

*Study report on Geographical Indication, Center of Origin of  
Indigenous and Local Fruit crops of Nepal*

# **(Lapsi and Chiuri)**



**Government of Nepal**

**Ministry of Agriculture and Livestock Development**

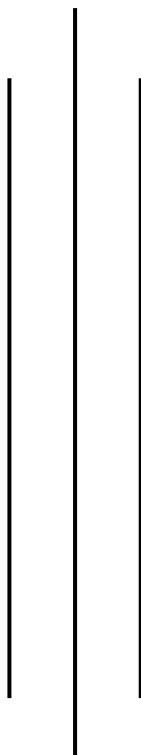
**National Centre for Fruit Development**

**Kirtipur, Kathmandu**

**2082**



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Government of Nepal  
**Ministry of Agriculture and Livestock Development**  
**National Centre for Fruits Development**  
Kirtipur, Kathmandu  
2082

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# Foreword

Lapsi (*Choerospondias axillaris*) and Chiuri (*Diploknema butyracea*) have been recognized as potential agro-forestry tree species for income generation to hill farming communities in Nepal. Lapsi is grown across 29 districts while Chiuri is reported across 46 districts in Nepal, with a significant concentration in the western and central regions. In the fiscal year 2081/82, the National Centre for Fruit Development conducted a study on Chiuri and Lapsi for the potential Geographic Indication and the Centre of Origin as Nepal's indigenous and local fruit crops. The initiative followed the recommendations from the meeting of National Centre for Fruit Development, National Gene Bank, Agriculture Development Directorate Chitwan, Agriculture Development Office Dhading, Pushpa Bikash Kendra Godavari, Seed Quality Control Centre, Warm Temperate Horticulture Centre, Dakshinkali Municipality, and private sector organizations like Himalayan Chiuri Oil Pr. Ltd, Rastriya Janaokalat Manch Nepal. Although both the selected crops have numerical advantages in terms of both nutrition and financial aspects, they are underutilized, so survey was done to assess the current status, distribution, and utilization of these valuable tree species. Chiuri is quite important within communities like the Chepang who rely on it for their livelihoods and cultural practices while Lapsi is famous for its use in pickles as ripe fruits and also locally processed products. Understanding these aspects is crucial for conservation efforts, sustainable economic development, and preserving the cultural heritage associated with Chiuri and Lapsi.

The guidance and expert ideas from all the experts from the National Gene Bank NARC, their team for their technical support, Warm Temperate Horticulture Centre, Kirtipur, Agriculture Development Offices of the study districts for their contribution and support during this study are highly appreciated. I also thank all the staff of National Centre for Fruit Development for the support. Special thanks go to the survey team members who generated the primary data and prepared the survey report of the three different districts.

Lastly, but not the least, it was the team responsible for preparing the report particularly, Kabita Sharma and Manita Tamang, Horticulture Development Officers and bringing this study into this concise form, the efforts are greatly acknowledged. I hope this book will shed light on the work done so far towards obtaining the geographical indication (GI) tag for the Lapsi and Chiuri and will be helpful in achieving this goal in the near future. This will also expect to serve as a model for other fruit crops which are potential for the GI tag.

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# Abbreviations

<b>%</b>	<b><i>Percentage</i></b>
<b>ADO</b>	<b><i>Agriculture Development Offices</i></b>
<b>FGD</b>	<b><i>Focus Group Discussion</i></b>
<b>FYM</b>	<b><i>Farm Yard Manure</i></b>
<b>GI</b>	<b><i>Geographical Indication</i></b>
<b>Ha</b>	<b><i>Hectare</i></b>
<b>Kg</b>	<b><i>Kilogram</i></b>
<b>KIS</b>	<b><i>Key Informant Survey</i></b>
<b>M</b>	<b><i>Meter</i></b>
<b>Masl</b>	<b><i>Meter above sea level</i></b>
<b>MS-Excel</b>	<b><i>Microsoft Excel</i></b>
<b>Mt</b>	<b><i>Metric ton</i></b>
<b>Mt/ha</b>	<b><i>Metric ton per hectare</i></b>
<b>NARC</b>	<b><i>Nepal Agriculture Research Council</i></b>
<b>NCFD</b>	<b><i>National Centre for Fruit Development</i></b>
<b>No.</b>	<b><i>Number</i></b>
<b>Rs.</b>	<b><i>Rupees</i></b>

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# ***Study report on Geographical Indication, Centre of Origin of Indigenous and Local Fruit Crops of Nepal***

## **1. Introduction**

Geographical Indication is a sign used on products that have specific geographic origin and possess qualities or a reputation that are due to place of origin. Geographical indications tags are important form of long-term protection provisioned in the trade related aspects of intellectual property rights (TRIPS) agreement of the World Trade Organization (WTO). Nepal boasts significant agrobiodiversity due to its climatic variation, with more than 100 agricultural products holding potential for GI tags. However, none of these products have been registered as GIs in Nepal. GI protection, focusing on product reputation, origin integrity, and market value, presents an opportunity for Lapsi and Chiuri in Nepal. Although there is a policy provision for GI in Nepal, the legal registration system is still under development by the Ministry of Industry and Commerce, and Supplies (Joshi et al., 2017). A GI tag is a sign or a symbol used on products which have a specific geographical origin and possess unique qualities conferred to them by that geographical location. The qualities, characteristics or reputation of the product should essentially be due to the place of origin (WIPO).

The absence of extensive documentation on native fruits and fruits varieties in Nepal has deprived the country of the right to obtain GI and Center of Origin status for many of its native fruits. Documenting Lapsi and Chiuri from various regions of Nepal can provide scientific evidences of their historical presence, introduce Nepal's Chiuri and Lapsi internationally and serve as a framework for obtaining GI status in the future.

This paper primarily focuses on collecting and studying primary data to accelerate efforts in documenting and preserving traditional knowledge, heritage varieties and farming practices associated with Lapsi and Chiuri in Nepal's major pocket areas.

## **2. Objectives**

- To identify, verify, and document products with characteristics linked to a specific geographic location, ensuring they are eligible for GI protection.
- To preserve the local landraces and traditional farming practices, promoting biodiversity.
- To improve the livelihoods of local producers and communities.

## **3. Methodology**

This study employed a comprehensive research methodology comprising literature review, related consultation, interactions and meetings outcome and surveys.

### 3.1 Site selection

Farmer's household surveys, market surveys, consumer surveys, key informant surveys (KIS), focus group discussion (FGDs) were conducted in the prominent areas of the country (listed below). The study site selection inside the district was made in accordance to the consultation with the government service provider organizations like National Gene Bank, Agriculture Development Directorate Chitwan, Agriculture Development Office Dhading, Pushpa Bikash Kendra Godavari, Seed Quality Control Centre, Warm Temperate Horticulture Centre, Dakshinkali Municipality and private sector organizations like Himalayan Chiuri Oil Pr. Ltd, and *Rastriya Janaokalat Manch Nepal* on the basis of their production, presence of old orchard and emerging new ones, recognition as Chiuri and Lapsi pockets.

Table 1: Districts selected for survey

S.N.	Name of District	Commodity	Location
1	Kathmandu	Lapsi	Dakshinkali municipality, ward no. 8 & 9
2	Chitwan	Chiuri	Kalika municipality, Siddhi
3	Makawanpur	Chiuri	Raksirang rural municipality- 06, Silinge

### 3.2 Data Collection:

#### 3.2.1 Literature review and outcome of the consultation meeting:

Extensive literature review was conducted to gather background information and insights of Lapsi and Chiuri, market trends, and consumer preferences. Also, some decisions like selecting the prominent Lapsi and Chiuri district was made based on the outcome of series of meetings held with the senior experts.

#### 3.2.2 Farmers household surveys:

A structured survey was administered to Lapsi and Chiuri farmers in prominent pocket areas, 30-35 household per pocket were surveyed. A total of 90 individuals (66 male and 24 female) participated in this survey.





Figure 1: Farmer household survey in Dakshinkali municipality



Figure 2: Farmers household survey in Kalika Municipality; Siddhi

### 3.2.3 Market Surveys and consumer surveys:

Five market surveys and five to seven consumer surveys were conducted to gather information market dynamics, pricing, and consumer preferences regarding Lapsi and Chiuri in each district.





Figure 3: Market survey in Kalimati

### 3.3.4 Key Informant Surveys:

KIS was conducted with at least three experts, including the chairperson of rural municipality, Chiefs/staffs of AKCs, Microfinance and other agricultural offices of each study district.

### 3.2.5 Focus Group Discussion (FGDs):

FGDs were held with 10-15 farmers, including elderly individuals, in all districts.



Figure 4: Focus Group Discussion with farmers of Raksirang, Silinge

### 3.2.6 Data Analysis:

Data collected from surveys and tests were compiled and computed using MS-Excel for analysis and is also interpreted on paper.

## 4. Lapsi

### 4.1 Introduction

Lapsi (*Choerospondias axillaris*) is grown in hills, of 850 – 1900 m height. Lapsi trees are distributed from North – East India to South – East China, Japan, Assam, Sikkim, Vietnam, Thailand, and Hongkong. Its tree is used for timber in China and for medical value in Vietnam. Lapsi tree is native to Nepal (Roxburgh, 1832). Lapsi tree is largely known for its delicious fruits in Nepal. The pulp/peel of ripen/raw fruits are used for sweet and sour pickles and candies. The seeds are used for brick kilns. Recent research on preparation of iron impregnated activated carbon from Lapsi seed has shown the potential use for the absorption of arsenic from water (Rajbhandari, 2015).

Lapsi has been recognized as one of the potential agro-forestry tree species for income generation to hill farming communities in Nepal (Paudel and Parajuli, 1999, Gautam, 1997 and LARC 1997). Nepal is an agrarian country employing 65 percent of the economically active population. Agriculture is the main source of food, income and employment for majority of the population.. Government of Nepal has emphasized on the production and processing of such high value agro forestry product (APP, 1995). Lapsi fruits cultivation and commercial enterprises can improve the income of farmers and thus, contribute in poverty reduction. Government of Nepal, Ministry of Agricultural Development in collaboration with Federation of Nepal Chamber of Commerce (FNCCI) has initiated One Village One Product (OVOP) program of Lapsi fruits to encourage the local community which is processing different Lapsi products in local as well as international market. It helps to generate income for people (FNCCI, 2007).

### 4.2 Historical Background of Lapsi in Nepal

The urbanization of Kathmandu valley created opportunities for the development of adjoining districts. Lapsi has been harvested from the forests to feed the markets in Kathmandu. Lapsi fruits entered the market in the mid-1960s and trade increased rapidly buoyed by brisk demand in Kathmandu for unprocessed fruits as well as candy, *mada*, seeds and ground-skin. Increasing demand for Lapsi fruits in Kathmandu led forestry programs to initiate its production. Accordingly, the cultivation of Lapsi trees has increased as part of forestry activities since the early 1970s, and processing industries have been developing in and around the Kathmandu in response. At present the Lapsi tree is widely used for private planting in the hills, as part of the community forestry program which was implemented in most of the hill districts of Nepal in the early 1980s with the support from bilateral and multilateral donors. Programs included establishing and operating nurseries in villages in order to produce seedlings of preferred species for planting in community and private forests.

### 4.3 Distribution of Lapsi in Nepal

Lapsi, *Choerospondias axillaris* is indigenous fruit tree of Nepal found growing within 900- 2000 m above sea level in many parts of the country. It is grown in 29 hill districts of Nepal for some socio-economic purpose (Paudel et.al, 2003). Lapsi trees are commonly found in places like Pharping, Machhaya gaon (Kirtipur), Phulbari, Panchkhal, Namobuddha, Kavre, Panauti and Dhulikhel of Kavrepalanchowk district as well as in Jiri, Charikot of Dolakha district and Chautara of Sindhupalchowk district. The tree has long been cultivated in rural Nepal for its fruit. The Lapsi tree is widely used for private planting in hills, as part of community forestry program. In the natural forest Lapsi trees are sparsely distributed. There is a tremendous opportunity for income and employment generation through proper management and use of Lapsi tree in Nepal.

### 4.4 Covered Area and Productivity:

Table 2: Lapsi fruits Covered Area, Production Area and Productivity in Nepal

Fruit	Total Area (Ha)	Productive Area(Ha)	Production(mt)	Productivity(mt/ha)
Lapsi	1279	995	6525	6.6

Source: Nepal Statistical Year Book-2023

Lapsi fruits can be consumed before and after annual processing. Production of Lapsi fruits is increasing according to the demand of consumers in market. Kathmandu valley is popular cultivator of Lapsi fruit in Nepal. At present, thirty-two districts have been producing Lapsi fruits in Nepal.

### 4.5 Importance of Lapsi

#### 4.5.1 Social and cultural importance:

Lapsi is used in several Hindu rituals and traditions. These fruits are utilised in numerous rites, such as an offering to the Gods. Lapsi trees are kept in the gardens of numerous temples in Kathmandu, where their fruits are vital to the survival of local monkeys and birds. These pretty large fruit trees can also be seen growing naturally in wild woods and in farmlands. As the demand for Lapsi products has increased in recent years, so has the demand for seedlings to boost agricultural stock.

#### 4.5.2 Religious importance:

In Hinduism, Lapsi (also known as Lapsika) holds religious significance as a food offering (Naivedhya) during Puja (Hindu ritual worship). It's commonly prepared and served during ceremonies and festive occasions. Skanda Purana, a Hindu scripture, mentions Lapsika as a suitable offering. In the Newari culture of Nepal, Lapsi fruits, along with Samayabaji, are also offered to deities during festivals.

### 4.5.3 Ecosystem services:

Lapsi plays a valuable role in the ecosystem, particularly in Nepal, where it is native. It contributes to soil conservation, biodiversity, and provides various ecological and economic benefits. Lapsi is often cultivated in agroforestry systems, helping to stabilize soil and prevent erosion. It also serves as a source of food and income for local communities, contributing to rural livelihoods.

### 4.6 Dakshinkali municipality as a Lapsi Area in Nepal:

Dakshinkali municipality is located in the southern part of Kathmandu valley. It lies between latitude 27° 35' 0" N, longitude 85° 15' 0" East. It has the average area of 42.68 km<sup>2</sup> (16.48 sq mi). The average height from the sea level is 1526m. Its average climate is Humid subtropical climate. The average annual rainfall is 56 mm. The total population of Dakshinkali is 24,296 that consists of 569.3 /km<sup>2</sup> (1,474.4 /sq mi). It has been found that almost ward no 8 and 9 in Dakshinkali has Lapsi trees especially in upland area. Most of the farmers residing the upland area have Lapsi tree in their lands. However, they are not growing these trees in commercial scale. They have got Lapsi trees growing naturally. In the natural forest Lapsi trees are sparsely distributed.

### 4.7 Findings:

#### 4.7.1 Socio-demographic condition:

The inhabitants of the study area exhibit varying socioeconomic conditions concerning education level, income sources, food sufficiency, family size, age, and occupation. The demographic distribution in the study included 29% women and 71% men.

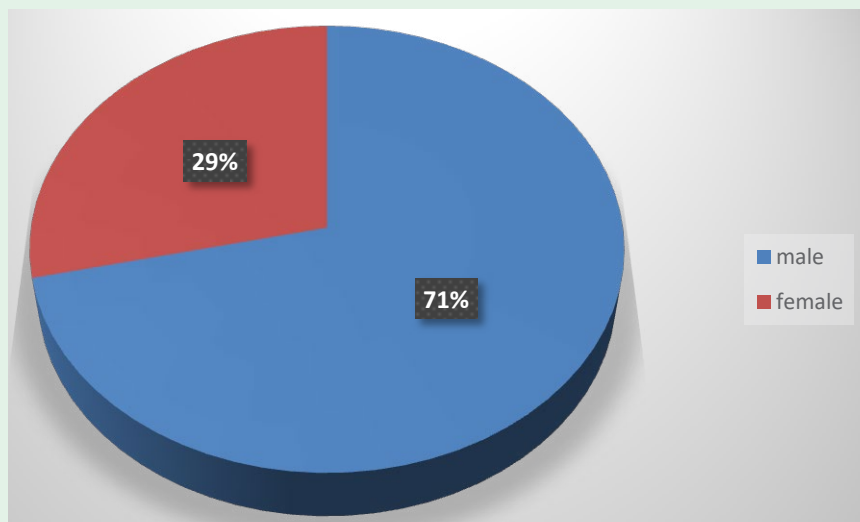


Figure 5: Gender ratio of the respondents.



#### 4.7.2 Ecology and Distribution of Lapsi in the area:

In Dakshinkali, Lapsi is often cultivated in agroforestry systems, where it plays a role in traditional farming practices. It is planted alongside other crops or integrated into existing agricultural lands, contributing to soil conservation and enhancing biodiversity. Cultivation of Lapsi trees is deeply rooted in here at the survey site. Most of the Lapsi area was found to be located facing in south slope direction as it is the light demanding commodity. The fruits hold cultural value and is often used in religious rituals and traditional cuisines. Lapsi cultivation contributes to the income of local farmers, especially in rural areas, where it serves as a source of livelihood.

#### 4.7.3 Origin:

- According to the farmers of Dakshinkali, Lapsi saplings have existed since prehistoric times in the jungle of Dakshinkali. These wild saplings were later domesticated by farmers. They stated Lapsi farming was started since *Lichhabikalin* area, which were found in the jungle and later they were distributed to other parts of the country also.

#### 4.7.4 Interesting facts:

- Jivan Basnet sings:** कति बस्छ्यौ माइतिकै कौसीमा, माइतिकै कौसीमा  
पाक्छु आँखा पाकेको लौसीमा, मैले के गरौ? तिमी आउछ्यौ कि आकेँ बे गरौ?
- Amrika Balami sings:** ए रिमै सिरीमा सिरी बतासै चलयो,  
हअअअअअअअअअअअ...लौसीबोटे डँडैमा।
- Mohan kaji Tamang sings:** लप्सी पाउँ, लप्सी पाउँ मुखै रसाउने,  
दौरा सुरबाल मैचालाइ कति सुहाउने।
- iv) And one of the tole or community is also named as *Lausigaun*, one of the residents' home is also termed as *Lausibote*.
- v) **Language evidences:** Local people term as *Laussi* for Lapsi, and Newari term for Lapsi is *aamli* and Tamang call it as *kalang*.

#### 4.7.5 Indigenous knowledge about cultivation, management and use of Lapsi

Local farmers have abundance indigenous knowledge about Lapsi cultivation, management and utilization. Almost all Lapsi fruits coming to markets to date are obtained from wild grown trees. Farmers are cultivating local varieties. Farmers have been protecting and growing naturally regenerated Lapsi plants in forest and farmland. They have increased cultivation of this tree for the last 10-20 years, especially when Pushpa Bikash Kendra, Godavari have begun to produce and distribute Lapsi saplings. No evidence on the use of improved technologies/ varieties for quality fruit production is found in area and no improved horticultural practices such as irrigation, fertilisation, and training pruning are applied. Lapsi is considered as one of the best agroforestry tree species to be grown in farmlands due to

several reasons such as thinner crown density, tall and deciduous in nature that causes low level of shading effect on cereal crops. However, the demerit of growing Lapsi in farmland/ bari is also realised by farmers as crop damage occurs while Lapsi harvesting. It is also evident from interaction with Lapsi growers that they are quite aware about the crop impact of Lapsi trees in their *bari* (un-irrigated farms) lands and they try to minimize this effect by locating trees in the margins of farmland, and pasture lands. Lapsi cultivation has been much influenced by marketing facilities such as access to motorable road, market centres; processing companies and traders' activity. The extensive cultivation of Lapsi around the districts of Kathmandu valley, and its catchment area provide absolute evidence on positive influence of market facility on Lapsi production. Farmers have categorized Lapsi in to different types according to their indigenous indicators that are based on fruit size, time of maturity and fruit quality (Table 3).

Table 3: Criteria used by farmers for the distinction of Lapsi types

<b>Fruit quality criteria:</b>	<b>Type</b>
Fruit size: small and large	Sano and Thulo Lapsi
Fruit maturity: early and late	Aghaute and Pachaute
Taste of fruit: sweet and sour	Guliyo and Amilo
Pulp content: high and low	Pulp content: high and low

#### **4.7.6 Disease and pest infestation:**

Fungal disease like powdery mildew, *Alternaria* leaf spot and various insect infestations is seen but no any precaution is applied for its control measures.

#### **4.7.7 Harvesting:**

Lapsi harvesting in Dakshinkali typically involves allowing the fruits to ripen on the tree until they turn yellowish-green and the pulp softens, then shaking the branches to dislodge them. While women are often involved in the initial stages of Lapsi production (growing, caring, and managing orchards), men typically carry out the harvesting. The harvested fruits are then assembled, stored, packed, and transported to local and urban markets. Harvesting is done typically between December and September.

Farmers started earning a decent income by selling their fruits to the processing factory. It is estimated that there around 8,000 trees is cultivated with Lapsi trees in Talku and Chhaimale, according to the Dakshinkali Municipality. Each tree yields 1-5 tonnes of fruit per season,” said Amrika Balami, chairman of ward no. 8. “As the tree bears fruit continuously for many years, Lapsi farming has become a dependable source of income for local farmers.

I recently sold Lapsi worth Rs150,000,” said Mankaji Tamang, a local from Chhaimale, in Dakshinkali-8. “Lapsi farming is not that difficult. If we can protect the saplings for five years, we can have a reliable revenue stream afterwards.

### 4.7.8 Major economic products:

Market price of the respective commodities at local market (Balkhu, Kalimati, Dakshinkali) during the study period was taken as an indicator of economic value of respective Lapsi products. Lapsi pickle and candy has found higher economic value across the study sites. Value of different Lapsi commodities at local market is given in the Table 4.

Table 4: Rate of economic products of Lapsi

Product	Unit	Rate
Fresh Fruit	Kilogram	Rs 30-40 (Season), 150-300(off-season)
Mada	Kilogram	Rs. 500-600
Candy	Kilogram	Rs. 500
Pickle	Kilogram	Rs. 500-1500
Powder	Kilogram	Rs. 600

Table 4 indicates that Pickle and Candy of Lapsi has huge scope to increase income of local people and diversified economic value of Lapsi could be an important tool for income generation of the rural people across the study areas.

Some of the traders of Kalimati store Lapsi in cold storage in Chovar, and they fetch the higher price during off season; *Falgun to Baisakh*.

Mahendra Shrestha, trader in Kalimati says “Lapsi is a tree where nothing goes waste, when we import Lapsi from the distant village too, only 10-15% Lapsi gets injured, and even the injured Lapsi is processed and made mada and can be sold even in higher price”.

### 4.7.9 Processing, marketing and trading of Lapsi products

Fruit processing is taking place at domestic, semi-commercial and commercial scale. Farmers in remote areas are traditionally processing Lapsi for household needs as pickles (both fresh and packed), and *mada*. Mada is a collective name for dried Lapsi mat prepared from the pulp and peel of Lapsi fruits by crushing in a wooden mortar and pastel (Dhiki), often mixed with salt, sugar or spices, sun dried, packed and sold in markets as dry fruit products. The production and sale of Lapsi fruits for processed products such as *mada*, candy and titaura is confined around urban areas, whereas local sale and bartering of Lapsi fruit for salt, sugar, cereals and stationery has been reported to take place even in remote areas. New processing companies are established in smaller town centres, as road network is being expanded.

Talku Lapsi Prasodhan Pr. Ltd located at Dakshinkali 9, is serving its facility for more than two decades by producing candy, *mada* and supplying to the local as well as distant market.



Jeevan Basnet, owner of Talku Lapsi Prasodhan Pr. Ltd. at Talku in Dakshinkali Municipality-9 spends his day outsourcing, managing, storing and processing the fruit. The factory employs around a dozen persons for processing and packaging. Seasonal workers are also hired to pick and collect the fruits during peak season.

The factory was established more than two decades ago, but it only saw a sharp rise in demand for its products in recent years. Orders for candy, pickle, jam and other products made of hog plum have been coming in from both domestic and international markets. “Lapsi products were sold mainly for domestic consumption in the past,” said Basnet. “But international demand has been growing in recent years.”

From the last four years, the factory has been exporting the Lapsi products to the United States too, according to Basnet. “Recently, we have also received orders for our products from South Korea, Japan and a few European countries,” he said.

Most of the Lapsi products are consumed within Nepal. However, the possibility for exporting Lapsi products could be improved with better management and processing practices. The main marketable products are: Mada, Candy, *Titaura*, Lapsi pau, Lapsi powder, Lapsi squash etc.

#### **4.7.10 Consumer preferences:**

Consumer prefer local *Lapsi* and when surveyed they showed interest upon processed Lapsi than fresh *Lapsi*. Consumer prefer shiny yellow coloured *Lapsi*, *Lapsi* with more pulp and slightly sweet in taste. Among processed, *Lapsi* pickle and the candy was most preferred by the consumer in the market.

### **4.8 Opportunities**

Lapsi is a wild, indigenous fruit tree of multiple benefits. It is a potential agroforestry tree species for income generation and nutrient supplementation in the middle mountains of rural Nepal. Lapsi has great potential as a cash-generating tree for hill farming communities in Nepal thus, reducing farmers’ reliance on subsistence food production and to improve their welfare. Regular annual income generation by the tree has great positive impact on the poverty alleviation of indigenous people in general. Lapsi is a multipurpose tree that has higher income and employment generating potential without deteriorating the natural environment. Farmers have been encouraged to grow Lapsi because of high demand of Lapsi from processors and collectors. Producers have not been able to fulfil the demand of markets. There is a great opportunity for income and employment generation through proper management and use of Lapsi tree. All the people involved in Lapsi business do not get worried of their stuffs’ marketing. Processors say they can sell their varieties in the market even they don’t get cash selling at the time of delivery. Lapsi wood is used as light construction timber and fuel-wood, seed stones are used as fuel in brick kilns and the bark has a medicinal value for treating secondary burn.

## **4.9 Conclusion:**

Dakshinkali municipality is a popular cultivator of Lapsi fruit in Nepal. Lapsi cultivation has started many more years ago, since *Lichhabikalin* era. Lapsi fruits are available from August to April. Farmers have been protecting and growing naturally regenerated Lapsi plants in forest and farmland. Fruit nurseries have started providing grafted seedlings recently but most of them rely upon the self-germinated *Lapsi* tree and no any innovative technologies have been followed for *Lapsi* cultivation. Different language evidences, songs related to the crop, religious beliefs, rely upon social status strongly points for the Lapsi to be native in the locality.

Furthermore, investigation is needed. More lab testing like DNA finger testing, organoleptic tests should be performed to find out the uniqueness of the fruit growing over there.

Providing tagging to the fruit will enhance towards the trade promotion and identity of the product nationwide and worldwide. There is some small and medium Lapsi fruit processing industries in Dakshinkali. A good market of Lapsi fruits creates employment opportunities for local people, helps earning foreign currency and develops economy of the country. Proper study on flowering physiology of Lapsi is a present need in developing a proper training and pruning practice for the increment of the yield as well as to reduce the harvesting difficulty.

Based on the findings, the study recommends that:

- i. More molecular level testing needs to be done for more reliable information.
- ii. Nationwide survey and research can give more accurate information about the indication tag of origin for Lapsi.
- iii. Production of Lapsi fruits should be increased. Therefore, research of Lapsi fruits should be continued to improve its varieties through Nepal Agricultural Research Council (NARC).
- iv. Training on improved practices of cultivation, harvesting, packing, grading, processing, packaging, labelling and variety should be given.
- v. Collection centre and cold storage must be facilitated.
- vi. Materials required for harvesting like tarpaulins, nets, ladder are to be provided.
- vii. Minimum price for Lapsi fruits as well as processed products should be supported.
- viii. Candy products of Lapsi fruits should have both quality and quantity.

## 5. Chiuri

### 5.1 Introduction

The botanical name of common Chiuri found in Makwanpur district of Nepal is *Diploknema butyracea* (Chikanbanjar et al. 2021). It also has other names such as *Aesandra butyracea*, *Madhuca butyracea*. The Chiuri, a medium size tree that inhabits in sub-Himalayan tracks of steep slopes and cliffs at an elevation of 400 to 1400 meters from west to east of Nepal, belongs to Sapotaceae family of the plant kingdom (Shukla 2017). The highest population of this tree species is believed to be in mid-western region of Nepal (Shukla 2017) present day parts of Lumbini and Karnali provinces. Nepal has approximately 10.8 million trees of Chiuri geographically distributed in 46 districts of the country (MEDEP 2014) and has potential to produce 37,245 MTs Chiuri butter and 17,285 MTs of honey from Chiuri trees (MEDEP 2010).

The Chepang, a minority group of semi-nomadic people consume Chiuri butter (gheu) and conserve the trees. The Chepangs are highly dependent on forest resources, partly for their use and partly for barter and sale (Bhattarai 1995; Chhetri et al. 1997). Leaves of Chiuri is used as a fodder for livestock, the residue of leaves is also used as manure and stems are used as a source of alternative source of fuel (Thapa 2019).

*Diploknema* is a genus native to Southeast Asia, the Himalayas, and southwestern China and comprises seven species, of which Nepal shares only *D. butyracea* (Press et al., 2000; Shrestha et al., 2022), a native tree species to the sub-Himalayan tracts of Nepal, India, China, and Bhutan

### 5.2 Historical background of Chiuri in Nepal

The Chepangs are a marginalized community, residing mainly in Gorkha, Makwanpur, Chitwan, and Dhading districts. Their slash-and-burn lifestyle has always been inextricably linked to the versatile चिउरी (Butter Tree). Historically semi-nomadic, they only started farming 80 to 120 years ago and rely instead on forest resources. They trade forest products like fiddlehead fern (निघुरो) and Chiuri for rice and grains. Chiuri especially is closely associated with Chepangs.

But the accelerated destruction of the *Chiuri* has imperilled Chepang traditions, culture and way of life. Here in the rolling hills of Makwanpur district south of Kathmandu, Ramesh Praja remembers fondly the festive *Chiuri* flowering season in winter, when the entire forest used to hum with bees to the blossoms.

In the past, the Chepang community used to give Chiuri plants as dowry in their daughters' marriages, considering Chiuri (*Diploknema butyracea*) as multipurpose and reliable. Traditionally, the mother-in-law would provide dowry to her married daughter with honey, oil, and butter.

## 5.3 Linguistic evidences

Language	Vernacular name	Language	Vernacular name
English	Butternut	Nepali	Chiuri
Bhutanese	Yika Shing	Newar	Ibuchi Pu Ma
Hindi	Phulwara	Rai	Isi
Chepong	Yoshi	Raji	Chiurya
Limbu	Imseva	Sanskrit	Madhupushpa
Tamang	Chyumli, Singbar	Tharu	Chihuly
Chepong	Yosai		

Source: Bhattarai et al., 2024

## 5.4 Importance of Chiuri

### 5.4.1 Nutritional value of Chiuri

Constituents	Flowers (%)	Constituents	Seeds (%)
Moisture	19.8	Refractive index	1.452-1.462
Protein	6.37	Saponification Value	187-197
Fat	0.5	Iodine value	55-70
Total Sugar	54.06	Unsaponifiable matter	1-3
Calcium	8.00	Palmitic C 16:0	24.3
Phosphorous	2.00	Stearic acid	22.7
Ash	4.36	Oleic acid	37.0
		Linolic acid	14.3

Source: Wealth of India, 2008

### 5.4.2 Economic Importance

Chiuri butter has historically been a primary source of income for the Chepong community, alongside other products like honey, oilcake, and leaf plates.

### 5.4.3 Traditional Uses

For generations, the Chepong have utilized Chiuri for various purposes, including making butter, oil, and medicinal products. They also use the leaves for making plates and the fruits for making alcoholic beverages.

### 5.4.4 Ecosystem Services

Chiuri is a good soil binder, useful for soil conservation. Chiuri adapts to slopes and barren land with comparatively less fertile soils, making it a suitable species for restoring degraded landscapes (Acharya 2023; Uprety et al. 2023). Chiuri also provide food and shelter for bats, birds, honeybees and other insects (MEDEP 2010).

### 5.4.5 Cultural Symbolism:

The tradition of giving Chiuri trees as dowry highlights the tree's value as a private asset and a symbol of wealth and prosperity within the Chepang community. Felling a Chiuri tree is considered a sin by the Chepang, demonstrating the deep reverence they hold for the tree. Because of its deep cultural significance, Chiuri is recognized as a cultural keystone species for the Chepang people of central Nepal.

## 5.5 Findings:

### 5.5.1 Socio-demographic conditions:

The total inhabitants of both the study area exhibit varying socioeconomic conditions concerning education level, income sources, food sufficiency, family size, age, and occupation. The demographic distribution in the study included 23% women and 77% men.

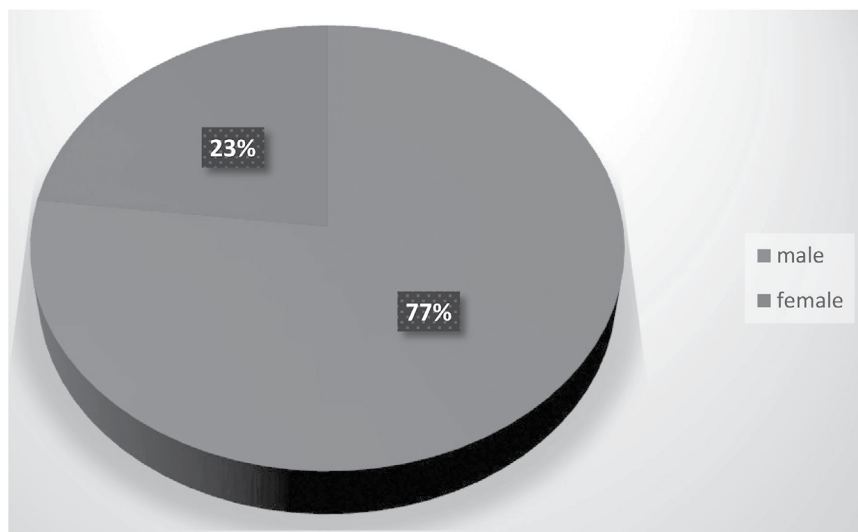


Fig 6: Gender ratio of the respondents

### 5.5.2 Origin:

According to the farmers of both Kalika municipality and Raksirang rural municipality, Chiuri saplings have existed since ancient times in the jungle. These wild saplings were later domesticated by farmers.

### 5.5.3 Interesting facts:

- i. There is a popular place named after Chiuri; चिउरीटार, चिउरीबारी in Chitwan and Makawanpur..
- ii. Govinda praja sang: चिउरीको फूलै टिपी सिरैमा सजाइदिनु सरमाउदै निउँरिउला ।
- iii. Sujita Praja sang a Chepang song” उकाली र ओराली बाजेड जाविलाती कमला योतुडला

- अलजेनास अर्थ: उकाली र ओराली म हिड्छु चाबी बोकेर चिउरी खान जान्छु।
- iv. ढाका टोपी सिरैमा ढल्केको, कुराउनीमा बिरालो पल्केको, ए चिउरी पातैमा, बस्दै न माया एकै रातमा।
  - v. चिउरी फूलको बोट, पिरती लाउनेले पायौं दिलमा चोट।
  - vi. Gam Bdr Praja sang a song "रसै मिठो त्यो चिउरी फूलको, राखिराखु सम्झना झझल्को"
  - vii. A famous festival celebrated after Chiuri: तोडकोलोड/च्योनामा
  - viii. *Chiuri is given to daughter as dowry during their marriage ceremony*

#### 5.5.4 Ecology and distribution:

Being a light-demanding species, it is found to be flourishing well at south-facing slopes of the sub-Himalayan region, precisely in the Siwalik and its higher elevation ranges in Nepal. It was found to occur singly or in small patches as a component of natural forest or agricultural vegetation. It is usually sparsely distributed in wastelands, pastures, rocky ridges on steep slopes, and agricultural lands near the villages of study area.

Raksirang Rural Municipality in Makawanpur is home to many families from the Chepang community, and butter tree, locally called Chiuri, plays a vital role in the lives of these people. The ecosystem connects three major components—Chepang (चेपांग), Chiuri (चिउरी), and chamara (चमेरा). For generations, these three **चस** have existed in a mutually beneficial system distinctive to the Chure. For one to survive, they must all thrive. When the population of bats flourishes, Chiuri (*Diploknema butyracea*, or butter tree) blooms. And when Chiuri blooms, Chepangs prosper. Bat meat was widely consumed in the community, which led to a decrease in the number of these mammal birds. At present, the community forest has imposed a restriction on hunting and killing the birds. For the conservation of bat, Bagmati province have announced the program of *Chepang, Chiuri ra Chamero* to be implemented from the fiscal year 2080/81. The relationship between *Chiuri Chepang and Chamero* can be explained as Chiuri triangle.



Figure 7: Place named after chiuri in Makawanpur.



### 5.5.5 Types of Chiuri:

From the survey, it is found that there are four types of the Chiuri grown in the study area based on the month of fruit maturity. The four types of the Chiure trees found in Raksirang Rural Municipality and Kalika Municipality are Asare (Wayo), Shrawane (Lanyo), Bhadaure (Chitiye) and Mangsire (Tomyo); fruit harvesting in third, fourth, fifth and eighth month of Nepali Calendar.

### 5.5.6 Cultivation practices of Chiuri:

Both in Raksirang rural municipality and Kalika municipality farmers still follows traditional knowledge for Chiuri cultivation and no innovatory methods is being applied for increasing productivity of the fruit. At most all Chiuri fruits coming to markets to date are obtained from wild grown trees. Farmers are cultivating four types of Chiuri varieties; *Wayo*, *Lanyo*, *Tomyo* and *Chitiye*. Farmers have been protecting and growing naturally regenerated Chiuri plants in forest and farmland termed as *khoria*. Nowadays nurseries have started producing grafted Chiuri saplings and providing to the farmers residing over there. No evidence on the use of improved technologies/ varieties for quality fruit production was found in site and no improved horticultural practices such as irrigation, fertilisation, and pruning were applied. Chiuri is considered as one of the best agroforestry tree species to be grown in farmlands due to several reasons like the tree's leaves serve as fodder for livestock, and the residue can be used as manure. Chiuri trees also contribute to environmental benefits by stabilizing slopes and restoring degraded land.

However, the disadvantage of growing Chiuri in farmland is also realised by farmers as crop damage occurs while Chiuri harvesting. While Chiuri is not always considered invasive, in some cases, it can spread rapidly and aggressively, potentially outcompeting other crops and native vegetation. This can be a problem in farmland, where farmers may want to maintain specific crop rotations or prevent the spread of unwanted plants.

It is also evident from interaction with Chiuri growers that they are quite aware about the crop impact of Chiuri trees in their *bari* (un-irrigated farms) lands and they try to minimize this effect by locating trees in the margins of farmland, comers and pasture lands. Chiuri cultivation has been much influenced by marketing facilities such as access to motorable road and market centres; processing companies and traders' activity.

### 5.5.7 Harvesting techniques:

The Chiuri tree is found on steep and difficult slopes. Climbing the tree is difficult and it is dangerous to harvest the Chiuri fruit. In many instances people fall from the trees and succumb to serious injury; sometimes loss of life occurs. The producers here place *doko* (traditional basket) on one shoulder, pick up the fruit with their other hand and place it into the *doko*. Normally, the men climb the trees and women gather the fruit that has fallen to the

ground. Children also help in the gathering of the fruit.

### 5.5.8 Major economic products:

The study showed that almost all sampled farmers are growing and harvesting Chiuri for fruit, seed and ghee purpose. Chiuri, being a versatile and beneficial plant, is referred to as “Kalpavriksha” due to the utility of its leaves, fruit, flowers, and plants. However, the usage varies across locations, customs, and cultures.

Table 5: Major products of chiuri and their uses

Product	Uses
Chiuri ghee	<ul style="list-style-type: none"><li>✓ Used in vegetable and for making bread throughout the year</li><li>✓ Used for light a lamp</li><li>✓ Used as a face cream to soften the cracked areas of the hands and feet</li><li>✓ Used on burn part of body</li><li>✓ Used on religious purpose</li></ul>
Oilcake	<ul style="list-style-type: none"><li>✓ Used as a fertilizer in agriculture field</li><li>✓ Suitable for killing earthworms, ants, butterflies, and protecting crops from cowpeas</li><li>✓ Used to stick fish when fishing in rivers, ponds and lakes</li></ul>
Flower Juice	<ul style="list-style-type: none"><li>✓ Useful for making honey</li><li>✓ Used for making “khudo”</li><li>✓ Used for washing cloth</li><li>✓ Used for energy drink</li></ul>
Leaf plate (Tapari)	<ul style="list-style-type: none"><li>✓ Used for religious purpose as well as used for lunch at a time of agriculture field work</li><li>✓ Used in making compost manure</li><li>✓ Used in fodder for animal.</li></ul>
Liso	<ul style="list-style-type: none"><li>• Used for catching bats, killing insects, mice, etc.</li></ul>
Raw Chiuri	<ul style="list-style-type: none"><li>• Exchanged fresh Chiuri with rice in equal amount specially in Chaudhary community</li></ul>



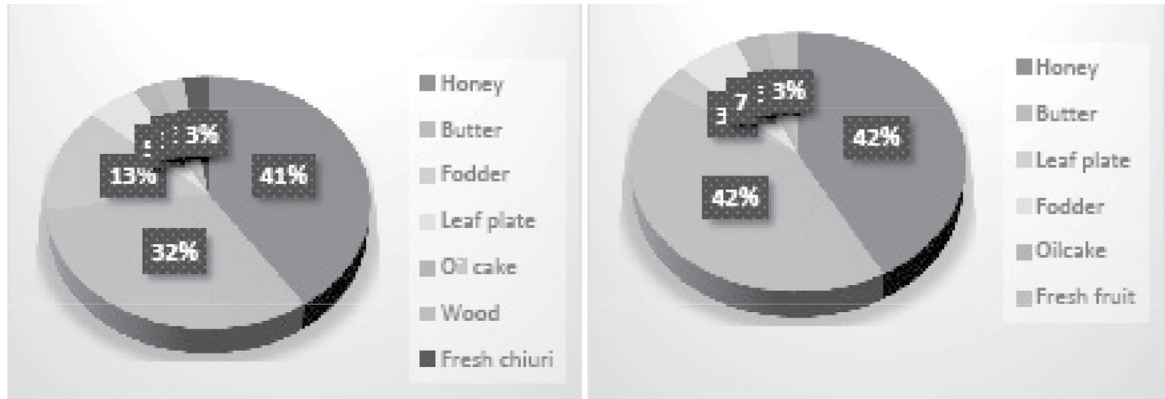


Figure 8: Pie chart showing % of respondent's involvement to produce a product in Kalika municipality and Raksirang Rural Municipality respectively

### 5.5.9 Economic value of major Chiuri products:

Market price of the respective commodities at local market during the study period was taken as an indicator of economic value of respective Chiuri products. Chiuri honey and Chiuri ghee has found higher economic value across the study sites. Value of different Chiuri commodities at local market is given in the Table 6.

Table 5: Value of different Chiuri commodities at local market

Products	Unit	Price
Ghee	Kilogram	Rs.250
Oilcake	Kilogram	Rs. 150
Fresh Fruit	Kilogram	Rs. 50-60
Honey	Kilogram	Rs. 350-500

Table 6 indicates that Ghee and Honey of Chiuri has huge scope to increase income of local people and diversified economic value of Chiuri could be an important tool for income generation of the rural people across the study areas.

### 5.5.10 Processing methods:

In earlier days, ghee was processed at a community level. This is now undertaken at the individual household level. Normally, about 18 kg are required to produce one litre of ghee. The processed ghee is used for domestic consumption. Among the farmers surveyed the consumption of Chiuri ghee varied from 2-5 kg per year per household in Chitwan district. The Chiuri fruit is collected and squeezed to liberate the seeds. After cleaning and drying, the seeds are pounded using a traditional pounder, a "Dhiki", into a fine powder. The powder is steamed on a perforated plate over the boiling pan. The oil is then extracted using a traditional oil expeller called a "Chepuwa". The product is bitter in taste due to high content of impurities such as saponins which are carried along with extracted oil. The ghee needs post filtration or purification to make it edible. The final product is white with a strong smell and taste.

There are number of value-added products which can be made out of Chiuri butter. If proper training and technical backstopping support is provided, the rural farmers can make these products locally. At present, Chiuri dwellers manage to harvest only a small quantity of fruits. Since the trees are very tall and mostly found in slopes it is hard and tedious job to harvest fruits. It is also difficult to extract butter with traditional tools and techniques. Hence, keeping in view the increasing demands of Chiuri butter for making value added products, it seems necessary to set up of improved oil expeller for the commercial production of Chiuri butter.

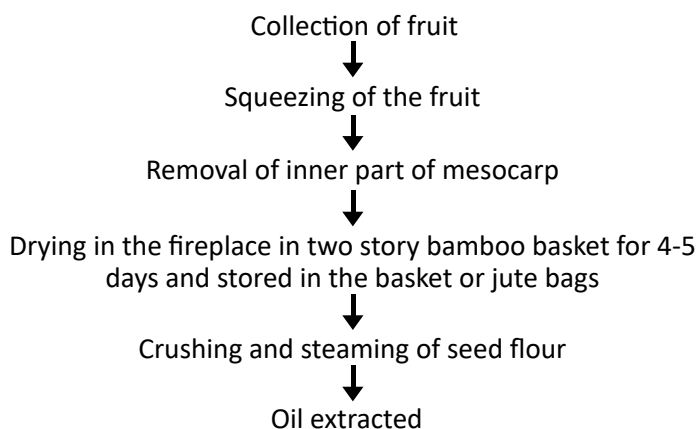


Figure 9: Flow diagram for extraction of Chiuri oil

#### **5.5.11 People's involvement in selling Chiuri product:**

Chiuri, being a multipurpose tree species, could be sold in various raw product forms. Around 20-30 years ago, most of people were involved in processing and selling Chiuri products especially Chiuri ghee in Swoyambhu area, Buddha Gumba area for lighting candle. But now as it is replaced by Vegetable ghee (*Dalda*), other oil in cheap rate so marketing of Chiuri product is deteriorating nowadays and they are using Chiuri mostly in household consumption.

#### **5.5.12 Marketing of Chiuri**

Chiuri products are usually handled by the Chepang community and they are used mostly for household consumption. They do not have accurate information about the market price of the Chiuri. The price of the fruit is determined by the dryness of the fruit. Dried fruit fetches a higher price to a raw fruit. Raw fruit is black in colour and turns white when dried. Preharvest selling of the fruit to the traders is common. The traders provide cash according to requirement of the producers. The producers sell the fruits at NRs 12-14 per 2.8 Kg. (Pathi) and the ghee is sold at about Rs 500per kg.

## 5.6 Conclusion:

It is evident from the survey that Chiuri is growing around 800-1000 masl elevation in the Rakshirang rural municipality and Kalika municipality area. Most of them have Chiuri older than 100 years of age and their *khoria* facing south direction. The Chiuri takes 6-10 years' time to start fruiting from seeding after plantation. Four types of Chiuri namely Wayo, Lanyo, Chitiye and Tomyo are found in the surveyed area. Based on the survey, Wayo and Lanyo Chiuri were found in lower elevation whereas Chitiya and Tomyo Chiuri were found in higher elevation.

Different languages evidences, Chiuri related festival celebrating in Chepang community, status of Chiuri in their marriage ceremony, traditional folk songs indicate Chiuri to be native in that locality. Further more tests like DNA finger testing can elaborate more accurate results for the indication tag of origin for Chiuri.

Today, the utilization of Chiuri leaves, flowers, fruit, latex, and bark is limited to a few uses. For the Chepang community in Kalika Municipality and Raksirang Rural Municipality, Chiuri is considered their property, consumed, and sold in the market. While Chiuri oil seeds were once harvested for cooking purposes and sold in the market, modernization and globalization have led to an increased utilization of mustard oil and the initiation of new businesses in honey production through modern methods.

## 5.7 Way forward

- Conduct a national resource inventory of Chiuri
- Target programmes of Chiuri conservation by relevant agencies
- Diversify products, add value and develop markets
- Document and support the maintenance of traditional knowledge of Chiuri
- Conduct research into ecosystem services from Chiuri.

## 6. Findings

### 6.1 Commodity: Lapsi Findings of Survey: Kathmandu district, (Dakshinkali municipality 8 & 9)

#### 6.1.1 Findings of Farmers household survey

Table 7: Overview of farmers Household survey

Description	Response
No.of male and female participated	71% male and 29% female
Initial orchard established	100-200 years before (at the time of their ancestors)
Total cultivated area	1028 household and more than 8000 trees
Growing direction in jungle/Khoria	South, East, West
Climate	Warm and humid and 900-1200 masl.
Land preparation	95% people don't prepare land for Lapsi as they protect self generated Lapsi. 5% farmers have started land preparation for grafted seedling.
Land type	100 % slopy
Pit digging	At least 50 cm depth.
Variety growing	100 % Local
Composting and fertilizer application	100 % composting
Nursery establishment	No nursery in the locality.
Sapling type (Seedlings/grafted	80% seedling and 20% grafted nowadays
Planting month/season	Asar/ Rainy season
Source/type of irrigation	100 % Rainfed
Weeding	Slash and burn.
Intercropping	Intercropping is practiced in the cultivated land only.
Average height of the plant	20-50 m.
Harvesting time/season	Shrawan-Magh
Harvesting indices	Color change- Green to pale yellow
Average production per plant	1-5 tonnes.
Direct sell/store	100% fresh fruits are sold directly to local market, Kalimati and Balkhu
Priority ranking of Lapsi product	Pickle, mada,
Market	Kalimati, Balkhu, Dakshinkali, Kavre
Disease/insect pest and control measure	No insect infestation noted

### 6.1.2 Findings related to Focus Group Discussion survey

**Table 8: Overview of Focus Group Discussion**

Description	Response
FGD conducted group	1(7 participants)
No. of male and female participated	85.72%Male and 14.28%female
Year of cultivation	More than 100 years ago
Household growing Lapsi	Approximately 1028
Evidences about Lapsi	Lapsi is the most essential dish for Newari festivals
No. of Lapsi tree (Average)	7.78
No. of trees	More than 8000
First saplings introduced	Pushpa Bikash Kendra Godavari
Local name	Lausii by locals, Newar-Aamli and Tamang- Kalang
Land type	100% slopy
Benefit of planting Lapsi	Enriched life style and easy for household cost.
Variety growing	100% Local
Composting and chemical fertilizer	100% composting
Nursery establishment	No private nursery established
Sahakari involved for Lapsi	Kriyashil Sana Kishan Krishi Sahakari Sanstha. Ltd
Suggestion	Provide training for proper and easy harvesting of Lapsi and subsidies to actual farmers.

### 6.1.3 Findings related to market survey

**Table 9: Overview of market survey**

Description	Response
No. of respondent/traders	6
Experience of selling Lapsi	35 yrs
Most preferred location	Kavre, Helambu, Dakshinkali, Pharping
Variety sold	Local
Prioritized location/var.for selling	Kavre, Helambu, Dakshinkali, Pharping
Price of Lapsi	20-30(season), 200-300(off-season)
Easily sold or not	Easily sold
Distinguishing character	Not so evident
Market supplied	Local markets of Kathmandu, Chitwan, Kavre
Storage	100% Directly sold
Problems	Price fluctuation
Suggestion	Support for better storage facility, tagging

## 6.1.4 Findings related to consumer survey

**Table 10: Overview of consumer survey**

Description	Response
No. of respondent/traders	6
Access of getting Lapsi in market	Yes
Price of Lapsi	40-50 in season and 200-300 in offseason
Choice of variety in market	Local
Location of growing	Kavre, Helambu, Dakshinkali, Pharping
Qualitative characteristics of choosing	Sour, slightly sweet, shiny yellow in color
Time of availability of Lapsi	Asoj-Magh
Problems	Grading, Storage
Suggestions	Increase availability and increase more shiny color Lapsi

## 6.2 Commodity: Chiuri

### 6.2.1 Findings of Survey: Chitwan district, (Kalika municipality, 10 & 11; Siddhi)

**Table 11: Overview of farmers Household survey**

Description	Response
Initial orchard established	100-200 years before (at the time of their ancestors)
Direction	South, East, West
Climate	Warm and humid and 900-1200 masl.
Land preparation	100 % farmers cultivate in Jungle called “Khoriya” and no land preparation as it is grown in Jungle dadopakho.
Land type	100 % Slopy
Layout	95% farmers do not follow standard layout; 5 % farmer have recently started following layout in orchards.
Pit digging	At least 50 cm depth.
Variety growing	Tomiyo (Early var, large seed), Langyo (Mid var), Chitiyo (Late var.), Prichiyo (small seed)
Composting and fertilizer application	100% composting nowadays
Nursery establishment	Community forest (Indreni Samudayik Ban, Praja Eakata Uthan Samaj)
Sapling type (Seedlings / grafted)	100% Seedlings
Planting month/season	Asar/ Rainy season
Source/type of irrigation	Kulo/Rainfed
Weeding	Slash and burn.

Description	Response
Intercropping	100 % farmers practice intercropping but only in cultivated land.
Average height of the plant	20-50 m.
Harvesting time/season	Asar- Bhadra
Harvesting indices	Color changed from green to pale yellow, sweet and milky, with a sugary scent. The fruits are soft and falling down.
Average production per plant	70-100 kg.
No. of fruit per bunch	3 to 5
No. of seed/fruit	1 to 3

## 6.2.2 Findings related to Focus Group Discussion

**Table 12: Overview of focus group discussion survey**

Description	Response
FGD conducted group	1(5 participants)
No. of male and female participated	100% male
Year of cultivation	100-200 years before (at the time of their ancestors). Growing naturally regenerated Chiuri plants in forest and farmland.
No. of farmer's household involved in Chiuri farming (HH)	200
No. of Chiuri tree (Average)	150000
Plantation area (ha.)	1500
Local name in Chepang language	Yosaai means Chiuri and Yotaaku means Chiuri bot
Evidence about Chiuri	3 “च”Chepang, Chiuri and Chamera program supported by Bagmati province, Place of name; Chiuritaar, In Chepang community, Chiuri is given to their daughter as a dowry during the marriage ceremony, Tongkolong/ Chyonaama festival (Nwugi)
Land covered by Chiuri	100 % slopy
Social impact in society by producing Chiuri	Income generated and enhancement of livelihood.
Variety and its attributes	Tomiyo (Early var, large seed) Langyo (Mid var), Chitiyo (Late var.), Prichiyo (small seed)
Nursery establishment	Community forest, Chepang Chiuri chamera nursery, Majhawang(Kaji Praja 9845693804)- financial supported by Bagamati province, Praja Eakata Uthan samaj.

Description	Response
Intresting fact (song/poem/Ukhan-thukka)	Chiuri phulko bot pirati laaunaale paryo dillma chot....

### 6.2.3 Findings of market survey:

Table 13: Overview of market survey

Description	Response
No. of respondent/traders	5
Experience of selling Chiuri product	8-10 years
Most preferred location	Hetauda, Narayanghat, kathmandu, Pokhara and local market
Price of fresh Chiuri fruits (Rs.)	50-60 (season), 350-500 (Chuiuri honey)
Easily sold or not	Easily sold
Distinguishing character fresh fruits	color pale green yellowish, sweet and milky, with a sugary scent. The fruits are soft.
Distinguishing character of Chiuri honey	Dark amber to Dark brown color
Market supplied	Local markets, Kathmandu, Chitwan, Hetauda, Butwal etc
Storage	100% Directly sold
Problems	Support for improved storage facilities, tagging and processing units.
Suggestion	Chiuri falls under underutilized forest crops; a study is being conducted on it that is highly appreciated. It is important to know about the significance of chiuri, its uses, market, and products.

### 6.2.4 Findings of consumer survey:

Table 14: Overview of consumer survey:

Description	Response
No. of respondent/traders	5
Accessibility of Chiuri and its product in market	Readily available (Honey, oil cake, ghee/oil)
Price of fresh Chiuri (Rs/kg)	40-60 in season
Choice of variety in market	Local
Location of growing	Rakshirang, Makawanpur, Chitwan Kalika na.pa. 10, 11 Siddi
Qualitative characteristics	Sweet and milky, with a sugary scent pale yellow in color.



Description	Response
Time of availability of Chiuri fresh fruit	Jeth-Asar
Problems	Poor cultivation practices, unavailability of grafted sapling, lack of modern processing unit, lack of wareness about its benefits, nutritional values and its uses in different products.
Suggestions	Increase availability of grafted saplings, plant modern processing unit, lack of technical know-how about Chiuri commercial cultivation, lack of awareness about Chiuri benefits and market

### 6.3 Findings of Survey: Makawanpur district, (Raksirang Rural municipality-06; Silinge)

#### 6.3.1 Findings of Household survey:

**Table 15: Overview of farmers Household survey**

Description	Response
Initial orchard established	150-200 years before (at the time of their ancestors)
Direction	South, East, West
Climate	Warm and humid and 900-1200 masl.
Land preparation	100 % farmers cultivate in Jungle called “ <i>Khoriya</i> ” and no land preparation as it is grown in Jungle <i>dadopakho</i> .
Land type	100 % Slopy
Layout	95% farmers do not follow standard layout; 5 % farmer have recently started following layout in orchards.
Pit digging	At least 50 cm depth.
Variety growing	Tomiyo (Early var, large seed), Langyo (Mid var), Chitiyo (Late var.), Prichiyo (small seed)
Composting and fertilizer application	100% composting nowadays
Nursery establishment	
Sapling type (Seedlings /grafted	100% Seedlings
Planting month/season	Asar/ Rainy season
Source/type of irrigation	Kulo/Rainfed
Weeding	Slash and burn.
Intercropping	100 % farmers practice intercropping but only in cultivated land.
Average height of the plant	20-50 m.

Description	Response
Harvesting time/season	Asar- Bhadra
Harvesting indices	Color changed from green to pale yellow, sweet and milky, with a sugary scent. The fruits are soft and falling down.
Average production per plant	70-100 kg.
No. of fruit per bunch	3 to 5
No. of seed/fruit	1 to 3

### 6.3.2 Findings related to Focus Group Discussion

**Table 16: Overview of focus group discussion survey**

Description	Response
FGD conducted group	1(4 participants)
No. of male and female participated	100% male
Year of cultivation	150-200 years before (at the time of their ancestors). Growing naturally regenerated Chiuri plants in forest and farmland.
No. of farmer's household involved in Chiuri farming (HH)	200
No. of Chiuri tree (Average)	150000
Plantation area (ha.)	1500
Local name in Chepang language	<i>Yosaai</i> means Chiuri and <i>Yotaaku</i> means Chiuri bot
Evidence about Chiuri	3 “च”Chepang, Chiuri and Chamera program supported by Bagmati province, Place of name; <i>Chiuritaar</i> , In Chepang community, Chiuri is given to their daughter as a dowry during the marriage ceremony, Tongkolong/ Chyonaama festival (Nwugi)
Land covered by Chiuri	100 % slopy
Social impact in society by producing Chiuri	Income generated and enhancement of livelihood.
Variety and its attributes	Tomiyo (Early var, large seed) Langyo (Mid var), Chitiyo (Late var.), Prichiyo (small seed)
Nursery establishment	Silinge Community Forest, Division Forest Office, Agriculture Cooperatives, Churiya Ban, Agriculture and Forestry University

Description	Response
Intresting fact (song/poem/Ukhan-thukka)	<p>✓ Cultural Program was organized by the District Development Committee Makawanpur on behalf of the farmer Kankada VDC in the academic year 2055/56, a singing competition was held with the participation of former VDC Vice president Govinda Ram Chepang, Ranglal Chepang, Dil Kumar Chepang, and the then president Krishnalal Tamang, and the song was titled चिउरी फूलने गाउँ जाउ माया ककाँडा उतै घर</p> <p>✓ Special song of the RM, “हरियाली वनपाखा चिउरी गुराँस फुल्छन हाम्रो आफ्नै पौरखले गाउँ बस्ती झुल्छन।</p>

### 6.3.3 Findings of market survey:

**Table 17: Overview of market survey findings:**

Description	Response
No. of respondent/traders	5
Experience of selling Chiuri product	5-7 years
Most preferred location	Narayanghat, Hetauda bazar, kathmandu, local market.
Price of fresh Chiuri fruits (Rs.)	50-60 (season), 350-500 (Chuiuri honey)
Easily sold or not	Easily sold
Distinguishing character fresh fruits	color pale green yellowish, sweet and milky, with a sugary scent. The fruits are soft.
Distinguishing character of Chiuri honey	dark amber to dark brown color
Market supplied	Local markets, Kathmandu, Chitwan, Hetauda, Butwal etc
Storage	100% directly sold
Problems	Marginalized Chepang tribe, there is a decline in the relationship between Chepang Chiuri Chamera and the Chepang culture.
Suggestion	Promote the Chepang culture, Build a strong relationship between Chepang Chiuri Chamera and promote beekeeping and generate income source helps in livilihood enhancement.

### **6.3.4 Findings of consumer survey:**

**Table 18: Overview of consumer survey:**

<b>Description</b>	<b>Response</b>
No. of respondent/traders	4
Accessibility of Chiuri and its product in market	Readily available (Honey, oil cake, ghee/oil)
Price of fresh Chiuri (Rs./kg)	50-60 in season
Choice of variety in market	Local
Location of growing	Rakshirang 6, 7 Makawanpur
Qualitative characteristics	Sweet and milky, with a sugary scent pale yellow in color.
Time of availability of Chiuri fresh fruit	Jeth-Vadhau 1st week
Problems	There is a lack of awareness about the benefits, nutritional values, and uses in various products, as well as poor cultivation practices.
Suggestions	Make available grafted saplings, establish modern processing units, cultivate Churi commercially, and promote its advantages and uses.

## 7. Annex (Questionnaires)

### 7.1 Lapsi

#### 7.1.1 Farmer's household survey

##### क. सामान्य जानकारी

१. जिल्ला:
२. गाउँपालिका/नगरपालिका:
३. गाउँ: तथ्याङ्क सङ्कलन मिति:
४. कृषकको नाम:
५. लिंग: पुरुष ☐ महिला ☐
६. उमेर:
७. सम्पर्क नम्बर.
८. तपाईंसँग कति जमिन छ (रो.):

##### ख. कृषकको लप्सी खेती सम्बन्धी जानकारी

- १) तपाईंले कति क्षेत्रफलमा लप्सी रोप्नु भएको छ : (रो.)
- २) यो भेगमा कति क्षेत्रफलमा लप्सी खेती भइरहेको छ होला ?
- ३) लप्सी खेती गरिएको क्षेत्र  
मध्यपहाड ☐ पहाड ☐ अन्य ☐
- ४) लप्सी खेती गरिएको जग्गाको उचाइ (Altitude) .....,  
अक्षांश (Latitude): ..... देशान्तर (Longitude): .....
- ५) यो ठाउँमा कहिलेदेखि लप्सी खेती सुरु भएको थियो ?
- ६) सबैभन्दा पहिले बिरुवा कहाँबाट ल्याएको/उद्गम स्थल ?
- ७) तपाईंको आफ्नो जग्गामा कहिलेदेखि लप्सी खेती सुरु गर्नुभएको थियो ?
- ८) लप्सीको नाम यहि (लप्सी) नै कसरी रहन गयो ?

- ९) स्थानीय नाम के-के छन् ? (विभिन्न भाषा, संस्कृति, अनुसार अर्थसहित बताउन भन्ने)
- १०) लप्सी फल तथा बालीसँग जोडिएर यस ठाउँमा गीत कविता उखान टुक्का केही चलेको छ कि ?
- ११) लप्सी फल तथा बालीसँग जोडिएर यस ठाउँमा कुनै चाडपर्व मनाउने चलन छ कि ? यो चलन कहिलेदेखि चलेको होला ?
- १२) यो भेगको सबैभन्दा पुरानो लप्सीको बोट कहाँ कसको बारीमा छ ? (फोटो लिने)

- १३) यस ठाउँमा लप्सीको नर्सरीहरू पनि छन् कि? छ भने नाम ठेगाना सम्पर्क नम्बर बताउनुहोस्।

क्र.सं.	नर्सरीको नाम	सम्पर्क	ठेगाना

- १४) तपाईंले कुन-कुन जातको लप्सी खेती गरिरहनु भएको छ ? रैथाने जात (भूमिजात: Landraces) हरू भए ती जातहरूसमेत उल्लेख गर्ने।

क्र.सं.	जात	बोट सङ्ख्या	गुण

- १५) तपाईंको विचारमा कुन जातको लप्सी राम्रो छ ?

- १६) लप्सी खेती गरिएको ठाउँ कस्तो छ ?

भिरालो ☐

समथर ☐

गह्रा ☐

अन्य ☐

- १७) वनजङ्गलमा लप्सीको बगानहरू कुन दिशातर्फ बढी छरिएका छन् ?

क) उत्तर ☐

ख) दक्षिण ☐

ग) पूर्व ☐

घ) पश्चिम ☐

- १८) तपाईंको जग्गामा भएका लप्सीका बोटहरू कलमी (गाफ्टेड) विरुवा हुन् कि बीजु हुन् ?

● कलमी (गाफ्टेड) विरुवा सङ्ख्या:

● बीजु विरुवा सङ्ख्या:

- १९) लप्सीको रूखहरूमध्ये तपाईंसँग अझै फल लागिराखेको पुरानो रूख कति वर्षको छ ?

२०) लप्सी खेतीसम्बन्धी निम्न जानकारी दिनुहोस्।

क्र.सं.	लप्सीको जात रैथाने जातसहित	रापेको वर्ष	बोटको औसत उचाइ	फलन सुरु गरेको वर्ष	प्रति बोट औसत फल सङ्ख्या
क.					
ख.					

२१) लप्सी खेती व्यवस्थापनका लागि के-के काम कहिले कहिले गर्नु हुन्छ उल्लेख गर्नुहोस्। (कृषकको खेती प्रक्रिया A-Z, लगानी विवरण)

### ग. लप्सी बगैँचा स्थापना

२२) रोप्नुअघि जमिन तयारी कसरी गर्नु भयो ?

२३) खाडल खन्नु भयो कि भएन। खनेको भए कति गहिरो खन्नु भयो ?

२४) खाडल कति टाढा खन्नु भयो किन ?

२५) एक खाडलमा कति मल राख्नु भयो ?

२६) लप्सीको बेर्ना कतादेखि ल्याउनु भयो ?

२७) लप्सीको कस्तो बेर्ना रोप्नु भयो ?

क) बिजु ☐

ख) ग्राफ्टेड ☐

२८) बिरुवा कुन सिजनमा रोप्नु भयो ?

### घ. लप्सी बगैँचा व्यवस्थापन

१) हरेक वर्ष लप्सी बगैँचा व्यवस्थापनका लागि के-के काम कहिले कहिले गर्नु हुन्छ ? मलखाद दिने गाईवस्तुको मल प्रतिबोट: ..... (के.जी.)/डोको रासायनिक मल प्रतिबोट: ..... के.जी. (मलको किसिम अनुसारको परिमाण खुलाउने)

३०) रासायनिक मल राखेको भए, रासायनिक मल र गाईवस्तु वा कम्पोष्ट मल मात्र राखेको लप्सीको स्वादमा केही फरक पाउनु भएको छ कि ? यदि फरक छ भने कस्तो प्रकारको फरक पाउनु भएको छ ?

३१) सिँचाइ कुन-कुन सिजनमा कसरी गर्नु भएको छ ?

३२) सिँचाइ गर्नको लागि पानीको कुनै सामुहिक स्रोत ?

३३) गोडमेल/झारपात व्यवस्थापन कसरी ?



३४) बगैँचाभित्र अन्तरवाली के-के लगाउनु हुन्छ ?

३५) यसको खेतीमा कुनै विशेष औजारको प्रयोग गरिन्छ ?

३६) लप्सीको फल टिप्ने सूचकाङ्क के-के हुन् ?

३७) लप्सी प्रति झुप्पा कति दाना फल्छ ?

३८) लप्सी खेतीमा कुनै रोग, कीराको प्रकोप कसरी व्यवस्थापन गर्नु हुन्छ ?

क्र.सं.	रोगको नाम	व्यवस्थापन तरिका	कीराको नाम	व्यवस्थापन तरिका

३९) लप्सीलाई बजारमा कसरी बिक्री गर्नु हुन्छ ?

क) ताजा फलको रूपमा ☐

ख) प्रशोधन गरेर ☐

४०) लप्सीको प्रशोधनमा कुनै विशेष तरिका अपनाइएको छ ?

४१) यदि प्रशोधन गरेर बिक्री गर्नु हुन्छ भने लप्सीका कस्ता कस्ता सामग्री बनाउनु हुन्छ ?

४२) तपाईंले कुन महिनादेखि कुन महिनासम्म लप्सी टिप्नुहुन्छ ?

कुन महिनामा पाक्छ:

कहिलेदेखि टिप्नुहुन्छ:

४३) तपाईंले लप्सी भण्डारण गर्नु हुन्छ कि सिधै बेच्नु हुन्छ ?

४४) लप्सीको भण्डारण गर्नु हुन्छ या गर्नु हुँदैन ? यदि गर्नु हुन्छ भने,

क्र.सं.	क्रियाकलाप
१.	फल टिप्ने तरिका:
२.	फल टिप्ने पछिका गतिविधि:
३.	भण्डारण विधि: .....
४.	कति समय:

४५) नजिकैको बजार कुन हो र कति टाढा छ ?

४६) यी लप्सीहरू कसरी बिक्री हुन्छन् ?

क) सिधै बजारमा लगेर ☐

ख) विचौलियामार्फत ☐

ग) ठेक्का दिएर ☐

- ४७) जग्गा तयारीदेखि फल टिपेर बिक्री गर्ने कार्यसम्मका लागि यस ठाउँ विशेषमा परम्परागत ज्ञान/सीप/ तरिकाहरू छन् भने उल्लेख गर्नुहोस्।
- ४८) जग्गा तयारीदेखि फल टिपेर बिक्री गर्ने कार्यसम्मका लागि कुनै नयाँ तरिकाको विकास (Innovation) गरिएका छन् भने उल्लेख गर्नुहोस्।

### च. यस क्षेत्रको लप्सी खेती सम्बन्धी जानकारी

- ४९) यहाँको लप्सीको बिरुवाहरू अन्य भेगमा पनि लगेर सारेका छन् कि छैन ? छ भने कुन-कुन ठाउँहरूमा लगेका छन् होला ?
- ५०) यहाँको लप्सी खेती गर्ने तरिका अरु ठाउँको भन्दा केही भिन्न छ ?
- ५१) यहाँको लप्सीको बोटमा अरु ठाउँको बोटभन्दा के फरकपन छ ?
- पात/बोट/फलको बोट/फल पाक्ने समयमा
  - स्वाद/फलमा रसको मात्रा अमिलो/गुलियोपनमा
- ५२) यहाँको लप्सीको बिरुवाहरू अरु भेगमा लगेर सार्दा पनि यस ठाउँमा पाइने स्वाद अर्को ठाउँमा पनि आउँछ कि फरक हुन्छ ?
- ५३) कस्तो हावापानी/माटोमा लप्सीको गुणस्तर राम्रो हुन्छ ?
- ५४) यस ठाउँको लप्सीमा अरु ठाउँको लप्सीभन्दा के यस्तो गुण छ जसले यस ठाउँको लप्सीलाई बढी महत्वपूर्ण बनाएको छ ?
- ५५) सबभन्दा नाम चलेको लप्सीको जात (केही गुणसहित)/स्थान छन् भने बताउनुहोस्। यस ठाउँको लप्सीलाई अन्यत्र पहिचान गराउनका लागि यसको उद्गमस्थल र पहिचान चिन्ह (ट्याग) दिएर बिक्री गर्दा के होला? के गर्नुपर्ला ?

क्र.सं.	लप्सीको जात	गुण	स्थान

- ५६) कृषकको थप भनाई राय सुझाव केही भए उल्लेख गर्ने।

## 7.1.2 Focus Group Discussion

### क. परिचयात्मक विवरण

१. ठेगाना: जिल्ला गाउँपालिका/नगरपालिका  
गाउँ/टोल:
२. तथ्याङ्क सङ्कलन मिति:
३. उपस्थित कृषकहरूको सङ्ख्या: .....
४. लिंग: पुरुष सङ्ख्या:  महिला सङ्ख्या:

### ख. लप्सी खेती सम्बन्धी ऐतिहासिक जानकारी

५. यो ठाउँमा कहिलेदेखि लप्सी खेती शुरू भएको थियो ?
६. यस क्षेत्रमा सबैभन्दा पहिले लप्सीका बिरुवाहरू कहाँबाट ल्याइएको होला ?
७. लप्सीको नाम यहि नै कसरी रहन गयो होला ? स्थानीय नाम के-के छन् ? विभिन्न भाषा, संस्कृति, अनुसार अर्थसहित बताउन भन्ने।
८. लप्सी फल तथा बालीसँग जोडिएर यस ठाउँमा गीत, कविता, उखान टुक्का आदि केही चलेको छ कि ?
९. लप्सी फल तथा बालीसँग जोडिएर यस ठाउँमा कुनै चाडपर्व मनाउने चलन छ कि ? विशेष परिकार बनाएर खाने चलन छ कि ? यी चलनहरू कहिलेदेखि चलेको होला ?
१०. सबैभन्दा ठूलो (ट्रंक परिधि र उचाइ) र विभिन्न जात मध्यमा तपाईंको इलाकामा सबैभन्दा उत्पादक रूख ?

### ग. लप्सी खेती सम्बन्धी जानकारी

११. यो भेगमा कति क्षेत्रफलमा लप्सी खेती भइरहेको छ होला ?
१२. यस भेगमा लप्सी खेतीमा संलग्न भइरहेका कृषकहरूको सङ्ख्या कति छ होला ?
१३. लप्सी खेतीमा संलग्न भइरहेका समूह/सहकारी/कम्पनीहरू छन् कि छैनन् होला ?
१४. लप्सी खेती गरिएको ठाउँ कस्तो छ ?  
क) भिरालो ☐ ख) समथर ☐ ग) गह्रा ☐ घ) अन्य ☐

१५. कुन-कुन जात (रैथाने जातसमेत) को लप्सी खेती भइरहेको छ ? (स्पष्टसँग चित्र सकिने गुणहरू सोध्ने)  
क) जात र गुण ख) ग)
१६. सबभन्दा नाम चलेको लप्सीको जात (रैथाने जातसमेत)/स्थान/स्पष्टसँग चित्र सकिने गुणसहित बताउनुहोस् ?
१७. यो भेगको सबैभन्दा पुरानो लप्सीको बोट कहाँ कसको बारीमा छ ? (फोटो लिने)
१८. यस ठाउँमा पाइने लप्सीहरूको गुण र यस ठाउँको उत्पादन चित्र कुनै विशेष गुण छ ?

क्र.सं.	विभिन्न स्थानीय नाम	उद्गम स्थल	विशेष गुण

१९. विभिन्न जातका लप्सी रूखहरूको रोपण दूरी कति छ ?
२०. लप्सी खेतीका क्रममा गरिने कार्यहरूको बालीपात्रो बनाउनुहोस्।
- घ. लप्सी खेती प्रविधिबारे जानकारी**
२१. लप्सी खेतीको लागि कस्तो वातावरण आवश्यक छ ?
२२. लप्सी खेती गर्दा के-के काम गरिन्छ ?
२३. बिरुवा कसरी सार्नुहुन्छ ? प्रसारण विधि खुलाउनुहोस्।
२४. लप्सीको नर्सरी सम्बन्धी ?
२५. लप्सी बोटको स्याहार सम्भार ?
२६. तपाईंहरूले सिँचाई गर्नु हुन्छ ? हुन्छ भने सामुहिक स्रोत छ ?
२७. सामुहिक गरिने केही कार्य छ ?
२८. यसको लागि मात्र प्रयोगमा ल्याइने केही औजार छ ?
२९. रासायनिक मल राखेको भए रासायनिक मल र गाईवस्तु वा कम्पोष्ट मल हाल्दा लप्सीको स्वादमा केही फरक छ कि ? यदि फरक छ भने कस्तो प्रकारको फरक पाउनु भएको छ ?

३०. लप्सी खेतीमा रोग, कीराको प्रकोप छ कि छैन ?

क्र.सं.	रोगको नाम	व्यवस्थापन तरिका	कीराको नाम	व्यवस्थापन तरिका
१				
२				

३१. यसको खेती भएको छ ? यदि छ भने कसले सुरु गर्यो ?

३२. यस ठाउँमा लप्सीको नर्सरीहरू पनि छन् ? छ भने नाम ठेगाना सम्पर्क नम्बर बताउनुहोस्।

क्र.सं.	लप्सी नर्सरीको नाम/नर्सरीधनीको नाम	ठेगाना	सम्पर्क नं.
१			
२			

३३. यहाँको लप्सीको बिरुवाहरू अन्य भेगमा पनि लगेर सारेका छन् कि छैनन् ? छ भने कुन-कुन ठाउँहरूमा लगेका छन् होला ?

३४. कुन महिनादेखि कुन महिनासम्म लप्सी टिप्ने गरिन्छ ?

३५. लप्सी भण्डारण गर्नु हुन्छ कि सिधै बेच्नुहुन्छ ?

- सिधै बेच्ने कृषकहरूको सङ्ख्या .....% बिक्री परिमाण .....%
- भण्डारण गरेर पछि बेच्ने कृषकहरूको सङ्ख्या .....% बिक्री परिमाण .....%

३६. लप्सीको भण्डारण गरिन्छ कि गरिँदैन ? यदि गरिन्छ भने.....

क्र.सं.	क्रियाकलाप
१	फल टिप्ने तरिका:
२	फल टिपे पछिका गतिविधि:
३	भण्डारण विधि: .....
४	कति समय:

३७. यसको उत्पादन वा Processing को लागि कुनै समूह वा सहकारी छ ? यदि छ भने तलको टेबल भर्नुहोस्।

क्र.सं.	समूह/सहकारीको नाम	ठेगाना

## ड लप्सी खेती सम्बन्धी परम्परागत ज्ञान, सीप तथा Innovation

३८. जग्गा तयारीदेखि फल टिपेर बिक्री गर्ने कार्यसम्मका लागि यस ठाउँ विशेषमा परम्परागत ज्ञान/सीप/तरिकाहरू छन् भने उल्लेख गर्नुहोस्।

३९. पहिले गरिने र अहिले गरिने क्रियाकलाप के फरक छ, छैन भने यी क्रियाकलाप कहिलेदेखि गर्दै आएको हो ?
४०. जग्गा तयारीदेखि फल टिपेर बिक्री गर्ने कार्यसम्मका लागि कुनै नयाँ तरिकाको विकास (Innovation) गरिएका छन् भने उल्लेख गर्नुहोस्।

**च. लप्सी खेतीबाट यस भेगमा परेका सामाजिक तथा आर्थिक प्रभावहरू**

४१. लप्सी खेतीबाट परेको सामाजिक प्रभाव .....
४२. लप्सी खेतीबाट पाएको पहिचान, मान, प्रतिष्ठा गाउँकै पहिचान आदि
४३. लप्सी खेतीबाट हुने आमदानी तथा आमदानीले जीवनयापन शिक्षा सम्पत्ति..... आदिमा भएको सुधार

**छ. लप्सीको पहिचान (Collective Marking)**

४४. यहाँको लप्सीको बिरुवाहरू अरु भेगमा लगेर सार्दा पनि यस ठाउँमा पाइने स्वाद अर्को ठाउँमा पनि आउँछ कि फरक हुन्छ ?
४५. यस ठाउँको लप्सी र अन्य क्षेत्रमा फलेको लप्सीको गुण एउटै छ कि फरक छ ? फरक छ भने के-के (बोटमा फलमा) फरक होला ?
४६. यस ठाउँको लप्सीमा के गुण/विशेषताहरू (पाक्ने सिजन, फलको स्वाद ..... आदि) छन्, जसले यस ठाउँको लप्सीलाई चिनाएको छ ?
४७. यस ठाउँको लप्सीलाई अन्यत्र पहिचान गराउनका लागि यसको उद्गम स्थल र पहिचान चिन्ह (ट्याग) दिएर बिक्री गर्दा के होला। के-के गर्नुपर्ला ?
४८. लप्सीको अन्तर्राष्ट्रिय माग बढाउन र पूर्ति गर्न के गर्नुपर्ला ?
४९. थप भनाई रायसुझाव केही भए उल्लेख गर्ने।

### 7.1.3 Key Informant Survey

#### क परिचयात्मक विवरण

१. नाम:
२. ठेगाना: जिल्ला: गाउँपालिका/नगरपालिका:  
गाउँ/टोल
१. तथ्याङ्क सङ्कलन मिति:
२. लिंग: पुरुष ☐ महिला ☐

#### ख. लप्सी खेती सम्बन्धी ऐतिहासिक जानकारी

३. यो ठाउँमा कहिलेदेखि लप्सी खेती शुरू भएको थियो ?
४. यस क्षेत्रमा सबैभन्दा पहिले लप्सीका बिरुवाहरू कहाँबाट ल्याइएको होला ?
५. लप्सीको नाम यहि नै कसरी रहन गयो होला ? स्थानीय नाम के-के छन् ? विभिन्न भाषा, संस्कृति, अनुसार अर्थसहित बताउन भन्ने ।
६. लप्सी फल तथा बालीसँग जोडिएर यस ठाउँमा गीत, कविता, उखान टुक्का आदि केही चलेको छ कि ? जस्तै: कति बस्छे माइतिकै कौशीमा लाग्छ आँखा पाकेको लौसीमा ..... आदि ।
७. लप्सी फल तथा बालीसँग जोडिएर यस ठाउँमा कुनै चाडपर्व मनाउने चलन छ कि ? विशेष परिकार बनाएर खाने चलन छ कि ? यी चलनहरू कहिलेदेखि चलेको होला ?
८. लप्सीका प्रशोधित सामग्रीहरूको उत्पादन तथा उपयोग ?

#### ग लप्सी खेती सम्बन्धी जानकारी

९. यो क्षेत्रमा कति क्षेत्रफलमा लप्सी खेती भइरहेको छ होला ?
१०. यस क्षेत्रमा लप्सी खेतीमा संलग्न भइरहेका कृषक कृषक समूह सहकारी कम्पनीहरूको सङ्ख्या कति छ होला ?
११. कुन-कुन जात (रैथाने जातसमेत) को लप्सी खेती भइरहेको छ ? (स्पष्टसँग चित्र सकिने गुणहरू सोध्ने)  
क)  
ख)



१२. सबभन्दा नाम चलेको लप्सीको जात (रैथाने जातसमेत)/स्थान (स्पष्टसँग चित्र सकिने गुणसहित बताउनुहोस् ।)
१३. यो भेगको सबैभन्दा पुरानो लप्सीको बोट कहाँ कसको बारीमा छ ? (फोटो लिने)

#### घ. लप्सी खेती प्रविधिबारे जानकारी

१४. लप्सी खेती गर्दा के-के काम गरिन्छ ?
१५. लप्सीको बिरुवा सारिन्छ कि आफैँ उम्रेको बिरुवाबाट बगैँचा बन्छ ?
१६. लप्सीको बिरुवा उत्पादन गर्ने कुनै नर्सरी छन् त ?
१७. लप्सीको बोटको स्याहार सम्भार कसरी गरिन्छ कि गरिदैन ?
१८. लप्सी खेती तथा बजारीकरणका प्रमुख समस्याहरू के-के होलान् ?
१९. कुन महिनादेखि कुन महिनासम्म लप्सी टिप्ने गरिन्छ ?
२०. लप्सी भण्डारण हुन्छ कि सिधै बिक्री हुन्छ ?  
 ○सिधै बेच्ने कृषकहरूको सङ्ख्या .....% बिक्री परिमाण .....%  
 ○भण्डारण गरेर पछि बेच्ने कृषकहरूको सङ्ख्या .....% बिक्री परिमाण .....%
२१. लप्सीको भण्डारण गरिन्छ भने कहाँ कसरी गरिन्छ ?
२२. प्रशोधन कसरी गरिन्छ कि गरिदैन ?

#### ङ. लप्सी खेती सम्बन्धी परम्परागत ज्ञान, सीप तथा Innovation

२३. जग्गा तयारीदेखि फल टिपेर बिक्री गर्ने कार्यका लागि यस ठाउँ विशेषमा परम्परागत ज्ञान/सीप/तरिकाहरू छन् भने उल्लेख गर्नुहोस्।
२४. यस ठाउँमा लप्सी खेती गर्नका लागि जग्गा तयारीदेखि फल टिपेर बिक्री गर्ने कार्य गर्नका लागि कुनै नयाँ तरिकाको विकास (Innovation) गरिएका भने उल्लेख गर्नुहोस्।

#### च. लप्सी खेतीबाट यस भेगमा परेका सामाजिक तथा आर्थिक प्रभावहरू

२५. लप्सी खेतीबाट भएको सामाजिक सद्भाव .....
२६. लप्सी खेतीबाट पाएको पहिचान, मानप्रतिष्ठा गाउँकै पहिचान आदि।

२७. लप्सी खेतीबाट हुने वार्षिक आम्दानी .... तथा आम्दानीले जीवनयापन शिक्षा .... आदिमा भएको सुधार

### **छ. लप्सीको पहिचान (Collective Marking)**

२८. यहाँको लप्सीको बिरुवाहरू अरु भेगमा लगेर सार्दा पनि यस ठाउँमा पाइने स्वाद अर्को ठाउँमा पनि आउँछ कि फरक हुन्छ ?

२९. यस ठाउँको लप्सी र अन्य क्षेत्रमा फलेको लप्सीको गुण एउटै छ कि फरक छ ? फरक छ भने के-के (बोटमा फलमा) फरक होला ?

३०. यस ठाउँको लप्सीमा के गुण/विशेषताहरू (पाक्ने सिजन, फलको स्वाद ..... आदि) छन्, जसले यस ठाउँको लप्सीलाई चिनाएको छ ?

३१. यस ठाउँको लप्सीलाई अन्यत्र पहिचान गराउनका लागि यसको उद्गम स्थल र पहिचान चिन्ह (ट्याग) दिएर बिक्री गर्दा के होला। के-के गर्नुपर्ला ?

३२. थप भनाई राय सुझाव केही भए उल्लेख गर्ने।

### **7.1.4 Market Survey**

बजारको नाम:	व्यापारीको नाम:
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१. तपाईंले लप्सी व्यापार सुरु गर्नु भएको कति वर्ष भयो ?

२. तपाईंले लप्सी कहाँबाट ल्याएर बेच्नुहुन्छ ?

३. लप्सीको बीउहरू देशभरबाट कसरी जम्मा गरेर प्रशोधन गरिन्छ ?

४. लप्सीको ढुवानी कसरी गर्नु हुन्छ ?

५. लप्सी ओसार पसारमा कति क्षति हुने गर्छ ?

६. तपाईंले कुन-कुन जातको लप्सी बेच्नु हुन्छ ?

७. कुन जात अथवा स्थानको लप्सी बढी बिक्री गर्नु हुन्छ (प्राथमिकताको आधारमा लेख्नुहोस्) ?  
क) ..... ख) .....

८. प्रति के.जी. लप्सी को दर कति छ ?  
 १) सिजनल (कुन-कुन महिना.....)  
 २) बेमौसमी महिना
९. लप्सीको बिक्री सिजनल हुन्छ कि बाह्रै महिना हुन्छ,  
 ३) सिजनल (कुन-कुन महिना.....)  
 ४) बाह्रै महिना
१०. यदि लप्सी बाह्रै महिना बिक्री हुन्छ भने बजारमा यो कसरी उपलब्ध हुन्छ ?  
 क) काँचो                      ख) पाकेको                      ग) माडा
११. कुन जातको लप्सी भनेर कसरी छुट्याउनुहुन्छ, मुख्य जातीय विशेषता स्वाद फलको किसिम अमिलोपन गुलियोपन आदिबारे लेख्नुहोस् ?  
 क)  
 ख)
१२. यो क्षेत्रको लप्सी अन्य कुन-कुन ठाउँमा निर्यात गर्ने गरिएको छ ?
१३. यो बजारमा लप्सी कुन-कुन ठाउँबाट आयात गर्ने गरिएको छ ?
१४. लप्सीको भण्डारण कहाँ कसरी गर्नु हुन्छ ?
१५. लप्सी कति समयसम्म भण्डारण गरेर राख्नुहुन्छ ?
१६. लप्सीका प्रशोधित के-के उत्पादनहरू छन् ?
१७. लप्सीको प्रशोधित उत्पादनमध्ये सबैभन्दा बढी कारोबार हुने उत्पादन के होला ?

क्र.सं.	लप्सीको प्रशोधित उत्पादन	मूल्य

१८. यो बजारमा लप्सीको कारोबार कति हुन्छ होला ?

बिक्री सिजन	कारोबार विवरण	परिमाण (टन)	मूल्य (रु.)
सिजन	दैनिक		
	मासिक		
	वार्षिक		

बेमौसम	दैनिक		
	मासिक		
	वार्षिक		

सबभन्दा राम्रो कुन ठाउँको र कुन जात राम्रो वा बढी बिक्री हुन्छ र के कारणले हो ?

१९. यस ठाउँको लप्सीलाई अन्यत्र पहिचान गराउनका लागि यसको उद्गम स्थल र पहिचान चिन्ह (ट्याग) दिएर बिक्री गर्दा के होला। के-के गर्नुपर्ला ?
२०. लप्सी बजारीकरणमा भएका समस्या र समाधानका उपायहरू के-के हुन्।
२१. लप्सीलाई अन्तर्राष्ट्रिय बजारमा माग बढाउनको लागि के गर्नुपर्ला ?
२२. के लप्सीमा *Domestication* को कमिले गर्दा व्यावसायिकरणमा कुनै समस्या देखिएको छ ?
२३. उपभोक्तासम्म लप्सीको गुणस्तर कायम गर्न के गर्नुपर्ला ?
२४. थप भनाई राय सुझाव केही भए उल्लेख गर्ने।

### 7.1.5 Consumer Survey

स्थान:	उपभोक्ताको नाम:
--------	-----------------

१. तपाईंले बजारमा लप्सी किन्न जाँदा सहजै पाउनुहुन्छ ?  
क) पाउँछु ☐ ख) पाउँदैन ☐
२. लप्सी सरदर प्रति के.जी. कति मूल्यमा किन्न पाउनुहुन्छ?  
सिजन: ☐ बेमौसम: ☐  
लप्सीको मूल्य *range*....  
राम्रो ☐ ठिकै ☐
३. बजारमा लप्सी किन्न जाँदा कुन-कुन जात/भेगको लप्सी पाउनुहुन्छ ?

क्र.सं.	जात	ठाउँ
१		
२		
३		

४. राम्रो लप्सीमा हुनु पर्ने के-के गुण हुन्/राम्रो लप्सी भन्नाले के-के गुण हुनुपर्छ ?  
.....
५. तपाईं कुन जातको लप्सी किन्न रुचाउनु हुन्छ र किन ?

जात	विशेषता (रुचाउनुको कारण: जस्तै बोक्रा पातलो, विया सानो र गुदी बढी आदि)
क)	
ख)	

६. तपाईंले स्थानीय जातको लप्सी र आयातित लप्सीमा के भिन्नता पाउनु भयो ? (color, taste and preference)
७. सबभन्दा राम्रो कुन ठाउँको र कुन जात राम्रो वा बढी प्रख्यात र के कारणले हो ?
८. राम्रो लप्सीलाई कतिसम्म मूल्य तिर्न तयार हुनुहुन्छ ?
९. लप्सीको कस्तो उत्पादन किन रुचाउनुहुन्छ ?

क्र.सं.	उत्पादन	मूल्य
क.	ताजा फल	
ख.	अचार	
ग.	धुलो Powder	
घ.	माडा	
ङ.	Candy	
च.	अन्य	

१०. कुनै ठाउँको लप्सीको लागि खोजेर बढी मूल्य तिर्न तयार हुनुहुन्छ ?
११. थप भनाई राय सुझाव केही भए उल्लेख गर्ने।

## 7.2 Chiuri

### 7.2.1 Farmers Household Survey

#### क. सामान्य जानकारी

१. जिल्ला: २. गाउँपालिका/नगरपालिका:
३. गाउँ: तथ्याङ्क सङ्कलन मिति:
४. कृषकको नाम:
५. लिङ्ग: पुरुष ☐ महिला ☐

६. उमेरः
७. सम्पर्क नम्बर :
८. तपाईंसँग कति जमिन छ (रो.):

## ख. कृषकको चिउरी खेती सम्बन्धी जानकारी

९. तपाईंले कति क्षेत्रफलमा चिउरी रोप्नु भएको छ (रो.) वा कति बोट चिउरी लगाउनुभएको छ ?
१०. यो भेगमा कति क्षेत्रफलमा चिउरी खेती भइरहेको छ होला ?
११. चिउरी खेती गरिएको क्षेत्र  
मध्यपहाड ☐ पहाड ☐ अन्य ☐
१२. चिउरी खेती गरिएको जग्गाको उचाइ (Altitude) .....  
अक्षांश (Latitude) : ..... देशान्तर (Longitude) : .....
१३. यो ठाउँमा कहिलेदेखि चिउरी खेती सुरु भएको थियो ?
१४. सबैभन्दा पहिले बिरुवा कहाँबाट ल्याएको/उद्गम स्थल ?
१५. तपाईंको आफ्नो जग्गामा कहिलेदेखि चिउरी खेती सुरु गर्नु भएको थियो ?
१६. चिउरीको नाम यहि (चिउरी) नै कसरी रहन गयो ? लोकल नाम के हो ?
१७. स्थानीय नाम के-के छन् ? (विभिन्न भाषा, संस्कृति, अनुसार अर्थसहित बताउन भन्ने )
१८. चिउरी फल तथा बालीसँग जोडिएर यस ठाउँमा गीत, कविता, उखानटुक्का केही चलेको छ कि ?
१९. चिउरीफल तथा बालीसँग जोडिएर यस ठाउँमा कुनै चाडपर्व मनाउने चलन छ कि ? यो चलन कहिलेदेखि चलेको होला ?
२०. यो भेगको सबैभन्दा पुरानो चिउरीको बोट कहाँ कसको बारीमा छ ? (फोटो लिने)
२१. यस ठाउँमा चिउरीको नर्सरीहरू पनि छन् कि ? छ भने नाम ठेगाना सम्पर्क नम्बर बताउनुहोस्।
२२. तपाईंले कुन-कुन जातको चिउरी खेती गरिरहनु भएको छ ? रैथाने जात (भूमिजात: Landraces) हरू भए ती जातहरूसमेत उल्लेख गर्ने।

क)

ख)

२३. चिउरी खेती गरिएको ठाउँ कस्तो छ ?

भिरालो ☐समथर ☐गह्रा ☐अन्य ☐

२४. वनजङ्गलमा चिउरीको बगानहरू कुन दिशातर्फ बढी छरिएका छन् ?

क) उत्तर ☐ख) दक्षिण ☐ग) पूर्व ☐घ) पश्चिम ☐

२५. तपाईंसँग चिउरीका बोटहरू कति छन् ?

क्र.सं.	चिउरीको जात (रैथाने जातसहित)	बोट सङ्ख्या

२६. तपाईंको विचारमा कुन जातको चिउरी राम्रो छ ?

२७. तपाईंको जग्गामा भएका चिउरीका बोटहरू कलमी (गाफर्टेड) बिरुवा हुन् कि बीजु हुन् ?

● कलमी (गाफर्टेड) बिरुवा सङ्ख्या :

● बीजु बिरुवा सङ्ख्या :

२८. चिउरीको रूखहरू मध्ये तपाईंसँग अझै फल लागि राखेको पुरानो रूख कति वर्षको छ ?

क्र.सं.	चिउरीको जात रैथाने जातसहित	रोपेको वर्ष	बोटको औसत उचाइ	फलन सुरु गरेको वर्ष	प्रति बोट औसत फल (के.जी.)	दाना प्रति फल
क)						
ख)						

२९. चिउरी खेती सम्बन्धी निम्न जानकारी दिनुहोस् ?

३०. चिउरी खेती व्यवस्थापनका लागि के-के काम कहिले कहिले गर्नु हुन्छ उल्लेख गर्नुहोस् ? (कृषकको खेती प्रक्रिया A-Z, लगानी विवरण)

**ग. चिउरी बगैँचा स्थापना**

३१. रोप्नुअघि जमिन तयारी कसरी गर्नुभयो ?

३२. खाडल खन्नु भयो कि भएन। खनेको भए कति गहिरो खन्नुभयो ?

३३. खाडल कति टाढा खन्नु भयो किन ?



३४. एक खाडलमा कति मल राख्नुभयो ?

३५. बिरुवा कुन सिजनमा रोप्नुभयो ?

### घ. चिउरी बगैँचा व्यवस्थापन

३६. हरेक वर्ष चिउरी बगैँचा व्यवस्थापनका लागि के-के काम कहिले कहिले गर्नु हुन्छ ?

- मलखाद दिने गाईवस्तुको मल प्रतिबोटः .....(के.जी.)/डोको
- रासायनिक मल प्रतिबोटः.....के.जी. (मलको किसिम अनुसारको परिमाण खुलाउने)

३७. रासायनिक मल राखेको भए, रासायनिक मल र गाईवस्तु वा कम्पोष्ट मल मात्र राखेको चिउरीको स्वादमा केही फरक पाउनु भएको छ कि ? यदि फरक छ भने कस्तो प्रकारको फरक पाउनु भएको छ ?

३८. सिँचाइ कुन-कुन सिजनमा कसरी गर्नु हुन्छ ?

३९. सिँचाइ गर्नको लागि पानीको कुनै सामुहिक स्रोत ?

४०. गोडमेल/झारपात व्यवस्थापन कसरी ?

४१. बगैँचाभित्र अन्तरवाली के-के लगाउनु हुन्छ ?

४२. यसको खेतीमा कुनै विशेष औजारको प्रयोग गरिन्छ ?

४३. चिउरीको प्रशोधनमा कुनै विशेष तरिका अपनाइएको छ ?

४४. चिउरीको फल टिप्ने सूचकाङ्क के-के हुन् ?

४५. चिउरी खेतीमा कुनै रोग, कीराको प्रकोप छ कि छैन ?

क्र.सं.	रोगको नाम	व्यवस्थापन तरिका	कीराको नाम	व्यवस्थापन तरिका

४६. तपाईंले कुन महिनादेखि कुन महिनासम्म चिउरी टिप्नुहुन्छ ?

क्र.सं.	फल पाक्ने समय	फल टिप्ने समय

४७. तपाईंले चिउरी भण्डारण गर्नु हुन्छ कि सिधै बेच्नु हुन्छ ? आफै बेच्नुहुन्छ वा ठेकेदारलाई दिनुहुन्छ ?

४८. चिउरीको भण्डारण गर्नु हुन्छ भने कहाँ कसरी गर्नु हुन्छ ?

४९. नजिकैको बजार कुन हो र कति टाढा छ ?
५०. के यी चिउरीहरू बजारमा सजिलै बिक्री हुन्छन् ?
५१. जग्गा तयारीदेखि फल टिपेर बिक्री गर्ने कार्यसम्मका लागि यस ठाउँ विशेषमा परम्परागत ज्ञान/सीप/ तरिकाहरू छन् भने उल्लेख गर्नुहोस्।
५२. जग्गा तयारीदेखि फल टिपेर बिक्री गर्ने कार्यसम्मका लागि कुनै नयाँ तरिकाको विकास (Innovation) गरिएका छन् भने उल्लेख गर्नुहोस्।

### च. यस क्षेत्रको चिउरी खेती सम्बन्धी जानकारी

५३. यहाँको चिउरीको बिरुवाहरू अन्य भेगमा पनि लगेर सारेका छन् कि छैन ? छ भने कुन-कुन ठाउँहरूमा लगेका छन् होला ?
५४. यहाँको चिउरी खेती गर्ने तरिका अरु ठाउँको भन्दा केही भिन्न छ ?
५५. चिउरी खेती के का लागि गरिन्छ ? प्राथमिकताका आधारमा लेख्नुहोस् (१ देखि ६ सम्म) (Descending order)

मह	
काठ	
जैविक मल	
Butter	
फल	
घाँसेबाली	
पानी	
टपरी	

५६. यहाँको चिउरीको बोटमा अरु ठाउँको बोटभन्दा के फरकपन छ ?
- पात, बोट र फलको बोक्रा, फल पाक्ने समयमा
  - स्वाद/फलमा रसको मात्रा टर्पोपन/अमिलो/गुलियोपनमा (ठीक चिन्ह लगाउने)
५७. यहाँको चिउरीको बिरुवाहरू अरु भेगमा लगेर सार्दा पनि यस ठाउँमा पाइने स्वाद अर्को ठाउँमा पनि आउँछ कि फरक हुन्छ ?
५८. कस्तो हावापमनी/माटोमा चिउरीको गुणस्तर राम्रो हुन्छ ?

५९. यस ठाउँको चिउरीमा अरु ठाउँको चिउरीभन्दा के यस्तो गुण छ जसले यस ठाउँको चिउरीलाई बढी महत्वपूर्ण बनाएको छ ?
६०. सबभन्दा नाम चलेको चिउरीको जात (केही गुणसहित)/स्थान छुन् भने बताउनुहोस्।
६१. यस ठाउँको चिउरीलाई अन्यत्र पहिचान गराउनका लागि यसको उद्गमस्थल र पहिचान चिन्ह (ट्याग) दिएर बिक्री गर्दा के होला ? के गर्नुपर्ला ?
६२. कृषकको थप भनाई राय सुझाव केही भए उल्लेख गर्ने।

## 7.2.2 Focus Group Discussion Survey

### क. परिचयात्मक विवरण

१. ठेगाना  
जिल्ला: गाउँपालिका/नगरपालिका: गाउँ/टोल:
२. तथ्याङ्क सङ्कलन मिति:
३. उपस्थित सहभागी सङ्ख्या : .....
४. लिङ्ग: पुरुष सङ्ख्या  महिला सङ्ख्या

### ख. चिउरी खेती सम्बन्धी ऐतिहासिक जानकारी

५. यो ठाउँमा कहिलेदेखि चिउरी खेती शुरू भएको थियो ?
६. यस क्षेत्रमा सबैभन्दा पहिले चिउरीका बिरुवाहरू कहाँबाट ल्याइएको होला ?
७. चिउरीको नाम यहि नै कसरी रहन गयो होला ? स्थानीय नाम के-के छन् ? विभिन्न भाषा, संस्कृति, अनुसार अर्थसहित बताउन भन्ने।
८. चिउरी फल तथा बालीसँग जोडिएर यस ठाउँमा गीत, कविता, उखान टुक्का आदि केही चलेको छ कि ?
९. चिउरी फल तथा बालीसँग जोडिएर यस ठाउँमा कुनै चाडपर्व मनाउने चलन छ कि ? विशेष परिकार बनाएर खाने चलन छ कि ? यी चलनहरू कहिलेदेखि चलेको होला ?
१०. सबैभन्दा ठूलो (ट्रंक परिधि र उचाइ) र विभिन्न जात मध्येमा तपाईंको इलाकामा सबैभन्दा उत्पादक रूख ?

**ग. चिउरी खेती सम्बन्धी जानकारी**

११. यो भेगमा कति क्षेत्रफलमा चिउरी खेती भइरहेको छ होला ?
१२. यस भेगको वनमा कति क्षेत्रफलमा चिउरी फैलिएको छ होला ?
१३. यस भेगमा चिउरी खेतीमा संलग्न भइरहेका कृषकहरूको सङ्ख्या कति छ होला ?
१४. चिउरी खेतीमा संलग्न भइरहेका समूह/सहकारी/कम्पनीहरू छन् कि छैनन् होला ?

क्र.सं.	नाम	ठेगाना	सम्पर्क नं

१५. चिउरी खेती गरिएको ठाउँ कस्तो छ ?  
 भिरालो ☐ समथर ☐ गह्रा ☐ अन्य ☐
१६. कुन-कुन जात (रैथाने जातसमेत) को चिउरी खेती भइरहेको छ ? (स्पष्टसँग चित्र सकिने गुणहरू सोध्ने)  
 क) जात र गुण  
 ख)  
 ग)
१७. सबभन्दा नाम चलेको चिउरीको जात (रैथाने जातसमेत)/स्थान/स्पष्टसँग चित्र सकिने गुणसहित बताउनुहोस् ?
१८. यो भेगको सबैभन्दा पुरानो चिउरीको बोट कहाँ कसको बारीमा छ ? (फोटो लिने)
१९. विभिन्न जातका चिउरी रूखहरूको रोपण दूरी कति छ ?
२०. चिउरीको रोपण देखि टिप्ने प्रक्रियासम्मको सम्पूर्ण कार्यको विवरण बताउनुहोस्। (Crop calender)
२१. यस ठाउँमा पाइने चिउरीहरूको गुण र यस ठाउँको उत्पादन चित्र कुनै विशेष गुण छ ?
२२. विभिन्न स्थानीय नाम:

**घ. चिउरी खेती प्रविधिबारे जानकारी**

२३. चिउरी खेतीको लागि कस्तो वातावरण आवश्यक छ ?
२४. चिउरी खेती गर्दा के-के काम गरिन्छ ?

२५. बिरुवा कसरी सार्नुहुन्छ ? प्रसारण विधि खुलाउनुहोस्।

२६. चिउरीको नर्सरी सम्बन्धी ?

२७. चिउरी बोटको स्याहार सम्भार ?

२८. तपाईंहरूले सिँचाई गर्नु हुन्छ ? हुन्छ भने सामुहिक स्रोत छ ?

२९. सामुहिक गरिने केही कार्य छ ?

३०. यसको लागि मात्र प्रयोगमा ल्याइने केही औजार छ ?

३१. रासायनिक मल राखेको भए रासायनिक मल र गाईवस्तु वा कम्पोष्ट मल हाल्दा चिउरीको स्वादमा केही फरक छ कि ? यदि फरक छ भने कस्तो प्रकारको फरक पाउनु भएको छ ?

३२. चिउरी खेतीमा रोग, कीराको प्रकोप छ कि छैन ?

क्र.सं.	रोगको नाम	व्यवस्थापन तरिका	कीराको नाम	व्यवस्थापन तरिका

यसको खेती भएको छ ? यदि छ भने कसले सुरु गर्यो ?

३३. तपमईको ठाउँमा चिउरी खेती गरिरहेको को-को हुनुहुन्छ ?

क्र.सं.	चिउरी कृषकको नाम	ठेगाना	सम्पर्क नं.	बिक्रीकर्ता/बजार
१				
२				
३				
४				

यस ठाउँमा चिउरीको नर्सरीहरू पनि छन् ? छ भने नाम ठेगाना सम्पर्क नम्बर बताउनुहोस्।

क्र.सं.	चिउरी नर्सरीको नाम/ नर्सरी धनीको नाम	ठेगाना	सम्पर्क नं
१			
२			

३४. यहाँको चिउरीको बिरुवाहरू अन्य भेगमा पनि लगेर सारेका छन् कि छैनन् ? छ भने कुन-कुन ठाउँहरूमा

लगेका छन् होला ?

३५. कुन महिनादेखि कुन महिनासम्म चिउरी टिप्ने गरिन्छ ?

३६. चिउरी भण्डारण गर्नु हुन्छ कि सिधै बेच्नु हुन्छ ?

• सिधै बेच्ने कृषकहरूको सङ्ख्या .....% बिक्री परिमाण .....%

• भण्डारण गरेर पछि बेच्ने कृषकहरूको सङ्ख्या .....% बिक्री परिमाण .....%

३७. चिउरीको भण्डारण गरिन्छ कि गरिदैन ?

यदि गरिन्छ भने.....

क्र.सं.	क्रियाकलाप
१	फल टिप्ने तरिका:
२	फल टिपेपछिका गतिविधि:
३	भण्डारण विधि : .....
४	कति समय:

यसको उत्पादन वा Processing को लागि कुनै समूह वा सहकारी छ ? यदि छ भने तलको टेबल भर्नुहोस्।

क्र.सं.	समूह/सहकारीको नाम	ठेगाना
१		
२		

#### ड. चिउरी खेती सम्बन्धी परम्परागत ज्ञान, सीप तथा Innovation

३८. जग्गा तयारीदेखि फल टिपेर बिक्री गर्ने कार्यसम्मका लागि यस ठाउँ विशेषमा परम्परागत ज्ञान/सीप/तरिकाहरू छन् भने उल्लेख गर्नुहोस्।

३९. पहिले गरिने र अहिले गरिने क्रियाकलापमा के फरक छ, छैन भने यी क्रियाकलाप कहिले देखि गर्दै आएको हो ?

४०. जग्गा तयारीदेखि फल टिपेर बिक्री गर्ने कार्यसम्मका लागि कुनै नयाँ तरिकाको विकास (Innovation) गरिएका छन् भने उल्लेख गर्नुहोस्।

#### च. चिउरी खेतीबाट यस भेगमा परेका सामाजिक तथा आर्थिक प्रभावहरू

४१. चिउरी खेतीबाट परेको सामाजिक प्रभाव .....

४२. चिउरी खेतीबाट पाएको पहिचान मान प्रतिष्ठा गाउँ कै पहिचान आदि

४३. चिउरी खेतीबाट हुने आम्दानी तथा आम्दानीले जीवनयापन शिक्षा सम्पत्ति..... आदिमा भएको सुधार

### छ. चिउरीको पहिचान (Collective Marking)

४४. यहाँको चिउरीको बिरुवाहरू अरु भेगमा लागेर सार्दा पनि यस ठाउँमा पाइने स्वाद अर्को ठाउँमा पनि आउँछ कि फरक हुन्छ ?

४५. यस ठाउँको चिउरी र अन्य क्षेत्रमा फलेको चिउरीको गुण एउटै छ कि फरक छ ? फरक छ भने के-के (बोटमा फलमा) फरक होला ?

४६. यस ठाउँको चिउरीमा के गुण/विशेषताहरू (पाक्ने सिजन, फलको स्वाद ..... आदि) छन्, जसले यस ठाउँको चिउरीलाई चिनाएको छ ?

४७. चिउरी खेती के-का लागि गरिन्छ ? प्राथमिकताका आधारमा लेख्नुहोस् (१ देखि ६ सम्म)

मह	
काठ	
जैविक मल	
Butter	
फल	
घाँसेबाली	

४८. यस ठाउँको चिउरीलाई अन्यत्र पहिचान गराउनका लागि यसको उद्गम स्थल र पहिचान चिन्ह (ट्याग) दिएर बिक्री गर्दा के होला। के-के गर्नुपर्ला ?

४९. थप बनाई राय सुझाव केही भए उल्लेख गर्ने।

## 7.2.3 Key Informant Survey

### क. परिचयात्मक विवरण

क. नाम:

ख. ठेगाना जिल्ला:

गाउँपालिका/नगरपालिका:

गाउँ/टोल:

ग. तथ्याङ्क सङ्कलन मिति:

लिङ्गः पुरुष ☐

महिला ☐



## ख. चिउरी खेती सम्बन्धी ऐतिहासिक जानकारी

१. यो ठाउँमा कहिलेदेखि चिउरी खेती शुरू भएको थियो ?
२. यस क्षेत्रमा सबैभन्दा पहिले चिउरीका बिरुवाहरू कहाँबाट ल्याइएको होला ?
३. चिउरीको नाम यहि नै कसरी रहन गयो होला ? स्थानीय नाम के-के छन् ? विभिन्न भाषा, संस्कृति, अनुसार अर्थसहित बताउन भन्ने ।
४. चिउरी फल तथा बालीसँग जोडिएर यस ठाउँमा गीत, कविता, उखान टुक्का आदि केही चलेको छ कि ? जस्तै: चिउरीको फूलै टिपी शिरैमा सजाई दिउला .....आदि ।
५. चिउरी फल तथा बालीसँग जोडिएर यस ठाउँमा कुनै चाडपर्व मनाउने चलन छ कि ? विशेष परिकार बनाएर खाने चलन छ कि ? यी चलनहरू कहिलेदेखि चलेको होला ?

## ग. चिउरी खेती सम्बन्धी जानकारी

६. यो क्षेत्रमा कति क्षेत्रफलमा चिउरी खेती भइरहेको छ होला ?
७. यस क्षेत्रमा चिउरी खेतीमा संलग्न भइरहेका कृषक कृषक समूह सहकारी कम्पनीहरूको सङ्ख्या कति छ होला ?
८. कुन-कुन जात (रैथाने जातसमेत) को चिउरी खेती भइरहेको छ ? (स्पष्टसँग चित्र सकिने गुणहरू सोध्ने)  
क)  
ख)
९. सबभन्दा नाम चलेको चिउरीको जात (रैथाने जातसमेत)/स्थान/स्पष्टसँग चित्र सकिने गुणसहित बताउनुहोस् ?
१०. यो भेगको सबैभन्दा पुरानो चिउरीको बोट कहाँ कसको बारीमा छ ? (फोटो लिने)

## घ. चिउरी खेती प्रविधिबारे जानकारी

११. चिउरी खेती गर्दा के-के काम गरिन्छ ?
१२. चिउरीको बिरुवा सारिन्छ कि आफै उम्रेको बिरुवाबाट बगैंचा बन्छ ?
१३. चिउरीका बिरुवा उत्पादन गर्ने कुनै नर्सरी छन् त ?

१४. चिउरीको बोटको स्याहार सम्भार कसरी गरिन्छ कि गरिदैन ?
१५. चिउरी खेती तथा बजारीकरणका प्रमुख समस्याहरू के-के होलान् ?
१६. कुन महिनादेखि कुन महिनासम्म चिउरी टिप्ने गरिन्छ ?
१७. चिउरी भण्डारण हुन्छ कि सिधै बिक्री हुन्छ ?
- सिधै बेच्ने कृषकहरूको सङ्ख्या .....% बिक्री परिमाण .....%
  - भण्डारण गरेर पछि बेच्ने कृषकहरूको सङ्ख्या .....% बिक्री परिमाण .....%
१८. चिउरीको भण्डारण गरिन्छ भने कहाँ कसरी गरिन्छ ?

#### **ङ. चिउरी खेती सम्बन्धी परम्परागत ज्ञान, सीप तथा Innovation**

१९. जग्गा तयारीदेखि फल टिपेर बिक्री गर्ने कार्यका लागि यस ठाउँ विशेषमा परम्परागत ज्ञान/ सीप/ तरिकाहरू छन् भने उल्लेख गर्नुहोस्।
२०. यस ठाउँमा चिउरी खेती गर्नका लागि जग्गा तयारीदेखि फल टिपेर बिक्री गर्ने कार्य गर्नका लागि कुनै नयाँ तरिकाको विकास (Innovation) गरिएका भने भने उल्लेख गर्नुहोस्।

#### **च. चिउरी खेतीबाट यस भेगमा परेका सामाजिक तथा आर्थिक प्रभावहरू**

२१. चिउरी खेतीबाट भएको सामाजिक सद्भाव .....
२२. चिउरी खेतीबाट पाएको पहिचान मान प्रतिष्ठा गाउँ कै पहिचान आदि
२३. चिउरी खेतीबाट हुने वार्षिक आमदानी .... तथा आमदानीले जीवनयापन शिक्षा .... आदिमा भएको सुधार

#### **छ. चिउरीको पहिचान (Collective Marking)**

२४. यहाँको चिउरीको बिरुवाहरू अरु भेगमा लगेर सार्दा पनि यस ठाउँमा पाइने स्वाद अर्को ठाउँमा पनि आउँछ कि फरक हुन्छ ?
२५. यस ठाउँको चिउरी र अन्य क्षेत्रमा फलेको चिउरीको गुण एउटै छ कि फरक छ ? फरक छ भने के-के (बोटमा फलमा) फरक होला ?
२६. यस ठाउँको चिउरीमा के गुण/विशेषताहरू (पाक्ने सिजन, फलको स्वाद ..... आदि) छन्, जसले यस ठाउँको चिउरीलाई चिनाएको छ ?

२७. यस ठाउँको चिउरीलाई अन्यत्र पहिचान गराउनका लागि यसको उद्गमस्थल र पहिचान चिन्ह (ट्याग) दिएर बिक्री गर्दा के होला। के-के गर्नुपर्ला ?

२८. थप भनाई राय सुझाव केही भए उल्लेख गर्ने।

#### 7.2.4 Market Survey

बजारको नाम:	व्यापारीको नाम:
-------------	-----------------

१. तपाईंले चिउरी व्यापार सुरु गर्नु भएको कति वर्ष भयो ?
२. तपाईंले चिउरी कहाँबाट ल्याएर बेच्नुहुन्छ ?
३. चिउरीको बीउहरू देशभरबाट कसरी जम्मा गरेर प्रशोधन गरिन्छ ?
४. चिउरीको ढुवानी कसरी गर्नु हुन्छ ?
५. चिउरीको ओसार पसार गर्दा कति जति क्षति हुने अनुमान छ ?
६. तपाईंले कुन-कुन जातको चिउरी बेच्नुहुन्छ ?
७. कुन जात अथवा स्थानको चिउरी बढी बिक्री गर्नु हुन्छ (प्राथमिकताको आधारमा लेख्नुहोस्) ?  
 क) .....  
 ख) .....  
 ग) .....
८. प्रति के.जी. चिउरी को दर कति छ ?  
 क. सिजनल (कुन-कुन महिना.....)  
 ख. बेमौसमी महिना
९. चिउरीको बिक्री सिजनल हुन्छ कि बाह्रैमहिना हुन्छ,  
 क) सिजनल (कुन-कुन महिना.....)  
 ख) बाह्रै महिना
१०. कुन जातको चिउरी भनेर कसरी छुट्याउनुहुन्छ, मुख्य जातीय विशेषता स्वाद फलको किसिम अमिलोपन/गुलियोपन/टर्पोपन आदिवारे लेख्नुहोस् ?  
 क)  
 ख)
११. यो क्षेत्रको चिउरी अन्य कुन-कुन ठाउँमा निर्यात गर्ने गरिएको छ ?

१२. यो बजारमा चिउरी कुन-कुन ठाउँबाट आयात गर्ने गरिएको छ ?

१३. चिउरीको भण्डारण कहाँ कसरी गर्नु हुन्छ ?

१४. चिउरी कति समयसम्म भण्डारण गरेर राख्नुहुन्छ ?

१५. यो बजारमा चिउरीको कारोबार कति हुन्छ होला ?

बिक्री सिजन	कारोबार विवरण	परिमाण (टन)	मूल्य (रु.)
सिजन	दैनिक		
	मासिक		
	वार्षिक		
बेमौसम	दैनिक		
	मासिक		
	वार्षिक		

सबभन्दा राम्रो कुन ठाउँको र कुन जात राम्रो वा बढी बिक्री हुन्छ र के कारणले हो ?

१६. यस ठाउँको चिउरीलाई अन्यत्र पहिचान गराउनका लागि यसको उद्गम स्थल र पहिचान चिन्ह (ट्याग) दिएर बिक्री गर्दा के होला। के-के गर्नुपर्ला ?

१७. चिउरीको बजारीकरणमा देखिने समस्याहरू के-के हुन् र यसलाई कसरी घटाउन सकिन्छ ?

१८. के चिउरीमा *Domestication* को कमिले गर्दा व्यावसायिकरणमा कुनै समस्या देखिएको छ ?

१९. उपभोक्तासम्म चिउरीको गुणस्तर कायम गर्न के गर्नुपर्ला ?

२०. बजारमा चिउरीको कुन उत्पादनको बढ्दो माग छ ? प्राथमिकताको आधारमा लेख्नुहोस्। (*Descending order*)

क्र.सं.	उत्पादन	
१	फल	
२	मह	
३	बीउ	
४	पात	

५	पिना	
६	Butter	

२१. थप बनाई राय सुझाव केही भए उल्लेख गर्ने।

### 7.2.5 Consumer Survey

स्थान:	उपभोक्ताको नाम:
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१. तपाईंले बजारमा चिउरी किन्न जाँदा सहजै पाउनुहुन्छ ?

क) पाउँछु ☐ ख) पाउँदिन ☐

२. चिउरी सरदर प्रति के.जी. कति मूल्यमा किन्न पाउनुहुन्छ ?

सिजन:

बेमौसम:

चिउरीको मूल्य range....

राम्रो

ठिकै

३. बजारमा चिउरी किन्न जाँदा कुन-कुन जात/भेगको चिउरी पाउनुहुन्छ ?

क) .....

ख) .....

ग) .....

४. राम्रो चिउरीमा हुनु पर्ने के-के गुण हुन्/ राम्रो चिउरी भन्नाले के-के गुण हुनुपर्छ ?

.....

५. तपाईं कुन जातको चिउरी किन्न रुचाउनुहुन्छ र किन ?

जात	विशेषता (रुचाउनुको कारण: जस्तै बोक्रा पातलो, विया सानो र गुदी बढी आदि)
क)	
ख)	
ग)	

६. तपाईंले बजारमा चिउरीको कुन-कुन उत्पादनहरू कति-कति मूल्यमा सहजै पाउनुहुन्छ

क्र.सं.	चिउरीको उत्पादन	मूल्य
१	ताजा फल	
२	मह	
३	बीउ	
४	Butter	

क्र.सं.	चिउरीको उत्पादन	मूल्य
५	पात	

७. तपाईंले स्थानीय जातको चिउरी र आयातित चिउरीमा के भिन्नता पाउनुभयो ? (*color, taste and preference*)
८. सबभन्दा राम्रो कुन ठाउँको र कुन जात राम्रो वा बढी प्रख्यात र के कारणले हो ?
९. राम्रो चिउरीलाई कतिसम्म मूल्य तिर्न तयार हुनुहुन्छ ?
१०. कुनै ठाउँको चिउरीको लागि खोजेर बढी मूल्य तिर्न तयार हुनुहुन्छ ?
११. चिउरी बजारीकरणमा भएका समस्या र समाधानका उपायाहरू के-के हुन् ?
१२. उपभोक्तासम्म चिउरीको गुणस्तर कायम गर्न के गर्नु पर्ला ?
१३. चिउरीको प्रयोग कसरी के का लागि गर्नु हुन्छ ?
१४. तपाईंलाई बजारमा चिउरी बटरको उपलब्धता र गुणस्तर सम्बन्धी कस्तो धारणा छ ?
१४. तपाईंलाई बजारमा चिउरीको महको उपलब्धता र गुणस्तर सम्बन्धी कस्तो धारणा छ ?
१५. थप भनाई राय सुझाव केही भए उल्लेख गर्ने।



## Annex:



The oldest Chiuri tree



Chiuri fruits



Survey team with FGD



Survey team with traders





Chiuri khoria



Flower of chiuri



Chiuri products in market





Dried Chiuri seeds



Crushed in locally made  
Dhiki



Steam crushed seeds



Steamed crushed seed



Oil/butter



Collection of oil/butter



Oil extraction process called  
Chepuwa





Survey Team in Rakshirang



Immature Chiuri fruits



चिउरीको बोटमुनि फलैँचा





Major economic products of lapsi (Lapsi pulp, Lapsi mada, Lapsi candy)



Fresh Lapsi in market

More than 100 years old Lapsi tree

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