

IMPACT OF SEASONAL VEGETABLE FARMING ON ENTREPRENEURSHIP DEVELOPMENT

A Study of Aathghare Namuna Agriculture Farm Suryodaya-12, Aathghare, Ilam, Nepal

A Thesis Submitted to
Tribhuvan University, The Faculty of Humanities and Social Sciences,
Mahendra Ratna Multiple Campus, Ilam, Department of
Rural Development for the Partial Fulfillment of
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in
Rural Development

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Declaration

I hereby declare that the thesis entitled " **Impact of Seasonal Vegetable Farming on Entrepreneurship Development : A study of Aathghare Namuna Agriculture Farm of Suryodaya Municipality-12, Aathghare, Ilam, Nepal,**" submitted to the Department of Rural Development, Mahendra Ratna Multiple Campus Ilam, Tribhuvan University is entirely my original work prepared under the guidance and supervision of my supervisor. I have made due acknowledgements to all ideas and information borrowed from different sources in the course of preparing this thesis. The results of this thesis have not been presented or submitted anywhere else for the award of any degree or for any other purposes. I assure that no part of the content of this thesis has been published in any form before.

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LETTER OF RECOMMENDATION

This thesis entitled **Impact of Seasonal Vegetable Farming on Entrepreneurship Development: A Case Study of Aathghare Namuna Agriculture Farm of Suryodaya Municipality-12, Aathghare, Ilam, Nepal** has been prepared by **Suman Rai** under my supervision. I hereby recommend this for evaluation Committee as a partial fulfillment of the requirements of the Degree of Master of Arts in Rural Development.

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The thesis entitled **Impact of Seasonal crop farming on Entrepreneurship Development : A Study of Aathghare Namuna Agricultural Farm, Suryodaya Municipality-12, Ilam, Nepal** submitted by **Suman Rai** in partial fulfillment of the requirements for the Master's Degree (M.A.) in Rural Development has been approved by the evaluation committee.

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Abstract

A thesis Impact of Seasonal Vegetable Farming on Entrepreneurship Development : A Study of Aathghare Namuna Agriculture Farm Suryodaya Municipality-12, Aathghare, Ilam, Nepal. Nepal is an agriculture-based country so this study shows the role of agriculture farm in rural area of Ilam and contribution towards entrepreneurship development.

The main objective of the study is to assess the impact of the seasonal vegetable/crop farming in rural entrepreneurship development specially in the poverty reduction and improving the socio-economics life of farmers of Aathghare Namuna Agricultural Farm as well as farmers of Suryodaya Municipality-12 aathghare, Ilam District. To find out the role of farm to vegetable/crop production in the study area is another important objective of this study. Interview study, key information interview, focus group discussion was conducted in collection priming information. Sixtyfive (65) household were sampled out of total one hundred seventy (170) households. This study is based on both exploratory as well as descriptive research design data and information are collected from random sampling method at study area of Aathghare Namuna Agricultural Farm.

Seasonal Crop/vegetable farming has become an important economic activity proving an independent as well as supplementary of livelihood in rural area. For creation of employment opportunities and to become a rural entrepreneur's life of rural people role of agricultural farming is much appreciated. It has important condition to landless farmers poor and women for their economics employment and self reliant. Seasonal Vegetable farming plays a significant role to solve the problem of food deficiency, generation of employment and income generation. Seasonal agricultural farming plays important role for Development of Rural area.

Likewise, the role of cooperative in agricultural production it is also important in the study area. Seasonal vegetable producer cooperative are the important channels for collection and distribution of vegetable/crop and crop product. Farmers sell vegetable to agricultural producer cooperative in the study area as well as farmers sells their production also on near market. Price of seasonal crop is paid by crop producer cooperative on the basis of quality of their production and also according to near market

value. The role of cooperative to the promotion of agricultural production scale become key element in rural seasonal crop farming. Small scale agricultural farming contributes significantly to be promoted. Thus, the seasonal agricultural farming is important source of rural livelihood and it has remarkable contribution for rural area and it has also remarkable contribution for rural life enhancement. It is important factor to improvement of economic level of rural area. Improvement and promoting of this types of farming of rural people can increase more benefit in country like Nepal. So, to enhance rural life of study area this kind of farming as well as this agricultural farm has important positive impact for entrepreneurship development.

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Abbreviations/Acronyms

APP	Agricultural Perspective Plan
ADB	Asian Development Bank
CIA	Central Intelligence Agency
CBS	Central Beauro of Statistics
DoFE	Department of Foreign Employment
FAO	Food and Agricultural Organization
FDI	Foreign Direct Investment
GON	Government of Nepal
GDP	Gross Domestic Products
INGOS	International Non Government Organization
KV	Kathmandu Valley
NARC	Nepal Agricultural Research Council
NRB	Nepal Rastra Bank
NLSS	National Living Statistics Survey
PACT	Project for Agricultural Commercialization Trade
QTS	Quintals

CHAPTER -I

INTRODUCTION

1.1 Background

Nepal is one of the most beautiful landlocked country in the world. Nepal is surrounded by green forest, natural resources and land. People living in Nepal are depended on agriculture main income source of Nepalese citizen is farming. They uses natural resources as resource for their day to day life style. Life style and main income source of Rural area is agriculture. People get wood for cooking, grass for animal from forest and they do farming. Nowadays farm, factory are playing most important role to growth national income as well as it helps for the growth of people living in rural area also. Such farm and collection centre is the medium where collector collect crops from farmer and supply it to the market. In Rural area this type of farm is needed which helps people to improve their income source and it provides employment for people. This kinds of farm produces seasonal crop products like *aakabare,iskush,aalu,kopi etc.* and their demand is higher in local market as well as national and international market with high price value.

The history of seasonal crop farming for incoming and marketing purpose is not a long. But crops farming for individual surviving has been doing from ancient time. Among whole population several people do farming for their survival. It seems agriculture is the main source for the Nepalese people. On the other hand the production sector of Nepal has been going downhill for decades. The cluster of important factories and production house such as the Basbari Leather and Shoes Factory, Biratnagar Jute mill, Janakpur Cigarette Factory etc. from twenty years earlier to today's low production can only have negative impact. The result of no job, low income and weak job security that lead to around 1300 youths to leave the country everyday for opportunities.(Republica,2022) Among the expatriates most of them are low waged and uneducated. Workers are forced to work overtime with no holidays nor appropriate compensations' all around the year .

The current scenario of industrial sector is even more worrying and its need to change. The industrial sector in Nepal contributes only 13.5% to the national GPD and services 59.5% of the economically active population(CIA,2017). If Nepal wants

to gain significant strides in economic development, the figures must increase. The number of industries must rise and so must their contribution. One significant step that should be taken is the development of entrepreneurship. Entrepreneurship is the ultimate answer to the questions related to production of opportunities .

Vegetable farming is the growing of vegetables for human consumption. The practice probably started in several parts of the world over ten thousand years ago, with families growing vegetables for their own consumption or to trade locally. At first manual labour was used but in time livestock were domesticated and the ground could be turned by the plough. More recently, mechanization has revolutionized vegetable farming with nearly all processes being able to be performed by machine. Specialist producers grow the particular crops that do well in their locality. New methods such as aquaponics, raised beds and cultivation under glass-are used. Marketing can be done locally in farmer's markets, traditional markets or pick-your-own operations, or farmers can contract their whole crops to wholesalers, canners or retailers.

1.2 Need of Entrepreneurs in Nepal

Nepal needs to strive for global integration through the trade by facilitating entrepreneurial bursts. The first step we can take it by keeping entrepreneurship in education courses, at the policy making level and more importantly, by supporting an entrepreneurial ecosystem to exploit the tremendous potentials of enterprises in areas such as energy, agriculture and tourism. The most important reason why Nepal really needs entrepreneurship is to lead the nation towards sufficiency and prosperity. Now its time for entrepreneurial minds to be the catalyst for change .

Entrepreneurship has assumed super importance for accelerating economic growth both in developed and developing countries. It promotes capital formation and creates wealth in the country. It reduces unemployment and poverty and it's a pathway to prosper. Entrepreneurship is the process of searching out opportunities in the market place and arranging resources required to exploit these opportunities for long term gains. It is the process of planning, organizing, opportunities and assuming. The concept of Entrepreneurship has a wide range of meaning. Entrepreneurship has traditionally been defined as the process of designing, launching and running a new business, which typically begins as a small business, such as a startup company,

offering a product, process or service for sale or hire. The people who create these businesses are called entrepreneurs. An entrepreneur is an individual who, rather than working as an employee, runs a small business and assumes all the risks and rewards of a given business venture, idea, or good service offered for sale. The or entrepreneur is commonly seen as a business leader and innovator of new ideas and business processes. Economists categorize the resources that go into production as either land (natural resources), labor, capital or entrepreneurship. An entrepreneur combines the first three of these to create goods or provide services. An entrepreneur typically creates a business plan, hires labor, acquires resources and financing, and provides leadership and management for the business. Entrepreneurs play a key role in any economy. These are the people who have the skills and initiative necessary to take good new ideas to market and to make the right decisions that lead to profitability. The reward for taking the risk is the potential economic profits the entrepreneur could earn. (Seth, 2022)

Nepal is a developing nation with an agricultural based economic system. Over the last two decades the country is expanding more towards the manufacturing industries and other technological sectors and these steps have achieved much success. Nepal is a country where most of its youth go to work in various foreign locations and the economy of Nepal is heavily dependent on remittances. As per a report of published by World Bank the Personal Remittance received as percentage of GDP is as high to 24.25% (World Bank) in 2020. These figures show that there are not many opportunities for the youth of Nepal to work in their own country, and that is the biggest challenge for the entrepreneurs in the country. The word entrepreneurship has become a buzzword in the Nepalese society. Entrepreneurship Development seems to have caught the attention of the government and business sectors whether profit or non-profit organizations. The Non- Government Organizations (NGOs) and International Non-Government Organization (INGOs) are trying to incorporate the entrepreneurial culture in their areas of work. The private sector or so called profit driven organizations have started new initiatives like venture capitalism, investing in startup's etc. and the government is also planning to increase the money supply in the name of entrepreneurship, better late than never. Increased entrepreneurship in the various sectors especially youth in the society is appreciable.

1.3 Statement of the Problem

More than 70 percent of people in Nepal depend on agriculture for their livelihood. Because of traditional agriculture system of Nepal there is no modern technology is used. It is difficult to fulfill the demands of food, income and employment through this type of traditional agricultural system. Daily thousands of productive age of youth's force goes to foreign countries for searching employment opportunities in Nepal. There are many probabilities in our country but many people have hidden forces to go out day by day.

Most of the people have engaged agriculture and livestock farming in the study area. People have spent their cost and time in seasonal crops production as well as dairy farming for the several years ago. But there is no systematic research about the role of seasonal crop farming in their livelihood. There is no attention towards opportunities, constraints and their solutions of crop farming in the study area. In this context this study has its own importance to find out the support crop farming in socio-economic life of rural people in the study area. It is hoped that this study helps to explore different opportunities, constraints and their creative solutions ideas.

In high rates of poverty has remained in rural areas. There is an absolute type of poverty in the rural area. We can found Poverty on both sides rural and urban area. But there are many possibilities of new economic activities in urban areas, so poverty may be reduced in some extent in urban areas. The rural economy mainly depends on agriculture. The contribution of agriculture is very important for income and employment generation in rural area. The agriculture system remains traditional nature in rural area. The agricultural system of Nepal has remained subsistence than commercial. Therefore, people cannot get return compared to their cost and hard labor. There are sufficient natural resources in rural area of Nepal. But there is no proper utilization of such type of natural resources. So, the problem of high rate of poverty, unemployment and lack of resources are remained in rural areas.

Rural area has suffered from malnutrition, food deficiency, shortage of renewable energy, illiteracy, poverty, unemployment etc. People spend large amount of their income for household food purpose. The health condition of rural people is also miserable. People depend on forest for firewood and grass. There is no availability of renewable source of energy for household purpose. Access exploitation of forest creates the environmental crisis in the rural area. It badly affects to whole

biodiversity of the rural area. Many youths of productive age go daily to foreign countries for searching employment opportunities. Similarly, many rural people migrate to urban area from rural area for employment opportunities. It disturbs the development of rural area.

There is difficult to operate productive activity due to lack of capital. Rural people have less capital for invest in productive activities. It disturbs to entrepreneurship development in rural areas. Without entrepreneurship development, there is no chance of employment and earning activities in rural sector. The population growth rate is seeming high in rural area. There is lack of economic activities proportion to increased population rate. The increased population finally goes to agriculture for employment and livelihood. But bad ward agricultural system and technology cannot provide sufficient employment opportunities for population increasing.

Usually, the rural people have not their own land for agriculture. There is no chance of agricultural production in the lack of sufficient land. In this situation people needed alternative source of income and employment. Rural people are unknown about modern technology and scientific knowledge. People have no sufficient money for their children's higher education and health. People needed much money for purchase chemical fertilizer and medicines to produce more crops. They have no chance care their cattle in the lack of veterinary services. People cannot archive good return from agricultural sector according to their investment.

Farm located at rural area faces many problems main problem is because of transportation it takes many hours for farmers to bring crops from village to market. Due to lack of sufficient vehicle and transportation problem goods are being wastage. Due to lack of Skill, knowledge and qualified worker it is being very difficult for production. It is being very difficult to collect crops from village to collection area and market because of transportation and lack of crop collection center. Goods, are being wastage, damaged because current situation of country, political violence and especially changing weather. Transportation problem, lack of Skill and knowledge of worker, lack of latest technology and latest equipment, geographical structure, changing weather, lack of crop collection center, selling markets, well equipment, skilled manpower are main problem that farm are facing.

Farm located at rural area faces many problem. Among various problems some main problems are transportations of goods, fertilizers, hybrid seeds, environment friendly insecticides, pesticides and capable technical main power. lack of the new scientific technique for farming and modern types of equipment required is also a huge problem for rural farmer.

Organic crops are the highly demanded in our market and society nowadays. Suffering from diseases are the main causes of unhealthy crops and foods. So for decrease down of such unhealthy environment in our society organic seasonal crop farming plays vital role. Along several difficulties of seasonal crop farming how it helps to rural entrepreneurship development is main state of this study.

Suryodaya Municipality –12, Aathghare is the study area where farmers have been facing the problem which are mentioned above. Here this research to focus on the following issues.

- 1) What are the main problems for seasonal vegetable farming ?
- 2) Is there any concern of government on seasonal vegetable farming ?
- 3) What do farmers need from local government ?
- 4) Do farmers have sufficient technologies for vegetable farming ?
- 5) Is there organic production of vegetable ?
- 6) What price is farmers getting and what price they want on market ?
- 7) Has vegetable farming played role on entrepreneurship development ?

1.4 Objective of the Study

- To identify the employment generation in the study area.
- To find out the role of the farm on economic development in the study area .
- To study the impact of seasonal vegetable farming in study area for rural Entrepreneurship development.

1.5 Importance of the Study

Public and private crop farms are most important in rural area which can be established in low investment and it provides many opportunities to the farmer . This kinds of farms is needed in every rural area where agriculture is main income source. It provides employment to the farmers and helps to farmers to fulfill their needs. Choosing of this form is important due to it provides many advantages to farmer of remote area.

Specially this study is useful and important for policymaker, planner, municipality, local people etc. to study the impact of entrepreneurship development of rural farmers through seasonal crop farming . It is also fruitful for analyzer or observer to study about impact of crop farming for economic growth, entrepreneurship development, policy implementation, crops production rate etc of village farmers .

1.6 Limitation of the Study

The limitations of study are as follows.

- 1)This study is purposed for the partial fulfillment of Master Degree in Humanities and social science & Arts /M.A. in Rural Development, Tribhuwan University.
- 2)The study is based on seasonal crop farming on rural area of Suryodaya Municipality 12, Aathghare and the information will be collected from only the rural seasonal crop farming beneficiaries located in the rural area of Suryodaya Municipality-12, through questionnaire.
- 3) The study has occupied only seasonal vegetable farming sector of Suryodaya Municipality-12, and only valid in the study area.
- 4) This study has found economic condition of farmers located on the study area.
- 5) Field visit, questionnaire and data collection has done as the main activities to meet the objectivities of this study.

- 6) Descriptive research design and simple random sampling methods are done for this study.
- 7) This study and its findings are only suitable in the study area.
- 8) It studied only the impact of seasonal crop farming on entrepreneurship development along with economic growth as well as employment generation situation of village farmers.

1.7 Organization of the Study

This study composes in different five chapters. The first chapter deals with introduction. It includes background of the study, statement of problem, objectives, significance and limitation of the study. The second chapter includes with the relevant literatures and the third chapter deals with research methodology used in this study. The fourth chapter shows the presentation and analysis of data. And the last fifth chapter presents summary of major points, conclusion and recommendations, Necessary references and appendixes also included in the last part of the study.

CHAPTER-II

LITERATURE REVIEW

2.1 Background

Vegetable farming and Farmer's Livelihood : Insights from Kathmandu Valley, Nepal an article (Rai,2019) Vegetable farming and farmer's livelihood, shows Agriculture is the main economic activity in Nepal, and vegetable farming is one of the major agricultural practices of peri-urban farmers in K.V. In this study, it was hypothesized that vegetable farming contributes significantly to the livelihood of farmers by generating cash and providing employment opportunities. The relationship between livelihood and vegetable farming based on the practices, views, and perceptions of vegetable farmers at four different sites in the outskirts of KV was studied. A purposive sample of 140 farm households was surveyed, and key informant interviews were conducted to collect comprehensive data. Binary logistic regression was used to identify the relationships between farmer livelihood and numerous variables related to vegetable farming. It was found that the most of the surveyed farmers are migrants who have spread to different corners of KV at different times. The surveyed farmers cultivate an average area of 2551.5 m² for vegetable farming. The major vegetable products in the study area are tomato (*Solanum lycopersicum*), carrot (*Daucus carota*), and green leafy vegetables. The model results indicate a significant positive relationship between vegetable farming and livelihood. The survey results also reveal many constraints (e.g., poor market management and lack of irrigation facilities) and challenges (e.g., haphazard urban growth, price fluctuation, and vegetable diseases). Since vegetable farming has become a major source of livelihood for farmers in the peripheral areas of KV, further interventions should be implemented to strengthen the vegetable sector and sustain this source of livelihood for peri-urban farmers. (Sustainability,2019)

The Journal of Production Efficiency of small holder vegetable farm with topic Production Efficiency of Smallholder Vegetable Farms in Ilam District, Eastern Hill Nepal (Shrestha,Huang,Ghimire,2014) explore out about the Efficiency in vegetable production is a critical issue for enhancing productivity, generating income and supplying nutrients for Nepalese rural people. The study aimed to measure and to

analyze the production efficiency of smallholder vegetable farms in eastern hill, Nepal, using Nepal vegetable crops survey (2020) data of the Central Bureau of Statistics, Government of Nepal. The results of maximum likelihood estimates of Stochastic Frontier Analysis revealed that the mean technical efficiency score was 0.77, implied that 23 percent production could increase by simply improving vegetable farming practices. The production was contributed by land, labor, seed, compost, fertilizer, pesticide, farm capital, seed types, credit, technical support and sex of household head. Therefore, this study recommend policies on improvement of land, develop skillful labor, promote improve seed, encourage composting, easily access of fertilizer, pesticide and farm capitals, promoting women farmer, enhance technical support and access of credit to vegetable farmers.

The Impact of vegetable farming on farmers livelihood patterns in Dhankuta, Nepal (Bhandari and Paudel,2021) Geographical Journal of Nepal 14:131-150) which deals with the livelihood pattern and the socio-economic condition of vegetable farmers of Chhathar Jorpati rural municipality, which lies in the eastern part of Dhankuta district of Nepal. This study area and Ilam both are hilly area with common altitude as well as climate too. Thus this research made me helpful for my study to complete my thesis. As same procedure and phenomenon were applied in the study . The study applied household questionnaire survey focus group discussion and field observation to collect information of vegetable farming and the impact of vegetable farming on farmers&; livelihood. The study conducted 45 households questionnaire survey in total using simple random sampling in ward number Six of Chhuthar Jorpati rural municipality. The statistical analysis of collected field survey data was preformed through correlation test and standard deviation. The result shows that the socio-economic condition and the livelihood of the vegetable farmers is improving in recent years. Before doing commercial vegetable farming, farmers cultivated potatoes and used to exchange their production with cereal crops: the neighboring villages. Farmers used to cultivate maize in their farmland, but due to the climatic and the topographic condition it took almost nine months (from January to October) for production. Among the total households, 24.4 percent farmers have seven members in their family and the average family size is 6.3. The Chhetri is the dominant ethnic group of the study area. Among educated groups, the majorities have completed secondary level of education. Most of the farmers are (35.5%) holding land size between 16 and 20

Ropani (0.82-0.10ha). The majorities of the farmers cultivated high valued vegetables i. e., cauliflower, cabbage, tomato, pea, radish, carrot and green leafy vegetables. The average income from vegetable farming is NRs. 250000/household per year. Primarily, farmers use their income to manage foods, clothes, children education and daily-required goods. Further, due to the lack of sufficient human resources, improved seeds and fertilizer, the majorities of the farmers are facing challenges in their vegetable farming. In addition to this, the vegetable farmers are utilizing their capabilities and are devoted to enhance their livelihood through vegetable farming.

2.2 Consumption and Supply of Crops Products

In earlier days when there were no organized public or private farms, the demand for seasonal crops vegetables was fulfilled by simple farming by the people themselves or through the direct supply from the professional vegetable producers or buying directly from Indian market. These producers used to go house by house and deliver the required quantity of green vegetables to the households. But after the establishment of organic seasonal crop farm, the scenario began to gradually change with the increasing supply of organic crops and modern different types of vegetable products such as *iskus*, radish, cauliflower, *akabare*, cabbage, tomato etc. Many new vegetable shops also started to emerge. Now, particularly in the urban areas, the situation has completely changed because many farms in the organized sector have come up with varieties of seasonal crop products. Besides, different agricultural products are also imported to cater the consumers' demand.

Although an effort was made to estimate the annual consumption of seasonal crop and agricultural products through internal supply and imports, it could not be done in the absence of data. Data of the private farms and informal vegetable market is absent for internal supply. For imports, the Customs data gives only the aggregated monetary value of the imported agricultural products .

Although demand for agricultural products could have been projected based on this information, it is not done so since the above-mentioned demand projections of agricultural products are made by a study carried out almost a decade ago as well as personal estimation without supporting data. The projection could be unconvincing and it would be inappropriate to base any future actions based on such projection. A detail national study about seasonal crops and agricultural product marketing is felt

essential to assess the current consumption, demand for and supply of seasonal agricultural products.

2.3 Seasonal Fresh Organic Vegetable Development Policy

Seed sector in Nepal has high comparative advantage. and the Government of Nepal has also emphasized to develop and strengthen seed supply system in Nepal 19. Vegetable seeds are recognized as lucrative enterprise for improving the livelihood of farmers and addressing the issues of self-sufficiency, food security and economic development of remote areas. Vegetable seeds give 3-5 times higher income as compared to alternative cereal crops, enabling farmers to buy at least three times more food as compared to growing traditional food crops on the same land .Most of the studies reported that vegetable seed production is more profitable than food grain crops. The cropping pattern in study area in upland area is mainly dominated by maize and included other crops like legumes, vegetables, wheat and vegetable seeds. In the lowland area, the cropping pattern was mainly dominated by rice and included other crops like wheat, potato, spring maize and vegetable seeds. The demand for quality seed is increasing day by day, presenting new challenges to meet the consumer's demands by taking competitive advantage in the context of international practices . Major areas for producing vegetable seeds are focused in mid and high hills of Nepal. The hilly area of Nepal has microclimatic diversity to produce several kinds of vegetable seeds. Seed marketing is not yet specialized in the overall seed system. However, a few seed companies have initiated systematic marketing with proper grading, standard packaging and labeling for some vegetable seeds, but they have lacking research and development activities . Marketing of quality seeds is constrained by the absence of equate quality control services. The seed vision of Nepal (2013-2025) focuses on marketing of high yield and quality seeds across the country through strengthening of seed networks and seed supply channels in the public- private partnership modalities . The organized vegetable production and distribution system from local to formula: international level is necessary in the context of growing demand for quality vegetable seeds. Nepalese vegetable seeds sector has been facing issues such as low level of knowledge and capacity at the farm level, dependency on middlemen for trading of product, inadequate market supports, weak input relationships, and limited learning seed production (varietal purity, germination, viability, genetic stock used, drying, packaging), and demand for hybrid seed are also

the major issues related to the vegetable seeds sector in Nepal. Moreover, limited number of seed storage and processing facilities, immature seed companies and mismatch between demand and supply of seeds are also the major constraints in vegetable sector. On this background, this paper focused to analyze overall existing vegetable seeds production environment, its marketing practice and perception of seed producer's and seed users in Nepal. This helps to harmonizing the policy for achieving strategic fits in the downstream and upstream part of the vegetables sector in Nepal.

Some districts are major vegetable seed-growing districts of Nepal. From the selected districts, onion from Rukum and tomato, cucumber, French bean and okra from Kavre were selected. Similarly, for seed users Rupandehi and Palpa districts were selected representing Terai and hilly districts of Nepal. The study was focused at three levels: first at field level (seed producers, seed users, co-operatives), second at district level (agro-vets, district-level service providers, seed traders, cooperatives) and third at central level (seed companies, large agro-vets, central level service providers). A total of 350 samples were selected including seed producers (175), seed users (100) and seed companies/agro-vets/cooperatives/traders/ service providers (75) for the study purpose.

For more than 5 decades, on the other hand crops production as well as dairying has developed in Nepal in absence of a comprehensive policy document. However, Agricultural Development policy as well as Dairy Development Policy, 2064 (2008), approved by GON, is now the guiding policy for overall development of the agricultural and dairy sector. The policy is prepared in accordance to the spirit of Agriculture Perspective Plan (APP, 1995-2015); National Agriculture Policy, 2061; National Milk Marketing and Strategy Study, 2001; and Agriculture Business Promotion Policy, 2063. Being based on these documents, all the aspects relating to the agricultural and dairy development in them have been incorporated in the policy.

The long-term vision of the policy is to qualitatively contribute to national economic development by commercially, qualitatively and competitively developing the agricultural sector for contributing employment generation and poverty reduction with the participation of government, cooperative and private sector and extending the efforts and programs of making good quality organic crops, milk, crop products and dairy products easily available to the consumers as a complementary to each other.

The policy aims at increasing seasonal crop and milk production and productivity; extending seasonal crop collection, transportation arrangement and processing industries; substituting import and promoting export of the crop products; developing agricultural products; producing seasonal crops as well as cattle dairy products easily available to the consumers through quality improvement and regulation.

Policies for increasing agricultural production and productivity include development of agricultural farming business for poverty reduction, development of resource centers for increasing production of improved seeds of crops, breed animals, and preservation, conservation and promotion of the improved as well as productive local seeds of crops, breed animals; expansion of effective crop and animal health care and disease control services; arrangement of pasture and feed; mobilization of cooperatives/groups for providing and extending seasonal crop and livestock insurance services; easy and convenient credit to the farmers for purchasing hybrid seeds, milking animals; development of appropriate animal feed, breeding and grass harvesting technology for increasing seasonal crop and milk production also in the lean season; group-based collateral-free low-interest loan and technical services particularly to the women, dalit and other disadvantaged groups; prioritization of highly crop and cattle production potential districts; expansion of cooling centre and chilling centers.

Policies for extending crop collection, transportation arrangement and processing industries contain arrangements providing concession in the tariff of electricity used by the seasonal crop cooling centers and crop farming industries established in the cooperative sector; arrangements for providing concession in the custom duty for agricultural development sanctioned processing machines and equipment; priority to the movement of crop transportation vehicles as essential service; encouraging establishment of import substituting and export promoting internal/external joint venture farming industries that produce value-added seasonal crop products including dry food and organic crop/ food; convenient credit facility and technical support to the seasonal crop farming particularly for the organic crop; support for cooperative/private sector for capacity development for producing organic seasonal crop establishment of farming institute/training center for developing necessary technical manpower for the crop farming; capacity enhancement of technical

as well as management personnel involved in farming sector; research and development of appropriate technology for organic crop production, processing and product diversification; tax exemption on the expenses made for seasonal crop research and development along with appropriate incentives by cooperative and private sector; implementation of necessary programs for crop production and producing seasonal crop and other wet or dry organic products from seasonal crops.

Policies for substituting import and developing crop, milk, seasonal vegetable and dairy products as exportable commodities consist of free market policy for pricing of crop, milk and crop products; collection and analysis of information on price, demand and supply of seasonal vegetable, milk and crop products through regular monitoring and study; exemption of income tax for certain period to the crop farming of the specified locations that fully use local seeds for producing seasonal crops and crops products, dairy products; convenient custom duty in the import of printed packaging materials; and removing bi-lateral and regional tariff and non-tariff barriers for making export of seasonal crop as well as cattle products comfortable.

Policies for agricultural products and making milk as well as dairy products easily available to the consumers through quality improvement and regulation comprise consumer targeted public awareness programs for promoting consumption habit of more crops and dairy products; regular quality monitoring of the market seasonal crop and dairy product; consumers' awareness about keeping methods, consumption duration, consumption methods etc. of these products; review and update of quality control of seasonal crop and dairy products; preparation and implementation of appropriate packing standard of crop and dairy products; implementation of seasonal crop collection and processing code of practice at the seasonal crop collection centre ,milk chilling centers, seasonal crop processing and dairy processing factories; and strengthening of laboratories at different levels for ensuring quality of crop and dairy products.

Policies for institutional arrangements are development of agriculture as a strong organization having institutional representation of farmers and farming entrepreneurs to formulate policy for the development of agricultural sector and prepare related development plan, monitoring and regulation; enhancement of seasonal crop farming capacity for planning, investment, monitoring, regulation, study and development of the agricultural sector; registration of government, cooperative and

private farm For the implementation and monitoring arrangements of the policy, local agricultural development office and other related institutions are made responsible. Local government is also required to prepare necessary working procedure for implementing the policy and also for taking initiative to make necessary amendment on the existing legal provision for implementing the policy.

2.4 Nepal Agriculture Perspective Plan

The livestock policy including dairy sector in APP (a 20 year plan designed in 1995 and implemented since 1996) has given first priority to dairy within livestock and in the short run buffalo is the priority animal. Buffalo has been more emphasized for milk production because of its importance in supplying both milk and meat. Livestock products including milk and milk products have been considered as demand driven signifying that these products will be greatly influenced by per capita income and population growth. APP has also emphasized that increased internal per capita income be the main impetus for increasing demand for milk and milk products. Livestock sector is considered as one of the key contributors to poverty alleviation and employment generation, particularly for women.

The broader policy framework for livestock component in APP include enhancement of the private sector with realization that livestock sector is a private sector and livestock policy be guided by this realization; and public policy be only complementing and help the private sector. Elimination of all subsidies in livestock processing and marketing is duly emphasized to provide free entry for the private sector. It underlines the privatization of public institutions or their existence as self-sustaining free-units. To help develop a competitive private sector, the APP stresses to set grades and standards, establish marketing information systems, improve veterinary services, and scrutinize imports of products like SMP. Expansion of roads and electric power, improvement of present extension program with focus on women, and expansion of credit facilities is some other major policy guidelines of APP.

2.5 National Agriculture Policy

National Agriculture Policy, 2061 is the guiding policy for agriculture sector. It aims to improve living standard through sustainable agriculture development by transforming subsistence agriculture system to commercial and competitive. In order to contribute for food security and poverty reduction through commercial and

competitive agriculture system the policy intends to increase agriculture production and productivity, make agriculture competitive with regional and global market by developing bases for commercial and competitive agriculture system, and conserve and utilize natural resources, environment and bio-diversity.

Development of appropriate agriculture technology; development of agriculture resource centers; participatory and competitive agriculture research and development by involving private and non-government sectors; collaboration, transfer of technology and specialists with international organizations related to agriculture research and development; regular monitoring of agriculture inputs for its guaranteed supply; farmers' training for capacity enhancement at local level; priority to produce such agriculture products which have comparative advantage; increase in women's involvement in agriculture programs etc. are some of the major policy to increase agriculture production and productivity. Similarly, development of large production pockets and mobilization of such facilities as technical services, agriculture roads, rural electrification, irrigation, agriculture credit, markets arrangement in these pockets with an integrated approach; expansion of animal insurance; priority to cooperative-based agricultural industries; institutional development of cooperatives and development of these cooperatives as local delivery point for providing required inputs and channeling farmers' produce to markets are some other major policies to make the agriculture commercial and competitive. Besides, this policy has other various provisions including special facilities to the targeted groups.

2.6 Agriculture Business Promotion Policy

In line with the National Agriculture Policy, the Agriculture Business Promotion Policy 2063 also intends to support market-oriented and competitive agriculture production, contribute to internal market and export promotion by developing agro-industries, and help poverty reduction through commercialization of agriculture. This policy also guarantees for an integrated approach to provide such facilities as agriculture inputs, technology and technical services, agriculture roads, rural electrification, irrigation, agriculture credit, insurance, markets, information system, appropriate mechanization of agriculture, and processing facilities with joint efforts of government, non-government, private and cooperatives sectors. Development of e-commerce, concession on interest of agriculture credit, encouragement to direct foreign investment, special programs for establishment of

agro-industries by disadvantaged groups, women and Dalits, 25 per cent concession on electricity charge for chilling vats and 75 per cent concession on import duty of machine and equipment to be used for agro-enterprises for 10 years, group loan, collateral of projects for loans, human resource development, capacity development of training institutes, free market price etc. are the major features of this policy.

2.7 Industrial Policy

The Industry Policy 2049 stresses for development of private sector. It intends to privatize the government sector industries and assures for creation an environment of competitive free market price of the products produced by the private sector industries. The main objectives of this policy are to increase industrial production and productivity to contribute to national economy, emphasize local raw material based and export promoting industries, reduce unemployment and under-employment in agriculture sector by employment-oriented industries, and adoption of appropriate industrialization policy for balanced development of all sectors of the country. The policy has categorized integrated dairy industries including livestock farming as national priority industries.

The main features of this policy are development of industries through fair competitive environment; protect industries through custom duties; development of such industries that use national labor, skill and resources and are of national importance; speeding-up the growth of national economy through export of industrial production; emphasis on the development of small, cottage and agro-based industries particularly for creating employment opportunities in the rural areas; emphasis to attract foreign investment and transfer of high technology and efficient management. The policy has various provisions relating to facilities including concession on excise duties and income taxes and prioritized availability of infrastructural support such as government land/land within industrial districts, water and electricity, telecommunication etc. Moreover, the policy also includes one-door service delivery to the industries, emphasis on import substituting industries, encouragement to industrial investment in less developed areas, gradual transfer of government owned industries to the private sector, securing cottage and small industries only to the Nepalese citizens etc.

2.8 Constraints in Policy Implementation

Rural sociology is basically characterized by agriculture and peasant farming (Boguslaw, 1972) which represents agrarian values. The social structure of Nepal predominated and based on agrarian in nature. Nepalese agrarian and social structure could not evolve enough to cope with the increasing population in respect with resources. Agriculture in Nepal is being less commercialized because of the low level of technology, infrastructures and poor markets facilities. The agriculture of Nepal depends mainly on monsoon; the government has failed to provide adequate irrigation facilities. According to the World Bank report in 2014, only 28 percent of the total agricultural land is irrigated (World Bank, 2014). Figure-1 shows that 24 percent of the total land is useful for the cultivation purpose. Nepal Terai- southern plane part- is the major agriculture sector (17% of total land) for the agriculture productions. The major cash crops in Nepal are oilseed, potato, sugarcane, tobacco, and the major cereal crops are Barley, maize, millet, paddy, and wheat. Figure-3 illustrates that the production of cereals covers half of the total production, followed by vegetables (9%) and fruits & spices (7%) respectively. Similarly, livestock shares 26% of the total production.

Nepal had exported paddy before 1975 but it is importing food grains beginning in 1980 (Mishra, 1987). Despite a large contribution of the agricultural sector in national GDP, agriculture growth rate seems to be fluctuating. Since the agriculture-growth is lower with respect to the population increment. The amount produced from agriculture is not satisfactory. The data of CBS 2011 reveals that 60 percent of farmers are unable to produce enough agricultural production in order to sustain their livelihood. Many western hill districts of the country have been facing food-deficit. Food and Agriculture Organization (FAO) has been working to ensure the food and nutrition security of farmers and herders (FAO, 2017). To cope with this, poor rural people mostly used to go to India in search of works in the off-farming season.

Furthermore, the average monthly household income in the rural area is lower than urban. The household income of the rural area is 27% only which is obtained from agriculture, wage and rural-micro enterprises. There is variation in total households with access to various facilities; urban represents 95.7 % and rural is 63.0% only. The agriculture sector in Nepal employs 55% of the labor force in 2021

(CBS, 2022). The labors in the agriculture sector are paid low as sometimes they receive food grains instead of cash that could not harness their livelihood sufficiently.

The household size in a rural area is 5.08 whereas the household size in an urban area is 4.85 (AHS 2015/16). Some 1.3 million households are landless or land-poor; geographically, the landless and land-poor are found all across Nepal. Access to land is considered to be requisite for the food and nutritional security of households. According to CBS 2011, small landholders and marginal farmers predominate Nepalese agriculture with the average holding size of 0.8 ha. Nearly half of all farms have less than 0.5 hectare of land. Likewise, land tenure system also plays a vital role in agriculture production; dual land tenure has been hampering for agriculture development. Many landless households particularly in Terai region -bowl of cultivation- have been cultivating others land for livelihood and in return, they receive half of the production; this system is called Adhiya/ Bataiya in the local level. Therefore, the land-secured arrangement is a crucial issue for agriculture development. Despite the remarkable decline in overall poverty level over decades, poverty in rural Nepal (25%) is still higher than urban Nepal (15 %). According to CBS 2022 data, the squared poverty gap index is doubled difference as it is 1.01 in an urban area and 2.00 in a rural area. Ministry of Agriculture Development is receiving approximately 3% of national budget which is not sufficient to promote adequate agricultural growth and ensure food security to the ever-growing population. While Bangladesh and India have allocated around 5-6% of their total budget in the agriculture sector. The growth in agriculture has remained stagnant over decades despite a number of plans and policies in national level and international supports. Admittedly, the plans and policies fail to address problems and issues relating to agriculture to the extent. The agriculture sector in Nepal has been facing a number of problems ranging from policy to implementation level.

The tradition agrarian mode of agriculture sector need adopts advanced technologies. Agriculture Development Specialist Arthur Mosher rightly emphasizes various science and technology for the increment of agriculture production. Improved-agricultural technologies include improved seed varieties, fertilizers, and technical support. The price for the agriculture production and market are found to be complex. The coordination between farmers and whole-seller/industrial seems not to be good enough and decisions related to agriculture particularly cost is not fixed timely by concerned authority and farmers could not benefit lavishly. The price-fixing

mechanism is not realistic as it ignores the participation of farmers and harvesting time. Normally, the price is fixed after harvesting period and farmers are not paid timely. The security of farmers in terms of their commodity selling is not assured in time. As several of sugar-mills are not paying farmers though they are doing well-producing sugar and selling in the market on cash (My Republica, 2022). The government could not fix the price of paddy timely and farmers could get more benefit. The delay in fixing the price, farmers across the country have apparently been selling paddy at a price that is lower than the base price of last year (The Himalayan Times, 2022).

Likewise, farmers could not get fertilizer in time. The fertilizers and agriculture tools are imported from India and other countries. Government policies that influence food prices play a critical role in shaping the incentives for farmers as they decide what to produce, how to produce it, and how much to produce (Block & Lindauer, 2019). Market access and linking between the village and urban center are important in the wake of agriculture development, which is poor. Especially road connectivity is a key factor in raising agricultural production. Many villages are still not connected in hilly and mountain districts. The lack of physical access has adverse impacts on the delivery of agricultural inputs on a regular basis. Nepal faces the shortage of agriculture storage centers that is essential in order to boost the commercialization of agriculture. Another problem is land fragmentation, which is becoming a problem for the development of agriculture because it is reducing agricultural land. Agricultural land includes arable lands both for permanent crops and for permanent pastures; land defined by the FAO as land under temporary crops, temporary meadows for mowing or for pasture, land under market or kitchen gardens, and land temporarily fallow.

About 70 percent of the population of Nepal depends on the forests for daily fuel wood supply; therefore, the agro-forest concept may be the one option for agriculture development to cope with the problem arising due to climate change. Cold wave in Nepal in 1997/98 had negative impacts on agricultural productivity and showed a reduction in the production of crops by 27.8 in potato (NARC, 1998). Similarly, Nepal has been facing a number of diseases on crops that harming agriculture production and farmers. The research-oriented agriculture policy and program seem to be supportive of sustainability. However, the research program is limited in the paper. Technical assistance provided by the government is insufficient in the agriculture sector.

Nepal government policy is also to introduce foreign direct investment (FDI) in the agricultural sector, although according to the World Bank Nepal Overview Report, FDI still only accounts for 0.6 percent of GDP. Agriculture sector still could not attract private investment despite the governmental prompt policy. Poor farm-market linkage, lack of policy, and political unwillingness may be the reasons behind it. Furthermore, the

Nepal government policy is also to introduce foreign direct investment (FDI) in the agricultural sector, although according to the World Bank Nepal Overview Report, FDI still only accounts for 0.6 percent of GDP. Agriculture sector still could not attract private investment despite the governmental prompt policy. Poor farm-market linkage, lack of policy, and political unwillingness may be the reasons behind it. Furthermore, the remittance is not being used properly and largely in the agriculture sector due to the lack of policy and political willingness. Remittance, which has been found in other countries to be contributing to increasing agriculture yield are not contributing to boosting agriculture yield in Nepal. (Asian Development Bank, 2018)

The implementation of agriculture development is a crucial question in Nepal. The Project for Agriculture Commercialization and Trade (PACT) was initiated by the Ministry of Agricultural Development with the objective of improving the competitiveness of smallholder farmers and the agribusiness sector to find new market opportunities to increase productivity and quality is not effective due to various reasons. Likewise, the public delivery of agriculture-related matters is not effective and even allocated budget for agriculture development could not spend properly and timely. For instance, last year, Debangunj Rural Municipality located at Province 1 of Nepal could not expend allocated agriculture budgets (approximately 10 thousand dollars) for agriculture development due to political and bureaucratic reasons and it became freeze.

The agriculture friendly economic policy and effective implementation are required for agriculture development. Sustainability must be the central idea in the context of agriculture development. Sustainable economic growth can be achieved through agriculture development avoiding deforestation, and land degradation. A new federal political structure of Nepal, which is assumed to have democratic and people-centric can make effective delivery services of agriculture-related matters to local levels. The local governance is imperative in order to implement agricultural development. Therefore, the government should make local governance effective both in terms of

strategy and implementation aspects. The role of good governance in this regard is vital.

The supportive policies and programs such as incentives, opportunities, easy access to needed inputs and safety nets- compensation in case of loss of productions due to diseases or natural calamities and insurance policy credit facility should be initiated; farmers can be encouraged through its implementation. The cash-transfer program as in loan form at a lower interest of rate may be another option in order to enhance and empower to poor farmers. Like the Bolsa Familia as an "anti-poverty scheme" implemented in Brazil in 2004, genuine farmers should be categorized for the receivers of the loan. In Bolsa Familia, those households who spend their children to school and get vaccinated were provided loan through banking genuine farmers who are engaged in the farming sector should be given cash for agriculture development.

Technical supports for agriculture can be included in this scheme. Besides, the insurance in agriculture sector is not effective like health-insurance. However, the Crops and Livestock Insurance Directives was introduced by the Insurance Board Nepal with the focus on crops (apples, banana, paddy, potatoes, vegetables, among others). livestock and poultry, making it mandatory for all the non-life insurance companies to come up with insurance policies for these products (Agriculture Insurance, 2018). Nevertheless, its implementation part is complex and therefore, it is not implemented in a realistic way. According to NLSS 2010/11, 86.8% of labor-power is available in rural. The new generation can be encouraged through the insurance in the agriculture sector. These all issues and problems related to agricultural development are important in the wake of agriculture development. Only if the Government of Nepal addresses these issues and problems, rural development can be accelerated by reducing poverty and rural development is possible in a true sense.

Among the above policies, the Seasonal crops farming Policy is the most relevant policy relating to the development of seasonal crops production sector in the country. The policy is very comprehensive and encompasses all the major aspects of crops development. It has emphatic provisions for increasing crop production and productivity in rural areas, making production of vegetable and crop products commercial and competitive, crops product diversification based on the potentiality of internal and external markets for import substitution and export promotion, easy availability of good quality vegetable and crop products to the consumers, free market

price of vegetable and crop products, expansion of vegetable plants, capacity enhancement of agricultural cooperatives and other private farm, various facilities for crop production development, creation of farming fund, and involvement of all related institution in its implementation.

2.9 Rationale of the Study

There are very few studies regarding role of crop farming activities of particular place. This study helps to identify the major farming activities and access the present situation of crop farming in Aathgharae which helps the crop farming planner and policy makers to frame appropriate policies and programs in order to improve the crop production further more. The population is going to increase day by day. It effects on demand of food and changing food habits, the demand of vegetable crop and crop product has been growing. Nepal is unable to fulfill the demand of consumers with organic crop and crop products. A huge amount of income is going outside the country to purchase fresh vegetable and crop products. Here are many chances to fulfill the demands of consumer and helps to increase in national income of the country by producing maximum seasonal crops.

Rural area is badly affected by the different problems like unemployment, poverty, food insecurity etc. in present time. In the rural area there is very pitiable living standard of people in the absence of transformation of traditional agriculture. There is unequal distribution of land or on access on land of rural poor farmers. It is impossible to up lift the living standard system. In such situation private and cooperative crop farming can be an important source of income in rural areas. Crop farming helps to generate employment opportunities for many rural households. It has greater role to supply of necessary food items for house hold consumption. The seasonal crop income helps to purchase necessary goods and services for the people of rural areas and helps to reduction poverty the role of crop farming in poverty reduction and positive impact. So this title of the study help to resolve the common problems.

Organic Crop Farming are needed compost fertilizer which we can gain through domestic livestock farm. So cow farming is the best way to produce compost fertilizer and milk production. Milk production helps to run dairy and diary products

which is helpful for extra supportive income sources for farmer. In other hand cow dung from cow farming helps to generate bio-gas from live stock farm. Bio gas is an alternate source of energy and it has great role in rural area for lighting and cooking. Bio gas fulfills the demand of energy for rural area in one hand other hand. It supplies the fertilizer for agriculture sector. which helps organic farming similarly, bio gas is an equally important for good health, time saving and protection of forest resources another importance of dairy farming is educational improvement. Education is very important aspect of human life to access on improved and quality education people needed goal income. Dairy farming helps to people needed good income. Dairy farm helps to people to afford in their children's quality education. Likewise, dairy farming supports to keep good health of people. Health is most important basis for development and prosperity of human being. Consumption of milk and milk products help people for their better health. Animal fertilizer is equally helpful to produce natural and healthy agricultural production. Likewise, bio-gas from animal dung also contribute to balance of environment. Environment related with the surrounding which exists around man. It is dynamic and ever-changing process. Dairy has important role for conservation of environment indifferent ways. Agro-products, dung, urine which maintains sustainable positive natural cycle that improves environment by producing and maintaining more greens and control pollution. Thus it studied the employment generation through other activities related to seasonal vegetable/crop farming which will be helpful for other people specially related to agriculture..

It is necessary to adopt any kind of occupation for living. Geographical condition and socio-cultural aspect of any specific area play important role for the selection of any kind of occupation. People select occupation according to their tradition and geographical environment. But in the present situation. It is important to economic development rather than subsistence farming system. People have adopted livestock rearing as well as agriculture for the source of income and employment. Livestock rearing especially dairy farming is one of the important occupations which helps to people for income, employment, poverty reduction, women empowerment, energy generation. A livelihood is a wide concept because there are different techniques of living and earning strategy of people, farming and society. Livelihood determines access of people on the means of resources, skills and link with the socio-cultural and economic aspect. The same ethnic group may have different adaptive

strategies in different places due to environment and availability of resources. People involved in agriculture, animal farm, and cottage industries etc. in rural areas which related with the livelihoods of rural people.

Generally, greater numbers of population live in rural areas in underdeveloped countries. In the content of 83 percent people live in rural area. The people depend on different occupations for living. Majority of the people in rural areas have involved in agriculture and animal husbandry. Agriculture and animal husbandry are interrelated to each other. Animal husbandry is found explained the sub-occupation of agriculture sector but it has own contribution to subsistence farming system of Nepal. Animal husbandry is a main source of income and employment for Nepalese economy. It creates employment opportunities for every members of the family. Crop farming is another main part of an animal husbandry. crop product and crop farming helps to people for their education health and to purchase other goods and services which necessary for their domestic purposes. Seasonal crop farming, livestock farm as well as dairy sector has important role to ensure social justice amongst the rural poor by providing on farm employment opportunities and income generation. These sector has important contribution to food security to the large number of populations as part of their rural goods production is consumed within the farm households in the form of crops and crops productions which encompass both elements of availability and access to food.

Modernization of traditional farming sector is necessary to gain more benefit from this sector. Rural farmers produce vegetables and crops only for themselves. Technology of animal husbandry and crop farming is traditional in rural sector. Method of making animal shed also traditional. There is majority of local type of crops seeds, dairy animals for produce crops and milk, that's why they only can produce little . As a result, cost of farmers becomes high but output becomes low. It is difficult to improve the economic condition of rural farmers reading such type of local production. Therefore, for the improvement of socio-economic status of rural poor through dairy farming. It is necessary to rear hybrid type of dairy cattle and proper care and management of them. For the industrialization of traditional farming system farmers needed more capital. They needed more capital for purchase of hybrid type seeds as well as cattle. Similarly, for the construction of modern farming and moden

animal shed. Purchase hybrid seed, animal feed they needed capital. The government should be managed training and skill-oriented knowledge for the farmers. It helps them to motivate and profit oriented in their occupation. It is compulsory to improve in traditional type of agricultural and livestock farming. For this, Formulation of necessary policy and expansion of market is also needed.

There is good relationship between cattle and crop production in rural areas. Rural people use fertilizer of cattle in agricultural field. It is very useful for organic farming. Likewise, crop reduces like grass hay etc. is useful for animal feeding. In the rural areas most of the farmers have adopted mixed type of farming system. Without compost fertilizer from cattle there is no chance of development of crop production and in the lack of crop residues, there is occur scarcity of animal feeding. Applying cattle manure reduces the use of chemical fertilizer it increases in crop production in one hand and reduces the production cost of crop in other hand. The use of cattle manure is important for growing fertility of agricultural land. The small-scale local farm contributes significantly to poverty reduction particularly in rural areas. Poor farmers use their local crops income to purchase agricultural inputs such as fertilizer, seeds, pesticides etc. As well as Income from dairy sector has helped to farmers for capital formation, land purchasing, improved housing and quality education for children. Dairy products like milk, curd, ghee, yoghurt, cream, cheese, chirpy, pannier etc. are the very essential food items for daily consumption. Dairy product helps to good health of body and helps to good health of body and helps to maintain physical and mental development. So, regular consumption of fresh and hygienic organic crops, vegetable and dairy product is needed for the healthier life.

The climate change has also great impact on crop farming. It affects to crops by suffering different kinds of diseases, lack of mineral etc. Due to extreme draught, it affects on the growth of fodder and grass species in pasture and forest fodder for livestock farming. It creates the shortage in diversity and quality of live stock fodder. This has affected livestock fodder. This has affected livestock which has affected on production of milk, milk products and meat. Livestock population is also decreasing due to climate change. Drought affected livestock by drying wetlands, pasture land and water resources, streams and decreasing availability of drinking water to livestock. It seems the climate change effect on both seasonal crop farming and livestock farm.

Ilam is famous for vegetable and seasonal crop production in Nepal. There is potentiality of fresh crop production due to favorable climate condition crop production and facilities of marketing, transportation. Similarly, there is good environment for the improved seeds. There are many problems of quality of crops expensive cost of vegetable transportation and animal feeding, strikes, expensive cost of drugs are the major constraints for the farming and management likewise, lack of training, no incentive for crop farmers lack of long-term livestock appropriate policy etc. are also the constraints for farming. For the solution of problem of crop farming it is necessary to formulate of appropriate long term agricultural policy provision of training and encourage to farmers, Expansion of technical services in rural sector and reduce the cost of drugs and transportation is needed. Similarly, advanced breeding service for cattle and research centre for crop is also necessary for the development of farming

Seasonal crop farming helps to improve socio-economic life of people through income and employment. Crop farming helps to provide employment opportunities through farming, processing of crops to make variety, sales and distribution, In the present condition, many educated youths also started rearing crop farming with dairy cattle applying advanced and modern technology. Youths are returned from foreign employment also being employed and independent by farming. Thus, such kinds of farming has great role in generation of employment opportunities.

People collect their milk at cooperatives, crops on collection centre and it pays the price of crops and milk on the quality of goods. Agricultural cooperative provides necessary capital to farmers in low-cost rate. It supports to promote this farming similarly, cooperatives facilities of medicines for farming. It has important role in unite to farmers. It creates awareness among rural farmers. Likewise, agricultural cooperative provides necessary information to farmers. Cooperative helps for rural people for their socio-economic development. Agricultural cooperative helps to promote woman's empowerment program in the society (Shrestha, 2022)

Crop farming helps to people for establish rural industry in the remote area. It supplies necessary raw materials for rural industry. Crop farming has important role to improve in health, education, women empowerment and increase in purchasing power. Live stock helps to generation of bio-gas from animal farm which is renewable source

of energy and helps to good health sanitation and environmental conservation. Income from milk and milk livestock farming have made people culturally changed which can be seen from their good housing, hygienic toilet, bio-plant, education, employment and credit flow, Livestock farming specially dairying is backbone of income for the villagers. Animal and animal by products keep economic value such as animal sale, milk cash, fertilizer and bio-gas. Agricultural crop producer cooperatives are important channels of crop production and supply that leads to generating income source for the rural people. Agricultural cooperatives are working as a leading agent for collection of milk, seasonal crops processing and distribution in rural and urban area too. The government should be giving necessary subsidy to agricultural cooperatives. The government should manage of necessary equipments for agricultural cooperatives. The burden of excessive tax should be reduced and necessary skills and training should be provided to cooperatives. Government should provide that type of subsidy focusing to backward, poor, women and landless people of cooperatives. There should pay attention to increase of export of crop and crop products and its product diversification.

Formulation and implementation of appropriate agricultural farm development policy is needed for the development of crop production sector and entrepreneurship development. In Nepal there is great constraint of good policy formulation and its proper implementation. A good policy helps to commercialization of this sector. policy should be formulated in the favor of farmers and consumers. In Nepal there is ample potentiality of reducing poverty through sustainable development of during sector due the country's geographical setting, livestock farming, crop farming based agricultural system, traditional involvement and experience of the farmers in livestock raising, high potentially of increasing present productivity of the cow, buffalo development of dairy processing industries (Dairy Development Policy 2064).

It is necessary to promote this sector the role of government, cooperatives and private sector is very important. It is equally necessary to coordination among government, cooperatives and private sector for the development of crop farming. Government should provide subsidies, pay attention to provision of market quality control and facilities for crop farmers. Advanced quality type of grass and animal feeding, conservation of community forestry is most necessary for rural farmers. It is necessary to motivate farmers to rearing hybrid caste of crop seeds for produce more

goods. The government should give priority to commercialization of small-scale crop farming. There are different kinds of diseases which attacks vegetables and crops. There are only traditional techniques to care them. If the crops plant die of the diseases, the farmers have to bear a great loss. Therefore, the farmers needed to technical support for the identification and treatment of diseases of crops.

Besides, many problems Seasonal farming has many potentialities to income generating activities of the rural area's people. Nepal can be able to establish the medium and large-scale industries to increase the productivity and national income. So, it is an important source of national income of Nepal. In the rural area crop farming is one of the weapons for the poverty reduction. Nepal. It is trying to analyze the impact of crop farming in socio-economic life of rural people, role of crop farming on livelihood activities of people at the study area. This study also examines the role of the cooperative in seasonal crop production and distribution at the study area.

CHAPTER-III

RESEARCH METHODOLOGY

3.1 Research Design

It is a work plan owing to the objective of the research. The main objective of the study is to analyze impact of the seasonal vegetable crop producing farm for rural entrepreneurship development. For that purpose of the research this study is designed under descriptive and analytical method. On the other hand, the study has tend to analyze and discover degree of interdependence between various characteristics that are influenced to entrepreneurship development. In this study the descriptive research design and cross- sectional study has done because of time limitation.

3.2 Nature and Sources of Data

The study is mainly based on the primary data. Questionnaire and interviews are carried out to collect data. The Secondary sources are also used to evaluate the impact of the farm which has obtained by contacting Concern market, person. These information in fact contributes to the inquiry of thought and approaches towards the reality.

3.3 Population and Sampling

This farm nearly covers all village of the study area in Suryodaya Municipality ward No-12, Aathghare. Since the population of the study area is large. So the judgmental and convenience sampling has been taken from 40 percent of 170 family. The descriptive research design and analytical study has done to find objective of this study.

3.4 Data Collection Tools and Techniques

The major task to collect data is to generate and generalize the information for various purposes. The major objective of collection data is to access easy and effective decision making and to drive out reliable and valid conclusion. In this study the primary data has been collected via observation, questionnaire, interview and focus group discussion. These data are more authentic and bias less. So, it greatly analyzes the research problem. The procedure of data collection begins from the Aathghare Namuna Krishi farm in Suryodaya municipality Ilam district.

For the collection of required data the following tools and techniques of data collection has been used.

3.4.1 Questionnaire

A questionnaire is a research instrument consisting of a series of questions (or other types of prompts) for the purpose of gathering information from respondents. Through the questionnaire primary data and needed information has been collected from the study area.

3.4.2 Interview:

An interview is a conversation where questions are asked by interview and answers are given by interviewee. This is another major tool which commonly used to gather primary data. Respondent interview has also used to gather data through questionnaire.

3.4.3 Focus Group Discussion

Focus group discussion is also mean of gathering primary data where the information is gathered from group discussion and is processed. In this study focus group discussion has done to found some certain specific data.

3.5 Data Presentation and Analysis.

Various presentation tools and statistical tools has been used for explore and interpret the impact of the entrepreneurship development. The collected raw data has molded as per the requirement and objective of the research. The various steps that were followed are as following.

3.5.1 Editing: It is the process of examining the collected raw data to detect error and omissions. So, to overcome the possible error in research editing has great value. So the collected raw data examined and processed.

3.5.2. Coding: In order to make the research more systematic and scientific, assigning of numerals or symbols to answer is done, so coding helps to allocate the answer whenever necessary. That's why different types of code has given before processing of data.

3.5.3 Classification: The result of research study is at large volume in the form of raw data. So, in order to simplify it should be classified into homogeneous groups, so a

meaningful relationship has been profoundly studied. Thus raw data has classified on different class then processed.

3.5.4 Tabulation: The tabulation is essential in order to systematize and logical arrangement of data for further manipulation. After the necessary classification of data the next step has done to arrange the data in respective tables / charts & diagrams.

3.5.5 Estimation of result

Analysis is the means to estimate the values of unknown parameters of the population from the sample statistics and hypothesis testing in order to reach the conclusion. In case of this study estimation of result is descriptive. It incorporates the study of distribution of one variable. This study provides us the information about the various impacts of vegetable producing farms on entrepreneurship development. After completed the all above tools estimation has done at last including above tools, contents and finding. Data collected are presented in statically which shows the finding clearly in the study.

CHAPTER- IV

DATA ANALYSIS AND INTERPRETATION

4.1 Introduction of the Study Area

There are different types of crops which have been farming from ancient period. In context of Nepal most of the crop farming belongs to self or family survival. In previous years farming only did for survival but now days it little bit changed into vocational. Generally seasonal vegetable farming denote the crops which only can farm in special seasons. Such kinds of crops helps to rapid growth of farmers income. So seasonal vegetable farming is very important for village people for their economic growth. Seasonal vegetable farming also supports on the self employment. It also plays vital role on woman's empowerment. Under the seasonal vegetable farming farmers can run their entrepreneurship development through different types of activities.

There are different types of agricultural farms and domestic animal farms are found in our surroundings. They are categorized into co-operative organization as well as private farm. The production of farms or organizations are collected in collection centre and forwarded to big market or directly supply on local market. Among them Aathghare Namuna Agriculture farm is seasonal vegetable producing farm operated by local people with private investment. It is located on Aathghare ,ward no. -12 of Suryodaya Municipality. It has established in 2071 B.S. It situated on the middle parts of study area. Currently there are three staffs. Among them two staffs are owner of the farm and one is working under daily wages.(According to Farm Office Record) They produce different seasonal vegetables and their seeds also. Its main production is *Akabare Khursani* and its hybrid seeds. They supply red chilly (*akabare*), potato, chayote (*iskush*), cucumber, cauliflower, cabbage, carrot, radish, pumpkin, ginger, onion, garlic, mushroom etc. to local markets as well as near market Fikkal. They also supply their production in main cities like Birtamode, Damak, Biratnagar, Hetauda, Kathmandu and Pokhara. They also produce seeds of vegetables and supply them in market as well as neighbor country India's market. It seems that it is helping for economic growth of farmers in the study area. People became self employed through seasonal vegetable farming.

4.2 Caste of the Respondents

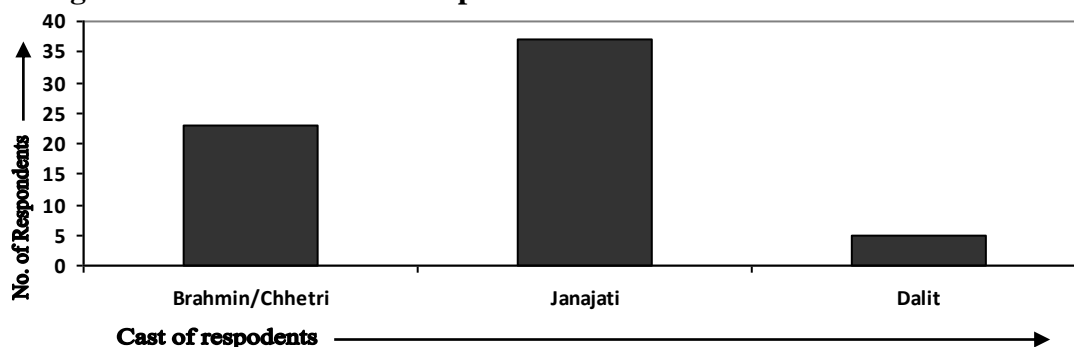
Heterogeneity and multiplicity of people are the figure of the study area. Various castes like Brahmin, Chhetri, Magar, Gurung, Rai, Tamang, Limbo and Dalit are existence in the villagers. Among the total population of the study area Janajati are dominant cast group compares to Brahmin, Chhetri and Dalit. The Nepali language is common communicative language of all cast.

Table no. 4.1 Caste Survey of the Respondents.

S.N.	Caste	No. of Respondents	Percentage
1	Brahmin/Chhetri	23	35.38
2	Janajati	37	56.92
3	Dalit	5	7.69
Total		65	100

Source: Field Survey 2023

Figure no. 4.1 Caste of the Respondents.



The above table no. 4.1 shows that the Brahmin/Chhetri are 35.39 percent, Janajati are 56.92 percent and dalit are 7.69 percent in the study area. It seems mostly people belongs to Janajati are doing farming in the study area. People belongs to these class has been farming from ancient period. It seems somewhere modernizations are needed to improve to increasing of production.

4.3 Religion Practice in the Study Area

The dominant Religion in Nepal is Hindu, about 80% Nepalese people practice Hinduism and only around 20 % and people practice Buddhism Christian and others. In this study area, respondents specially practice Hinduism, kirat and and Buddhism. The respondent's ratio according to relation has presented in the table.

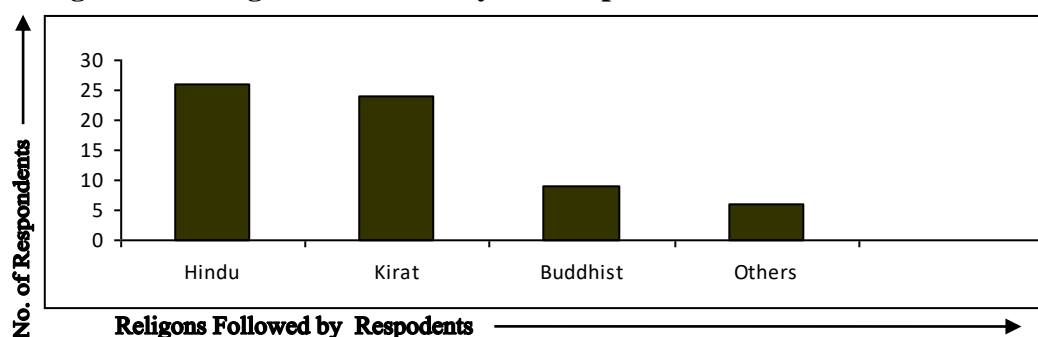
Table no. 4.2 Religions followed by the Respondents

S.N.	Religions	No. of Respondents	Percentage
1	Hindu	26	46.42
2	Kirat	24	36.92
3	Buddhist	9	13.85
4	Others	6	9.23
Total		65	100

Source: Field Survey 2023

The table no. 4.2 indicates that the religion practiced by the respondents are among total Hindus are about 46.42 percent Kirat are 36.92 and Buddhist were 13.85 percent and remaining 9.23 were others religion. Religion practice has also effect on farming , agriculture sector and animal husbandry also due to social religious practice in our society.

Fig no. 4.2 Religions Followed by the Respondents



4.4 Age Group of Respondents

According to the age, the respondents were divided into four groups. The questions were asked to the respondents aging above 18 years which is shown as table 4.3.

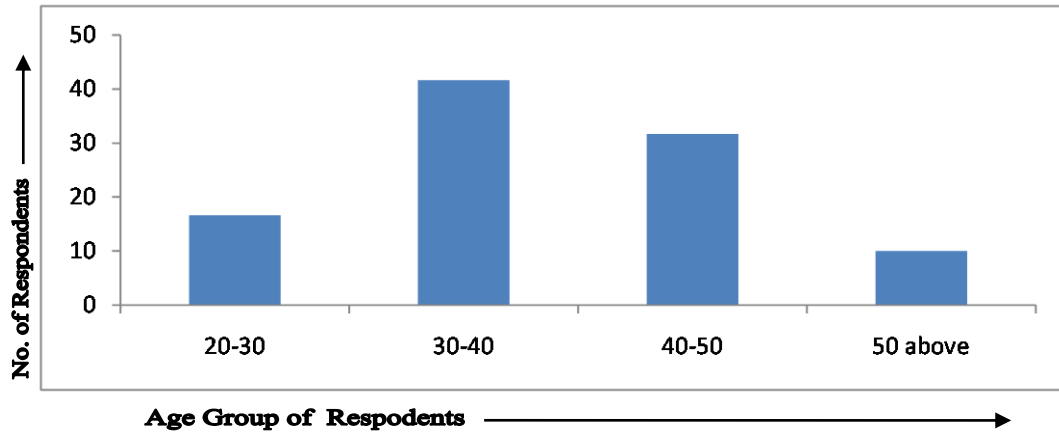
Table no. 4.3 Age Group of the Respondents.

S.N.	Age group	No of Respondents	Percentage
1	20-30	12	18.46
2	30-40	25	38.46
3	40-50	22	33.84
4	50 above	6	9.23
Total		65	100

Source: Field Survey, 2023

The table no. 4.3 shows that the age group 20-30 were 18.46 percent likewise 30-40 38.46 percent, 40-50 were 33.84 percent and rest of them above 50 were 9.23 percent in the study area. Age of people gives power to work or to do something well. Here in the study area more capable people belongs to age 30-40 are higher then other. So this age plays positive role to entrepreneurship development in the study area.

Fig no.4.3 Age Group of Respondents



4.5 Education Status of the Respondents

Education is a process of acquiring general knowledge and developing the power of reasoning and judgment. It can play most important role in rural development process of a nation. Similarly, education is not only a crucial factor for employment opportunities but also the most important aspect of human identity in the society.

Table no. 4.4 Educational Status of the Respondents

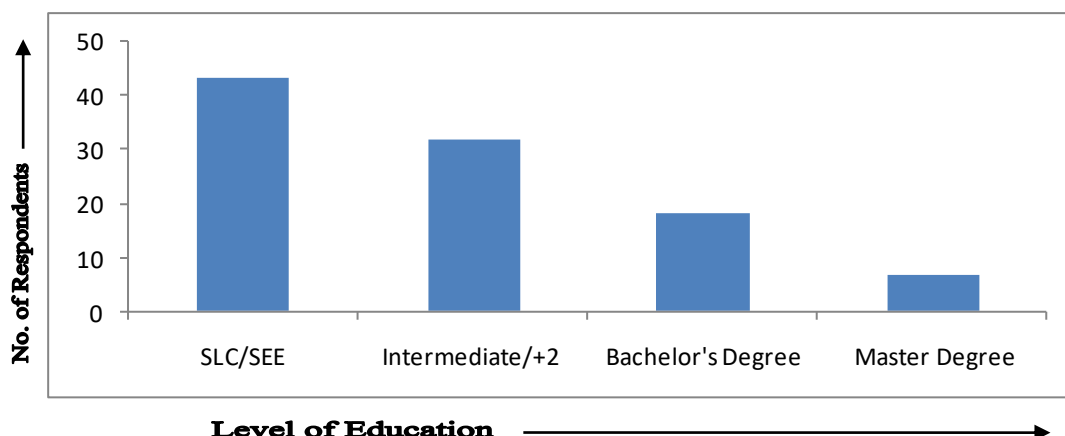
S.N.	Level of Education	No. of Respondents	Percentage
1	SLC/SEE	27	41.53
2	Intermediate/+2	22	33.84
3	Bachelor's Degree	11	16.92
4	Master Degree	5	7.69
Total		65	100

Source: Field Survey, 2023

The table no. 4.4 demonstrates the educational status of the respondent. According to the study, 41.53 percent of respondents are SLC/SEE whereas 33.84 percent of the participants are Intermediate/+2, Likewise, 16.92 percent respondents have achieved education Bachelors Degree and Master degree were 7.69 percent in the study area. Though, this status of the education is not best. Simply graduate and post graduated people are more mature and experienced then other. Here in the study area most of the

farmer belongs SLC/SEE Degree holder. But it seems their experience and practice made them skilled for farming.

Fig no. 4.4 Educational Status of the Respondents



4.6 Main Income Sources of Households

Agriculture, service, self oriented business, Foreign Employment are the main occupation/income sources of the survey households. Other occupation includes daily wage, fishing etc. The frequency and the percentage of survey households has presented in the table below most of the households are depend on foreign employment. Although, out of 29 households are involved in agriculture but some households are totally depending on agriculture where agriculture is there main income sources.

Table no. 4.5 Main Income Sources of Households

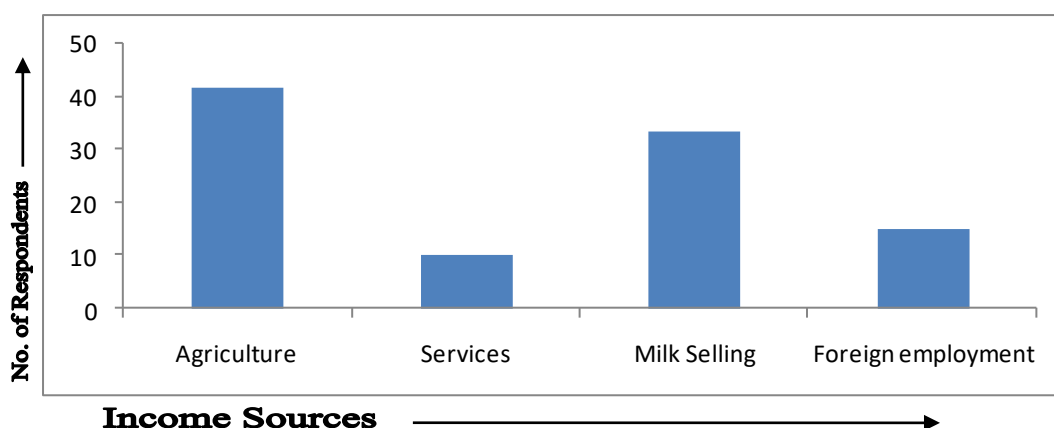
S.N.	Income Sources	No. of Respondents	Percentage
1	Agriculture	29	44.61
2	Services	6	9.23
3	Milk Selling	20	30.36
4	Foreign employment	10	15.38
Total		65	100

Source: Field Survey, 2023

The table no. 4.5 demonstrates that the main income source is agriculture is 44.61 percent, service is 9.23 percent, milk selling is 30.36 percent and foreign employment is 15.38 percent. There are different types of income sources in the study area but

agriculture is the main part of income. So it is clear that seasonal crop farming belongs to agriculture which is helping on entrepreneurship development on study area.

Fig no. 4.5 Main Income Sources of Households



4.7 Average Land Holding Size

As agriculture is the main occupation of Nepalese, this study conducted in Suryodaya Municipality also depicts the same result. But the cultivation patterns a little bit different as found in nationwide cultivation pattern. There are several studies which have shown that farmers do not get their own land for cultivation. The landlords occupies most of the land and farmers get land in rent. But in this study area, cultivation pattern in land is done by own landowner. Most of the landowner are farmer here.

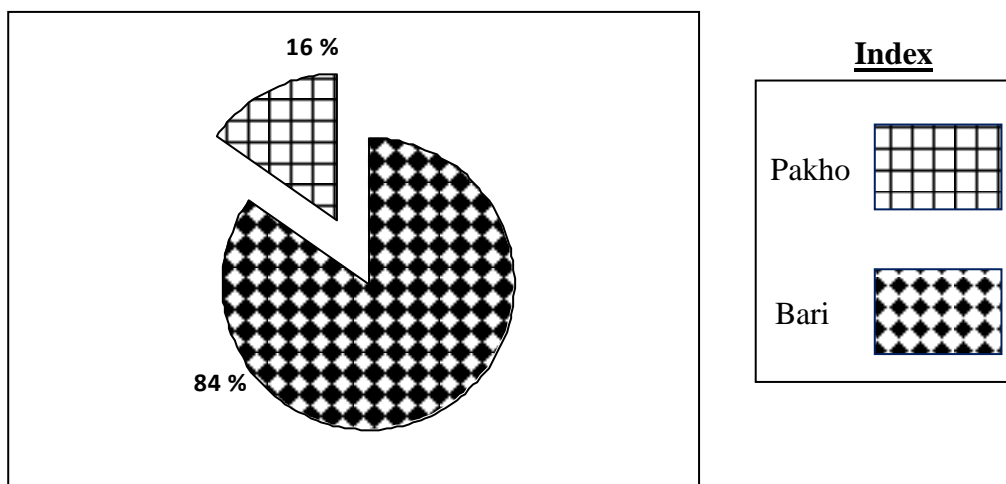
Table no. 4.6 Average Land Holding Size

S.N.	Types of Land in (Ropani)	No. of Respondents	Percentage
1	Bari	55	84.61
2	Pakho	10	15.38
Total		65	100

Source: Field Survey, 2023

The table no.4.6 elaborates that among the sampled households, 84 percent of households have *khet/Bari* and 15.38 percent of sampled households have land like *pakho*. This land patterns shows most of the land are cultivative which helps in the increasing of seasonal vegetable production.

Fig no. 4.6 Average Land Holding Size



4.8 Crop Collection Ratio per week.

Generally ready seasonal crops are collected in near collection centre before supplying market . In the collection centre weighing labeling, sampling, separating, grading etc. types task are done. The following are the crop collection ratio in the study area.

Table no. 4.7 Crop Production and Collection Ratio Per week

S.N.	Quantity in QTS.	No. of Respondents	Percentage
1	2-5	2	3.07
2	5-10	15	23.07
3	10-15	28	43.07
4	15-20	20	30.76
Total		65	100

Source: Field Survey, 2023

The table no, 4.7 shows that the crop collection ratios are (2-5)QTS. per week is 3.07 percent done by 2 respondents, likewise (5-10) QTS. is 23.07 percent done by 15 respondents, (10-15)QTS. is 43.07 percent done by 28 respondents and (15-20)QTS. is 30.76 percent collected by 20 respondents per week. This collection ratio shows the marketing supply rate of crops which is directly related to income generation activities. Thus collection ratio conclude that the positive impact of economic growth.

4.9 Animal Husbandry

Farmers have been keeping livestock for many years. Cow, Buffalo, Goat, Pig, Ox, and Hens are major source of income from livestock in this study area. Almost all the farmers have kept cow for the compost fertilizer and dairy purpose. After the

establishment of dairy components farmer have started keeping more cows because now, they have realized that dairy farming is an another important source of earning as well as it helps to prepare compost fertilizer to grow organic seasonal crops.

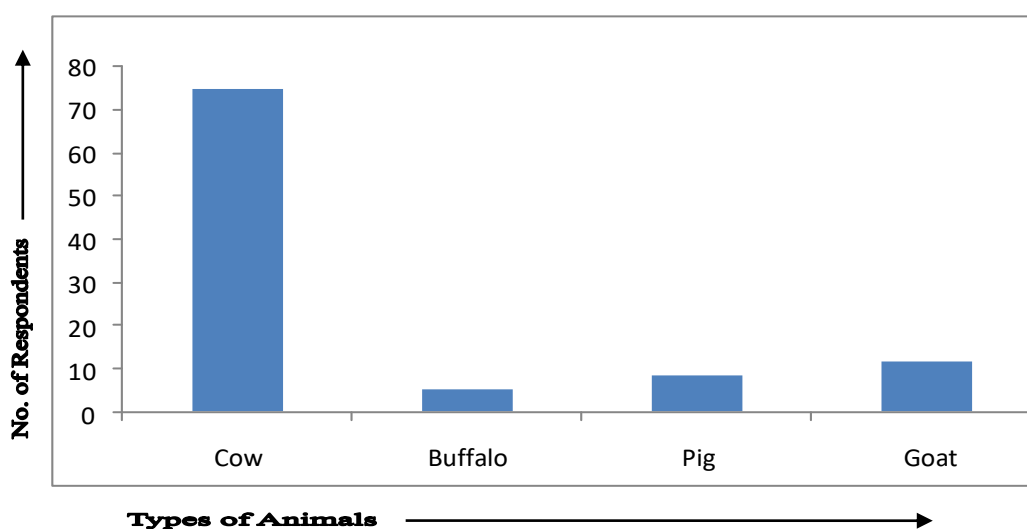
Table no. 4.8 Animal Husbandry of Respondents

S.N.	Cattle	No. of Respondents	Percentage
1	Cow	49	75.38
2	Buffalo	5	7.69
3	Pig	4	7.15
4	Goat	7	10.76
Total		65	100

Source: Field Survey, 2023

The table no. 4.8 reflect that the major respondents have cow that is 75.38 percent so on 7.69 percent are buffalo, pig were 7.15 and remaining 10.76 were goat in the study area. Animal Husbandry is another important income generation source for people of study area. Thus this activities is also the supportive role for economic growth.

Fig no. 4.7 Animal Husbandry of Respondents



4.10 Insurance Pattern of the Respondents

Insurance plays great role for unfortunate cases . It helps to recover the respondents problems form present time to future. Here it seems the insurance status of respondents are not well. On the other hand for the crop insurance most of the farmers complain about the lack of insurance of crops. Farmers bought improved seeds taking loan from different sources but if the crops do not produce or die or become

unproductive then there are no facilities of repayable. Thus the crop insurance are not mentioned here. But the insurance pattern of respondent are given below.

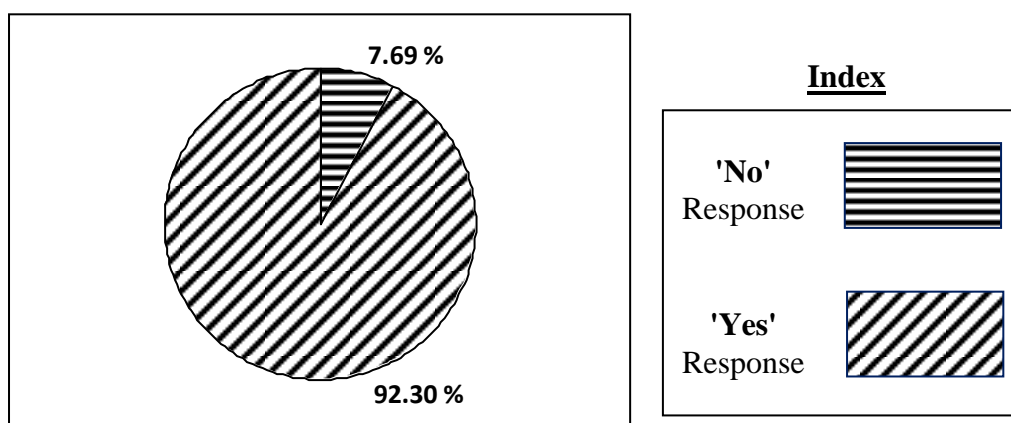
Table no. 4.9 Insurance Pattern of the Respondents.

S.N.	Response	No. of Respondents	Percentage
1	No	60	92.30
2	Yes	5	7.69
Total		65	100

Source: Field Survey, 2023

The table no. 4.9 shows that the 92.30 percent of the respondents has not done their insurance except 7.69 percent of respondents in the study area.

Fig no. 4.8 Insurance Patterns of the Respondents.



4.11 Types of Farming Field Prepared by the Respondents

The management and operation of crop farming field management maintain the effect of benefits by crops income at their home.

Table no 4.10 Types of Farming Field Prepared by the Respondents

S.N.	Types	No. of Respondents	Percentage
1	Traditional	25	38.46
2	Advanced	40	61.53
Total		65	100

Source: Field Survey, 2023

The table no. 4.10 shows that 38.46 percent people are still doing traditional types farming and about 61.53 percent people are using advanced types of farming like terrace farming, green farming, greenhouse farming. This management of field has

direct effect on agricultural production. Modern methods of management of land helps to produce huge amount of production with satisfaction. Here method of advanced technology seems higher than traditional which has positive role for agricultural aspect and entrepreneurs development too.

4.12 Market Facilities of Respondents

Vegetable collection is often one of the first activities of crop producer groups. Once the vegetable from several group members is collected in a central location. The vegetables can be processed or transported to processing centers or markets. Vegetables should be forwarded towards marketing within 24 hours of collecting from field.

Table no. 4.11 Market Facilities of Respondents.

S.N.	Facilities	No. of Respondents	Percentage
1	Yes	55	84.61
2	No	10	15.38
Total		65	100

Source: Field Survey, 2023

The table no. 4.11 shows the market facilities for respondents. It has seen that there is no such market facilities for the transportation of the crops of the specific remote area. It seems nearly 15.38 percent people belongs that specific area. On other side 84.61 percent of people are satisfied with the market facilities. Market facilities and prices are important affected factors for crops/vegetables production. Market distance and availability of price plays direct effect on vegetables productions. Here this data on the study area shows satisfactory access of market facilities.

4.13 Means of Vegetables Transportation

Transportation facility is most necessary to transport of vegetable product from remote area. Firstly, it is necessary to collect vegetables on the collection centre. If there is no any transportation facility, it is very difficult to collect vegetables from remote area. There are different types of means of transportation are applied in the study area. Thus the following are the main means of transportation for vegetables.

Table No. 4.12 Means of Vegetables Transportation

SN	Means of Vegetables Transportation	No. of Respondents	Percentage
1	On foot	10	15.38
2	Pick up/Van	45	69.23
3	Horse	10	15.38
	Total	65	100

Source: Field Survey, 2023

The table no. 4.12 explains the means of vegetables transportation in the study area. It found that 15.38 on foot, 69.23 through pickup/van. then rest of them some amount of vegetables they carry with the help of horse. Which is 15.38 percent of respondents. The vegetables are collected in different collection center. Now the remote area of the study area generally covered by simple small village road. Which makes farmers helpful to transportation of their products. But somewhere it is still difficult due to lack of vehicle-able road. Seasonal affections are also there. Although here in the study area high amount of transportation of vegetables are done through vehicle. This plays positive support for entrepreneurship development.

4.14 Income Generating Activities through Agricultural Farm

The small-scale of agricultural farming contributes significantly to poverty reduction particularly in rural areas. Poor farmers use their agricultural as well as cattle income to purchase agricultural inputs such as fertilizer, seeds, pesticides etc. Income from seasonal vegetables sector has helped to farmers for capital formation, land purchasing, improved housing and quality education for children. Seasonal vegetables products like *iskush*, tomato, cucumber, pumpkin, ginger, onion, garlic, *akabare* (red chilly), cauliflower, potato, *rayo*, cabbage, radish etc. are very essential food items for daily consumption. This kinds of seasonal vegetables should be organic. Organic vegetables production helps to maintain good health of body and also helps to maintain physical and mental development. So, regular consumption of fresh and hygienic vegetables product is needed for the healthier life. However, it is little bit costly then other . Although organic vegetables productions are also the income generating activities in the study area.

4.15 Vegetables Related Institutions

There are many organized institutions are working for the development of agricultural sector in Nepal. Crops production related institutions have their own role of commercialization of crop sector. Registration of agricultural farm, development of cooperative sector crop farm, monitoring and evaluation of agricultural development programs, maintain coordination among the public and private sector etc. are the main functions of these institutions. some of the important crop related institutions in Nepal are given bellow.

- Agricultural Development Bank
- Agricultural Co Operative Organization
- Nepal Agricultural Research council (NARC)
- Food and Agricultural Organization (FAO)
- Department of Cooperatives (DOC)
- National Cooperative Development Board (NCDB)
- Private Sector

Above mentioned intuitions plays great role for agricultural sector . Specially agricultural bank provide the capital for farmer with least percent of interest. Agricultural Co operatives helps to farmers through different programme. Agricultural research has also very important role to research new hybrid seeds, crops diseases, farming field and so on. Food and agriculture are core related to each other so the food from crops and their hygienist, consumers health , validity, expiry like act are maintained by food and agricultural organization. Agricultural cooperatives are also in under of department of cooperative. So the department of cooperative has high role to control different types of cooperative. It seems government invest sector could not cover all over the area and it is also difficult to manage .That's why private sector plays a vital role to manage such problem. Personal or Private investment and private properties are become major aspect for agricultural development and entrepreneurship development in the study area.

4.16 Expansion of Vegetables Collection and Distribution Networks

Presently, formal vegetables collection networks cover only about 10 percent of vegetables produced in the country. Vegetables collection is mostly concentrated in

the urban centric region. Marketing system refers to the channel along which commodity passes through a sequence of stages or events, and it varies with commodity and other factors such as distance, infrastructure and producer's awareness. Price signal transmission and physical transmission of the commodities are major functions of marketing; carrying out such by a market depends on number and size of participants, information system and the physical infrastructure. Marketing links the production and consumption sectors, marketing can contribute to all four objectives through the efficiency with which it communicates signals of scarcity and abundance to decision makers because it is the source of productive activities involving many jobs, marketing can contribute directly to economic growth, income distribution, and nutritional objectives. While price is the most flexible, marketing channel plays a major as distribution channel through which firms reach their end consumer is the least flexible and perhaps the costliest to change in the short run.

Nepalese agriculture has been confronting low return depriving farmers of their improvement in livelihood. 'vegetable' has been identified as one of the leading sub-sectors to harness advantages of agro ecological diversities and has undertaken vegetable promotion strategy especially in the small holders visualizing comparative advantages of vegetable production and marketing in economic growth and development. Over the time and commensurate with the national vision, many state agencies including those supported by donors are, in their various capacities, engaged in vegetable production and marketing promotion in the country. However, the goal is not achievable unless a fairly operating marketing system and a market-oriented production system are instituted.

Local vegetable production has good opportunities to fulfill quality aspects/requirements of transparency and traceability in the supply chain due to the possibilities for direct interaction between producers and consumers. This necessitates analysis of specific logistics systems in order to identify successful approaches for improving the local crops can only be described, when the economy of production mechanism and marketing system for major vegetable products operating in a particular area is evaluated. Local seasonal vegetable distribution systems to determine how cooperation, optimization and integration in the supply chain can make the distribution systems of local and small-scale vegetables producers more efficient and aid to economic development.

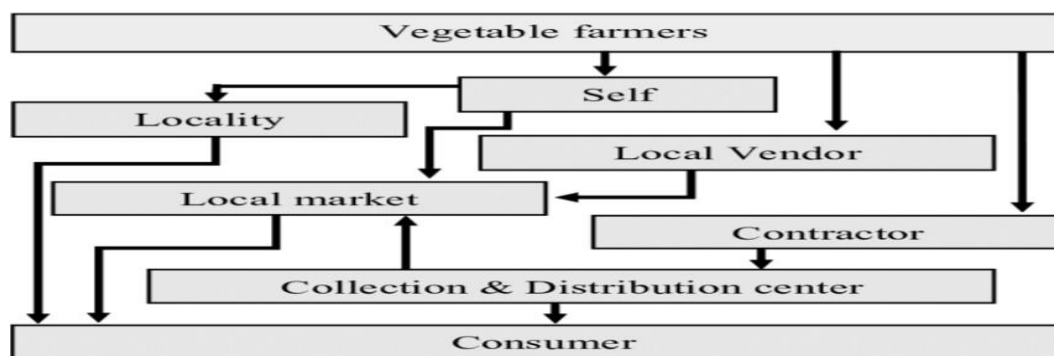
4.16.1 Market Marketing System and Marketing Channel

Major markets of the seasonal vegetables producers of the study area are the Hat bazaars of the district Fikkal bazaar consumes more than 60% of total produce of the farmers while Tinghare, Gorkhe and Pashupatinagar bazaar consume rest of the production of the study area. Marketing of off-season vegetables encompasses all the activities being performed in moving vegetables from producers to the hands of ultimate consumers. Marketing system creates time, space and form utilities of the farm produce for the consumers. The producers, traders, transporters, wholesalers, retailers were the main actors of off-season marketing in Nepal.

4.16.2 Marketing System in the Study Area

Mainly the red chilly (*Akabare*) and tomato producers and the local traders were the main actors involved in the marketing. Generally the producers found large in numbers whereas traders were few number. Most of the portion of produce was sold by the producers themselves in local hat bazaars while some portion was marketed by the local traders. Buying, assembling, transportation, financing and selling activities were done by the traders and producers. The marketing system of the study sites was very simple type. Most of the production was marketed by the producers themselves. Producers carry on their back and some use vehicles for transport and sell them in the local market. Most of their produce was sold on the day of hat bazaar. Hat bazaar is organized once a week namely Thursday in Fikkal hat bazaar. Likewise, on Sunday on Tinghare hat bazaar and on Monday on Pashupatinagar hat bazaar are run. Producers sell some of their produce to the local traders who further sell to the retailer and consumer, Producers also sell their product to the retailer directly who sell to the consumer. The common marketing channel observed is presented in Figure 4.9

Fig 4.9 Marketing Channel of Study area.



4.16. 3 Production and Marketing Problem Analysis

In the study area farmers has been facing production and marketing related problems. Some problems were found entirely related to producers, some to traders. To identify the problems in the production and marketing of off-season vegetables like tomato, radish, cabbage etc in the study sites, the respondents were confronted with some open ended questions, asked to mention and rank all the problems.

4.17 Price and Non-price Measures

The major price and non-price immediate measures for improving the crop sector are: implementation of appropriate seasonal crops pricing mechanism, quality improvement, product diversification, manpower development, improving crops production, domestic market promotion, and institutional capacity building. In the study area most of the time price and non price depends upon the chain business. Rarely farmers can get real price of their products from consumers while direct purchasing.

4.18 Increase Vegetables Production and Productivity Ratio

Presently, the main problem faced by the seasonal vegetables collector, seed collector is the shortage of organic and hybrid production. Increase in crop production and productivity has become urgent. For this, more concerted efforts are required which are given as following.

4.18.1 Research Centre Development

In the study area lack of the research centre scarcity resulting in weak production. On the other side the fungus ,insect, attacking from virus is the biggest hurdle for increasing crop production of study area. The shortage of research center is the most critical aspect of crop production which also has a serious effect on the study area, entire agricultural and eco-system as well. The hill areas, which contain major organic and fresh crops areas due to larger concentration of organic crops, have the most pronounced research centre deficit. On the other hand, the two main areas of off- farm research service – the forest and rangeland – are both declining in area and productivity. Poor precaution makes crops much more susceptible to diseases and causes considerable wastages through insect, fungus effect and even death. Consequently, excess dependency of farmers on the grain based expensive concentrate

seed rather than locally produced seed. Therefore, intensive programs for improving hybrid seed resource base should be launched to increase hybrid seed. For this, the followings are main issues and potential means:

- Investigate and assess seed situation in different agro-ecological zones to better understand good seed production, management and utilization practices to identify constraints and opportunities facing best seed development; Promotion of community pure seed development programs to plant healthy and treatment seeds;
- Emphasize promoting the use of native organic seeds and expand farmer operated nurseries to propagate locally preferred crops species for distribution to other farmers; Manage the well integration of the planting of crops in the farm
- Encourage private sector in seed production research activities and foster collaboration with international research organizations;
- Upgrade the skills of farmer extension workers through regular in-service trainings; and Use crop residues from more intensive crop production to decrease the pressure on fodder resource bases;

4.18.2 Plant (Vegetable, Crops) Health

Good and organic crop health is an essential prerequisite to any improvement in organic crop production. The overriding problem is the limited capacity of the Local Government to fund them at a level sufficient to achieve any meaningful results. Local Government limited financial resource is thinly spread over the local area. At present, the crop health services are inadequate to meet the requirements of the country's quantities number of seasonal crops. In the study area there is no any plant (crops) health organization or institutions. So there is an urgent need to extend plant crops health services to the village level through means that do not totally rely on the GON budget for continued operation. As such, the potential measures to improve plant/crops health are as follows in the study area.

- Encourage private veterinarian/Para-veterinarians to provide animal health services in the rural areas by providing easy-term credit facility (without

collateral and low rate of interest) to procure the initial stocks of drugs, vaccines and other essential equipment;

- Strengthen procure, insurance services to protect crops from the risk of imported diseases, Adopt preventive crop health treatment programs to protect crops, vegetables from epidemic diseases; Implement quality assurance system for locally produced biological products used for plants health protection and treatment;
- Strengthen disease diagnostic capability of the laboratories through making them well-equipped; and Upgrade skills of the plant health workers through providing commercial horticulture , agriculture, veterinary training under fellowship programs;

4.18.3 Hybrid seed Services

In Nepal, rural crop producers have adapted indigenous seeds of crops, vegetable over the centuries to the limitations of environmental and producing regimes which exist in the country. The cross-pollinating of local crops with higher producing species has been beneficial only to the lesser extent because of the shortage of adequate caring and lack of improved farming practices. Hybrid seed improvement through cross-pollinating has frequently been regarded as a means of increasing crops productivity, but it does not provide a quick solution to seasonal crops production problems when delivered in isolation and without supporting crops health and farming The artificial greenhouse preparation and hybridizing plants seed is one successful practice in locality, this service has been limited to accessible areas and is constrained by trained farmers and hybrid seed producer .In the study area it is found that there is lack of hybrid seed distribution, production services. At this backdrop, the followings are some potential measures to improve hybridizing of seed services:

- Preservation of the genetic characteristics of local seeds where these have particular attributes of value, and development of their special characteristics through within-seed selection program;
- Encourage cross-pollinating as a means of improving productivity but only in conjunction with supporting adequate caring, management, arrangement and plants health services

- Ensure availability of improved seed stock and extend availability of hybrid seed distribution services particularly in high cultivating production areas along with other support services; extend seed distribution services in the potential crop production areas;
- Upgrade skills of green house making service providers, and Make farmers aware about the effects of other unknown genetic quality which results in degenerated genetic quality of crops

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CHAPTER -V

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Findings

In every market consumer needs vary from person to person, and also from time to time. Vegetables processors have accommodated this trend by providing not only basic vegetable products, but special products for special needs as well. Because of its decomposing, decaying and destroying nature, most seasonal vegetables in the world is not consumed in its original fresh form, but in some processed state: fermented dry *rayo* (*Gundruk*) fermented dry pieces of radish(*Sinki*), wet packaging of *akabare* in bottle, Packaging of Drying red chilli (*Akabare*) after boiling, dry food from potato (*Maseura*) . The number of value-added seasonal crop products available to consumers has increased considerably in recent years as Nepali post farming processors from fresh seasonal products are introducing more new products in hopes of increasing product consumption. As well as other market the organic fresh vegetable market in particular, are increasingly being presented in a wide variety of forms. While some demand low-priced products, others are ready to pay a premium for quality. It is, therefore, the challenges for the seasonal crop farming sector is to identify what the consumer needs are and focus on these areas. In Nepal, population is increasingly becoming urbanized. The rural people who used to be the vegetable producers some years ago have now become the urban consumers. Urbanization has brought increased disposable income and consumption of higher cost foods, such as seasonal crop products and also other agricultural products. Here, the fact that urbanization is also characterized by the general provision of electricity, and hence the potential for developing an extended cool chain, is of particular importance for a highly perishable product such as seasonal farming. Although the shortage of electricity has resulted in extended time of load shedding during summer season, big restaurants and supermarkets have managed their own alternatives such as generators, high-capacity inverters etc. for operating the cool chain. In such a situation, household expenditure shifts from unrefrigerated raw and fermented vegetables, and products such as tinned and dried vegetable products which do not require refrigeration, to the wide range of vegetable and crop products which can be found in any of today's supermarkets. Thus, along with population concentration urbanization has also resulted in concentrations in

food marketing. This is manifested in supermarkets, which are fast growing in the urban centers. Supermarkets are offering seasonal crop products with both refrigeration capacity and space to display products, which acts as a stimulus to increased consumption of value-added products. The growth in consumption of food outside the home has brought enormous potentiality to the farming sector. The growth of the fast food has considerably improved the position of value-added seasonal agricultural products. Restaurants, mainly those specializing in pizza, burger, chaumin, mo mo are major users of value-added seasonal vegetable products.

Beside the above mentioning contents some main findings of this study are as following.

- Social, cultural, educational, economical status of respondents .
- Employment status of people from study area is well although least people are found unemployed due to their personal and physical reason.
- Agricultural area or pocket area found good for seasonal crop farming , and bit amount of land portion found uncultivated of the study area.
- High Seasonal crop production rate was seen in study area.
- Different types of crops /vegetables production are found in the study area
- It seems seasonal vegetable farming as agriculture as well as animal husbandry as a supportive earning sector for economic growth made people economically strong
- Woman empowerment and woman self employment seen good.
- Problems like transportation, market facilities, hybridization of seeds, food and agricultural technician, go down, cooling centre , etc. like problems are found in the study area.
- Entrepreneurship development through seasonal agricultural farming plays positive impact for the local people in the study area.

On the other hand it was found that the engage people for agriculture are middle aged people not young one. Young people are not very much interested in continuing in agriculture because they don't see much prospect in the future of agriculture and they don't see it is as an active profession in the long-run, so many of the smallholder farmers are quite aged. Despite the decline in interest for agriculture as a career there are still young farmers working at their farm as the last source of subsistence for their livelihood. Meanwhile, following policies should be envisioned to engage youth in agriculture:

- ▶ Need to more active than ever before the Youth Self Employment Fund Program that should be directed to youth willing to involve in agriculture to make easy access to credit.
- ▶ Youth oriented agricultural groups and clubs
- ▶ Agricultural education and training for skill development and strengthening the resilience
- ▶ Incentives and subsidies for commercial farming focusing on youth
- ▶ Insurance for crops and livestock as it is profession with high risk and uncertainty.
- ▶ Pocket package program and commercial agriculture

5.2 Conclusions

In this research the following types of conclusion are drawn out of the study area.

- ▶ As we can see in the above, Aathghare Namuna Agriculture farm has the maximum influence over the market than other private farm . This farm is the first private farm and collecting centre in the study area that gave the farmers benefit of earning reasonable price for the vegetables they produced in their home.
- ▶ Being private owned company, the farmers have to face the risk of certain alternation
- ▶ However, these reason does not stop the up rising popularity of Aathghare Namuna Krishi (Agriculture) Farm, among all the farms present in the nation, it ranks in respective position and also prized nationally. They can consistently increase their production capacity, collection capacity and various new products. This farm is planning to launch new hybrid seed products of crops like potato, *akabare*, cauliflower, tomato, *rayo* etc. near future. With such increase in pace of development, the day when they will make it to the top is not far. By observing, analyzing, and studying above-mentioned all the factors we can conclude that this farm is established by rural person as a social service organization, which later turned as business organization. They are helping hundreds of people of different districts like Ilam.
- ▶ It is found that nearly 50 percent people are belongs to farmer in the study area. They are farming different types of crops , specially seasonal crops. Most of the people belongs to different types of groups, cooperatives, farms to do agricultural

activities. It is clearly seen that the people are incoming or getting money through agricultural activities. Thus it is justified that seasonal crop farming has positive impact to entrepreneurship development in the study area.

5.3 Recommendations

This farm has played great role for rural entrepreneurship development and economic growth of study area. Although being a local vegetable and seasonal crop farm it has to face high competition and have to face hurdle any moments. It needs to maintain its quality, products type, quantity in order to prevail in the competition and be in first rank among competitors forever. It should introduce organic products that would attract even new and a greater number of customers. Including all the followings recommendations are given for related farms, corporations, organizations, government, farmers, etc.

- Agriculture Farm should introduce new techniques for farming.
- The organization of farm should recruit more skilled manpower and should adapt new technology in order to meet the goal..
- The loan mechanism of banks and other financial institutions should be simplified and made feasible to the rural and far remote area.
- The government should pay attention for promote seasonal vegetable farming sector and should provide different subsidies for the agricultural equipments and other charges.
- The tax of government for farming material or machine should be discounted.
- There should be started village road improvement programs early as possible.
- There is necessary to pay attention for research on seasonal crops farming.
- There should be given training to seasonal crops farmers about scientific knowledge and new technology.
- There should be established Plant/veterinary service centers in the study area.
- It is necessary to encourage the farmers towards artificial or hybrid seeds to plant.
- It is recommended that, there should be planted different type of hybrid grasses and flowering plants in barren to fulfill lack of green grass.
- The community forest should be managed.

- There should be proper utilization of local resources and management of people's knowledge.
- Modern type of green house should be constructed for seasonal vegetable farming.
- Bio-gas plant should be installed in farmers house in the study area.
- The capital and other necessary materials should be managed by government for the farmers to produce huge organic vegetables.
- It is necessary to establishment of vegetable or seasonal crops cooling center in the study area.

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- 16) What are the problems are you facing for vegetables production .
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- 17) Does this kind of farming helps on your economic development ?
.....
- 18) Are you become self employed by this kind of seasonal farming ?
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