



Challenges of Seasonal Green Vegetable Marketing in Nepal: A Study of Chitwan District

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Abstract

This study examines the challenges of seasonal green vegetable marketing in Nepal, with a focus on Chitwan district, assessing the status of farming and key obstacles in the marketing of produce such as cauliflowers, cabbage, tomatoes, pumpkins, and leafy greens. Using a mixed-method research design, the study combines qualitative and quantitative approaches, analyzing data from 50 respondents, including farmers, businesspersons, local leaders, and government agriculture staff. The findings reveal major challenges such as a traditional and inefficient marketing system, lack of market information and price transparency, insufficient storage facilities, black marketing, monopolistic practices, and high production costs. The study concludes that improving market infrastructure, enhancing price dissemination mechanisms, expanding storage facilities, and regulating unfair trade practices are essential for addressing these issues. Based on primary data, the research provides actionable insights for policymakers and stakeholders to strengthen Nepal's agricultural marketing system.

Keywords: seasonal vegetables, marketing challenges, Nepal agriculture, Chitwan district, price transparency

Introduction

The term "vegetable" refers to a diverse range of plant species or products; however, in the context of this study, it specifically pertains to the fresh, edible parts of herbaceous plants that can be consumed either raw or cooked. Cabbage, cauliflower and tomato are commonly regarded as vegetables. (Encyclopedia, 2015). Role of vegetable farming plays significant on the national Gross Domestic Product (GDP) by generating employment opportunities and



contributing to poverty reduction. This sector has become a vital approach to enhancing economic conditions in rural regions. Through participation in commercial vegetable farming, numerous individuals can attain stable jobs, thereby improving their livelihoods and invigorating local economies. Consequently, the expansion of the vegetable farming industry is demonstrating its effectiveness in combating poverty and promoting sustainable development.

Agriculture is the main occupation of Nepal. National population report 2021 noted that 65% household and 67% population totally depended on agriculture (National Population Report, 2021). However, Report of Nepal Rastra Bank, central bank of Nepal and economic survey 2023 noted that only 31% GDP covers by the agriculture sector. The data shows that Nepal could not get enough benefit from agriculture sectors because output of the agriculture sectors is comparatively low. Due to diverse kinds of climate all types of crops can cultivate in Nepal. Vegetable can be cultivated in plain land of hill and terai. Cauliflower, cabbage, pumpkin, and a variety of leafy greens, including mustard (known locally as Rayo), are among the main seasonal green vegetables grown in the diverse agricultural landscapes of Nepal. In addition to these, mushrooms, lady's fingers (also referred to as okra), and tomatoes are also significant crops in both the hilly and Terai regions of the country. These vegetables not only contribute to the local diet but also play a crucial role in the agricultural economy, reflecting the rich biodiversity and farming practices prevalent in these areas.

Due to suitable climate and facilities of irrigation annually production of season green vegetable is increasing, however, the situation of market is not so improved. The following report of My Republica daily shows the situation as:

On Friday, farmers in Chitwan organized a protest by dumping vegetables onto the streets of Narayanghat. This symbolic demonstration was aimed at highlighting their concerns that domestic produce is not receiving a fair price due to the influx of vegetables imported from India. The farmers unloaded various vegetables, including tomatoes, cauliflowers, cabbages, pumpkins, peas, and others, from six tractors onto the roadway. (My Republica Feb,4, 2025)

The news indicates that farmers are facing the problems of green vegetable marketing in study area; however, government claimed that the programs and policies are concentrated on the welfare of farmers. Without proper marketing farmers so not earn from vegetable. Earning from seasonal green vegetable is not so good and farmers destroyed green vegetable like cabbage and tomato in season. In this context the study analyzes the stakeholders' perceptions about the challenges of marketing of seasonal green vegetable in Chitwan.

Theory of Vegetable Marketing

Cost return theory is one of the major theories of vegetable marketing. The theory talks about return that farmers get from the selling of vegetable in comparison of investment. The cost concept is set forth are employed to evaluate cultivation expenses and metrics related to farm income. Return on investment is a crucial performance indicator used to assess the efficiency or profitability of an investment and to compare the effectiveness of different investments. This



metric seeks to quantify the return produced from a particular investment in relation to its corresponding costs. Dastagiri et al. (2013) investigated trends in production, marketing efficiency, and export competitiveness, finding a notable gap between the prices received by farmers and those paid by urban consumers, indicating a deficiency in organized marketing systems. The study showed that the total area allocated for vegetable cultivation is growing at a rate of 4.12 percent, whereas production growth rates are at 6.48 percent. Furthermore, the research highlighted that marketing costs, transportation fees, and labor expenses frequently hinder marketing efficiency. Marketing, in a general sense, encompasses the process through which a product is transferred from the producer to the end consumers. In the agricultural sector, effective marketing is essential for its growth and development. Consequently, the management of marketing strategies and the provision of dependable market access for producers are critical in improving the production and productivity of agricultural goods. Within the marketing ecosystem, the primary participants include producer farmers, traders, wholesalers, and consumers, all of whom are essential to the production and consumption continuum. Producer farmers actively participate in selling their products both directly from the farm and in various markets. This study identifies four distinct marketing channels that support off-season onion marketing, which are elaborated upon below.

Literature Review

K.C. and Paudel (2023) analyze the economic factors related to the production and marketing of essential vegetables in the Bhaktapur district of Nepal. Primary data for the household survey was collected using a semi-structured questionnaire distributed to sixty chosen respondents from two municipalities, namely Madhyapur Thimi and Suryabinayak, through a simple random sampling method. A range of methodological tools were utilized to gather information, including a household survey with a pre-tested questionnaire, key informant interviews, focus group discussions, and various secondary data sources. The marketing margins for tomatoes, cauliflowers, and radishes were NRs. 31.00, NRs. 39.50, and NRs. 19.00, respectively. Tomatoes had the highest producer's share at 55.71%, followed by radishes at 52.50%, and cauliflowers at 46.97%. It was noted that middlemen had a significant influence on vegetable pricing. The analysis conducted in the study identified the main challenges in vegetable production and marketing as the prevalence of diseases and pests, along with low farm gate prices.

GC and Hall, (2020c) talked about agricultural marketing encompasses a range of activities including the purchasing, selling, storage, processing, standardization, certification, and distribution of farm products. The study focused on infra structure development, facilities of market place and government subsidy in market price play important role of sustainable vegetable marketing.

According to GC and Hall (2020b), a crucial solution to this problem is the establishment of locally managed market infrastructures that facilitate connections between farmers and traders. It is essential for farmers to have access to relevant information regarding market demands,



pricing, and production. The development of local markets has the potential to reduce sales uncertainties, thereby enhancing the revenue and profits from crops.

Shaikh, and Wagh (2021) notes the agriculture and agribusiness faces numerous challenges, including the lack of suitable policies such as contract farming, insufficient promotion of enterprises, weak cooperative structures, inadequate service infrastructure to support value chain development (e.g., agribusiness incubators, agro-industrial parks), low agricultural insurance coverage, and the absence of a clear and stable tax system along with incentives to foster innovation and mitigate risks.

Malla, S. (2021) discussed about the role of marketing in agriculture production. She claimed that production achieves its full potential only when marketing is properly coordinated. Marketing plays a vital role in managing the goods produced and helps improve the living conditions of the farmers. Its goals include boosting the income and job opportunities for vegetable farmers while also ensuring that consumers have access to fresh vegetables at affordable prices, thus satisfying their needs.

Sigdel et. al. (2018) highlights the essential importance of financing in relation to the agricultural sector and its economic development in Nepal. In the last decade, the agricultural industry has not met its expected growth targets. It explores the current dynamics of this sector; the study proposes a hypothesis that the sluggish growth is mainly attributed to insufficient and ineffective financing. This hypothesis is analyzed using a system dynamics model that demonstrates the connections between financing and agriculture. The results reveal that limited access to formal banking leads to higher overall interest rates, which subsequently reduces investment and capital in the sector, ultimately resulting in lower production levels.

Rahman (2017) analyzed the agricultural sustainability in Bangladesh, Pakistan, India, and Nepal. This research involved the computation of multi-lateral Total Factor Productivity (TFP) indices and pinpointed key factors affecting TFP growth over a span of 34 years. The results indicated differing rates of productivity growth, with Bangladesh achieving the highest at 1.05% per year, followed by India at 0.52%, Pakistan at 0.38%, and Nepal at 0.06%. The study identified natural, human, and technological capital as the primary contributors to TFP growth, while financial capital and crop diversification were noted to have adverse effects.

Awasthi (2007) discussed about spatial price fluctuations of vegetable that reflects the dynamics of supply and demand in various localities, providing valuable insights into the overall health and efficiency of the market. By analyzing these regional price changes, stakeholders can better understand market trends, identify potential opportunities for investment, and make informed decisions that align with the prevailing economic conditions.

Verhees (2005) highlighted the attributes of the market, along with their impact on the process of price determination; represent essential components of economic theory. The study includes factors such as supply and demand dynamics, market structure, competition levels, and consumer behavior. Each of these elements plays a crucial role in shaping how prices are established within a given market. For instance, the interaction between supply and demand can lead to price fluctuations, while the degree of competition can influence pricing strategies

among businesses. Understanding these characteristics is vital for economists and policymakers, as they provide insights into market functionality and the mechanisms that drive economic activity.

Rokaya and Bhandari, (2004) noted financial factors of vegetable farming and marketing and benefit of the farmers. Main objective of this study is to highlight the profitability during periods when traditional crops may not be in season. The main strategic challenge to address is that vegetables lose quality and eventually spoil after harvest. Therefore, producers must develop strategies to balance the quantity of vegetables available for sale, the variety of vegetable types provided, the placement of their specific vegetables in the consumer market, and the marketing channels employed to connect with consumers.

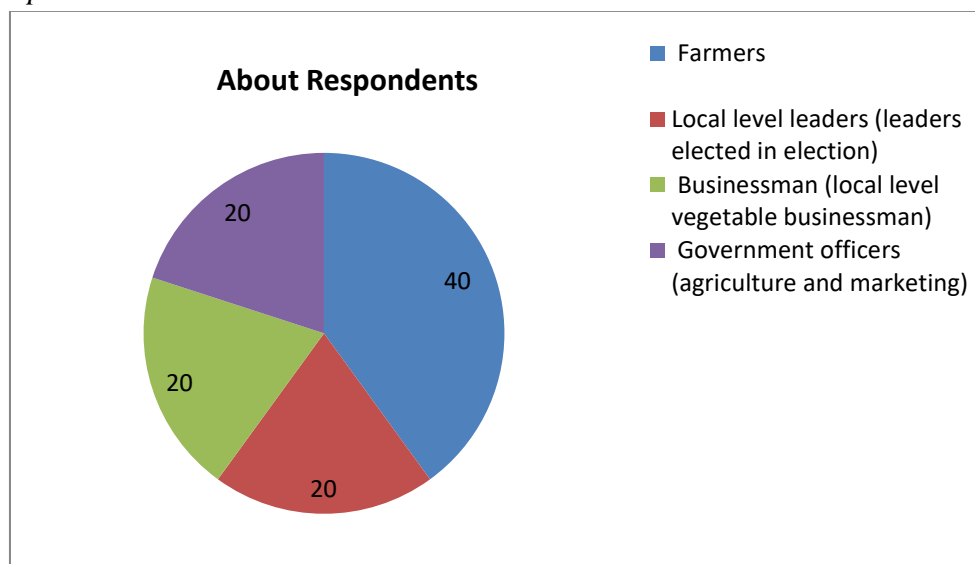
Above reviews highlighted the several issues related to of vegetable production and marketing, however, none of the study focused on the challenges of the marketing of seasonal green vegetable so that the issue has risen by the study in the context of Chitwan districts.

Methodology

The study followed mixed method to analyze the collected data from the field due to the nature of the study. Descriptive statistical tools like table and percentage were used to analyze quantitative data and qualitative data were analyzed by using interpretive paradigm of data analysis. Both primary and secondary sources were used to collect the data. Primary data were gathered from the field survey and secondary data were collected from books, journals, articles, reports and periodicals. The secondary data were collected through library study and internet search. Primary data were gathered by using closed and open question. Purposive random sampling method was used to select sample from the field. 50 respondents were selected for this study from different background whose role is important for vegetable production and marketing.

Figure:1

About Respondents





In this study respondents were selected from all stakeholders whose role is important for vegetable production and marketing such as farmers, businessmen, local level leaders (policy makers) and government staffs (policy implementers). The joint efforts of all sector are needed to solve the problem of seasonal vegetable marketing that has seen in the current time in study area.

About Study Area

For this study data were collected from the two municipalities of Chitwan districts. Kalika municipality and Ratnanagar municipality were selected as study area of this study.

According to districts coordination office report 2024 and the municipality report 2024, 12432 households were involved in seasonal vegetable farming in Ratananagar municipality and 6452 households were involved in seasonal green vegetable farming gin Kalika municipality (Kalika Municipality Report 2024). More than sixty percent population of both municipalities was involved in seasonal green vegetable framing.

Data Analysis and Presentations

There are various factors that create challenges on the marketing of the seasonal green vegetable in the context of Chitwan. I have asked questions to the respondents about production cost and market price, impact of free border of India and cost of production is higher in Nepal, lack of storage, mediator or agent exploit farmers and given low price of their production, transposition cost is high and government policy create barrier to sell farmers production etc. There have given option on each issue and collect the opinions of the respondents by using Likert scale.

Opinion of the Respondents about the challenges of Marketing

While analyzing the opinions of the respondents there uses likart scale Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D) and Strongly Disagree (SD).

Table: 1

Opinion of the Respondents about the challenges of Marketing

S.N.	Statement	SA	%	A	%	N	%	D	%	SD	%	Total	%
1	Production cost is high	20	40	10	20	5	10	15	30	5	10	50	100
2	Open border and invasion of Indian vegetable	25	50	10	20	5	10	7	14	3	6	50	100
3	Lack of storage for long time	15	30	20	40	5	10	6	12	4	8	50	100
4	Lack local market	30	60	10	20	3	6	2	4	5	10	50	100
5	Due to high commission of Businessman	18	36	12	24	5	10	10	20	5	10	50	100
6	Transportation cost is high	25	50	10	20	6	12	5	10	4	8	50	100
7	Lack of policies for selling vegetable	30	60	7	14	3	6	5	10	5	10	50	100
8	Government does not any vision for marketing	35	70	5	10	3	6	4	8	3	6	50	100

9	Lack of information about market price	10	20	12	24	8	16	15	30	5	10	50	100
10	People consume less green vegetable	12	24	8	16	15	30	5	10	10	20	50	100

Source: Field Survey, 2024

Participants conveyed negative opinions about government policies and programs, particularly highlighting issues related to production costs, transportation expenses, and the insufficient availability of storage facilities. Additionally, they pointed out a noticeable absence of a strategic governmental vision aimed at fostering the market for green vegetables. This lack of foresight was seen as a significant barrier to the growth and sustainability of the sector, which could benefit from more proactive measures and support from the government.

In the courses of conversation, respondents focused on weak government policy for creating challenges of green seasonal vegetable marketing in study area because Indian businessmen illegally import the vegetable that creates problems in market so that they demand to strictly stop the Indian vegetable and promote the local farmer. (*Personal Interview, 2024*)

The following photo published in national news papers also indicates the challenges of marketing of seasonal green vegetable produced by the farmers of Chitwan.

Way to Solve the Challenges of Green Vegetable Marketing in Study Area

Respondents have various opinion to solve the challenges of promotion of the market of seasonal green vegetable. Responses are evaluated using a five-point Likert scale, which includes the options: Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), and Strongly Disagree (SDA). The table below illustrates the current situation as follows:

Table: 2

Way to Solve the Challenges of Green Vegetable Marketing in Study Area

Statement	SA %	A %	N %	DA %	SD A %	Total %	Me an	SD
Stop import Indian vegetable	50	20	10	10	10	100	3.9	1.37
Increase market in local place	54	20	10	14	2	100	4.1	1.17
Make policy to purchase by government	44	26	10	12	8	100	3.86	1.31
Increase access in international market	60	20	6	4	10	100	4.16	1.3
Stop commission of agent	70	22	4	2	2	100	4.56	0.83
Increase awareness about market and market price to farmers	50	20	12	10	8	100	3.94	1.32
Manage to dry green vegetable	66	14	6	10	4	100	4.28	1.18



Provide subside in transportation	70	1	6	8	2	100	4.2	1.05
		0					6	
Make policy of crops insurance	30	2	16	20	10	100	3.4	1.36
		4					4	
Calculate market before production	50	1	10	10	14	100	3.7	1.49
		6					8	

Source: Field Survey, 2024

Highest mean value (4.56) and low SD (0.86) indicates strong and consistent agreement to control stop commission of agent and mixed opinions on calculate market before production which value of SD is 1.49. Most statements are above 4.0, showing overall agreement.

Standard deviation of the data indicates that most of the respondents (Mean 4.56) were focused on commission because in vegetable marketing whole sellers only focused on the commission they work as function of agent and farmers are fallen into the trap of whole sellers so that respondents demand to stop such situation for solving the problem of market of seasonal green vegetable. Calculate market before production is the most polarized value to this because such practice has not carried out before.

Findings and Conclusion

Respondents shared a range of perspectives regarding the marketing challenges faced by green vegetables cultivated in the study area. A considerable portion of the respondents highlighted the urgent necessity to put an end to the illegal importation of Indian green vegetables, stressing that such actions undermine local production. They called for increased government support to facilitate the export of locally grown green vegetables, which could enhance their market presence and profitability. Furthermore, there was a strong advocacy for the creation of insurance provisions specifically tailored for these agricultural products, which would provide farmers with a safety net against potential losses. In addition, the majority of respondents recommended the elimination of the current agent system, suggesting that the government should engage in direct purchasing from farmers. This approach has the potential to greatly enhance the efficiency of the supply chain, guaranteeing that all operations function seamlessly and effectively. It aims to secure fair compensation for farmers, allowing them to receive just rewards for their products. Through the adoption of this strategy, we can establish a more balanced and fair system that serves the interests of both the supply chain and the agricultural producers engaged in it.

The majority of participants in this study conveyed the opinion that seasonal green vegetables from India play a predominant role in the local vegetable market. They strongly recommended the implementation of policies aimed at curtailing vegetable imports, emphasizing the need for the government to support the procurement of these locally grown vegetables. This support is seen as a crucial step in reducing the risks faced by farmers in the region. It is essential for the government to evaluate both production and consumption patterns within the market. By doing so, it can make informed adjustments to agricultural output, ensuring that it is in harmony with the prevailing market demand. This approach would not only bolster the local agricultural



sector but also enhance food security and sustainability within the community. More than that respondents demand to stop the agent system and black market of the vegetable because most of the time businessmen exploit the farmers by providing low price of their production. Farmers are exploited by the business and government because government hardly provides transportation facilities to the farmers. The costs related to transportation are significantly high, creating a major obstacle for farmers aiming to access key markets such as Butwal, Pokhara and Kathmandu. In response to these difficulties, farmers are calling for the introduction of insurance options specifically designed for seasonal green vegetables. Furthermore, there is a notable absence of policies that would promote the creation and expansion of farmers' markets in urban areas. This lack of supportive initiatives discourages farmers from capitalizing on the opportunities available in local urban markets. Therefore, it is essential to develop and implement policies that improve farmers' access to these urban markets. Additionally, it is vital for the government to set prices for seasonal vegetables that accurately reflect production costs, ensuring fair remuneration for farmers and fostering sustainability in the agricultural sector.

References

- Acharya, S., Shrestha, S. K., Neupane, D., & Mahat, D. (2024). Exploring Green Finance Practices for Advancing Sustainable Development in Nepalese Banking Sector. *NPRC Journal of Multidisciplinary Research*, 1(8), 23-34.
- Awasthi, B.D. (2007). Relevance of market information system to environment protection. *Journal of Agriculture and Environment*, (8), 46-54.
- Choudhary, H., Bisht, D., Badal, P.S., Singh, V., Shah, R. and Saryam, M. (2017). Profitability of vegetables in hill agriculture. *An economic analysis. International Journal of Current Microbiology and Applied Science*, (6). 1674-1682.
- Dastagiri, M.B., Chand, R., Immanuelraj, T.K., Hanumanthaiah, C.V., Paramsivam, P., Sidhu, R.S., Sudha, M. *et al.* (2013). Indian vegetables: Production trends, marketing efficiency and export competitiveness. *American Journal of Agriculture and Forestry*, (12), 1-11.
- (GC, R.K., Hall, R.P., 2020c). The Commercialization of Smallholder Farming: A Case Study from the Rural Western Middle Hills of Nepal. *Agriculture* 10, 143. <https://doi.org/10.3390/agriculture10050143>
- Government of Nepal (2021). *National Population Report*. National Statistical Office
- Government of Nepal (2023). *Economic Survey*. Nepal Rastra Bank giwmscdnone.gov.np (<https://giwmscdnone.gov.np> > media > pdf.upload)
- K.C. Naturally, Paudel S. (2023). An Economic Analysis of Production and Marketing of Major Vegetables in Bhaktapur District, Nepal, Nepal. *Food and Agri Economics Review*, 3(2): 68-78. (DOI: 10.26480/faer.02.2023.68.78)
- Mahat, D., Karki, T. B., Neupane, D., Shrestha, D. K., & Shrestha, S. (2024). Decolonization in Focus: A Bibliometric Analysis of Scientific Articles from 2010 to 2023. *Nepal Journal of Multidisciplinary Research*, 7(1), 1-21.



- Malla, S. (2021). Situation of Vegetable Production and Its Marketing in The Context of Rural Farmers: A Case Study. *Food and Agri Economics Review*, 1(2): 124-126.
- Mishra, R., Kumar, D.A. (2012). Price behaviour of major vegetables in hill region of Nepal: An econometric analysis. *SAARC journal of Agriculture*, 10 (2), 107-120
- MoAD. (2017). *Ministry of Agriculture Development*. Kathmandu
- My Republica, (2025). Farmers throw agro product on road. February, 4, 2025
- My Republica (<https://myrepublica.nagariknetwork.com>)
- (Adopted by <https://newbusinessage.com/article/dissenting-farmers-throw-agro-produce-on-the-road>)
- Nepal Rastra Bank (2024). *Annual Bank Supervision Report 2024*. <https://www.nrb.org.np>
- Rokaya, B. B. & Bhandari, K. B. (2004). Study on off season onion production in river basin environment of mid and far-western of Nepal, 366-72. *Proceedings of Fourth National Workshop on Horticulture*.
- Rahman, S. (2017). Agricultural Productivity Growth and the Role of Capital in South Asia. *Journal sustainability*, 9(3).
- Sigdel, U. P. & Silwal, U. K. (2018). Gender role in commercial vegetable farming (CVF) in Chitwan District, Nepal - a case study of Gunjanagar and Sharadanagar VDCs. *International Journal of Agricultural Extension and Rural Development Studies*. 5(2), 29-40.
- Sharma, Y. P. (1983). Vegetable Marketing Practices in Nepal with Reference to Pokhara Town, Discussion Paper, Eco. Ins. Committee, P. N. Campus, Pokhara.
- Shaikh, A., Wagh, R.B., 2021. Understanding the Upcoming Farmers Bills: Are the Farmer'S Bill Just or Unjust? *SSRN Electron. J.* <https://doi.org/10.2139/ssrn.3954793>
- Verhees, F.J. (2005). Market-oriented product innovation in small firms. Wageningen Universiteit.