

CHAPTER-I

INTRODUCTION

1.1 Background :-

Nepal extends for 500 miles along the Himalayas between $26^{\circ}25'$ and $30^{\circ}27'$ North latitudes and $80^{\circ}12'$ East longitudes. Its northern boundary merges with the Tibet region of the People's Republic of China. On the east it borders with the state of Sikkim and the North Bengal division of India. On the Southern side it touches the India States of Uttar Pradesh (U.P) and Bihar. Topographically, Nepal can be divided into three major region: The Terai, Mid Terai and the hill or mountain area. Terai which occupy about 17% of the total area of the country, has a favorable climate for producing rice , jute, sugarcane, oil seeds etc. where as the central region which occupy about 63% of total area bear rice, Maize, millet, potatoes, oil seeds, fruits etc. and northern region about 15% gives medicinal herbs, yak, citrus, fruits etc.

The country has an area of 1,47,181sq. km. The average length the Mechi river in the east to the Mahakali river in the west is 885km (Parajuli,

2000:145). At its widest is 241km, while at its least it is 145 km. Yielding a mean width of 193 km. it has a population over 2 crore 30 lakhs, the Kingdom is in the largest Himalayan state.

Nepal, however is a more fraction in the Asian political set up viewed in relation to her immediate neighbors. India is about twenty-two times bigger in size and nearby fifty times larger in population and China is seventy-five times bigger in size and nearby fifty seven times larger population than Nepal (CRS, 2001:41).

Thus Nepal is said wedged between two giant neighbors. As geographically Nepal marks a traditional mountain area between the fertile Ganga plain and the area Tibetan plateau, the country is politically a monarchical state wedged between republican India and communist China (Gurung, 1980:131). The 2001 census gives a total population of 234.53 million with the percentage rate of annual increase at 2.2%. The annual productivity of agricultural production less than the productivity of population growth. The agricultural production growth is highly decreasing than the previous years due to the various reasons, factors i.e. traditional agriculture methods, land merchants make the land non-plantation of any crops. There are not rigid rules between land owners and tenants, dividing lands day by day, there are no facilities provided by the government to the

small size framers. The basis of population concentration is being the agriculture productivity, the more fertile areas have highly density.

Nepal is predominately an agricultural country and agriculture has a dominant role in the Nepalese economy. About 80% of the economically active population of Nepal are engaged in the agricultural sector. In the foreign trade of Nepal a sizeable contribution is made by the agricultural sector. This sector, therefore, has great significant for the total economy of the country. It also assume importance which consideration is given to have in increase total national production because its contribution to the gross domestic production is about 38.1 percent (HMG, 2001:5).

To increase the DNP in Nepal on improvement in agricultural sector is essential. The past experience of the country shows that the growth trend of agricultural production is not satisfactory. In addition to the poor farming techniques, lacks of trade diversification, transportation difficulties, lack of market information etc.

Nepal is poorest country in the world with an average per capita income of \$ 240 (WDR, 2006 :11). The output of economy in terms of goods and services and other informs of consumer satisfaction depends on the quantity of the resources that are put into its production. In Nepal about

39 percent of the total population falls under the absolute poverty line. Poverty is mainly concentrated in rural areas of the underdeveloped country like Nepal. The burden of poverty is spread unevenly among the regions of the developing world. It is estimated that in 1985 more than one million people in the developing world live in absolute poverty.

Nepal an underdeveloped country has own economic constrains. Nepalese people are dependent on agriculture for their livelihood. Nepal is an agricultural country where more than 70 percent of the total population is engaged in agriculture, which is providing 42 percent of GDP (Gross Domestic Product).

Agriculture also contributes more than 60 percent of the total export earning. Therefore increasing the production and consumption in this sector is essential for the development of the economy. Agriculture development could be achieved only when the agriculture production could be increased and efficient marketing system could be developed (HMG, 1995:27).

1.2 Importance of Agriculture :-

Agriculture is one of the most important part of the potential savings concerted in our economy. Agriculture is an essential component of industrialization in a country. Because its provides employment to the major

section of the population, raw materials for industries, creates necessary capital mobilized labour force for non-Agricultural sector and also creates effective demand to simulate industrial growth, agriculture is that sector of economy where from 65 percent of national income is derived. Moreover, it is the agricultural products that occupy 85 percent of the total export of the country.

Agriculture marketing is one of the major field of marketing, refers to the marketing of the farm products. The agricultural marketing system operates to move goods from producers to the consumers and to establish economic incentives and market condition to facilitate this movement. The total agricultural marketing system which alternatively may be called an agricultural marketing functions.

1.3 Importance of Vegetable :-

Vegetables are important sources of energy-proteins, vitamin and minerals. They are considered as protective food since they contained higher amount of vitamins and minerals. However, in Nepal cereals provides major bulk of the daily food which provide larger amount of energy (88 percent). The per capita consumption of vegetable in Nepal is only 44kg. Which is less 50 percent of minimum recommended requirement. This circle based

diet is one of the main causes of malnutrition, and lack of protective nutrition has resulted into poor standards of health in the kingdom.

The demand for fresh vegetable is rapidly increasing with the increase in population, rapid organization and increase in awareness of fresh vegetable consumption. Hence, more and more farmers seem to be interested towards vegetable farming is profitable, their land holding small (0.3 to 1ha)(Pun, 2006:72).

1.4 Statement of the Problem :-

It is well known that Nepal is a country where more than 70 percent of the population is engaged in agriculture. Development of this country would therefore mean the development of its agriculture sector. Realizing this fact, the government of Nepal has been giving top most priority to the agricultural sector.

Although, agricultural sector has been kept as priority sector, people involved here are not provided with many essential things like fertilizer, seeds etc. similarly there is no good godown and transportation facility.

On the other hand increase in production alone doesn't increase the consumption, since the production is slowly meant for the destruction of it's utility through prominent role to decline the desired goal.

Small farmers are the vegetable growers in Nepal. Most of them try to sell their produce directly either to whole-seller or retailer or middlemen. The marketing system is not well developed in one hand, on the other hand the farmers have limited knowledge on past harvest to handling and marketing of vegetables, the training to vegetable growers are designed to impart knowledge on production technology and past harvest handling and marketing aspects are mostly neglected. Hence many vegetable growers know how to produce vegetable but it is hardship to them to sell their produce at reasonable farm price. At present the study focus to set the answer of the following problems.

(1) Whether there is lack of knowledge on the past harvest technology?

Most of the vegetable, being perishable need attention on past harvest handling and care. Vegetable growers have very limited knowledge on the following aspects of past – harvest handling.

(a) Harvesting: Mostly vegetables are brushed as injure during harvest. Firms do not pay attention during harvesting and such brushed or injured vegetables are the sources of inflation or rotting . It is common in Tomato, Onion, Potato, Brinjal, Sweet pepper and many cucurbits.

(b) Cleaning and pre-cooling : Vegetable are not properly cleaned dirt particles on the surfaces of vegetables also reduce their self – life, Pre-cooling treatment prolongs the self-life of vegetables by a week . Pre-cooling means dipping vegetables in clean and cold water for few minutes immediately after harvest. The farmers are ignorant with this pre-cooling treatment.

(c) Grading : Farmers do not practice Grading and Standardization of vegetables.

(d) Packaging and naming : Farmers do not properly package vegetables due to lack of availability of packaging materials. Type of packaging is different depending on distance of market.

(2) Is there lack of infrastructures facilities?

The vegetable growers do not have collection centers after harvest and packaging. Usually the vegetables should be collected at centre from

where the product should be transported to market. They do not have selling centre also from where the vegetables are sold to be the whole-sellers or retailers. There is no provision for keeping vegetables in cold stores or deep freeze for some days.

(3) Is there lack of transport facilities?

The vegetables are mostly transported from the production centre to the markets either by Trucks and Busses. No Special transport facility of perishable products like vegetables are available in Nepal. Most of the formers who produce vegetables near the market transport their produce by themselves.

(4) Is there lack of institutional development?

The farmers do not have their own co-operatives for marketing vegetables. Due to they get very low farm price and number of intermediaries or middlemen exit between producers and consumers. This results into low profit to farmers and high price to consumers.

(5) Is there lack of knowledge on improved production technology?

The farmers do not know how to select varieties which have better keeping qualities. For example varieties Roma and Tomato, Variety Red Creole of onion are better keeper and do better during transport.

(6) Is there lack of assured market?

More farmers have to find the market for their produce themselves and many times there is no assured market. There is no market information system.

(7) Is there lack of financial support?

There are many farmers having low income. They are not able to invest their income to produce the vegetables. So, they need to financial support from others.

1.5 Objectives of the Study :-

Following are the objectives of the study :

- (a) To see the present situation of the marketing vegetables in Biratnagar.
- (b) To identify the distribution channel of vegetables in Biratnagar.
- (c) To see the present vegetables pricing situation.
- (d) To drive conclusion and Recommend suggestions for the improvement of vegetable marketing.

1.6 Importance of the Study:-

Vegetables not only adorn thing but also enrich our health. They form the most nutritive menu of man and tone up his energy and vigor. They were appreciated even by the ancient people for their tempting succulence; pleasing flavor, high nutritive value and regulatory effects vegetable supply many of the most essential health building and protection substances, such as vitamins and mineral which are wanting in other food materials. Vegetables, if taken fresh are more Vigo rating than cooked.

In Nepal a greater percentage of populations under nourished. They are suffering from various disease and hundreds of children die every year due to mal-nutrition. Such problems to some extent can be solved through the use of nutritious food. Since the Nepalese people can hardly afford meat, eggs, milk, fish etc. for their daily consumption. Vegetables which are cheaper as well as nutritious can be used.

The vegetable market is suffering from various marketing problems due to which a significant level of vegetables go waste. Appropriate provision of the marketing facilities helps minimize the imbalance between season and off-season which leads to smooth supply of vegetables round the year and helps establish fixed prices. Hence, some concrete steps have to be

taken to improve production, distribution and marketing of vegetable in the Biratnagar. So that all parties involved in the process can be benefited.

Before taking any steps, information is needed. But, studies conducted in this field seem to be limited. Thus, this study aims at providing an insight into the area of vegetable marketing in Biratnagar.

This study is broad. It may be useful for improving vegetable marketing in Biratnagar. It may to some extent, assist the government to design policies with regard to developing vegetable production and marketing. Besides, data and information produced in this study may be used and exploited for further research purposes.

1.7 Limitations of the Study:-

Although, the study provides wide scope in many ways with regard to vegetable marketing. The study lacks many relevant issues due to many seasons. Some limitations of the study are as follows-

- (a) Although, the study is based on primary sources of data, secondary data are also incorporated in it.
- (b) Sampling survey of fifty cases have been taken to explain the Marketing system. Hence the finding of the study sometimes may not represent the reality or may deviate to some point.

- (c) The study particularly stresses the marketing system of vegetables of the Biratnagar only. Although the marketing system.
- (d) Crops wise analysis of the vegetable is not made in these studies due to the lack of information.
- (e) Lack of adequate data and literature on the subject.
- (f) Lack of research work.

1.8 Organization of the Study :-

This study has been organized into five chapters. They are:-

- CHAPTER I - Introduction
- CHAPTER II - Review of literature.
- CHAPTER III - Research Methodology.
- CHAPTER IV - Presentation, Analysis and Interpretation of data.
- CHAPTER V - Summary, Finding, Conclusions & Recommendations.

In the last some more interviews are also included which have been taken from the concerned institutions and personalities.

CHAPTER-II

REVIEW OF LITERATURE

2.1 Organization for the Development of Vegetable:-

Agriculture marketing is private business in Nepal. In all the policy level, marketing has not been accorded a pivotal role in the increase of agricultural production. This implies an earlier nation among policy makers that there is a product it will find its own market. So marketing was neglected, serious study of agricultural marketing has started only recently.

The attention of government to the development of vegetable cultivation was given from 1959/60 A.D. when the Indian aid mission submitted a preliminary report for horticultural development in Nepal. Following the recommendation of the report, 24 horticultural farms were established through out the country. The main objectives of these farms were to demonstrate the use of scientific of cultivation, to produce and distribute improved vegetable seeds and fruit seeding and to conduct research problems relate to horticulture.

In 1965 A.D. , the development of agriculture has launched , "A grow more vegetable campaign" in various parts of the country mainly – Jhapa, Kathmandu, Lalitpur, Bkaktapur, Rautahat and Bardia with a view to giving impetus to growth of more and better vegetables.

In 1966/67, five departments were created under the Agriculture Ministry and the horticulture department was given the responsibility to promote and the horticulture in Nepal. However, the horticulture department was found to be more interested in fruits rather than vegetables. Later in 1972/73 A.D. when the agriculture ministry was re-established, all five departments were dissolved.

In 1973/74 A.D., under the agriculture department for regional offices were established in four department regions. As a result, the responsibility of horticulture department was given to regional agriculture offices, In 1974/75 A.D. for the development of vegetables a separate division namely vegetable development division was established under the department of agriculture. Similarly, potato is the major vegetable in Nepal. National potato development program was initiated in the same year. The main function of both vegetable development division and National potato development program are promoted the production of respective crops to produce and distribute improved seeds to conduct and co-ordinate various research,

training and development activities. These two units are supported by the agronomy division, Agriculture botany division, entomology division, plant pathology division, soil and Agriculture Chemistry Division in various activities like- plant protection, agronomy and cultures practices soil and plant nutrition, seed testing and inspection etc.

Two project namely vegetable seed production campaign project and potato development project are implemented with the external assistance.

All programs activities related to vegetable are implemented through horticulture forms and stations situated in the various parts of the country. The main functions of these farms are to supply improved seeds and seeding, planting materials and technical know how to the peasants these farms also provide sites for training and research program.

No specific plan strategy for development and expansion of market extension services, presence is found in the successive development plans of Nepal. The minimum treatment provides to marketing services, in general is attributable to difficulty to take it as a directly productive sector, accurate monitoring and evaluation of market activities and its impact is methodologically difficult . Also extension is one of the most difficult activities for the government to organize and Administer P.R. Mathema

wrote as early as 1974 about the plans of department of food and Agricultural –marketing services (DFAMS) to provide extension services on improved storage technique, drying, cleaning, processing and packaging to forms, co-operatives and concerned corporation in the future. But not any tangible dent had been made to this effect. One reason may be the pressing need for the government to direct its scarce resources some – where.

2.2 Supporting Activities of the Government

The government provides the following supporting activities in order to promote vegetable cultivation in Nepal.

- A. Seed production and distribution.
- B. Research
- C. Training and extension
- D. Credit facilities

A. Seed production and distribution

Improved seed is one of the major factors for increasing productivity of any crop. With this view vegetable seeds are produced and distributed from all most horticulture farms and stations.

However, the major seed production centers for vegetables are as following:

I. Potato :-

There are two potato's researches stations that research centers are lunched with the help of foreign assistance. They are as follows:-

- (1) National potato development programming (Khumaltar)
- (2) Nucleus seed potato development center (Sindhupalchowk)

II. Other Vegetable:-

Vegetable, seeds cereals productions and research centers are operated as follows, which are mentioned below:-

1. Vegetable development and seed production Center (Khumaltar)
2. Horticulture Research Farm (Dhankuta)
3. Horticulture form (Mustang)
4. Extensive horticulture form (Sarlahi)
5. Vegetable seed production Center (Rukum)

B. Research

Research on vegetable is conducted with a view of providing information on vegetable that have suitability and scope of cultivation in particular area.

There are two research stations for potato and five for vegetables . The central research station is situated in Khumaltar . The research activities are carried out by the vegetable development division and national potato development program under the guidance provided by the central office.

Two research project and potato development project are immolated with foreign assistance.

C. Training and Extension

The objectives of training and extension program are to demonstrate the modern and improved practices of cultivation. It includes the provision of information to peasants about better varieties of crops and the use of fertilizer, plant protection, chemical and modern technology. During 1982/83, 26 training programs were conducted by National potato development program, out of which seven for JT and J.T.A. level and nineteen for peasant's level. The target for 1983/84 was to be conducted one officer level, JT and J .T.A. level and twelve peasant's level training

program. Altogether, the aim was train fifteen officers, J .T. and J .T.A. and 173 peasants.

Number of training program conducted on vegetables other than potato was 36 (13 for JT an JTA level 20 for farers level). All these programs were conducted by vegetable seed campaign project (Bhattra, 2042:19). This program covered nine districts – Ilam, Bara, Dhanusha, Dhading, Kavre, Nuwakot, Kathmandu, Lalitpur, Bhaktapur. The aim was to conduct 39 training programs during the same period.

D. Credit Facilities

Agriculture production can be increased through the application of modern technology. However, since most of the Nepalese peasants are below the subsistence level, they are not in a position to adopt modern cultivation practices. Thus, realizing the need for financing for such inputs, agriculture development bank was established in 1968 A.D. Under agriculture development act 1967, since, the bank has been providing short, medium, and large term loans to the individual as well as institutional to be developed their farming programs.

In order to promote vegetable production, the bank started providing loans to vegetable growers 1982/83 in particular. During this year, the total

loan distributed for vegetable cultivation was RS. 13,939 thousand out of which Rs. 9,685 thousand to individual peasants and Rs. 4,254 thousand to institution (ADB,1984:105). The loan for vegetable cultivation was provided for the short term and interest was 14 %.

2.3 Vegetable crops research and development program in Nepal

A vegetable development activity in Nepal was started during early forties, During fifties a wide range of temperate and tropical vegetables were introduced and tested for their adaptability and seed production in different ecological zones of Nepal.

However, the vegetable development activities received priority since fifth five year plan (1975/76 –1979/80). In 1972, vegetable development division (VDD) was established with in the department of agriculture with the objective to conduct research, generate and promote new technology and finally to run the sound vegetable development program in the country .

There are three main thrusts of vegetable development activities in Nepal. They are:

1. Vegetable production program

2. Vegetable seed production program
3. Vegetable crop research and out reach program

1. Vegetable production program

The different types of vegetables programs are conducted which are given as below. This is divided into three categories:

- a) Special production program
- b) General production program
- c) Low priority area

a) Special production program :-

This program has received the first priority and is conducted in 30 districts of the kingdom. Production pockets are located near the town or city and along the highway. This program has objectives to supply fresh vegetable to urban area throughout the year and to export the surplus to India and Tibet. Production during the main season as well as off season has already started in commercial scale by exploiting the naturally available variation in topography and Agro Ecological condition.

This program has been launched in 30 districts:

Ilam, Jhapa, Morang, Dhankuta, And Siraha in eastern development region .
Sarlahi, Dhanusha, Dhading, Nuwakot, Kavre, Kathmandu, Bhaktapur,
Lalitpur, Tanahu, Makawanpur, Bara, Palpa, Kaski, Syanga, Kapilvastu, and
Rupandehi in Western development region. Bire, Surkhet and Jumla in
Midwestern Kailali and Doti in far western development region.

This program is carried out with the strong support of vegetable research and extensions. Technical support is provided mostly through vegetable development division (VDD) as well as local horticulture farm and extension support through agriculture development office (ADO) and VDD. The peasant of the special vegetable production pockets received the following services:

i. Private Nursery Establishment:-

The private Nursery in the peasant field are established with the objectives to provide vegetable seeds, seeding, fungicides and insecticides through private sector and priority is to be given to establishment . Nurseries in the district headquarters as well as in the special vegetable production pocket area . In the first year of the Nursery establishment, the nursery owner receives input support equivalent to Rs. 1500. Input and materials

provided are polythene pipe, plastic bags, plastic sheets, bent steel rods, sprays , watering cans, garden tools etc.

ii. Training :-

Vegetable production training is conducted to the peasants of special production pockets in an average of training in each district.

iii. Production Demonstration:-

Production demonstration is conducted to verify the technology in the peasant's field already developed by the research stations. It has become one of the effective methods of technology transfers.

iv. Field Day:-

Once the production demonstration is successful the peasants are invited to participate in the field day. The field day is organized with the objective to disseminate the improved technology of vegetable production through production demonstration.

v. Peasants Visit:-

The peasants of one pocket area visit the other production pocket during the cropping season with the objective to exchange their ideas and problems and help solve them.

vi. Production Services:-

Technical service is provided by the subject matter specialist of the nearest horticulture farm, a regular basis, Technical support through vegetable development division (VDD) is provided when needed.

vii. Loan and Agricultural Inputs:-

Peasants of the production area receive loan from the Agricultural Development Bank (ADB) and improved seeds and other inputs are provided through Agriculture Inputs Corporation (AIC) and its dealers.

B. General Production Program:-

This program is to be conducted in all the 75 districts of Nepal as the kitchen gardening. The technical inputs service will be provided from the Agriculture Development Office (ADO).

C. Low Priority Area:-

Low priority area will be gradually included in the general special programs and supply of improved seed and technology will be gradually increased. Agricultural marketing plays a pivotal role in accelerating the economic development of Asian country like Nepal. It is an important element for promoting farm production above subsistence level.

The history of agricultural marketing development services in Nepal does not date back more than one and half decades. Only after the establishment of Department of food and Agricultural marketing services (DFAMS) in 1972. Of course, technical advice, certain amount official aid to establish, to operate, to maintain, to develop the rural markets, to organize group market and to promote the agricultural marketing activities have been put into operation by DFAMS for the last one decade and so on.

However, the vegetable development activities received priority.

Since eight five years plan 2049/2054 B.S. vegetable development division (VDD), was established with in the department of agriculture with the objectives to conduct research, generate to promote new technology and finally to run the sound vegetable development program in the country. The achievements and projections in different years are presented in tables.

2.4 Production Achievement of Vegetable in Tenth Plan :-

The below table shows the production achievements of the vegetables in tenth plan year. Which are presented in the table.

Table -1**Production Achievement of Vegetable in Tenth Plan**

In 000 mt.

S.N.	Program	1	2	3	4				
					59/60	60/61	61/62	62/63	63/64
1	Vegetables	"	1128	1278	1197	1197	1257	1327	1350
2	Fruits	"	354	478	366	377	398	367	428
3	Potatoes	"	733	1033	733	780	840	898	961
4	Veg.Seeds	"	-	181.6	226	310	261	463	419
5	Production	"	-	-	-	-	-	-	-
6	Government Level	"	-	17.60	11.10	10.4	11	13	19
7	Level	"	-	164	215	300	250	450	400

Source : NPC (2058:30)

2.5 Vegetable Production Base Year 2063/064 :-

The below table indicates the vegetables production base year 2063/064.

Table –2

Vegetables Production Base Year 2063/64

Description	Weight	Production of 063/64 (000mt)	production target of 063/64	Percentage		
				Total	Annual average	Weight increased
Fruits	7.04	428	500	116.82	3.16	8.00
Vegetables	4.82	1350	1716	127.11	4.91	6.00

Source : NPC (2058:40)

The above table indicates the achievements and production of targets of the fruit is increased by 8 percent and vegetable is increased by 6 percent in the base year 2063/64.

2.6 High Price Vegetable and Fruit Progress of Tenth Plan :-

The below table indicates that high price vegetable and fruit progress of the tenth plan.

Table –3

High price vegetable and fruit progress of tenth plan

	Unit	tenth plan target			Level of 2063/64		
	Mt.	Area	Production	Productivity	Area	Production	Productivity
Fruit	"	65083	380537	9.0	62920	428255	10.13
Vegetable	"	41000	1276000	9.10	45000	1350000	9.31
Vegetable seeds distribution	"	-	181.6	-	-	261	-
Potato production	"	96000	1033000	10.76	09800	961490	8.76

Source : NPC (2058:20)

The above table indicates the high price vegetables and fruits are progress 10.13 in fruit, 9.31 in vegetable and potato production is 8.76 in tenth year plan .

2.7 Production Target of Vegetable and Potato in Tenth Five year Plan:-

The above table indicates that production target of vegetable and potato production in Tenth year plan period. Seasonal and off- seasonal vegetable production are also presented below.

Table – 4

Production Target of Vegetable and Potatoes in Tenth five year Plan:-

	Ninth plan			Tenth plan		
	Area	Production	Productivity	Area	Production	Productivity
Vegetable	145000	1350000	9.30	60000	171600	10.725
Non-Season of vegetable	10800	-	-	25000	-	-
Potato	109800	961490	8.76	40000	1300000	9.30

Source : NPC (2058:25)

The above table mentioned indicates the seasonal and off seasonal vegetable production in ninth plan increased by 9.30 percent and tenth plans period is increased by 10.72 percent and Potato is increased in ninth year plan by 8.76 percent and increased by 9.30 percent in tenth plan period.

2.8 Seed Production Farm/Center :-

The below table shows the different seed production farms and centers

Table –5
Seed Production Farms/Centers

	Agricultural Department		Agriculture Research	Others
	Vegetable Seed	Vegetable Seed		
1	Vegetable seed Production Center Khumaltar	Sarlahi	Dhankuta	Lumla
2	Rukum	Solu	Pokhara	Pakhribas
3	Dadeldhura	Sindhuli	sindhuli	Jumla
4	Fikal/Ilam	Daman	Dailekh	
5	Nigale	Trisuli	Tarahara	
6	Dolpa	Boch	Parawanipur	
7		Panchkal	Nepalgunj	
8		Palpa		
9		Marfa		

Source : NPC (2058:50)

2.9 Vegetable grown in Nepal:-

There are more than 247 cultivated vegetable crops and more than 50 crops are common in Nepal .ⁱ Due to wide range of climate variability ranging from tropical to alpine temperate it is possible to grow almost all types of vegetable in the kingdom . The common vegetables grown in Nepal are :-

1. Cole crops :

Cauliflower, Cabbage, Broccoli, Kohlrabi, Chinese cabbage .

2. Solanaceous fruits :-

Tomato, Brinjal, Sweet and hot pepper chilies, Lady's Finger etc.

3. Root tuber and bulb crops :

Radish, Turnip, Carrot, Potato, Yams, Taro, Onion, Garlic, Sweet Potato, Ginger, Turmeric etc.

4. Legume crops :

French Beans, Cowpea, Peas, Asparagus Bean, Broad Bean, lima bean etc.

5. Cucurbit crops :

Cucumber, Pumpkin, Squash, Bitter gourd, Sponge Gourd, Ridge Gourd, Water gourd, Watermelon, Muskmelon, Chayote, Snake Gourd etc.

6. Leafy Vegetables:

Broad leaf mustard, Beet Spirach, Cress, Spinanch, Amoranin, Coriander, Lettuce, Mustard Leaf, Tengreek, Swisschrd, Mint etc

7. Other Vegetables :

Okra, Asparagus etc of the above the major crops with larger acreage and production are Cauliflower, Cabbage, Tomato, Brinjal, Sweet Pepper, Hot Pepper, Radish, Taro, Turnip, Onion, Garlic, Ginger, Beans, Cucurbits, Peas, Broad Leaf Mustard, Spinch, Okra, etc.

Government of Nepal has recognized onion and tomato as essential food items.

CHAPTER-III

RESEARCH METHODOLOGY

3.1 Introduction:-

The research methodology is the process of arriving to the solution of the problem through planned and systematic dealing with the collection, analysis and interpretation of fact and figure. "Research is a systematic method of finding out solution to a problem where as research methodology refers to the various sequential steps adopt by a researcher in studying a problem with certain objectives in view." (Kothari,1989:19). Research methodology may be defined as a systematic process that is adopted by a researcher in studying a problem with certain objectives in view. In other words research methodology describe the methods and process apply in the entire aspect of the study. A systematic research study needs to follow a proper methodology to achieve the predetermination objectives. Research methodology is a sequential procedure and method to adopt in systematic study. For the purpose of achieving the objectives of the study the following research methodology are used.

3.2 Research Design:-

In this study, mainly two research designs have been used to complete the study. They are, "Descriptive " and "Causal comparative". The first descriptive research design has been used to establish the relationship between different variables. The second one ie. causal comparative research design has also been used to show the cause and effect relation among the variables selected.

3.3 Population and Sample:-

The term population means whole universe refers the total observation which is related with this study. Population must be defined in terms of elements, sampling units, extend and time. On the other hand, sample is the number of representative, which is going to be studied. In another words, a sample refers to a part chosen from the population. Thus, the process of selecting a sample from population is called sampling. The sampling process is based on the principle that a sufficiently large number drawn at random from the population will be representative of the total population.

The populations under the study area of vegetable market of Biratnagar is very large. Whatever they are not registered anywhere. Thus the total population is very difficult to define. Whatsoever we have taken only fifty merchant as a sample for the study.

3.4 Sampling Technique:-

While obtaining information from population, each of them were contacted in person and asked questions from a structured questionnaire which is given in appendix. Fifty populations were selected in equal number from different selling spots like Gudri Bajar, Budhaat, Sanihaat, Sukrabare etc.

3.5 Data Sources:-

In this study, both primary and secondary data are used. The data which are originally collected by the investigator or agency for the first time for any statistical investigation and are used by themselves are called primary data. While, the data that have already been collected and used by other individual or agencies published or unpublished are called secondary data.

3.6 Data Gathering Methods:-

In this study, secondary data are directly obtained from various sources like Reports of CAA, Reports published by Biratnagar sub metropolitan city, Bulletins of different related institutions, etc. Similarly, primary data are gathered by taking inter to related personalities. These data are used according to the need and requirement of the study.

3.7 Data Presentation & Analysis Technique:-

Basically, data has been presented on tabular form. Master sheet with required information has been prepared from the collected information. As per the requirement, small tables have been reproduced from the same.

3.8 Statistical Tools Used:-

The collected information from the different sources has been analyzed by using statistical tools like average, percentage, index etc.

CHAPTER – IV

PRESENTATION, ANALYSIS & INTERPRETATION OF DATA

4.1 Introduction of Study Area :-

Biratnagar Municipality was established in 2008 B.S. It changed into sub-metropolitan city in 2052 B.S. Magh 18 with the help of many great social workers and politicians . It become major industrial and trade center of Nepal due to great contribution of political parties and reputed personalities. It is popularized the political center because of many ministers and prime ministers were appointed from here. It is known as the birth place of politicians and wise men. It is mentioned the famous place of king Birat in the history of Nepal. So it is named Biratnagar sub-metropolitan city. It is known as the historical place of Nepal.

It has a great role to change into sub-metropolitan city due to its population, area, income source and well developed of infrastructures. it become successful of continuous exercise of politicians and people of this city as well.

It is a beautiful town of Eastern Development Region of the Nepal, it is situated in Morang district of Koshi Zone historical and tourism city. The city is 575 KM far east South from Kathmandu. This city lies in Tropical Zone, it has hot climate and this Municipality has become the main gate of India state Bihar.

4.2 Topography:-

Biratnagar consists of 22 ward, It covers 5,990.4 hectores (59.9 sq km). The total numbers of house hold are 26,999 and number of families are 38,358. It has been extended to the keshaliya stream to west, it separates Sunsari District, Singhiya stream to the east, it separates from katahari VDC, Bhatigung VDC and Jhapa Baijnathpur and Tankisinwari VDC in the north and the Budhnagar VDC and Jogbani Bazar, Bihar state of India in the south.

4.3 Climate:-

It is situated 86⁰19 latitude to the east longitude 26⁰28. It lies 23 to 17 meters above the sea level. The maximum temperature of this city was 42.2 degree celcius in 1990 A.D. Minimum temperature of this city was 4.1 degree celcius in 1985, Average temperature is 31.2⁰c. The maximum

rainfalls of years are 1986 to 1990. The maximum rainfall in a day 219 milliliter in 1987 A.D.

4.4 Land use:-

Biratnagar Municipality covers 5,990 hectares. The agricultural sector covers 3,561 hectares or 58.7%. Inhabitant area covers 1,480 hectares or 24.7% . Trade area covers 219 hectares or 3.65%, industrial area covers 175 hectares or 2.92%, institutional area covers 200 hectares or 3.33%, rivers and ponds 355.4 hectares or 6.70%.

4.5 Population:-

The total population of Biratnagar sub-metropolitan city was 180,138 among them the total number of male are 94,075 and female are 86,063 (BSM, 2064:1). The density of population per K.M. is 3,007.31 and the growth rate of population of this sub- metropolitan is 1.29.

4.6 Transportation:-

No country can develop without the growth of infrastructure and communication. Transport and communication from an important infrastructure necessary for the socio-economic development of a country.

Highway links Biratnagar with Dhankuta, Hile and fine primary road has been built from Hile to Terhathum and Basantapur, in the north there is a regular bus service. There is a fine black topped double lane road from Biratnagar sub-metropolitan city to Vedetar at the height of 4,439 feet. Similarly, there is a good facility of transportation of bus and taxi service from Biratnagar to Rangeli in the east, Sunsari in the west and Jogbani Bihar, a state of India also. There are so many day and night bus services from Biratnagar to Kathmandu and other places of Nepal.

The present position of transportation of Biratnagar is shown in the following table:-

Table -6

Types	Length(KM)	Percentage
Black topped	133.3	36.16
Gravelled	147.65	40.06
Fair wealth	87.65	23.78
Total	368.60	100

Source:- Metropolitan Survey 2064, P-172

4.7 Historical and Religious Places:-

Biratnagar is one of the richest historical and religious city in Nepal. The place is known as the capital of king Birat. So it self is named Biratnagar.

The historical, religious, cultural and beautiful places which can be visited from Biratnagar are as following:-

Table-7

Historical and Religious Places

S.N.	Spots	Particular	Distance from Biratnagar	Transportation
1	Sunbarsi, Morang	Religious and historical	40Km	By bus and taxi
2	Raja Rani, Dhankuta	Tourist center	50Km	By bus or By foot
3	Birat Raja ko Darbar,Morang	Historical	16 Km	By bus or by taxi
4	Dhanpalgadi, Morang	Historical	25 Km	By bus or taxi
5	Belbari simsar chhetra, Morang	Tourist center	40 Km	By bus or taxi

Source:- District Agricultural Development Office 2064,P-37

4.8 Education:-

Biratnagar is not rich in political field but has been prominent place of Education, Health and industries of the eastern development region. There are many campuses in Biratnagar. Mahendra Morang Adarsha Multiple College is the second biggest campus in Nepal established in 2012 B.S. The literacy rate of this city is 72.40 % while the literacy rates of males are 81.7% and females are 63.1%. The education institutions of Biratnagar are as follows:

Table -8
Educational Status

S.N.	Particular	Government	Private	Total
1	Primary School	25	40	65
2	Lower Secondary	16	9	25
3	Secondary	16	34	50
4	Higher Secondary	8	16	24
5	Campus	4	6	10
6	University	1		1
7	Technical School		7	7
8	Private college		12	12

Source :- District Education Office, Morang 2009,P-42

The total numbers of admitted students in school are 36,112 while the numbers of girls are 19,532 and boys are 16,580. The main colleges of this city are Mahendra Morang Adarsha Multiple Colleges, Post Graduate College, Nursing College, Janta Multiple College, and Purwanchal University. There are about 20,000 students studying in these campuses.

4.9 Industry:-

Biratnagar is an industrial city. It is a kind of birth place of industry in the History of Nepal. Because there are so many historical industry.

Biratnagar Jute mill is the first industry of Nepal which was established in 1993 B.S. There are 101 large and 886 Small and cottage industry in the periphery of Biratnagar.

4.10 Hydro-Power:-

Morang Hydro power Limited is established in 1990 B.S. at the cost of Rs. 7 lakhs by the effort of Letang inhabitant engineer Padam Sundar Malla in the Biratnagar. Nowadays, Nepal greed and India supplying electricity in Biratnagar. 52.8% electricity, electrify in these city. In the private sector e-mail and internet services are operating in Biratnagar. The total numbers of consumer of electricity are 52,088 (2066 Ashad)

4.11 Drinking Water:-

In 1995 B.S. drinking Water tank is established Rs. 14,000 and started pure drinking water supply in this city. Nowadays, there are three water tanks are constructed and supply pure drinking water. The total numbers of pure drinking water supply consumer are 36,258 in this city. The total numbers of tube-well are about 10,000. The total numbers of public taps are 74 in this city. According to metropolitan survey 2064, 67.8 percent people are used public tube-well and taps, While 30.1 percent are managed drinking water personally.

4.12 Market:-

Biratnagar sub-metropolitan city main markets are cloth Emporium, Enterprises, Fancy shops and Hardware shops. As the population is increasing the marketing places are also increasing. Such as Gudri, Sanihatya, Budha hatya etc. There are small shops in every ward and the main road is in the main market.

4.13 Financials and Non- Financial Institutions:-

Development is possible only with co-operative efforts of government, private and non-government sectors. In order to speed –up

economic and social development activities of the country, non government sector have already been involved as the partners.

In Biratnagar, there are many financials and non financials, commercials and non commercials, government and non governmental institutions. There are 46 Banking institutions, 112 governmental and non governmental offices, Magazines 165 , cinema halls 2, Hotels and lodges 94, public toilets 9, Savagriha 1, F.M. stations 4, cable lines 4, bus parks 3,(Ward No.10, 22 and 15) , Sahid Smriti Udhyan 1, Covered hall 1, airport 1 (Biratnagar sub-metropolitan -5) , airport services 9 places daily.

4.14 Agriculture and Farming:-

Because of the establishment of industries, People of this Municipality have fallen in business. Agricultural production of this town is nominal and only about 12.05% of people are fully depended on agriculture.

4.15 Meaning of Marketing:-

What is marketing? Producers say the activity of production of goods or services is marketing. Seller's say the activity of selling of goods or services is marketing. Similarly, buyers say the activity of purchasing goods or services is marketing. Advertisers say the activity of promoting sale of

goods or services by making effective advertisement is marketing. Most of the general public say the activity of sale and advertisement is marketing. According to them, promoting sale of goods or services through effective advertisement is called marketing. But any one of these definitions can not give satisfactory meaning of marketing.

Sale and advertisement are the two activities among many of marketing. Now a days, marketing is understood not from the old concept 'Telling and selling', but it is understood from the concept of 'Satisfying customers needs'. This means the modern concept does not accept that marketing is to collect as much profit as can be by selling goods or services through effective advertisement and influencing customers. The modern concept of marketing gives first priority to customers' satisfaction. It accepts profit as the gift of customers' satisfaction.

Many writers and experts have defined marketing, some of the important definitions are given as follows.

According to William J. Stanton, Michael J. Etzel and Bruce J. Walker, "Marketing is total system of business activities designed to plan price, promote and distribute want satisfying products to target market to achieve organizational objectives."

According to Prof. Philip Kotler and Gray Armstrong, “Marketing is a social and managerial process by which individuals and groups obtain what they need and want through creating and exchanging products and value with others.”

4.15.1 Agricultural marketing:-

The role of marketing in the development of any nation can not be underestimated. Today the importance of marketing is recognized by marketing in a board sense or may be defined as all the activities that are involved in making a flow of agricultural produce from producers to the final consumers. Vincent maintains the agricultural marketing system operates to move good from produced to the consumers to establish economics incentives and market condition to facilitate this movement. In other words the total agricultural marketing system. Constitutes a number of sub systems and micro system, which alternatively may be called on agricultural marketing functions.

For the simplification to understand, all the agricultural marketing functions may be broadly categorized into four parts they are given below:-

1. Physical Function :-

Relating to harvesting, threshing, processing, grading and standardizing, stirring, Packaging and handling, transporting etc.

2. Facilitative Function:-

Relating to market of transaction, sport, marketing information, standard weighing, measuring system, quality control, credit service risk, aversion service, research and development service.

3. Policy Function:-

Constituting policy espousal implementation in terms of physical measurement, hanging and bargaining or action or fixed pricing system .

The above mentions functions categorized under four broad areas encompass most of the agricultural marketing activities. But a cut off point can not be established for each specific function as all function are interrogatively interlinked to build up a complete circuit of total marketing system .

4.16 Vegetable Development :-

Vegetable farming is labour intensive. It also helps to create employment opportunity and increase income especially to small farmers. It

is the commodity that can channel urban income to rural area, It helps improve the nutritional level of Nepalese people. There is a great export potential of vegetable seeds. Hence it is necessary to promote this high value crop from the point of view of comparative advantage.

During the Ninth plan, a positive signal was seen in the export of some vegetables to India produced from the irrigated land of kavre, Dhading, Bara, Sarlahi, kaski, Syanja, Tanahu, Illam , Palpa and Dhanusha districts . In this plan period, 1,625 thousand metric tone of vegetables and about 502 mt of vegetable seeds was estimated to have been produced from 146 thousand hectares. In order to promote the programmes of seasonal and off – season vegetable seed production by extensive utilization of ecological diversity.

Vegetable development programmes in the tenth plan will be lunched as follows:-

(i) Commercial vegetable production program (CVPP):-

Vegetables will be produced using economy of scale in pocket areas in order to help produce off-season vegetables for export after fulfilling the demand of local market. Such programme will be lauched in Illam, Panchthar, Dhankuta, Terathum, Makwanpur and Palpa districts.

(ii) Off- seasonal vegetable production programme (OVPP):-

This programme will be launched for the production of market oriented vegetable in the pocket areas in and around. North – south highway of Taplejung, Illam, Pachthar, Dhankuta, Terathum, Makwanpur, Palpa, Dhading, Kavre, Tanahu, Kaski, Nwwakot, Dolakha, Sindhupalanchok, Dang , Dadeldhura and Baitadi districts. The programme will be given continuity in different irrigated pocket areas. This program will help produce fresh vegetables according to the demand of small and the big markets and it will enhance their export potential.

(iii) Potato Seed Development:-

Potato is produced in all districts of kingdom in commercial ways. It is cultivated two times a year in the irrigated land. The potato development programme will help establish foundation seeds in the mountainous districts for the supply of potato seeds to the demand area. A special programme will be launched so as to support the potato seed production centers in the high mountain area, Private entrepreneurs will be encouraged to produce potatoes commercially. Seed Act will be implemented in an effective way and updated as per need.

Table -9**Farm/ centers for foundation seed production:-**

S.N.	Department of Agriculture		Agricultural Research	Others
	Vegetable development division	Vegetable development division		
1	VSPC Khumaltar	Sarlahi	Dankuta	Lumla
2	Rukum	Solu	Pokhara	Pakhribas
3	Dadeldhura	Daman	Sindhuli	Jumla
4	Fikkal, Illam	Trishuli	Dailekh	-
5	Nigale	Sindhuli	Tarahara	-
6	Dolpa	Boch	Parwanipur	-
7	-	Panchkhal	Nepalgunj	-
8	-	Palpa		-
9	-	Marpha		-

VSPC: Vegetable Seed Production Centre

iv Other Programmes:-

A) Special Vegetable Production Programme:-

In the selected districts, onion, green chilly, asparagus, parbal and tomato will be produced for import substitution . From this program, onion farming is done in Dhanusha, Siraha, Saptari, Sarlahi, Rupandehi, Banke and Dang asparagus farming in Kathmandu, Lalitpur and Bhaktapur, Parbal farming in Banke , Mahottari, Sarlahi and Nawalparashi, Tomato farming in Sarlahi, Makwanpur, Kavre, Dhanusha and Mahottari, and green chilly farming in other potential districts . In this program and ginger are also included.

b) Kitchen Garden Programme:-

Vegetable production will be continued under kitchen gardening programme in order to improve nutritional status of rural people in the remote areas where there are no other programmes and marketing facilities:

Physical Target:-

During tenth plan, Vegetable production area will be increased to 175 thousand hectares from present 152 thousand and its productivity to 11.25 mt. per hectare from 10.73 mt. Total production is established to be 1918

thousand metric tones .Vegetable seed production will be 800 mt from the present production level 627 mt.

Sericulture Development:-

The climate of the country is suitable for sericulture. Though this, it is possible to use unproductive time thereby increase income and employment opportunities for rural women. There is also potential for exporting silk product. This programme needs to be initiated with priority to increase its coverage. During the eighth plan, 10 years Sericulture development plan was prepared to develop this sector. Sericulture development centers were setup in four different places.

4.17 Classification:-

There are many vegetables market in Biratnagar both organized vegetable market and unorganized vegetable market. An organized market is characterized by a definite spot with regular seller and with many other essential facilities.

An unorganized vegetable market may be referred to the various spots with irregular seller's haphazard sitting of the sellers as such .Talking about the selling spots of vegetables in Biratnagar.

4.18 Organized Vegetable market:-

1. Gudri Bazar:-

Gudri bazar was established in 2030 B.S. This market is organized and managed by Biratnagar metropolitan.

It is the first whole sale market of vegetable. Gudri is the oldest vegetable market located at the heart of the Biratnagar. Since this selling spot is very accessible for the consumers receiving in very areas. It always remains crowded. Consumers prefer to buy vegetable here because most of them believe that there are many types of vegetables and there are found to be less expensive as compared to the other selling spots. Besides, office goes drop in at Gudri and carry fresh vegetables while coming back home from their job. There are many vegetables stall. There are various types of vegetables:-

- ❖ Potato
- ❖ Onion
- ❖ Cabbage
- ❖ Peas
- ❖ Cucumber
- ❖ Turnip

- ❖ Bean
- ❖ Carrot
- ❖ Dry chilly
- ❖ Squash
- ❖ Tama
- ❖ Duku
- ❖ Tomato
- ❖ Cauliflower
- ❖ Garlic
- ❖ Leafy Vegetable
- ❖ Pumpkin
- ❖ Green vegetable
- ❖ Radish
- ❖ Green chilly
- ❖ Brinjal
- ❖ Sweet potatoes
- ❖ Tusa tama

At Gudri, many of the vegetable sellers are the producers themselves.

Producers carry vegetable from the farm and sell. Many people are coming

to the Gudri vegetable market from the outside of the Biratnagar, like – katahari, Tanki, Jhorahat, Amahi Bela Sunsari etc. to buy the various type of seasonal vegetables, specially leafy vegetable and Tama, Tusatama, Duku etc.

Some seasonal vegetables like leaf Duku, Tama and non seasonal vegetable like cabbage to be supply for kathamandu and other city of Nepal like Itahari , Birtamod, Damak, Dharan etc.

2. Gudri Fruits and Wholesale Market:-

Gudri fruits and whole-sale market is the first whole-sale market of fruits and vegetables is established in 2030 B.S. This market is central market of Biratnagar.

Gudri fruits and vegetables whole-sale market with telephone facilities and public toilet, Biratnagar has provided technical assistance for the preparation of master plans for the extensive future market. Municipality has plan to market more facilitated ,well managed and for larger capacity . The planed purposes the following facilities:-

- ❖ Multipurpose shed and information section
- ❖ Retailer's section

- ❖ Road branch road
- ❖ Loading and unloading spot
- ❖ Cleaning and pricing section

As Biratnagar, is the city of densely populated and people having relatively high income with a habit of consumption of fresh fruit and vegetables at seasonal price was to be necessarily fulfilled.

B) Unorganized Vegetable Market:-

Biratnagar has only one organized vegetable market. Gudri is only one of the organized vegetable market. It is organized by assistant of Municipality, but in Biratnagar there are so many unorganized markets. The cause of the population growth and migrated people of various places. There are many vegetable market stalls going to be opened and launched. An unorganized market may be referred to the various spots with irregular seller, haphazard sitting of the seller as such various vegetable selling spots operating cross roads on the city.

According to the field survey, there are more than 100 stall of vegetables and fruits, which stalls are situated various part of the city . Average 5 stalls and shop are already doing their own business in all wards.

So many stall are situated many places and ward of Biratnagar. Some of there unrecognized markets are as following:-

- i Sanihat, Brt-2
- ii Sombare hatt, Brt-3
- iii Manglabare, Brt-5
- iv Bargachi, Brt-6
- v SantiChowk, Brt-6
- vi Sankarpur, Brt-6
- vii Sikiyahi, Brt-7
- viii Budha hatt, Brt-11
- ix Sombare, Brt-13
- x Sukrabare, Brt-16
- xi Bakhari, Brt-16
- xii Bihibare, Brt-17
- xiii Aitabare, Brt-18
- xiv Rani hatt, Brt-20
- xv Ganesthan, Brt-21 etc.

4.19 Supply of Vegetable:-

The population of the Biratnagar is increasing day to day on one hand, on the other hand, the students from different place and different districts as well as different countries of Asia come to study different subjects in Biratnagar and thus population increase and more and more vegetables are demanded. This Municipality fulfills only 2 percent and rest 98 percent has been imported from neighboring villages like Katahari , Jhorahatt, Ramgang, Amaibela, Chitaha, different place of the morang district of different VDC, Sunsari districts and neighboring districts like Dhankutta, Tehrathum, Sunsari, Neighboring countries like India .

In Biratnagar, there are small shops in every ward and well managed vegetables shops are at Gudri, There are wholesale and retail vegetable shops. This vegetable market has been constructed by Biratnagar. Goat meat, chicken and fish are also available here. The table shows the import of some important vegetables.

Table -10**Supply of vegetables**

S.N.	Vegetables	Places
		Nepal
1	Potao	Hile, Basantapur, Sindhuwas, Inaruwa
2	Onion	Siraha, Saptari, Morang, Westbengal (India)
3	Tomato	Dhankuta, Sunsari, Nasik (India)
4	Green vegetable	Hille side local area, Dhankuta, Terathum
5	Leafy vegetable	Hill side, Local area
6	Cauliflower	Dhankutta, Morang, Sunsari
7	Cabbage	Sindhuwa, local area
8	Garlic	Hill side Nepal and India
9	Brinjal	Morang
10	Radish	Dhankuta, Morang

Source:- Field Survey , 2067

The table 10 shows the some of important vegetables. Local area fulfills green vegetable, leafy vegetable and cabbage. Some vegetables are imported from neighboring countries like India and Bhutan. In Biratnagar, different types of vegetables are import from various parts of country mainly – Inaruwa, Saptahari, Morang, Hill side (Hile, Dhankutta, Sarlahi). Besides these vegetable like potato, Onion, Radish, Beans, Cauliflower, Brinjal, Cabbage etc.

4.20 Imports of Vegetable and Daily Consumption in Biratnagar :-

The below table shows the imports of vegetables and daily consumption in Biratnagar:

Table – 11**Imports of vegetables and daily consumption in Biratnagar**

Vegetable	Imports place	Percentage (%)	Consumption (in KG)
Cauliflower	Nepal: Hill	60	700
	Terai	40	
Garlic	Nepal,	50	300
	India	50	
Leafy Veg.	Nepal: Hill,	70	200
	Local area	30	
Onion	Nepal,	40	500
	India	60	
Cabbage	Nepal: Terai	60	400
	Local area	40	
Green Veg.	Nepal: Hill	40	100
	Terai	30	
	Local	30	
Potato	Nepal: Hill	50	1000
	Terai	35	
	India	15	
Tomato	Nepal: Hill	10	600
	Terai	70	
	India	30	

Source: District Agricultural Development Office, 2064, P.27

Table -11 shows that 15 percent of the potato is imported from India and 15 percent is product in Nepal. Similarly, 60 percent onion, 20 percent tomato 50% garlic are imported from India. 50 % potato, 40% onion, 80% tomato,50% garlic are product in Nepal . These vegetables are product in different places of Nepal like-50% potato are product in hill and 10% tomato are hill side and 70% in terai area. 40% Green vegetable are in hill side, 30% terai and 30% grow in local area. 50% Garlic is product in Nepal and 50% import from India. Cauliflower 60% hill area, 40% terai and local area. 70% of the leafy vegetable area and 30% local area.

In Biratnagar, population increases and more and more vegetables are demanded. Therefore in Biratnagar 1000 Kg. potato, 500 Kg onion, 600 Kg tomato, 100 Kg Garlic, 100 Kg green vegetable, 700 Kg cauliflower, 400 Kg cabbage, 200 Kg leafy vegetable are daily consumption in Biratnagar . It can be presented in the following figure:

Figure -1

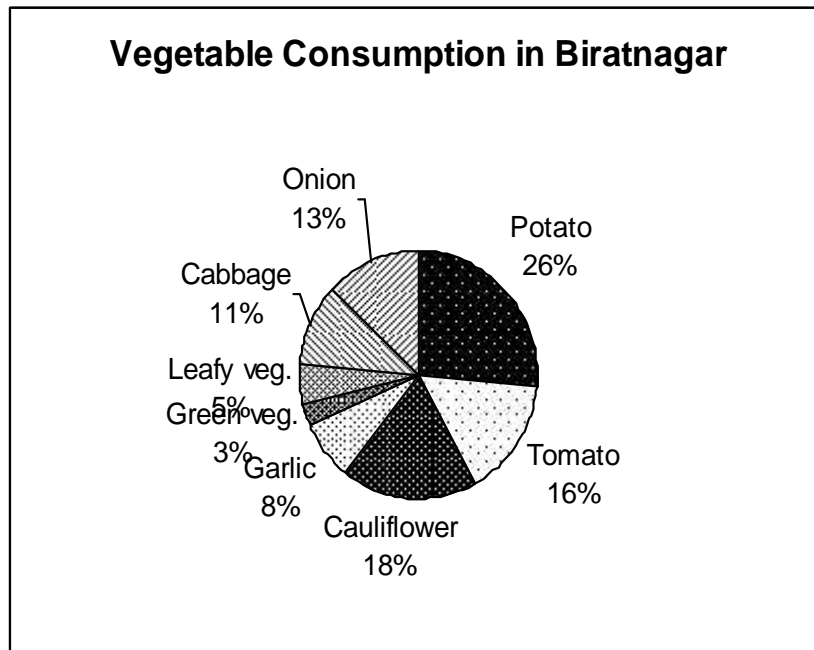
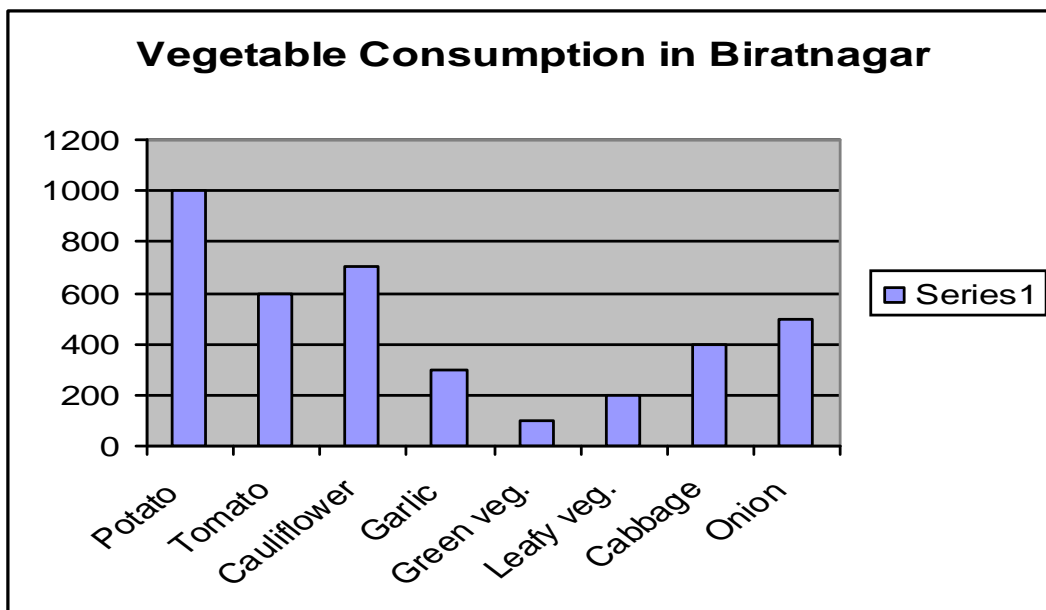


Figure -2



4.21 Description of Vegetable Sellers:-

Different castes are involved in this business. The field survey of vegetables sellers 20% are found to Meheta, Yadav 40%, Teli 25% and other caste 15 % are the combination of many castes .

4.21.1 Caste –Wise Classification of Vegetable Sellers (in Percentage) :-

The below table presented the caste classification of vegetable sellers:

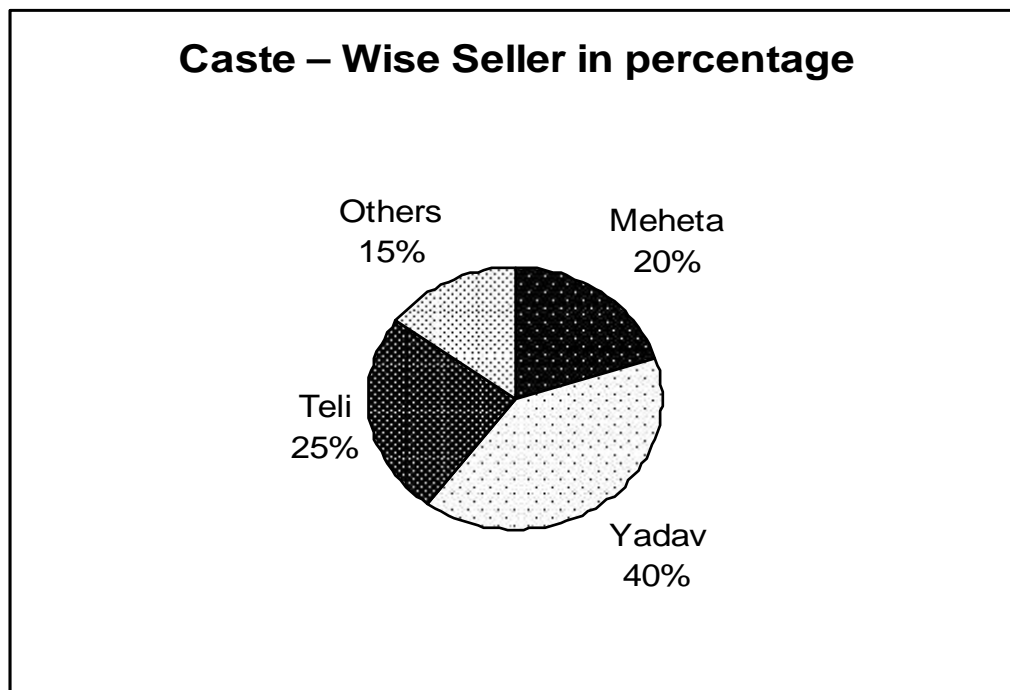
Table – 12

Caste – Wise Seller in percentage

Cast	Percentage
Meheta	20
Yadav	40
Teli	25
Others	15

Sources : Field Survey, 2067

Figure -3



The above table and figure give the information of different caste vegetable sellers by caste-wise while the Meheta are 20 percent, Yadav are 40 percent, Teli are 25 percent and other castes are 15 percent.

4.21.2 Percentage of Vegetable Sellers' by Age Group (in Percentage):-

Analyzing the age group of the surveyed vegetables seller. The following tables would depict the age group involved in this business.

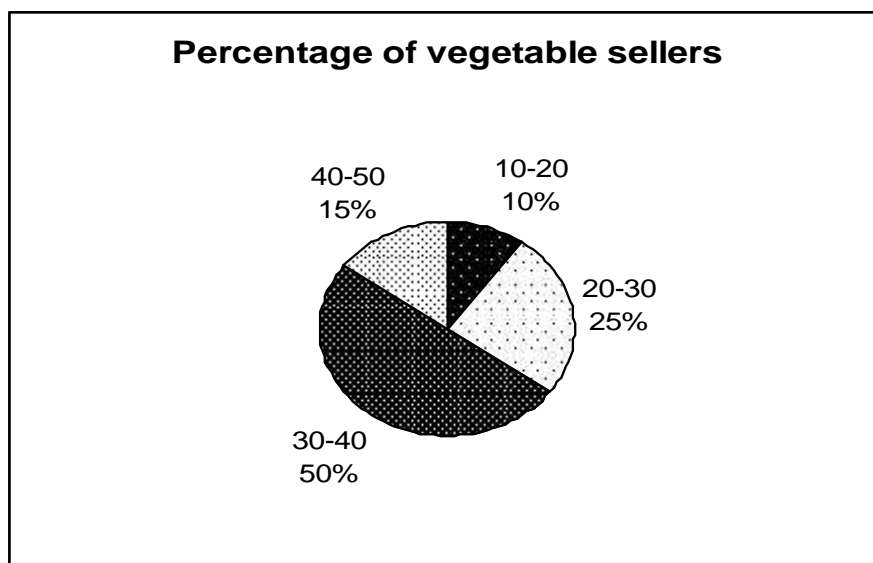
Table – 13

Percentage of vegetable sellers

Age Group	Percentage
10-20	10
20-30	25
30-40	50
40-50	15

Source : Field Survey, 2067

Figure 4



The above table and figure shows that people of 10 to 20 years ago group are reported to account for 10 %, 20 to 30 years ago group comprise 25 % , 30 to 40 years includes 50% and people above 40 years accounts 15%. The age group 30-40 years in found dominant.

4.21.3 Sex Wise Classification (in Percentage):-

The following table shows sex wise vegetables sellers in different sex group.

Table – 14

Sex wise Classification in Percentage

Male	Female
75	25

Source: Field Survey, 2067

This table statically classification the people in this business on the basis of the sex. This table proves the male domination for 75% while female accounts only 25% of the vegetables sellers.

4.21.4 Education Status:-

Education status of the vegetables sellers in percentage is given below.

Table – 15

Education Status of Vegetables Sellers

Illiterate	15
Literate	65
Below S.L.C.	6
Above	14

Sources: Field Survey, 2067

This table shows the education states of seller of the surveyed vegetables sellers 15% are found to be illiterate, 65% literate, 6% under S.L.C. and 14% are found to be fairly educated.

4.21.5 Respondents with Home in Percentage:-

The below table makes it clear in the percentage with home in percentage of vegetables sellers.

Table -16
Responded With Home in Percentage

Sellers with there own home	35
Sellers living on rate	55
Sellers living elsewhere	10

Sources: Field Survey 2067

Above table shows their states of living surveyed 35% were staying at their own home 55% were living on rent, while rest of 10% live elsewhere.

4.21.6 Employment States:-

The below table shows employment states in vegetable marketing.

Table – 17

Employment: No of family engaged (in %)

One	40
Two	35
Three	10
More	10
Hired	5

Source: Field Survey 2067

The above table explains that the No. of family engaged to run the business. Business runs by a single manpower is 40%, business runs by two 35%. Similarly three person's needs to the 10% of the surveyed vegetable sellers, 5% are reported to have been hired to deal in.

4.21.7 Credit Facilities are Percentage:-

A credit facility in percentage is given:

Table – 18

Credit facilities in percentage

Given	55
Not required	20
Not given	25

Sources: Field Survey, 2067

The table explains about credit facility. The survey vegetable sellers are 55% reported that credit facility has been enjoyed. 20% said it is not really required and 25% reported that they are not given credit.

4.21.8 Stock Vegetable in Percentage:-

The below table shows the stock of vegetables in percentage in Biratnagar.

Table -19

Stock of vegetable in Percentage

Left over	No left over
76	24

Sources: Field Survey 2067

The collection information says that 24% of the vegetable sellers sell all the vegetable, they procure or put to sell but while 76% sellers are reported there remain left over which they have to sell to hotel at cheaper rate or throw them away.

4.22 Activities of the Wholesale Market:-

The market begins from early in the morning until late evening. More transaction is made in the morning when both peasants and other traders bring their products, consumers buy desired vegetables and fruits at various prices.

The whole-selling transaction is made in each of the selling sheds especially during day and morning time in the evening whole selling becomes low while retailing is high. The price of the product is determined by the interaction between buyer and sellers.

A field office has been established inside the market to manage day to day activities within it. There are technical assistance, poem, watchman and cleaner serving rotationally for early in the morning till evening. The technical assistants are responsible for supervising the market centre, collected information, market and arrivals and their prices. The field staff do involve only in collecting market data and informing the traders in case of trunk call. The recorded data about the market arrivals of the commodities are not exact but only on estimation, since, the peasants and other people involved in the market are not necessarily compelled to weight their products in standard metric until.

Selling sheds having tin roofed and cemented floor raised from the ground levels are being used by traders and peasants. They keep their products and make wholesale transaction. The important aspects of the market management like shed allotment, market security, traffic management, market space allotment are not being properly managed as

there is no definite guide lines and rules to the field staffs about responsibilities and authority .

After collecting the volume of all commodities arrived in the market from production areas and collection centers including some parts of India. The recorded data of volume of the commodities and their respective price (of the day) are sent to the food and price until DFAMS, F.M. studies and other communication institutions.

Different market functionaries are involved in the market centre. They are peasants and traders. The traders are primary traders, whole sellers, and whole sale cum retailers, retailer, vendors and contractors. Vehicles engaged in transporting vegetable and fruits from production areas to the centre and from centre to the other selling spots are over night buses, trucks, tempo, taxi and manpower.

4.23 Distribution Channel of Vegetable Marketing in

Biratnagar:-

(i) Before attempting to explain the channel of distribution of the vegetable. It would be necessary to understand the type of the market that deals in fresh vegetables. There are basically two types of market dealing

in vegetables. First type is organized vegetable market and the second type is an unorganized vegetable market.

An organized market is characterized by a define spot with regular seller and with many facilities. Vegetable markets may be recognized as these types of market. Gudri bazaar is only one organized vegetable market of Biratnagar.

An unorganized vegetable market may be referred to the various spots with irregular seller, haphazard sitting of the sellers as such. There are various vegetable selling spots operating, on the cross roads of the city. Some of the examples of this type of vegetable market are as follows:-

- i. Sanihatt, Brt-2
- ii. Sankarpur, Brt-3
- iii. Bargachi, Brt-6
- iv. Santi Chowk, Brt-6
- v. Manglabare, Brt-6
- vi. Somebare, Brt-13

vii. Sukrabare, Brt-16

(II) Existing marketing system of vegetables:-

Increase in production is not only way to increasing consumption. It is necessary to develop marketing channels together with vegetable production. The ultimate aim of increasing vegetable production into make fresh vegetable readily available to consumers at reasonable price. The marketing system of fresh vegetable in Biratnagar is not well developed and still needs improvement. The vegetable distribution and marketing system that operate between the producers and consumers are found as follows:-

a. **Producer** —————→ **Consumer**

In this system the producer directly sells their product to consumer.

I Producers themselves are vendors and go to sell their produce

door to door.

II Producers themselves sell their product putting them in the

road side.

III Producers themselves sell their product in the market.

IV Sometime consumers themselves go to the producer and buy the vegetable.

Above explained channel of distribution can be justified by the table reproduce from the master sheet.

Table – 20

Classification of the vegetable seller (In %)

No. of buyers	56
No. of farmers	24
Both	20

Source : Field Survey,2067

Table-20 shows that total surveyed of population. 24% vegetable sellers are the producers. They sell their product directly to consumer.

b. Producer → Retailer → Consumer

Consumer of 56% of the total surveyed cases are the buyers i.e. instead of growing vegetable, those people buy vegetable from the producer and sell to the final consumers.

c. Producer → Whole seller → Retailer → Consumer

This channel shows that whole seller producer's vegetable from producer and sells them to retailer who in turn sells to the consumers.

d. Producer + Buyers → Consumers

This unique types of distribution in which vegetable retailer (seller) is producer as well as buyers

Table – 21

Classification of the vegetable seller (In %)

No. of producers	56
No. of buyers	24
Both	20

Source: Field Survey, 2067

It is seen that 20% are partly sell their own product and partly sell vegetables brought buy the outside. They reported that they have to buy vegetable from other as own produce doesn't suffice from them to stay at the market.

4.24 Whole Seller in Percentage:-

The given below table shows the percentage of whole sellers in Biratnagar:-

Table – 22

Whole seller in percentage

Whole seller	20
Retailer(Seller)	80

Source: Field Survey,2067

The table shows that 20% are involved in whole sale business and 80% in retail business.

4.25 Pricing of Vegetables in Biratnagar:-

In order to attract the producer to the vegetable growing, pricing, plays a vital role. It has been said that a good peasants should have one eye on the plough and the other on the market. This is because the prosperity of the cultivators does nor depend on how much he produces. It also depends upon the price; he is able to obtain for his produce. It determines the profit of the producer and seller. Given the some cost,

profit earned varies considerably between different price levels. Price is equally important from the consumer's point of view. It has a significant impact on the consumers' standard of living. It plays a major role in the consumers' household budget. To quote B.P. Dhital, "The function of price becomes one of interpreting production cost and income in such a way that helps to allocate resources in production in an efficient manner, helps increase the market surplus helps stabilize income and reduce inequality of income among various occupation (Dhital,1972:20).

Usually price is fixed by the interaction between demand and supply. Price decrease when supply exceeds the demand and vice-versa.

Because of such relationship between demand, supply and price, price of agricultural product is considerably between regions. The variation will be even more extreme in case of highly perishable product like vegetables.

4.26 Price Determination of Vegetables (in Percentage):-

Table below shows the present price determination of vegetable in Biratnagar.

Table -24

Price Determination In Percentage

Types	Percentage
Seeing the price in the neighbor	55
According to cost and profit margin	35
Seeing the scarcity	10

Source: Field Survey, 2067

The table explains that 55% fix price of the vegetables seeing what their close sellers are charging. Similarly, 35% follow the cost and profit margin method while fixing the prices of the vegetable. 10% set the price seeing whether the vegetables are scarce during the survey, a question, who determines the price? Was asked the responses are given in table.

Table – 25

Who determines the price ? (In%)

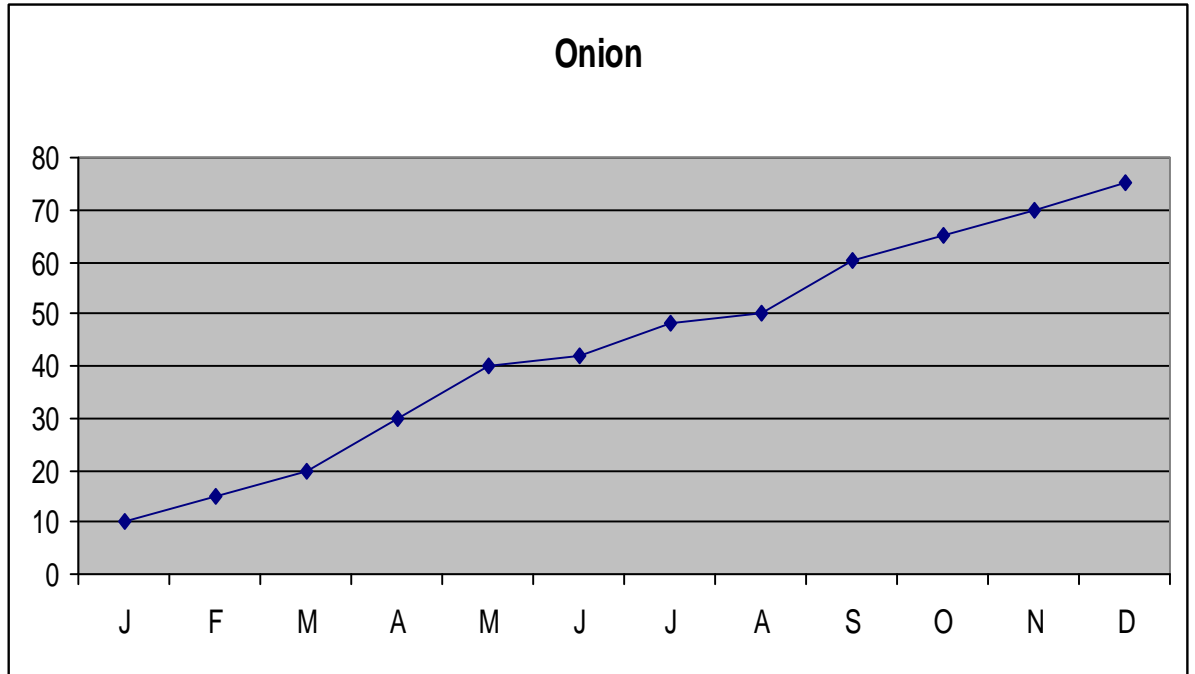
Seller	96
Producer	4

Source: Field Survey 2067

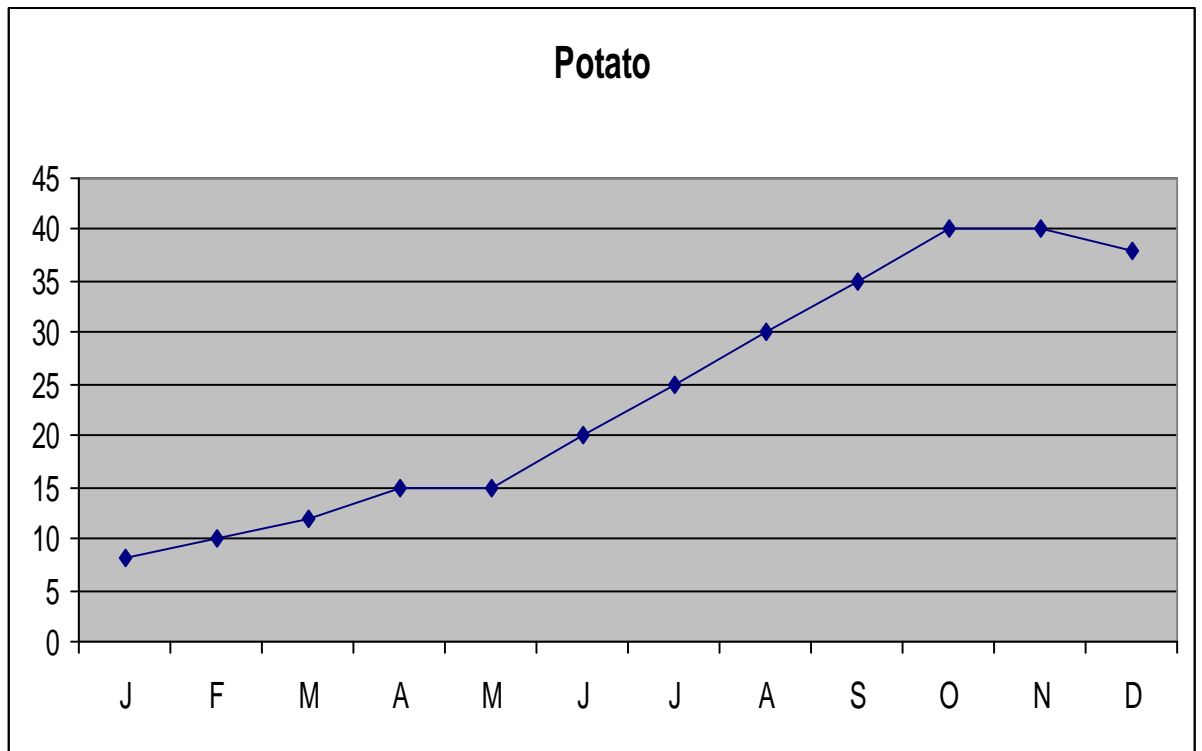
The table proves that the sellers themselves determine the price. 96% of the surveyed sellers responded that they determine the price of vegetables. Only 4% responded that producers determine the price.

Finally, it was observed that prices of the vegetables differ a lot. Asked as to why such variation in prices arise the respondents showed many reasons like unit of the vegetables, size of the vegetables and their cost price etc. It was also found that the extent of the price variation is dependent on the bargaining as well.

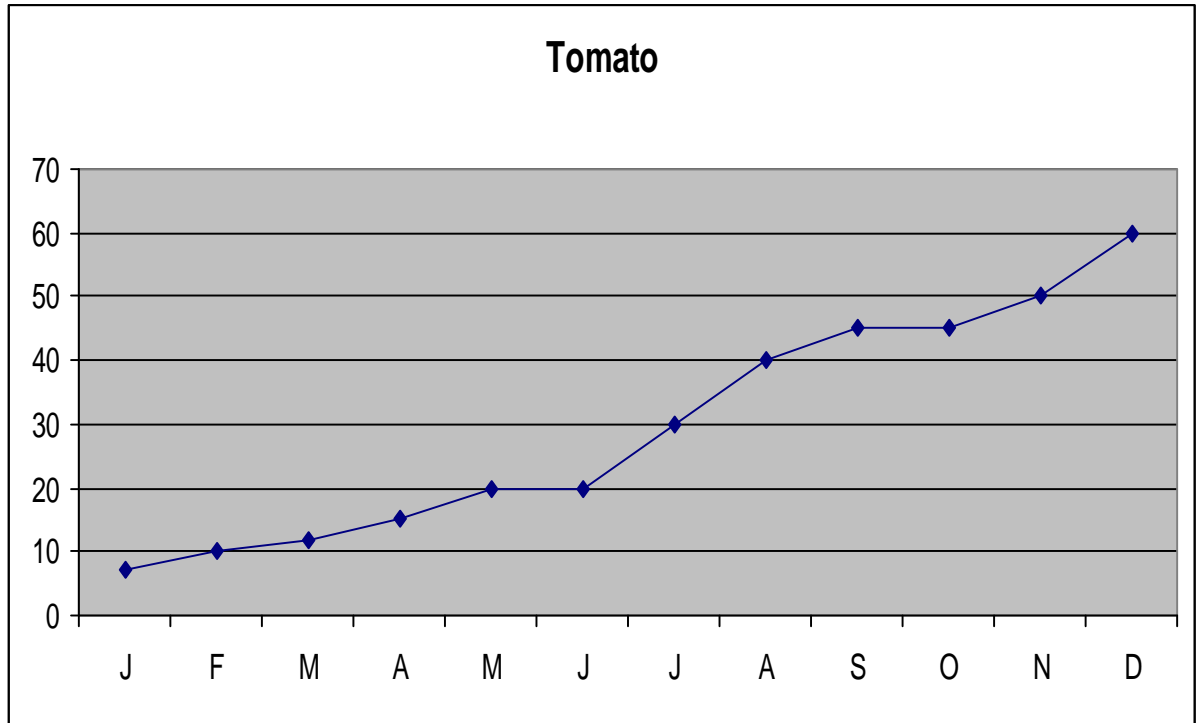
Price Fluctuation in Biratnagar of Major vegetable;



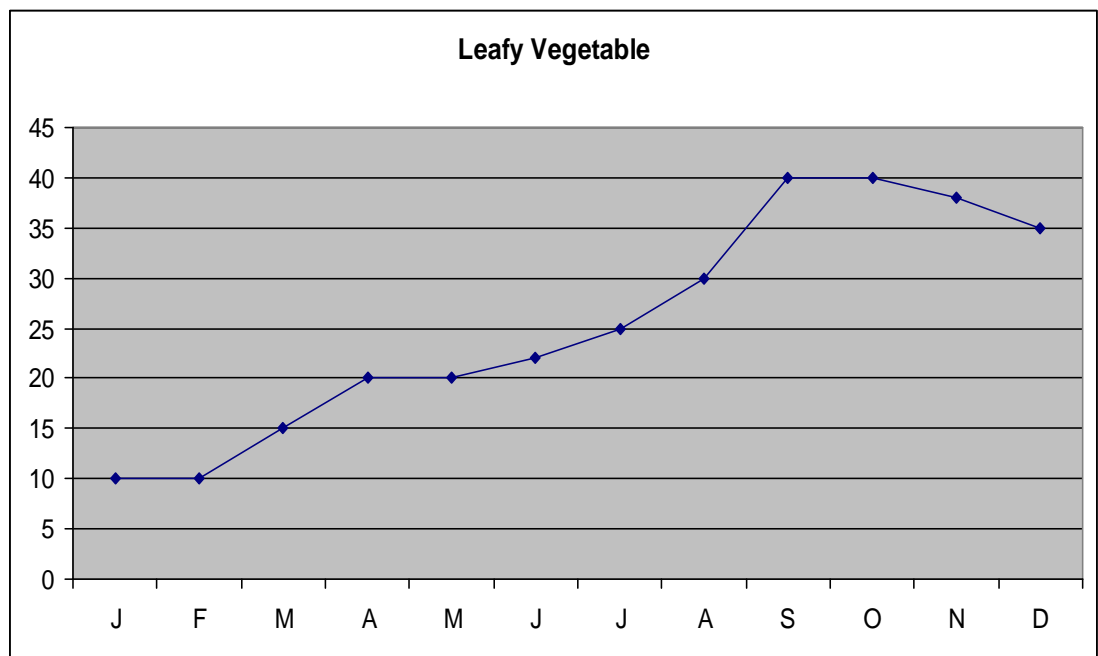
Source: Field Survey, 2067



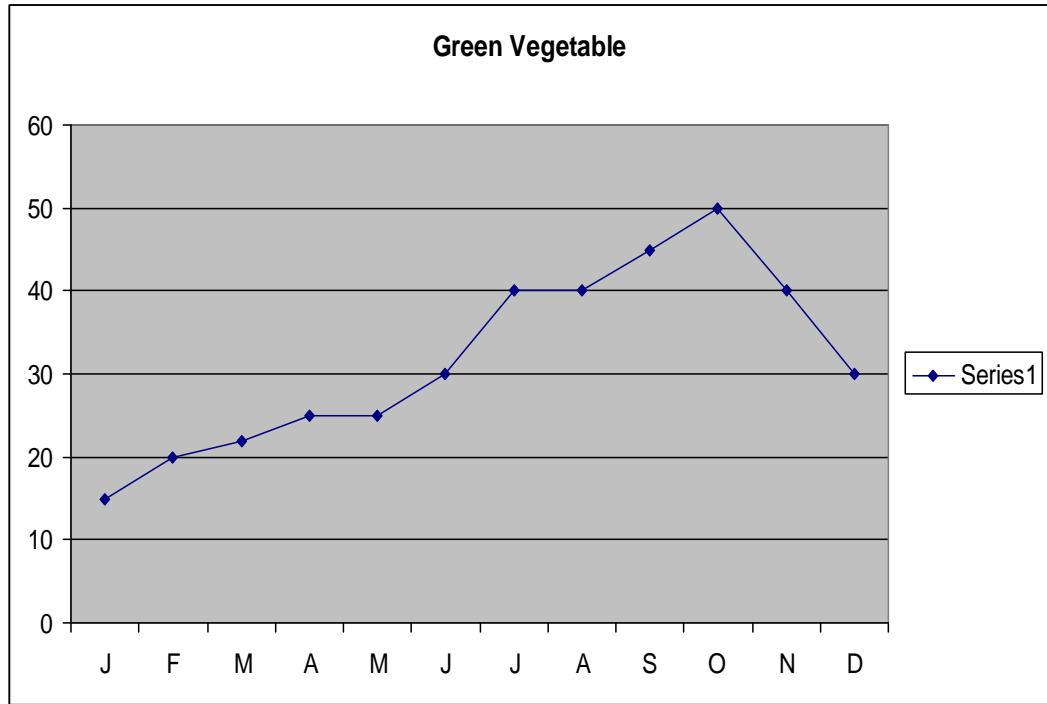
Source: Field Survey, 2067



Source: Field Survey, 2067



Source: Field Survey, 2067



Source: Field Survey, 2067

CHAPTER-V

SUMMARY, CONCLUSION, FINDINGS AND RECOMMENDATIONS

5.1 Summary :-

The study has been undertaken to analyze the marketing position of vegetable in Biratnagar. There is no systematic or well managed market structure in Biratnagar. Most of the vegetable market are Hatt, Bazar. So, it is very difficult to the formal data as a secondary sources. Mainly it is based on Primary data. So, the research design is primary data explanatory.

The study have been divided into five chapter, they are introduction, review of literature, research methodology, presentation, analysis and interpretation of data and then finally summary, research findings, conclusion and recommendations.

The general introduction of agricultural and vegetable market, statement of the problems, objectives of the study, importance and limitation of the study have been discussed in the very first chapter. Concept, development and other tools have been explained in the second chapter.

However, the third chapter explains about the research methodology. It includes about the research design, data gathering methods, data analysis technique etc. moreover, the collected data about the vegetable market in Biratnagar have been gathered and presented, analyzed and interpreted in the fourth chapter. Lastly, the finding conclusion of the study and some valuable market of Biratnagar have been presented in the fifth chapter.

5.2 Conclusion :-

Agriculture is the backbone of Nepalese economy. Its development essentially results in the over all economic development and development of vegetable marketing is the part of agricultural development. Hence, development of vegetable marketing depends not only on the improvement of production side but equally on the improvement of marketing side as well. But, in a curry glance, much of our planning focus seems on production aspect neglecting the marketing aspect, whatever efforts are leveled to ameliorate the extent vegetable marketing situation. They are too general. But more than 75% of the total farm households in the country are characterized by small holdings poor economic condition.

In Biratnagar, vegetable market can be classified as organized and unorganized. They all sell different types of fresh vegetables imported from

neighboring areas of Nepal and India. Local area fulfill only two percent and rest of the 98 percent has been imported from other places and other countries. Local area like – Katari, Jhorahatt, Chitaha, and other places of Morang, Saptari, Dhankutta, Terathum and neighboring country like– India .

Green vegetable, Leafy vegetable, Cabbage, generally are fulfill from the local area. Potato, Onion, Tomato, Cauliflower, Garlic, Radish, Brinjal are imported from neighboring areas and some volume of them are imported from India also. 96% of the sellers determine the price of vegetable and 4% responded that producers determine the price. In this business 75% are Male and 25% are Female engaged and 30-40 years group includes 50% is found dominant. More ever, the study gives a clear vision regarding the distribution channel of vegetables in Biratnagar. This analysis has drawn the conclusion that the price is fixed in three ways. Seeing the price in the neighbor according to cost and profit margin, seeing the scarcity are the methods of price determinations. The study gives the result regarding the price determination is that 42 percent fix the price of the vegetables. Seeing what their close sellers are charging. Similarly, 48 percent follow the cost and profit margin method while fixing prices of the vegetables. 10 percent set the price seeing whether the vegetables are scarce not. The educational

status of the seller is found to be poor only 12 percent were found to be fairly educated.

5.3 Major Findings :-

From the study and analysis of vegetable market of Biratnagar it transpires that there are so many problems in overall development and management of it. These problems are basically felt by whole sellers. But the retailer and consumer are also suffered by various problems. Some problems may be identified as internal or minor and some are external or major. Due to these problems, the price level of vegetables are raised even it causes to damage the vegetables. Some of the major problems in the vegetable market of Biratnagar are as follows:-

- I. There is not any government agency and office which can control and fixed the price rate of the vegetable.
- II. In Biratnagar sub-metropolitan city, there are few whole sellers. They exercise monopoly power in the determination of vegetable price .
- III. Another problem is lack of institutional development therefore farmers get very low price and number of middleman exist between

producers and consumers. This result in to low profit to farmers and high price to consumer.

- IV. There is no any proper place to destroy damaged vegetable.
- V. Vegetable is perishable goods but in the case of this market no any cold storage to store vegetable. In this situation, vegetable damaged percentage is increased and price also takes high.
- VI. Lack of proper transportation facility in the village area is another problem. Due to this farmers are not able to carry their product in the market at the time.
- VII. Lack of proper and managed place is another problem.
- VIII. There is no information centre for farmers and consumers also.

Apart from the above, there are so many other problems in the vegetable market of Biratnagar, such as rapid population growth, lack of new equipment and technology, lack of managed market, lack of skilled manpower, lack of over all infrastructure development etc. which have been creating the problems of vegetable market.

5.4 Recommendations:-

It is clear that there are so many problems in vegetable market of Biratnagar. They need support from the public sector. The problem mentioned earlier could be solved by support of local government i.e. public sector and farmers themselves. Some problems are related to the metropolitan city and some are related to the concerned people. The major suggestion is presented here as follows:-

1. Support from public / Government sector:-

The following supports are needed farmers from the public or Government sector.

a. Transport facilities:-

Well managed roads and special trucks and vehicles for transporting perishable product like vegetables should be arranged.

b. Training on post harvest technology:-

The farmers should get training on harvesting clearing, pre-cooling, grading, packaging, transport of vegetable. They should also be trained on proper selection of varieties and used of balance of fertilizer.

c. Development of infrastructure facilities:-

Sheds should be constructed at the collection centers and shells centers.

d. Institutional development:-

Vegetables marketing through farmers co-operative could be more efficient and effective. Government should help the farmers informing farmers group and co-operative.

e. Marketing information:-

Information on market situation should be provided through daily news papers. With adequate market information farmers can plan themselves on the following aspects.

Where and what to produce?

When produce?

How much to produce?

How to produce?

f. Supply system:

Models for every market for supplying vegetables all the year round should be developed and the farmers should be well acquainted with models.

g. Vegetable processing and preservation:-

Any surplus vegetable product if not processed and preserved is wasted, support could be provided to create facilities for processing and preservation of vegetable. This will provide assured market for the growers.

2. Support from small farmers themselves:-

- a. Try to start as joint venture.
- b. Keep record on cost of production of vegetable.
- c. Try to scout the buyers while the crop is still standing.
- d. Find out possible market for seeing at higher prices.
- e. Grow vegetable always with better quality.
- f. Try to send the product to an organized marketing system.
- g. Try to clean, grade and package vegetable properly before selling.
- h. Try to find out the transportation and other handling cost wherever product is brought to distant market.

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APPENDIX

Marketing of Vegetable in Biratnagar

1. General Information :-

Caste :		Religion:
Age gap :	0-9 10-59 60 over	
Male :		Female :
Permanent Address :		Main Occupation:

2. Economic Information:-

-) Where do you live?
Own house Rent Other
-) Type of business:
Whole seller Retailer Middleman
-) Land holding:
Khet Bari Land
-) Which crops you usually cultivate?
Summer Winter
-) Do you cultivate vegetable too?
Yes No
If yes, which ones?(Crop land in vegetable cultivation for each vegetable)
If No, from where do you procure vegetable?

3. Vegetable Marketing:-

-) How much vegetables are sold daily?
-) Where do you buy?
-) Where do you sell?
-) How many persons are engaged in this business?
-) Have you employed any other your own family member?

) Do you get credit facility?

Yes

No

) Will you be able to dispose all you buy?

Yes

No

) Are you provided with storage facility?

Yes

No

) How do you determine the prices?

Seeing the price in the neighbourhood.

According to the cost and profit margin.

Seeing the scarcity of the production.

) Who determine the price?

Wholesaler

Yourself

Producer

Local

Government

) How much is your investment for this business?

) Is it more profitable to grow vegetable than other crops?

Yes

No

If Yes, Why?

) What is the net monthly return?

4. What are the problems faced presently?

Credit

Storage

Competition

Transportation

Institutional Support
