

**AGRICULTURAL TRADE POLICIES AND FOOD SECURITY IN NEPAL:
A WTO PERSPECTIVE**

Draft Final Report

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ACRONYMS/ABBREVIATIONS

ADS	Agricultural Development Strategy
AMS	Aggregate Measurement of Support
AoA	Agreement on Agriculture
AVEs	Ad Valorem Equivalents
BBIN	Bangladesh, Bhutan, India, and Nepal
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
CISE	Cash Incentive Scheme for Exports
DFIA	Duty Free Import Authorization
DoC	Department of Customs
FAO	Food and Agriculture Organization
FDI	Foreign Direct Investment
FGD	Focus Group Discussion
FY	Fiscal Year
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GHI	Global Hunger Index
GMO	Genetically Modified Organisms
GoI	Government of India
GoN	Government of Nepal
GVC	Global Value Chain
LBMC	Law Book Management Committee
LDC	Least-developed Country
MC13	13th Ministerial Conference
MIP	Minimum Import Price
MoALD	Ministry of Agriculture and Livestock Development
MoF	Ministry of Finance
MoICS	Ministry of Industry, Commerce & Supplies
MSP	Minimum Support Price
NAP	National Agriculture Policy
NFIDC	Net Food-Importing Developing Country

NRB	Nepal Rastra Bank
NSIC	Nepal Standard Industrial Classification
NSO	Nepal Statistics Office
NTB	Non-Tariff Barrier
NTIS	Nepal Trade Integrated Strategy
ODCs	Other Duty and Charges
SADCA	Safeguards, Anti-Dumping and Countervailing Act
SAFTA	South Asia Free Trade Area
SAPTA	South Asian Preferential Trade Agreement
SDGs	Sustainable Development Goals
SMS	Short Text Message Service
SPS	Sanitary and Phytosanitary Measures
SSG	Special Safeguards
TMA	Transport and Marketing Assistance
TRFFSA	The Right to Food and Food Sovereignty Act
TRIPS	Trade-Related Aspects of Intellectual Property Rights
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
US	United States
WB	World Bank
WTO	World Trade Organization

ABSTRACT

Inadequate trade infrastructure and recent export bans imposed by the largest trading partner India in major food staples has resulted in a high risk of food insecurity in Nepal. This study examines the potential adjustments to be made in Nepal's agricultural trade policies in line with WTO rules, so that these policies strengthen food security. The research is based on analytical, exploratory and interpretative in design. Researcher employs multi methods of research comprising desk review of existing policy documents on Nepal's agriculture trade, food security, and WTO provisions followed by the brief survey among farmers and consumers and a focus group discussion moderated with selected experts. Based on findings, researcher draws a conclusion that there is absence of a comprehensive Agriculture Act incorporating the pertinent policy issues of farmers, producers including supply chain management, agriculture financing, agriculture trade, self-sufficiency, food security, market access, subsidies, quality standards and such. Nepal has not yet been able to fully utilize the flexibilities provided to the LDCs under AoA. The bound tariff rates on market access is very much low in Nepal regarding the Agriculture products. Researcher recommends the concerned authorities to pass a comprehensive legislation on agriculture incorporating a separate Unified Agriculture Development Authority to look after the pertinent issues of agriculture. Tariffs on agricultural food products and forms of subsidies to protect the farmers in Nepal must commensurate with that of its largest trading partner India.

Keywords: Agriculture Trade Policies, Food Security, WTO, Agreement on Agriculture, Agricultural Subsidies

CHAPTER 1

INTRODUCTION

1.1 Background

Nepal, being the first least-developed country (LDC) to obtain membership of World Trade Organization (WTO) through the full working party negotiation since 23 April 2004, has been fully committed on rule based multilateral trading system (Government of Nepal Ministry of Industry, Commerce & Supplies [GoNMoICS], 2018). However, Nepal has not yet been able to expand its export market largely being benefitted by the WTO rules due to several structural and capacity constraints such as dearth of institutional capacity and inter-agency coordination, absence of robust legal regime for trade and investment environment, lacking of competitiveness in product identification, weak trade related infrastructures and so on. The Covid-19 pandemic and prolonged Russia-Ukraine war has too adversely affected the livelihood and economic activities globally and Nepal's trade is not an exception (Government of Nepal Ministry of Finance [GoNMoF], 2023). Accordingly, Nepal's export import ratio has continuously been widening which remains at 1:10.26 presently with merchandise exports limited to meager Rs.157.14 billion against the merchandise imports of Rs.1611.73 billion during 2022/23 as reported by Nepal Rastra Bank (NRB, 2023).

The bleak picture of its international trade has also the adverse impact on food security dynamics as Nepal is a net importer of agricultural and food products. Pursuant to the macroeconomic data presented by Nepal Rastra Bank (NRB, 2023), agricultural, commodity goods and food products worth Rs 352 billion have been imported from abroad during 2022/23. The import of rice/paddy alone is worth Rs. 36.40 billion in the review year, which is 23.1 percent less than the previous year. This was the outcome of the imposition of import regulations which lasted from April 2022 to January 2023 in an attempt to curb the import of non-essential luxurious items (GoNMoF, 2023). Chemical fertilizer worth Rs. 40.69 billion, edible oil worth Rs. 18.71 billion and pulses worth Rs. 6.82 billion were imported in 2022/23. Vegetables worth Rs. 16.88 billion were imported as one of the major commodities from India whereas apple worth Rs. 5.15 billion was imported from China during 2022/23. On the export side, Nepal shipped cardamom amounting Rs. 8.26 billion, Juice worth Rs. 6.63 billion and tea worth Rs. 3.93 billion in the review year (NRB, 2023).

Given that large segment of youths are migrating abroad pursuing better opportunities for foreign employment, Nepal has been relying much upon food imports rather than internal agricultural production to safeguard its food security interests in recent years. Central Bureau of Statistics has estimated the share of agriculture in Nepal's gross domestic product (GDP) stands 24.12 percent only which is gradually decreasing for last few years. According to the Nepal Labor Force Survey, the population engaged in the agricultural sector was 73.9 percent in 2008 and 60.4 percent in 2018, which has sharply declined to 50.4 percent in 2021 (GoNMoF, 2023). While implementing the sustainable development goals (SDGs), ending hunger, achieving food security and improved nutrition and promoting sustainable agriculture has been a high priority for Nepal in the area of zero hunger under Goal 2 but so far the achievement in food security is low. Although per capita food production is satisfactory, the food security index is 46. In the 2022 Global Hunger Index (GHI), Nepal ranks 81st out of the 121 countries with sufficient data to calculate 2022 GHI scores. With a score of 19.1, Nepal has a level of hunger that is moderate (Global Hunger Index, n.d.). The prevalence of stunting (short height for age) among children under five decreased from 36 per cent in 2016 to 25 per cent in 2022. During the same period, the prevalence of child wasting (low weight for height) reduced from 10 per cent to 8 per cent. However, large numbers of children under five years of age are stunted, wasted, underweight, and anemic, so the expected improvement in malnutrition has not been achieved. The expected achievement in the infrastructure required for food production also has not been achieved (GoNMoF, 2023).

Martin (2017) rightly points out that agricultural trade is vitally important for achieving the goal of ending hunger in SDGs. Trade helps in enhancing food security in number of ways, by allowing the importer country to have access to and availability, utilization, stability of ample food. Also trade liberalization can support in enhancing agricultural production efficiency, balance the food prices by adequate supply and reducing volatility. The Constitution of Nepal has enshrined the right to food and food sovereignty as the fundamental rights of the citizens (The Const. of Nepal, art. 36). The Right to Food and Food Sovereignty Act are passed in 2018, declaring the right of all Nepali people to be free from hunger and to be able to access sufficient nutritious food all year round. These laws on food sovereignty can be implemented well based on the WTO rules which could facilitate the agriculture trade in favoring the food security status. Strict adherence to the WTO rules can enhance food security by ensuring members not to impose

unnecessary restriction on the flow of food and have policies in place to facilitate trade at the international border. GoNMoICS (2018) noted how Nepal being a WTO member is implementing its tariff rate on agricultural products, "The simple average applied tariff on agricultural products is 15% with a median of 10% (including estimates for ad valorem equivalents (AVEs) of non-ad valorem tariffs) and high variability indicated by a standard deviation of 20.8%" (p. 116). During the accession to WTO, Nepal had accepted not to use any export subsidies for agricultural goods and had no commitments relating to tariff quotas and did not seek any special agricultural safeguard on any tariff line but subsidies under the cash incentive scheme for exports (CISE) was introduced in 2012, the scheme which was modified in 2013 and subsidy was 1% or 2% of the value of exports for eligible products, which included agricultural products as well (GoNMOIcS, 2018). In addition, it is ensured that farmers will get fair price of agricultural products on the basis of production cost. The minimum support price (MSP) of raw milk, paddy, wheat and sugarcane among the major food crops has been fixed in order to discourage the influence of middlemen in the agricultural sector. Nepal's largest agriculture trade partner, India has been fixing MSP for more than thirty agriculture products including barley, maize, cotton, gram, moong dal, mustard, jute etc. beyond paddy, wheat and sugarcane (GoNMoF, 2023).

In its latest move to stem the rising food prices, India has imposed several bans on different food products including rice and wheat, which is supposed to have serious implications not only in the food prices but also overall other dimensions of the food security in Nepal. On July 20, 2023, India imposed export bans of non-basmati rice to curb the domestic rice prices. A notification from the Directorate General of Foreign Trade reads that export policy of non-Basmati white rice, semi-milled or wholly milled rice, whether or not polished or glazed, is now amended from 'free to prohibited'. In 2022, India implemented a ban on the export of broken rice and imposed a supplemental tariff of 20% on exports of non-basmati rice (Glauber & Mamun, 2023). Earlier, following the Russian-Ukraine crisis, India has been imposing a ban on the export of sugar and wheat since June 1, 2022. India further issued a ban on wheat flour exports in an effort to control rising domestic wheat and flour prices (Gro Intelligence, 2022).

These sort of tendencies of Nepal's agriculture trade and commodities imports directly linked with the food security concerns on the one hand and the series of restrictive measures of export ban imposed lately by the key trading partner, India on the other hand has established the

fact that food security is becoming more complicated to ensure due to arising geopolitical risks. Safeguarding food security interests has been a much pertinent question for Nepal and readjustment and realignment of its overall agricultural trade policies to cope up with the threat of food insecurity is need of the hour. Thus it is of the dire need to study and assess the required adjustments in Nepal's agriculture and trade policies to mitigate the hazards of the restrictive approach of the other trading partners including the export bans of the food and agriculture products arising out of the geopolitical crisis and escalating tensions between the superpowers in different parts of the world. This study focuses on what are the key vulnerabilities in Nepal's domestic food production and distribution systems that could exacerbate the food crisis caused by the export ban and other restrictive policy constraints adopted by the major trading partners. Despite there is no integrated agricultural law in Nepal but there are specific laws relating to different aspects of agricultural policy and Agricultural Development Strategy (ADS), 2015-35 has been implemented. This study also examines the potential adjustments that can be made to Nepal's agricultural and trade policies in line with the WTO rules, so that these policies result in enhancing domestic agricultural production, minimize supply chain disruption and strengthen food security during the times of external crisis. Nepal should consider the various ways in which it can meet domestic food security objectives, through effective and complete implementation of the WTO agreements.

1.2 Statement of the Problem

WTO promotes liberalization of agricultural trade through its Agreement on Agriculture (AoA) which sought to improve market access by reducing agricultural market protections such as quotas and converting them to tariffs, reduce and remove all trade-distorting domestic support measures like market price support and export subsidies (David & Kim, 2015). However, Sharma (2016) found the unfair provisions of AoA rules are restricting many developing countries from adopting measures to provide food security through price and procurement policy. Provisions given under AoA are not fair to the developing countries to provide food security to millions of poor people and those provisions are highly skewed towards developed countries. While the developed countries provide billions of dollars of subsidy to their farm sector but often they object to developing countries implementing food security programmes tailored to meet their needs as pointed out by Sharma (2016).

In the wake of 2015 mega earthquake and COVID pandemic, Nepal's economy is in quite sluggish stage and is estimated to grow by only 2.16 percent in 2022/23 due to the impact of Russia-Ukraine crisis led obstruction in the supply chain, contraction seen in the construction, manufacturing and wholesale and retail trade (GoNMoF, 2023). Food prices have escalated sharply with the annual average consumer price index of restaurant & hotel sub-category increased 14.42 percent, spices 12.50 percent, cereal grains & their products 10.70 percent, and milk products & eggs 9.23 percent (NRB, 2023). Vulnerability to fluctuations in global food prices, poor trade infrastructure, recent export bans imposed by Nepal's largest trading partner India in rice, wheat and other major food staples has resulted in a high risk of food insecurity in the country. To cope up with such problem, Nepal needs to thoroughly examine the WTO Rules on agriculture and their implications for enhancing food security. To deal with problems and issues related to the agriculture and food security, Nepal as a net importer of food needs to take the WTO rules on agriculture into consideration and make necessary adjustments and alignments in its agriculture trade policies.

The major research questions of the study are as follows:

1. How can Nepal strategically negotiate and manage its trade relations within the WTO framework and other regional trade agreements to ensure that its food security interests are safeguarded amidst global geopolitical uncertainties?
2. What potential adjustments especially in tariff rate, subsidies measure and product specific support system can be made to Nepal's agricultural and trade policies to enhance self-sufficiency in major food production, minimize dependency on food imports, and strengthen food security?
3. What policy measures can be adopted to diversify Nepal's food imports and build resilience in the face of export bans or trade disruptions from major trading partners?

1.3 Objectives of the Study

The major objectives of the study are as follows:

- i. To identify the lacunae in the agriculture trade policies and existing laws on food security in Nepal.
- ii. To find out how far the WTO principles and rules are incorporated within the agriculture trade policies and bundle of laws in Nepal to enhance domestic production.

- iii. To investigate how Nepal can strengthen its food security status taking consideration of the WTO rules in agriculture trade and manage subsidies measures and product specific support system effectively to enhance domestic food production.
- iv. To assess the ability of the WTO legal framework to address food security challenges by minimizing supply chain disruptions of essential foods during external crises.
- v. To examine how Nepal can collaborate with regional and international stakeholders to develop a comprehensive food security strategy that addresses both short-term crisis and long-term sustainability.

1.4 Significance of the Study

This study is very much significant to address the pertinent problems of food security in Nepal through ensuring smooth agriculture trade within the multilateral rule based trading regime of WTO. Food security is closely linked to health, nutrition, sustainable economic development, environment and trade. International trade has significant role in mitigating the food related crisis by maintaining the supply chain to make available of essential foods abundantly amidst heightening global food insecurity due to the regional and international crises. The study is supportive to readjust Nepal's agricultural trade policies in light of WTO rules so as to enhance food security in Nepal by addressing the susceptibility created by various restrictive measures of the trading partners including export bans and highly volatile prices of essential food staples in the international market. Nepal, as one of the member of LDCs has not yet been able to make use of the subsidies measures permitted within the WTO rules on agriculture, the issue which is explored in this study. Nepal needs to formulate and realign its agriculture trade policies with the aim of using different instruments and programmes to enhance access of its general people to adequate food, maintain public stockholding and avail the farmers with the benefits of proper subsidies and product specific supports. These pertinent issues explored and examined in the research substantiate the rationale of the study.

CHAPTER 2

LITERATURE REVIEW

2.1 Concept of Agricultural Trade Policies

The concept of agricultural trade policies in this study covers arrays of the plans, principles and courses of actions adopted or governed by the government relating to enhancement of production, storage, supply, consumption, financing and trading of the agricultural products both at domestic and transnational level.

The term "agricultural trade" refers to import and export of agricultural products while "agricultural products" as broadly defined by United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP, 2011) include (i) Perishable Goods, (ii) Cereals and (iii) Other Products. Food and Agriculture Organization and World Health Organization (1993, as cited in UNESCAP, 2011) describe the perishable goods as food items that are highly susceptible to spoilage and defined readily perishable food as food that consists wholly or partly of milk, milk products, eggs, meat, poultry, fish or shellfish, or ingredients that are capable of supporting the progressive growth of microbiological organisms that can cause food poisoning and other food borne illness. Likewise, cereals include commodities such as rice, maize, wheat, barley, millet and other cereals. Category of other products comprise animal or vegetable fats, sugar, cocoa, preparations of cereals, beverages, seeds, high-value processed food and other mostly food products. With few exceptions such as seeds, flowers etc, most of the agricultural products are agricultural food products (p. 2). UNESCAP (2011) points out three major reasons for policy makers to focus on agriculture trade – firstly the rising global population resulting in disproportionately increasing food demand by 2050; then the food security concerns of the poor people in the net food importing least developed countries hampered by global price dynamics, undue agricultural subsidies and export restrictions imposed by influential economies; and thirdly, the changing dietary habits and demand of processed food due to rapid urbanization. Hence, the agricultural trade policies, in essence, constitute a framework of rules, regulations, and agreements governing the international exchange of agricultural products. These policies are crafted to address a spectrum of issues inherent in agricultural trade, encompassing market access, tariffs, subsidies, sanitary and phytosanitary measures, and various trade barriers. The overarching objectives of agro-trade policies are to foster equitable and efficient trade, ensure

food security, and underpin the sustainable development of the agricultural sector. Key components of agro-trade policies include but not limited to:

Tariffs and Trade Barriers: Countries often impose tariffs or non-tariff barriers to protect their domestic agricultural industries. Tariffs are taxes on imported goods, while non-tariff barriers can include quotas, licensing requirements, and technical standards.

Subsidies: Governments may provide subsidies to their domestic farmers to support agricultural production and ensure food security. However, these subsidies can distort international trade by creating an uneven playing field.

Sanitary and Phytosanitary Measures (SPS): SPS measures are regulations related to food safety and animal and plant health. These measures are essential for protecting human, animal, and plant health but can also be used as trade barriers.

Trade Agreements: Bilateral and multilateral trade agreements play a significant role in shaping agro-trade policies. These agreements aim to reduce trade barriers, promote market access, and create a more level playing field for participating countries.

Market Access: Agricultural trade policies often address issues related to market access, ensuring that countries have fair opportunities to export and import agricultural products. This includes negotiations on tariff reductions and the removal of non-tariff barriers.

Sustainability and Environmental Considerations: Increasingly, agriculture trade policies are incorporating sustainability and environmental considerations. This includes addressing issues such as climate change, conservation of biodiversity, and sustainable agricultural practices.

Intellectual Property Rights: Protection of intellectual property rights related to agricultural innovations, such as Genetically Modified Organisms (GMOs) and new plant varieties, is also an important aspect of agro-trade policies.

Food Security: Policies may also be designed to ensure food security by managing the balance between domestic production and imports, especially for essential food items.

2.2 Agricultural Trade Policies in Nepal

As noted in FAO (2011a), many developing countries have followed a typical practice of announcing the national trade policy periodically, usually every 5-6 years, outlining strategies, policy orientation and broad rules and parameters especially through periodic plans, annual budgets or any specific schemes. Nepal also followed the similar pattern consistently

emphasizing the import substitution and promotion of exports as major aspect of economic policy since the inception of its first periodic plan of development in 1956. In the wake of restoration of the multiparty system in early 1990s, Nepal also embarked on policy reforms towards a liberal, market-oriented international trading regime which was significantly pushed by the structural adjustment programmes and loan conditionality from Nepal's major donors including the IMF and World Bank, among others (Pandey, 2011).

GoNMoICS (2023) briefly surveys the evolution of Nepal's trade policy in its latest Nepal Trade Integrated Strategy (NTIS). Until the year 1992, there was no separate trade policy in Nepal let alone the agricultural trade policies. The first trade policy in 1992 introduced the concept of openness which removed many barriers to trade. In 2009, the second trade policy was implemented, incorporating more innovative ideas in line with the commitments made during Nepal's WTO accession in 2004 and the provisions in the regional level trade policy instruments, trade and transit treaty with the major trading partner India. Second trade policy of 2009 aimed to create a favorable environment for international competition, promote export growth, reduce trade deficits, increase income and employment opportunities, and establish internal and external business relationships. Nepal had identified 19 selected items for exports through its National Trade Integration Strategy (NTIS) in 2010. However, despite having such policy documents for promoting exports of Nepali products, mainly the food products in the international market, strengthen the domestic supply chain, and establish supportive preconditions for business cooperation, those goals could not be achieved. Trade deficits and imports of food persistently increased. In 2015, the third trade policy was released after promulgation of the new constitution, primarily aiming to reduce trade deficits, connecting services to trade, and protecting intellectual property. In addition, the ambitious goals of the NTIS 2010 could not be achieved and in 2016, the strategy was revised taking into account that export growth rate of goods and services recognized by the NTIS remained weak even during the years which witnessed overall export growth. Recently in the backdrop of the new tendencies emerged in the international trading system in the post COVID pandemic situation, federalized economic system adopted by the new constitution and while Nepal is likely to graduating to the status of developing country from that of LDC, Nepal has launched its third NTIS in 2023 with the aim to develop healthy ecosystem for trade in goods and services by means of improving the trade competitiveness, investing in

trade infrastructures, streamlining the regulatory environment, trading procedures and expanding export markets.

Besides trade, governmental policies relating to diverse aspects of agriculture are found to be scattered in the arrays of policy documents in Nepal. While Nepal currently lacks a unified, comprehensive policy addressing the various facets of agriculture and food security, the country has implemented a multitude of policies spanning from the year 2000 to the present day. Recent agricultural policies implemented in Nepal include, among others, the ADS (2015-2035), the National Food Safety Policy (2019), the National Agro Forestry Policy (2019), and the Dairy Development Policy (2021). Similarly, the plethora of agriculture-related policies brought in place since 2000 by the GoN comprise Nepal Seed Policy, 2000, National Tea Policy, 2000, National Coffee Policy, 2003, National Agriculture Policy (NAP), 2004, Agribusiness Promotion Policy, 2006, Rangeland Policy, 2012, Agriculture Bio-Diversity Policy (1st Amendment), 2014, Agriculture Mechanization Policy, 2014, Climate Change Policy, 2011, Bird Farming Policy, 2011, Floriculture Promotion Policy, 2012. In addition, the ongoing 15th periodic plan, the concept paper of the 16th periodic plan and the agricultural and food security related directive principles and policies in the Constitution also include policy matters somehow relating to agriculture and food security.

The ADS has a 10-year action plan, a 20-year vision, and seven vision components to guide agriculture sector indicators, including self-reliance, sustainability, competitiveness, inclusion, agriculture growth, livelihoods, and food and nutrition security—each in five-year, 10-year and 20-year increments. ADS implementation has already completed six fiscal years (2015/16 to 2021/22). Out of the 16 indicators, 12 were found generally on track and four—related to food grain self-sufficiency, agriculture trade, irrigated area development, and agriculture productivity growth—were still lagging. Likewise, the revisions to the NAP, 2004 are at an advanced stage which are expected to adapt the federalized context, improving access to agricultural inputs and creating enabling environment for enhanced production of the major commodities in demand (GoNMoALD, 2023).

FAO (2011b) rightly points out the trade policy in Nepal as missing out on some broader development issues due to its exclusive focus on exports. The important development issues for agriculture policy including the structure of import tariffs and protection, tariff escalation, and incentives to import-competing industries which were related to importable food products were

bypassed while introducing the NTIS for the first time in 2010. No analysis or guidance were included on how the trade sector's weak linkages with raw materials would be reversed in the trade policy and NTIS. There are no serious analyses on what policies and incentives would encourage export-oriented industries that use local materials and have strong linkages. Even the agricultural policy does not have the priority list of the agriculture products to export, although trade policies and NTIS list many agricultural products. The provisions for supply value chains and incentive schemes involving the subsidies covered in trade policy are yet not evidence-based on the baseline statistics on trade support measures and product-specific support.

Brooks & Matthews (2015) notes that trade policy instruments are often politically attractive to policymakers due to their flexibility of adjustments even without requirement of use of budgetary sources and also being politically visible way of responding in the food crisis. Articulation of agriculture trade policy is a continuing process, which needs to be able to respond the newer issues emerging in regional and global food markets, price volatility, trade barriers, export restrictions and other obstinate policies by trading partners and problems of the prolonged poverty among basic foods producers (FAO, 2011a). Thus, to address the cross-cutting issues arising in agriculture, food production, and trade, mainstreaming across agriculture-related policies and trade policies, along with industrial policy, export policy, climate change, and the like, is the most crucial need of the hour. Agriculture trade must be dealt as one of the holistic issues of development policy frameworks. The mainstreaming of agricultural trade policies into development strategies can help build support for policies that can help trade contribute more effectively to national food security.

Agriculture trade suffers from a range of constraints causing time delays and incurring additional cost leading to increased transaction cost for both the producers and the traders. The lack of proper agriculture supply chain for the movement of agriculture products from producers to consumers, cumbersome trade and custom procedures, capacity constraints relating to complying with product standards, absence of the trade finance, trade logistics and other infrastructures are the area in which agriculture trade policies must address to enhance the competitiveness in trading food products (UNESCAP, 2011).

In this study, the agriculture trade policies related to overall production, specific crops, farming systems, and agricultural marketization, policies relating to tariff rates, export promotion and food imports for maintaining food security resilience, seasonal export and import

restrictions, product standardization and quality control, sanitary and phytosanitary regulations, incentives, subsidies and quota changes, anti-dumping measures, trade financing, non-tariff trade barriers, export diversification, regional trade agreements with major trading partners, agriculture supply chain and such are mainly studied and analyzed for the timely improvements in these policies to address the food security concerns.

2.3 The Concept of Food Security and Linkages with Trade

Food security is often defined in the literatures on the basis of World Food Summit held at FAO Headquarters in Rome, Italy, from 13 to 17 November 1996. The Rome Declaration on World Food Security and the World Food Summit Plan of Action adopted by the World Food Summit declares that food security exists when all people, at all times, have physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life (FAO, 1996).

The four main dimensions of food security involves physical availability of food, economic and physical accessibility to food, food utilization and stability of the other three dimensions over time. Food availability addresses the “supply side” of food security and is determined by the level of food production, stock levels and net trade. An adequate supply of food at the national or international level does not in itself guarantee the accessibility of the household to food. The other variables such as incomes, expenditure, markets and prices also have their impacts on the accessibility to food. Sufficient energy and nutrient intake by individuals come under the dimension of food utilization. Thus feeding practices, food preparation, diversity of the diet and intra-household distribution of food determines the food utilization. The adequate access to food on regular and periodic basis without any adverse impact by the weather conditions, political instability, or economic factors (unemployment, rising food prices) on the food security status is expected to realize the food security objectives (The World Bank, n.d.)

Valdes & Siamwalla (1981, as cited in Headey & Fan, 2010) elucidates the basic notion to constitute food security is that food-deficit countries, regions, or households should be able to meet target consumption levels on a year-to-year basis and target levels refer to adequate levels in a nutritional sense. Thus attaining food security involves several different dimensions: i. Producing enough food at the global level, at a minimum; ii. Ensuring country-level access to food imports at affordable and relatively stable international prices and iii. Ensuring household-

level access to food purchases at affordable and relatively stable domestic prices. With this definition, it can be concluded that predictability is also as much equally important as affordability to ensure food security. Absolute price changes do not only create food crisis but the speed of price changes and the degree to which they take consumers, producers and the governments by surprise is also important issues of the note. From this discussion, we can say that the abrupt export restrictions imposed by the regional and major trading partners can speed up the frequency of price changes and gearing the food insecurity to a new height. Access to imports of food also depends on domestic factors such as sufficient export earnings to meet import requirements, whereas dependence on food imports is largely the result of low levels of domestic food production. Likewise, access to food within countries is though more a national-level dimension of food security, however, this dimension is also affected by foreign assistance influences through food aid, agricultural aid, infrastructure aid, the influence of technical assistance and conditional loans on food and input subsidies, and so on.

International trade affects the availability, access to, price stability and utilization of food and there can be no food system without international trade. As people, arable land and water do not always exist in the same place, international trade is inevitable for the quick redistribution of food across the globe which is not possible without adequate trade finance and food supply chains connected with trade infrastructures. Farmers look for the right conditions to trade as producers are also businessmen and they may starve when they do not sell their products. However, Global Value Chains (GVCs) have become a key feature of the international food trading system in the modern times instead of the smallholder farmers. The FAO estimates that about one-third of global agricultural and food exports are traded within a GVC and cross international borders at least twice which needs some effective alternatives. To enable agricultural trade, it would be important to “de-risk” participation in GVCs, and commercialize the smallholder farmers in particular to allow for their inclusion in trading of agro-food products (WTO, 2020).

It is also highlighted in WTO (2020) that in the present food system, in many countries, the wrong calories are consumed, and people are at once undernourished and overweight. Nepal is also not an exception with regards to this problem. Food systems need to move towards a lower consumption of food staples (rice, wheat, maize) and of meat, and a higher consumption of food perishables (fruits and vegetables) for a more nutritious diet. Likewise, it is also challenging

issue to control the food waste while we are wasting 25-30% of the food we produce in our food system every day. Wasting food means waste of land, water, and energy, as well as all of the other natural resources that is utilized into producing food. Also to make the trade negotiations really workable with regards to the food security, it is high time for the reexamination of the values and interests behind the huge subsidies provided persistently by the developed countries to their agriculture.

2.4 Theoretical underpinnings of Food Security and Agricultural Trade

Theoretically, the ethical and human rights dimension is associated with the concept of food security. The Right to Food was first recognized in the UN Declaration of Human Rights in 1948. In 1996, the formal adoption of the Right to Adequate Food established the concept of food security which taken as a milestone achievement of the World Food Summit 1996. It firmly set the trend towards the rights based approach to food security (FAO, 2006). The issues of the food security and trade is also theoretically linked with utilitarianism as forwarded by the theorists including Bentham and J.S. Mill. Utilitarianism focus on maximizing overall well-being and happiness. Thus evaluating agricultural trade policies of Nepal based on their consequences for the maximization of the wellbeing of the greatest number of people could be a theory underneath the study. Based on utilitarian values, state can prioritize the policies that contribute positively to food security for the majority of the population.

Pogge (2008) argues that cosmopolitan justice is a practical and relevant theory to address global poverty. He emphasizes the responsibility of developed nations and their citizens in restructuring the global order to ensure justice. His theory is relevant in relation to the agricultural trade to enhance food security in the poor countries. Professor Pogge stresses the negative duty to avoid supporting an unjust system that deprives the poor of basic necessities. Those in power, especially at the global level, have a crucial role in changing policies to alleviate poverty. The priority is to stop harming the global poor and take immediate, non-optional, and morally necessary steps towards poverty eradication. Pogge mentions that most of the poor countries are excluded from exporting their agricultural products to developed countries because of the imposition of high duties and tariffs, anti-dumping laws and agricultural subsidies, etc. He claims that he have no complain that the WTO regime opens markets too much, but that it has open our markets too little and has thereby gained for us the benefits of free trade while withholding these benefits from the global poor (Pogge 2008: 18).

FAO (2003) discusses the theoretical foundations underlying trade liberalization and its implications for food security. The arguments for trade liberalization are primarily rooted in the Ricardian "conventional" or "neo-classical" trade theory, specifically the theory of comparative advantage and the Heckscher-Ohlin (H-O) theorem. These theories suggest that differences in productivity and factor endowments between countries form the basis for engaging in trade, with the expectation that it maximizes potential economic welfare globally. The H-O model explains the pattern of trade based on differing factor endowments, where countries export goods that use their relatively abundant factors and import those that use scarce factors more intensively. Advocates of free trade argue that, under competitive free market conditions, trade can lead to international economic welfare maximization, provided suitable redistribution is made. However, the theoretical model assumes perfect competition, no economies of scale, and homogeneity in products, raising questions about its real-world applicability. Despite the potential benefits of free trade, governments often resort to border intervention policies to restrict it. The infant industry perspective is identified as a reason for protectionism, especially in developing countries, where industries may require protection to grow before competing globally. Political imperatives, such as the influence of groups benefiting from protection and revenue generation for developing country governments, also play a role in justifying protectionist measures (FAO, 2003).

In the short run, the FAO (2003) highlights that agricultural sectors in poor economies may not immediately benefit from trade liberalization due to inflexible production structures, limited market access, weak institutional development, and a constrained capacity to respond to improved incentives. Food importers, however, can be affected in the short term through higher costs.

2.5 Present Status of Agriculture and Food Security in Nepal

In its last census report, Nepal Statistics Office (NSO) (2021) reports the classification of agriculture, forestry, and fishing as the largest industrial category in Nepal, employing 57.3 percent of the economically active population out of the 14,983,310 individuals who were engaged in any kind of economic activity in the last 12 months preceding the census. The economically activity of the individuals aged 10 years or above who are engaged in any economic activity, regardless of whether they are seeking employment or not is classified according to the Nepal Standard Industrial Classification (NSIC). Among the economically

active population, skilled labours from agriculture sector comprise the largest proportion of 50.1 percent on the basis of the classification of occupation. The farm population accounts to 66.7 percent of the total population of the country in 2021. Compared to 2011/12, the farm population has decreased by 5 percent (NSO, 2023). Similarly, the census report of 2021/22 shows that there are a total of 74,591 permanent workers employed in 39,190 agriculture holdings which is also a slight decrease of 3.1 percent compared to 2011/12

According to 2021/22 Agriculture census, out of a total of 2,218,410 hectares, 1,429,981 hectares are classified as wet land, while 788,429 hectares are classified as dry land. Over the last 10 years, there has been a decrease in the total land area, resulting in a corresponding 9.7% decrease in wet land and a 16.3% decrease in dry land. Agriculture census highlights an alarming situation of decreasing agriculture land. Out of 2.21 million ha. of land used by agricultural holdings, 2.12 million hectares (95.6%) are used for agriculture, 80.7 thousand hectares are covered by forests and other wooded land, 12.9 thousand hectares are used for ponds, and the remaining 3.2 thousand hectares are other land not elsewhere classified. In 2021/22 the area of forests and other wooded land is increased by 46.9%, and the area of ponds is increased by more than three times compared to the last Agriculture Census 2011/12. The total area of holdings has decreased by around three hundred thousand hectares, resulting in a decline in both temporary and permanent crops. Over the past ten years, the land used for temporary crops has decreased by 392,316 hectares (18.5%), while permanent crops have decreased by 23,093 hectares (13.7%). This data clearly shows that deficit in the food production will arise in the day to come due to the decrease in the farm based population, farm based labours and agriculture land.

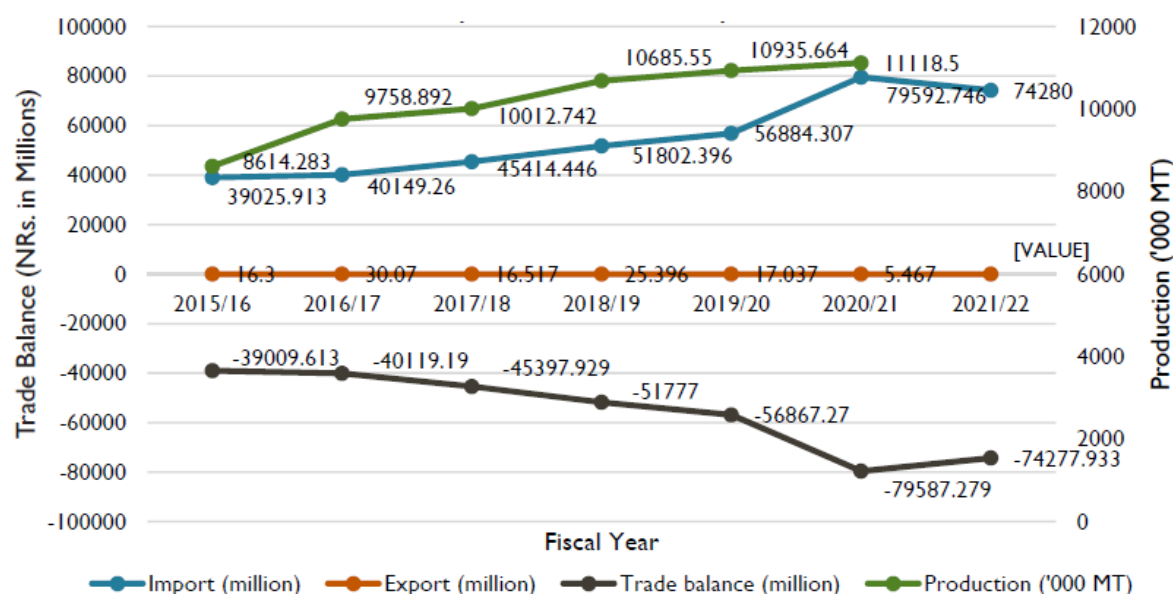
In Nepal, there has been a rise in the use of modern farming techniques such as improved and hybrid seeds, chemical fertilizers and pesticides. However, the most recent census conducted in 2021/22 shows that more than half (56.3%) of paddy farmers still use local seeds, with only 27.2% using improved seeds and 16.5% using hybrid seeds. The agriculture census also reports that almost half (47.9%) of farmers in Nepal grow vegetables. Among the livestock, census data shows that over the past decade, the number of cattle on agriculture holdings decreased from 6,430 thousand to 4,559 thousand, which is a decrease of 29%. Likewise, buffalo numbers decreased from 3,174 thousand to 2,923 thousand and sheep numbers decreased from 608 thousand to 478 thousand. However, there is an increase in the numbers of poultry and goats.

The decrease in the numbers of the cattles, buffaloes and sheeps also poses threat to the food security.

Although food grain production has slightly increased in recent years, agriculture trade data for fiscal year 2021/22 indicate a food grains deficit of around 14.07 percent against the national requirement. It was targeted to be reduced to zero deficit by 2021/22 in the ADS (GoNMoALD, 2023). Further, the data for the first seven months of (mid july 2023 to mid-February 2024) of the fiscal year 2023/24 shows that cereals worth Rs. 28.21 billion have been imported and equivalent of NRs. 6.8 million is exported resulting a trade deficit of Rs. 1.11 billion as shown in the statistics of the Department of Customs (DoC) (2024). The cereals production, import and export trends during the period of seven fiscal years of implementation of ADS is shown in the figure 1.

Figure 1

Status of Cereals Trade Balance (FY 2015/16-2021/22)



Note: Data obtained from GoNMoALD (2023, p.11).

There is absence of the mechanism to assess progress on the food-based poverty indicator in Nepal. Food-based poverty was estimated to be 23.1 percent in 2011. About 10 percent of households were severely food insecure and 22 percent moderately insecure in 2016. Further, the available data indicates that 17.9 percent of the population was severely food insecure and malnourished in FY2018/19(GoNMoALD, 2023). The latest Nepal Demographic and Health

Survey, 2022 shows that severe stunting (below 5-year children) decreased to 25 percent, severe underweight decreased to 19 percent and severe wasting decreased to 8 percent in 2021 (MoHP et al., 2022).

2.6 Review of Previous Studies

Most of the previous studies and research papers published in context of food security in Nepal are found to have been written from perspective of evaluating the impacts of various factors upon agriculture and food management rather than analyzing agricultural trade policies and food security. The following selected articles are briefly reviewed during the study:

Paudel et al. (2020) has reviewed Nepal's role in WTO and based on the systematic analysis, concluded that despite the efforts made towards benefiting from WTO provisions, achievements are not satisfactory during one and half decade period of the membership of WTO. The research focus on Nepal's exports and priorities to be taken at WTO and thus suggested to work on finding 'niche' products which in general have zero duty even after Nepal's graduation from LDC. Nepal should further explore the export potentials based on provisions of regional initiatives and trade treaty arrangements. Regarding the agricultural policies, the researchers concluded that additional domestic supports in the form of subsidies, export incentives, finance, and guaranteed fixed price or MSP must be provided to ensure that farmers would get a minimum profit. Similarly, arrangements for public stock holding which includes purchasing, stockpiling, and distribution of food by the government in times of necessity is suggested in the study to make the agriculture sustainable and maintain food security.

According to Ghimire (2020), COVID-19 has significantly and unprecedentedly deteriorated food security of 11.6 percent household and reduced sources of income by 68 percent among the 839 respondents from 13 districts in Nepal. These data were collected through questionnaire and telephonic survey method. Researcher found that in the primary survey area, the households have adopted different coping strategies to cope with emerging livelihood and food security issues. Therefore, economic recovery programme is required to be prioritized for food-insecure households for children's malnutrition and family well-being as suggested by the author. However author fails to suggest the precise method or way to address the serious food insecurity arising out of the COVID-19 pandemic.

Chemjong & KC (2020) evaluated the food security status and found that Pandemic COVID-19 is degrading the daily life of the Nepali people and accelerating the food insecurity in

the country. According to their study, mostly western Nepal and Terai region seemed to be more vulnerable to disasters and food insecurity. In Nepal, 4.6 million people are food-insecure, with 20 percent of household mildly food-insecure, 22 percent moderately food-insecure and 10 percent severely food-insecure, the problem which is suggested to be solved by clear and sound policies and strategy.

Kim et al. (2019) examines the effect of male-out migration on household food security, especially on the women, in the rural Nepal where 90 percent of Nepalese low-skilled labour migrants are men who migrate alone to earn wages abroad while their families stay behind. Their findings from in-depth interviews and FGD in the mountains of Far West Nepal draw linkages between the effects of male out-migration and the three core cross-cultural domains of household food insecurity experience in Far West Nepal and suggest that migration can benefit households through remittances by facilitating access to loans and credit, and alleviating anxiety about having enough to eat. However, it comes at high costs of men working at undignified, unsafe, and conditions and women bearing additional childcare, fieldwork, and house-work responsibilities. Limited male agricultural labor also hampers agricultural productivity and increases households' reliance on markets to meet basic needs. Though remittances help to address the problem of insufficient quantity of food, it also does not improve the inadequate quality of foods consumed by the households.

Kripke (2015) observed how US Administration opposed to the historic legislation passed by Indian government in 2013 to expand its subsidized food distribution to the country's poor people. Although still experiencing significant levels of hunger and malnutrition, India had taken such measures to improve food security through the expansion of domestic food assistance programs. Researcher suggested for further analysis and study on how WTO rules can be converted into an opportunity to support the goal of improved nutrition and food security for hundreds of millions of poor people. Likewise researcher also pointed out as a major research gap to study how important or relevant India's food security program is or could be to other countries.

Gartaula et al. (2012) recorded vast changes in the perception of agricultural and residential land for a secure living and the meaning given to food security among the people living in the eastern Terai of Nepal. Both qualitative and quantitative data obtained through the survey, FGDs and in-depth interviews with key informants and participant observations found

that voluntary out-migration for remunerative employment, urbanization and reluctance of younger generation to farm regarding it as ‘dirty job’ were key causes to shift the people’s livelihood practices and access to food from agriculture-based economy to remittance based economy. This sort of changes threatens overall food security of the country as found by the researchers.

Pandey (2011) discussed selected issues on agricultural trade policies with main focus on trade agreements signed by Nepal including Nepal-India trade treaty, SAFTA, BIMSTEC, and the WTO. Author found that government introduced agricultural development fee of 5-10 percent, depending on the nature of the product, on all agricultural products for which custom duties are exempted in order to provide protection to Nepalese farmers from imports from India by circumventing the zero customs duty provision of Nepal-India trade treaty. Though Nepal as a LDC is also entitled for special and differential treatments enshrined in WTO agreements, Nepal does not provide any export subsidy to the agricultural products and the domestic support to the agriculture sector is very low. Nepal’s WTO bound tariff on agriculture products is 41.4 percent on average and had committed to phase out other duty and charges (ODCs) by 2012. Author presented his view that Nepal should strive to maintain a certain level of self-sufficiency in foods, especially cereals, irrespective of the economics of food production but porous border with India are the sources of price stability and assured enough food supplies rather than a threat to Nepal’s food security. While formulating the trade policy, author has suggested to take into account the role of exchange rate regime in promoting agricultural exports and role of international trade in ensuring food security.

Pant et al. (2011) stated the trade disruptions due to export restrictions imposed by India as the major problems in Nepal’s food security. As India is the main source for cereals and other basic foods for Nepal at the margin and during an emergency, trade policy must address the problems created by the disruptions in free trade due to export restrictions as in 2008 and 2010. The researcher also raised concern that India could also restrict the export of food items that it considers subsidized to consumers, which is a potential threat to food security in Nepal. Author concluded that trade policy could also cover issues on foods and importable, rather than ignore completely these ground realities and thus preparing evidence based analyses on policy issues is suggested by the researcher.

Pyakurel et al. (2010) found the outcomes of the liberalization and policy reforms during 1980s and 1990s in Nepal as mixed with regards to the food security. Nepal removed a host of agricultural subsidies and downsized its public food distribution system in an attempt to liberalize the economy which show improvement in aggregate indicators of food sufficiency and per capita food availability but on some other indicators like stunting of children, researcher found that Nepal was actually doing the worst. The gains from liberalization across regions were found uneven due to the lack of complementary policies from government that would lead to better market integration with creation of physical and other trade infrastructure.

Various previous studies and research articles on agriculture, trade policy and food security issues published from the period of 2010 to 2020 are reviewed to have broader understanding on the WTO rules, trade and food security issues and to identify the research gaps evidently. The analysis and review of the aforementioned literatures available in the areas of food security shows the clear research gap in policy interactions, linkages and interrelationships between WTO rules and agricultural trade policies to safeguard the food security interests of the local people, agro producer farmers and consumers in Nepal. The reviewed literatures also point out the need and urgency of comprehensive policy research to tackle the food security problem through necessary adjustments in the agriculture trade policy taking the WTO rules on agriculture into consideration. This study on agriculture trade policy from WTO perspective would be proven distinctive to fulfill the research gap found in the literatures regarding food security in Nepal.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Research Design

The researcher employs multi methods of research comprising extensive desk review of existing research, policy documents, and reports related to Nepal's agriculture trade, food security, and WTO commitments. Likewise, a brief survey is administered among farmers and consumers in the Janakpur of Dhanusha district and Gauradaha of Jhapa district, which are known as major pocket areas for agriculture production ranging from rice paddy to sugarcane and betel nuts. The survey is conducted from 7th January to 18th January of 2024 to gather data on experiences of farmers relating to agriculture trade and food security as well as the public perceptions and impact of supply disruption resulting from the restrictive export ban measures imposed by India on some major essential food products. In addition, a FGD was moderated on 3rd February, 2024 by the researcher with selected experts in agriculture trade including academia, government officials and private sector traders from Nepal. The data obtained from the FGD is helpful in cross-validating the findings from the doctrinal policy analysis from desk review. The FGD with experts in agricultural policymaking was useful to get more in-depth information on perceptions, insights, attitudes, experiences from the experts. Thus this research is based on analytical, exploratory and interpretative in design.

3.2 Sources and Nature of Data

This research is based on both primary and secondary sources of data. Primary information is collected from survey and FGD with the selected five key resource persons engaged in the area of agriculture, trade and food security in different roles. The key informants representing the concerned ministries, agriculture traders and independent experts are hosted in the FGDs to obtain their experiences and observations relating to the ongoing phenomenon of food security and impact of agriculture trade upon it. The additional information on the subject matter is collected through the secondary sources including the major existent food security related and agriculture trade laws, regulations, bylaws, guidelines, regional trade agreements and multilateral trade instruments, various books, research articles published in journals, official publications, research reports, news reports and other relevant sources.

3.3 Selection of Study Site

The major geographical location of the research is Kathmandu, Jhapa and Dhanusha. Due to the reason that the concerned ministries working on food security, agriculture and trade is located within the Kathmandu at Singhadurbar, researcher visited the concerned ministries, National Statistics Office and WTO Reference Centre to obtain particular data relevant to the study. Likewise, the FGD with the resource persons representing the food security experts and the other stakeholders of agriculture trade is hosted in Kathmandu. The primary legislation and regulations on food security and agriculture trade are also obtained from Law Book Management Committee (LBMC), situated at Babarmahal, Kathmandu. Survey with farmers and consumers are conducted in Gauradaha of Jhapa district and Janakpur of the Dhanusha district.

3.4 Sampling Techniques and Sample Size Calculation

As the research is purely analytical one, purposive sampling technique is utilized to select the relevant literatures, policy documents and the participants in FGD. Especially in the survey, a two-tiered sampling approach was adopted. Initially, Janakpur in Dhanusha district and Gauradaha in Jhapa district, were purposefully selected through judgmental sampling based on their reputation as major pocket areas for agriculture production. This choice was guided by the concentration of agricultural activities in these areas, making them pertinent to the research objectives. Selected two districts (Jhapa and Dhanusha) were chosen to ensure geographical diversity and representation of the different agricultural practices and consumer behaviors of the agriculture basket zone within Nepal. The inclusion criteria specified that participants must be residents of either Janakpur or Jhapa districts. Subsequently, respondents, comprising farmers and consumers, were randomly selected within each identified pocket area. The utilization of random sampling enhances the reliability and validity of findings by ensuring that the selected individuals are representative of the broader population in these agriculturally significant locations.

The sample size was determined to allow for statistical significance and capture variability, contributing to the generalizability of the study's outcomes. Researcher has calculated the minimum sample size using the formula for sample size estimation. A brief breakdown of the calculation is presented as follows:

The proportion of farmers and users are unknown so that we use $P=0.5$,

Complementary proportion, $Q = 1 - P = 0.5$, then Level of significance (α)=0.05, then

Z-score corresponding to a 95% confidence level (standard value for a two-tailed test), $Z = 1.96$, and Margin of error, $E = 0.10$

Sample Size Formula:

$$n = \frac{PQ\left(\frac{Z}{E}\right)^2}{\left(PQ\left(\frac{Z}{E}\right)^2\right) + \left(\frac{E^2}{4}\right)}$$

The minimum sample size required is computed as;

$$n = PQ \left(\frac{Z}{E}\right)^2 = 0.5 \times 0.5 \left(\frac{1.96}{0.1}\right)^2 = 96$$

Hence the calculated minimum sample size required is 96. Researcher has thus selected a minimum sample size of 96 farmers and 96 consumers to achieve a 95% confidence level with a margin of error of 0.10, assuming a proportion of 0.5 for both farmers and consumers when the true proportion is unknown.

Based on this calculation, participants were randomly selected from each districts of Jhapa and Dhanusha to form a sample of 96 farmers and 96 consumers.

3.5 Tools of Data Collection

The data collection tools employed in this study are discussed as follows:

3.5.1 Survey

The survey among the local farmers and consumers is conducted using the two sets of questionnaires designed to collect information on the awareness of and perception towards agriculture trade policies and food security. Questionnaires include the closed ended questions and data enumerators were trained before administering the questions in the field. Before administering the questionnaires, a pilot test of the questionnaires was conducted on 5th of January 2024 and on the basis of outcomes of the pilot test, some technical words were simplified in the questionnaire so as to make them comprehensible to the local farmers. During the training, enumerators were provided with technical guidance on ethical considerations to be observed during and after the survey. Informed consent with the respondent were taken before seeking their responses as demanded by the questionnaire. Two personnel were hired and trained as data enumerator to assist in the field survey. They conducted the survey from 7th January to 12th January in Gauradaha of Jhapa district among the farmers and consumers there whereas survey was conducted among the farmers and consumers in Janakpur from 13th to 18th January of 2024 to find out the data on their preferences, constraints, experiences and expectations

related to agricultural trade and food security along with the impact on market price of major essential foods.

3.5.2 Focus Group Discussion

FGD is utilized as one of the tools of data collection to collect the primary information from the major stakeholders having profound knowledge about the agriculture trade and food security. To obtain the insightful authentic information and expert opinions on the dynamics and linkages between agriculture trade and food security, researcher conducted FGD with the five key informants each representing own specialized sector of the agriculture trade and food security that of regulatory policy making, food security experts, agro economist, agriculture traders and the industrialist. While conducting the FGD session, each participant was invited to the discussion in advance and researcher made use of techniques of active listening, flexibility and patience for the thorough understanding of the discussants' articulation as intended. Open ended questions, effective probing additional questions were asked and also the experience of the key informants regarding the agriculture trade and food security were pursued.

Researcher moderated the FGD session with Dr. Yamuna Ghale, Expert on Food Security, Mr. Birendra Bahadur Basnet, Executive Chairperson, Arju Rice Mills, Mr. Lal Kumar Shrestha, Agro Economist & Agriculture Expert, MoALD, Mr. Gajendra Kumar Thakur, Chief of Supply Chain and Consumer Interest Protection Division, MoICS and Mr. Ram Sharan Timalsina, Agro Economist & Deputy General Manager, Muktinath Krishi Company Ltd., which is the first ever listed public company in Nepal Stock Exchange Ltd. with its major focus in the agriculture business. During the moderation, researcher asked each discussant with the structured questions pre designed to elicit insights and perspectives from each expert informant on agricultural trade policies and food security in Nepal. The initial questions relating to the agricultural trade policies and WTO Impact, food security dynamics and policy recommendations were asked to the experts on food security and agriculture trade. Likewise, questions on implementation of agricultural trade policies, government initiatives and stakeholder engagement in formulation of key policies were queried to the government officials. The impact of trade policies, food security at the ground level and consultation with policymakers for policy lobbying were the issues enquired with the agriculture trades and industrialists.

Table 1*Details of Key Informants Participated in FGD*

S. N.	Resource Persons	No.	Major Issues	FGD Location
1.	Dr. Yamuna Ghale, Expert on Food Security	1	Food security dynamics	Kathmandu
2.	Mr. Birendra Bahadur Basnet, Executive Chairperson, Arju Rice Mills,	1	Impact of trade policies, export restrictions imposed by India, policy consultations	Kathmandu
3.	Mr. Gajendra Kumar Thakur, Chief of Supply Chain and Consumer Interest Protection Division, MoICS	1	Food security at ground level, government initiatives to ensure food security, consultations with stakeholders in policymaking	Kathmandu
4.	Mr. Lal Kumar Shrestha, Agro Economist & Agriculture Expert, MoALD,	1	Agriculture trade policies and WTO impact, implementation of agriculture trade policies	Kathmandu
5.	Mr. Ram Sharan Timalsina, Agro Economist & Deputy General Manager, Muktinath Krishi Company Ltd.	1	Impact of trade policies in agriculture, impact of WTO in food security, policy lobby by private stakeholders	Kathmandu

3.5.3 Collection of Agriculture Trade Policies, Relevant Law and WTO Agreements

Researcher paid visit to National Statistics Office to obtain the report of National Sample Census of Agriculture Nepal 2021/22. Likewise, reports including the statistical information on Nepalese agriculture and NTIS 2023 was obtained from MoALD and MoICS respectively. LBMC and the library of WTO Reference Centre were consulted to obtain the copies of the primary legislation, regulations and study reports relating to agriculture trade. The data and information required for the purpose of this research are obtained through the primary legal authorities including the Constitution of Nepal, 2015 and Food Act, 1967 and Right to Food and Food Sovereignty Act, 2016, the major existent law relating to food security. The copies of those primary authorities as published by LBMC is obtained to find relevant provisions on food

security. The food security and agriculture trade related various laws, regulations, guidelines, bylaws, regional trade agreements with key trading partners are obtained from the web resources of the MoALD and MoICS. The food security and agriculture trade relevant provisions contained in the relevant policies, Acts, regulations and regional trade agreements are also reviewed in light of the multilateral instruments of WTO. The agriculture trade related instruments of WTO Agreement including AoA, Agreement on Sanitary and Phytosanitary Measures, Agreement on Subsidies and Countervailing Measures, Agreement on Anti-Dumping, Agreement on Technical Barriers to Trade etc. are obtained from the official website of WTO. The secondary data from books, journals, reports are also collected by the researcher.

CHAPTER FOUR

RESULTS

4.1 Reliability Analysis of the Questionnaires

Given that researcher assess the reliability of the questionnaires administered to farmers and consumers in two different locations, Jhapa and Dhanusha district, split-half reliability test method is employed which involves splitting the questionnaire into two halves and calculating the correlation between the scores obtained from each half. Spearman-Brown prophecy formula is then applied to estimate the reliability of the full questionnaire from this correlation coefficient. The responses collected from the respondent farmers and consumers are encoded in numeric form in the excel sheet and then divided into two halves ensuring that each half contains a representative sample of items from the entire questionnaires. The total score for each participant based on their responses to each half of the questionnaire are calculated. Then correlation coefficient between the scores obtained from two halves are calculated. Once having the correlation coefficient calculated from two different set of the responses from the questionnaires administered among the group of farmers and consumers in Jhapa and Dhanusha, Spearman-Brown prophecy formula is applied to estimate the reliability of the full questionnaire from the split-half correlation. The formula is:

$$r_{Full} = \frac{2r_{Half}}{1+r_{Half}} \text{ where,}$$

r_{Full} is the estimated reliability of the full questionnaire.

r_{Half} is the correlation coefficient obtained from the split-half analysis.

With application of the formula, an estimated reliability value of the full questionnaire administered among the respondent farmers in Jhapa and Dhanusa is calculated as 0.68 which indicates adequate consistency in the measurements obtained from the questionnaire. Due to the nature of questions consisting several policy options and of exploratory nature, a coefficient of above 0.6 is considered reliable.

Similarly the split-half reliability coefficient of 0.64 calculated for the questionnaire administered among the respondent consumers in Jhapa and Dhanusha suggests adequate internal consistency reliability for the full questionnaire. This value implies that approximately 64% of the variance in the scores of the questionnaire is attributable to true score variance, while the remaining 36% is due to error variance. A split-half reliability coefficient of 0.64 indicates

reasonable internal consistency reliability for the questionnaire, due to the fact that questions are of exploratory nature seeking policy choices and suggestions as well.

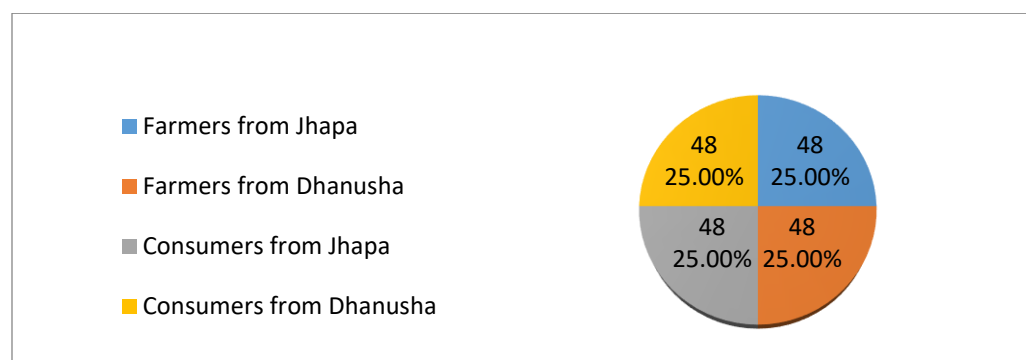
4.2 Characteristics of Survey Respondents

4.2.1 Distribution of Respondents

In this study, a total sample size of 192 participants, comprising 96 consumers and 96 farmers, were strategically selected from Gauradaha of Jhapa and Dhanusha of Janakpur regions to obtain necessary information on awareness of agricultural trade policies, impact of the export bans imposed by India and opinions regarding the subsidies and trade support measures, minimizing dependency and enhancing the food security. Ample attention has been provided to ensure broader representation of the respondents from diverse backgrounds. The decision to pool participants from these distinct geographical areas was motivated by the desire to capture diverse perspectives on food security, considering the unique agricultural practices and consumer behaviors prevalent in both Jhapa and Janakpur. Ninety-six consumers were included in the study, with careful consideration given to the diversity of consumer age, behaviors and preferences. This combined consumer sample, drawn from Jhapa and Dhanusha, reflects the varied socio-economic and cultural contexts that may influence food consumption habit, preferences on food quality and awareness on food security. Similarly, a cohort of 96 farmers, encompassing participants from both Jhapa and Dhanusha, was chosen to provide a holistic view of agricultural practices and challenges. The inclusion of farmers from these distinct regions acknowledges the potential differences in agro-ecological conditions, farming methods, and local contexts that may impact the agricultural trade and food security. Cluster-wise distribution of respondents is shown in the chart below:

Figure 2

Distribution of Respondents

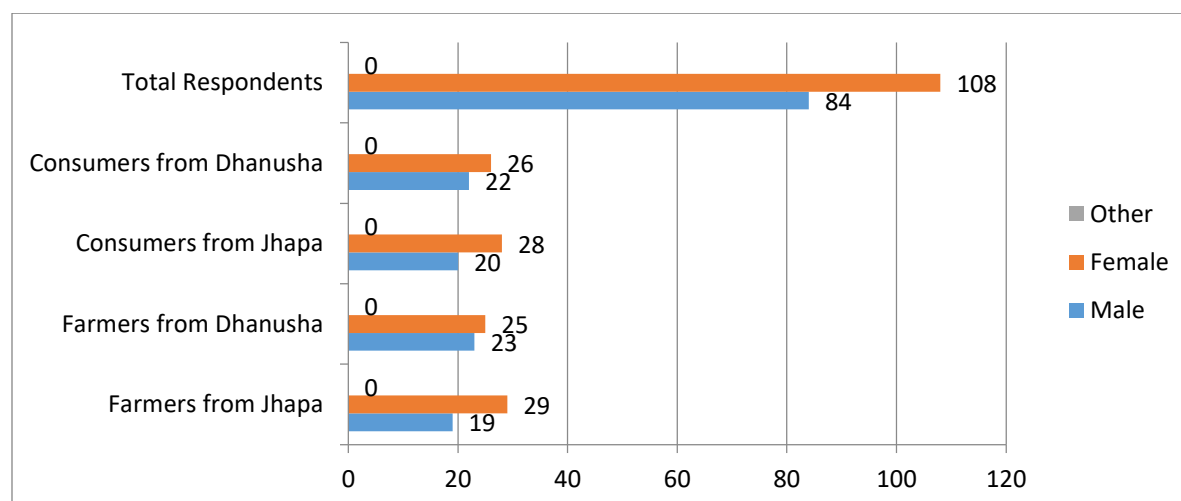


4.2.2 Gender

The Bar graph in Figure 3 shows the distribution of the respondents according to gender among the respondent farmers and consumers in the study. The proportion of female respondents is higher than that of male in both cluster which results in more than half (56.25 percent) of the total 192 respondents composed of female while 43.75 percent respondents are male. Given that none of the respondent falls in the category of other gender, female member seems mostly prevalent as farmers and consumers. As can be seen from the gender based distribution of respondents, food security and agricultural trade seems to be much of concerned with the Nepalese women due to the trend of engagement of Nepali males in foreign employment.

Figure 3

Gender



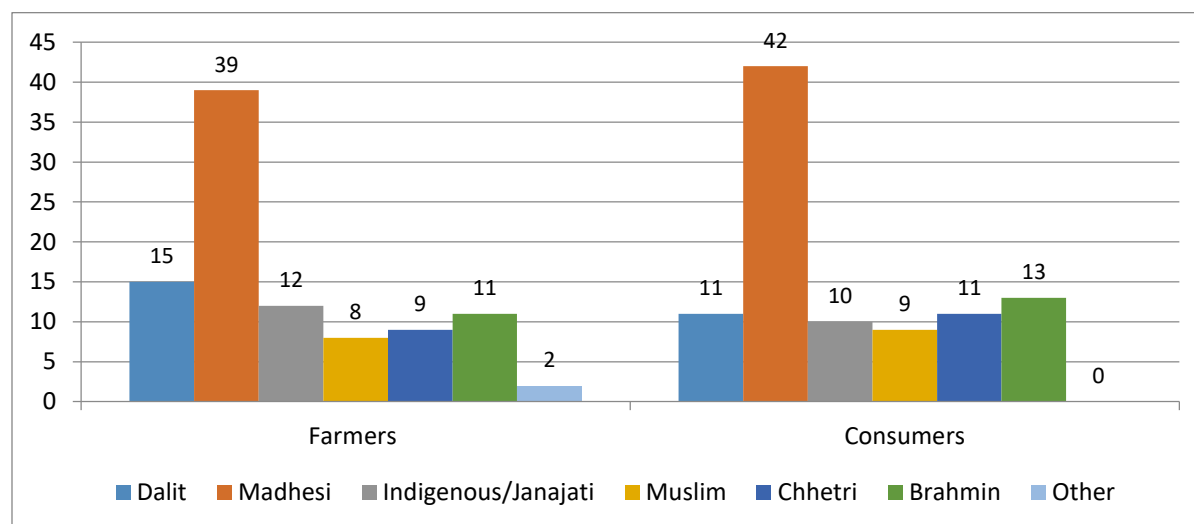
4.2.3 Ethnicity/Community

Majority of the respondents belongs to Madhesi communities with 40.63 percent among respondent farmers and 43.75 percent within the respondent consumers in the survey. The respondents who do not wish to disclose their castes are classified as 'others'. Few respondents (2.08 percent) farmer respondents choose not to disclose their ethnicity and thus shown in 'other' categories. Dalit communities constitute second largest segment among the farmers with 15.63 percent share while Bharamin community respondents stand at 13.54 percent forming second largest segment of consumers. 11.45 percent each from Dalit and Chhetri community composed the segment of consumer respondents. Respondents from Muslim community stand at 8.33 percent and 9.37 percent within farmers and consumers respectively. Among the respondents

from farmers and consumers, there is significant participation of the indigenous janajati communities as well with 12.50 percent and 10.41 percent respectively in each cluster. Figure 4 represents the distribution of respondents according to ethnicity/community.

Figure 4

Ethnicity/Community

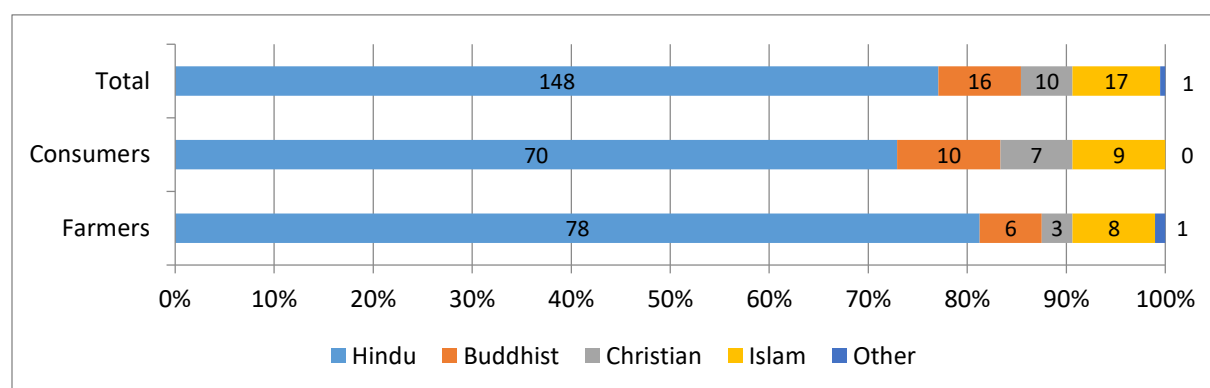


4.2.4 Religion

As far as religion is concerned, majority of farmers and consumer respondents from Jhapa and Dhanusha are Hindu with 77.08 percent (148 out of 192), followed by Islam standing at 8.85 percent (17 out of 192). Similarly, 8.33 percent (16 out of 192) are Buddhists whereas, 5.21 percent (10 out of 192) and 0.52 percent (1 out of 192) respondents are Christian, Islam and others. The composition of respondents based on religion is illustrated in the figure 5.

Figure 5

Religion

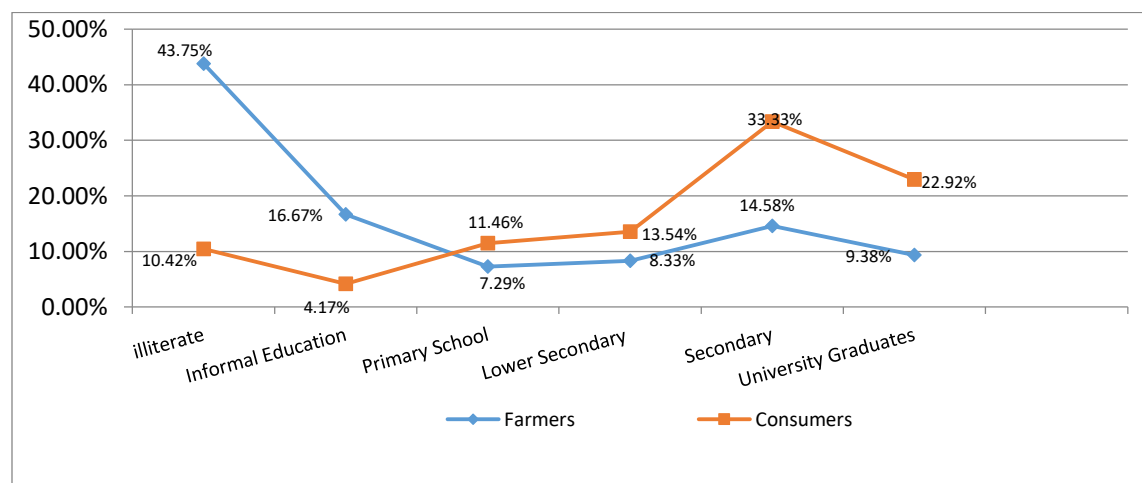


4.2.5 Education

Educational status of the respondents reveals that illiterate person accounts for most of the part of the farmer with 43.75 percent while one third 33.33 percent of the consumers have obtained secondary level education. Figure 5 shows the distribution of respondents from two subgroups according to the education background. Among consumers, merely 10.42 percent are found to be illiterate. Among farmers, respondents having informal education stand at 16.67 percent whereas 7.29 percent is educated up to primary level. 8.33 percent, 14.58 percent and 9.38 percent respondents from the farmers have obtained lower secondary, secondary level and college education respectively. Within the respondents from consumers, secondary level graduates are highest in number followed by university graduates with 22.92 percent. The respondents who received informal, primary and lower secondary level education are 4.17 percent, 11.46 percent and 13.54 percent respectively. Only 10.42 percent of consumer respondents are unable to read and write.

Figure 6

Education



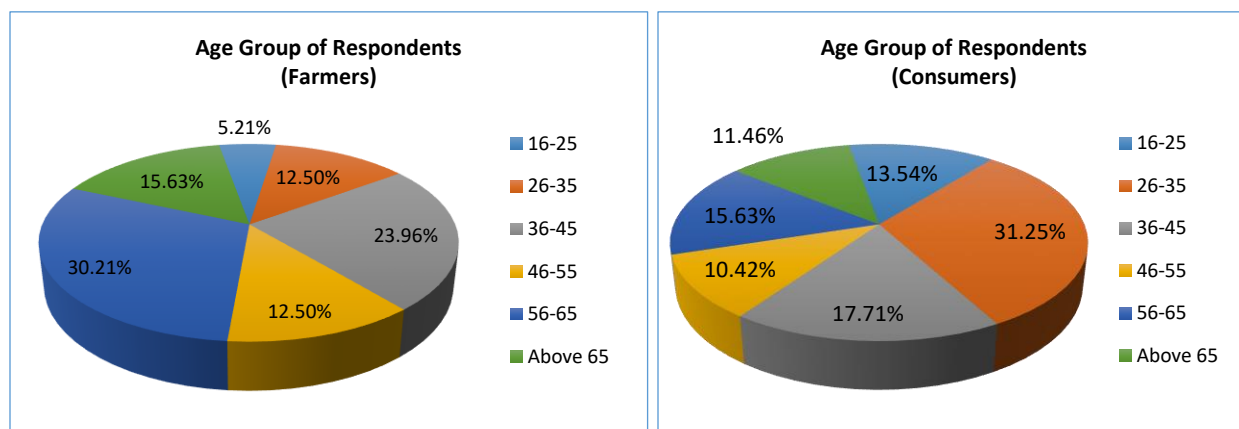
4.2.6 Age

The highest proportion of the respondent farmers belongs to the age groups between 56 to 65 years which shows the lack of youths engaged in agriculture. Likewise, the age group of 26 to 35 constitute the largest portion 31.25 percent of the consumers. Among the respondents from farmers, more than three quarters (82.30 percent) are adults (36 to above 65 years) respondents. Moreover, above 55 percent of the consumers are adults having attained the age of above 35 to above 65 years. It is interesting to note that 15.63 percent respondents are engaged in agriculture even after crossing

the senior age of 65. The problem of youths migrating abroad is visible in the distribution of the age groups among the respondent farmers and consumers which is illustrated in the figure 7.

Figure 7

Age Group of Respondents

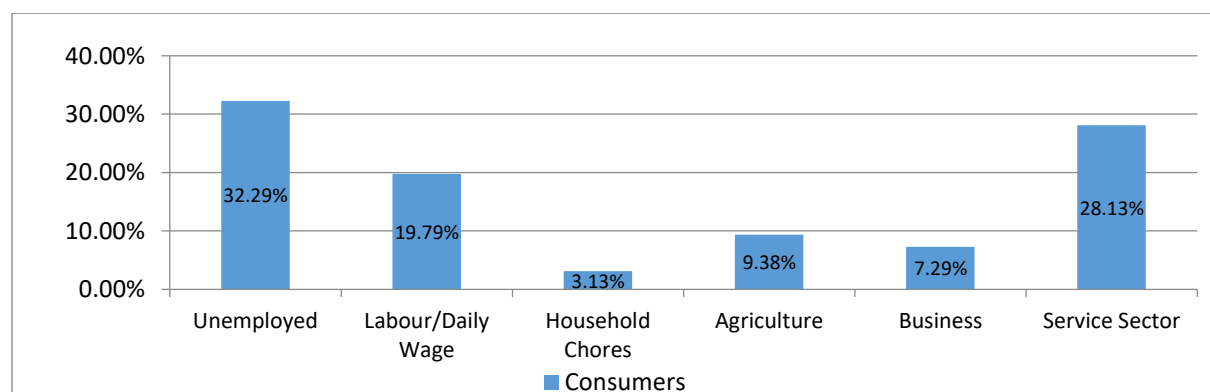


4.2.7 Occupation

In the wake of Covid-19 pandemic and stagnant economic conditions, unemployment has hardly hit the consumer respondents shows the data. The majority 32.29 percent of the consumers are found to have no any employment while 28.13 percent of the respondent consumers are engaged in service sector. Student respondents are also included within the occupation of service. Due to the lack of business environment merely 7.29 percent are operating their businesses while nearly one fifth percent (19.79) are engaged in labour/daily wages in informal sectors such as driving, construction, sanitary related works and so on. The consumer respondents with their occupation of agriculture account for 9.38 percent while 3.13 percent are in the role of homemaker having their own household chores. Figure 8 highlights the occupational details of consumer respondents.

Figure 8

Occupation



4.3 Patterns of Data and Analysis

The data collected from the study of the policy instruments on agriculture trade, regional and multilateral trade agreements WTO rules on agriculture and relevant laws are descriptive whereas the data obtained from the survey are empirical one. Likewise, the data obtained from FGD are qualitative one. The agricultural trade data, including imports, exports, and tariffs are examined to identify trends and patterns that may affect food security. While conducting this research, the data obtained from the legal instruments and policy documents are to be presented and analysed based on textual analysis approach, whereas the data obtained from the FGDs of the resource persons are to be analysed using the interpretative and phenomenological approach so as to understand their observations and experiences regarding the impact on food security dynamics linked with agriculture trade in Nepal. The available data are to be organized and presented in systematic order under different headings and sub-headings as per the requirements in the subsequent chapter. The overall research design and methodology employed in the study can be presented as follows:

Table 2

Synopsis of Research Methodology

S.N.	Research Components	Research Design	Tools of Data Collection	Sources of Information
1.	Study of Primary Authorities (Legislation, Regulations, Policies, Guidelines, Regional and Multilateral Trade Agreements)	Descriptive/ Analytical	Primary Law Texts, Documents & Records	LBMC, WTO Reference Library, MoALD, MoICS, WTO web resources
2.	Survey among farmers and Consumers	Descriptive/ Survey	Questionnaire & Field Survey	Respondents
3.	FGD	Explorative/ Interpretative/ Phenomenology	Pre-structured questions and follow up questions	Regulator, Experts, Agriculture Traders, Stakeholders

CHAPTER FIVE

SUMMARY, DISCUSSIONS AND IMPLICATIONS

5.1 Summary of Findings on WTO Agreement on Agriculture and Food Security Laws

5.1.1 Trade and Food Security Issues in WTO Negotiations

The WTO Agreement on Agriculture (AoA) emphasizes food security both in existing commitments made by WTO members and in ongoing negotiations, recognizing trade as a means to enhance food availability and economic access to food by creating employment and stability in food prices. Food security has been central from the Doha Round negotiations to the recent 13th Ministerial Conference (MC13) which took place from 26 February to 2 March 2024 in Abu Dhabi (World Trade Organization [WTO], n.d.-a).

Denton (2024) observed during the MC13, trade ministers representing all 164 WTO member states including developed, developing and LDCs met and discussed on a plethora of topics including food security and agriculture trade however, they couldn't agree on the crux of agriculture negotiations. The main disagreement was over "public stockholding for food security" which deterred consensus on enhanced disciplines on agricultural export restrictions often threatening the food security in net-food importer nations.

As reported by Koirala (2024), the disagreement stemmed from India's objection to timelines for a permanent solution on public stockholdings during discussions at the MC13. India advocates for allowing public stockholding to ensure domestic food security. A revised draft proposed two options: adopting a permanent solution at MC13 or intensifying negotiations within the agriculture committee. However, consensus couldn't be reached among member states on the issue.

Denamiel et al. (2024) noted that amidst MC13, the G33, representing developing nations, pushed for a permanent solution to public stockholding, aiming for greater flexibility in stockholding regulations. Led by India, the G33 demanded a deal at MC13, reaffirming the agreement made at the 9th Ministerial Conference in Bali not to challenge public stockholding programmes. However, other developing countries and the United States opposed the permanent solution.

Nandi & Mukharjee (2024) rightly pointed out that a permanent solution is sought by India due to the reason arising out of its MSP program for food grains, especially rice, which has breached the WTO's suggested subsidy limit thrice. According to WTO norms, food subsidies

shouldn't exceed 10% of production value based on a reference price from 1986-88, as surpassing this is considered trade-distorting. India seeks amendments to the calculation formula to prevent breaching the WTO cap. WTO agreed to the interim measure of "peace clause" at the 2013 Bali ministerial meeting, committing to negotiate a permanent solution at the 11th ministerial meeting in Buenos Aires. Subsequent to Bali conference, India has been invoking the same peace clause to safeguard its food procurement program from WTO actions if the limit is exceeded.

Earlier at the 12th Ministerial Conference in June 2022, trade ministers exempted food from export restrictions for humanitarian purpose purchases of the World Food Program and adopted a Ministerial Declaration on Emergency Response to Food Insecurity. Members also expressed their commitment to facilitating trade in food, fertilizers, and other agriculture production inputs mainly not to hinder the trade in seeds. Also they reaffirmed not to impose food export restrictions or prohibitions in a manner inconsistent with WTO rules. This spurred a work program on food security for LDCs and Net Food-Importing Developing Countries (NFIDCs) initiated in November 2022. (WTO, n.d.-b; WTO, 2020).

Likewise, at the Nairobi Ministerial Conference in 2015, trade ministers abolished agricultural export subsidies and imposed new regulations on other forms of farm export support, aligning with sustainable development goal 2.b. This goal aims to rectify trade restrictions and distortions in global agricultural markets to end hunger, achieve food security, improve nutrition, and promote sustainable agriculture. In addition, some governments utilize public stockholding programs to procure, store, and distribute food to those in need. However, these programs can distort trade, especially when purchases from farmers occur at government-fixed prices. Despite this, at the Bali Ministerial Conference in 2013, ministers agreed not to legally challenge such programs in developing countries, even if they exceed agreed-upon limits for trade-distorting domestic support. At the 2015 Nairobi Ministerial Conference, a decision on public stockholding reiterated this commitment and urged WTO members to collaborate on finding a permanent solution. In the Doha Round launched at 4th Ministerial Conference in 2001, developing nations gained the ability to protect certain agricultural goods as special product (WTO, n.d.-a).

5.1.2 WTO Agreements relevant to Agriculture and Food Security

Although in principle, most of the multilateral agreements on trade in goods enumerated in the Annex 1A of Marrakesh Agreement establishing the World Trade Organization, 1994

(WTO Agreement) are somehow applicable to agricultural trade, among them, mainly the Agreement on Agriculture (AoA) is directly concerned with the agriculture trade and food security along with the food producers' access to resources. Besides AoA, General Agreement on Tariffs and Trade, 1994 (GATT 1994), Agreement on the Application of Sanitary and Phytosanitary Measures, Agreement on Technical Barriers to Trade, Anti-Dumping Agreement, Customs Valuation Agreement also affect the agriculture trade and concerns of farmers in one way or another. General Agreement on Trade in Services (GATS) and Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) listed in Annex 1A and Annex 1B respectively of WTO Agreement also have their impacts upon agriculture trade and food security issues. However,

the AoA is emphasized as the most significant in this research with regards to the impact of trade liberalization in agricultural commodities and food security within the framework of WTO agreements. Article 21.1 of AoA clearly spells out that the GATT and all other WTO agreements on trade in goods (Annex 1A) apply but if there is a conflict, then the rules in the AoA prevail. Thus the discussion in this study limited to the AoA to examine its implications on food security.

The facilitation of agricultural trade under a uniform, rule-based international regime became achievable following the successful conclusion of the Uruguay Round (1986-94), culminating in the establishment of the WTO in 1995. Prior to this milestone, different scholars (Wilkinson, R., 2006; Clapp, J., 2006, as cited in David & Kim, 2015) observed that agricultural commodities had largely been exempt from international trade regulations, primarily due to the resistance of industrialized nations, notably spearheaded by the United States, motivated by their desire to uphold protectionist measures and maintain substantial expenditures on domestic agricultural subsidies. Nevertheless, certain net food-exporting developing nations advocated for the regulation of agricultural trade within the framework of General Agreement on Tariffs and Trade (GATT) provisions.

The concept of food security though developed separately from WTO trade rules, which weren't initially focused on it, the liberalization of agricultural trade through the Uruguay Round of multilateral trade negotiations resulted in the AoA which indicates 'food security' as a 'non-trade concern' in its preamble lines. Thus food security is recognized by AoA as a non-trade objective for the fulfilment of which trade could be the measure. The AoA stipulates as its long-

term objective of establishing a fair and market-oriented agricultural trading system is to provide for substantial progressive reductions in agricultural support and protection sustained over an agreed period of time, resulting in correcting and preventing restrictions and distortions in world agricultural markets (AoA, 1994, preamble).

Despite the proponents of agricultural liberalization believing it would boost productivity, employment, economic growth, and food security, this ideal hasn't translated into reality. Developing countries conceded domestic support during the Uruguay Round to access developed markets and reduce export subsidies, but the resulting deal favored developed nations. Heavy subsidies in developed countries artificially depress global food prices, benefiting urban poor but disadvantaging producers and increasing food price volatility during crises like the pandemic or international conflicts. Ironically, industrialized countries advocating for liberalization heavily rely on subsidies, policy supports, and market protection for their own economic progress. David & Kim (2015) note that agricultural trade often harms small-scale farmers, who produce most of the world's food and preserve biodiversity. Prioritizing these farmers in policy-making is crucial to support their role as innovators and biodiversity custodians and to enhance agricultural resilience to climate risks.

5.1.3 Agreement on Agriculture and its Three Pillars

The AoA, which came into effect in 1995 along with the WTO is consist of its twenty-one articles divided into thirteen parts and five annexes. It provides for a number of general rules, concessions and binding commitments to be undertaken by the WTO members mainly in three areas often called as 'three pillars' in liberalization of agricultural trade. These three pillars are market access, domestic support and export subsidies. Export subsidies and export-related measures with equivalent effect in combined form is presented as export competition in the preamble of the agreement. The Agreement on Sanitary and Phytosanitary Measures; and the Ministerial Decision concerning Least-Developed and Net Food-Importing Developing countries are also the portion of the agreement. The text of the AoA is mirrored in the GATT Schedules of legal commitments relating to individual countries (WTO, 2015). The major provisions provided in the three areas having their implications in the agricultural trade and food security of the member countries are discussed as follows:

5.1.4 Market Access

The main provisions of the AoA relating to market access are provided under Article 4, Article 5 and the Annex 5. Under this pillar, the AoA mandated the conversion of non-tariff

import restrictions such as quotas, embargoes, variable import levies, discretionary import licensing, minimum import prices, non-tariff measures maintained by state enterprises etc., into import tariffs that provided an equivalent level of protection. This process, termed "tariffication," aimed to simplify and make transparent the trade regime by replacing complex non-tariff barriers (NTBs) with tariff-based systems. Tariffication involved converting NTBs to tariff equivalents, reflected in each member's schedules, subsequently subject to reduction commitments. Developed countries were required to reduce their bound tariffs by an average of 36% over six years (1995–2000), with a minimum reduction rate of 15% for each product line. In contrast, developing countries had to reduce their bound tariffs by an average of 24% over ten years (1995–2004), with a minimum reduction rate of 10% for each product line. Least developed countries (LDCs) were subject to tariffication and tariff binding but were exempt from tariff reduction requirements. Furthermore, the tariffication process included provisions for maintaining current access opportunities and establishing minimum access tariff quotas, particularly where access was less than 3% of domestic consumption. These quotas were to be expanded to 5% over the implementation period. Additionally, special safeguard provisions were included for tariffed products, allowing for additional duties in cases of import surges or shipments at prices below reference levels (AoA, 1994; WTO, 2015; Gonzalez, 2002; David & Kim, 2015).

According to GoNMoICS (2018) average tariffs on agricultural products (12.6%) are higher than those on non-agricultural products (11.9%) in Nepal. The average applied MFN tariff on agricultural tariff lines (WTO definition) increased slightly, from 12.4% in FY 2011-12 to 12.6% in FY 2018-19. Including *ad valorem* equivalents, the average applied tariff on agricultural tariff lines is limited at merely 15 percent. The average bound tariff on agricultural goods is 113% in India. However, India's applied average tariff was 39% in 2018–19. As highlighted by Ratna et al. (2021), some of the products bound tariffs in India are much higher than applied tariffs, such as oilseeds. Compared to the average applied tariff on agricultural products in Nepal, the key trading partner India has several times higher average applied tariff. Such disparity in average bound tariff on agricultural food products is noteworthy data to review agricultural trade policy framework in Nepal. Upon comparison of Nepal's average customs tax rates with those of its South Asian neighbours, it is observed that the tax rate on agricultural products is higher in Bhutan, India, and Sri Lanka, while Bangladesh imposes a lower rate, and

Pakistan and Maldives levy slightly lower rates than Nepal as revealed by the latest report of GoNMoICS (2023). Nepal does not have any tariff-rate quota (TRQ) commitments and Special Safeguards (SSG) as trade remedy measures to raise import duties temporarily on tariffed products in order to deal with import surges or a fall in world prices.

5.1.5 Domestic Support

The AoA governs domestic support measures from the perspective of limiting the trade distortions rather than aiming at enhancing agricultural production and maintain the food security. Consumer subsidies involve selling agricultural produce at a loss to consumers, akin to a welfare scheme are generally accepted by the WTO. However, producer subsidies are more unwelcomed which support farmers financially. Such producer targeted subsidies can be production-linked, providing financial aid based on output, or non-production linked, offering cash regardless of farming activity (Global Justice Now, 2015). These subsidies are placed within the limit set by the AoA. These subsidies and support measures are classified into different categories or "boxes" based on their potential to distort trade and production. The major available subsidies "boxes" including "Green", "Blue" and "Amber" boxes and other pertinent issues including AMS and *de-minimis* rule within AoA and the general exceptions are discussed below based on the literatures, including the AoA (1994), WTO (2015), Gonzalez (2002), Schutter (2009), David & Kim (2015), and Birovljev & Četković (2013).

Green Box Measures: Green Box measures are considered non- or minimally-trade-distorting and are exempt from reduction commitments. These measures have minimal or no impact on agriculture trade and production. They include government services like research, training, and extension services, disease control, and infrastructure, as well as direct payments to producers that are decoupled from production. Developing countries have special provisions for certain support measures under the Green Box, such as food security programs and investment subsidies. Developmental measures also fall under Green box which are exempt subsidies designed to promote agricultural and rural development in developing countries. They include investment subsidies, input subsidies for low-income producers, and support to encourage diversification away from illegal crops. These measures are provided in the Article 6.1 of the agreement whereas detailed rules for green box payments are set out in Annex 2 of the AoA.

Blue Box Measures: Blue Box measures include direct payments made under production-limiting programs. These measures are exempt from reduction commitments.

Payments under Blue Box measures are made to farmers for limiting production and are subject to specific criteria such as fixed areas, yields, or livestock numbers. Article 6.5 of the AoA provides for the blue box measures.

Amber Box Measures: Amber Box measures include subsidies directly linked to production levels or prices and are subject to reduction commitments. They include trade-distorting subsidies such as market price support and direct per unit payments to farmers. As these measures are considered trade-distorting, they are subject to strict financial limits. Amber Box support includes both product-specific and non-product-specific support. Reduction commitments for Amber Box subsidies required developed countries to cut by 20% over six years and developing countries by 13.3% over ten years period beginning in 1995 from a 1986-1988 year base period. Article 6.3 and 6.4 of AoA are concerned with this amber box measures.

De Minimis Rule: Green Box, Blue Box and the development support by the governments are only allowed without limit. All other domestic agricultural support has to be placed within limits. All countries are allowed a minimal level of support without reduction commitments, even if it distorts trade. The *de minimis* provision allows a threshold of permitted trade-distorting support, set at 5% of the total value of production for individual products and total agricultural production for developed countries and 10% for developing countries. Support above the de minimis level is counted in a country's Aggregate Measure of Support (AMS) and is subject to reduction commitments. Article 6.4 of AoA provides this rule.

Aggregate Measurement of Support (AMS): AMS quantifies the total amount of non-exempt domestic support provided to the agricultural sector. Price support, mainly provided in the Amber Box, is a significant component of AMS. The comparison between administered prices and fixed external reference prices determines the level of market price support. Reduction commitments are based on AMS levels, with developed countries committed to reducing by 20% over six years and developing countries by 13.3% over ten years. The Base Total AMS is a benchmark derived from domestic subsidies during the base period (1986-1988). Compliance with reduction commitments is measured by the Current Total AMS, which includes only the most trade-distorting subsidies. Annexes 3 and 4 of the AoA describe how to calculate the AMS.

General Exceptions: Article XX of the GATT permits governments to implement discriminatory trade policies under specific circumstances. Article XX (b) allows such measures if they are necessary to protect human, animal, or plant life or health, provided they do not

unjustifiably discriminate between countries or act as disguised trade restrictions. This provision may be invoked to address issues like ensuring food rights, achieving food security, or preserving environmental integrity. The WTO has recognized exceptions under Article XX in its dispute settlement mechanism, particularly regarding environmental concerns, subject to certain conditions and limitations.

Ratna et al. (2021) states that over the years, India has provided support, not only under Green Box and Article 6.2 but also under Amber Box and Indian domestic support measures, especially in the form of the MSP, have come under criticism in recent times. Often WTO members have alleged that India has breached the applicable limit in the case of wheat, rice, pulses and cotton. . India's support measures, including MSP, have led to criticism and disputes at the WTO. In India, subsidies have been given to boost agricultural production in wide range of inputs including fertilizers, seeds, irrigation, crop insurance, electricity, exports, infrastructure construction, bank credit and agricultural implements, which resulted in the cost of production reduced by 21 percent (GoNMoICS, 2023). The MSP policy, vital for Indian farmers' safety, covers various agricultural products but impacts Nepali farmers who struggle to compete. The MSP policy serves an important safety for farmers in India but it is hurting the small-scale farmers in Nepal. Nepal so far has not been able to provide adequate domestic support to the agriculture producers. Only 7% (meager 0.3 million) agricultural producers have received the government subsidies for agricultural activities as reported by the agriculture census 2021/22. Among those, the highest percentage of 46% received subsidies for chemical fertilizer followed by 35% getting subsidies for seeds, 15% for agricultural equipment and 8% for agricultural infrastructure (NSO, 2023). As provided in GoNMoICS (2018), the most recent WTO notification for domestic support (2010-2011) revealed that all support in Nepal fell within the Green Box, comprising less than 1% of production value. Government spending primarily focuses on input, infrastructure support, research, and interest rate subsidies. Nepali farmers face unfair competition due to heavily subsidized product imports from India. Indian agriculture products import hinder fair prices and market access for Nepali producers, reflecting broader commercial interests challenging domestic support policies as enshrined by the AoA.

5.1.6 Export Subsidies

The AoA aims to reduce export subsidies, with developed countries mandated to cut expenditures for export subsidies by 36% and volume of subsidized exports by 21% over six

years (1995-2000). Developing nations required reductions of export subsidies expenditure by 24% and volume of subsidized exports by 14% over ten years (1995-2004), while LDCs are exempt from the obligation to reduce export subsidies but they are obligated not to increase subsidized exports. Reductions are based on a 1986-90 baseline. The agreement targets various types of export subsidies, including direct subsidies, release of products from non-commercial stocks, payments on exports, cost reduction subsidies, and favorable domestic transport charges. Compliance is monitored annually, with flexibility in meeting commitments over a five-year period. The Nairobi Ministerial Conference (2015) aimed to eliminate all export subsidies by 2015 for developed countries and by 2018 for developing countries, with flexibility for the latter until 2023 under certain conditions (AoA, 1994; WTO, 2015; Gonzalez, 2002; David & Kim, 2015; Ratna et al., 2021).

The LDCs are exempted from the prohibitions on the export subsidies under the agreement on agriculture and agreement on Subsidies and countervailing measures. The GoN has started the cash incentive scheme for exports through the budget announcement from the fiscal year 2010/11.

Exports of some agricultural products to destinations other than India qualified for subsidies under the Cash Incentive Scheme for Exports (CISE) which was introduced in 2012 with a subsidy rate that depended on the domestic value added: at 2% of the value of the export where the value of domestic content was 30%; and rising to 4% where the value of local content exceeded 80%. The scheme was modified in 2013 and renamed the CISE 2070. Under the modified Scheme, the subsidy was 1% or 2% of the value of exports for eligible products, which included a number of agricultural products under both the “agricultural products” and “industrial products” headings. Mainly tea, coffee and processed honey are included in the industrial products eligible to get 2% export subsidy though they are agricultural products. But in most of the agricultural products including seeds, vegetables, fruits, ginger, cardamom, herbs, only 1 % of the eligible export values have been claimed as export incentives since the beginning.

Whether subsidies have promoted the export or not is subject to empirical question, the claimed figures against the eligible value of the incentive are not substantial. Export subsidy of 1.70 billion has been distributed by the GoN in the six years period from 2012 to 2018 while agriculture products used to compose 18.60 percent of total exports in 2011 the share of which increased to 26.1 percent in 2017. (Paudel et al., 2020).

5.1.7 Shortcomings in WTO Rules Regarding Agricultural Trade and Food Security

Various scholars have observed that AoA made some progress in regulating agricultural trade, but it remains imbalanced and incomplete, failing to adequately address the needs of smaller economies and food security concerns. Häberli (2016) assessed that WTO regime has so far been failed to address specific concerns of NFIDCs and resource-poor farmers and thus promises to establish a fair and market-oriented agricultural trading system are yet remained unfulfilled and thus it requires additional specific commitments with implementation by developed and emerging economies. Citing Desta (2016) he asserted that heavy subsidies to agriculture in developed countries make them the biggest food commodities exporters globally. This renders developing nations net importers of food from developed countries, unable to compete due to the subsidies. The mandatory global reduction of only 20% in the previously high spending levels of rich subsidies leaves them with a lot of leeway to support their farmers against foreign competition. Despite limitations on trade-distorting farm support, rich countries still have significant leeway to subsidize their farmers, creating unfair competition for poorer nations. The shift towards Green Box subsidies, which are deemed non-trade-distorting, still disadvantages developing countries due to their inability to match such financial support as evaluated by Häberli (2010).

Market access improvements under the AoA are modest and insufficient for developing countries to benefit significantly. Tariff reductions and quota commitments do little to create new trade opportunities, particularly for newcomers in agricultural trade. Domestic support, including price support and export competition, further exacerbates inequalities. Despite a 20% reduction mandate for distorting support, many countries had already reduced spending below 1986–1988 levels by the time the AoA took effect. This allows for continued surplus dumping on world markets, depressing global food prices and hurting farmers in developing countries. Export competition disciplines, while limiting export subsidies, fail to address other forms of support such as export credits and international food aid. The lack of regulations on non-genuine food aid perpetuates market distortions and negatively impacts food security, especially during periods of high food prices (Häberli, 2010; Gonzalez, 2002).

Food security campaigners also view the current WTO agricultural trade regime as disproportionately favoring the wealthy nations. Developed countries negotiated deals allowing them to keep subsidies while promising to phase them out gradually, but no such provisions were

made for developing nations. Additionally, the calculation of permissible subsidies for developing countries is based on outdated prices, severely limiting their ability to support their agricultural sectors. Wealthy nations have even manipulated subsidy programs to fit into "green box" categories, which are supposedly non-distorting but still provide unfair advantages. Thus the rules provided by AoA perpetuates trade distortions, disadvantages smaller economies, and undermines efforts to address global issues like malnutrition (Global Justice Now, 2015).

Schutter (2009) notes that AoA perpetuates imbalances between countries by favoring those with higher historical levels of agricultural support. Developing countries, unable to afford similar levels of support, are left at a disadvantage, exacerbating food insecurity and dependency on international markets. The removal of subsidies, particularly export subsidies, harms food-importing countries, increasing vulnerability to volatile international prices and discouraging local production, creating unsustainable reliance on low-priced imports. He highlights the challenges faced by small-holder farmers in global south in achieving food security, particularly due to their reliance on food imports and the inadequacy of current WTO provisions to address import surges. He emphasizes the need for strategies to protect small-scale farmers from being marginalized by global supply chains and stresses the importance of sustainable agricultural practices to mitigate climate change impacts and to intervene in excessive reliance on international trade for the food security by increasing agricultural productivity. Additionally, scholars have given emphasis on regulating the private sector to safeguard food security and uphold the right to food for all.

Birovljev & Ćetković (2013) rightly pointed out that in smaller economies, the WTO AoA has negatively impacted food security by exacerbating poverty and inequality. This is due to restrictions on government tools to promote food security. Given historical differences in agricultural policies between developed and developing nations, reforms are also proposed to be directed in equitable way by differentiating the two groups to address the disparities effectively. AoA compelled developing nations to open up their markets to foreign competition, while allowing developed countries to maintain subsidies and protect their domestic producers. This has led to unfair competition and hindered the ability of developing countries to support their own agricultural sectors. The situation in Nepal is analogous to the analysis provided by the various scholars. Trade liberalization encouraged by the AoA has prioritized export production over domestic food production in many countries in global south, including Nepal, leading to a

decline in food security as resources are diverted away from local food production. Cheap food imports depress prices, leading to reduced income for small farmers who also face increased costs for agricultural inputs. The AoA has perpetuated a system where food security is compromised, especially for vulnerable populations in Nepal, among other smaller economies of the global south.

5.1.8 Analysis of the Constitutional Provisions

The Constitution of Nepal (2015) in its preamble emphasizes the commitment to sustainable agricultural practices, environmental conservation, and the equitable distribution of resources to enhance food security and improve the livelihoods of rural communities. It acknowledges the necessity of protecting and promoting the traditional knowledge, skills, technologies, and innovations, including in the agricultural sector, to ensure sustainable development and food sovereignty. Every citizen shall have the right relating to food (The Const. of Nepal, art. 36(1)). Thus the right to food prohibits any form of discrimination in access to food. All citizens, regardless of their socio-economic status, gender, ethnicity, or other factors, have an equal right to food. Every citizen shall have the right to be safe from the state of being in danger of life from the scarcity of food (The Const. of Nepal, art. 36(2)). This fundamental right emphasizes the state's obligation to safeguard citizens from life-threatening conditions resulting from food scarcity, reflecting a commitment to ensuring the basic necessities for human survival and well-being but people are facing hunger and malnutrition. Art. 36(3) of the Constitution of Nepal (2015) provides for every citizen shall have the right to food sovereignty in accordance with law. This constitutional provision guarantees citizens the power to actively participate in decisions and policy making related to their food production, distribution, and consumption.

In the directive principles, pursuant to art. 51(e) of the constitution, Nepal adheres to its policies centred on implementing scientific land reforms, encouraging land pooling for increased productivity, promoting sustainable land management and agricultural modernization while safeguarding farmer rights, regulating land use based on productivity and ecological balance, and establishing fair pricing and market access provisions for agricultural inputs and products. Similarly, the directive principle provide for sustainable production, supplies, storage, security, and easy as well as effective distribution of foods by encouraging food production in tune with climate and soil, in consonance with the concept of food sovereignty, while enhancing investment in the agriculture sector (The Const. of Nepal, art. 51(h)(12)). The Constitution of

Nepal, with its provisions supporting agro trade and food security, underscores the nation's commitment to fostering a robust agricultural sector, ensuring sustainable practices, and safeguarding the rights and interests of farmers, thereby contributing to the overall economic development and food security of the country.

5.1.9 The Right to Food and Food Sovereignty Act, 2018

This is mainframe act which establishes a legal framework in Nepal affirming citizens' fundamental right to access adequate, safe, and nutritious food. The legislation emphasizes the importance of local communities and the nation having control over their food policies, promoting food sovereignty. Provisions in the Act encompass sustainable agricultural practices, traditional farming methods, and strategies to address food security challenges. Quality and safety standards for food production and distribution, as well as mechanisms to empower local communities, Under s. 2 (e) of the Right to Food and Food Sovereignty Act (TRFFSA), the concept of "food sovereignty" is defined to entail several rights exercised by farmers in the food production and distribution system. These include the right to actively participate in the formulation of policies related to food, the freedom to choose any occupation within the food production or distribution system, the autonomy to make choices regarding agricultural aspects such as land, labour, seeds, technology, and tools. Additionally, farmers have the right to safeguard themselves from the adverse effects of globalization or the commercialization of agricultural businesses. This legislation acknowledges and emphasizes the empowerment of farmers, ensuring their active involvement, decision-making autonomy, and protection from external influences that may compromise their agricultural practices.

TRFFSA (2018) defines food security in its s. 2 (f) as both physical and financial access for every individual to obtain the necessary food for maintaining an active and healthy human life. This definition emphasizes the broader goal of ensuring that people not only have the means to acquire food but also have the financial capacity to access it. The concept underscores the importance of addressing both availability and affordability aspects to guarantee a state of food security where all individuals can lead a healthy and active life. In the s. 4 of TRFFSA (2018) the legislation articulates a comprehensive framework for the prevention and control of famine, involving the role of three tiers of GoN, Provincial Government and the Local Level. The specified functions encompass the regular identification and record-keeping of famine-affected individuals, families, communities, and vulnerable zones. Additionally, provisions are mandated

for ensuring an adequate supply of food to control famine and mitigate associated risks. The law emphasizes the importance of food distribution as a preventive measure. Immediate, short-term, and long-term measures are outlined to address the prevention and control of famine, underlining the need for a multi-faceted approach. However, the lack of proper implementation of this provision suggests potential challenges in enforcement, coordination, resource allocation, or public awareness on vulnerability of food crisis and disaster preparedness.

The Government of Nepal, Provincial Government or Local Level shall provide food support to the targeted households for concessional price and to the targeted households of particular nature for free as prescribed during disaster or crises or when significant challenges persist (TRFFSA, 2018, s. 7(1)). Critical issue regarding the implementation of this provision could be the apparent compromise in the quality of the provided food, falling below established standards and posing a serious health risk. Moreover, there is a lack of effective identification mechanisms for individuals in need of free food, necessitating a more precise targeting system. Furthermore, the distribution process should adhere to government-set standards, ensuring both fairness and efficiency. Lastly, the call for periodic reviews is commendable, but it should not only assess the form and quantity of the provided food but also rigorously evaluate its nutritional value. Addressing these concerns is imperative to enhance the effectiveness and impact of the food support program. While providing the food support as per the s. 7 of the Act, the establishment of standards for the nutritious elements of food shall be as prescribed (TRFFSA, 2018, s. 8), which underscores the importance of promoting balanced and nourishing diets for those receiving assistance.

Emergency food and nutrition security has to be guaranteed as per the s. 9 of the Act whereas the s. 10 of the Act authorizes GoN to declare a food crisis zone for a specific period when faced with crises such as earthquakes, excessive rainfall, low rainfall, floods, landslides, infernos, epidemics, or famine. While making arrangements for food and nutrition, local traditional foods must be prioritized and distributed as provisioned in s. 11 of the TRFFSA (2018). Farmers' right to food sovereignty is enshrined in the s. 12 of the TRFFSA (2018) which affirmed the rights of farmers to be recognized and respected, to actively participate in the food and agro-production system, and to access the resources needed for their agricultural activities. The provision also emphasizes the freedom of farmers to choose local seeds, technology, tools, and agro-species, as well as the protection of their intellectual property. Additionally, it

acknowledges the importance of safeguarding traditional and indigenous foods and provides protection against arbitrary deprivation of agricultural occupation. This provision aims to empower farmers, respect their choices, and uphold their rights within the agricultural domain.

A comprehensive set of measures to protect the agricultural occupation and promote the livelihood of farmers in Nepal is provided in s.13 of the Act. The three tiers of the Governments are obliged to make arrangements in mutual coordination to increase investment in the agro and food production sector, promote sustainable use of technology, environment-friendly fertilizers, seeds, pesticides, and agricultural materials, among others.

The provision for the classification of the farmers is provided in the s. 14 which reflects a systematic effort to acknowledge and respect the diverse contributions of farmers. The provision of distributing identity cards not only facilitates recognition but also serves as a gateway to essential social benefits including the pensions and other concessions (TRFFSA, 2018, s. 14(3)). However, the law has not yet been implemented to provide pensions and social security benefits to the farmers by means of their categorization. To safeguard and ensure the sustainable use of agricultural land, all three tiers of the Governments are made obliged under s. 15 of TRFFSA (2018) to collaborate in encouraging or promoting the cultivation of crops in agricultural lands, to classify the scientifically identified agricultural lands, to prevent agricultural lands to remain fallow, to restrict plotting of the agricultural lands and so on. This comprehensive set of measures reflects a commitment to the responsible management and utilization of agricultural lands, emphasizing cultivation, preventing misuse, and encouraging collaborative farming practices for optimal land productivity. Provisions on the necessary role of all three tiers of Governments in promotion of local agro-crops and livestock is provide in the s. 16 of the Act.

One of the salient feature of this Act is the responsibility entrusted to the local levels for the sustainable management of agricultural lands subject to federal and provincial laws. Local levels have to compile a list of agricultural lands, identifying fallow and other unused lands, maintaining records of such lands, updating land-related records, and undertaking other necessary functions to ensure effective management of fallow lands (TRFFSA, 2018, s. 17). The Government of Nepal shall make necessary provisions to adopt preventive measures for the mitigation of adverse impacts likely to be caused upon food production from climate change (TRFFSA, 2018, s. 19). The compensation has to be provided pursuant to s. 20 of the Act to the farmer if his/her crops fail or substantially decrease in production despite following

recommended methods, processes, or using suggested seeds, fertilizers, etc. by any government institution, body, company or firm. Such public or private body providing the consultation or recommendation has to bear such compensation. This provision has so far not been implemented due to the lack of awareness among the farmers. Farmers should be encouraged to pursue such claims on the basis of this provision. This provision is very much pertinent also for the trade of agricultural inputs including fertilizers, farm equipment, seeds, pesticides and such materials. Importers and marketers shall also be responsible for their recommendations.

The Government of Nepal shall prepare a National Food Plan upon coordinating with the bodies of the Federation, Province and Local Level related to food pursuant to s. 21 of TRFFSA (2018). The plan, guided by prescribed criteria, focuses on indicators for measuring and monitoring progress in implementing the right to food.

One of the important provision on public stockholding for crisis situation is provided in s. 26 of the act which stresses on making reservation of foods by the GoN and Provincial Government to fulfill the necessity of food during the crisis. The food required for the storage and reservation pursuant to Section 26 shall be purchased internally and where necessary, it can also be imported pursuant to s. 27 of the TRFFSA (2018). However, there is absence of the specification of price to be administered while buying foods for such stockholding. It is not clear whether the GoN would buy foods on the market price or above or below the market price from farmers for creating such buffer stocks. Besides, there is also lack of clear provision for public stockholding of food programs to meet the needs of the people who spend their lives below the poverty line and are constantly facing food shortages. The arrangement of fair price shops and public food distribution should be done collaboratively by all three tiers of Governments as per the s. 30 of the Act, while responsibility of maintaining stability in the price of basic food rests on GoN (TRFFSA, 2018, s. 29).

5.1.10 Food Act, 1967

The Food Act (1967) serves as a comprehensive regulatory framework governing the entire food supply chain, from production to distribution and consumption. Pursuant to s. 4(b) of Food Act (1967), a person intending to produce, sell, distribute, store or process the prescribed foodstuffs shall have to obtain license as prescribed. This provision implies that individuals or businesses involved in the production, sale, distribution, storage, or processing of specified food items must acquire the necessary license according to the regulations set by Nepali authorities.

This requirement ensures adherence to food safety and quality standards, as well as regulatory compliance within the country.

Likewise, s. 5(1) of the act provides that an individual engaged in producing, selling, distributing, exporting, or importing sub-standard food may face penalties. For the first offense, a fine ranging from One Thousand Rupees to Two Thousand Rupees may be imposed. Subsequent offenses could result in a fine between Two Thousand Rupees to Five Thousand Rupees or imprisonment for a term ranging from six months to one year, or both. Notwithstanding anything contained in Sub-section (1), if a mobile vender selling milk, curd and other foodstuffs without opening a fixed shop violates this Act, or Rules or Orders framed under this Act, such a person may be penalized with a fine from Fifty Rupees to Two Hundred Rupees for the first time, with a fine from Two Hundred Rupees to Five Hundred Rupees or with an imprisonment for a term not exceeding three months or with both for the second time and with a fine from Five Hundred Rupees to One Thousand Rupees or with an imprisonment for a term from Three months to Six months or with both for each time from the third time onwards (Food Act, 1967, s. 5 (2)). However, the absence of regular monitoring and inadequate legal repercussions for mobile vendors, particularly those selling milk and curd, poses a significant health risk due to their negligence. To mitigate this risk and ensure a more systematic and vigilant monitoring process, it is imperative to make necessary arrangements for monitoring the quality of foods distributed by the mobile vendors.

Under s. 5(3) of Food Act (1967), a fine of Five Thousand to Ten Thousand Rupees or imprisonment for one to two years, or both is imposed to those involved in producing, selling, distributing, exporting, or importing adulterated foodstuffs. However, this punishment may be perceived as relatively lenient given the potential risks to public health due to such criminal activities. Penalties for the wrongdoers are outlined in s. 5(4) of the Act which provides for a fine from Ten Thousand Rupees to Twenty-Five Thousand Rupees and imprisonment for a term not exceeding three years, for cases where the consumption of adulterated food results in severe consequences such as death or irreparable damage to the body.

The compensation ranging from merely Twenty-Five Thousand Rupees to One Hundred Thousand Rupees to the victims or their heir is considerably inadequate in addressing the potential long-term consequences and emotional distress faced by the affected parties. Since this Act provides for meagre fines as punishment and low level of compensation, it seems necessary

to update the penalties along with appropriate compensation mechanism to have periodic adjustments and revisions based on consumer inflation rate to redress the potential harm caused by the substandard food upon affected individuals' health. It seems urgent to have more stringent penalties in place to serve as a stronger deterrent against the production and distribution of dangerously adulterated food which could better reflect the gravity of such severe health implications.

Though s. 7 of Food Act (1967) stipulates the provision allowing the GoN to issue orders specifying the quality, standard, or quantity of ingredients in foodstuffs and to publish it in the Nepal Gazette, the act does not provide for taking any sanitary and phytosanitary measures necessary to protect human, animal or plant life or health during any process of production to distribution and importation of the foods. Thus the act needs a revision to harmonize the sanitary and phytosanitary measures based on international standards, guidelines and recommendations, which is crucial for maintaining food safety. Priority should also be given on rigorous enforcement and monitoring of the standards to curb the unhealthy and unsafe practices posing a serious threat to public health and compromising food security.

5.1.11 Safeguards, Anti-Dumping and Countervailing Act, 2019

The Safeguards, Anti-Dumping and Countervailing Act (SADCA) (2019) comprises the legal provisions for anti-dumping, countervailing or safeguard measures for contingency trade remedies for any kind of goods including the agricultural food products. The Act authorizes the government to impose safeguards measures, anti-dumping and countervailing duty on unexpected rise in the quantity of import of any goods including the agro food products that might have been hampering or affecting the domestic market of Nepal.

Provisions related to safeguard measures are provided in the s. 3 to s. 7 of the Act. Where there is increase in import of any products in an unexpected way which is causing or threatening to cause injury to the identical goods of the domestic industry, the GoN can impose the safeguards measures after the investigation conducted by the MoICS through the concerned department pursuant to the s. 3(1) of the Act. Following an investigation by the MoICS, the GoN can take various measures, including imposing additional duties and tariffs beyond existing customs laws or to impose additional tariffs rate on the top of the additional duty based on tariff quota in the event goods are imported in a larger quantity than those determined by the government. In cases of excessive imports exceeding determined quantities, the government can

also enforce partial or complete restrictions on the import of such goods. Additionally, the government reserves the right to apply any specified measures as necessary. The safeguard measures cannot be implemented to the identical imported goods of developing countries if it is less than 3% of the total import of products as provided in s. 3(4). The safeguard measures will be implemented for 4 (four) years and it can be extended to the next 4 (four) years by the GoN under the recommendation of investigating authority as per the s. 4 of the Act. The GoN holds the prerogative to revoke safeguard measures, a decision influenced either by a comprehensive review undertaken by the investigating authority or by opting for alternative measures negotiated with the government of the exporting country or autonomous custom territories as stated in sec. 5 of the Act.

Similarly, s. 8 of the Act prohibits the importers in Nepal to engage in the practice of dumping identical articles at prices lower than the normal value of autonomous custom territories, in order to prevent and mitigate potential threats to domestic industries caused by such unfair trade practices. Anti-dumping measures are provided from s. 8 to s.12 in the Act. Anti-dumping duty measures can be imposed subsequent to a report submitted by the investigating authority. However, anti-dumping measures may not be imposed on identical articles that have been dumped with a margin of less than 2% by countries or autonomous custom territories, provided their share is below 3% of the total import of Nepal (SADCA, 2019, s. 9(2)). An exception exists if the combined share of similar goods imported from multiple countries or autonomous custom territories exceeds 7% of the total import; in such cases, anti-dumping duties can be applied, even if the individual share of a specific country or territory is less than 3% of the total import. The imposition of anti-dumping duty in Nepal spans a period of 5 (five) years initially, with the provision for extension by an additional 5 (five) years. Such extensions are subject to approval by the GoN, relying on the recommendations put forth by the investigating authority (SADCA, 2019, s. 10). Regarding the removal of anti-dumping duty, the GoN is empowered to rescind such duties based on the findings outlined in the report submitted by the investigating authority. Alternatively, the government holds the discretion to eliminate anti-dumping duties if other measures present evidence that deems the continuation of such duties unnecessary or counterproductive (SADCA, 2019, s. 12).

SADCA (2019) restricts the importers in Nepal under s. 13 from importing products that have been granted subsidies in either indirect or direct forms, particularly when such subsidies

adversely impact the domestic industry. This restriction is in place to prevent unfair competition and safeguard the interests of the local market and industries. Pursuant to s. 14(1) of the Act, the GoN can impose the additional countervailing duty to the subsidized goods of the export country on top of the investigation report received as per the s. 26 of the Act.

The exceptional circumstances for not imposing the additional countervailing duties on subsidized goods include among others, the subsidized goods which account for less than 2% of the export value from a developing country or less than 1% of the export value of goods from an autonomous custom territory (SADCA, 2019, s. 14(2)(a)). Likewise, if the import of subsidized identical products from a developing country is less than 4% of the total import of the country, it would also be exempted from countervailing duties (SADCA, s. 14(2)(b)). However, this provision does not apply if the import exceeds 9% of the total import of similar goods, even if the import from the developing country is below 4% (SADCA, s. 14(3)). Countervailing duties shall not be applicable to any goods received by the Government of Nepal in the form of kind or cash subsidy under bilateral or multilateral agreements (SADCA, s. 14(2)(c)). The imposition of countervailing duties in Nepal is subject to a time frame, initially effective for a period of five (5) years. The Government of Nepal retains the authority to extend this duration for an additional 5 (five) years based on the recommendation provided by the investigating authority as provided in the s. 15 of the Act.

A person aggrieved by the decision of the GoN imposing safeguard measures, anti-dumping or countervailing duties, whether provisional or final, may file an appeal before the concerned High Court within 35 (thirty-five) days from the date of the decision (SADCA, 2019, s. 44). The Act is important to restrict the imports of the excessive agricultural foods or subsidized agro products or such products in extremely lower price with an intention to dump in the market. However, due to the open border, often subsidized agro food products are brought into Nepal informally by the unscrupulous traders including the black marketers and smugglers which is hampering the market and price of domestic agricultural products.

5.1.12 Bilateral Agreement between Nepal and India

The Indo-Nepal bilateral trade treaty, initially signed in 1978 and renewed every seven years, saw its latest renewal in November 2023 without alterations. Although governed by multiple agreements including South Asian Preferential Trade Agreement (SAPTA), South Asia Free Trade Area (SAFTA), Bay of Bengal Initiative for Multi-Sectoral Technical and Economic

Cooperation (BIMSTEC), and Bangladesh, Bhutan, India, and Nepal (BBIN), the Treaty of Trade between GoN and Government of India (GoI) has remained pivotal in shaping trade dynamics between the two nations. The bilateral trade treaty mandates a 30 percent value addition for manufactured goods using raw materials from Nepal or India or both. Notably, a tariff quota is imposed on certain items such as vegetable ghee, acrylic yarn, copper products, and zinc oxide (Paudel et al., 2020).

India implements import prohibitions based on health, safety, and price considerations, affecting certain products including agricultural goods. Import prohibitions are also based on minimum import prices (MIPs), aimed at safeguarding domestic growers/farmers and their livelihoods. India provides various subsidy schemes like the Transport and Marketing Assistance (TMA) Scheme and Duty-Free Import Authorization (DFIA) Scheme, primarily focused on supporting the agricultural sector and ensuring food security of its people (GoNMoICs, 2023). Hence, Nepal has not fully capitalized on its export potential to India, particularly in agricultural trade. Issues such as logistical constraints, inadequate infrastructure, compliance challenges and huge subsidized agricultural market of India hinder the effective utilization of trade benefits.

5.1.13 Regional Agreement of SAFTA

Nepal's membership in SAFTA aimed to boost its exports to the Rest of South Asia (RSA) and diversify its geographic export markets. However, Nepal has faced significant revenue losses due to participation in SAFTA, as other South Asian member countries enjoy similar facilities in the Indian market, leading to a decline in Nepal's special privileges. There is pressure on Nepal to reduce its list of sensitive goods within SAFTA, indicating challenges in leveraging the agreement for trade improvement (GoNMoICs, 2023). While SAFTA replaced SAPTA, offering zero-duty market access for products not on India's sensitive list, Nepal's top export products to India remain outside this list. Despite the trade benefits afforded by regional treaties, the bulk of Nepal's exports still adhere to bilateral agreements (Paudel et al., 2020).

5.1.14 Bilateral Agreement between Nepal and China

Nepal and China have an active Trade and Payments Agreement since 1981, facilitating trade between the two nations. The Transit and Transport Agreement signed in 2016 allows Nepal to utilize Chinese ports for third-country trade, reducing dependence on Indian ports. China has granted zero-tariff access to over 8000 Nepali products since 2010, promoting trade cooperation and reducing trade imbalances. This has facilitated Nepal's economic growth and development while strengthening bilateral ties (GoNMoICS, 2023). Opening up the access of

Nepal to high sea through Chinese port would be strategically important in the days to come from the agricultural trade and food security perspective as well.

5.2 Summary of Findings from Survey

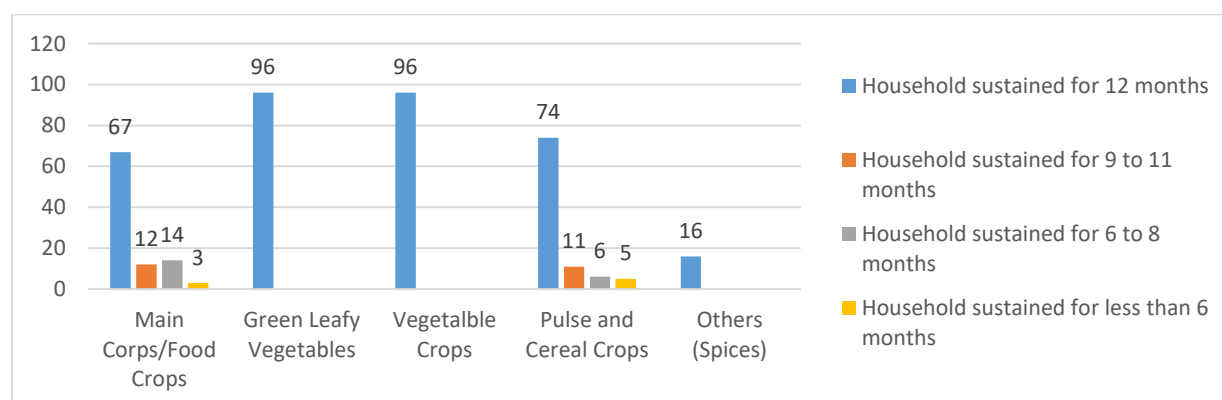
The results and discussions from survey conducted among farmers and consumers are presented in the subsequent paragraphs.

5.2.1 Sustainability in Agricultural Food Production

The bar chart in Figure 9 illustrates the duration for which different agricultural products sustain the families of 96 farmers surveyed. Food crops, green leafy vegetables, vegetable crops, and cereal crops are reported to sustain majority of families for the entire year, indicating their significant contribution to household food security.

Figure 9

Sustainability from own agricultural production among farmers



69.8% of respondent farmers reported being sustained for the entire year (12 months) by their own production of main food crops. In main food crops, 12.5% of farmers reported sustainability for 9 to 11 months, while 14.6% reported sustainability for 6 to 8 months. 3.1% of farmers reported their food crops production sustain their family for less than 6 months. In the category of green leafy vegetables and vegetable crops, 100% of respondent farmers are found to be sustained for the entire year (12 months). Pulse and cereal crops also play a crucial role, with the majority of farmers reporting sustainability for the entire year. Among the pulse and cereal crops, 77.1% of farmers reported sustainability for the entire year (12 months) while 11.5% of farmers reported sustainability for 9-11 months. The share of farmers reporting sustainability for 6 to 8 months stands at 6.3% and a small portion of 5.2% of farmers reported sustainability for less than 6 months in pulses. The significant part of the respondent 83.3% of farmers reported

purchasing spices for the entire year (12 months) while 16.7% of farmers reported growing spices and sustaining their families for the entire year under the 'others' category.

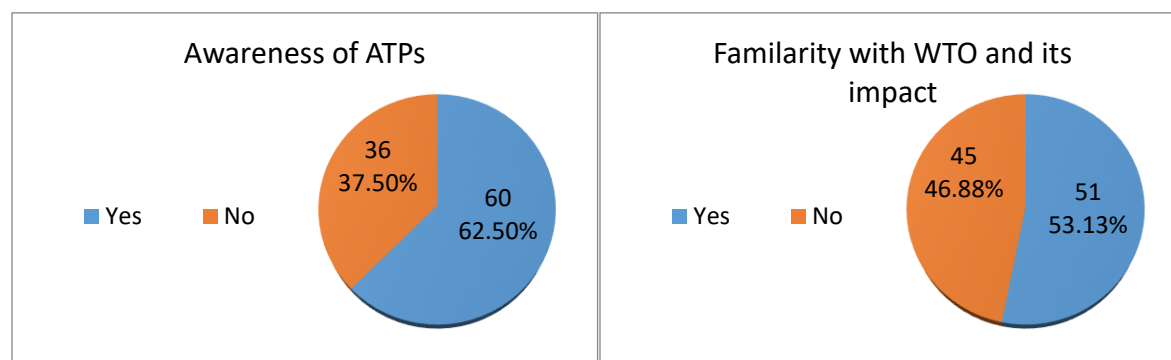
The data on sustainability and food security among the farmer's household based on own agro food production highlights potential areas for intervention or support to improve agricultural practices and yields. It shows that especially, trade policies need to be more flexible regarding the supply of major food crops and spices rather than green vegetables. Nepal needs to prioritize the implementation of stringent SPS standards and quarantine mechanism in the imports of green vegetables as it would not hamper any food security concerns of the farmers.

5.2.2 Awareness of Nepal's Current Agricultural Trade Policies

The survey reveals that a majority of the surveyed farmers are aware of Nepal's current agricultural trade policies (62.5%), while slightly more than half of them have heard about the World Trade Organization (53.1%) and its impact on agricultural trade in Nepal.

Figure 10

Awareness of ATPs & Familiarity with WTO and its impact



5.2.3 Market access and Trade Policies

The survey indicates that a significant majority of farmers (88.54%) face challenges in accessing domestic markets for selling their agricultural products. Most agricultural products are sold through middlemen (36.5%) and in the open market/local mandi (22.9%). Only, a small portion of respondent farmers (6.3%) export their agro-food products, with India being the most preferred export market. Market access in cross-border, regional & transnational markets is predominantly rated as very poor by 83.3% farmers. The vast majority of 93.75% farmers have faced challenges in exporting their products due to trade barriers. Regarding competition from highly subsidized agro products exported by neighboring countries, a significant portion of respondents (91.67%) view it as either unfair or absolutely unfair.

Figure 11

Challenges in access to market & methods of selling agro crops

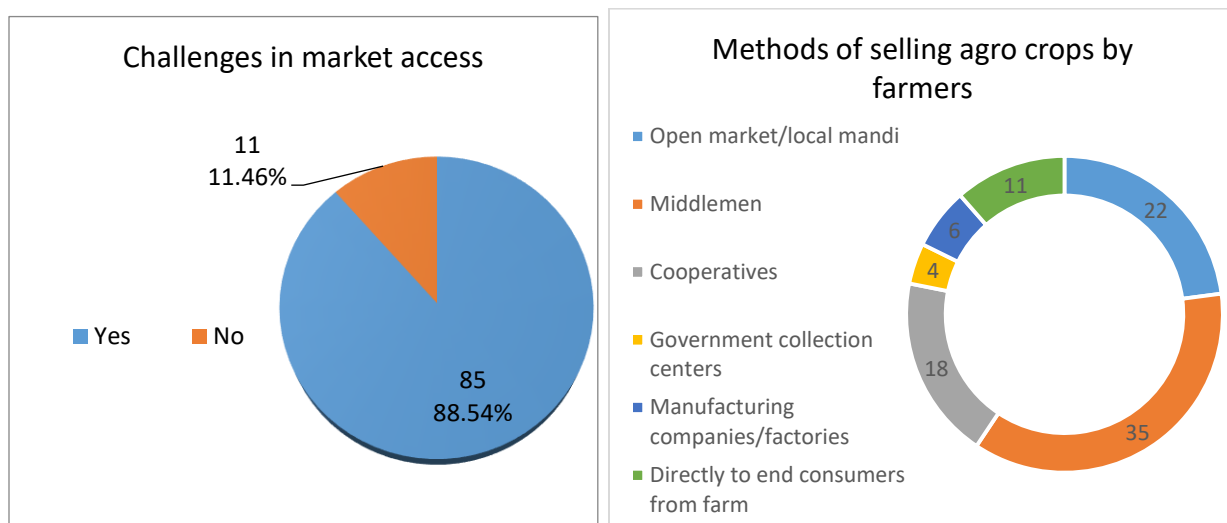
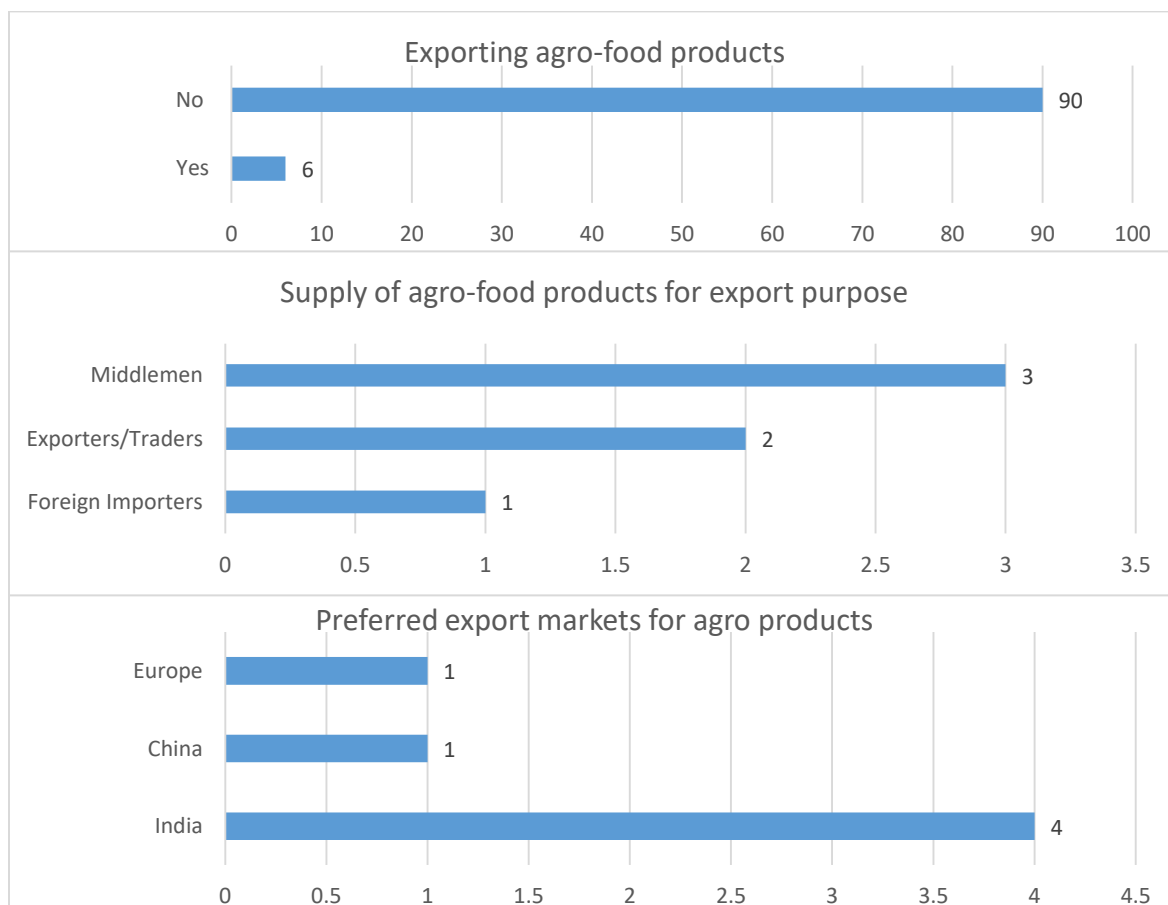
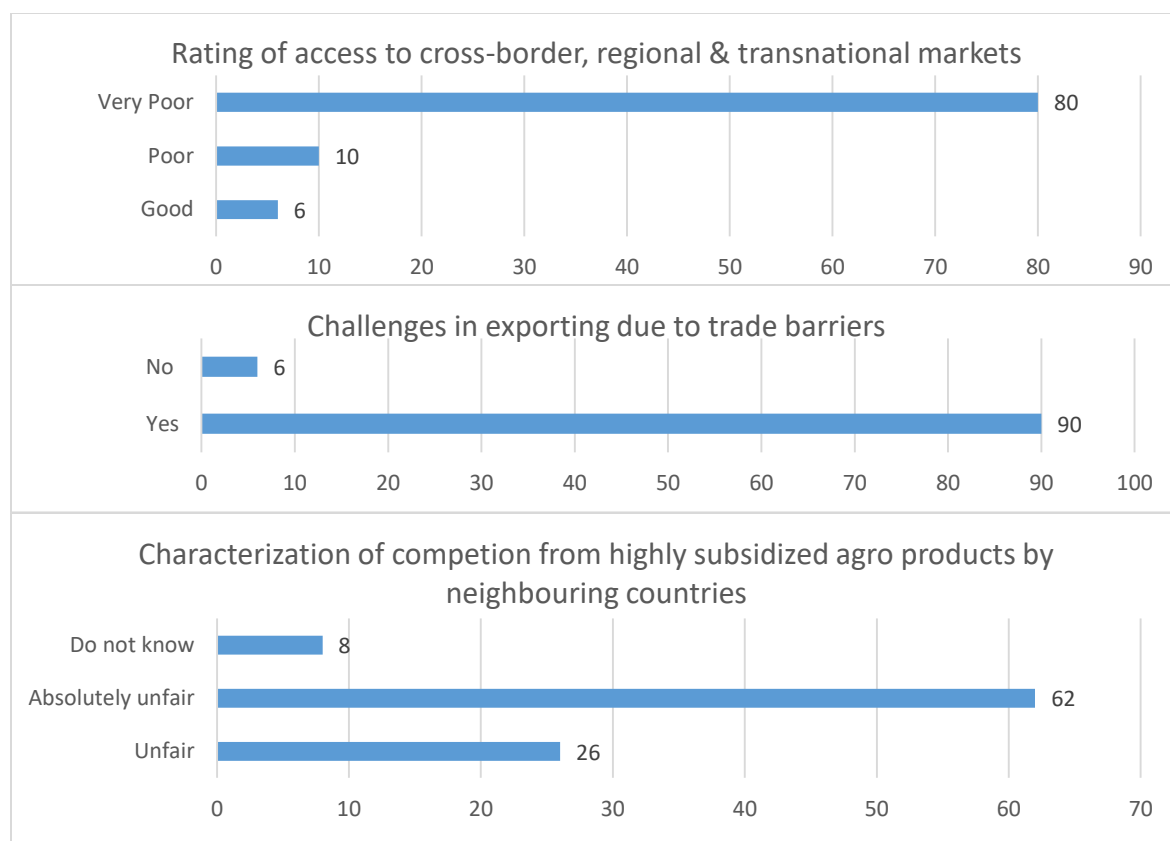


Figure 12

Export market of agro-food products





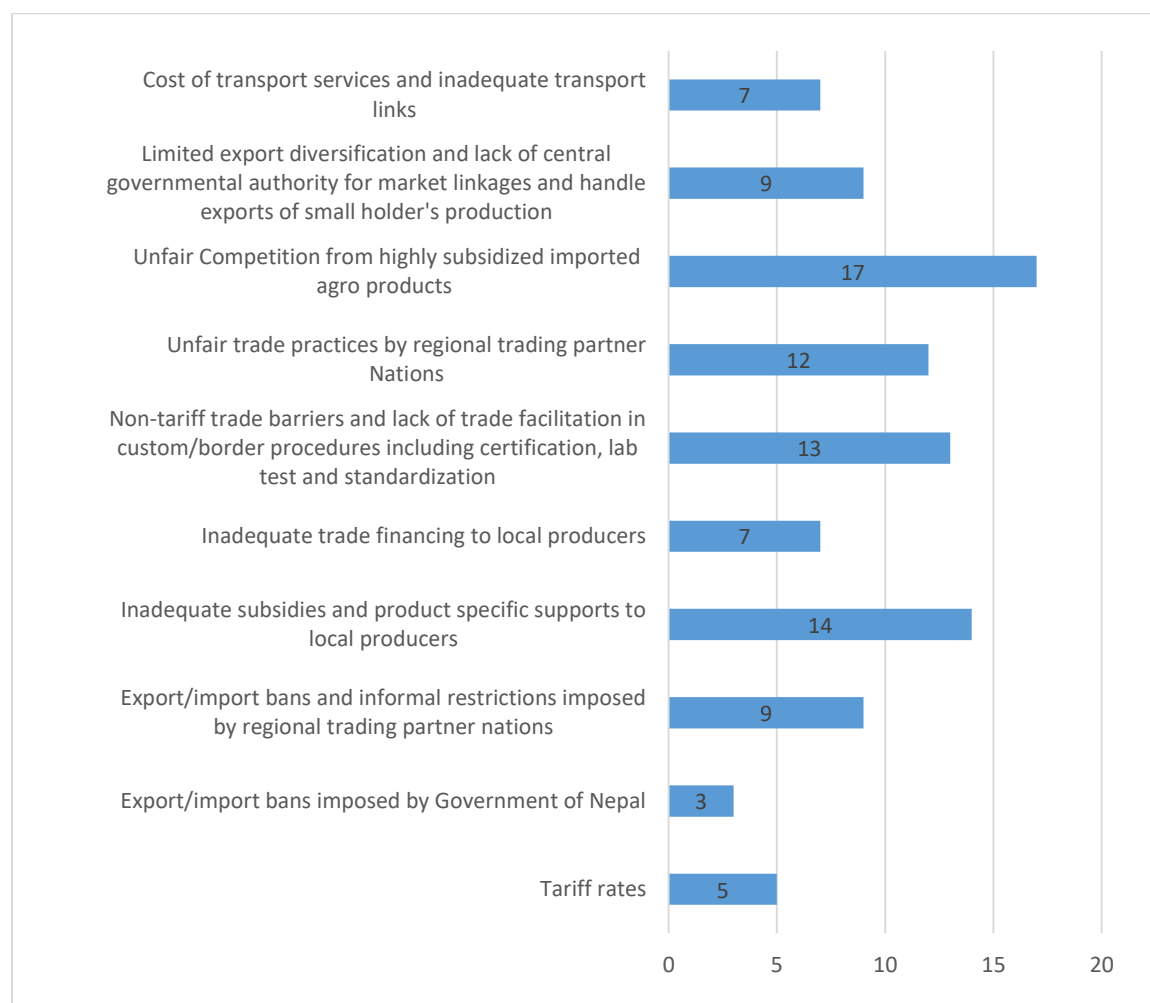
5.2.4 Trade Policy Constraints on Market Access of Agricultural Products

The highest number of respondents (17.71%) identifying unfair competition from subsidized imports underscores the severity of this issue. Such competition can undermine the competitiveness of domestic products and hinder market access. The sizable proportion of respondents citing inadequate subsidies and support (14.58%) indicates a widespread concern among farmers regarding the lack of government assistance. Addressing this issue could help enhance the competitiveness of Nepalese agricultural products in both domestic and international markets. The significant number of respondents identifying non-tariff trade barriers (13.55%) highlights the complexity of trade procedures and the need for streamlined processes. Enhancing trade facilitation measures and improving infrastructure could help reduce transaction costs and expedite cross-border trade. The substantial number of respondents (12.5%) citing unfair trade practices suggests that issues such as dumping or discriminatory measures by trading partners pose significant challenges for Nepalese farmers. The significant number of respondents (9.37%) identifying both formal bans and informal restrictions imposed by regional trading partners underscores the importance of addressing trade barriers beyond Nepal's borders. Improving diplomatic relations and negotiating trade agreements could help alleviate these constraints. The

lack of export diversification and centralized authority for market linkages highlight structural challenges within Nepal's agricultural sector. Addressing these issues requires strategic planning and coordination among relevant stakeholders to promote a more diversified and competitive export base. Transportation costs and links, while less prominent, still hinder market access. Tariff rates and export/import bans imposed by Government of Nepal are perceived as minor constraints by the farmers. The relatively moderate number of respondents highlight inadequate trade financing as constraints which suggests that access to capital might be a less prevalent constraint compared to other factors. However, ensuring sufficient financial support for farmers could still contribute to improving market access and competitiveness.

Figure 13

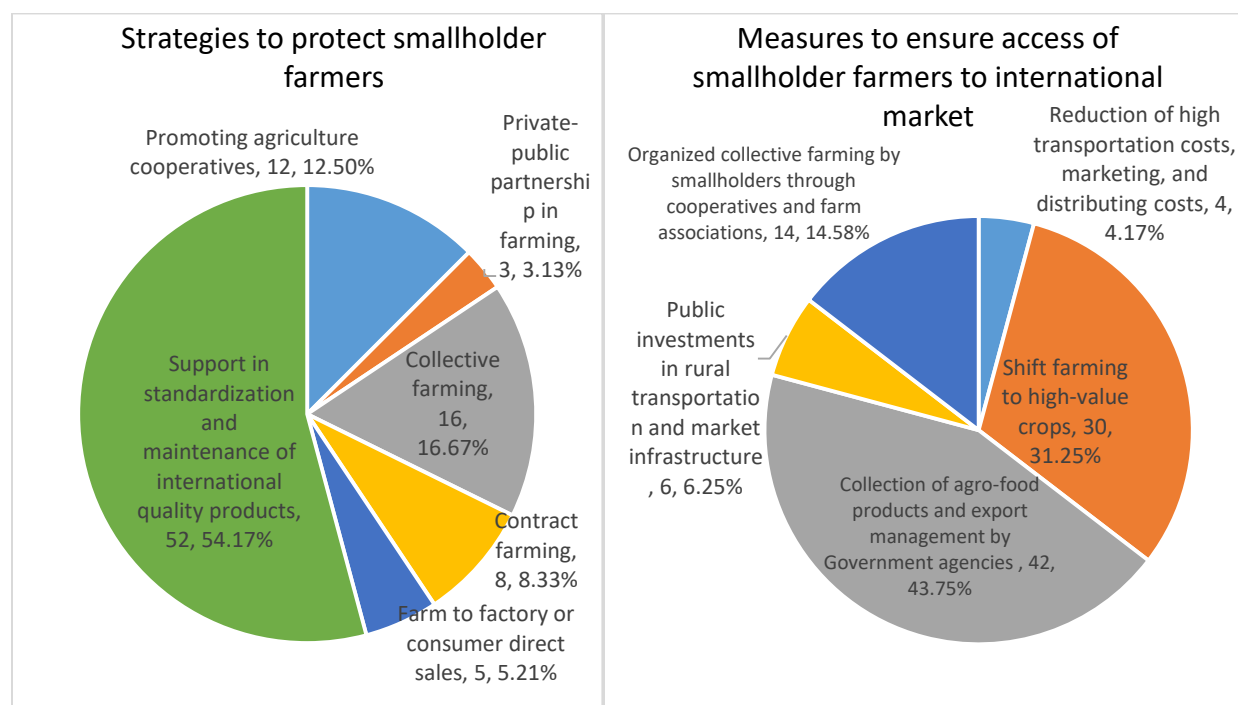
Key trade policy constraints on market access of agricultural products



Findings from the survey questionnaire administered among farmers in Jhapa and Dhanusha reveals the overwhelming majority of respondents (96.87%) believe that the current regime of international trade is not benefiting smallholder agro producers. Respondents largely advocate for support in standardization and maintenance of international quality products (54.16%), indicating a preference for enhancing product quality and meeting international standards to mitigate vulnerabilities in global supply chains. A significant number of respondents (43.75%) advocate for the collection of agro-food products and export management by government agencies, suggesting a preference for centralized export facilitation to improve smallholders' access to international markets. Additionally, shifting farming to high-value crops (31.25%) and organized collective farming through cooperatives and farm associations (14.58%) are also perceived as effective measures.

Figure 14

Strategies to protect smallholder farmers and measures to ensure their access to international market



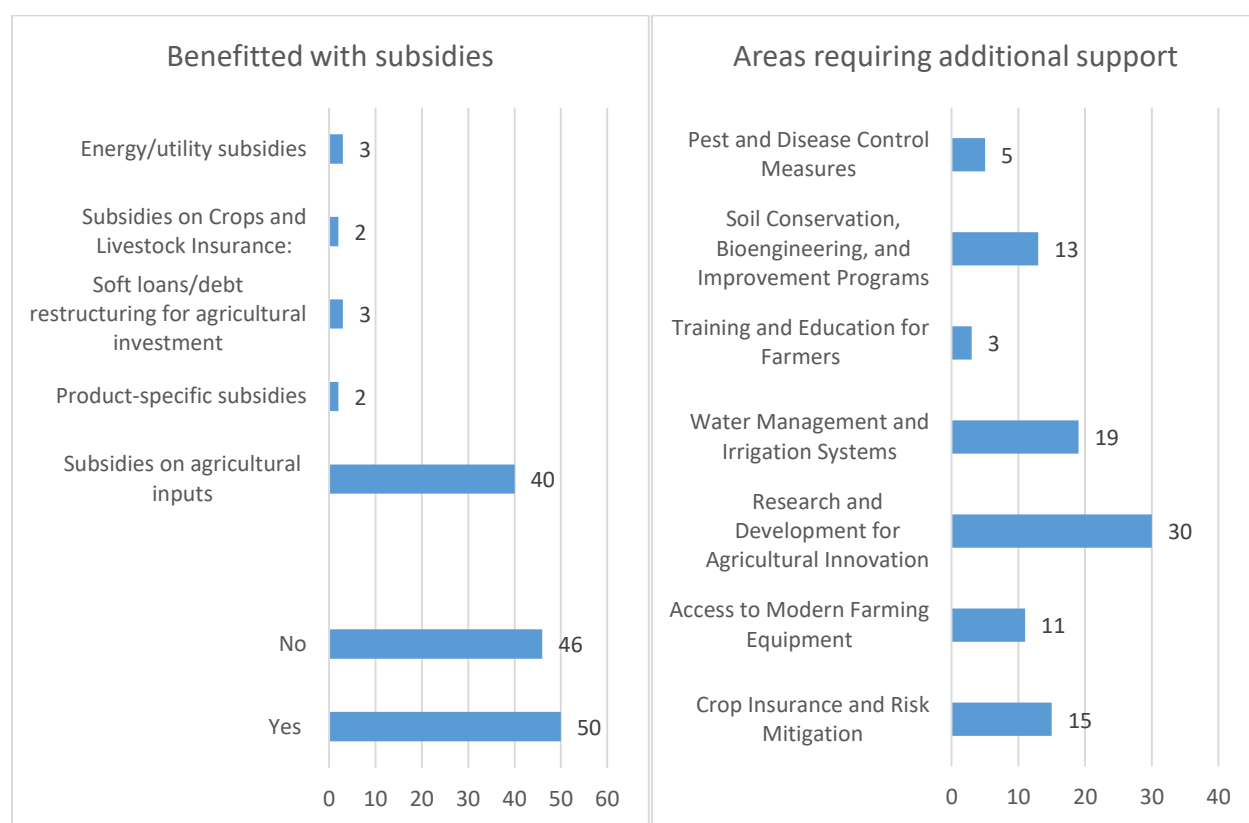
5.2.5 Agricultural Subsidies

The surveyed population provides valuable insights into the current status and perceptions regarding government subsidies and support mechanisms for agricultural production and farming.

Approximately 52.08% of respondents reported benefiting from government subsidies, indicating a significant portion of farmers availing themselves of such support. However, nearly half of the respondents (47.92%) reported not receiving any form of government subsidies, highlighting a potential gap in access to support mechanisms among farmers. Among respondents receiving subsidies, the majority (80%) reported receiving subsidies on agricultural inputs, emphasizing the importance of support in accessing essential resources for farming. Other types of subsidies, such as soft loans/debt restructuring and energy/utility subsidies, were less commonly reported, suggesting potential areas for further government intervention or awareness campaigns.

Figure 15

Status of Government subsidies and areas requiring additional support

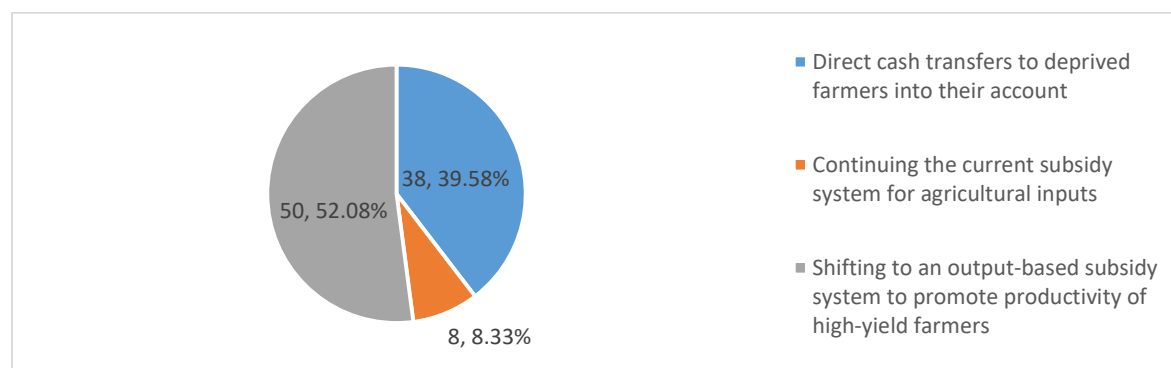


Social media emerged as the primary source of information about government subsidies, with two third (67.70%) of respondents relying on this platform. This indicates the increasing importance of digital communication channels in disseminating information to farmers. Traditional channels such as news media outlets and local community centers also play a role, albeit to a lesser extent, underscoring the need for a multi-channel approach in information

dissemination. A majority of respondents (74%) expressed dissatisfaction with the government subsidies they are currently receiving, suggesting a perceived inadequacy or inefficiency in the existing subsidy schemes. The neutral response from 26% respondents with the subsidies currently receiving also indicates a lack of strong positive sentiment towards the subsidies, further highlighting areas for improvement in the delivery and effectiveness of government support programs. Respondents identified several key areas where they felt a dire need for additional government support or subsidies to enhance competitiveness. These include research and development for agricultural innovation (31.25% responses), crop insurance and risk mitigation (15.62%), and water management and irrigation systems (19.79 responses), among others. More than half of the respondent farmers (52.08%) opted for a shift to an output-based subsidy system to promote productivity of high-yield farmers while significant portion (39.58%) come up with a response that direct cash transfers to deprived farmers into their bank account could be a better option of subsidy scheme. Only few (8.33%) of farmers support in continuance of the current subsidy system for agricultural inputs. The diversity of responses underscores the multifaceted challenges faced by farmers and the importance of targeted interventions to address specific needs across different aspects of agricultural production.

Figure 16

Farmers' Preferences of subsidy mechanism



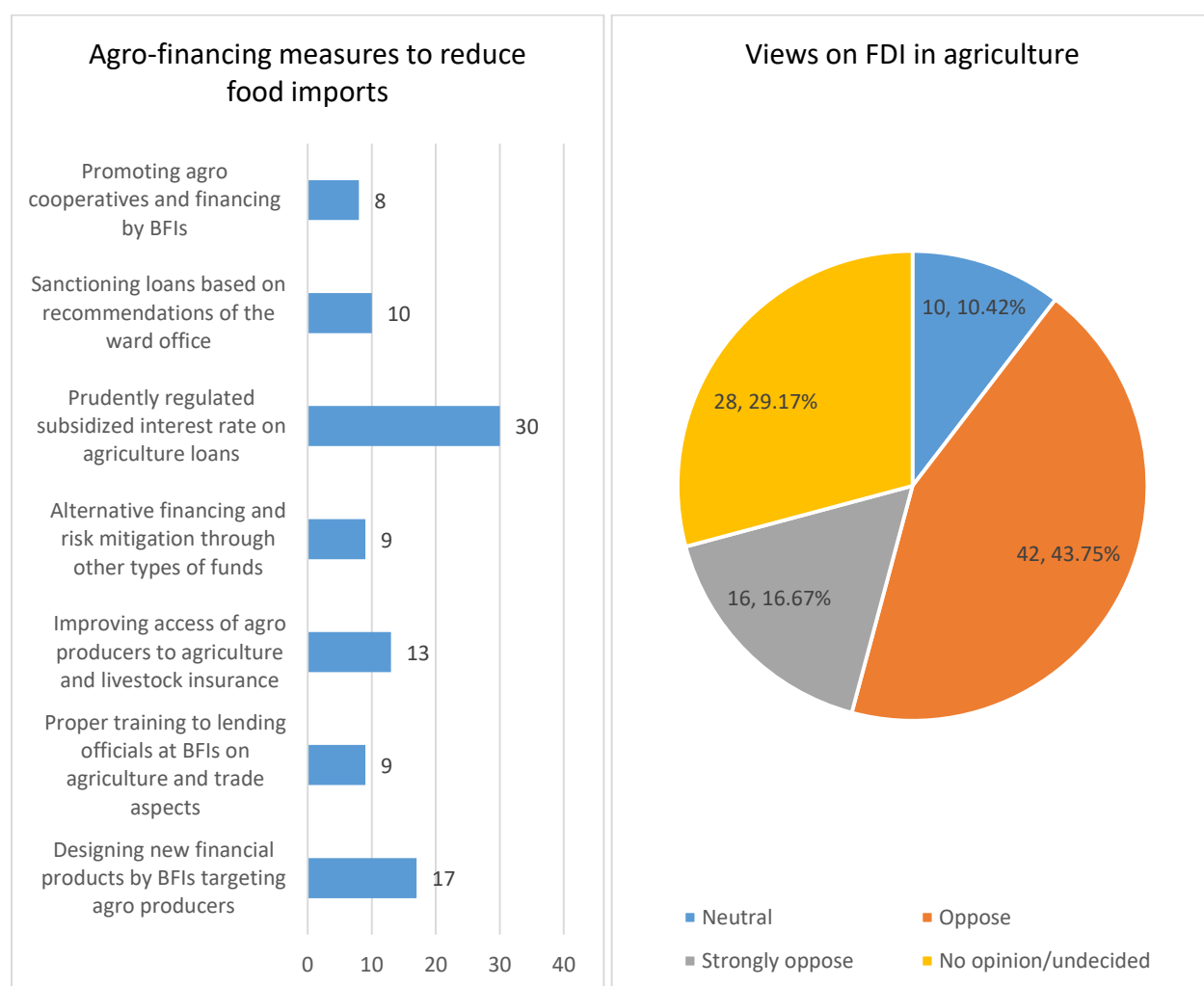
5.2.6 Agro Financing and Foreign Direct Investment (FDI) in Agriculture

Respondents identified several potential measures to promote agro financing aimed at reducing food imports. The most popular option was advocating for prudently regulated subsidized interest rates on agriculture loans, with 31.25% of respondents supporting this measure. Other notable measures included designing new financial products by BFIs targeting agro producers (17.71%) and improving access to agriculture and livestock insurance (13.54%).

A significant portion of respondents (43.75%) opposed FDI in the agriculture sector, while 16.67% strongly opposed it. Conversely, only 10.41% of respondents were neutral on the matter, and 29.17% were undecided or had no opinion. These findings highlight the diverse perspectives among farmers regarding both agro financing and FDI in the agriculture sector, indicating the need for proper consideration of stakeholders' viewpoints in policy formulation.

Figure 17

Agro-financing measures to reduce food imports and views on FDI in Agriculture



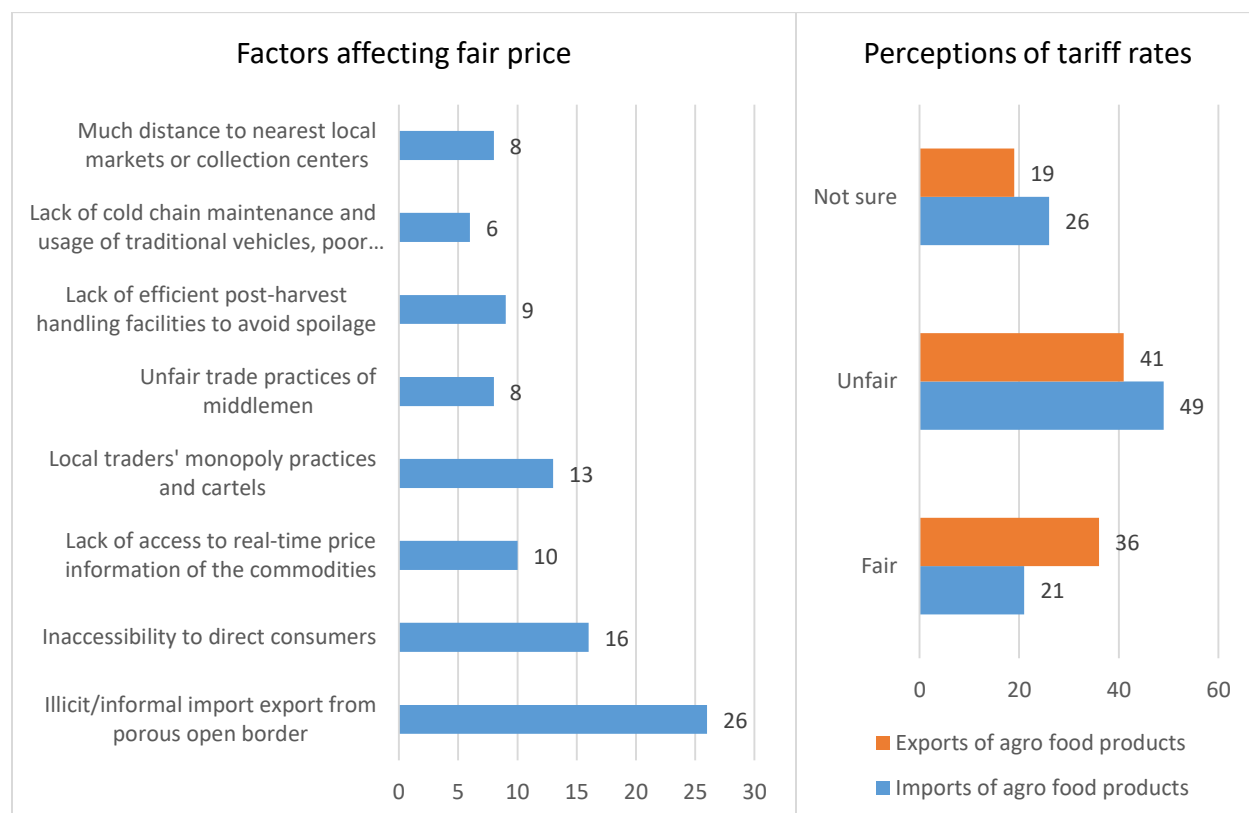
5.2.7 Minimum Support Price (MSP) and Tariff Rates

The majority of respondents (67.71%) expressed dissatisfaction with the MSP offered by the government for their agricultural commodities. A significant portion of farmers (29.17%) believed that the MSP is not applicable mostly due to oversupply and dumping of the substandard imported food products. A significant proportion of farmers (87.50%) reported not

selling their agricultural products to the government purchase centre. The primary reasons cited for not selling to government purchase centres include the absence of such centers in nearby areas (68.75%) and the preference for better prices in the open market (8.33%). This underscores the importance of accessibility and market competitiveness in influencing farmers' selling decisions. Various factors contributing to the perceived lack of fair prices for agricultural products were identified, including illicit trade practices (27.08%), limited access to direct consumers (16.67%), and local traders' monopolistic behaviors (13.54%). These findings highlight the multifaceted challenges faced by farmers in obtaining fair value for their produce.

Figure 18

Factors affecting fair price and perceptions of tariff rates for agricultural food products



The preferred method for providing real-time price information to farmers is through Short Text Message Services (SMS) on personal mobile devices (67.71%), indicating the importance of accessible and timely communication channels for agricultural stakeholders. A majority of respondents viewed the current tariff rates on imports of agricultural food products to Nepal as unfair (51.04%), while perceptions regarding tariff rates on exports were more evenly divided, with a slight majority considering them unfair (42.71%). These perceptions may reflect

concerns about the competitiveness of domestic agriculture vis-à-vis imported products and the impact of tariffs on export-oriented farming enterprises.

5.2.8 Availability of Agricultural Inputs among Farmers

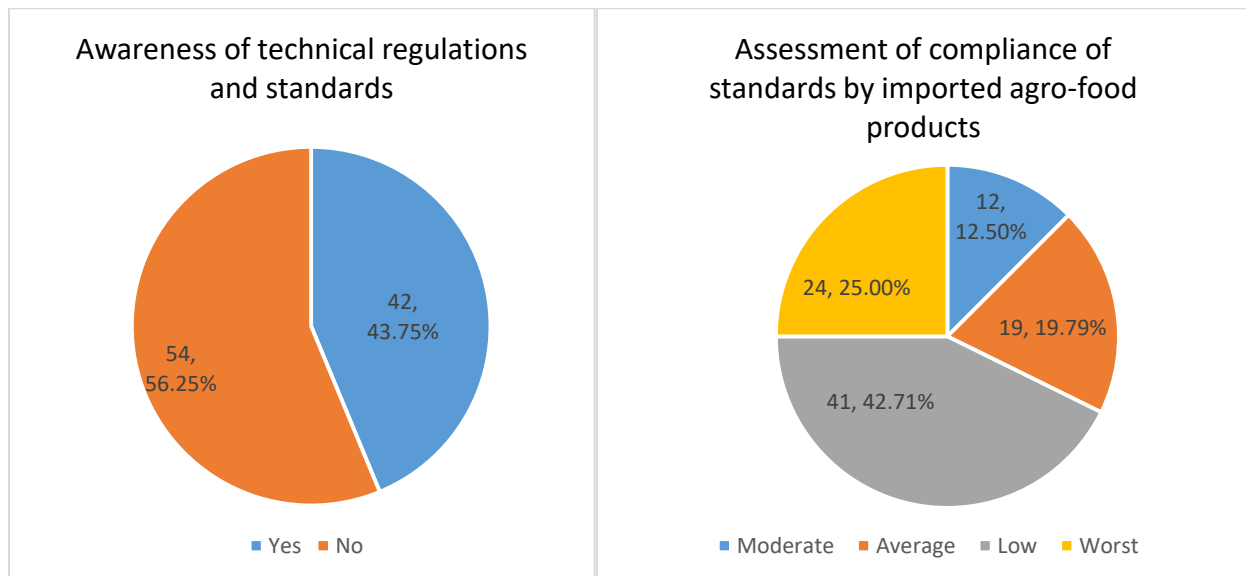
The entire cent percent population of farmers surveyed reported facing challenges in accessing fertilizers, seeds, and pesticides for their farming needs. This indicates a widespread issue regarding the availability and accessibility of crucial inputs among farmers. A significant majority of respondents rated the availability of inputs in their local markets as poor (54.17%) or very poor (41.67%). Only a small minority reported neutral ratings (4.17%). These findings suggest a systemic inadequacy in the supply chain and distribution networks for agricultural inputs in the surveyed areas, which fall within the major agricultural zone. The most commonly used type of seeds among respondents were certified enhanced seeds (proven second generation), with 52.08% indicating their usage. This was followed by local/indigenous/traditional seeds (25%), and hybrid seeds (22.92%). Notably, none of the respondents reported using genetically modified foreign seeds. These preferences reflect a mix of traditional farming practices and adoption of modern agricultural technologies, with a notable absence of genetically modified seeds, possibly due to regulatory constraints or cultural preferences.

5.2.9 Awareness of Technical Regulations and Standards

Out of the 96 respondent farmers, 43.75% were aware of the technical regulations and standards required for importing/exporting products, while the majority 56.25% lacked awareness. This indicates a need for greater dissemination of information and education regarding trade-related regulations among farmers. A significant portion of respondent farmers rated the compliance of imported agro-food products for food safety and animal/plant health as low (42.71%) or worst (25%). This suggests concerns among farmers regarding the quality and safety of imported agricultural products, highlighting the importance of effective regulatory oversight and enforcement mechanisms on quality control and enhanced quarantine facility at custom border points. The vast majority of respondent farmers (88.54%) considered the establishment of national accreditation bodies, standards bodies, and conformity assessment bodies as extremely important for ensuring the quality standards of agro-products. This underscores the perceived importance of robust quality assurance mechanisms within the agricultural sector to safeguard consumer health and promote market competitiveness of Nepali products.

Figure 19

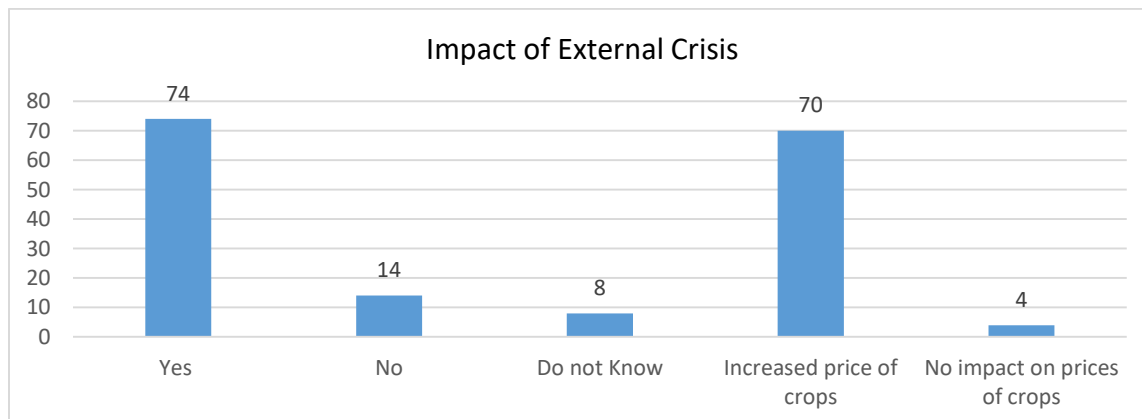
Awareness of technical regulations and assessment of its compliance by imported agro-food products



5.2.10 Impact of External Crisis and Specific Challenges to Enhance Production

Figure 20

Impact of Russia-Ukraine crisis and export bans imposed by India on specific agricultural commodities



A significant majority of respondent farmers (77.08%) reported experiencing impacts due to the Russia-Ukraine Crisis and export bans imposed by India on specific agricultural commodities. This suggests that external geopolitical events and trade policies have substantial repercussions on the livelihoods and economic activities of farmers. Among those impacted by the Indian export ban, the majority of farmers (94.59%) reported increased prices of their crops. This indicates the vulnerability of farmers to disruptions in regional and international markets

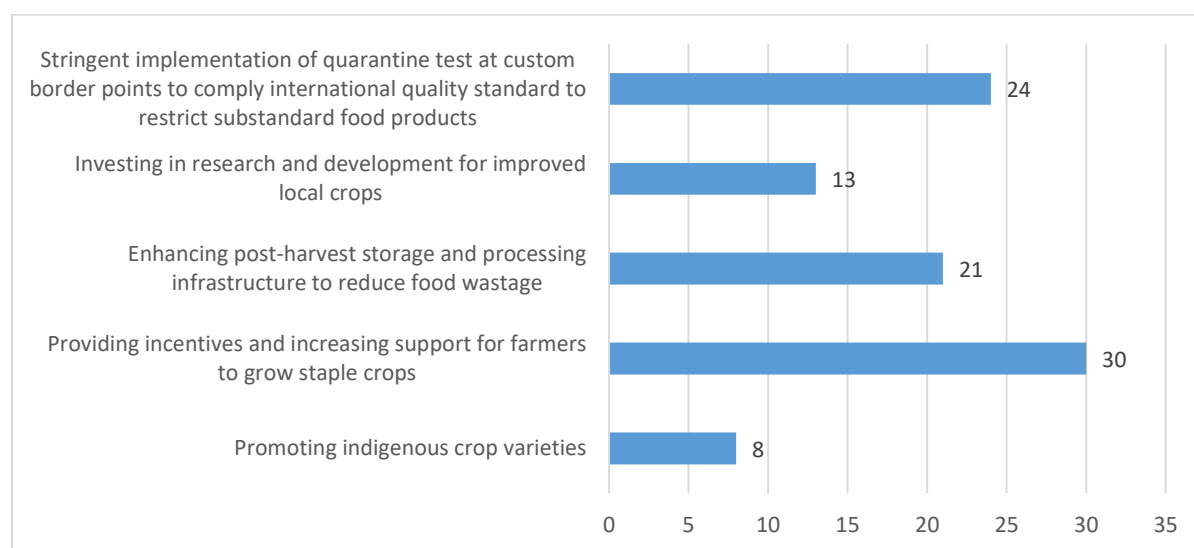
and underscores the importance of diversification and resilience-building strategies within the agricultural sector.

Limited availability of agricultural inputs such as seeds, fertilizers, and pesticides was identified as the most prevalent challenge, if addressed by the government, could significantly enhance the agricultural production, with 26 respondents (27.08%) farmers highlighting this issue. Other significant challenges included inadequate infrastructure (23.96%), market restrictions due to trade barriers (19.79%), and the lack of international accreditation facilities for exporting agricultural products (15.63%). These findings indicate a range of systemic issues affecting agricultural production in Nepal, including constraints related to input access, infrastructure, market access, and international trade standards.

5.2.11 Minimizing Dependency on Food Imports

Figure 21

Measures to reduce dependency on food imports



The majority of respondent expressed a strong agreement (57.29%) or agreement (36.46%) with the idea of minimizing dependency on food imports. This suggests a widespread belief among farmers in the importance of enhancing domestic food production to reduce reliance on imports. Respondents proposed various measures to reduce dependency on food imports, including providing incentives for farmers to grow staple crops (31.25%), enhancing post-harvest storage and processing infrastructure (21.88%), and promoting indigenous crop varieties (8.33%). Additionally, stringent implementation of quarantine tests at custom border points (25%) and investment in research and development for improved local crops (13.54%)

were cited as crucial strategies. The overwhelming majority of respondents (83.33%) supported the idea of exploring diversification of food import sources to build resilience against potential export bans from major trading partners. This highlights farmers' recognition of the vulnerability associated with dependence on a limited number of trading partners and their willingness to explore alternative sourcing strategies to mitigate risks and ensure food security.

5.2.12 Approaches to Enhance Food Production Self-Sufficiency and Strengthen Food Security in Nepal

Among the five different approaches which government should prioritize to enhance food production self-sufficiency in Nepal, respondent farmers ranked the approach of providing agricultural input subsidies to smallholder farmers and output based subsidies to commercial farmers as top most in order of priority. The respondent farmers were asked to rank the top three approaches among the five approaches enumerated alphabetically, using a three-point ranking scores, which ranged from one to three. On the basis of varying ranking scores given by the respondent, mean scores for each approaches were determined. The mean score is calculated using the weighted average:

$$\frac{x_1w_1+x_2w_2+x_3w_3}{Total\ Responses}$$

Total Responses

Where:

w= weight of the ranked position

x= response count for answer choice

Each respondent's most preferred choice (ranked as #1) has a largest weight of 3 followed by the second choice (ranked as #2) with a weight of 2 and the third preferred choice (ranked as #3) has a weight of 1.

Nearly half (43.75%) of the farmers marked the approach of providing input and output based subsidies by classifying the smallholder and commercial farmers with the score of one and thus it resulted in the first position with the calculated mean score of 1.89. Respondents emphasize the importance of supporting farmers through subsidies to enhance their productivity and profitability. This suggests a recognition of the financial constraints faced by farmers and the potential benefits of targeted support to different types of farming operations. With the mean score of 1.54, increasing investment in agricultural infrastructure including warehouses is identified as second most important approach to be prioritized by government for enhancing self-sufficiency in food production. It reflects recognition of the importance of efficient storage

facilities in reducing post-harvest losses and ensuring food security. The top third approach suggested by the farmers is encouraging sustainable farming practices by preserving traditional knowledge with mean score of 1.20.

Table 3

Top three approaches ranked by farmers to enhance food production self-sufficiency in Nepal

Approaches in alphabetical order	Rank #1	Rank #2	Rank #3	Mean scores	Final ranking (in ordinal)
Encouraging sustainable farming practices by preserving traditional knowledge	14	26	22	1.20	Third
Implementing effective irrigation management practices	12	4	28	0.75	Fourth
Increasing investment in agricultural infrastructure including warehouses	16	40	20	1.54	Second
Providing agricultural input subsidies to smallholder farmers and output based subsidies to commercial farmers	42	20	16	1.89	First
Strengthening farmer cooperatives	12	6	10	0.60	Fifth

In order to identify the most important actions the government can take to strengthen food security in Nepal, farmers participated in the survey were asked to rank 3 actions (alphabetically listed options), using a 3-point ranking scores, which ranged from one (top most important) to 3 (top third important). Mean scores for each actions were determined using the calculation of weighted average. In this way, mean scores in Table 4 clearly displayed the list of top three most important actions identified by the farmers to be initiated promptly by the government to strengthen food security.

Public stockholding to building strategic food reserves by buying food products at market prices topped the list as most important priority action to be implemented by the government, followed by actions of implementing effective food distribution systems to stabilize food prices and supporting small-scale farmers with financial assistance with the mean ranking scores of 1.85, 1.33 and 1.25 respectively. A higher 41.67% of respondents identified public stockholding as rank one, whereas implementation of effective food distribution system and supporting small-scale farmers with financial assistance were scored one by 16.67% and 18.75% portion respectively. Building strategic food reserves through public stockholding identified as the most important action for strengthening food security reflects a recognition of the importance of ensuring sufficient food supplies during times of crisis or market volatility. Likewise, respondents prioritize the establishment of effective food distribution systems to stabilize food prices and ensure equitable access to food which suggests a concern for food affordability and accessibility for all segments of the population. Supporting farmers during crises, such as natural disasters, identified among top three critical action for strengthening food security underscores the recognition of the vulnerability of agricultural livelihoods to external shocks and the need for targeted assistance to mitigate their impact.

Table 4

Top three actions to be taken by government as ranked by farmers to strengthen food security in Nepal

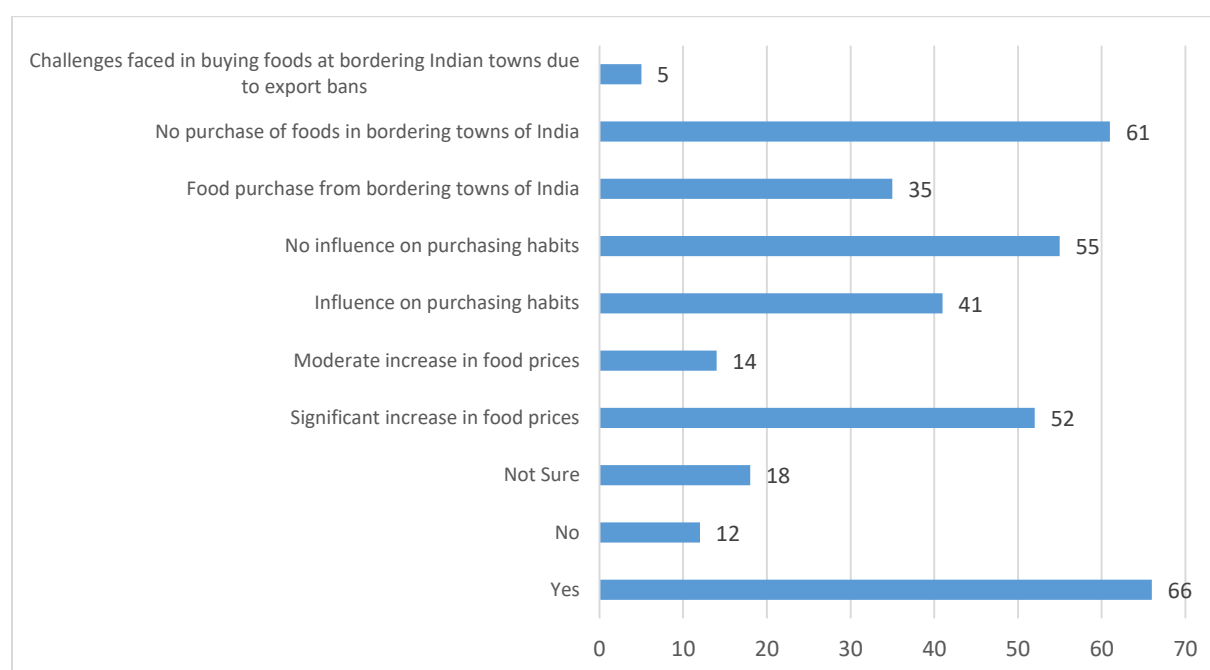
Actions in alphabetical order	Rank	Rank	Rank	Mean	Final
	#1	#2	#3	scores	ranking (in ordinal)
Implementing effective food distribution systems to stabilize food prices	16	28	24	1.33	Second
Promoting climate-smart agriculture with enhanced early warning systems for agricultural and climate change risks	10	6	16	0.60	Fifth

Public stockholding to building strategic food reserves by buying food products at market prices	40	24	10	1.85	First
Supporting farmers during crises (e.g., natural disasters)	12	18	20	0.96	Fourth
Supporting small-scale farmers with financial assistance	18	20	26	1.25	Third

5.2.13 Impact of Trade Disruption and Export Bans upon Consumers

Figure 22

Impact of trade disruptions and export bans upon consumers



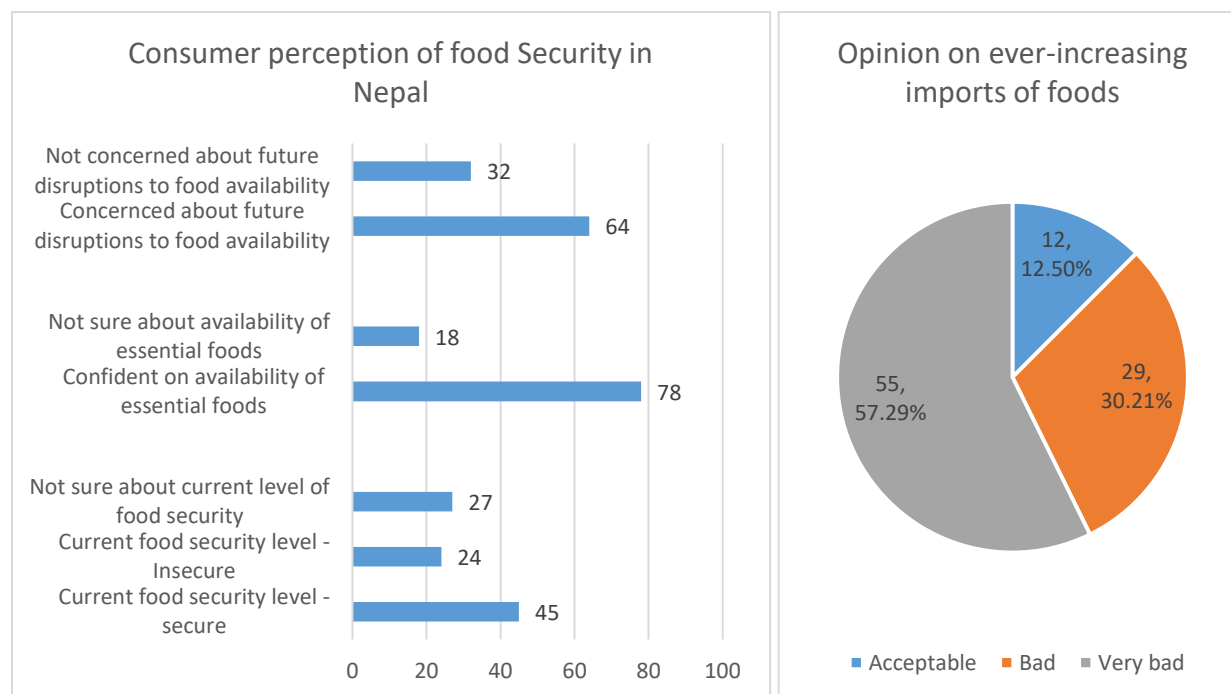
A significant majority (68.75%) of respondent consumers have noticed an impact on food prices due to trade disruptions or export bans from India. 12.5% of respondent consumers haven't observed any noticeable impact while 18.75% of consumers surveyed are unsure, indicating potential ambiguity or lack of clear information. Among those who noticed an impact, a substantial majority (78.79%) reported a significant increase in food prices. A smaller portion (21.21%) reported a moderate increase. The majority of consumer respondents sometimes purchase agricultural food products directly from farmers, with the highest frequency being once every three months (32.29%). A significant portion (25%) always shop normally every week

directly from the farmers. A notable portion (23.96%) stated that they have never shopped directly from farmers. A significant proportion (42.71%) of respondent consumers indicated that trade disruptions or export bans from India influenced their purchasing habits. However, a majority (57.29%) reported no influence. Among respondents influenced by trade disruptions, the most common changes in purchasing habits include a reduction in overall imported food consumption (29.27%) and increased reliance on local products (24.39%). Other changes such as changing preferred brands and choice of food items were also reported but to a lesser extent. A significant portion (36.46%) of respondents purchase food items from bordering towns of India. However, a majority (63.54%) do not engage in such purchases. Among respondents who purchase from bordering towns of India, only a small portion (14.29%) reported facing challenges or changes in purchasing after the imposition of export bans on various food products, including rice.

5.2.14 Consumer Perception of Food Security

Figure 23

Consumer perception of food Security and ever-increasing food imports in Nepal



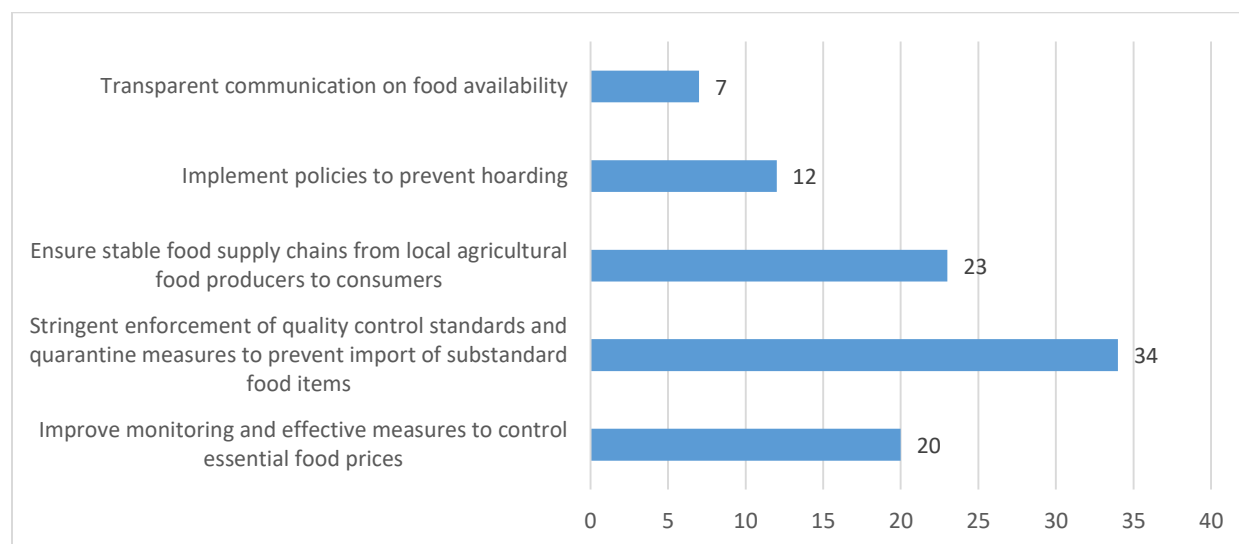
A significant portion (46.88%) of respondents perceive the current level of food security in Nepal as secure. However, a notable portion (25%) perceives it as insecure, with a significant portion (28.13%) being unsure. A large majority (81.25%) of respondents feel confident about

the availability of essential foods in the local market. 18.75% are unsure about the availability. A significant majority (66.67%) of respondents are concerned about potential disruptions to food availability in the future. The majority of respondents have negative opinions regarding the ever-increasing import of foods from foreign countries in Nepal, with 57.29% considering it "Very Bad" and 30.21% considering it "Bad."

Respondents have varied expectations from the government to address consumer concerns and enhance food security. Specifically, responses indicate a considerable interest in measures such as stringent enforcement of quality control standards and quarantine measures to prevent the import of substandard food items, with 59.65% consumer respondents highlighting this as a priority. Additionally, ensuring stable food supply chains from local agricultural producers to consumers garnered significant attention, with 40.35% emphasizing its importance. Furthermore, the survey underscores the significance of implementing policies to prevent hoarding, as indicated by 21.05% consumer respondents. Transparent communication on food availability, although less emphasized, was still deemed important by 12.28% of consumers.

Figure 24

Consumers' expectations from government to enhance food security



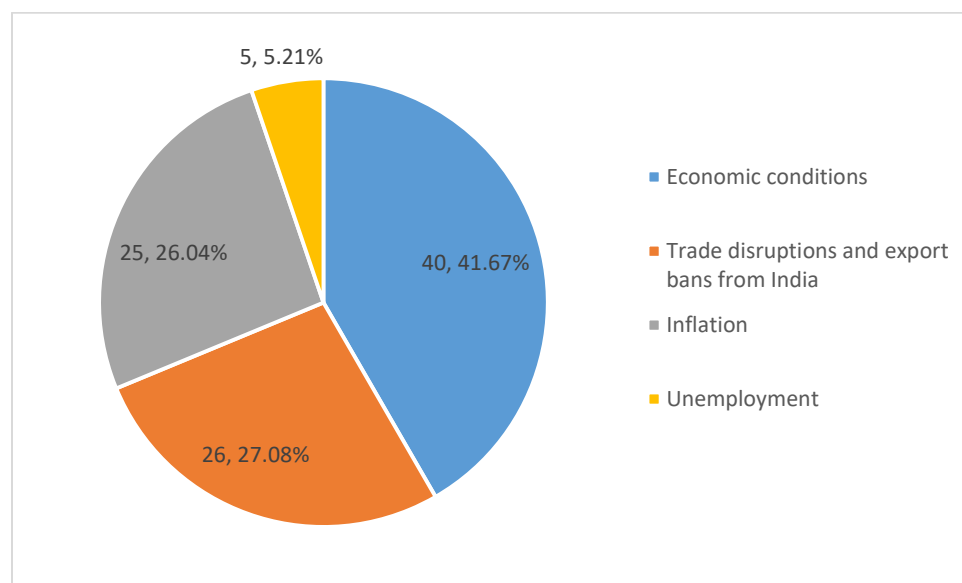
5.2.15 Expenditure and Purchasing Parity of Consumers on Food Consumption

From the consumer survey, it is found that a significant majority (78.13%) of respondents allocate 20-40% of their total monthly expenditure to food consumption. A smaller portion (12.5%) allocate less than 20% to food consumption, while an even smaller portion (9.38%) allocate 41-60%. A substantial majority (60.42%) of respondents perceive a decrease in their

purchasing power for food items over the past year. Only a small portion (10.42%) perceive an increase. A notable portion (15.63%) perceive no change, while some (13.54%) are unsure about change in their purchasing power. Economic conditions are attributed by the majority (57.14%) respondents as the primary factor influencing changes in purchasing power for food items. Trade disruptions and export bans from regional trading partners are also significant, cited by 37.14% respondents. Inflation is found to contribute to purchasing power of 35.71% of the total respondents and unemployment are cited by smaller portions (7.14%) of the respondents. The most common response to the economic impact on household finances regarding food purchasing decisions is opting for more budget-friendly options, cited by the majority (53.13%) of respondents. Fewer respondents reported maintaining previous habits, reducing overall food consumption, or shifting to locally available foods.

Figure 25

Factors influencing purchasing power for food items



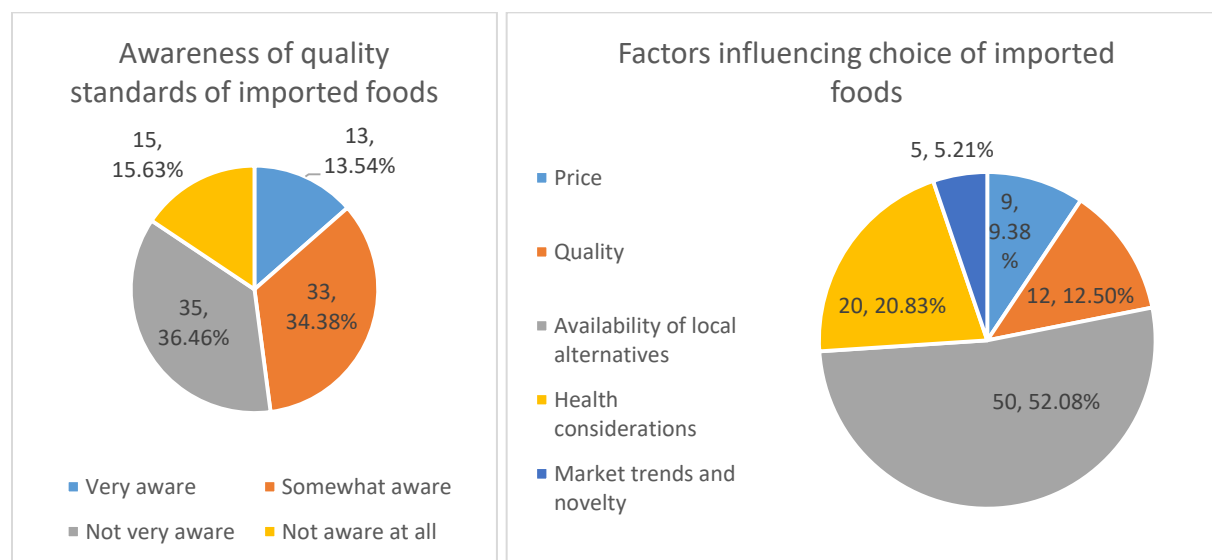
5.2.16 Awareness of Quality and Purchasing Decisions of Imported Foods

A significant portion (70.83%) of respondents are aware to some degree of the quality standards of imported foods available in the market while 13.54% of the consumer respondents are very aware. However, more respondents (36.46%) consider themselves "Not very aware" compared to those who consider themselves "Somewhat aware" (34.38%). A notable portion of consumer respondents (59.25%) check the origin and quality of the foods they purchase, especially those imported, at least sometimes. However, a significant portion (59.37%) rarely or

never check. The most influential factor in the decision to purchase or avoid imported foods among respondents is the availability of local alternatives, cited by the majority (52.08%) respondents. Other factors such as price, quality, health considerations, and market trends are also cited but to a lesser extent.

Figure 26

Awareness of quality standards and factors influencing choice of imported foods



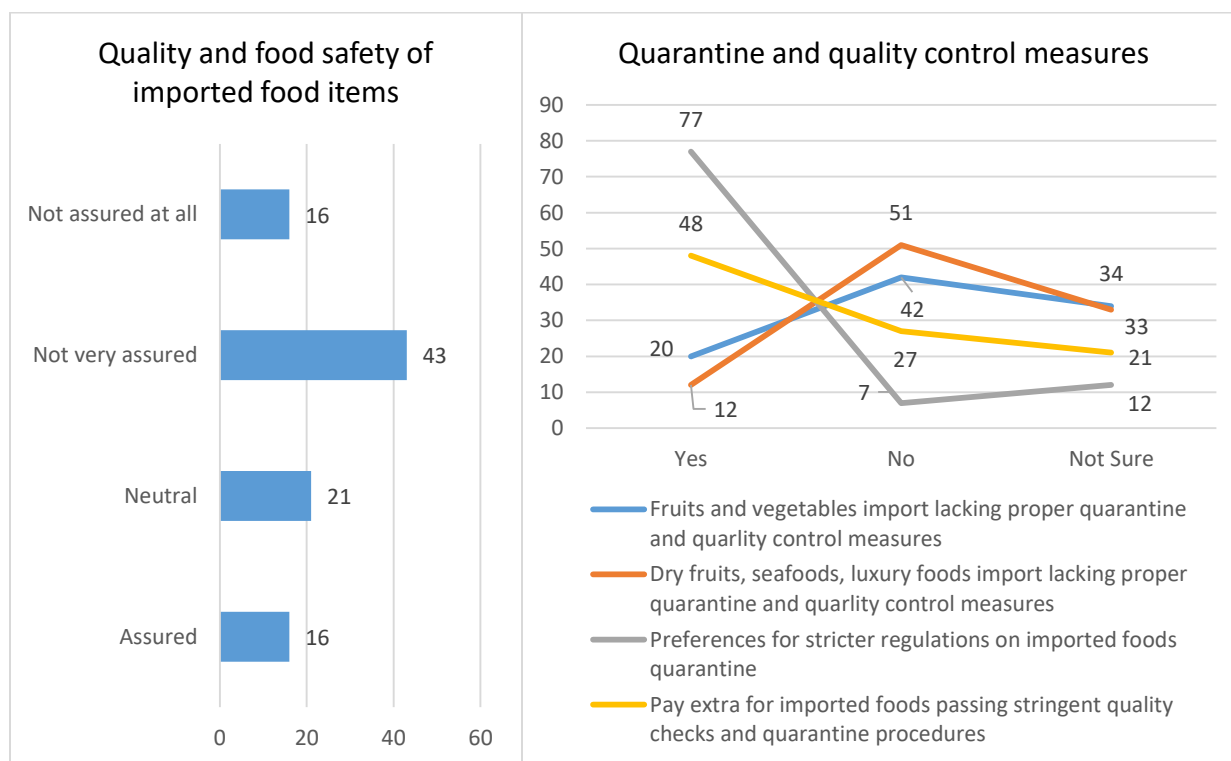
5.2.17 Standardization, Quarantine Procedures, and Safety Standards

A significant portion of consumer respondents (61.46%) express varying degrees of lack of confidence in the adherence to international quality standards and stringent quarantine procedures for imported food products in Nepal. Only a minority (16.67%) feel assured or very assured about the adherence to these standards. A large majority (80.21%) of consumer respondents express a preference for stricter regulations on standardization and quarantine procedures for imported foods to ensure they meet safety standards. A small portion (7.29%) oppose stricter regulations. A notable portion (20.83%) of respondents are aware of fruits and vegetables imported from India entering Nepal without proper quarantine measures and pesticide checks. However, a larger portion (43.75%) are not aware, and a significant portion (35.42%) are unsure. The majority of respondents (66.67%) express some level of concern about the potential health risks associated with consuming fruits and vegetables that might not undergo proper quarantine and pesticide checks. A smaller portion (14.58%) are very concerned, while a minority (18.75%) are not concerned.

The majority of respondents (77.09%) consider imported dry fruits, seafood, and other luxury foods at least somewhat relevant to their overall diet. A smaller portion (22.92%) consider them not relevant. A minority of respondents (12.50%) are aware of the inspection, quality control measures, and safety standards for imported dry fruits, seafood, and luxury foods available in the market. A significant portion (87.50%) are either not aware or unsure. A large majority of respondents (92.71%) consider it important to know the origin and quality standards of imported fruits, vegetables, dry fruits, seafood, and luxury foods. Only a small portion (7.29%) do not consider it important. A minority of respondents (17.71%) have altered their consumption habits or choices of fruits, vegetables, dry fruits, seafood, and other luxury foods due to concerns about chemical levels and the absence of proper quarantine procedures. A larger portion (46.88%) have not made any alterations. A significant portion (35.42%) consider the question not applicable, possibly indicating they don't feel the need to alter their consumption habits. Precisely half of respondent consumers (50%) would be willing to pay extra for imported food products if they undergo stringent quality checks and quarantine procedures. However, a significant portion (50%) are either not willing to pay extra or unsure.

Figure 27

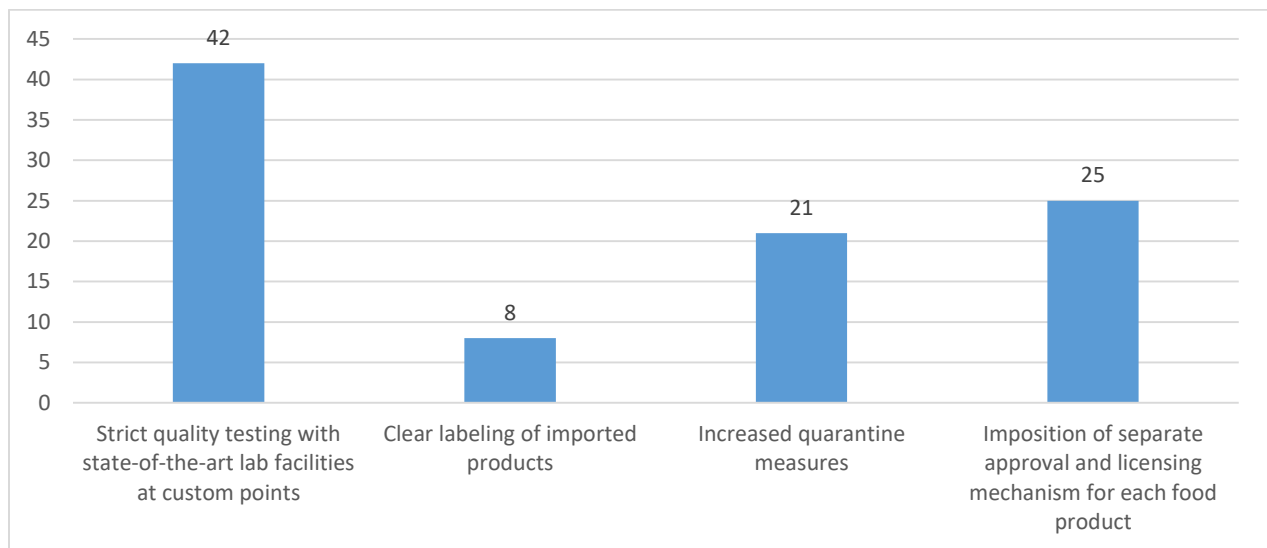
Standardization, quarantine and quality control measures of imported food products



Respondent consumers suggest various measures to ensure the quality and safety of imported food items, with the majority (43.75%) emphasizing the need for strict quality testing with advanced lab facilities at custom points. Other suggested measures include imposing separate approval and licensing mechanisms (26.04%) and increasing quarantine measures (21.88%), indicating a multifaceted approach to addressing concerns about food safety and quality.

Figure 28

Measures to ensure quality and safety of imported food items

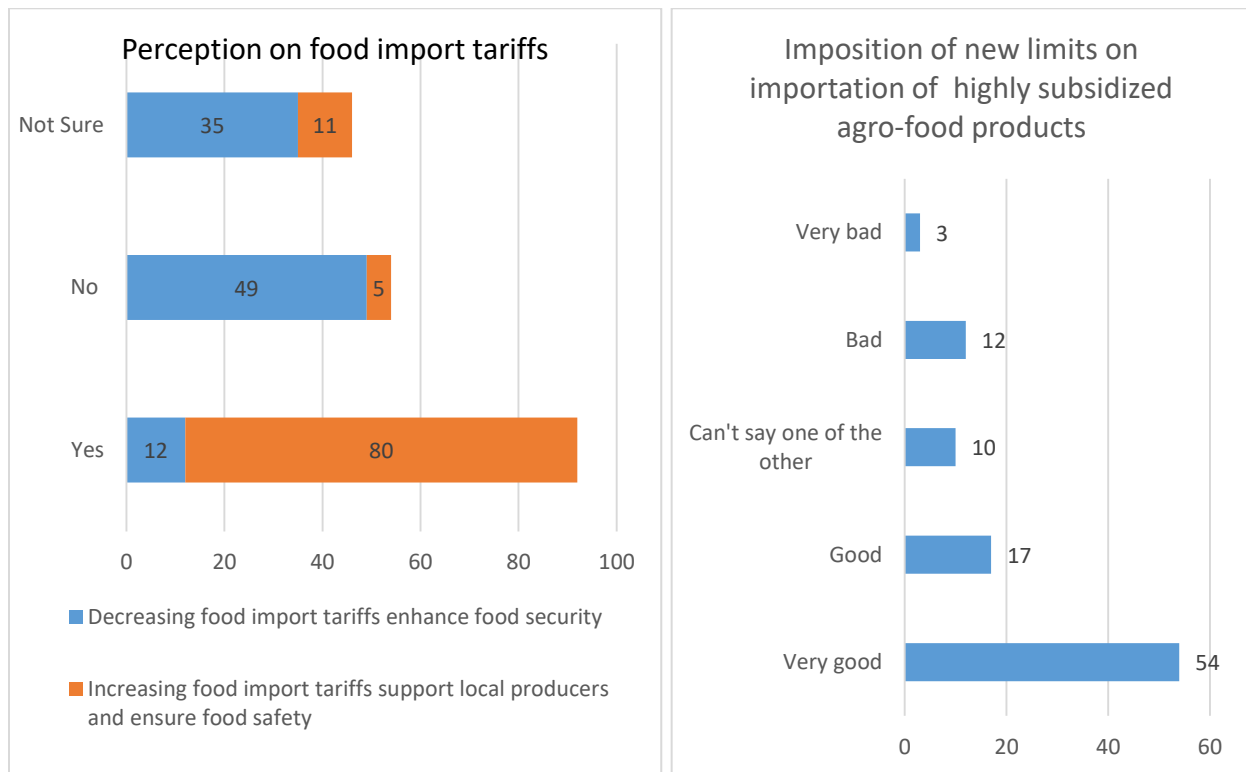


5.2.18 Consumer Perception on Food Import Tariffs

A majority of consumer respondents (51.04%) do not believe that decreasing tariffs on food imports would enhance food security. A minority (12.5%) support the idea of decreasing tariffs, while a significant portion (36.46%) are unsure, indicating ambiguity or lack of consensus. A large majority of respondent consumers (83.33%) support an increase in tariffs on food imports to support local producers and ensure better quality and safety standards. A small portion (5.21%) oppose the idea, and a few are unsure regarding increase in tariffs on food imports. The majority of respondent consumers (73.96%) view the imposition of new limits on the importation of hugely subsidized agro-food products from foreign countries positively, with 56.25% considering it "Very Good" and 17.71% considering it "Good." A smaller portion (15.63%) have negative opinions, with 12.5% considering it "Bad" and 3.13% considering it "Very Bad."

Figure 29

Consumer perceptions on food import tariffs and imposition of new limits on importation of highly subsidized agro-food products



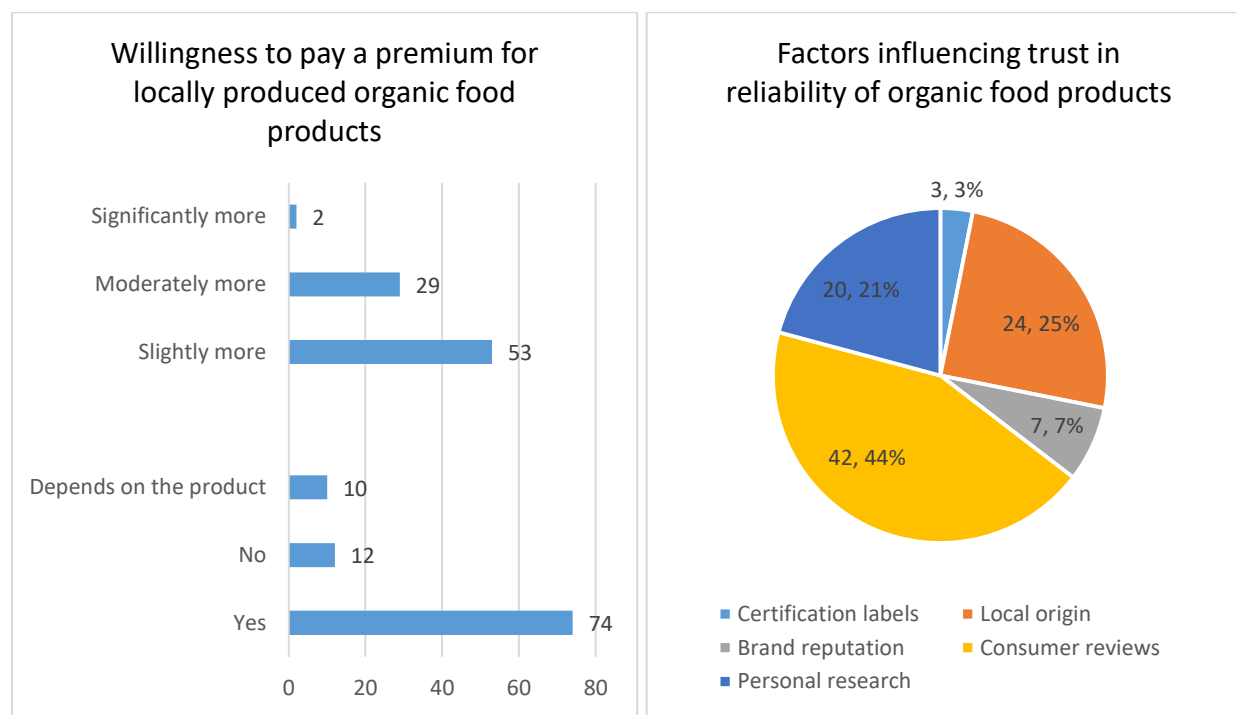
5.2.19 Consumer Preferences for Locally Sourced Organic Food Products

A significant majority of respondent consumers (77.08%) are willing to pay more for locally produced organic food products, indicating a preference for organic and locally sourced items. A smaller portion (12.5%) are not willing to pay more, while some (10.42%) are undecided but yet ready to base their decision on the product. Among those willing to pay more for local and organic products, the majority (63.09%) are willing to pay slightly more, followed by 34.52% willing to pay moderately more, and merely 2.38% willing to pay significantly more.

The majority of respondents (75%) consider food products labeled as "organic" that claim to use no chemical fertilizers and pesticides at least somewhat reliable. However, one fourth (25%) express doubts, with 16.67% considering them not very reliable and 8.33% considering them not reliable at all. Respondents' trust in the reliability of organic products is influenced by various factors, including consumer reviews (43.75%), local origin (25%), and personal research (20.83%). Certification labels and brand reputation are less influential factors.

Figure 30

Consumer willingness to pay a premium for organic food products and factors influencing trust in reliability of organic food products



5.3 Summary of Findings from Focus Group Discussion

The thematic analysis of the qualitative data obtained through transcribed statements provided by the five stakeholders representing different areas reveals a diverse range of perspectives on Nepal's agricultural trade policies, with experts offering recommendations on how to address the challenges effectively. Collaborative efforts between government, private sector, and other stakeholders and comprehensive approach to policy formulation are deemed essential for achieving sustainable agricultural development and food security in Nepal. The thematic and comparative analysis based on the inputs from FGD conducted with the five experts are presented as follows:

5.3.1 Transformation of Agricultural Subsidy Models and Support Measures

Agro economist, Lal Kumar Shrestha, MoALD advocates for a shift from input-based to output-based subsidies highlighting the need for better monitoring of subsidy utilization. Food security expert, Dr. Yamuna Ghale criticizes the lack of clarity in MSP policies and emphasizes the need for government support for organized producers. Mr. Birendra Bahadur Basnet, executive chairperson of the Arju Rice Mills stresses the importance of offering fair prices to

farmers to stimulate agricultural production. DGM of MKCL, Ram Sharan Timalisina proposes subsidies for essential products where local producers can't compete and raises concerns about illicit trading of uncertified seeds due to porous borders. Chief of Supply Chain and Consumer Interest Protection Division, MoICS, Gajendra Kumar Thakur also calls for a shift from input-based to output-based subsidies criticizing the structural defects in WTO agreements regarding the subsidies regime of developed countries while guiding smaller economies to cut all form of subsidies. The major issues on transformation in subsidy regime and support measures are:

a. Inputs vs. Outputs: Experts emphasize the need to shift from input-based subsidies to output-based subsidies to encourage higher productivity and efficiency in agricultural production.

b. Monitoring and Evaluation: There is a consensus among experts regarding the lack of proper monitoring and evaluation mechanisms for agricultural subsidies, leading to misuse and inefficiencies.

c. Differentiated Subsidies: Suggestions are made to differentiate subsidies based on the scale of farming operations, with smaller farmers needing support on inputs while larger commercial farmers should be incentivized based on their production output.

5.3.2 Market-Based Approach and Enhancing Trade Competitiveness

Representing MoICS, joint secretary Gajendra Kumar Thakur urges for market-oriented approaches to enhance trade competitiveness. He highlights the lack of institutional mechanisms for buy-back guarantees of agricultural products. Agro economist of MoALD, Lal Kumar Shrestha focuses on the importance of aligning production with market demand and stresses the need for consumer behavior studies to encourage farmers for informed production decisions. Dr. Yamuna Ghale calls for institutional mechanisms to ensure reliable market linkages. Agriculture industrialist, Birendra Bahadur Basnet emphasizes the role of pre-cultivation contracts in managing market risks and stresses the need for proper pricing mechanisms to support farmers.

Agro economist and representative of publicly listed agriculture company, Ram Sharan Timalisina advocates for public-private partnerships to enhance agricultural production. He also highlights the importance of studying consumer behavior for effective production planning and recommends creating databases to track demand and supply in local and international markets. The major themes on enhancing market based approach and trade competitiveness which emerged through the FGD are as provided in the following lines:

a. Lack of Market Information: Experts highlight the disconnect between production and market demand, leading to overproduction or underproduction of certain crops.

b. Importance of Consumer Behavior: Recommendations are made to study consumer behavior to align production with market demand effectively.

c. Trade Policies: Concerns are raised regarding the impact of trade policies on local agriculture, with a need for policies that prioritize local production and competitiveness.

5.3.3 Export Restrictions, Non-tariff Barriers and Food Security

Dr. Yamuna Ghale, highlights the impact of export restrictions on food security and the importance of domestic production. Industrialist Birendra Bahadur Basnet advocates for import controls to promote self-sustainability in major food crops including paddy and rice. DGM of MKCL, Ram Sharan Timalsina raises concerns about stringent quarantine procedures hindering export opportunities. Joint secretary, Gajendra Kumar Thakur urges for a focus on production-oriented agricultural policies to ensure food security. Agro economist, Lal Kumar Shrestha expresses concerns about heavy reliance on food imports and the need for self-sustainability. The major points on the themes of export restrictions, non-tariff barriers and food security are presented below:

a. Quarantine and Quality Standards: Strengthening quarantine procedures and quality standards is essential to prevent the influx of substandard agricultural products and ensure food safety. This includes improving facilities at border points and enhancing testing capabilities. Experts underscore the need of support by all three tiers of the governments to the food producers in certification, standardization and compliance of international quality standards to facilitate exports of high value products.

b. Dependency on Imports: There is a shared concern about Nepal's heavy reliance on food imports, which poses risks to food security, especially in times of export restrictions by major trading partners.

c. Need for Domestic Production: Experts advocate for policies that promote self-sustainability in major food crops production to reduce dependency on imports.

5.3.4 Institutional Reforms

Representative of the agricultural entrepreneurs, Ram Sharan Timalsina, DGM, MKCL urges for the establishment of a unified agricultural development authority under the Prime Minister's leadership to govern and regulate agricultural activities. Government official, Gajendra Kumar Thakur, Joint Secretary, MoICS highlights the need for institutional

mechanisms to evaluate progress on poverty indicators related to food security. He advocates for the leasing out of government-owned warehouses to the private sector and to enhance trade diversification. Agro economist, Lal Kumar Shrestha (MoALD) and food security expert, Dr. Yamuna Ghale stress on the importance of inter-ministerial coordination and call for a focus on production-oriented agricultural policies rather than merely trade-centric approaches. Agriculture industrialist, Birendra Bahadur Basnet, stresses the need for investments in modern warehousing facilities to enhance food security. The major issues of institutional reforms are given below:

a. Coordination and Collaboration: Experts stress the importance of inter-ministerial coordination and cooperation between government agencies to effectively implement agricultural policies and address food security concerns.

b. Newer Institutional Mechanism: Establishment of a monitoring and evaluation division within MoALD is suggested by the experts to ensure effective policy implementation and address the needs of smallholder and commercial farmers separately.

c. Role of Private Sector: Suggestions are made to involve the private sector in agricultural development initiatives, including research, infrastructure development, and market linkages.

5.3.5 Socioeconomic Factors Affecting Agriculture

The concerned authority of MoICS, joint secretary, Gajendra Kumar Thakur highlights land reform policies and lack of dignity in agricultural work as socioeconomic barriers to agricultural production. He emphasizes the need for policy interventions to address these challenges and retain agricultural workforce. The major socioeconomic challenges in agriculture are provided as follows:

a. Land Reform and Labor Migration: Socioeconomic factors such as land reform policies and the lack of dignity associated with agricultural work are identified as barriers to agricultural production.

b. Youth Engagement: Concerns are raised about the trend of youth seeking employment abroad instead of engaging in agriculture, indicating a need for interventions to attract youth to farming.

5.3.6 Comparative Analysis

The comparative analysis based on comparison and contrast in between the perspectives of the stakeholders expressed during FGD highlights both areas of consensus and divergence among stakeholders in Nepal's agricultural sector. While there is agreement on the need for

institutional reform and inter-ministerial coordination, divergent priorities reflect the complexity of addressing agricultural challenges and ensuring food security. While stakeholders unanimously recognized the need for newer institutional mechanisms, there were differences in emphasis, with some prioritizing poverty alleviation measures and others focusing on infrastructure development. The essence of the comparative analysis is provided in the following points:

a. Consensus on Subsidy Reform: All experts agree on the need to reform agricultural subsidies, shifting towards output-based incentives and improving monitoring mechanisms.

b. Divergence on Trade Policies and Priorities: While some experts advocate for protectionist trade policies to support local agriculture, others emphasize the importance of competitiveness and market-oriented approaches. Perspectives diverged regarding priorities, with some stakeholders prioritizing poverty evaluation mechanisms, while others emphasized infrastructure investments and trade diversification.

c. Recognition of Food Security Importance: There is a shared recognition among experts regarding the importance of food security and the need for policies to promote domestic production to ensure self-sustainability.

d. Call for Institutional Reform: Experts unanimously recognize the need for new institutional mechanisms to address challenges in agriculture, such as land reform, coordination, and poverty evaluation. Stakeholders advocated for the establishment of a unified agricultural development authority to govern and regulate agricultural activities.

e. Focus on Inter-Ministerial Coordination: All stakeholders stressed the importance of inter-ministerial coordination, suggesting a shared understanding of the collaborative approach needed to address multifaceted challenges in agriculture, trade and food security and ensuring effective policy implementation.

f. Emphasis on Evaluation and Progress Monitoring: Experts stress the importance of mechanisms to evaluate progress on poverty indicators and the effectiveness of agricultural policies in ensuring food security. There was agreement on the necessity of monitoring progress to ensure that interventions effectively address food security concerns.

g. Priority to Adequate Warehousing and Cold Storage Facilities: Some stakeholders prioritized the need for investments in modern warehousing facilities and trade diversification. Perspectives varied on the role of government-owned warehouses, with some advocating for

leasing them out to the private sector for enhanced efficiency. Most of the experts stressed on making adequate warehousing and cold storage facilities available to avoid the post-harvest spoilage.

5.4 Discussions

The major trends and patterns observed in the findings shows that food crops, green leafy vegetables, vegetable crops, and cereal crops sustain the majority of farmers' families for the entire year, emphasizing their crucial role in household food security. The data suggests the need for flexible trade policies, especially regarding major food crops and spices, to enhance food security without compromising farmers' livelihoods. A considerable portion of surveyed farmers are aware of Nepal's agricultural trade policies, but there is room for improvement in understanding the implications of international agreements such as those governed by the World Trade Organization. Farmers face significant challenges in accessing domestic and international markets for their agricultural products, with issues such as unfair competition from subsidized imports and trade barriers hindering their ability to sell produce. India remains a primary export market for Nepalese agricultural products, highlighting the importance of cross-border trade relations. Unfair competition from subsidized imports, inadequate government support, and non-tariff trade barriers are identified as key constraints on market access for Nepalese agricultural products. Improving trade facilitation measures, enhancing product quality, and exploring export diversification strategies are suggested to address these constraints effectively. Smallholder farmers advocate for measures such as standardized product maintenance and centralized export management to improve their access to international markets. Shifting to high-value crops and promoting organized collective farming through cooperatives are also seen as effective strategies to protect smallholder farmers' interests. Approximately half of the surveyed farmers reported benefiting from government subsidies, primarily on agricultural inputs. Dissatisfaction with the current subsidy schemes suggests a need for reform or improvement in subsidy delivery and effectiveness, with a shift towards output-based subsidies or direct cash transfers gaining traction among farmers.

There is support for prudently regulated subsidized interest rates on agriculture loans to reduce food imports. However, there's significant opposition to FDI in the agriculture sector, highlighting diverse perspectives among farmers. Farmers express dissatisfaction with MSP, often opting not to sell to government purchase centers due to accessibility issues and preference

for better prices in the open market. Perceptions on tariff rates indicate concerns about competitiveness vis-à-vis imported products. Farmers face challenges accessing fertilizers, seeds, and pesticides, with a majority rating the availability of inputs in local markets as poor or very poor. Limited availability of agricultural inputs is a major challenge affecting production. Both farmers and consumers face challenges related to access to inputs, fair prices, and affordability, influencing their decisions and perceptions. There's a lack of awareness among farmers regarding technical regulations and standards for importing/exporting products, highlighting the need for greater dissemination of information. Concerns exist about compliance of imported agro-food products for food safety and health standards. However, concerns of consumers over compliance with technical regulations, quality standards, and safety measures for imported food products indicate a need for stricter regulations and oversight. External geopolitical events and trade policies significantly impact farmers, with the Russia-Ukraine crisis and export bans from India affecting agricultural commodities and prices. External factors like trade disruptions, geopolitical events, and market dynamics significantly impact both farmers and consumers, highlighting the interconnectedness of global markets with local agriculture and food security.

There's a strong consensus among farmers to reduce dependency on food imports, emphasizing diversification of sources and support for local production. Consumers show a strong preference for locally sourced and organic food products, willing to pay more, but also express concerns about reliability and safety standards. Both farmers and consumers support government intervention through subsidies, infrastructure investment, and stricter regulations to enhance food security and support local producers.

Moreover, there is a consensus among experts to shift from input-based subsidies to output-based subsidies to promote higher productivity and efficiency in agricultural production. Experts emphasize the importance of aligning production with market demand and studying consumer behavior to encourage informed production decisions. Recommendations are made for institutional mechanisms to ensure reliable market linkages and manage market risks through pre-cultivation contracts. Concerns are raised about the impact of export restrictions on food security and the need for import controls to promote self-sustainability in major food crops. Inter-ministerial coordination and collaboration are stressed to effectively implement agricultural policies and address food security concerns. Socioeconomic barriers such as land reform policies and the lack of dignity associated with agricultural work are identified as challenges to

agricultural production. Policy interventions are needed to address these challenges and retain the agricultural workforce, particularly in the context of youth migration. Among experts, there is consensus on the need for subsidy reform and institutional coordination, but divergence exists regarding trade policies and priorities. Stakeholders recognize the importance of food security and call for evaluation mechanisms to monitor progress in addressing agricultural challenges. Adequate warehousing and cold storage facilities emerge as priorities to avoid post-harvest spoilage and enhance trade diversification.

While Nepal aims to graduate from the LDC status by the end of 2026 and it is estimated that Post- Graduation tariff increases could reduce Nepalese exports by 4 percent (GoNMoICS, 2023), Nepal needs to remain much perceptive to tackle with its agricultural trade and food security concerns. Nepal shall be no longer availed with the flexibilities and exemptions provided to LDC within the WTO framework and being a newly upgraded developing country, Nepal has to adhere to among others, the AoA provisions set for the developing countries specially in three pillars of market access, domestic support measures and export incentives. Nepal would also have to come up with additional reduction commitments in these areas. The recently concluded MC13 could not come up with a permanent solution on ongoing negotiations concerning pertinent issues of the agricultural trade and food security. Almost all of the issues press forwarded by the developing country including the public stockholding for food security and much demanded fairer provisions and policy flexibilities for developing countries within AoA for increasing the subsidies, incentive and other support measures would directly be meaningful to Nepal's concern as well. Thus Nepal should join hands with the NFIDCs and likeminded developing countries facing similar problems within the traditional agricultural value systems so as to carry on collective negotiations and policy lobbying at WTO having common minimum broader insights to address the prevailing difficulties in agricultural trade and food security for the public at large.

Nepal can strategically negotiate within the WTO framework and regional trade agreements to ensure that its food security interests are safeguarded amidst global geopolitical uncertainties. Within the WTO, Nepal can actively participate in negotiations related to agriculture, advocating for policies that prioritize food security, such as special safeguard mechanisms and exemptions for certain sensitive agricultural products. In regional trade agreements like SAFTA, Nepal can push for provisions that allow for flexibility in agricultural

trade policies, including mechanisms to protect domestic food production and support farmers during times of crisis. Nepal should also engage in bilateral discussions with key trading partners to address concerns related to food security and ensure that trade agreements do not compromise the country's ability to maintain food self-sufficiency.

Despite several scholars representing both global north and south have been reiterating their observance on structural bias and much favoured position in AoA to the cluster of wealthy developed economies which seems to be persistently failing to adequately address the needs of smaller economies and food security concerns, in case of Nepal, it is found from the overall study that Nepali policymakers so far have not been able to utilize even the available policy space and flexibilities provided on domestic support, market access and export subsidies targeted to the LDCs within WTO framework. Following Nepal's accession to WTO, the policymakers so far have given much of their priority to liberalize the agricultural trade by eliminating almost all forms of the subsidies and protection measures targeted to the small-scale farmers rather than focusing on self-sufficiency in food security through State support in production enhancement. Agricultural policies are found to be formulated taking trade and export into much consideration than increasing production and maintaining self-sufficiency in domestic food products. The average bound tariff on agricultural goods is found to be far lower in Nepal than that of its largest trading partner India. Export incentive schemes of 1% of the value of the agricultural exports are though introduced since 2012, this has not much spurred the food production. Due to resource and budgetary constraints, Nepal could not invest abundantly in subsidies at par to its largest trading partner India, basically in areas such as agriculture financing, credit, insurance, transportation, and production incentives to protect small-scale farmers and to promote the commercial farming.

Nepal has not yet been able to fully utilize the flexibilities provided to the LDCs under AoA. The bound tariff rates on market access is very much low in Nepal regarding the Agriculture products. This has only promoted the market of imported foods haphazardly without any safeguard measures. No proper quality standards and international standards and parameters have been set by GoN on import of foods. Thus substandard foods and often smuggled subsidized agro food products are illegally imported through the porous border which is highlighted by the farmers and consumers during survey. There is no proper subsidy distribution

system based on classification of farmers. Nepal has not yet focus on public stockholding of foods to enhance the access of food to the deprived and people living below the poverty line.

In pursuit of broadening export markets through liberalized trade, Nepali policymakers have been much gullible obedient than being vigilant adherent to agricultural trade rules of WTO AoA, so far as they have promoted unfettered imports of agricultural foods including the substandard products, which ultimately turns Nepal as market submerged in the imported agriculture food products. This sort of policy so far has ultimately led to mass addiction to low-priced imported foods, quality standards of which the authorities are themselves not sure. Such form of consumerism promoted dependency on food imports have discouraged the local agriculture production on one hand and have damaged the nutrition security empowered by the traditional foods on the other hands. To address the vulnerabilities in Nepal's food security particularly due to the volatile food prices in international market and unpredictable trade disruptions often created by international crisis and imposition of restrictive measures by the major trading partners, Nepal needs a wide reform in its agriculture trade policy to shift its focus to increase agriculture production, create self-sufficiency in major food staple crops and protect particularly small-holder farmers and people living below the poverty line in terms of food security. To do so, Nepal needs to stop pretending like a wealthy country in providing unregulated market access to any kinds of imported agricultural products from any countries.

In shifting the agricultural trade policies towards addressing the vulnerabilities in food security, much consideration is required to address the concerns and plights of the small-scale farmers, to adopt reform measures for increasing production and to strengthen the technical and financial capacity of the farmers. There is ample policy space within the WTO AoA framework for Nepal to increase its tariff on certain major staple food products to protect the domestic production, to increase export incentives specially to the cash crops having better performance in exports including ginger, cardamom, tea, coffee etc. and above all to intensify the subsidy measures to both small scale farmers in agricultural inputs and output based subsidy to the commercial farmers at par to the level of subsidies provided to its farmers by the largest trading partner with adjoining open border, India. Nepal can consider adjusting its tariff rates to provide greater protection for domestic agricultural producers, especially for staple food crops. Implementing targeted subsidies for agricultural inputs such as fertilizers, seeds, and irrigation systems can help boost productivity and reduce dependency on imports. Developing product-

specific support systems, such as price support mechanisms for key food crops, can incentivize domestic production and enhance food security. Investing in agricultural research and extension services to improve farming practices and promote the adoption of high-yielding and climate-resilient crop varieties can also contribute to increased self-sufficiency in food production.

The overall findings of the study lead the researcher to draw a conclusion that though the Constitution of Nepal, expresses nation's commitment to fostering a robust agricultural sector, ensuring sustainable practices, and safeguarding the rights and interests of farmers, thereby contributing to the overall economic development and food security of the country, the legal framework on agriculture is yet not insufficient to tackle with the multifaceted aspects of increasing agricultural production and addressing the food security concerns. There is absence of the comprehensive Agriculture Act incorporating the policy issues of farmers, producers, supply chain management, agriculture financing, agriculture trade, self-sufficiency, food security, market access, subsidies, quality standards, preserving traditional knowledge in agriculture and such pertinent issues. The prevalent Right to Food and Food Sovereignty law though provides for the classification of farmers, social security and pension for farmers, mechanism of maintaining the food reserves for crisis, agricultural zoning and making effective use of agriculture lands, there is lacking of implementation of it through collaborative efforts of all three tiers of the Federal, Provincial and Local Level governments. The provision for claiming the compensation for the substandard agro inputs has been introduced in the Right to Food and Food Sovereignty Act but yet such mechanism is not accessible to the farmers in practical implementation.

The legal provisions for anti-dumping, countervailing or safeguard measures for contingency trade remedies has been brought in place but proper implementation and monitoring mechanism for imposition of such measures where necessary to curb the dumping of imported subsidized food products seems necessary. Having a closer look to the agricultural policies, law on food security and food sovereignty, law on food supply management and law on safeguards, anti-dumping and countervailing, it is clearly seen and much coherent and comprehensive law on agriculture is need of the hour. The tariffs on agricultural food products and forms of subsidies to protect the farmers in Nepal must commensurate with that of its largest trading partner India, which needs to be regulated through the the comprehensive Act on agriculture. To reach the conclusion, researcher has drawn mainly upon the analysis with regards to the legal framework

of AoA within WTO, regional and bilateral arrangements and the agro-trade and food securities policies in Nepal. In addition, the interpretative analysis of the insights obtained from the FGD with experts and the perceptions of the farmers and consumers articulated through the survey findings also assist the researcher in making such inference.

The law on agriculture and food security is quite scattered and institutional responsibility has also been segregated in haphazard way resulting in lack of coordination among the responsible authorities at different tiers of the federal system of governance. Thus food security and agriculture trade seems to be much neglected due to the dispersed responsibilities among various authorities. It seems urgent to establish a Unified Agricultural Development Authority under the leadership of the Prime Minister, so that the authority can govern and regulate different activities of agriculture including the agro trade. Such consolidated authority has to provide licenses to carry out certain tasks in the agricultural industry, business and trade. Such authority shall provide tax benefits to the producers and manufacturers of food products for certain period which could encourage private sector large scale investment in agriculture and also it shall facilitate the inter-ministerial coordination. Such authority is important also to institutionalize the wholesale market for food products and vegetables.

Nepal can diversify its food imports by exploring new sourcing options and strengthening trade relations with alternative suppliers. Investing in infrastructure development, such as storage facilities and transportation networks, can enhance the country's capacity to handle fluctuations in food supply and mitigate the impact of trade disruptions. Promoting domestic production of a wider variety of food crops through targeted incentives and support programs can reduce reliance on a few key trading partners for essential food items. Implementing policies to improve post-harvest management and reduce food waste can also contribute to greater resilience in the face of export bans or trade disruptions. Strengthening domestic food processing industries can add value to locally produced food products and reduce dependency on imports of processed foods.

5.5 Research and Practical Implications

Based on the detail examination of the relevant laws in Nepal along with the WTO AoA provisions, the findings from the survey and FGD, the researcher makes following fifteen recommendations to concerned authorities for necessary reform in the agricultural trade policies to enhance the food security:

- i. Federal Legislature-Parliament is recommended to pass a comprehensive legislation on agriculture incorporating a separate Unified Agriculture Development Authority to look after the pertinent issues of agriculture. The comprehensive legislation on agriculture should integrate various aspects of agricultural policy, including production, distribution, research, support measures and quality standards. The comprehensive Agriculture Act should address the concerns of farmers, producers, supply chain management, agriculture financing, agriculture trade, self-sufficiency, food security, market access, subsidies, quality standards, preserving traditional knowledge in agriculture and such pertinent issues. The Unified Agricultural Development Authority should be established under the premiership of the Prime Minister, so that the authority can govern and regulate different activities of agriculture autonomously including the agro trade and food security concerns. Such consolidated authority should promote the commercial private large scale investment in agriculture production while protecting the interests of the small-scale farmers from food security perspective.
- ii. GoN is suggested to establish a dedicated institution tasked with formulating and implementing agricultural trade and food security policies. This institute could conduct research, provide policy analysis, and facilitate stakeholder consultations to inform evidence-based decision-making by making economic intelligence and surveillance of the policy measures and decisions taken by the trading partners.
- iii. GoN is recommended to carry on the negotiation on agriculture at WTO along with other developing countries to integrate pertinent policies like farmer settlement, land reform and public stockholding into the green box measures within AoA. Likewise, Nepal should also make lobby for necessary revision on the criteria in AoA for measuring reduction commitments against the amount of agricultural support level in 1986-1988. This measure would create problem to Nepal in providing domestic support to the needy farmers after the graduation from LDC status from 2026 onwards. Nepal should also lobby for the special safeguards measures in order to protect the interests of Nepalese farmers and ensure food security objectives alongside trade liberalization efforts.
- iv. Nepal needs to give much attention to develop agricultural sustainability through increasing the production of major staple food products and strengthening the small-scale farmers. Nepal should create a list of domestically producible agricultural products and

protect such sensitive staples through infrastructure support, subsidies, and assistance, while identifying and mitigating harm caused by imports. Even import restriction measures on such sensitive food crops can be imposed where necessary based on general exceptions provisions on GATT.

- v. GoN and the Provincial Governments are recommended to allocate resources towards agricultural research and development to enhance productivity, crop resilience, and the adoption of sustainable farming practices. This would help improve the trade competitiveness of Nepalese agriculture in domestic and international markets. A comprehensive baseline data collection and assessment should be done on the market demand and the domestic production level of major agricultural products, particularly rice, wheat, maize, other cereals, vegetables, fruits, tea, milk, meat, herbs, and juices etc.
- vi. It is imperative to implement support programs such as subsidies, access to finance, support in transportation and maintain the quality standard parameters and training initiatives aimed at enhancing the capacity and livelihoods of smallholder farmers. This would contribute to increasing agricultural productivity and income levels across rural communities. The tariffs on agricultural food products and forms of subsidies to protect the farmers in Nepal must commensurate with that of its largest trading partner India.
- vii. GoN and the Provincial Governments are suggested to establish Public Stockholding Systems and develop and implement public stockholding systems to manage food reserves effectively, ensuring food security during times of scarcity or crisis. This would involve purchasing, stockpiling, and distributing food by the government to stabilize prices and meet the nutritional needs of the population.
- viii. GoN is suggested to enforce a policy mandating government entities to prioritize domestic agricultural food products consumption, including potential initiatives like Nepal army producing their own food. The army have access to land, equipment, and resources that can be utilized for agricultural purposes for their own consumption at the barracks. The army often has personnel with expertise in logistics, engineering, and organization, which can be leveraged to improve agricultural practices, infrastructure, and supply chain management and even in public stockholding for crisis and disaster preparedness.

- ix. It is necessary to provide competitive export incentives and support mechanisms to encourage agricultural exports of the cash crops based on its performance in exports including tea, coffee, cardamom, ginger, thereby increasing foreign exchange earnings and promoting economic growth. This could also be supported with providing support by waiving all custom fees and providing support in insurance premium and cost of freight. Exemption should be provided to imported machinery used in exportable items like tea and herbs from customs duty, and provide subsidies and support for export processes, including clearance, transportation, marketing, and infrastructure development.
- x. Nepal needs to strictly enforce the stringent quarantine, sanitary and phytosanitary regulations and quality control measures to ensure the quality of the imported agro food products to protect the human, animal and plant life. Likewise, such quality control measure would be effective in maintain the imported seed quality standards leading to improved crop yields and resilience against pests and diseases.
- xi. To reduce the non-tariff trade barriers faced by Nepalese exporters, GoN should focus on streamlining the complexity of trade procedures. Enhancing trade facilitation measures and improving infrastructure for lab test, standardization and certification of Nepali products could help reduce transaction costs and expedite cross-border trade.
- xii. Nepal needs to encourage investments providing tax incentives to warehouses, post-harvest storage facilities and agro-processing industries to add value to agricultural products, diversify rural economies, and create employment opportunities. This would enable Nepal to capture more value along the agricultural supply chain and enhance overall competitiveness. Nepal also need to promote the adoption of sustainable agricultural practices, such as organic farming and water conservation techniques, to mitigate environmental degradation and enhance long-term resilience in the face of climate change impacts.
- xiii. Department of Customs is suggested to enhance market surveillance to counter tax evasion and ensure fair competition for domestically produced agricultural goods against imported ones. Nepal needs to implement minimum import prices to address the problem of imported agricultural products being sold at excessively low prices, supported by adequate resources for enforcement.

- xiv. Government and private sector especially the producers and manufactures of agricultural foods products and consumer societies should conduct awareness programs in educational institutions, super markets, public places, vegetable and fruit markets and such to promote the utilization of local agricultural food products and traditional foods to enhance nutritional security and changes in dietary habits.
- xv. GoN and Nepal Rastra Bank should direct the bank and financial institutions to fix the interest rates on agriculture loan and farming at the minimal level which can help boost agricultural entrepreneurship.

5.6 Critique of the Study

The study utilizes both quantitative and qualitative approach, incorporating insights from various stakeholders in Nepal's agricultural sector. Strengths include diverse perspectives gathered through FGDs, but limitations may exist regarding purposive sample in FGD representativeness. The study acknowledges the need for improved monitoring and evaluation mechanisms for agricultural subsidies and emphasizes the importance of aligning production with market demand. Consensus exists among experts regarding the need to shift from input-based to output-based subsidies to promote agricultural productivity and efficiency. Concerns are raised about the lack of market information and the disconnect between production and market demand, highlighting the need for better coordination and research into consumer behavior. Stakeholders recognize the importance of food security and self-sustainability in major food crops production, advocating for policies to reduce dependency on imports.

Future research should aim for larger and more representative samples to enhance the generalizability of findings. Employing a mixed-methods triangulation approach could provide richer insights into the complexities of agricultural challenges and potential solutions. Policymakers should consider transitioning towards output-based subsidies and enhancing monitoring mechanisms to ensure effective utilization of resources. Efforts should be made to bridge the gap between production and market demand through improved market information systems and consumer behavior studies. Enhancing collaboration between government agencies and the private sector could lead to more effective implementation of agricultural policies and infrastructure development. Future research should explore the impact of trade policies on local agriculture and the effectiveness of different subsidy models in promoting agricultural

productivity. There is a need for research into the socioeconomic factors affecting agriculture, including land reform policies and strategies to attract youth to farming.

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Appendix A

Survey on Agricultural Trade Policy and Food Security in Nepal: A WTO Perspective Questionnaire for Agro Producers/Farmers

Dear Participant,

Thank you for considering participation in our survey, titled "Agricultural Trade Policy and Food Security in Nepal: A WTO Perspective." This research is conducted under the auspices of the WTO Chairs program and Kathmandu University School of Management supported by a grant that aims to advance knowledge in the field of agricultural trade policies and their impact on food security in Nepal. Your contribution is vital to achieving a comprehensive understanding of the subject matter. Before you proceed, it is imperative to outline the ethical considerations and the informed consent process. Your participation is entirely voluntary, and your decision to partake in this survey indicates your willingness to contribute to the advancement of knowledge in this critical area. Rest assured, all responses will be kept confidential, and your anonymity will be strictly maintained throughout the research process. If you have any concerns or require further clarification at any point, please do not hesitate to contact us using the provided contact information. Your collaboration in this survey is greatly appreciated and plays a crucial role in fostering informed decision-making in the realm of agricultural trade policies and food security.

Section 1: Demographic Information of Respondent

1.1 Name of the Respondent (Optional):

.....

1.2 Location of Farm:

1.2.1 Province:

1.2.2 District:

1.2.3 Metropolitan/Sub-Metropolitan/Municipality/Village
Municipality.....

1.2.4 Ward No.....

1.2.5 Local Village/City.....

1.3 Age:.....

1.4 Gender:

1. Female 2. Male 3. Other

1.5 Caste/Ethnicity:

1.6 Contact Number:

1.7 Years of Farming experience

1.8 Type of Farming: (more than one option may be marked)

1. Food/Cereals Crop Cultivation

2. Cash Crop Cultivation (e.g. Tea, Cardamom, Sugarcane)

3. Horticulture (Fruits & Vegetables) Cultivation
4. Livestock and Animal Products
5. All

1.9 Family Type: 1. Single 2. Joint

1.10 No. of Family Members:

Total Under 16 Years.....

Female..... Male.....

1.11 How many members of your family are involved in agriculture related activities?

1. Female
2. Male

1.12 Please select up to FIVE top sources of household income for your family, ranking those from the most significant source to the least significant one in the order of 1 to 5.

1. Sales of Agricultural Products and Livestock
2. Agriculture Labour
3. Non-Agricultural Labour
3. Salary and Wages from Other Services
4. Own Production/Business
5. Remittance
6. Income on Property (rental income, interest, equity gain)
7. Public Pensions and Benefits
8. Social Security Allowances
9. Others (Please Specify)

1.13 Classification of Farmer:

1. Smallholder farmer
2. Commercial Farmer/Producer

1.14 How many months does your own agricultural production sustain your family in a year?

Type of Food	Month
1. Main Crop/Food Crop	
2. Green Leafy Vegetables	
3. Vegetable Crops	
4. Pulse and Cereals Crops	
5. Others	

Section 2: Awareness of Agricultural Trade Policies

2.1. Are you aware of Nepal's current agricultural trade policies?

1. Yes
2. No

2.2. Have you ever heard about the World Trade Organization (WTO) and its impact on agricultural trade in Nepal?

1. Yes

2. No

Section 3: Market Access and Trade Policies

3.1. Do you face challenges in accessing domestic markets for selling your agricultural products?

1. Yes
2. No

3.2 How do you usually sell most of your crops and other agro products?

1. In the open market/ local mandi
2. Through the middlemen
3. Through the cooperatives
4. Through the government collection centers
5. Through the supermarkets
6. Directly to the manufacturing company/factories
7. Directly to end consumers from the farm
8. Others (Please Specify).....

3.3 Do you export your agro food products to the bordering countries, regional and international markets?

1. Yes
2. No

3.4 (If 'Yes' in Q 3.3) To whom do you directly supply your agro-food products when exporting to foreign markets?

1. Foreign Importers
2. Exporters/Traders
3. Wholesalers
4. Small and Medium Enterprises in Local Market
5. Cooperatives
6. Middlemen

3.5 (If 'Yes' in Q 3.3) Which market do you prefer most to export your agro products?

1. India
2. China
3. South Asia
4. East Asia
5. Middle East/Gulf Countries
6. Europe
7. America (North & South)
8. Africa
9. Australia
10. Others (Please Specify).....

3.6 How would you rate the market access for your agricultural products in cross-border, regional & transnational markets?

1. Excellent

2. Better
3. Good
4. Poor
5. Very poor

3.7 Have you faced any challenges in exporting your products due to trade barriers?

1. Yes
2. No

3.8 How would you characterize the competition from highly subsidized agro products exported by farmers from neighboring countries?

1. Fair
2. Unfair
3. Absolutely unfair
4. Do not know

3.9 Identify the key trade policies that impose constraints on the domestic and international market access of your agricultural products.

1. Tariff rates
2. Export/import bans imposed by Government of Nepal
3. Export/import bans and informal restrictions imposed by regional trading partner nations
4. Inadequate subsidies and product specific supports to local producers
5. Inadequate trade financing to local producers
6. Non-tariff trade barriers and lack of trade facilitation in custom/border procedures including certification, lab test and standardization
7. Unfair trade practices by regional trading partner Nations
8. Unfair Competition from highly subsidized imported agro products
9. Limited export diversification and lack of central governmental authority for market linkages and handle exports of small holder's production
10. Cost of transport services and inadequate transport links
11. Other (please specify).....

3.10 Do you think the current regime of the international trade is benefitting the smallholders agro producers?

1. Yes
2. No

3.11 What could be the strategies to protect and promote the small hold farmers from the vulnerabilities created by the global supply chains?

1. Promoting agriculture cooperatives
2. Private public partnership in farming
3. Collective farming
4. Contract farming
5. Farm to factory or consumer direct sales
6. Support in standardization and maintenance of international quality products
7. Others (Please Specify).....

3.12 Which measures do you think could be most effective for the smallholder farmers to have direct access to the international markets for exporting agro food products?

1. Reduction of high transportation costs, marketing and distributing cost
2. Shift farming to high value crops
3. Collection of agro food products and export management by Government agencies including Salt Trading Corporation Ltd., Food Management and Trading Co. Ltd.
4. Public investments in rural transportation and market infrastructure
5. Organized collective farming by small holders through cooperatives and farm associations
6. Others (Please specify).....

Section 4: Subsidies, Credit Facilities, Agro Financing & Investment

4.1. Do you benefit from any type of government subsidies for enhancing agricultural production and farming?

1. Yes
2. No

4.2 (If yes in Q 4.1) What type of agricultural subsidies are you currently receiving? (Select all that apply)

1. Subsidies on agricultural inputs (fertilizers, seeds, pesticides, machineries)
2. Product specific subsidies
3. Soft loans/debt restructuring for agricultural investment
4. Freight/Transportation subsidies for commodities and production inputs
5. Export subsidies
6. Subsidies on Crops and Livestock Insurance
7. Energy/utility subsidies

4.3 How do you usually receive information about government subsidies? (Select all that apply)

1. Government websites
2. Social media
3. Local community centers
4. News media outlets
5. Other (please specify).....

4.4 (If yes in Q 4.1) On a scale of 1 to 5, how satisfied are you with the government subsidies you are currently receiving?

- 1 Very dissatisfied
- 2 Dissatisfied
- 3 Neutral
- 4 Satisfied
- 5 Very satisfied

4.5 In which specific areas do you feel dire need of additional government support or subsidies to enhance your competitiveness? (more than one option may be marked).

1. Crop Insurance and Risk Mitigation
2. Access to Modern Farming Equipment

3. Research and Development for Agricultural Innovation
4. Water Management and Irrigation Systems
5. Training and Education for Farmers
6. Soil Conservation, Bioengineering and Improvement Programs
7. Pest and Disease Control Measures
8. Market Access and Price Stabilization
9. None
10. Other (please specify)

4.6 Which do you prefer most?

1. Direct cash transfers to deprived farmers into their account
2. Continuing the current subsidy system for agricultural inputs like fertilizers and seeds
3. Shifting to an output-based subsidy system to promote productivity of high-yield farmers
4. Other (Please Specify).....

4.7 What could be the most efficient measures to promote agro financing to substitute the food imports?

1. Designing new financial products by BFIs targeting the agro producers
2. Proper training to the lending officials at BFIs on agriculture and trade aspects
3. Improving access of agro producers to agriculture and livestock insurance
4. Alternative financing and risk mitigation through other types of funds
5. Prudently regulated subsidized interest rate on agriculture loan
6. Sanctioning loan on the basis of recommendation of the ward office
7. Promoting agro cooperatives and financing by BFIs

4.8 To what extent do you believe Foreign Direct Investment (FDI) should be permitted in the agriculture sector?

1. Strongly support
2. Support
3. Neutral
4. Oppose
5. Strongly oppose
6. No opinion/undecided

Section 5: Minimum Support Price (MSP) and Tariff Rates

5.1 Are you satisfied with the Minimum Support Price (MSP) offered by Government for your agricultural commodities?

1. Yes
2. No
3. Not Applicable

5.2 Do you sell your crops, milk products, livestock etc. to the Government Purchase Centre?

1. Yes
2. No

5.3 (If 'No' in Q 5.2) What is the reason for not selling agro food products to Government Purchase Centre?

1. Low profit margin/ preferably good prices in open market
2. No Government purchase centre in the nearby vicinity
3. Delay in getting payment
4. Lack of storage facility for agro food products at the centre
5. Too much formalities and cumbersome processes
6. Government agency does not have facility to buy my crops and agro food products
7. Ill manner and corrupted behaviors of the officials
8. No information about the Government purchase centre or its agency
9. Others (Please Specify).....

5.4 What, in your opinion, is the main reason for not receiving a fair price for your agricultural products?

1. Illicit/informal import export from porous open border
2. Inaccessibility to direct consumers
3. Lack of access to real time price information of the commodities
4. Local traders' monopoly practices and cartels
5. Unfair trade practices of middlemen
6. lack of efficient post-harvest handling facilities to avoid spoilage
7. Lack of cold chain maintenance and usage of traditional vehicles, poor packaging
8. Much distance to nearest local markets or collection centers
9. Others (Please Specify).....

5.5 How do you think real time price information of agro food commodities should be provided to farmers?

1. News outlets
2. Government website
3. Commodity market's website
4. Short text messages services on personal mobile
5. Social media
6. Others (Please Specify).....

5.6 How do you perceive the current tariff rates on imports of agricultural food products to Nepal?

1. Fair
2. Unfair
3. Not sure

5.7 How do you perceive the current tariff rates on exports of agricultural food products from Nepal?

1. Fair
2. Unfair
3. Not sure

Section 6: Availability of Inputs

6.1 Do you face challenges in accessing fertilizers, seeds, and pesticides for your farming needs?

1. Yes
2. No

6.2 How would you rate the availability of these inputs in your local market?

1. Excellent
2. Good
3. Neutral
4. Poor
5. Very poor

6.3 What type of seeds do you typically use for farming? (more than one option may be marked)

1. Local/indigenous/traditional seeds
2. Hybrid seeds
3. Genetically modified foreign seeds
4. Enhanced seeds
5. Others (Please Specify).....

Section 7: Trade related Infrastructures

7.1 Are you aware of the technical regulations and standards to be met for importing/exporting the products?

1. Yes
2. No

7.2 How do you assess the imported agro-food products currently follow stringent guidelines and compliances to maintain food safety and animal/plant health?

1. Best
2. Moderate
3. Average
4. Low
5. Worst

7.3 How important do you consider the establishment of a national accreditation body, national standards body, and conformity assessment body for ensuring the quality standards of agro-products, including testing laboratories and inspection agencies?

1. Extremely important
2. Important
3. Neutral
4. Not very important
5. Not important at all

Section 8: Impact of External Crisis and Export Bans by Major Trading Partner

8.1 Have you experienced any impact instigated due to Russia-Ukraine Crisis and export bans imposed by major trading partner India on specific agricultural commodities?

1. Yes
2. No
3. Do Not Know

8.2 (If 'yes' in Q 8.1) How has the export ban imposed by India affected the prices of your crops?

1. Increased prices
2. No impact on prices of crops
3. Decreased prices

Section 9: Minimizing Dependency on Food Imports and Building Resilience

9.1. Is there any specific challenge you face that, if addressed by the government, could significantly enhance your production?

1. Lack of access to credit on subsidized interest
2. Limited availability of agricultural inputs eg. seeds, fertilizers, pesticides etc.
3. Inadequate infrastructure (roads, storage facilities, dryers, post-harvest handling)
4. Climate change impacts
5. Market restriction due to trade barriers and cumbersome processes
6. Lack of international accreditation, certification and standardization facilities to export agro products
7. Insufficient market information and market linkages
8. Other (please specify)
9. No challenge at all

9.2 To what extent do you believe Nepal should minimize dependency on food imports?

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree

9.3 What measures do you believe could help minimize dependency on food imports?

1. Promoting indigenous crop varieties
2. Providing incentives and increasing support for farmers to grow staple crops
3. Enhancing post-harvest storage and processing infrastructure to reduce food wastage
4. Investing in research and development for improved local crops
5. Stringent implementation of quarantine test at custom border points to comply international quality standard to restrict substandard food products

9.4 Should Nepal explore diversifying its sources of food imports to build resilience against potential export bans from major trading partners?

1. Yes
2. No
3. Not sure

Section 10: Enhancing Self-Sufficiency and Strengthening Food Security

10.1 What are the top THREE approaches the government should prioritize to enhance food production self-sufficiency in Nepal? Rank them from 1 to 3.

1. Encouraging sustainable farming practices by preserving traditional knowledge
2. Implementing effective irrigation management practices
3. Increasing investment in agricultural infrastructure including warehouses
4. Providing agricultural input subsidies to smallholder farmers and output based subsidies to commercial farmers
5. Strengthening farmer cooperatives

10.2. In your opinion, what are the top THREE most important actions the government can take to strengthen food security in the country? Please rank them from 1 to 3.

1. Implementing effective food distribution systems to stabilize food prices
2. Promoting climate-smart agriculture with enhanced early warning systems for agricultural and climate change risks
3. Public stockholding to building strategic food reserves by buying food products at market prices
4. Supporting farmers during crises (e.g., natural disasters)
5. Supporting small-scale farmers with financial assistance

Thank you for sharing your insights. Your input is crucial in shaping agricultural trade policies that address the needs and concerns of farmers in Nepal.

Appendix B

Survey on Agricultural Trade Policy and Food Security in Nepal: A WTO Perspective Questionnaire for Consumers

Dear Participant,

Thank you for considering participation in our survey, titled "Agricultural Trade Policy and Food Security in Nepal: A WTO Perspective." This research is conducted under the auspices of the WTO Chairs program and Kathmandu University School of Management supported by a grant that aims to advance knowledge in the field of agricultural trade policies and their impact on food security in Nepal. Your contribution is vital to achieving a comprehensive understanding of the subject matter. Before you proceed, it is imperative to outline the ethical considerations and the informed consent process. Your participation is entirely voluntary, and your decision to partake in this survey indicates your willingness to contribute to the advancement of knowledge in this critical area. Rest assured, all responses will be kept confidential, and your anonymity will be strictly maintained throughout the research process. If you have any concerns or require further clarification at any point, please do not hesitate to contact us using the provided contact information. Your collaboration in this survey is greatly appreciated and plays a crucial role in fostering informed decision-making in the realm of agricultural trade policies and food security.

Section 1: Demographic Information of Respondent

1.1 Name of the Respondent (Optional):

.....

1.2 Address:

1.2.1 Province:

1.2.2 District:

1.2.3 Metropolitan/Sub-Metropolitan/Municipality/Village

Municipality.....

1.2.4 Ward No.....

1.2.5 Local Village/City.....

1.3 Age:.....

1.4 Gender:

1. Female 2. Male

3. Other

1.5 Caste/Ethnicity:

1.6 Contact Number:

1.7 Location: 1. Urban 2. Semi Urban 3. Rural

1.8 Occupation:

1. Unemployed

2. Labour/Daily Wages

3. Household Chores

4. Agriculture

5. Business

6. Service Sector

1.9 Family Type: 1. Single 2. Joint

1.10 No. of Family Members:

Total Under 16 Years.....

Female..... Male.....

1.11 Do any members of your family involved in agriculture related activities?

1. Yes 2. No

1.12 Please select up to FIVE top sources of household income for your family, ranking those from the most significant source to the least significant one in the order of 1 to 5.

1. Sales of Agricultural Products and Livestock

2. Agriculture Labour

3. Non-Agricultural Labour

3. Salary and Wages from Other Services

4. Own Production/Business

5. Remittance

6. Income on Property (rental income, interest, equity gain)

7. Public Pensions and Benefits

8. Social Security Allowances

9. Others (Please Specify)

Section 2: Impact of Trade Disruption and Export Bans on Food Prices

2.1. Have you noticed any impact on the prices of major essential foods due to trade disruptions or export bans from India?

1. Yes

2. No

3. Not sure

2.2. If yes, how would you describe the impact on food prices?

1. Significant increase

2. Moderate increase

3. No noticeable change

4. Not sure

Section 3: Consumer Purchasing Habits

3.1 How often do you buy agricultural food products directly from the farmers?

1. Always (Every Week)

2. Often (Every Month)

3. Sometimes (Once every three months)

4. Rarely

5. Not at all (Never Shopped Before)

3.2 Has the trade disruptions or export bans imposed by India influenced your habit of purchasing food items?

1. Yes

2. No

3.3 If yes, in what way has trade disruptions influenced your purchasing habits?

1. Increased reliance on local products
2. Changed preferred brands
3. Reduced overall imported food consumption
4. Decreased frequency of shopping
5. Changed choice of food items
6. Other (Please Specify)

Section 4: Purchasing Foods from Bordering Towns of India

4.1. Do you purchase food items from bordering towns of India?

1. Yes
2. No

4.2. If yes, have you faced any challenges or changes in purchasing from these areas after imposition of export bans on various food products including rice?

1. Yes
2. No

Section 5: Consumer Perception of Food Security

5.1 How do you perceive the current level of food security in Nepal?

1. Secure
2. Insecure
3. Not sure

5.2 Do you feel confident about the availability of essential foods in the local market?

1. Yes
2. No
3. Not sure

5.3 Are you concerned about potential disruptions to food availability in the future?

1. Yes
2. No

5.4 What is your opinion on ever-increasing import of foods from foreign countries in Nepal?

1. Very Good
2. Good
3. Acceptable
4. Bad
5. Very Bad

5.5 What are your expectations from the government to address consumer concerns and enhance food security?

1. Improve monitoring and effective measures to control essential food prices

2. Stringent enforcement of quality control standards and quarantine measures to prevent import of substandard food items
3. Ensure stable food supply chains from local agricultural food producers to consumers
4. Implement policies to prevent hoarding
5. Transparent communication on food availability

Section 6: Expenditure and Purchasing Parity on Food Consumption

6.1 What percentage of your total monthly expenditure is typically allocated to food consumption?

1. < 20%
2. 20-40%
3. 41-60%
4. 61-80%
5. > 80%

6.2 Do you perceive your purchasing power for food items has increased, decreased, or remained the same over the past year?

1. Increased
2. Decreased
3. Remained the same
4. Not Sure

6.3 If there has been a change, what do you attribute it to?

1. Economic conditions
2. Trade disruptions and Export Bans from Regional Trading Partners
3. Inflation
4. Unemployment

6.4 How has the economic impact on your household influenced your food purchasing decisions?

1. Opting for more budget-friendly options
2. Maintaining previous purchasing habits
3. Reducing overall food consumption
4. Shifting to locally available foods

Section 7: Awareness of Imported Food Quality

7.1 How aware are you of the quality standards of imported foods available in the market?

1. Very aware
2. Somewhat aware
3. Not very aware
4. Not aware at all

7.2 How often do you check the origin and quality of the foods you purchase, especially those imported?

1. Always
2. Sometimes
3. Rarely

4. Never

7.3 What factors influence your decision to purchase or avoid imported foods?

1. Price
2. Quality
3. Availability of local alternatives
4. Health considerations
5. Market trends and novelty

Section 8: Standardization, Quarantine Procedures and Safety Standards

8.1. To what extent are you confident in the adherence to international quality standards and stringent quarantine procedures for ensuring quality and safety of imported foods products in Nepal?

1. Very Assured
2. Assured
3. Neutral
4. Not Very Assured
5. Not Assured at All

8.2 Would you prefer stricter regulations on standardization and quarantine procedures for imported foods to ensure they meet safety standards?

1. Yes
2. No
3. Not sure

8.3 Are you aware of fruits and vegetables imported from India entering Nepal without following proper quarantine measures and pesticide checks?

1. Yes
2. No
3. Not sure

8.4 How concerned are you about the potential health risks associated with consuming fruits and vegetables that might not undergo proper quarantine and pesticide checks?

1. Very concerned
2. Somewhat concerned
3. Not concerned

8.5 In your opinion, how relevant are imported dry fruits, sea foods and other luxury foods to your overall diet?

1. Very relevant
2. Somewhat relevant
3. Not relevant

8.6 Are you aware of the inspection, quality control measures, and safety standards for imported dry fruits, seafood, and luxury foods available in the market?

1. Yes

- 2. No
- 3. Not sure

8.7 How important is it for you to know the origin and quality standards of imported fruits, vegetables, dry fruits, seafood, and luxury foods?

- 1. Very important
- 2. Moderately important
- 3. Not important

8.8 Have you altered your consumption habits or choices of fruits, vegetables, dry fruits, sea foods, other luxury foods due to concerns about chemical levels and absence of proper quarantine procedures?

- 1. Yes
- 2. No
- 3. Not applicable

8.9 Would you be willing to pay extra for imported food products if they undergo stringent quality checks and quarantine procedures?

- 1. Yes
- 2. No
- 3. Not sure

8.10 What measures do you think would be effective in ensuring the quality and safety of imported food items?

- 1. Strict quality testing with state-of-the-art lab facilities at custom points
- 2. Clear labeling of imported products
- 3. Increased quarantine measures
- 4. Imposition of separate approval and licensing mechanism for each food products
- 5. Other (please specify)

Section 9: Tariffs on Food Imports

9.1 In your opinion, do you think decreasing tariffs on food imports would enhance food security?

- 1. Yes
- 2. No
- 3. Not sure

9.2 Would you support an increase in tariffs on food imports in order to support local producers and to ensure better quality and safety standards?

- 1. Yes
- 2. No
- 3. Not sure

9.3 What is your opinion regarding imposition of new limits on importation of hugely subsidized agro-food products from foreign countries?

1. Very Good
2. Good
3. Can't Say one or the other
4. Bad
5. Very Bad

Section 10: Preferences for Organic Products

10.1 Are you willing to pay more price or a premium for locally produced organic food products?

1. Yes
2. No
3. Depends on the product

10.2. How much more are you willing to pay for local and organic products?

1. Slightly more
2. Moderately more
3. Significantly more

10.3 How reliable do you consider food products labeled as "organic" that claim to use no chemical fertilizers and pesticides?

1. Very reliable
2. Somewhat reliable
3. Not very reliable
4. Not reliable at all

10.4 What factors influence your trust in the reliability of organic products?

1. Certification labels
2. Local origin
3. Brand reputation
4. Consumer reviews
5. Personal research
6. Other (Please Specify)

Thank you for participating in this survey. Your feedback will contribute to understanding consumer perceptions and shaping agricultural trade policies to ensure a resilient and secure food supply in Nepal.

Appendix C

LIST OF THE KEY QUESTIONS USED IN FGD

During the FGD, researcher asked the following open-ended questions as initial questions to the participant key informants. Questions asked to resource persons representing different sectors are categorized as follows:

Agricultural/Food Security Experts

- How do you perceive the influence of WTO agreements on agricultural trade policies in Nepal?
- From your expertise, what specific WTO agreements have had the most significant impact on agricultural practices and trade?
- In your opinion, what are the key factors within agricultural trade policies that contribute to or hinder food security in Nepal?
- How can international trade agreements be leveraged to enhance food security outcomes in the country?
- Based on your expertise, what policy recommendations would you propose to align agricultural trade policies with the goal of improving food security in Nepal?
- How can the government collaborate with experts and international bodies to address potential challenges identified in the agricultural trade and food security nexus?

Government Officials

- How are WTO agreements translated into specific agricultural trade policies in Nepal?
- What challenges and successes have you observed in the implementation of these policies to support food security objectives?
- What initiatives has the government undertaken to ensure that agricultural trade policies align with the goal of enhancing food security?
- How does the government collaborate with international bodies, including the WTO, to address food security challenges?
- How does the government engage with various stakeholders, including farmers and experts, in shaping and refining agricultural trade policies?
- In your view, what role do government policies play in promoting sustainable agricultural practices that contribute to long-term food security?

Agricultural Traders/Industrialists

- From your perspective, how have recent changes in agricultural trade policies affected your trade or farming practices?
- What opportunities and challenges do you face in the current trade environment, especially concerning access to markets and pricing?
- How do you perceive the link between agricultural trade policies and food security in your community?
- What improvements or changes in policies would you suggest to better support local food security initiatives?
- How involved do you feel in the policymaking process related to agricultural trade and food security?
- What channels of communication would you recommend to enhance the dialogue between farmers, traders, and policymakers concerning these issues?