

Empowering Economic Development: A Case Study Analysis of Agricultural Commodity Production in Nepal's Local Markets with a Focus on Farmers and Traders (2021/ 22)

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Received Date 03 March 2024 **Accepted Date** 19 March 2024 **Published Date** 22 March 2024

ABSTRACT

For economic development, Agriculture is the ultimate source of production to survive and manage economy and market system both. Nepal is divers with full of opportunities from the agriculture productions with three distinct geography such as hill, mountains and terai. This study aims to find out the role of consumable agriculture production in the economic development of Nepal. A mixed method approach is planned to conduct this research following the secondary data from the Government of Nepal that cross verified with the traders, farmers and various Key Informant persons using primary data collection tools. Study was conducted during 2022-23 and farmers and traders' data from all seven provinces were contracted and interviewed. The results shows that the role of agriculture production plays a vital role managing food security and economic situation of the Country. The local production is not enough to meet the requirement of Nepal. Import from India, China and Other countries supporting and meeting the requirement so the peoples. The study concluded as the GDP value of the local Production significantly plays a role in the positive development of Nations for the growth and sustainability. However, the local production is the ultimate way out to manage long-term sustainability in the study. Researcher suggesting instead of imports from neighbor country. A local production and traders' management is recommending managing local food production availability as well as growth in economic development.

KEYWORDS

Agriculture production, Economic development, Food security, Local production, Trade system

INTRODUCTION

According to the FAO and OECD report, individuals living lower the hardship line in undeveloped nations like Nigeria and Nepal and creating nations like India and China confronted challenges such as geopolitical impacts, changes in esteem chains and nourishment generation respectively (FAO, 2015). Worldwide

control relations in geopolitics, pandemics and climate alter have changed the universal and territorial environment. As a result, the world community has had to confront the impacts of financial subsidence, struggle and plagues. On the other hand, Nepalese have to be confronted the challenge of unfavorable impacts on nourishment generation. In this context, Nepal ought to talk about and inquire about to plan for issues such as sustenance emergency and starvation (NPC, 2019).

Agreeing to the World Starvation Report 2021, Nepal's hunger record is at the level of 19.1 and Nepal ranks 76th within the world positioning of Food security status. Within the starvation index, from 2000 to 2020, Nepal has made a few advances in Food and Nutrition security and diminishing ailing health. This change is not due to the advance made in Nepal's inside nourishment and livestock generation framework. The utilization has moved forward due to the accessibility of effortlessly imported nourishment grains from India (Joined together Countries, 2020). (United Nations, 2020).

A study by Chhetri et al (2020) reviewed that ILO (2020) highlights that global crisis and food role is vital for the people, any type of crisis on globe load the workforce (ILO, 2020; Chhetri et al., 2020). WFP and CBS (2022) illustrated that Food security of Nepal depends on the local production and market plays a vital role because farmers products and buyers demands both meet at markets, price and supply system is vital to run the market and meet everyone's desire in positive way.

From the point of Food Security, Nutritional and Livelihood security, each Nepali needs at slightest 2,250 calories worth of nourishment. Some, 70 percent of it ought to be provided from plant items and the remaining 30 percent from creature items. Nevertheless, in Nepal, 1,964 calories (87.3 percent) of the specified calories per individual per day are gotten from plant nourishments, whereas the remaining 286 calories (12.7 percent) are gotten from creature nourishments. This uncovers the truth that the production and consumption of creature items in Nepal is lower (NPC, 2020)

Land-ownership is the crucial factor determining food security and poverty level. The NLSS data 2004 showed that about 31percent and 40 percent of the households in Nepal have inadequate food consumption level and limited consumption of required household items respectively. Above two-third of the households have reported their total household income less than adequate for meeting their livelihood needs. By ecological zone, people in the mountains are more food, health and income insecure as compared to Terai and Hills. Access to basic life supporting services is also limited in the Mountains due to inaccessibility, harsh topography and climate as well as developmental biases in the lowlands and valleys (NLSS, 2004; Gauchan, 2008).

It was reviewing that the accessible measurements of the Service of Horticulture and Animals Improvement for the money related year 2020/21; it was assessed that approximately 860,000 tons of nourishment grains will be inadequately in Nepal each year. Out of that, about 620,000 tons of beats, 400,000 tons of vegetables, 581,000 tons of natural products, 1,370,000 liters of drain and 2,614,000 eggs were evaluated to be less. In spite of the fact that the potato production in Nepal appears to be adequate, 946274 thousand kilos of potatoes worth 6.83 billion were imported from India and Bangladesh one by one.

It was found that due to the dominance of Indian businesspersons in Nepal and the vested interface of making a part of benefit, in spite of the fact that the potatoes delivered in Nepal appear to be adequate, it appears that potatoes worth approximately 7 billion are imported. This demonstrates that the exchange shortage has been expanded superfluously (PRI, Nepal, 2022).

The foremost devoured nourishment in Nepal is rice (Paddy). About 51 percent of the countries add up to paddy crops account for nourishment supply, whereas other nourishment crops account for the remaining 49 percent. In spite of the fact that the production of rice within the nation is not adequate, other

nourishment crops like maize, wheat, millet, sorghum and grain offer assistance to meet the nourishment necessity. But due to the lack of such an approach in Nepal and inadequately household generation, within the monetary year 2020.021, Nepal imported 551,750 tons of paddy and 578,910 tons of rice worth about 48 billion rupees, in add up to 11,30,664 tons of paddy and rice have been imported. Within the same year, Nepal has imported 74.28 billion rupees of all sorts of nourishment grains, which is separated from the offices permitted to bring Nepal from India for residential utilization. Nepali and Indian businesspersons who win a parcel of benefit to have an intrigued in this (MoALD, 2022).

Agreeing to Traditions Division of Nepal, Outside Exchange Measurements, within the budgetary year 2020/2021 period, Nepal imported rural commodities worth 341.52 billion rupees whereas sends out of rural commodities measured to 117.63 billion rupees amid the same period. The add up to exchange shortfall that year come to 223.89 billion rupees. This affirms the truth that Nepal's trade base is powerless. In addition, the developing awkwardness between send out and purport of rural items demonstrates that Nepal's agriculture division could be a major issue (NRB, 2022).

In 2011, the proportion of Nepal's cereal edit purport reliance, which was 5 percent, expanded nearly three times in eight a long time (in 2019) to more than 13 percent. As the share of imports in Nepal's nourishment supply framework is expanding due to expanding debasement such as open customs, approach mistakes, trade machination, the circumstance of food availability, access, utilization and soundness is challenging. So also, the comparative figure of the region of food crops generation and the annual development rate of generation within the final 10 a long time appears to be mind boggling since it appears that the range beneath crops is more than the implies of nourishment generation. Efficiency per unit arrive of nourishment crops shows up to be exceptionally moo (3.20 ton/per he). The information raises the doubt that there is a blunder within the information related to agribusiness, as well as the viability of the execution of research-related teach can moreover be questioned (NPC, 2020).

Within the setting of Nepal, it seems that China and India, the two enormous nations that surround Nepal from the north and south, are attempting to weaken Nepal's agrarian framework through the import-export instrument. Because rather than spurring the individuals to embrace a multifaceted rural framework in Nepal, it appears that circuitous back is being given by political resistance from all divisions to go to foreign employments to meet their needs and to purchase basic nourishment from India and China through settlements.

Nepal's laws and approaches are only on paper but genuine implementation has not been done. Therefore, this investigate is outlined to analyze the showcase exchange framework at the side send out and import components of major nourishment product frameworks. It has been appeared that constrained considers have been done on the send out, consequence and nourishment exchange framework within the setting of Nepal. The writing holes recognized in this think about too unequivocally demonstrate crevices in nearby, national and territorial generation, utilization and display exchange frameworks. The motivation for this inquire about was arranged based on talk and consultation with specialists and past investigate, affirming the fitting and essential populace in this inquire about. In this manner, to satisfy a few of the destinations of the study, the commodity dealers gather was too considered as the consider populace.

Adhikari (2020) added that Nepal has now become a net importer of food. Its ability to produce enough food has been hampered by several factors, some of which are small farm sizes, remoteness of farms, insufficient support to farmers in terms of access to inputs like seed, fertilizer, irrigation, and technically know-how (Adhikari, 2020; Chhetri et al., 2021).

Agriculture and creature cultivation are the most occupations of most individuals in provincial towns in Nepal. In most urban areas, agricultural and animal's items are traded as commodities. Therefore, they are the backbone of Nepal's socio-economic improvement potential. This inquire about has been done with the point of supporting financial improvement through the exchange of rural and creature cultivation items in Nepal. In this manner, the respondent regions are as takes after:

1. Cereal Crops; Paddy, Maize, Wheat, Millet, Buckwheat and Barley
2. Pulses/Legumes; Soybeans, Black Gram, Grass pea, Horse gram, Lentil, Chickpea, Pigeon pea and others
3. Oilseed and Mustards
4. Vegetables; Onion, Tomato, Potato and other green vegetables
5. Fruits; Apple, Orange, Mango, Banana and others fruits
6. Animal Products; Milk, Meat and Eggs

These groups of farmers, traders and experts were selected for this study because; they are representative and nature of the study and they will fulfil the research objectives.

Following the above agriculture commodities, this study aims to analyze the role of local agriculture production in the economic development of Nepal.

A concept was drawn here (Figure 1) to analyze the factors of various variable, which is linked with this study.

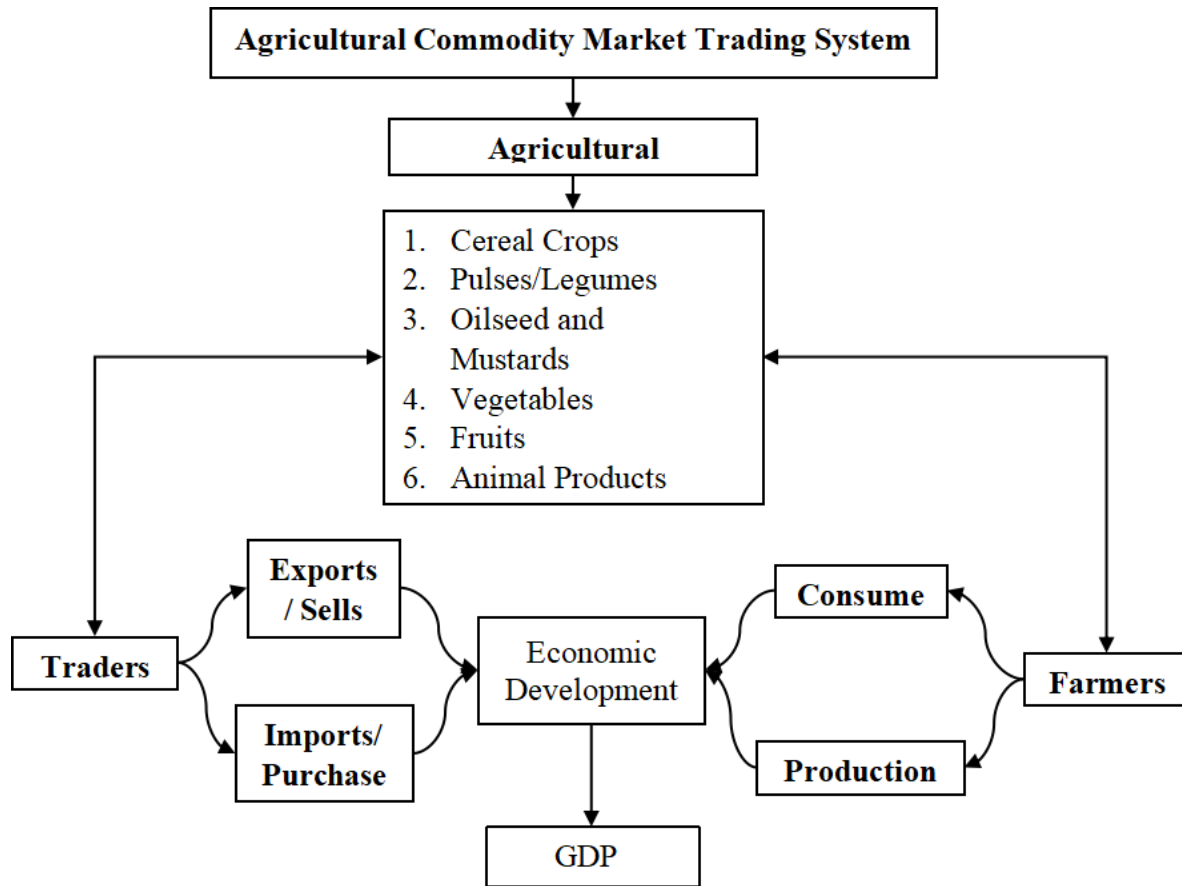


Figure 1: A conceptual framework

(Source: Self Prepared concept of the researcher, prepared during 2022)

METHODS

Since this research is related to the production, consumption, distribution and foreign import and export of agricultural foods in Nepal, the researcher has taken the study area to represent 77 districts in all the seven provinces of Nepal to explain and analyse these facts. Households living in all seven provinces engaged in farming as well as engaged in food crop production are taken as population.

The study is unique from the point of analysis as economic and agriculture productions are two major substances of country. Hence, this is a mixed method approach applied to analysis the published data from the Ministry of Agriculture and Livestock Development, CBS and many other Government based data that deal with the yearly data of the major income generated from agriculture as well as import management-based data. Interview with major stakeholders such as Agriculture officials, market representative based organizations were contracted and conducted interview through KII and FGD data were taken participating farmers and local traders.

Published data of major consumable commodities was selected as a secondary data and further analyzed and verified with the traders' data and farmer's notes. KII with Traders and Farmers was further concluded to validate the result of the secondary data. The study was conducted during 2022-to-2023-time; Various data from the 7 Provinces were collected and analyzed.

All reviewed data from field and secondary mode were further processed through MS excel and SPSS version-24, a pretest was done to check the status of the questions and reliability and feedback of the questionnaires.

RESULTS AND DISCUSSION

To get in details, this section will explain the secondary notes and evidence from the secondary data will be cross verified with the KII noted and data collected from the farmers.

Concurring to Nepal 2021 census, the overall populace of Nepal is 29164578. Out of which 8632715 (29.60 percent) individuals are as it were included in farming generation. The populace of this investigate is individuals included in farming generation. The topographical structure of Nepal is spread over mountains, slopes and terai (marshes) from east to west. The analyst has taken the consider region to cover all those sorts of geological structure and to speak to 77 locales of all seven areas.

The analyst chosen on a cluster-examining plan for selecting the specified respondents of this inquire about. To begin with of all, the think about zone was isolated into three parts (mountains, slopes and fields) based on geological range. In arrange to speak to all geological regions, 17 locales were taken as a test based on the number of 77 areas in all seven territories. After that, a add up to of 17 locales were chosen from the Himalayan, Uneven and Terai districts. So also, ranchers creating six sorts of rural create (Cereal crops, beats, vegetables, oilseeds, creature items and natural products) from all locale were chosen as a bunch. The analyst chosen the respondents based on probability testing strategies. A stratified testing plan was decided for selecting the specified respondents of this inquire about. Members were selected on a relative premise from all districts. A add up to of 1498 respondents were chosen from six bunches taking part within the consider overview.

Nepal has been known as an agrarian nation for a long time. This implies that agrarian crops are a major portion of Nepal's economy. Agreeing to the measurements of FY 2020/ 2021, agrarian generation has contributed approximately 23.9 percent to the Net Residential Item (GDP) of Nepal. Rural crops and creature items meet the basic food needs of the individuals of the nation. In expansion, doing commerce inside makes business inside the nation and gets to be a implies of gaining wage, whereas trading to other nations makes a difference in gaining outside money. Since of this, the government of Nepal has set 15 rural and creature items including six cereal crops within the list of national need agrarian items (MOF, Nepal, 2022).

Table 1: Production and sale status of Cereal crops

	Paddy		Maize		Millet		Wheat	
	Production	Sale	Production	Sale	Production	Sale	Production	Sale
Involved in production%	88.57	82.86	79.28	78.57	28.57	21.43	50.0	42.86
Not involved in production%	11.43	17.14	20.72	21.43	72.43	78.57	50.0	57.14
Mean Kg	2809.3	3275.6	1937.5	1489.4	601.0	470.0	2544.1	1055.0
Std. Deviation Kg	4353.5	10645.7	5299.8	3934.0	488.3	346.0	4616.8	885.1
Minimum Kg	200	10	50	10	4	4	100	80

Maximum Kg	12000	11000.00	40000	40000.00	1000	800.00	20000	2800.00
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(Source: MoALD, 2021)

The production and Mean value of Paddy stands higher value (Production-2809.3 and Sale-3275.6), this indicated that the Nepalese local Paddy usually sale in larger portion through market and buying other commodities to manage livelihood. Wheat selling trend is also significant but in case of Maize and millet the portion remains with farmers as both are stable crops and used in various work of cattle feed, self-consumption as well.

The overall trend verified added through the KII notes where the various stakeholders such as FNCCI, Agriculture professionals and farmers added that Paddy is primarily consumed and certain amount of the stock usually sold in the markets. The commercial farmers added that the farmers more than 5 katha land usually cultivated paddy for the selling purpose. This production usually applies in two seasons during early paddy and seasonal paddy.

Whereas in maize, the larger part of the production used in home than sold in local market and most of the farmers do cultivate maize for the self-consumption, cattle feed and for the market sell, because the farm gate price of maize grains remains 20-30 Nepalese Rupee-NRS/ kg considered the standard market price.

KII and FGD with various stakeholders (Ministry of Agriculture-Federal Ministries and Farmers of all 7 Province based district headquarters) added that:

“Maize and Paddy plays a vital role in the Nepalese kitchen as this is the major staple food in Nepal. Following the trend of Nepal, Millet and Wheat significantly representation some area of Nepal where some peoples do engage in the plantation, Paddy usually grow for self-consumption as well as for sale in market.”

Table 2: Production and sale status of Vegetables

	Lentils		Potato		Tomato		Cali-flower		Reddish		Chilli		Other vegetables	
	Production	Sale	Production	Sale	Production	Sale	Production	Sale	Production	Sale	Production	Sale	Production	Sale
Involved in production %	44.3	28.6	58.6	57.1	75.0	62.1	70.0	59.3	46.4	32.1	40.0	38.6	11.4	7.1
Not involved in production %	55.7	71.4	41.4	42.9	25.0	37.9	30.0	40.7	53.6	67.9	60.0	61.4	88.6	92.9
Mean Kg	354	240	1958	1478	5739	2892	4902	5073	3713	3100	2359	1144	17217	27070

Std. Deviation Kg	502	570	3572	2417	15304	4535	11379	11946	8673	7560	8752	1710	31545	36776
Minimum Kg	15	30	50	60	10	30	8	15	30	26	10	10	60	400
Maximum Kg	2500	2100	20000	12000	90000	20000	60000	60000	40000	38000	60000	7500	80000	80000

(Source: MoALD, 2021)

The trend of Cauli-flower reported high as the standard Deviations stands 11379 for Production and Sale is 11946. This indicating that among the other vegetables, Cauli-flower is usually produced for the commercial purpose compared to the other vegetables. Standard Deviation value of other vegetables also remains high as off seasonal vegetables such as ladyfinger, spinach, leafy vegetables, brinjal and seasonal vegetables.

In case of potato, selling trend is high and self-consumption trend is little low.

The KII participants also added that:

“Potatoes, Cauli-flower, and seasonal vegetables are seasonally produced and sufficient for Nepal but during off season, India and China provided and fulfills the Nepali vegetables demand.”

Table 3: Fruit Production and Sell

	Banana		Pineapple		Mango		Lychee		Other fruit	
	Production	Sale	Production	Sale	Production	Sale	Production	Sale	Production	Sale
Involved in production %	21.4	23.6	14.3	9.3	29.3	28.6	2.1	2.1	5.0	2.9
Not involved in production %	78.6	76.4	85.7	90.7	70.7	71.4	97.9	97.9	95.0	97.1
Mean Kg	217	232	1207	104	622	332	108	300	91	190
Std. Deviation Kg	188	257	4432	80	1242	172	166	0	143	127
Minimum Kg	30	20	20	18	150	30	4	300	2	80
Maximum Kg	800	880	20000	280	6000	600	300	300	300	300

(Source: - MoALD, 2021)

In context of Fruit production, Banana playing a significant role in the production and sell both as this is the most nutritious food and easy to available across the Country available in low cost (1 dozen is 100 to 150 Rs/ kg retail price). Pineapple, Mango, Lychee, and other fruits are core horticulture products required a substantial area for the production but this is limited and due to limited areas and seasons, this production is constraints to some area with limited production, which not goes to sell in near market.

KII Participants added that:

“Banana is the most cost-effective and useful fruits more popular among farmers from the farm gate price and nutritional benefits for the consumers. This is easily cultivated in all types of area in Nepal; hence, this sell and production is genuine.”

Table 4: Statistical analysis of production and GDP contribution of agriculture commodity during year 2020/ 21

SN	Product Name	Production M.T.	Contribution in GDP
1	Rice	561,011	11.3
2	Maize	2713635	6.8
3	Wheat	2005665	4.63
4	Vegetables	4271270	16.67
5	Potatoes	3112947	5.52
6	Apples	31386	0.29
7	Citrus Fruits	271908	1.75
8	Bananas	278890	1.36
9	Mangoes	366144	2.51
10	Cardamom	7954	0.46
11	Coffee	221	0.1
12	Oilseeds	662517	0.36
13	Mustard oil seed	143000	1.07
14	Milk	1800000	12.47
14	Fish	62725	1.83
15	Other meat	357082	6.1
16	Goat meat	65583	3.16
17	Pork meat	18709	0.36
18	Honey	3990	0.18

(Source: Statistical Information on Nepalese Agriculture 2077/78 (2020/21))

Starting from rice until honey, the vital roles in GDP plays by Vegetables (16.67 percent) followed by Milk (12.47 percent) and Rice (11.3 percent). The Gross Domestic products-GDP contributions of such commodities indicating that the huge amount of the desirable commodities is import from neighbor countries such as India and China.

Similarly, Honey, port meats and apples have low contribution in GDP because, the area of beehives farming is less due to Urban based business, similarly, pork meat is rare and only used by the

specific ethnics and this is low in consumption compared to poultry and Goat Meats. Whereas, applies low in production as this is cultivated in hills area and in Nepalese context Mustang, and high mountains area fir for this fruits which is rare and low in productions.

KII with Farmers Associations, Chamber of Commerce and Industries, Agriculture Offices stated as:

“The varieties of rice are limited and traditional farming methods have lowered the paddy production in Nepal. The varieties of rice are not meeting the demands of Nepalese production; Thus, Indian rice and Chinese productions are likely much. Diversity and varieties of Foods-Hills Maize and Terai rice are the two different taste of the people, rice demands are high than other things. Mustard oils, spices and other foods are more in demands, Nepalese production only sufficient for some seasons and demand fills by neighboring case of fruits, no alternative way remains as dependencies arouse.”

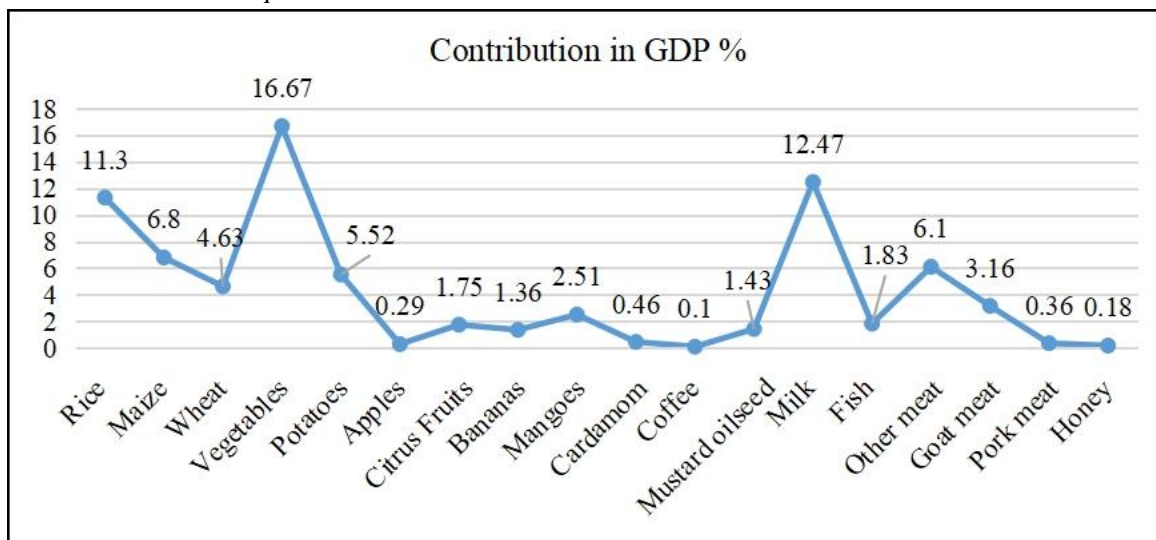


Figure 2: Contribution on Nepalese production in GDP of 2021/22
 (Source: GoN, MoALD, 2021/2022)

Figure 2 indicates that Vegetables and Mils can contribute significantly but seasonally so this requirement also fills by local supply through India and China. However, the KII added that:

Local Vegetables mainly seasonal (tomato, chili, reddish, cauli flower, cabbage, lady finger, ginger, onion etc.,) are seasonally cultivated that last for 3 to 6 months only and the large portion of vegetables imported through India and China. After COVID-19 outbreaks, the meat consumption and production both recorded increased and this production sufficiently manage farm gate price that benefited farmers and traders to perform business. Local traders added that the market is fully dependent on neighbor supply system hence if Nepalese production is insufficient the trading system means market will not survive without production available in the market from any sources, Hence, the Nepalese market is weakening throughout seasons due to limited production.

Rice is the fundamental and every day nourishment of most Nepali families. Additionally, rice is the most source of job and wage for more than two-thirds of Nepalese families. Thus, among all rural crops in Nepal, rice is the foremost developed. Approximately 5.6 lakh metric tons of paddy is delivered in paddy development arrive in Nepal. After Kanchanpur, Chitwan locale has the most elevated rice generation in Nepal. Rice contributes around 20 percent to the country's Agrarian Net Residential Item (AGDP), which is more than 7 percent of Nepal's GDP (MOF, Nepal, 2022).

CONCLUSION AND RECOMMENDATIONS

The study concluded as the local production of rice, vegetables, milk significantly among cereal contributing in the GDP of Nepal following the overall production data of 2021/22. Similarly, daily consumable vegetables cauli-flower, potatoes and other vegetables playing a vital role in the sell as the production and sell both reporting high. Among the fruits, banana role is high as a nutritional food and easily available across the nations doing magnificent role in the local economy. Local production significantly playing a role in some seasons and overall GDP contribution is appreciable to manage economy, However, some additional, agricultural commodities significantly playing a role in the Nepalese economy, beside all this, lack of technical knowledge and traditional farming system as well as diversity challenges in the local production noticed.

As part of precise recommendation, the local production is need to be strengthening too sufficiently throughout a year. Diversification of food is also an opportunity, hence verities of production and need-based production is the best approach for the future market promotion. Hence, Local production need to increase and distributed in each region to manage food security of the country, also trader's management to boost the positive market role is also a need of Nepal. Economic contribution is only possible when a local production of agriculture available throughout year and this process must go in sustainable way.

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