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Review Article

Nepalese Wine Market: Current Landscape and Future Prospects

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Abstract

Nepal's wine market is at a nascent stage, characterized by limited domestic production and a heavy reliance on import. Wine consumption in Nepal has increased steadily, with an average annual import of 570,814.875 liters over past eight years. Despite this dependence on imports, its unique geographical and cultural attributes present immense opportunities for the development of a robust wine industry. This paper explores the global wine production landscape, historical context of alcohol consumption in Nepal, and the challenges and opportunities of wine industry in Nepal. By emphasizing the potential of fruit wines, leveraging wine tourism, and addressing existing bottlenecks, Nepal can position itself as a competitive player in the regional and global wine market. This paper utilizes secondary data derived from journal publication, census, survey data, and news reports.

Keywords: Wine Consumption; import and export; Sustainable wine industry; wine tourism; wine marketing.

Introduction

Wine is among the world's oldest fermented beverage and has a history deeply intertwined with the rise of civilization. It is believed to have accidentally emerged in early human settlements such as Georgia and Tigris-Euphrates Basin before 6000 BCE, as a method of preserving perishable commodity. Over time it evolved into a practice valued for both its cultural and therapeutic significance (Glonti and Glonti, 2010), but quality was very poor (Estreicher, 2006). With the rise of Greek civilization and development of metallurgy, the wine industry reached a much higher degree of perfection. Greek used wines for trading, medicinal, social and religious purposes before 3500 BCE (Estreicher, 2006; Amerine and Singleton, 2022). Ancient texts such as the *Rigveda* and the *New Testament* reflect its prominence in rituals and daily life. References to similar medicinal fermented products, such as *Aasava* and *Aarishtha*, appear in ancient Ayurvedic texts, where they were extracted from various fruits, herbs, and soluble substances (lisara, 2019). Fig. 1 illustrate how winemaking expanded over time across different regions of the world. Between the 17th and 19th centuries, Spanish and British colonists brought viticulture

and winemaking practices to areas like South Africa, Australia, New Zealand, and the Americas, which are now classified as "New World" wine producers, while countries like France, Italy, and Germany remain "Old World" producers (Li et al., 2018). Following World War II, the economic boom in the mid-20th century led to the commercial expansion of viticulture and winemaking in New World regions (Tiefenbacher and Townsend, 2020).

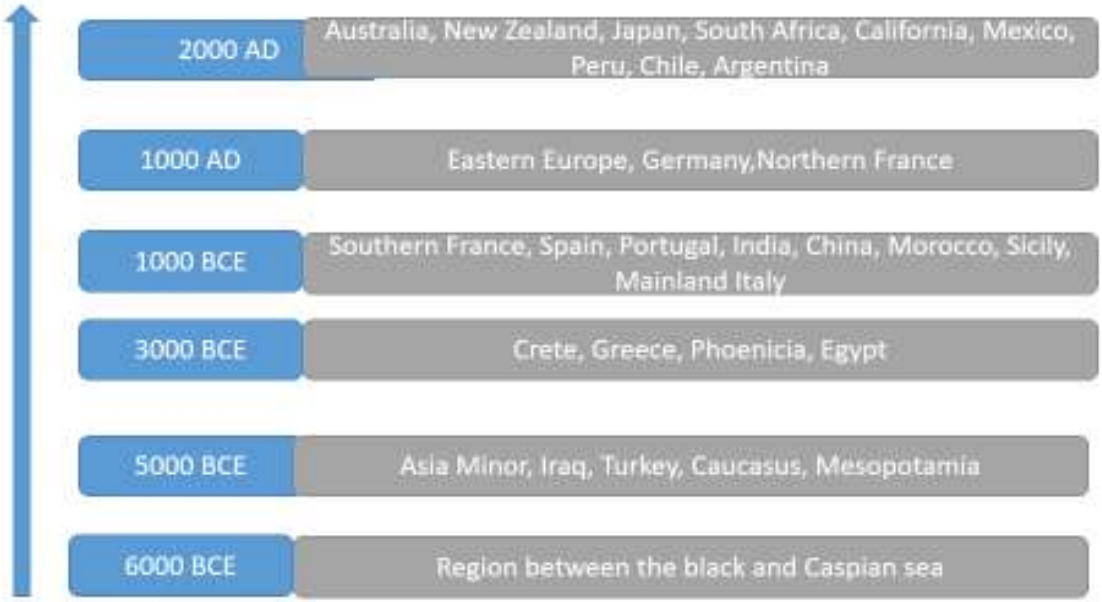

Fig. 1: A flowchart of expansion of Vitis vinifera noble varieties and winemaking from their center of origin to other parts of the world (Joshi *et al.*, 2021).

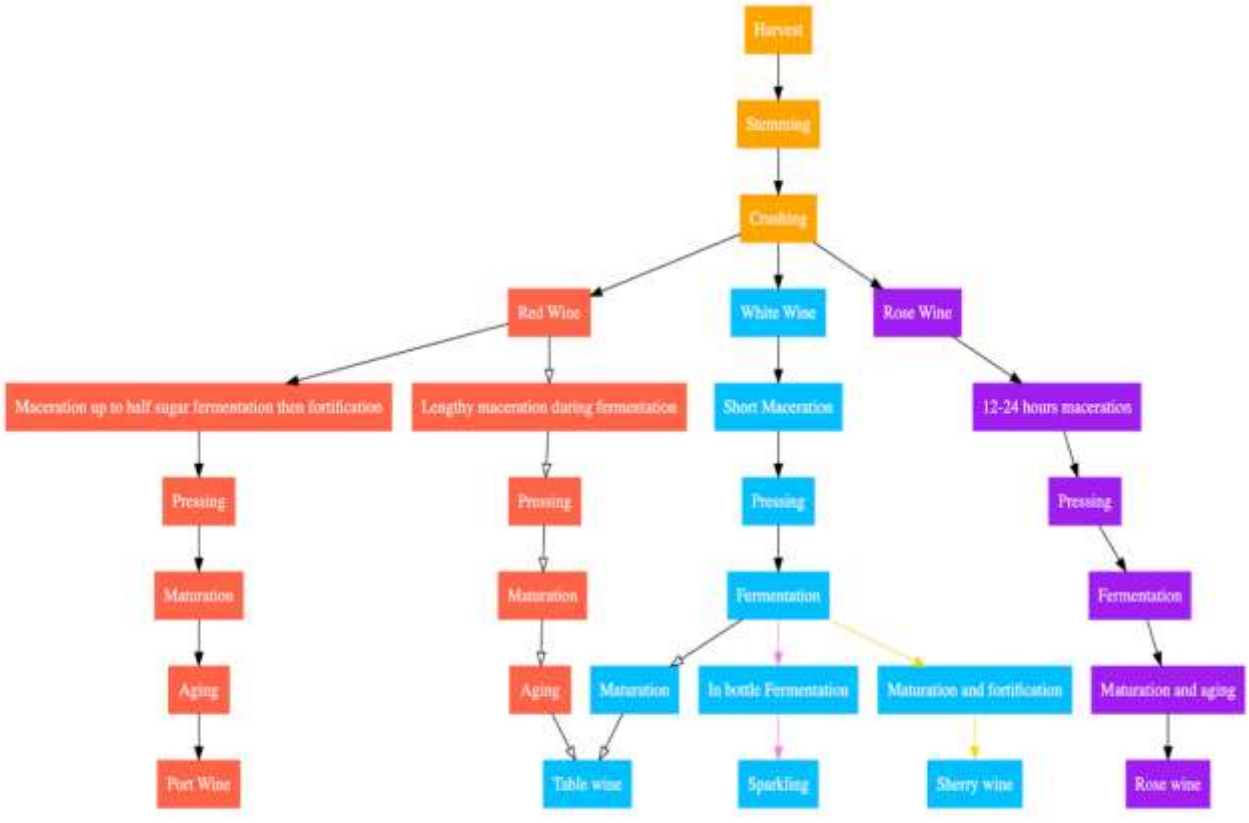

Fig. 2: Flowchart of wine making process (Kumar *et al*., 2016; Jackson, 2014; Jackson, 2011)

As wine spread globally, variations in fruit types, fermentation methods, and yeast strains also emerged over time. While the majority of wines are made using grapes, other fruits that contain fermentable sugars, nitrogen bases, and a suitable substrate for yeast growth can also be used to produce wine (Swami *et al.*, 2014). In general, wine consists of alcohol, sugars, acids, tannins, minerals, proteins, and various other compounds, including organic acids, volatile substances, and phenolic compounds (Garrido and Borges, 2013). In Nepal, common fruits such as apples, pears, and plums offer significant potential for winemaking. The yeast *Saccharomyces cerevisiae* plays a crucial role in converting sugars into alcohol and CO_2, formation of secondary metabolites, and producing aroma during the fermentation process (Ribereau-Gayon *et al.*, 2000; Pretorius, 2003; Howell *et al.*, 2004; Swiegers & Pretorius, 2005; Swiegers *et al.*, 2005). The key factor governing quality of wine is to ensure ideal sugar-acid balance. Depending on the type of fruit, the choice of yeast strain, and the fermentation method employed, a wide range of wines can be crafted, ranging from dry to sweet varieties and from still to sparkling wines as shown in Fig. 2.

Despite rising wine consumption, Nepal's wine sector remains under-researched, with studies largely emphasizing global wine history, chemistry, or technology rather than Nepal-specific industry issues. This review synthesizes fragmented evidence on Nepal's wine market, trade patterns, production potential, challenges, and future pathways to support informed policy and domestic industry development.

Types of Wine and Preferences in Nepal

Global Wine Classification Overview

There is no universally accepted system for classifying wines. However, wines are commonly categorized based on factors such as color, alcohol and carbon dioxide content, sweetness, geographical origin, and varietal composition (Jackson, 2008). A general classification used globally is illustrated in Fig. 3.

Wine Classification in Nepal for Tax Purposes

In Nepal, for taxation purposes, wines are classified into sparkling, non-sparkling, and fortified types, and further tiered by alcohol by volume (ABV) into three categories: wines with < 12 % ABV, 12-17 % ABV, and those with > 17 % ABV (DOC, 2025).

Local Consumer and Seller Practices

Consumers and sellers in Nepal typically classify wine according to color, focusing mainly on red and white wines, with rosé wines being less popular. In terms of sweetness, the Nepalese market is predominantly made up of sweet wines, which are more widely preferred compared to dry wines.

Bottling Trends and Home Production

Wines in Nepal are commonly bottled in 750 ml and 4 liter sizes. Additionally, home wine production—often without formal bottling—is also widespread (Karagiannis, 2011).

Consumer Preferences and Market Trends

Red wine is the most popular choice in Nepal, favored for its perceived health benefits and robust flavor. It is primarily consumed by urban elites, expatriates, and tourists. White and sparkling wines are becoming increasingly popular, particularly among women and younger generations who are more open to exploring new flavors.

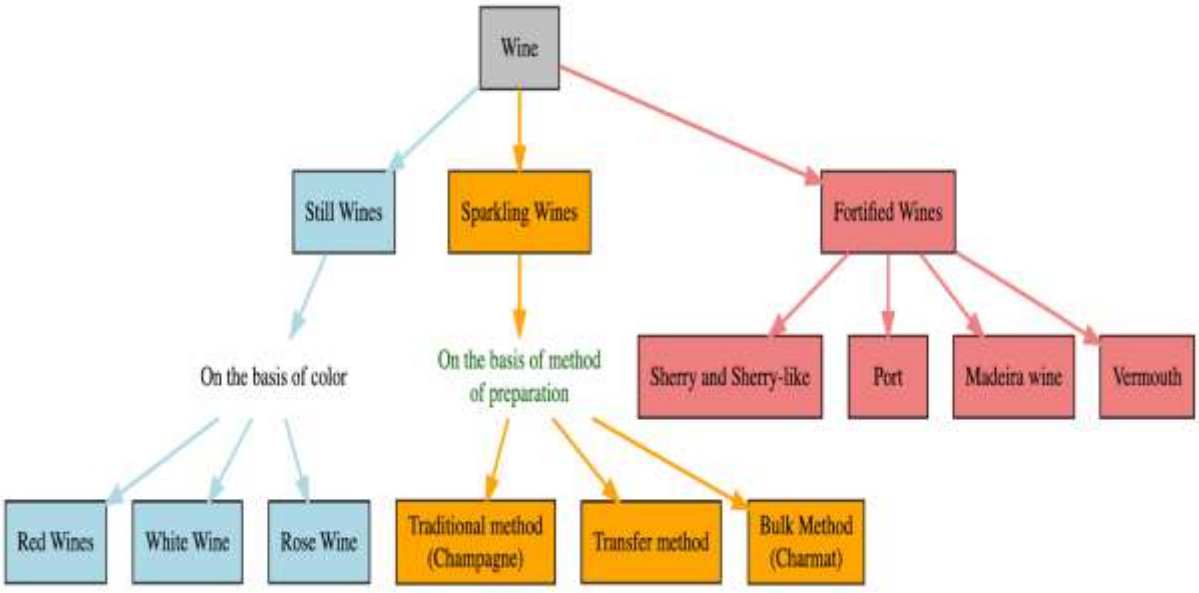

Fig 3: Wine classification (Kumar *et al.*, 2016; Karagiannis, 2011)

Market Growth Drivers and Data Challenges

Overall, wine consumption in Nepal has been steadily rising. This growth is driven by the influence of Western lifestyles, rising disposable incomes, and evolving consumer preferences. However, the lack of reliable data on consumer preferences continues to pose a significant challenge for new producers and exporters entering the market.

The Global Wine Landscape

Wine is an undistilled alcoholic beverage produced through the fermentation of fruit with use of yeast. Its production was initially discovered accidentally as a method to preserve perishables, with civilization and scientific development evolving over time (Aylward, 2005; Morris, 2000). Today, its production has evolved to include fortified varieties designed to enhance nutritional and medicinal benefits (Tredoux and Ferreira, 2012). Fig. 4 highlights that wine production is concentrated among a few dominant countries across various regions, while South Asian nations contribute relatively lower volume in comparison. The dual appeal of wine as both a pleasurable drink and a medicinal product has significantly driven its global demand, leading to a substantial increase in production.

In 2022, Italy, France, and Spain accounted for more than half (approximately 51%) of the world's wine production, while the United States, France, and Italy together made up over one-third (36%) of global wine consumption (OIV, 2023). This enduring popularity underscores wine's integral role in both cultural and economic contexts worldwide.

The trend of wine production in Asia has seen a significant increase since 1990, as illustrated in Fig. 5, with China dominating production, followed by Japan. However, Chinese wine production has declined over the past decade, while Japan has increased its wine imports by 23% in terms of value (OIV, 2023). This shift presents an opportunity for Nepal to position itself as a wine producer and exporter to neighboring Asian countries, potentially boosting its revenue.

Nepal possesses significant potential for wine production, particularly in the development of diverse regional varieties of fruit wines, owing to its abundant natural resources. The increasing pace of globalization and the liberalization of international markets provide Nepal with a strategic opportunity to expand its wine industry both domestically and globally. By capitalizing on its unique fruit resources and addressing the growing demand within regional markets, Nepal can position itself as a competitive contributor to the Asian wine sector.

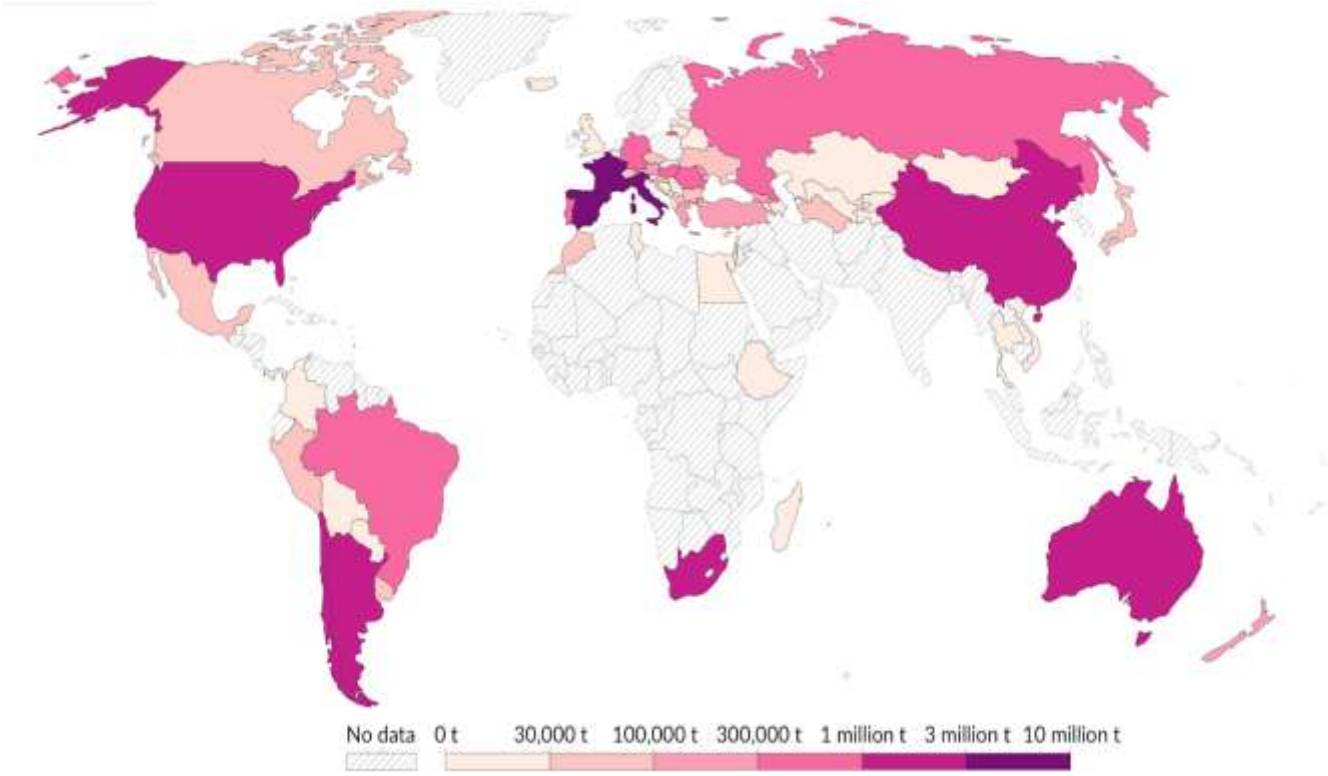

Fig. 4: Wine production across the globe (FAO, 2023)

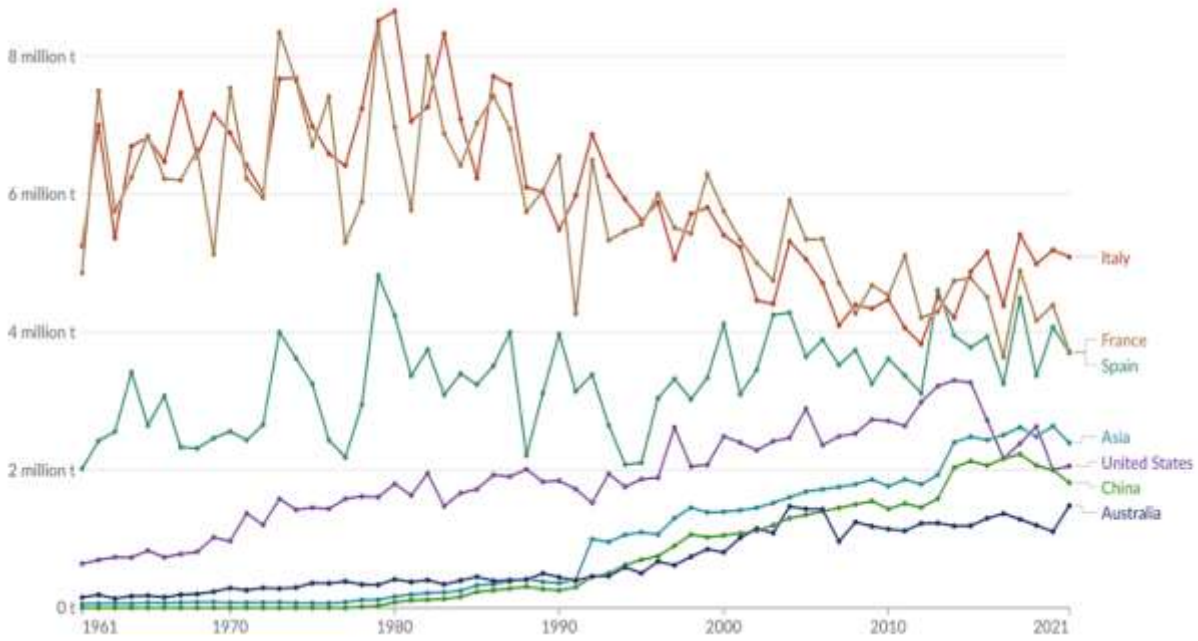

Fig. 5: Wine production across the globe from 1961 to 2021 (FAO, 2023)

Wine Culture in Nepal

Nepal, renowned for its rich natural diversity and cultural heritage, has witnessed a gradual shift in alcohol consumption patterns. In the history of Nepal alcohol consumption was regulated according to caste, some caste permit it while some restrict it (Kunwor, 1984). In Ancient Hindu and Buddhist civilization there were separate types of alcoholic beverage dating back a few years centuries BCE according to person's class; higher class enjoy Maireya that is made from Jaggery, sugarcane juice, honey fruit and spices (McHugh, 2021). In modern history of Nepal, the then prime minister of Nepal after visits to European countries encouraged elite people to consume foreign alcohol like wine and brandy (Vaidya *et al.,* 1993). After that Nepalese soldiers recruited in the British army during world war were the main agents to popularize western drinks in Nepal (Dhital *et al.*, 2025). Although Nepal maintains a high rate of alcohol abstinence (Adhikari *et al.*, 2019), those who do consume alcohol drink more than the global average, with an annual consumption of 7.4 liters compared to 6.4 liters globally. Currently Nepalese above 15 consume 31% of beer, 49% of wine and 20% of spirit, with significant reduction in distilled alcoholic beverage uses (WHO, 2018). Over the history of Nepal alcohol consumption was shifted from home brewed distilled alcohol to commercially manufactured alcohol like; beer, wine and brandy. This transition can be attributed to evolving consumer tastes, higher disposable incomes, and increasing awareness of the health and lifestyle benefits associated with wine. Currently more than 50 brands are producing wines however due to various factors majority of them are under struggling stage (Rijal, 2016) some popular wineries are listed in Table 1. With comparison to foreign wine, Nepalese wines also contain lower amount of phenolic compound and anthocyanin (Pandeya *et al*., 2018), so wine enthusiast usually doesn't prefer over imported one. Currently, wine is increasingly regarded as a beverage suitable for family consumption and is enjoyed by women as well, contributing to a rise in its demand. Despite this emerging trend, the winery and wine market in Nepal remain in a nascent stage, with domestic demand primarily fulfilled through imports.

Wine consumption in Nepal has steadily grown, with an expanding market and the emergence of local wine brands. However, production remains limited, relying primarily on fruits like apples, berries, and grapes. Challenges include a lack of diverse fruit varieties, modern winemaking techniques, technical expertise, and a small consumer base. Currently, only a few wineries operate, producing small batches for the domestic market, often experimenting with local grapes and blends. Nepalese wines use a range of fruits such as apples, oranges, grapes, wild barberries, and raspberries, along with ingredients like honey and spices, and producing wine cheaper price starting from NRP. 1100 per liter as compare to imported wine. The limited availability of these raw materials and the need for imports from India and China make consistent production difficult. Majority of wineries mainly relied upon raw material imported from foreign country. Despite the growing demand, the lack of scientific data on vineyard suitability in Nepal increases the risk of planting vines in unsuitable areas. Providing such information would benefit farmers, winemakers, and the industry as a whole.

Table 1: Some wineries and wine produced in Nepal

Wineries	Brand	Used fruit
Hinwa winery	Hinwea sweet red, Hinwa sweet white	Rasberry and barberry
Manag Valley	Manang Valley Premium Sweet White, Manang Valley Premium Semi Sweet White	Apple
Kewalpur Agrofarm (Patleban vineyard winery)	Red Kaule, White Ashish, Rose Koshu	Grapes
Big master	Syrah, Chenin Blanc,Jazzy grape, Funky grape, Dreamy Grape, dazzling apple, Hearty grape, Jolly Yacon,Merry mixed fruit, Breezy yacon, playful grape, Sweet red wine, Dry red, Yacon Dry White, Mixed fruit, Apple sweet white	Grapes
Submarine	Submarine sweet Red, Submarine sweet white	Grapes
Canvas	Canvas sweet white, Canvas sweet red	Grapes
Akira	Akira sweet white, Akira Sweet red	Grapes

Source: as per their website, community blogspot

Imported Wine

The wine market in Nepal is predominantly dominated by imports, with red wines being the most imported type. Among the leading suppliers, Australia ranks first, followed by France, Spain, Italy, and India. Additionally, Nepalese wine industries import raw grapes and grapes must from various countries to support local wine production (DoC, 2023). These imported wines primarily cater to the growing middle- and upper-class consumer segments, particularly in urban areas such as Kathmandu, Pokhara, and Lalitpur. In contrast, no official records of exports.

Globally, Italy, France, and Spain collectively account for 53% of world wine exports, while the USA, Germany, and the UK contribute 39% of total wine imports by volume as of 2022 (OIV, 2023). Over the past eight years, Nepal has imported an average of 570,814.875 liters of wine annually, generating an average import revenue of NPR 453 million as shown in Fig. 6 (DoC, 2023).

Wine Grapes Production Potentialities and Challenges

The cultivation of wine grapes in Nepal is relatively new and continues to evolve. According to a study by Acharya et al. (Acharya and Yang, 2015), approximately 6.6% of Nepal's land is highly suitable for vineyard cultivation, considering factors such as slope, soil quality, and geographical location. While rainfall volume and soil conditions alone may not be reliable indicators of grape production, the remarkable diversity of Nepal's climate and the recent success of grape cultivation in Dhading highlight the significant potential for expanding grape production in areas with similar soil and climatic conditions across the lower hills of the country. In addition to grapes, Nepalese indigenous fruits also can be utilized for production of wine and development of other sectors also. However there are few challenges associated with production of grapes in subtropical monsoon climatic conditions of Nepal. One of the reasons is the lack of government prioritization of the viticulture sector. Currently, vineyards occupy only 38 hectares supported by a government farm that serves as a resource center for grape propagation. Private farms primarily focus on cultivating wine grape varieties. Key grape types grown in Nepal include Himrod, Muscat Belly, Beauty Seedless, Thompson Seedless, and Cabernet Sauvignon, among others (Acharya *et al.,* 2023). The local production is limited; however, the demand remains substantial, as evidenced by the import of approximately 25,881 metric tons of fresh grapes, 689 metric tons of dried grapes, and 64,897 liters of grape must in 2023/24(DoC, 2023). This highlights a robust market for table grapes, raisins, and wine within the country.

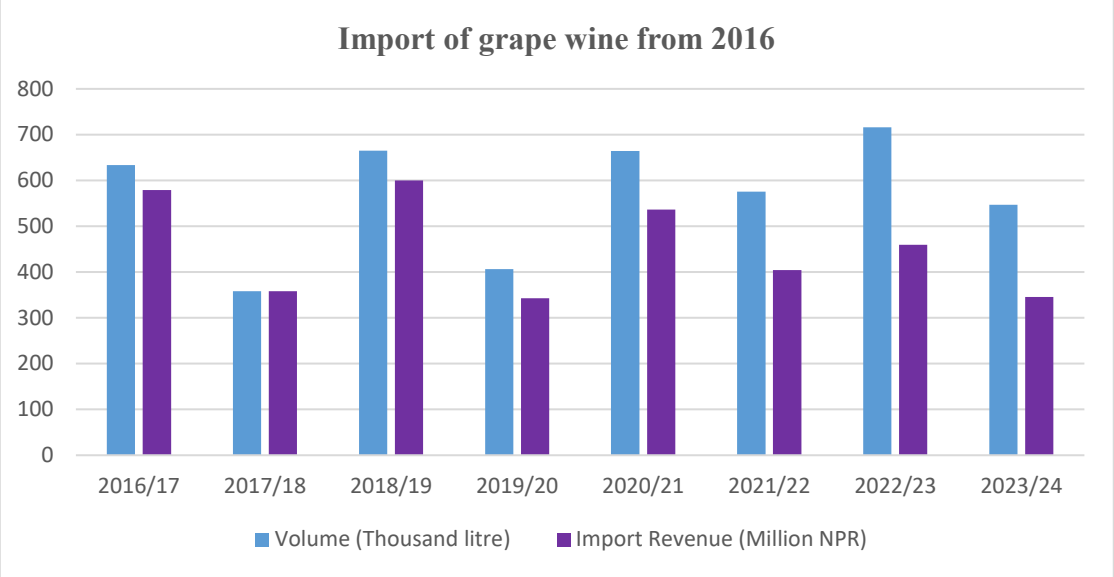

Fig. 6: Wine Import Volume and Revenue over the years (DoC, 2023)

A key challenge to vineyard expansion in Nepal is the timing of grape harvesting, which coincides with the monsoon season. The heavy rains during this period can affect grape quality, increasing the risk of diseases, fungal infections, and waterlogging, and hinder proper ripening. Monsoon rainfall poses a significant risk of crop damage, as the optimal harvesting period in the Terai and mid-hills (subtropical climates) aligns with this rainy season. To address this, Ghimire et al., 2024 and Sapkota et al., 2024 recommend use of hydrogen cyanamide to manage dormancy in subtropical regions. Additionally, Dahal *et al.,* 2017 highlight the importance of selecting suitable vineyard locations, especially in the subtropical western Terai, to optimize growth conditions. Various horticultural techniques, including defoliation, irrigation and fertilizer adjustments, and heavy pruning, have been employed to support grapevine cultivation in subtropics. However, these methods are often costly and labor-intensive. Techniques like girdling have been effective in advancing grape production timelines (Carreno *et al.*, 1999), while chemicals such as mineral oils (Black, 1936), Thiourea (Blommert, 1965), Garlicextract (Botelho and Muller, 2007; Carvalho *et al.*, 2016) have been used for dormancy breaking with mixed results—some even hindering vine growth. Among these approaches, hydrogen cyanamide has emerged as the most reliable solution for promoting bud growth in grapevines (Shulman *et al.*, 1983.) It is essential to prioritize research and development to overcome existing challenges, identify suitable grape wine varieties, and establish a comprehensive production framework for wine in Nepal. By doing so, Nepal can significantly increase its grape wine production and unlock its full potential in the industry.

Nepal's wine industry holds significant potential for growth and sustainability, driven by development of other sectors too. Integrating wine production with wine tourism, as seen in global models like Napa Valley in the U.S., Marlborough in New Zealand, and the Hunter Valley in Australia, could further amplify its prospects (Hall *et al.*, 1997). Wine tourism links agriculture with tourism, creating sustainable economic opportunities in rural areas through activities such as vineyard tours, wine tastings, and festivals while preserving natural resources and cultural heritage (Dodd and Bigotte, 1997; Milićević *et al.*, 2024). Nepal's picturesque vineyards, combined with its established tourism offerings like trekking, jungle safaris, and adventure sports, provide a unique platform to attract domestic and international visitors. The wine production process, deeply connected to local traditions, offers immersive experiences that generate jobs, foster agro-industrial linkages, and drive rural revitalization (Joshi and Ray, 2019). By adopting modern production techniques and leveraging successful global examples from Greece, Portugal, and South Africa, Nepal can transform its wine industry into a key driver of sustainable development and establish itself as a distinctive destination for wine tourism worldwide.

Increasing health awareness among people has also significantly influenced their preference for wine over hard drinks such as whiskey and brandy. Unlike distilled beverages, wine retains essential nutrients due to the absence of a distillation process, offering a rich composition of minerals like sodium, potassium, calcium, and magnesium, along with polyphenols, antioxidants, and vitamins B1 and B12 (Soni *et al.*, 2011; Joshi *et al.,* 2017). Additionally, wine's inclusion of herbal and spice extracts during production enhances its antimicrobial properties, further distinguishing it from other alcoholic beverages. From a medicinal perspective, moderate wine consumption provides numerous health benefits, including improved cardiovascular health, reduced cancer risk, better digestion,

and bone density retention. Red wine, in particular, is rich in resveratrol, which helps lower serum lipid levels and offers anti-inflammatory and antioxidant properties (Saremi and Arora, 2008). Compared to beer and spirits, wine has the lowest associated cancer risk, making it a preferred choice for health-conscious individuals. However, moderation is key, as excessive consumption can lead to adverse health effects. This growing awareness of wine's nutritional and medicinal advantages has contributed to its rising popularity as a healthier alternative to hard drinks and helped to expand grape wine in Nepal.

Grape wine production has the potential to significantly reduce postharvest fruit losses in Nepal. The challenges of transportation and handling, particularly in hilly areas, often lead to high levels of spoilage. By transforming surplus grapes into wine, these losses can be mitigated, preserving the nutritional value of the fruit while also diversifying consumer options. Currently post-harvest losses of fresh fruit have been estimated between 20-30% (Gautam *et al.*, 2019). Furthermore, globalization and urbanization have fueled a growing appreciation for wine, especially among urban consumers with increasing disposable incomes. The thriving tourism industry also contributes to rising demand for wine, particularly from Western tourists, prompting a need for diverse wine options in hotels, restaurants, and bars. These combined factors position grape wine production as a promising and sustainable opportunity for Nepal.

Potential Strategy to Address the Wine Market in Nepal

Strengthening research in oenology is essential for realizing the full potential of fruit wines and fostering the growth of Nepal's wine industry. Innovations in fermentation technology, such as the use of bioreactors, novel fruits, and honey for creating low-alcohol beverages, as well as advancements in yeast strain selection, can significantly enhance the quality and diversity of locally produced wines. The development of the wine sector requires systematic efforts, including the establishment of dedicated wine research institutes modeled after those in leading wine-producing countries like the USA, Australia, and France. Overcoming key challenges—such as limited collaboration between universities and industry, inadequate funding for research, and restrictive policy frameworks—will be critical. Off-trade distribution channels, including supermarkets, convenience stores, and specialty shops, are highly effective in delivering wine to the market (Hall *et al.*, 2005; Olsen, 2003; Ritchie, 2009) offering greater product variety and lower prices compared to on-trade outlets like pubs and bars. To boost the wine market in Nepal, it is crucial to strengthen regulated marketing and enhance e-commerce platforms (Denic *et al*., 2018; Bousquet, 2023), such as Daraz, Cheers Online Store, and LiquorWorld, which should be properly guided and regulated to ensure growth. To boost Nepalese wine production and marketing, the government and stakeholders should focus on tax incentives, R&D, infrastructure, technical support, international market access, and wine tourism for large-scale producers. For small-scale producers, priorities should include supporting cottage industry establishment, branding, certification, technical assistance, and forming farmer producer organizations. By addressing these challenges and fostering innovation, Nepal can develop a vibrant wine industry that not only supports economic growth but also showcases its rich agricultural potential on the global stage.

Conclusion

Although the Nepalese wine market is still in its infancy, there is immense growth potential. While imported wines currently dominate, evolving consumer preferences and an increasing appetite for locally produced products are driving demand for domestic wines. To ensure sustainable development, it is essential to address challenges in production, distribution, and consumer awareness. By leveraging its unique cultural heritage and focusing on quality and innovation, Nepal can establish itself as a significant player in the global wine market. Continued research, innovation, and government support are essential to unlock the full potential of the Nepalese wine sector.

Authors' Contribution

N Ghimire: Conceptualization, Methodology, data collection, writing – original draft, writing – review & editing. Goma Joshi: Conceptualization, Methodology, visualization, writing – original draft, writing – review & editing. Anil Balchhaudi: writing – review & editing. Final form of the manuscript was approved by all authors.

Conflict of Interest

No potential conflict of interest was reported by the author(s).

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