Figure 4.3 Involvement of Family Member in Ginger Production



Source: *Field survey, 2020*

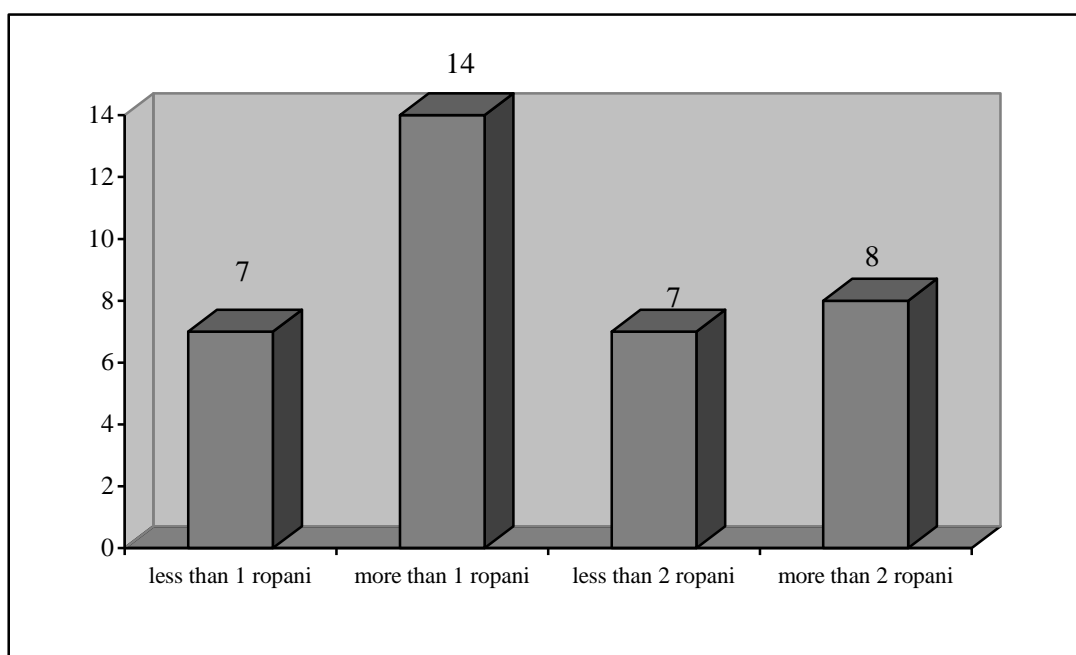
The figure 4.3 shows that there are total 210 family members in 36 households, out of 210 family member 153 members are involved ginger production. This data shows that only 57 family members are not involved in ginger farming. So, there is more

priority given in ginger farming. The more member involvement in ginger farming the more net income will be in ginger production.

4.2.2 Land Used in Ginger Cultivation

Land used is reliable measurement of ginger farming in rural area. In rural area, the main measuring tool is occupied land area that is cultivated crops as ginger cultivation. Thus, the survey has been included about the ginger production that measures ginger production in study area. The land used in ginger cultivation is shown in figure 4.4.

Figure 4.4 Land Used in Ginger Cultivation



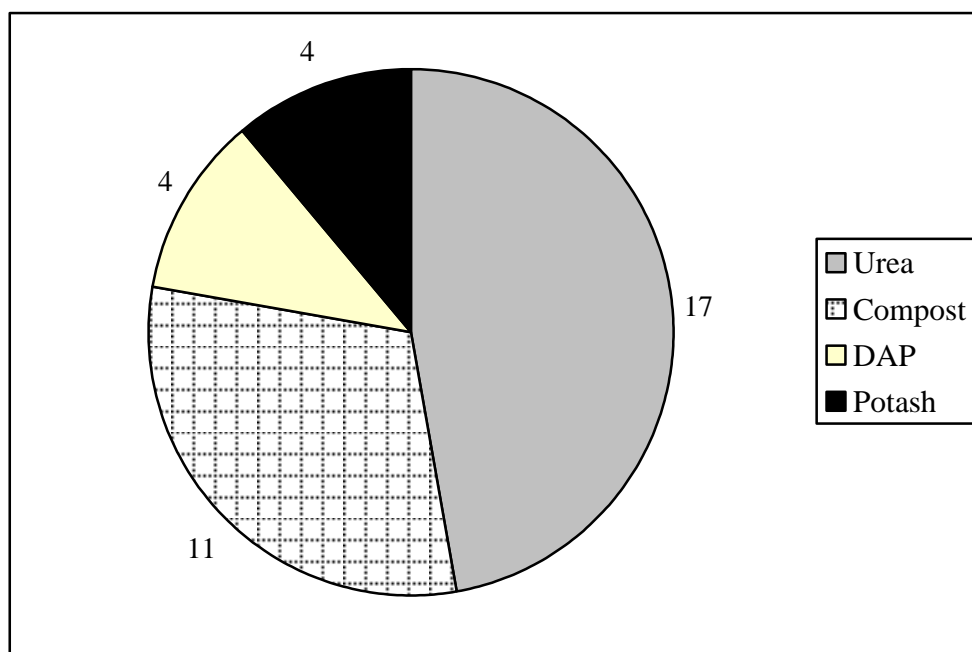
Source: *Field survey, 2020*

The figure 4.4 expresses the land use for ginger production. Among 36 respondents, 7 (19.44%) respondents have cultivated ginger in less than 1 ropani, 14 (38.89%) respondents have cultivated in more than 1 ropani, 7 (19.44%) respondents have cultivated ginger in less than 2 ropani and 8 (22.22%) respondents have cultivated in more than 2 ropani land. This survey shows that more respondents used more than 1 ropani which are 14 (38.89%) respondents. Equal and the least 7 (19.44%) respondents used less than 1 ropani and less than 2 ropani land for ginger farming. This figure shows that most of respondents have cultivated ginger in more land. That shows there is good trend to farm ginger in study area.

4.2.3 Manure Used in Ginger Cultivation

Manure increases the production of ginger and increase the income. Rural farmer use different kinds of manure for cultivate crops and ginger. Proper used manure increase ginger production. The study had asked the question about used manure in ginger production field. The study had found the answer as given figure 4.5.

Figure 4.5 Manure Used in Ginger Cultivation



Source: *Field survey, 2020*

The figure 4.5 illustrates the used of manure in ginger cultivation. Out of 36 respondents, 17 (48.57%) respondents have used Urea, 11 (31.43%) respondents have used Compost, DAP and Potash manure have been used in 4/4 (11.43%/11.43%) respondents equally. This study shows that the most respondents have preferable manure is Urea manure and the second preferable manure is Compost manure.

4.2.4 Production Quantity of Ginger in Respondents

The production quantity should be known to find out the economic importance and contribution of ginger production in rural people. The more production quantity the more income should be in ginger production. The study had asked questionnaire to know the production of quantity of ginger in study area. Table 4.2 shows the production quantity of ginger in the study area.

Table 4.2 Production Quantity of Ginger in Respondents

S.N.	Production quantity group (in k.g.)	Respondents	Percent
1.	100-300	6	16.67
2.	301-600	2	5.56
3.	601-900	6	16.67
4.	901-1200	5	13.89
5.	1201-1500	3	8.33
6.	1501-1800	4	11.11
7.	1801-2100	6	16.67
8.	2101-2400	1	2.78
9.	2401- above	3	8.33
Total		36	100

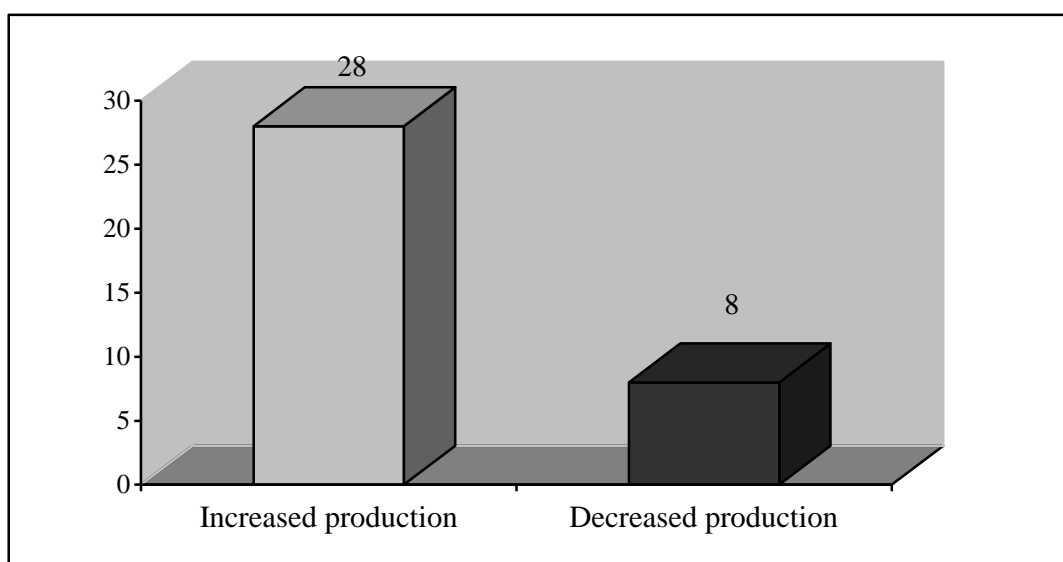
Source: *Field survey, 2020*

The above table 4.2 reveals the production quantity of ginger in respondents. Out of 36 respondents, 6 (16.67%) respondents produce 100-300 kg ginger, similarly 2 (5.56%), 6 (16.67%), 5 (13.89%), 3 (8.33%), 4 (11.11%), 6 (16.67%), 1 (2.78%) and 3 (8.33%) respondents produce 301-600 k.g., 601-900 k.g., 901-1200 k.g., 1201-1500 k.g., 1501-1800 k.g., 1801-2100 k.g., 2101-2400 k.g., 2401- above k.g. ginger respectively. The table shows the production of ginger more satisfactory in study area.

4.2.5 Production Condition of Ginger in Respondents

Ginger is main cash crop of rural people. Nowadays, ginger is cultivated instead of maize, millet and other crops. Production condition of ginger shows the effectiveness, attractiveness and priority of ginger production in study area that is compared with last year. The study was conducted production condition of ginger year in respondents. Figure 4.6 shows the production condition of ginger in respondents.

Figure 4.6 Production Condition of Ginger in Respondents



Source: *Field survey, 2020*

The figure 4.6 exposes the production condition of ginger in respondents. The figure shows the production of ginger is increased in 28 (77.78%) respondent and decreased in 8 (22.22%) respondents with compared last year. Thus, the figure shows only 8 (22.22%) respondents have been decreased ginger production.

4.2.6 Market for Ginger in Study Area

Market is key points of ginger farming. Ginger is sold in market that determines the exact price of ginger. The more facility of market there will be more possibilities of high price of ginger. After producing the ginger there should be good market. The researcher had asked the questions about market where the respondents used to sell the ginger. As the respondents answer table 4.3 shows the market for selling ginger.

Table 4.3 Market for Ginger in Study Area

Market/bazaar	Respondents	Percent
Biblate	34	94.44%
Ilam	1	2.78%
Dada Bazaar	1	2.78%
Total	36	100.00

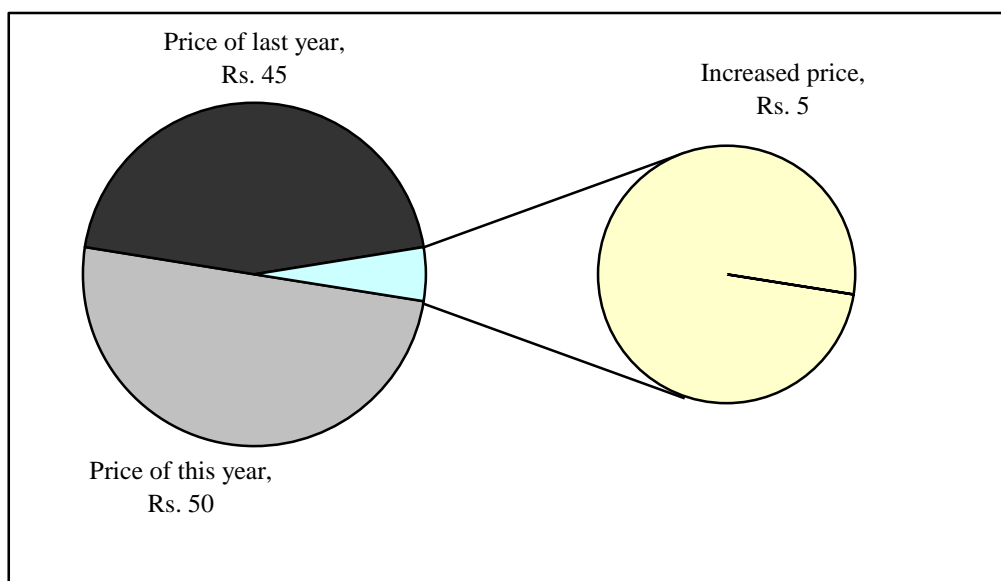
Source: *Field survey, 2020*

Table 4.3 measures the market center of ginger producer where respondents used to sell the ginger. Out of 36 respondents, 34 (94.44%) respondents answered the Biblate bazaar for market, 1 (2.78%) respondents answered the Ilam and Dada Bazaar to sell the ginger. Most respondents are used to sell the ginger in Biblate

4.2.7 Price of Ginger in Respondents

Economic importance of ginger mostly determines the price of ginger. The high price of ginger automatically makes the economic importance high. Nowadays, to manage the production of goods there should be high price. Without high price of ginger there will not be well importance of ginger production. Thus, the study had been wanted to the price of ginger. Given below, figure 4.7 identify the price of ginger.

Figure 4.7 Price of Ginger in Respondents



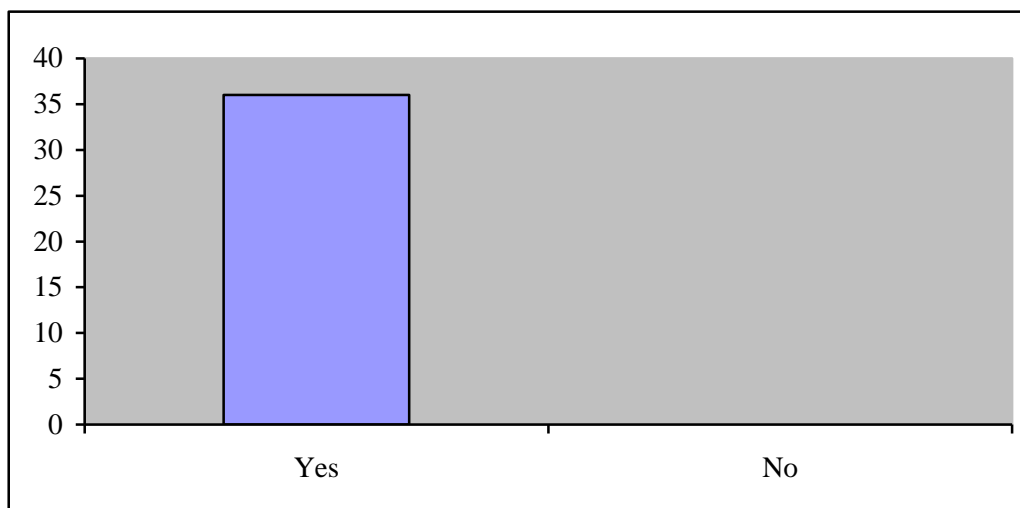
Source: *Field survey, 2020*

Figure 4.7 indicates the price of study year and last year of ginger price. Respondents have sold in Rs. 50 per k.g. ginger this year but respondents had sold in Rs. 45 per k.g. last year, this figure shows the price of ginger is increased in Rs. 5 per k.g. in a year. Thus, the price of ginger is increased gradually year by year.

4.2.8 Disease in Ginger Production

Disease causes the loss of production. The researcher has asked the disease in ginger production. Thus, figure 4.8 has shown the answer of respondents which the question was about the disease in ginger production.

Figure 4.8 Disease in Ginger Production



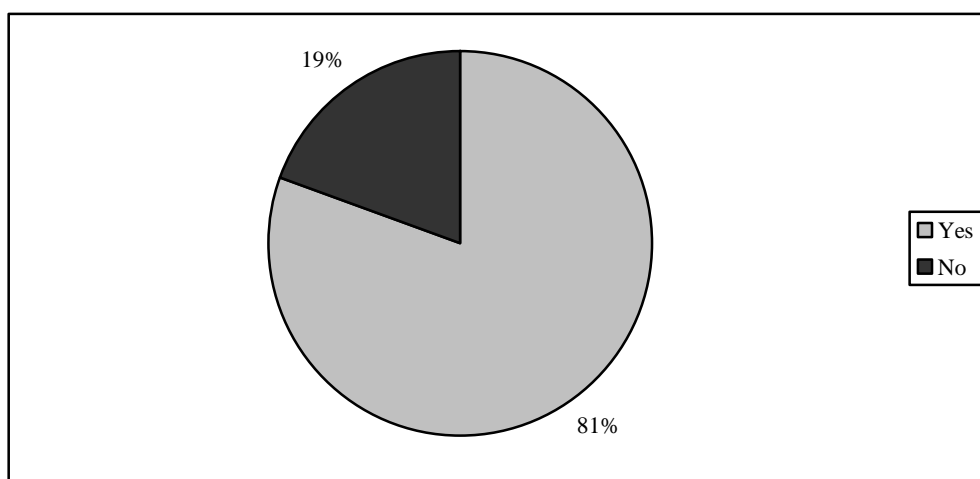
Source: *Field survey, 2020*

Figure 4.8 shows that all respondents have caused by disease in ginger production. Respondents had responded that the main cause of decreasing product is disease.

4.2.9 Problem in Ginger Production in Respondents

While producing ginger, there may be more problem aroused. To identify problem the researched asked about problem. Figure 4.9 have shown the respondent answer which was asked about problem in ginger farming.

Figure 4.9 Problem in Ginger Production in Respondents



Source: *Field survey, 2020*

Figure 4.9 exposes the problem in ginger production in respondents. Out of 36 respondents 81% (29) respondents have faced the problem in ginger production, only

19% (7) respondents have not faced the problem in ginger production. Thus, the research shows that the problem in ginger problem is still remaining in rural area.

4.2.10 Types of Problem in Ginger Production in Respondents

Figure 4.9 shows the problem of respondents in ginger production. Out of 36 respondents, 29 respondents have responded the problem in ginger production. Out of 29 respondents, the researcher has identified as table 4.4 problems in respondents.

Table 4.4 Types of Problem in Ginger Production in Respondents

S.N.	Types of problem	No. of respondents	Percent
1.	Disease	6	16.67
2.	Manure	4	11.11
3.	Employer	4	11.11
4.	Market	4	11.11
5.	Land	2	5.56
6.	Price	6	16.67
7.	Transportation	3	8.33
8.	No Responses	7	19.44
Total		36	100%

Source: *Field survey, 2020*

Table 4.4 reveals the types of problem which is facing the ginger producer. According to the respondents answer, 6 (20.69%) respondents have disease problem, 4 (13.79%), 4 (13.79%), 4 (13.79%), 2(6.90%), 6(20.69%) and 3(10.34%) respondents have manure, employer, market, land, price, and transportation problem respectively. Disease in ginger and proper price of ginger is most problems in respondents which have in 6 (20.79%) respondents equally and the least problem is in land problem which have in 2 (6.90%) respondents.

4.3 Economic Importance of Ginger Pproduction in Study Area

Ginger has been recognized as a potential spice crop grown in commercial scale for cash income across the mid-hill region of Nepal extending up to an altitude of 1500m. Ginger has many important uses such as spice, ginger tea and important component of traditional medicine in Nepal. Production of ginger is mainly concentrated in the mid-

hill region of the country, which is lacking in adequate transport facilities. More emphasis was given to agricultural growth through commercialization of high value agricultural products, the production and export of ginger as one of the high value agricultural products has flowed.

Ginger is capable of generating farmer's income, creating employment opportunities and earning foreign exchange. To find out the economic impact of ginger production net income and expenditure in ginger production, employer in ginger production and priority based things in ginger production should be analyzed in study area. The study is for to find the economic importance of ginger production in study area.

4.3.1 Income from Ginger Production

Income plays the vital role to recognize the economic importance of ginger production. Ginger is produced for income and earnings money. The main aim of ginger production is highly income. The study has conducted to inform the income of ginger producer to fulfill the objectives of this research. Here the study had studied the income of respondents by asking questions. Table 4.5 states the income of respondents which are ginger producer.

Table 4.5 Income from Ginger Production

S.N.	Income group (in Nrs.)	No. of respondents	Percent
1.	5000-20000	2	5.56
2.	20001-40000	6	16.67
3.	40001-60000	7	19.44
4.	60001-80000	3	8.33
5.	80001-100000	9	25.00
6.	100001-120000	3	8.33
7.	120001 - 140000	4	11.11
8.	140001-160000	0	0.00
9.	160001-180000	0	0.00
10.	180001-200000	0	0.00
11.	200001 -220000	0	0.00
12.	220001 - above	2	5.56
Total		36	100%

Source: *Field survey, 2020*

Table 4.5 shows the income of respondents that is categories interval of Rs. 20000. The income group has become 12 group and out of 36 respondents has answered among 12 categories group of income. Out of 36 respondents, 9 (23.00%) respondents have between Rs. 80001 to 100000 income that is highly income of this study and there is not available income of respondent between Rs. 140001 to 220000. 2 (5.56%) respondents have more than Rs. 220001 in a year.

4.3.2 Expenditure in Ginger Production in Respondents

Expenditure represents a payment with either cash or credit to purchase goods or services. Expenditure can be in manure, farming, transportation, packaging, seed rhizomes, employer etc. Expenditure determines the income of ginger production, the less expenditure follows the more income and more expenditure follows the less income. The relation of income and expenditure are in vice versa. Thus, the study has conducted to know the expenditure of respondents. Table 4.6 shows the expenditure in ginger production of study area.

Table 4.6 Expenditure in Ginger Production in Respondents

S.N.	Expenditure percent [Income/Expenditure*100]	Respondents
1.	1% - 10%	1
2.	11% - 20%	1
3.	21% - 30%	1
4.	31% - 40%	9
5.	41% - 50%	12
6.	51% - 60%	6
7.	61% - 70%	2
8.	71% - 80%	3
9.	81% - 90%	0
10.	91% - 100%	1
Total		36

Source: *Field survey, 2020*

Table 4.6 defines the expenditure percent, that is compared with answer of responded. First of all, finding the income and expenditure after then calculate the percent of

expenditure by taking base of income then categories the percent with 10 intervals. Above table 4.6 shows 12 respondents have expended in ginger production between 41% to 50% percent as their income. Then 9 respondents have expended in ginger production 31% to 40% as their income. The most expended respondent in ginger production is 1 who expends in 91% to 100% than his/her income. The least expended respondent in ginger production is 1 who expends less than 10% of his/her income that shows his/her income is high. The most expended percent is 41% to 50% that are 12 respondents.

4.3.3 Profit in Ginger Production in Respondents

Ginger is main cash crop in agriculture. The cultivation and production of ginger is highly after massive destruction of cardamom production with disease in rural area. The main objective of the study is to find out the economic importance of ginger production that is directly related with profit of ginger production. Profit generates the economic status, the more profit is good economic condition. Therefore, producer always wants to increase the profit of profit from ginger production. The study has conducted to find out the profit from ginger production. Table 4.7 is for profit from ginger production that is found from the study area.

Table 4.7 Profit in Ginger Production in Respondents

S.N.	Profit (in Nrs.)	Respondents	Percent
1.	5000-10000	4	11.11
2.	10001-20000	8	22.22
3.	20001-30000	9	25.00
4.	30001-40000	4	11.11
5.	40001-50000	3	8.33
6.	50001-60000	5	13.89
7.	60001-70000	1	2.78
8.	70001-80000	1	2.78
9.	80001-90000	0	0.00
10.	90001-100000	1	2.78
Total		36	100%

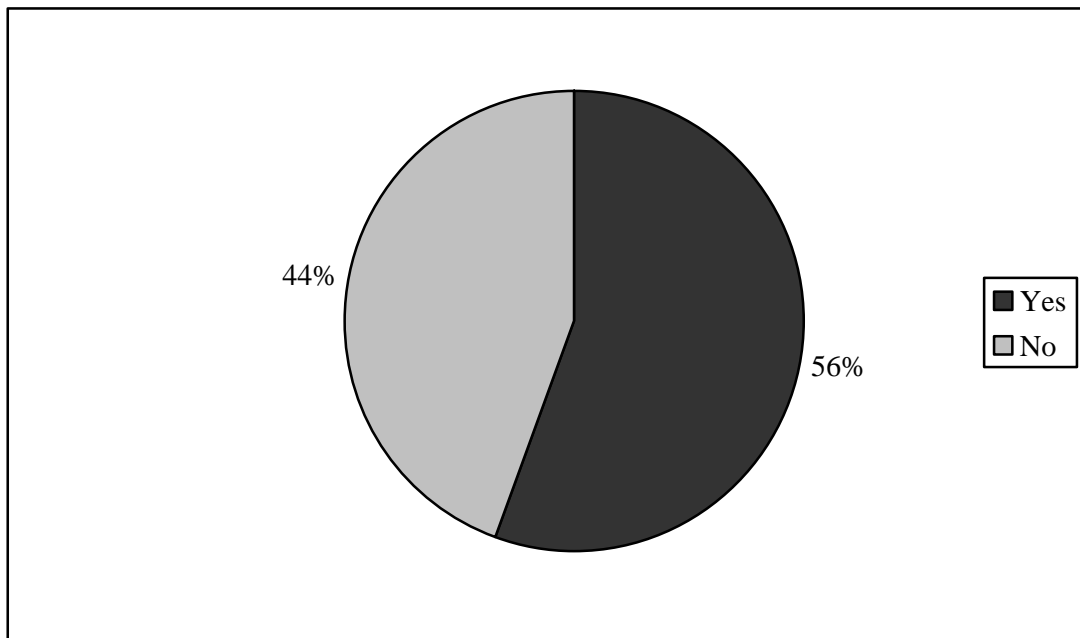
Source: *Field survey, 2020*

Table 4.7 tells profit amount from ginger production. In study, out of 36 respondents 9 (25%) respondents have made profit Rs. 20001 to 30000. This study shows that most of respondents don't get high profit from ginger production. Only 1 (2.78%) respondents get Rs. 90001 to 10000 profit from ginger production. 4(11.11%) respondents get only between Rs. 5000-10000 profit. Similarly, 8(22.22%) respondents earn between Rs. 10001-20000 profit.

4.3.4 Using Employee in Ginger Farming by Respondents

The researcher aims to find importance of ginger in economy aspect of rural life. How does life of rural people is role playing with ginger production? Nowadays, ginger production life line of rural people. About 180 households are engaged in ginger productions that are out of total 591 households. The researcher has asked to know the use of employee while farming the ginger. Using employee creates the employment and increase the production of ginger too. Use of employee in ginger farming is displayed by figure 4.10.

Table 4.10 Using Employee in Ginger Farming by Respondents



Source: *Field survey, 2020*

According to figure 4.10, out of 36 respondents, 20 (56%) respondent have used employee while farming ginger in their filed but 16 (44%) respondents have not used employee that means 16 (44%) ginger farmers cultivate ginger themselves.

4.3.5 Number of Employee while Farming Ginger

The researcher had asked question about employee to know the number of employee while farming the ginger in study area. Using employee determines the earning money, profit and mass production of ginger. Table 4.8 defines the using employee by respondents in study area.

Table 4.8 Number of Employee while Farming Ginger

S.N.	Number of employee used by per household (respondents)	Respondents	Total employee
1.	1	1	74
2.	2	4	
3.	3	8	
4.	4	2	
5.	5	1	
6.	6	2	
7.	7	1	
8.	8	0	
9.	9	1	
Total		20	74

Source: *Field survey, 2020*

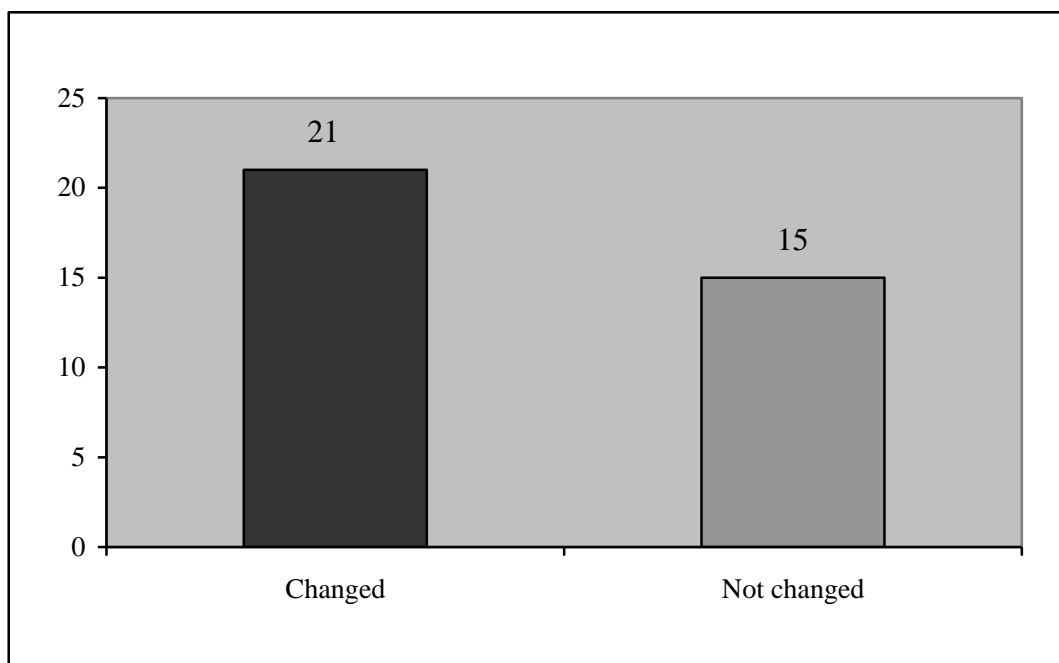
Table 4.8 deals the using employee by respondents. Out of 20 respondents, 8 respondents use 3 number of employee in ginger farming while 4 respondents use 2 numbers of employees to produce ginger. Similarly, 1, 4, 5, 6, 7 and 9 employees have been used by 1, 2, 1, 2, 1 and 1 respondents respectively for farming ginger. Thus, in total 74 employees are used to produce ginger altogether 20 respondents.

4.3.6 Changing Income after Starting Ginger Farming

After getting income from ginger production, really there should be changed income. Simultaneously, their life should be changed after income changing. Therefore, the researcher wants to know the changing income or not and asked question about

changing income. After increasing the income of respondents, there should be influenced to product ginger gradually year by year. Figure 4.11 reveals the income changing after starting ginger farming.

Figure 4.11 Changing Income after Starting Ginger Farming



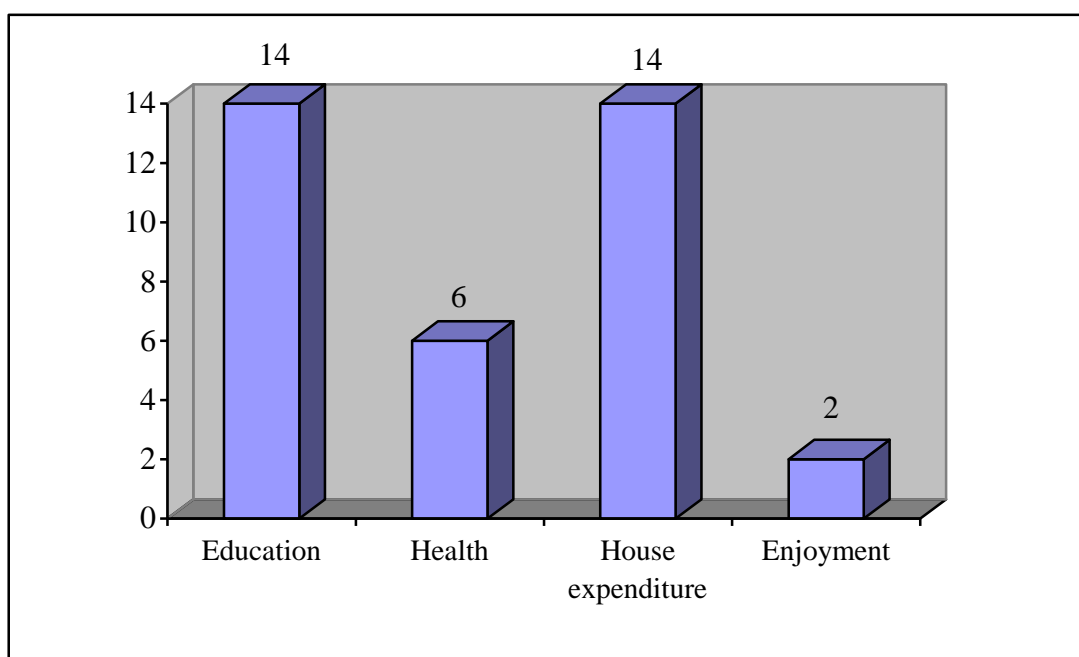
Source: *Field survey, 2020*

Figure 4.11 shows the changing income of respondents after starting ginger farming. Out of 36 respondents, 21 (58.33%) respondents have responded about changing income after starting ginger farming but 15 (41.67%) respondents have not changed in their income after starting ginger farming. There is majority of respondents changing income after starting ginger production.

4.3.7 Sector of Using Money after Getting from Ginger Production

Nowadays, ginger production is main occupation of rural people. Rural people earn money from ginger production, then they expenses in education, health, house expenditure, enjoyment, saving and buying things in market. The researcher has asked questions to know the sector of expenses while earning the money from ginger production. This study has shown the proper using money after earning from ginger production. Indirectly the researcher wants to find the national development by paying tax with expenses of different sectors expenditure. The sector of using money after getting from ginger production is shown in figure 4.12.

Figure 4.12 Sector of Using Money after Getting from Ginger Production



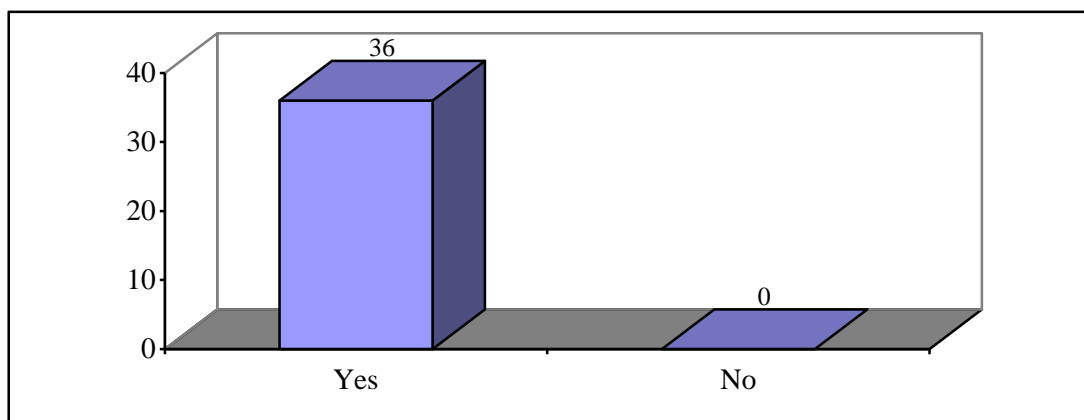
Source: *Field survey, 2020*

The figure 4.12 expresses sector of using money after getting from ginger production. Out of 36 respondents, 14 (38.89%) respondents expenses money in education similarly same number of respondents expenses money in house expenditure. 6 (16.67%) respondents expenses money in health sector after getting money from ginger production. The least, 2 (5.56%) respondents expense in enjoyment. The study shows education and house expenditure is main sector to use money after earning from ginger production.

4.3.8 Planning to Increase the Ginger Production

Most of the rural people are getting profit from ginger production. And the study shows the more massive production of ginger there is more profit. Therefore, the researcher has asked about planning of increasing ginger production in future. Ginger will be more produced after making well planning. Planning means overall aspected i.e. mass farming, land, employee, pricing and quality. While making the planning to produce the ginger, there will be more volume ginger production and good manner ginger will be produced. More volume ginger and good manner ginger earns more money with ginger producer farmer in rural area. Figure 4.13 shows the number of respondents that are planning to increase ginger production.

Figure 4.13 Planning to Increase the Ginger Production



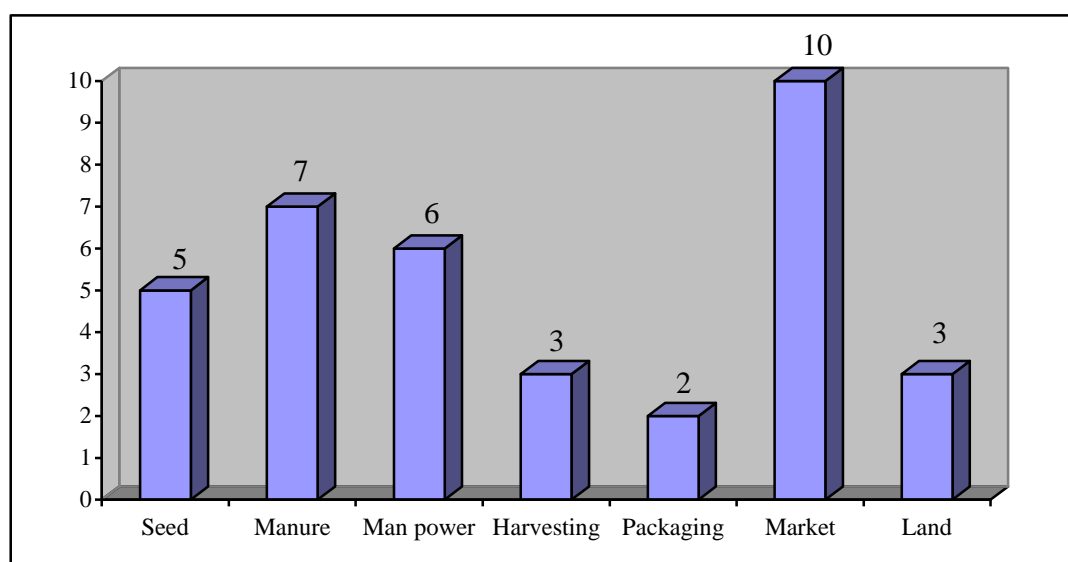
Source: *Field survey, 2020*

The figure 4.13 exposes the number of respondent who is making plan to increase the ginger production. The study had found 36 (100%) respondents want to increase ginger production to increase income from ginger production.

4.3.9 The Most Priority Factor while Farming the Ginger

To improve and increase the ginger production there should be set priority factor while farming/producing the ginger. The study had conducted to know the most priority factor while farming the ginger. The researcher has presented the priority factor in figure 4.14 while farming the ginger.

Figure 4.14 The Most Priority Factor while Farming the Ginger



Source: *Field survey, 2020*

The figure 4.14 discloses the most priority factors while doing ginger farming. The researcher has asked questions about the priority factors for ginger farming.

Out of 36 respondents, 10 (27.78%) respondents has responded the most priority factor is market. Similarly, seed, manure, manpower, harvesting packaging and land is selected by 5(13.89%), 7(19.44%), 6(16.67%), 3(8.33%), 2(5.56%) and 3 (8.33%) respondents respectively. The least priority factor is packaging that is selected by 2 (5.56%) respondents whereas market is the most priority factor that is selected 10 (27.78%) respondents.

CHAPTER V

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

On the basis of analysis and interpretation of data, the following the summary and findings have been prepared.

5.1 Summary and Findings

Ginger cultivation has already established itself as one of the major contributing sub-sector in the livelihood of the people in hilly areas of Nepal. Most of the farmers were medium and small farmers and since they are resource poor, they can't make sudden approach towards more technology demanding modern agriculture practices and ginger farming is the best alternative available for them. Despite selling in market, ginger is commonly used for different purposes which include treatment of various types of illness like stomach upset, diarrhea, morning sickness, nausea and vomiting, chemotherapy. Ginger is also used as tea and for making ginger juice. Dry powdered ginger can be used for food flavouring and in food processing industries.

Ginger is a high value cash crop that is grown by farmers in many parts of the world. Nepal is known to be one of the major producers of ginger in the world. Cultivation of ginger began in Nepal when it was identified as one of the crops that could generate income and promote internal trade. In recent years interest and demand for ginger has increased dramatically worldwide and the crop has assumed great importance in the global market. Ginger production in study area is one of the basic economic activities that could serve as a source of employment, revenue generation and poverty alleviation.

The study is about economic importance of ginger in rural area. The study had conducted to find out the production status of ginger and the economic importance of ginger in study area. The summary and findings of the study were based on the questionnaires filled by the selected 36 respondents of Ilam municipality ward no. 2 Sumbek area within the Manshir and Poush of 2077 B.S. Different techniques were used to meet the findings of study. Questionnaires, informal interviews and survey visit, meeting with ginger producers, some other secondary data were some important tools. The major findings of the study are listed below.

5.1.1 Summary and Finding of Production Status of Ginger in Study Area

The study has focused the economic importance of ginger in study area. Ginger production directly helps to earn money, increasing income and conduct the occupation and living standard. Producing ginger is the most necessary in rural area because rural people can enough income from ginger production. It is necessary that the status of ginger farming, production and marketing in rural area. The status is known by conducting study in different field. Thus, the study has conducted to know the production status of ginger in study area and the study has found the summary and findings given as follows.

1. Random sampling method was used to choose the sample size of the study among the household of 36 household as respondents of Ilam municipality ward no. 2 Sumbek, Ilam within the Manshir and Poush 2077.
2. 36 respondents were included in the study, which is almost 20% of the total ginger producer household of the study area.
3. Out of 36 respondents 17 (47%) respondents were male whereas 19 (53%) were female respondents.
4. In this study, number of family member group is divided that are number of family 4, 5, 6, 7 and 8. Among 5 categories 6 family member in households are most that has in 10 (27.78%) respondents. The least categories is 8 member of family which is 4 (11.11%) respondents and number of family member 7 and 4 have same number which is 8 (22.22%) and remaining number of family member is 5 which has in 6 (16.67%) households.
5. In the case education, 36 respondents there are 25 (69.44%) respondents are literate and only 11 (30.56%) respondents are SEE/SLC passed. 36 respondents 19 (53%) are female among 19 female respondents 16 (84.21%) respondents are literate and 3 (15.79%) are only SLC/SEE passed respondents. On the other hand 17 (47%) male respondents, 9 (52.94%) male respondents are literate and 8 (47.06%) male respondents are SLC/SEE passed.
6. There are total 210 family members in 36 households, out of 210 family member 153 members are involved ginger farming. This data shows that only 57 family members are not involved in ginger farming.
7. In area of land used in ginger farming, among 36 respondents, 7 (19.44%) respondents have cultivated ginger in less than 1 ropani, 14 (38.89%)

respondents have cultivated in more than 1 ropani, 7 (19.44%) respondents have cultivated ginger in less than 2 ropani and 8 (22.22%) respondents have cultivated in more than 2 ropani land. This survey shows that more respondents used more than 1 ropani which are 14 (38.89%) respondents. Equal and the least 7 (19.44%) respondents used for ginger production less than 1 ropani and less than 2 ropani land for ginger farming.

8. The study has found the using manure in respondents, out of 36 respondents, 17 (48.57%) respondents have used Urea, 11 (31.43%) respondents have used Compost, DAP and Potash manure have been used in 4/4 (11.43%/11.43%) respondents equally.
9. Out of 36 respondents, 6 (16.67%) respondents produce 100-300 kg ginger, similarly 2 (5.56%), 6 (16.67%), 5 (13.89%), 3 (8.33%), 4 (11.11%), 6 (16.67%), 1 (2.78%) and 3 (8.33%) respondents produce 301-600 k.g., 601-900 k.g., 901-1200 k.g., 1201-1500 k.g., 1501-1800 k.g., 1801-2100 k.g., 2101-2400 k.g., 2401- above k.g. ginger respectively.
10. By comparing the production of ginger with last year, the production of ginger is increased in 28 (77.78%) respondent and decreased in 8 (22.22%) respondents.
11. Out of 36 respondents, 34 (94.44%) respondents answered the Biblate bazaar for selling market, 1 (2.78%) and 1 (2.78%) respondents answered the Ilam and Dada Bazaar to sell the ginger equally.
12. The study has surveyed about per kg price of ginger, respondents have sold in Rs. 50 per k.g. ginger this year but respondents had sold in Rs. 45 per k.g. last year, this figure shows the price of ginger is increased in Rs. 5 per k.g. in a year.
13. All respondents have been caused by disease in ginger production. Respondents had responded that the main cause of decreasing product is disease.
14. Out of 36 respondents 81% (29) respondents have faced the problem in ginger production, only 19% (7) respondents have not faced the problem in ginger production.
15. According to the respondents answer, 6 (20.69%) respondents have disease problem, 4 (13.79%), 4 (13.79%), 4 (13.79%), 2(6.90%), 6(20.69%) and 3(10.34%) respondents have manure, employer, market, land, price, and transportation problem respectively.

5.1.2 Summary and Findings

As agriculture has been a key sector in Nepalese economy, agricultural sector has to be developed and commercialized to raise the living standard of rural people by earning net profit and by providing employment opportunities. The living standard of the farmers can be raised by identifying high-value low-volume crops, which have comparative advantage, and by optimally utilizing the available resources for ginger production.

The study area, Ilam municipality ward no. 2 Sumbek was study area, the study has asked questionnaire to find out economic importance of ginger production in rural people. The study had conducted to visit in ginger farming field and area by asking questionnaire about income, expenditure, uses of income sector that has helped to find economic importance of ginger in study area. Thus, the study has conducted to find economic importance of ginger production in study area and the study has found the summary and findings given as follows.

1. In the case of income from ginger farming, the income group has become 12 groups among 36 respondents, 9 (23.00%) respondents have between Rs. 80001 to 100000 income that is highly income group of this study and there is not available income of respondent between Rs. 140001 to 220000. 2 (5.56%) respondents have more than Rs. 220001 in a year.
2. 12 respondents have expended in ginger production between 41% to 50% percent as their income. Then 9 respondents have expended in ginger production 31% to 40% as their income. The most expended respondent in ginger production is 1 who expends in 91% to 100% than his/her income. The least expended respondent in ginger production is 1 who expends less than 10% of his/her income that shows his/her income is high. The most expended percent is 41% to 50% that are 12 respondents.
3. In the view of net profit from ginger farming, 9 (25%) respondents have made profit Rs. 20001 to 30000. This study shows that most of respondents don't get high profit from ginger production. Only 1 (2.78%) respondents get Rs. 90001 to 10000 profit from ginger production. 4 (11.11%) respondents get only between Rs. 5000-10000 profit. Similarly, 8 (22.22%) respondents earn between Rs. 10001-20000 profit.

4. Out of 36 respondents, 20 (56%) respondent have used employee while farming ginger in their filed but 16 (44%) respondents have not used employee that means 16 (44%) ginger farmers cultivate ginger themselves.
5. The study has conducted to inform the employee to farm ginger in respondents, out of 20 respondents, 8 respondents use 3 number of employee in ginger farming while 4 respondents use 2 numbers of employees to produce ginger. Similarly, 1, 4, 5, 6, 7 and 9 employees have been used by 1, 2, 1, 2, 1 and 1 respondents respectively for farming ginger. Thus, in total 74 employees are used to produce ginger altogether 20 respondents.
6. Out of 36 respondents, 21 (58.33%) respondents have responded about changing income after starting ginger farming but 15 (41.67%) respondents have not changed in their income after starting ginger farming. There is majority of respondents changing income after starting ginger production.
7. About the expenditure money after earning from ginger production, out of 36 respondents, 14 (38.89%) respondents expenses money in education similarly same number of respondents expenses money in house expenditure. 6 (16.67%) respondents expenses money in health sector after getting money from ginger production. The least, 2 (5.56%) respondents expense in enjoyment. The study shows education and house expenditure is main sector to use money after earning from ginger production.
8. The study had found 36 (100%) respondents want to increase ginger production to increase income from ginger production.
9. Out of 36 respondents, 10 (27.78%) respondents have responded the most priority factor is market. Similarly, seed, manure, manpower, harvesting packaging and land is selected by 5(13.89%), 7(19.44%), 6(16.67%), 3(8.33%), 2(5.56%) and 3 (8.33%) respondents respectively. The least priority factor is packaging that is selected by 2 (5.56%) respondents whereas market is the most priority factor that is selected 10 (27.78%) respondents.

5.2 Conclusion

Ginger is one of the major spice crops of Nepal and is traditionally grown in the middle mountain areas for cash income of rural communities. Not only has ginger

been responsible for fulfilling the domestic demand, ginger has also remained to be one of Nepal's major export produces. Ginger is originally from Southern China, but now it is cultivated in many tropical and subtropical regions of the world. The economically harvested part of ginger is its rhizome (underground stem/root), which is mostly used as a spice and as a preserve. Ginger plays an important role in supporting rural livelihoods, including poor, marginal and disadvantaged communities. Nepal have been cultivating ginger with a bigger impact on smallholder farmer. It has proved to be more lucrative and beneficial than cereal crops.

The marketing channel usually consists of farmers, road head traders, district traders and processors or exporters. While exporting to India, ginger is usually provided to Indian commission agents, who work for 6-7 percent of sales commission. Domestic trade is mainly focused in major urban areas as the rural people usually plant their required quantity of ginger in their field.

The production trend of ginger is increasing gradually and lucrative trend also fame in rural people. The study has prioritized to know the production status of ginger in rural people and economic importance of ginger in rural people.

The study has wanted to emerge the production of ginger that production is helpful for ginger farmer or producer and national development. Ginger is a medium of profit maker of rural people that helps to earn money for their daily life expenditure. In study area, there is positive vibes of production of ginger; mostly farmers are engaged in ginger farming. Ginger producer has produced between 150 kg. to 2500 kg. ginger. This production quantity is positive quantity for ginger production. Mostly ginger producer use compost manure that shows positive trends because compost manure is good for cultivation any crops. In respondents, there are 74 employee are used to farm the ginger, this shows the employment are also created in rural area. The study found that respondents said the expenditure mediums are education and daily house expenditure after earning money from ginger production. The planning to increase the ginger production shows the importance of ginger in rural area.

Concluding that cultivating of ginger in mostly more than 1 ropani area, production o more than 2400 kg. ginger in a household, the market for ginger is near Biblate bazaar, the increasing price in Rs. 5 with last year per kg. price, increasing quantity of ginger, creating employment, changing lifestyle of ginger producer after starting

ginger farming and satisfaction of ginger production is the main and positive conclusion of this study.

5.3 Recommendation

The study has investigated the production status of ginger and economic importance of ginger production in Ilam municipality ward no. 2 Sumbek among 36 households. Along with, the study has concluded some findings regarding to some ideas for solving those problems. Here, researcher has presented some recommendations on the basis of his research conclusion. They are outlined as below.

1. It is no doubt that ginger is main cash crops in rural area. There should be influenced to farm the ginger in rural people.
2. Municipality office and ward office should provide the subsidies in manure and other equipment for ginger farming.
3. Municipality should conduct the training about new innovation to cultivate ginger.
4. Municipality and ward level agriculture sector office should conduct the training and awareness program of cash crop production.
5. Municipality should give the subsidies of money, new equipment, seed (rhizomes) to rural people.
6. Municipality office and ward office should arrange the agriculture tour of rural people in different agriculture pocket area especially for ginger producer.
7. Municipality office and ward office should manage the market to sell the ginger production.
8. Public institution should conduct awareness programme and training for new disease and problem in ginger farming.
9. The authoritative public institution, municipality office, ward office should manage the stable market for ginger producer.
10. The public institution and authorized or representative group should manage the equipment for making pickles, candy, squash, powder, sutho.
11. Ginger farmer should encourage for insurance that makes the reliable production of ginger in future.
12. Related authorized public institution should widely inform the market of ginger and market price of ginger.
13. Authorized person should manage the export agent for international market.

14. Authorized public institution should manage the trade mark and branding of ginger of Nepal that makes the high quality performance and high price of ginger.
15. Municipality office and ward office should conduct the training to clean or wash the ginger, farming, manure making programme and cultivating the ginger.
16. Municipality office and ward office should manage the seed rhizome for cultivating the ginger.
17. The public institution and authorized or representative group should manage the transportation for ginger farming and production.
18. The public institution and authorized or representative group should encourage to earn high income from ginger.

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Report on Logistics Study Ginger

Annex-i

Questionnaire

This questionnaire has been designed to implore information for purely academic purposes. This is to enable the researcher **Ms. Asmita Kadariya** complete his thesis on the topic; **Economic Importance of Ginger Production in Rural Area: Ilam Municipality Ward no. 2, Sumbek of Ilam district, Nepal**, in pursuance of Master of Art in Rural Development (MA.R.D.) degree.

Questionnaire for the Respondents

Age	Sex			Occupation	Number of family member
	Male	Female	Others		

Academic qualification			
illiterate	literate	SCL/SEE	Higher Education

1. How many family members are involved in agriculture sector?					
1	2	3	4	5	more than 5

2. Have you cultivated ginger farming?	Yes	No
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3. If you have cultivated ginger, how many area of land is used to cultivate?					
less than 8 anna	less than 1 ropani	more than 1 ropani	less than 2 ropani	more than 2 ropani	other

4. Which manure is used to cultivate the ginger?	Ans _____
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5. How many k.g. gingers are produced in your field in this year?	Ans _____
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6. How many k.g. gingers were produced in your field last year?	Ans _____
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7. Which is the bazar that you used to sell the ginger?	Ans _____
---	-----------

8. What is the price of ginger which you have sold this year?	Ans _____
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9. What was the price of ginger last year?	Ans _____
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10. Is there any disease in your ginger production field?	Yes	No
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11. Is any problem while farming ginger?	Yes	No
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12. If any problem, what is the problem while farming the ginger?
Ans: _____

13. How much rupees is being earned from ginger production in a year?
Ans: _____

14. How much rupees is being paid as expenditure in ginger production in a year?
Ans: _____

15. How much rupees is profit from ginger farming in a year?
Ans: _____

16. Do you use employee while you farming the ginger?	Yes	No
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17. If yes how many employee is used in ginger farming in a year?	Ans _____
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18. Is any income changing while you starting ginger farming or not?	Change	Not Change
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19. Which sector is used after you get money from ginger production?				
Education	Health	House expenditure	Enjoyment	Other _____

20. Have you planned to increase the ginger production?	Yes	No
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21. Are you satisfied from ginger farming?	Yes	No
--	-----	----

22. What is the most priority being while farming the ginger?						
Seed	Manure	Man power	Harvesting	Packaging	Market	Land

❧ Thanks for cooperation ❧

Annex-ii

Photographs with researcher and respondents in study area









“स्वच्छ समृद्ध सुसंस्कृत इलाम”
इलाम नगरपालिका
२ नं. वडा कार्यालय
सुम्बेक, इलाम



प.सं. : ०७७/०७८

च.नं. : १४३



१ नं. प्रदेश, नेपाल ।

मिति : २०७७/०८/१५

विषय : सिफारिस गरिएको सम्बन्धमा

जो संग सम्बन्धीत छ ।

प्रस्तुत विषयमा महेन्द्र रत्न बहुमुखी क्याम्पस इलाममा अध्यनरत विधार्थी अर्सीमता कडरियाको माग निवेदन बमोजिम निजले यस वडामा मानविकी संकायको ग्रामीण विकास विषय अन्तर्गत शोधपत्रको प्रस्तावान अदुवा खेतीमा गरेको सिफारिसका साथ अनुरोध छ ।

नारद प्रसाद तमराकार
वडा अध्यक्ष